Louisville and Jefferson County
Metropolitan Sewer District

COMPREHENSIVE ANNUAL FINANCIAL REPORT

Fiscal Years Ended June 30, 2017 and 2016

msd
Safe, clean waterways

Comprehensive Annual Financial Report

Louisville and Jefferson County Metropolitan Sewer District
Louisville, Kentucky

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

msd
Safe, clean waterways

Fiscal Years Ended June 30, 2017 and 2016

Prepared by the Department of Finance, Louisville MSD
Chad Collier, CFO, Secretary/Treasurer

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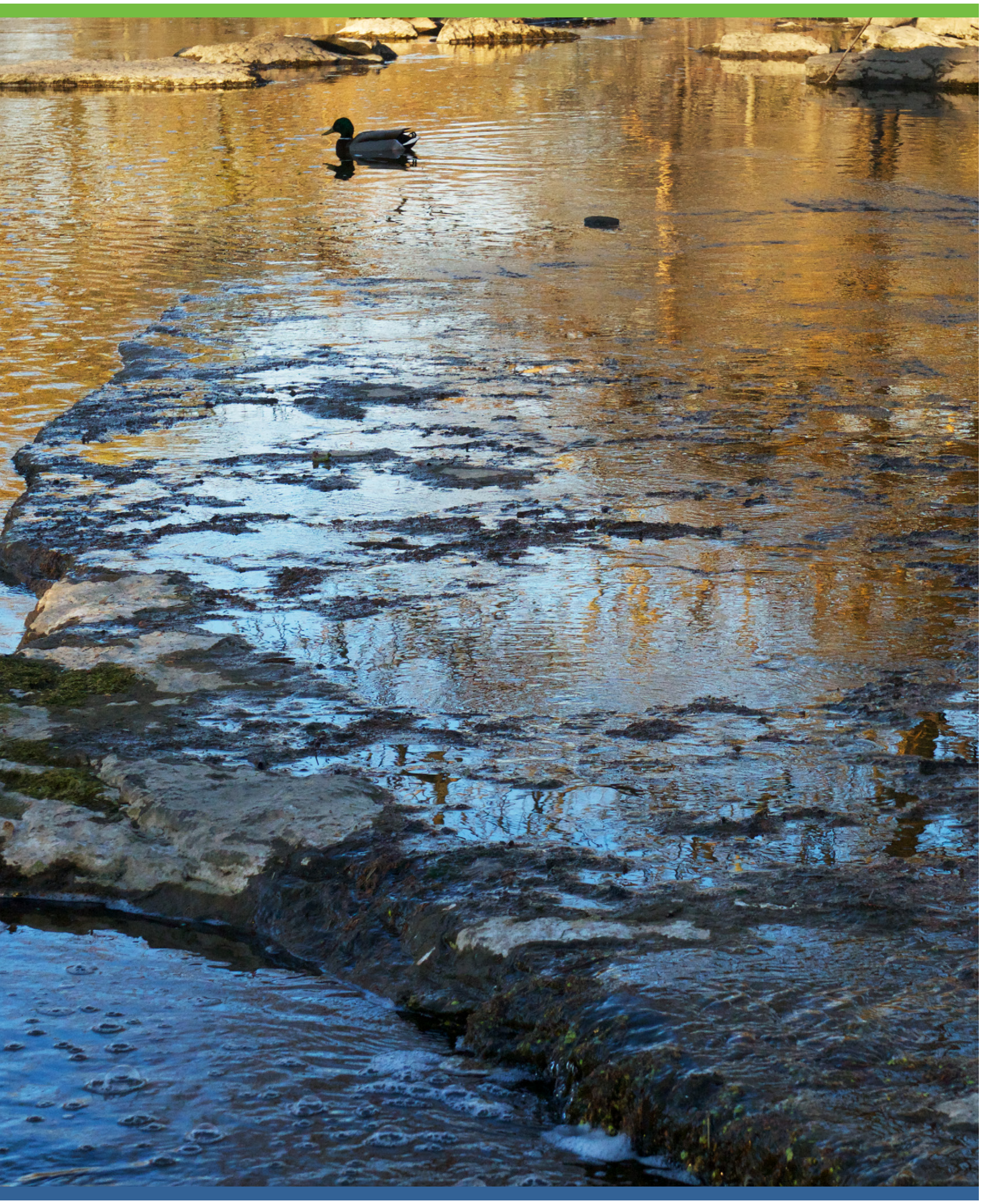


A mallard drake swims at sunrise in Seneca Park.
Photo courtesy John Nation.

INTRODUCTORY SECTION

Safe, clean waterways

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

October 31, 2017

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

As Controller of Louisville and Jefferson County Metropolitan Sewer District (MSD) it is my pleasure to present the Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2017.

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 Generally Accepted Accounting Principles (GAAP).

MSD's comprehensive framework of internal controls has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. To the best of MSD's 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 operations of MSD. All disclosures necessary to enable the reader to understand MSD's financial activities have been included. GAAP requires that management provide a narrative to accompany the basic financial statements in the form of Management's Discussion and Analysis which is found beginning on page 3. This letter of transmittal is intended to be read in conjunction with that analysis.

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 and drainage systems within the majority of Louisville Metro, which now comprises all of Jefferson 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 considered 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 sewer and drainage services to the Metro government. The value of these services in 2017 was $5.7 million.

MSD is required by law and by its Revenue Bond Resolution to undergo an annual independent audit of its financial statements. The goal of the independent audit was to provide reasonable assurance that the financial statements of MSD for the fiscal years ended June 30, 2017 and 2016 are free of material misstatement. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation. The independent auditor's report can be found at the beginning of the financial section of this report.

During fiscal year 2017 two new individuals joined MSD's Board of Directors:

> On September 30, 2016 the Board unanimously confirmed Louisville Metro Mayor Greg Fischer's appointment of Jason Williams to the MSD Board. Williams is a member of Frost Brown Todd LLC and represents Senatorial District 28. Williams replaced Sujata Barai Chugh who resigned in May of 2016. His term expires February 28, 2018.
>
> On June 28, 2017 the Board unanimously confirmed Mayor Fischer's appointment of Marita Willis to the MSD Board representing Senatorial District 20. Willis serves as Major Gift Officer for the American Red Cross and previously served on LWC's Board of Water Works. Willis replaces Yvonne Wells-Hatfield who served as a member of the Board since 2011. Her term expires June 30, 2019.

Customer Base:
MSD's revenue is derived from sewer and drainage service charges collected from residential, commercial, and industrial customers. Sewer service charges are distributed to respective customer classes on the basis of actual costs incurred to collect and treat wastewater. For FY 2017 fifty-six percent (56%) of MSD's sewer service charge revenue came from residential customers, thirty-three percent (33%) came from commercial customers and eleven percent (11%) from industrial customers. MSD bills for stormwater services using equivalent service units (ESUs). An ESU is defined by MSD as 2,500 square feet of impervious area. For FY 2017 thirty-seven percent (37%) of MSD's stormwater service charge revenue came from residential customers, fifty-seven percent (57%) came from commercial customers and six percent (6%) from industrial customers.

Local Economy:
A study by the University of Louisville Urban Studies Institute (USI) projects Jefferson County will grow by 131,135 people, or 18%, between 2010 and 2040. USI predicts an increase in population within MSD's service area of nearly 12%. This translates to an approximate increase in wastewater flows of 7% during the next 20 years although growth is not expected to be uniform. Population growth outside the core market area (generally defined as the areas surrounding downtown that were part of the original City of Louisville) is projected to continue at a faster pace than growth inside the core. Jefferson County is projected to gain 65,425 households, a 21% increase, between 2010 and 2040.

Trade and transportation are central to the Louisville economy. Louisville is home to UPS' Worldport air hub and Louisville sits at the crossroads of three major Interstate highways, I-64, I-65, and I-71. A summary of the Louisville area's nonfarm employment by industry for 2017 follows:

Louisville area employment (numbers in thousands)	June 2017	Change from June 2016 to June 2017	
		Number	Percent
Total nonfarm	678.4	15.3	2.3
Mining, logging, and construction	29.9	1.0	3.5
Manufacturing	83.7	1.1	1.3
Trade, transportation, and utilities	149.5	3.8	2.6
Information	9.3	0.2	2.2
Financial activities	48.5	1.9	4.1
Professional and business services	88.6	2.9	3.4
Education and health services	90.1	1.5	1.7
Leisure and hospitality	76.1	3.4	4.7
Other service	26	-0.2	-0.8
Government	76.7	-0.3	-0.4
Source: U.S. BLS, Current Employment Statistics.			

The United States Department of Labor's Bureau of Labor Statistics listed the unemployment rate for Jefferson County as 4.6 percent in June 2017 which was slightly above the United States overall unemployment rate of 4.5 percent for the same time period. The latest published U.S. Census Bureau statistics lists median household income in Jefferson County as $48,695 (2015 dollars). Additional information on demographic and economic conditions for Louisville can be found in the Statistical Section of this report.

In June of 2017 Forbes magazine named Louisville-Jefferson County the number one region in the United States for manufacturing job growth. According to Forbes "since 2011 manufacturing employment in the Louisville metropolitan area has expanded 30.2% to a total of 83,300 jobs, led by a resurgent auto industry that accounts for 27,000 jobs in the area."

In June of 2017 Louisville was also named one of the best-run cities in the United States according to a study performed by WalletHub. WalletHub ranked 150 U.S. cities based on six categories of metrics - financial stability, health, safety, economy, infrastructure, and pollution. Louisville came in at number 10 on the list.

Major Initiatives:

- *Critical Repair and Reinvestment Plan:* Louisville, like many cities, is faced with aging infrastructure that must be maintained and refurbished in order to continue serving a growing community. MSD has completed a Critical Repair and Reinvestment Plan (CRRP) to address the challenges posed by its aging infrastructure. The plan contains a breakdown of the critical risks in six areas: Ohio River flood protection system; stormwater drainage and inland flooding; wastewater treatment facilities; viaduct flooding, crumbling sewer infrastructure; Consent Decree and support systems. The solutions proposed by the CRRP come with a price tag of $4.3 billion over the next 20 years, including almost $500 million to finish the remaining federal Consent Decree obligations for managing sewer overflows.

  MSD embarked on a wide-reaching community conversation in fiscal 2017 to communicate the magnitude of risks identified in the CRRP and the impact on ratepayers and to the community at large. This outreach included community organization meetings, Metro Council district meetings, MSD staff focus groups, Metro TV appearances, bill inserts, radio and TV news stories, and social media impressions. The CRRP was made available to the public both on MSD's website and at all Louisville Free Public Library locations. Two-way conversations were encouraged through dialogue in public meetings, written comments, and questionnaires. All results were documented and shared with MSD's board, Metro government, and the public.

- *Rate Increase:* MSD's Board approved a 20% rate increase on May 22, 2017 to support the CRRP improvements for community health and safety. Louisville's Metro Council approval is required for any rate increase greater than 7%. Two ordinances were subsequently introduced to Metro Council. O-185-17 was an ordinance proposing the 20% increase to MSD's rates, rentals and charges for wastewater and drainage services. O-207-17 proposed amending section 50.24 of the Louisville Metro Code of Ordinances to increase the MSD Board's ability to raise rates without Metro Council approval from 7% to 10% for four years. Both Ordinances were returned by the Budget Committee without recommendation and were later withdrawn by their sponsors.

  On July 28, 2017 the MSD Board approved a rate increase of 6.9 percent for wastewater, drainage and Environmental Protection surcharges fees on all bills effective August 1, 2017. The average monthly residential wastewater bill (based on 5,000 gallons per month) increased by $3.03 from $43.84 to $46.87. Monthly stormwater drainage fees increased by $0.60 from $8.66 to $9.26. On the same date the Board approved MSD's capital budget for fiscal 2018 of $195 million. This budget is scaled to meet MSD's CRRP requirements and address other infrastructure needs within the financial constraints of the current rate increase.

- *Overflow Prevention:* Underground storage basins and the Ohio River Tunnel are part of MSD's larger endeavor to prevent sewage from overflowing into Louisville's waterways. The basins and tunnel are designed to capture rainwater and sewage which would otherwise overwhelm the sewer system during rain events and flow untreated into our waterways. These underground storage areas retain the mixture of rainwater and sewage until the rain subsides and system capacity is available. Water is then conveyed to one of MSD's Water Quality Treatment Centers, treated, and returned to our local streams or the Ohio River.

  Seven storage basins in the combined sewer system – Bells Lane, Clifton Heights, I-64 and Grinstead, Logan Street, Nightingale, Portland, and Shawnee Park – are in design and construction phases. The Muddy Fork and Bancroft basins, in the separate sewer system, are complete. Construction of the Ohio River Tunnel will begin in fiscal 2018. The tunnel and all of the basins are required to be operational by the close of 2020.

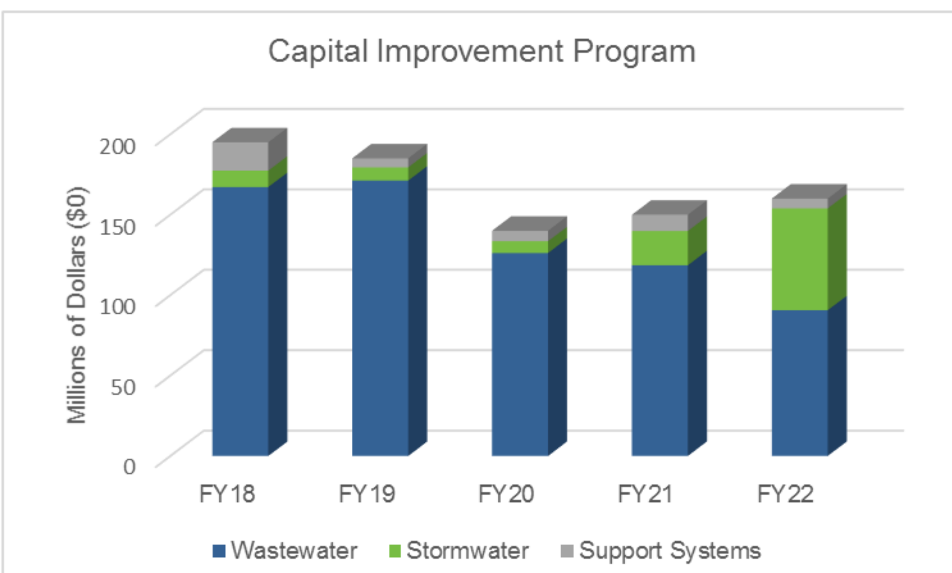
- *Effective Utility Management:* MSD has implemented the Effective Utility Management (EUM) framework. EUM is a performance improvement process that is sanctioned by major U.S. water and wastewater associations and is designed to advance effective utility management practices. MSD now tracks over 70 measures covering the areas of Product Quality, Customer Satisfaction, Employee Leadership and Development, Operational Optimization, Financial Viability, Infrastructure Stability, Operational Resilience, Community Sustainability and Stakeholder Understanding. Quarterly reports are made MSD's Executive Leadership Team tracking progress toward achievement of the goals for each measure. This program helps MSD target critical success factors and cultivates a culture of transparency and accountability for performance.

- *One Water Initiative:* In 2015 the Board of MSD and the Board of Waterworks of the Louisville Water Company (LWC) entered into an inter-local agreement (ILA) which was approved by the Kentucky Attorney General. This ILA is known as One Water and its purpose is to capitalize on synergies between MSD and LWC. One Water's major initiatives center around cost reduction, revenue enhancement and service improvement. The ILA established a One Water Board of Directors comprised of two members of the Board of Waterworks, two members of the MSD Board of Directors, and one member of Louisville/Jefferson County Metro Government. Kimberly Reed was appointed Project Liaison Director for One Water in May 2017. Reed works with staff at MSD and LWC to identify shared service opportunities, cost savings, and new lines of revenue. MSD & LWC project One Water net benefits for calendar year 2017 to exceed $11 million.

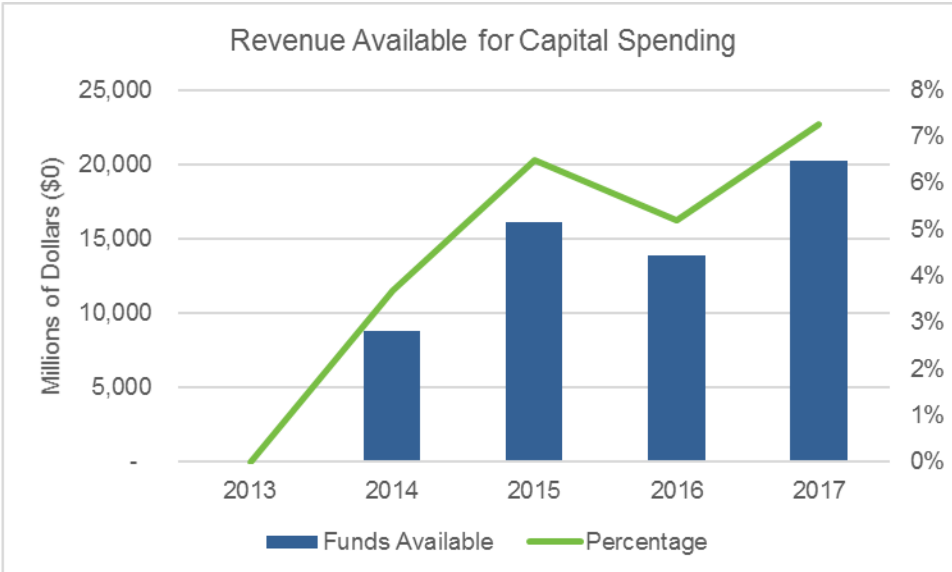
Financial Planning:
MSD is focused on continuously strengthening its financial position through planning and analysis in order to meet its short-term and long-term operational and infrastructure plans.

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.

The capital program is a critical piece of MSD's financial plan. Our five-year capital plan totals $830 million assuming annual rate increases of 6.9%. The CRRP is scalable such that projects can begin as funding becomes available from future rate increases. The current five-year capital plan is heavily focused on completing the aforementioned basin and tunnel projects along with other Consent Decree spending. The following chart provides a breakdown of spending by year and category:



Funding for the capital program consists of proceeds from issuance of debt along with revenue from operations (total revenue less operating expenses and debt service payments). MSD has focused for the last several years on increasing the amount of revenue from operations available for capital spending. The following chart highlights the success of this effort and illustrates MSD's operational efficiency:



MSD's long term financial planning window is 20 years and is supported by the 20 year CRRP and a 20 year comprehensive financial model. The financial model enables MSD to analyze alternative scenarios in order to optimize resources in the face of competing priorities. Rate adjustments are carefully considered in conjunction with bond issues and other financing options with an eye toward maintaining affordability for the ratepayer. Key long term considerations are debt service coverage, maintaining level debt service payments, and maintaining adequate cash reserves.

Awards

The 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 comprehensive annual financial report (CAFR) for the fiscal year ended June 30, 2016. This was the 27th 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 CAFR. 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 current CAFR 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 department of Louisville MSD has worked hard to produce the 2017 CAFR and I would like to thank them for their individual contributions. I would also like to take this opportunity to thank the MSD Board of Directors and the Executive Leadership Team for their continued support.

Respectfully Submitted,

Brad Good
Controller

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Louisville and Jefferson County Metropolitan Sewer District

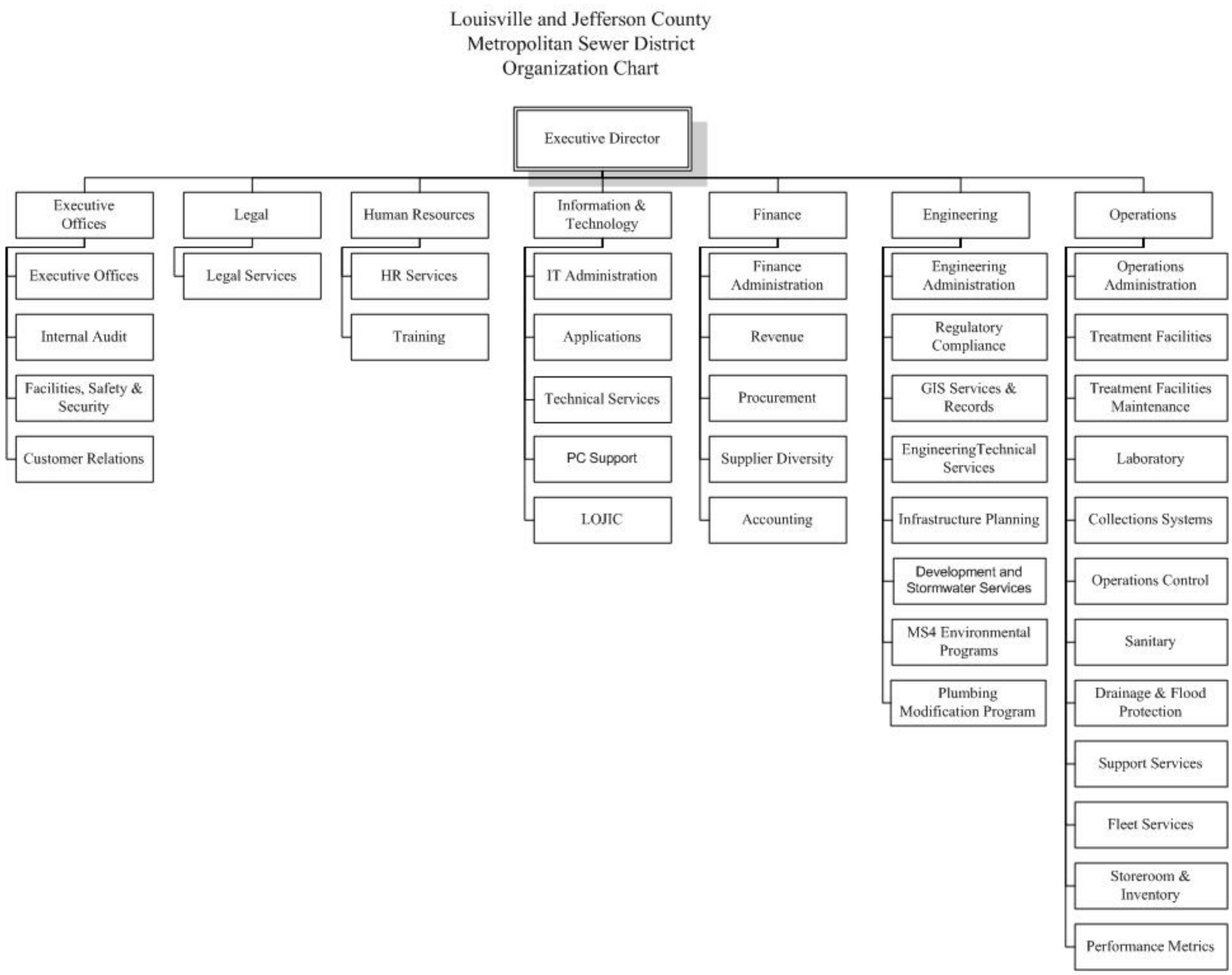
Kentucky

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT ORGANIZATION CHART



LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

msd
Safe, clean waterways

Fiscal Year Ended June 30, 2017

MSD BOARD MEMBERS:

Cyndi Caudill, Chair .... Term expires 8/31/17
Daniel Arbough, Vice Chair .... Term expires 6/30/18
John Phelps .... Term expires 7/31/16
Joyce Horton Mott .... Term expires 8/31/17
J.T. Sims .... Term expires 7/31/17
Andrew Bailey .... Term expires 7/31/18
Jason Williams .... Term expires 2/28/18
Marita Willis .... Term expires 7/30/19

PRINCIPAL OFFICERS:

Tony Parrott .... Executive Director
Angela Akridge .... Chief Engineer
Chad Collier .... Chief Financial Officer and Secretary/Treasurer
Paula Purifoy .... General Counsel
W. Brian Bingham .... Chief of Operations
Lynne Fleming .... Human Resources Director
Tom Luckett .... One Water Chief Information Officer

FINANCIAL MANAGERS:

Brad Good .... Controller
Rene' Thomas .... Director of Procurement and Supplier Diversity
Sharon Dawson .... Revenue Manager
Patrick Meador .... Budget Administrator

Walkers enjoy a stroll along Beargrass Creek in Brown Park.
Photo courtesy John Nation.

Financial Section

INDEPENDENT AUDITOR'S REPORT

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

Report on the Financial Statements

We have audited the accompanying 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, 2017 and 2016, 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.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the 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, 2017 and 2016, and the changes in its financial position and its cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 12, the schedule of proportionate share of the net pension liability on page 44 and the schedule of employer contributions on page 45 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the 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. The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by Governmental Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 10, 2017 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 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 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 Horwath LLP
Crowe Horwath LLP

Louisville, Kentucky
November 10, 2017

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, 2017 and 2016. 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

- Total net position increased from fiscal 2016 to fiscal 2017 by $67.9 million, or 11.3%, including an increase in unrestricted net position of $7.8 million or 54.5%.

- Total assets and deferred outflows of resources increased $160.3 million, or 5.5%, from fiscal 2016 to fiscal 2017.

- Operating revenues increased in fiscal 2017 by $16.3 million, or 6.7% primarily due to a rate increase of 6.9% effective August 1, 2016.

- Service and administrative costs, excluding GASB 68 pension expense, increased in 2017 by $482 thousand or 0.6% over fiscal 2016.

- MSD refunded $103.2 million in long-term debt in fiscal 2017 reducing future debt service payments by $15.5 million.

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 profitability of MSD during the time period for which the statement relates.

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 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.

STATEMENT OF NET POSITION

A comparative summary of MSD's Statement of Net Position is shown below in Figure 1.

Figure 1

CONDENSED NET POSITION INFORMATION

(amounts in thousands)	FY 2017	FY 2016	% Change 2016-2017	FY 2015
Unrestricted current assets	$ 83,085	$ 103,529	(19.7%)	$ 93,761
Restricted current assets	42,129	20,378	106.7%	16,342
Capital assets	2,742,037	2,573,262	6.6%	2,392,466
Restricted non-current assets	124,192	149,447	(16.9%)	138,780
Other non-current assets	32,768	29,457	11.2%	30,807
Total assets	3,024,211	2,876,073	5.2%	2,672,156
Deferred outflows of resources	35,911	23,708	51.5%	20,407
Total assets and deferred outflows	3,060,122	2,899,781	5.5%	2,692,563
Current liabilities	16,550	17,420	(5.0%)	14,936
Current liabilities from restricted assets	82,654	85,186	(3.0%)	74,697
Non-current liabilities	2,208,378	2,087,962	5.8%	1,925,627
Total liabilities	2,307,582	2,190,568	5.3%	2,015,260
Deferred inflows of resources	84,052	108,633	(22.6%)	92,233
Total liabilities and deferred outflows	2,391,634	2,299,201	4.0%	2,107,493
Invested in capital assets, net	562,784	501,675	12.2%	475,580
Restricted, net	83,667	84,639	(1.1%)	80,424
Unrestricted	22,037	14,266	54.5%	29,066
Total net position	668,488	600,580	11.3%	585,070
Total liabilities , deferred inflows & net position	$ 3,060,122	$ 2,899,781	5.5%	$ 2,692,563

2017 Comparative Analysis:
The change in MSD's net position was $67.9 million in fiscal 2017.

Total assets and deferred outflow of resources increased by $160.3 million in fiscal 2017. This overall increase can be attributed primarily to additions to plant, lines and other facilities which were financed by the issuance of $150.0 million in revenue bonds.

Total liabilities and deferred inflow of resources increased by $92.4 million due to the senior debt issued in fiscal 2017[1] and an increase in the net pension liability. This increase was partially offset as the negative value of the swaps in MSD's portfolio improved during fiscal 2017.

Unrestricted net position increased $7.8 million during fiscal 2017.

2016 Comparative Analysis:
The change in MSD's net position was $15.5 million in fiscal 2016.

Total assets and deferred outflows of resources increased by $207.2 million in fiscal 2016. This was primarily attributable to additions to plant, lines and other facilities financed by the issuance of $175.0 million in revenue bonds.

[1] See Note 7 – Long-Term Debt

Total liabilities and deferred inflow of resources increased by $191.7 million due to the senior debt issued in fiscal 2016[2], partially offset by refunding of existing debt[3], an increase in net pension liability, and an increase in the negative value of the swaps in MSD's portfolio.

Unrestricted net position decreased $14.8 million during fiscal 2016.

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

A comparative summary of MSD's Statement of Changes in Net Position is shown below in Figure 2.

Figure 2

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

(amounts in thousands)	FY 2017	FY 2016	% Change 2016-2017	FY 2015
Service charges	$ 253,943	$ 238,480	6.5%	$ 225,462
Other operating income	5,691	4,810	18.3%	4,406
Total operating revenues	259,634	243,290	6.7%	229,868
Investment income	14,273	17,891	(20.2%)	17,623
Total revenues	273,907	261,181	4.9%	247,491
Depreciation & amortization expense	77,156	62,820	22.8%	63,321
Service and administrative costs	87,637	87,155	0.6%	76,245
GASB 68 pension expense	2,512	4,003	(37.2%)	(127)
Nonoperating expenses	77,655	73,779	5.3%	71,334
Change in fair value - swaps	(26,072)	22,951	(213.6%)	5,240
Total expenses	218,888	250,708	(12.7%)	216,013
Net income (loss) before contributions	55,019	10,473	425.3%	31,478
Contributions	12,889	5,037	155.9%	4,605
Increase (decrease) in net position	67,908	15,510	337.8%	36,083
Net position - begininng	600,580	585,070	2.7%	548,986
Net Position - ending	$ 668,488	$ 600,580	11.3%	$ 585,069

2017 Comparative Analysis:

Operating revenues as of June 30, 2017 were $259.6 million This represents an increase of $16.3 million, or 6.7%, in fiscal 2017. The increase in operating revenues was driven by a Board-approved rate increase of 6.9% effective August 1, 2016. Wastewater service charges totaled $195.0 million as of June 30, 2017. This represents an increase of $11.3 million, or 7.3%, from a year ago. The majority of MSD's wastewater customers are billed based on the volume of water used. Because substantially all of MSD's customers are also customers of the Louisville Water Company, all service charges are billed and collected by the Louisville Water Company on behalf of MSD. Stormwater service charges were $58.9 million as of June 30, 2017. This represents an increase of $4.0 million, or 7.4%, from the same period one year ago. Other operating income was $5.7 million in fiscal 2017, which is $881 thousand more than fiscal 2016.

Gross service and administrative costs[4] increased by $482 thousand in fiscal 2017 from their fiscal 2016 level. MSD's employee count, including vacant positions, increased from 607 in fiscal 2016 to 629 full-time

[2] See Note 7 – Long-Term Debt
[3] See Note 7 – Long-Term Debt
[4] Excludes GASB 68 Pension Expense

equivalent positions in fiscal 2017. Labor cost was 49.5% of gross service and administrative costs in fiscal 2017 compared to 46.9% in fiscal 2016. Figure 3 shows the composition of gross service and administrative costs by major classification for the past three fiscal years.

MSD recorded net operating income of $92.3 million in fiscal 2017 which is an increase of $3.0 million or 3.3%, compared to fiscal 2016.

2016 Comparative Analysis:
Operating revenues as of June 30, 2016 were $243.3 million This represents an increase of $13.4 million, or 5.8%, in fiscal 2016. The increase in operating revenues was driven by a Board-approved rate increase of 5.5% effective August 1, 2015. Wastewater service charges totaled $183.6 million for the year. This represents an increase of $9.7 million, or 5.6%, from fiscal 2015. Stormwater service charges were $54.9 million for the year. This represents an increase of $3.3 million, or 6.4%, from fiscal 2015. Other operating income was $4.8 million in fiscal 2016, which is $403 thousand more than fiscal 2015.

Service and administrative costs[5] increased by $11.4 million in fiscal 2016 from their fiscal 2015 level. The key factor driving the increase in service and administrative costs was the repair expense associated with the Morris Forman Water Quality Treatment Center flood. MSD's employee count, including vacant positions, increased from 591 in fiscal 2015 to 607 full-time equivalent positions in fiscal 2016. Labor cost was 46.9% of gross service and administrative costs in fiscal 2016 compared to 51.2% in fiscal 2015.

MSD recorded net operating income of $89.3 million in fiscal 2016 which is a decrease of $1.1 million, or 1.2%, compared to fiscal 2015.

Figure 3[6]

SERVICE AND ADMINISTRATIVE COSTS INFORMATION

(amounts in thousands)	**2017**	**2016**	**2015**
Labor	$ 59,183	$ 55,229	$ 54,378
Utilities	14,427	18,256	13,817
Materials and supplies	7,976	4,183	9,706
Contractual services	25,899	28,376	20,943
Chemicals	5,298	4,371	3,681
Fuel	1,077	1,326	1,616
Insurance premiums & recovery	791	388	(960)
Bad debt	3,495	2,603	2,068
Other operating expense	1,440	2,939	1,052
Service & administrative costs	119,586	117,671	106,301
Capitalized overhead	(31,949)	(30,516)	(30,056)
Net service and administrative costs	$ 87,637	$ 87,155	$ 76,245

[5] Excludes GASB 68 Pension Expense
[6] GASB 68 pension expense has been excluded from this chart of Service and Administrative Costs.

STATEMENT OF CASH FLOWS

A comparative summary of MSD's Statement of Cash Flows is shown below in Figure 4.

Figure 4

CONDENDSED STATEMENT OF CASH FLOWS INFORMATION

(amounts in thousands)	FY 2017	FY 2016	% Change 2016-2017	FY 2015
Cash flows from:				
Operating activities	$ 173,755	$ 155,000	12.1%	$ 152,718
Capital and related financing activites	(197,246)	(139,454)	41.4%	(184,324)
Investing activities	18,941	(9,421)	(301.1%)	5,289
Change in cash and temporary investments	(4,550)	6,125	(174.3%)	(26,317)
Cash and temporary investments, Beginning of year	104,095	97,970	6.3%	124,287
Cash and temporary investments, End of year	$ 99,545	$ 104,095	(4.4%)	$ 97,970

2017 Comparative Analysis:

Cash and temporary investments were $99.5 million at the end of fiscal 2017 which is a decrease of $4.5 million from fiscal 2016 or 4.4%. Cash flows from operating activities increased as revenue and customer receipts grew. Cash used by financing activities in fiscal 2017 increased primarily as a result of debt service payments. Cash provided by investing activities is fiscal 2017 increased as investments in U.S. Agency discount notes were converted to money market funds.

2016 Comparative Analysis:

Cash and temporary investments were $104 million at the end of fiscal 2016 which is an increase of $6.12 million from fiscal 2015 or 6.2%. Cash from operating activities was $155.1 million which is an increase of $2.4 million compared to fiscal 2015. Cash used by capital and related financing activities was $139.4 million compared to $184.3 million in fiscal 2015. Cash used by investing activities was $9.4 million compared to $5.2 million provided by investing activities in fiscal 2015.

CAPITAL ASSETS

A comparative summary of MSD's capital assets net of depreciation is shown below in Figure 5.

Figure 5

CAPITAL ASSETS NET OF DEPRECIATION

(amounts in thousands)	2017	2016	Increase (Decrease) 2017-2016	2015	Increase (Decrease) 2016-2015
Sewer lines	$ 1,120,151	$ 1,076,071	$ 44,080	$ 990,658	$ 85,413
Wastewater treatment facilities	244,482	262,369	(17,887)	142,667	119,702
Stormwater drainage facilities	401,729	385,410	16,319	324,011	61,399
Pumping and lift stations	103,085	83,979	19,106	45,984	37,995
Administrative facilities	13,411	13,652	(241)	15,380	(1,728)
Maintenance facilities	2,119	2,351	(232)	2,117	234
Machinery and equipment	7,580	2,674	4,906	2,638	36
Miscellaneous	4,150	6,422	(2,272)	6,119	303
Capitalized interest	264,108	252,660	11,448	239,711	12,949
Construction in progress	581,222	487,674	93,548	623,181	(135,507)
Total	$ 2,742,037	$ 2,573,262	$ 168,775	$ 2,392,466	$ 180,796

2017 Comparative Analysis:
MSD's total capital assets net of depreciation increased by $168.8 million in fiscal 2017. Construction in progress contained the biggest increase with $215.8 million of additions offset by $122.3 million of assets placed in service. $61.2 million worth of sewer lines were placed into service offset by $17.1 million of additional depreciation. For more detailed information, see Note 5, Capital Assets – Plant, Lines and Other Facilities, in the accompanying notes to the financial statements.

Depreciation expense was $77.2 million or $14.3 million more than fiscal 2016. This increase was due to $377.9 million in total assets placed into service at the end of fiscal 2016.

2016 Comparative Analysis:
MSD's total capital assets net of depreciation increased by $180.7 million in fiscal 2016. Wastewater treatment facilities contained the majority of the increase with $139.7 million of additions offset by $20.0 million of additional depreciation expense. There were $101.4 million of sewer line additions placed into service offset by $15.9 million of additional depreciation. There were $208.7 million of additions to construction in progress offset by $344.2 million of assets placed into service. For more detailed information, see Note 5, Capital Assets – Plant, Lines and Other Facilities in the accompanying notes to the financial statements.

Depreciation expense was $62.8 million or $0.5 million less than fiscal 2015.

DEBT ADMINISTRATION

A comparative summary of MSD's bonds and other financing is shown below in Figure 6.

Figure 6

SCHEDULE OF BONDS AND OTHER FINANCING

(amounts in thousands)	2017	2016	Increase (Decrease) 2017-2016	2015	Increase (Decrease) 2016-2015
Senior Revenue Bonds					
Series 2006A	$ -	$ -	$ -	$ 87,290	$ (87,290)
Series 2007A	42,965	44,425	(1,460)	45,815	(1,390)
Series 2008A	65,520	97,860	(32,340)	99,850	(1,990)
Series 2009A	13,040	41,485	(28,445)	47,280	(5,795)
Series 2009B	69,725	136,115	(66,390)	150,900	(14,785)
Series 2009C	180,000	180,000	-	180,000	-
Series 2010A	330,000	330,000	-	330,000	-
Series 2011A	252,610	254,590	(1,980)	256,490	(1,900)
Series 2013A	115,790	115,790	-	115,790	-
Series 2013B	116,940	118,255	(1,315)	119,515	(1,260)
Series 2013C	99,625	99,750	(125)	99,875	(125)
Series 2014A	79,900	79,950	(50)	80,000	(50)
Series 2015A	174,280	175,000	(720)	-	175,000
Series 2015B	79,085	81,350	(2,265)	-	81,350
Series 2016A	150,000	-	150,000	-	-
Series 2016B	28,095	-	28,095	-	-
Series 2016C	67,685	-	67,685	-	-
Bond Anticipation Notes					
Series 2014A	-	-	-	226,340	(226,340)
Series 2015A	-	226,340	(226,340)	0	226,340
Series 2016A	226,340	-	226,340	-	-
KIA Loan	1,973	2,071	(98)	2,168	(97)
	$ 2,093,573	$1,982,981	$ 110,592	$1,841,313	$ 141,668

Excludes bond premiums/discounts

2017 Comparative Analysis:

On August 30, 2016, MSD issued $150 million of revenue bonds (series 2016A). The proceeds of the series 2016A bonds, net of issuance cost, were used to pay the costs of improvements to MSD's sewer and drainage system.

On August 30, 2016, MSD issued $28.3 million of revenue refunding bonds (series 2016B). The proceeds of the series 2016B bonds net of issuance costs and together with certain amounts in the reserve account, were used to refund in advance of maturity $30.2 million of outstanding principal on MSD's sewer and drainage system revenue bonds, series 2008A. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding will reduce debt service payments over the next 20 years by $7.7 million and resulted in a net present value savings of $5.3 million.

On August 30, 2016 MSD issued $67,685 million of revenue refunding bonds (series 2016C). The proceeds of the series 2016C bonds net of issuance costs and together with certain amounts in the reserve account, were used to refund in advance of maturity $22.3 million of outstanding principal on MSD's sewer and drainage system revenue bonds, series 2009A and $50.6 million of the outstanding principal amount on MSD's sewer and drainage system revenue bonds, series 2009B. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding reduced debt service payments over the next 7 years by $7.7 million and resulted in a net present value savings of $4.7 million.

MSD ended fiscal 2017 with $2.2 billion in outstanding long-term debt compared to $2.1 billion in outstanding long-term debt at the end of fiscal 2016. Additional information on MSD's long-term debt can be found in Note 7 – Long-Term Debt.

Short term debt outstanding payable from restricted assets at the end of fiscal 2017 totaled $82.6 million compared to $85.1 million at the end of fiscal 2016.

Net interest expense totaled $77.7 million in fiscal 2017, an increase of $3.9 million from fiscal 2016.

2016 Comparative Analysis:
On October 6, 2015, MSD issued $175 million of sewer and drainage system revenue bonds, series 2015A. Proceeds of the 2015A bonds, net of issuance cost, were used to pay the cost of improvements to MSD's sewer and drainage system.

On October 6, 2015, MSD issued $81.7 million of sewer and drainage system revenue bonds, series 2015B. Proceeds of the 2015B bonds, net of issuance cost and together with funds released from the reserve account were used to currently refund $87.3 million of MSD's outstanding sewer and drainage system revenue bonds, series 2006A. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding reduced debt service payments over the next 23 years by $18.4 million and resulted in a net present value savings of $12.3 million.

MSD ended fiscal 2016 with $2.1 billion in outstanding long-term debt compared to $2.0 billion in outstanding long-term debt at the end of fiscal 2015. Additional information on MSD's long-term debt can be found in Note 7 – Long-Term Debt.

Short term debt outstanding payable from restricted assets at the end of fiscal 2016 totaled $85.1 million compared to $74.7 million at the end of fiscal 2015.

Net interest expense totaled $73.8 million in fiscal 2016, an increase of $2.5 million from fiscal 2015.

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 debt service ratio tests from the 1993 Sewer and Drainage System Revenue Bond Resolution.

The 1993 resolution and its supplements require MSD to provide available revenues sufficient to pay 110% of each year's aggregate net debt service on revenue bonds and 100% of operating expenses. Available revenues, as used for purposes of the resolution, means all revenues and other amounts received by MSD and pledged as security for payment of bonds issued pursuant to the resolution, but excludes interest income which is capitalized in accordance with generally accepted accounting principles.

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

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

MSD's debt service coverage ratio, calculated on the foregoing basis, was 181% in 2017, 187% in 2016 and 188% in 2015 (see Figure 7).

Figure 7[7]

DEBT SERVICE COVERAGE

(amounts in thousands)	FY 2017	FY 2016	% Change 2016-2017	FY 2015
Total available revenues	275,282	270,025	1.9%	249,393
Total net operating expenses	87,637	87,155	0.6%	76,245
Net revenue	187,645	182,870	2.6%	173,148
Aggregate net debt service	103,699	97,592	6.3%	92,308
Debt service coverage ratio	181%	187%	(3.4%)	188%

FUTURE ECONOMIC FACTORS

The MSD Board approved a 6.9% rate increase for wastewater and stormwater volume and service charges as well as optional and quality charge rates that are assessed to commercial and industrial wastewater customers effective August 1, 2017.

On August 1, 2017 Moody's Investors Service maintained its Aa3 rating and stable outlook on MSD's $1.8 billion of outstanding sewer and drainage system revenue bonds and the MIG 1 rating on MSD's $226.3 million of outstanding subordinated bond anticipation notes. The Aa3 rating reflects MSD's large service area, stable customer base and steady debt service coverage.

S&P Global Ratings maintained its AA long-term rating to MSD's outstanding debt on August 2, 2017. S&P revised MSD's outlook to stable from positive based on their expectation that MSD's long term capital plan, while substantial, will remain manageable within the Board's approval levels.

On October 3, 2017 Moody's assigned a MIG 1 rating to MSD's $226.3 million sewer and drainage system subordinated bond anticipation notes, series 2017. Concurrently, Moody's maintained the Aa3 long-term rating and stable outlook on MSD's outstanding debt.

On October 4, 2017 S&P assigned its SP-1+ short-term rating to MSD's $226.3 million sewer and drainage system subordinated bond anticipation notes, series 2017. At the same time, they affirmed their AA long-term rating on MSD's outstanding debt.

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). The agreement calls for MSD to design and implement projects within specified deadlines that will eliminate sewer overflows in its service area. The cost of the projects is estimated to be $850 million over the next two decades. MSD has submitted plans to finance the projects through additional bonds and future rate increases. In a letter dated June 6, 2014, MSD requested approval from the KEPPC and the EPA for

[7] Excludes GASB 68 pension expense

the Integrated Overflow Abatement Plan (IOAP) 2012 Modifications, dated May 2014. The IOAP 2012 Modifications represents a revision to 28 separate projects set forth in the original IOAP, dated September 30, 2009. The IOAP modifications were approved and will supersede and replace the 2009 IOAP. To date, MSD has complied with all submittals and reports requirements contained in the amended consent decree. For additional information on the consent decree see Note 13 to the financial statements.

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.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

	2017	2016
Current Assets		
Unrestricted cash and cash equivalents	$ 42,449	$ 69,481
Unrestricted investments	10,095	100
Restricted cash and cash equivalents	19,454	5,379
Restricted investments	22,675	14,999
Accounts receivable, less allowance for doubtful accounts of $1,145 (2017), $986 (2016)	23,480	26,554
Inventories	4,184	4,210
Accrued interest receivable	1,066	1,193
Prepaid expenses and other current assets	1,811	1,991
Total current assets	125,214	123,907
Non-current Assets		
Restricted cash and cash equivalents	37,642	29,235
Restricted investments	86,550	120,212
Capital assets - plant, lines and other facilities, net	2,742,037	2,573,262
Other non-current assets	32,768	29,457
Total non-current assets	2,898,997	2,752,166
Total Assets	**$ 3,024,211**	**$ 2,876,073**
Deferred Outflow of Resources		
Deferred outflow - pension contributions	16,499	11,580
Unamortized loss on refunding	19,412	12,128
Total deferred outflow of resources	35,911	23,708
Total Assets and Deferred Outflow of Resources	**$ 3,060,122**	**$ 2,899,781**
Current Liabilities		
Current liabilities (payable from unrestricted assets):		
Accounts payable and accrued expenses	$ 16,550	$ 17,420
Current liabilities (payable from restricted assets):		
Accounts payable and accrued expenses (capital), includes contractor retainage of $14,630 (2017), $14,249 (2016)	30,764	33,271
Accrued interest payable	15,935	17,533
Refundable deposits	2,300	2,557
Current maturities of bonds payable	33,655	31,825
Total current liabilities	99,204	102,606
Non-current Liabilities		
Bonds payable, net	1,905,933	1,790,207
Subordinated debt	228,313	228,412
Net pension liability	74,132	68,653
Other long term liabilities	-	690
Total non-current liabilities	2,208,378	2,087,962
Total Liabilities	**$ 2,307,582**	**$ 2,190,568**
Deferred Inflow of Resources		
Interest rate swaps	75,760	101,832
Deferred inflow - pension liability	2,529	145
Other deferred inflows	5,763	6,656
Total deferred inflow of resources	84,052	108,633
Total Liabilities and Deferred Inflow of Resources	**$ 2,391,634**	**$ 2,299,201**
Net Position		
Net investment in capital assets	$ 562,784	$ 501,675
Restricted net position	83,667	84,639
Unrestricted net position	22,037	14,266
Total net position	668,488	600,580
Total Liabilities, Deferred Inflow of Resources and Net Position	**$ 3,060,122**	**$ 2,899,781**

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
YEARS ENDED JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

	2017	2016
Operating Revenues		
Service charges	$ 253,943	$ 238,480
Other operating income	5,691	4,810
Total operating revenues	259,634	243,290
Operating Expenses		
Service and administrative costs	87,637	87,155
GASB 68 pension expense	2,512	4,003
Depreciation and amortization	77,156	62,820
Total operating expenses	167,305	153,978
Income from Operations	92,329	89,312
Non-operating Revenue (Expenses)		
Investment income	4,047	7,559
Build America bond refund	10,226	10,332
Interest expense - bonds	(90,117)	(86,818)
Interest expense - swaps	(8,926)	(9,514)
Interest expense - other	(9,317)	(8,601)
Amortization of debt discount / premium	13,701	12,052
Amortization of loss on refunding	(3,070)	(1,949)
Capitalized interest	20,074	21,051
Change in fair value - swaps	26,072	(22,951)
Total non-operating revenue (expenses) - net	(37,310)	(78,839)
Income before capital contributions	55,019	10,473
Capital contributions	12,889	5,037
Increase in net position	67,908	15,510
Net position, beginning of year	600,580	585,070
Net position, end of year	$ 668,488	$ 600,580

See the accompanying notes to the financial statements.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF CASH FLOWS
YEARS ENDED JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

	2017	2016
Cash Flows from Operating Activities		
Cash received from customers	$ 262,055	$ 240,202
Cash paid to suppliers	(48,449)	(49,867)
Cash paid to employees	(39,851)	(35,335)
Net Cash Provided by Operating Activities	173,755	155,000
Cash Flows from Capital and Related Financing Activities		
Proceeds from issuance of debt	376,340	401,340
Premium from sale of bonds	15,715	16,887
Build America bond refund	10,226	10,332
Principal paid on debt	(271,064)	(255,291)
Interest and fees paid on debt	(103,919)	(92,246)
Interest paid on swaps	(8,926)	(9,514)
Proceeds from capital grants	6,386	91
Proceeds from sale of capital assets	10	614
Payments for capital assets	(220,892)	(213,996)
Proceeds from assessments	1,254	2,329
Assessments extended	(2,376)	-
Net Cash Provided (Used) by Capital and Related Financing	(197,246)	(139,454)
Cash Flows from Investing Activities		
Change in investments	15,990	(15,047)
Investment income	2,951	5,626
Net Cash Provided (Used) by Investing Activities	18,941	(9,421)
Net Increase (Decrease) in Cash and Cash Equivalents	(4,550)	6,125
Cash and Cash Equivalents, Beginning of Year	104,095	97,970
Cash and Cash Equivalents, End of Year	99,545	104,095
Reconciliation of Operating Income to Net Cash provided by Operating Activities		
Income from operations	92,329	89,312
Adjustments to reconcile operating income to net cash provided by operating activities		
Depreciation and amortization	77,156	62,820
Accounts receivable	2,678	(4,006)
Inventories	26	(229)
Prepaid expense	180	(303)
Accounts payable	(812)	1,502
Customer deposits	(257)	918
Accrued liabilities	2,455	4,986
Net Cash Provided by Operating Activities	$ 173,755	$ 155,000
Non-Cash Capital Financing and Investing Activities		
Contribution of plant, lines and other facilities by developers and property owners	$ 6,503	$ 4,946
Construction costs in accounts payable	30,764	33,270
Change in fair value of investments	1,924	786
Decrease in interest rate swap deferred revenue	918	918
Change in fair value - swap agreements	26,072	(22,951)
Bonds issued for refunding	96,000	81,750

See the accompanying notes to the financial statements.

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEARS ENDED JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

NOTE 1 – SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Louisville and Jefferson County Metropolitan Sewer District (MSD), a 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 the 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. 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 sewer 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. Sewer 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, but no change in the service charge schedule is final within the Louisville Metro area until approval by Louisville Metro Council. However, the statute provides that such approval may not be arbitrarily withheld and that the schedule shall be sufficient to provide revenues 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.

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 Metropolitan 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.

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 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 investments[1]. Investment income is reduced by estimated federal arbitrage liability.[2]

Operating/Non-Operating Revenues, Expenses and Receivables: Operating revenues are those revenues that are generated directly from the primary activity of MSD. These revenues are wastewater and stormwater service charges. The Louisville Water Company is responsible for the billing 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.

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.

[1] See Note 2 – Deposits and Investments
[2] See Note 7 – Long-Term Debt

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Management considers all amounts collectible on the basis that liens are placed on properties at the time of assessment.

Inventories: Inventories are stated at the lower of cost (principally weighted average cost) or market. They consist 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.

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. The revenues from contributions are part of the change in net position.

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 basis[3].

Estimated useful lives on depreciable assets are as follows:

Buildings 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	80 years

Costs incurred for capital construction and acquisition are carried in construction in progress until disposition or completion of the related projects. The major components of construction in progress are sewer lines, wastewater treatment and stormwater 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: Interest capitalized on projects funded from bond proceeds is recorded as the average cumulative expenditures multiplied by the weighted average borrowing rate.[4] Interest is not capitalized on project costs that are reimbursed by contributions of capital from government, property owners and developers.

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 manor 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

[3] See Note 5 – Capital Assets – Plant, Lines, and Other Facilities
[4] See Note 6 – Capitalized Interest

circumstance is outside the normal life cycle of the capital asset. No impairment losses were recognized in the years ended June 30, 2017 and 2016.

Bonds Payable: Bonds payable are recorded at the principal amount outstanding, net of any applicable premium or discount[5].

Bonds outstanding, which have been refunded and economically defeased, are not included in long-term debt. The related assets are not included in investments. The 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. Derivative instruments are reported at fair value as deferred inflow of resources. Changes in fair value of derivative instruments are reported in non-operating revenue (expenses) on the Statement of Revenues, Expenses and Changes in Net Position.

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.

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, 2016, MSD adopted the following GASB pronouncements:

- Statement No. 74: *Financial Reporting for Postemployment Benefits Plans Other Than Pension Plans*
- Statement No. 77: *Tax Abatement Disclosures*
- Statement No. 80: *Blending Requirements for Certain Component Units – an Amendment of GASB Statement No. 15*

[5] See Note 7 – Long-Term Debt

- Statement No. 81: *Irrevocable Split-Interest Agreements*
- Statement No. 82: *Pension Issues – An Amendment of GASB Statements No. 67, No. 68, and No. 73*

The objective for Statement No. 74: Financial Reporting for Postemployment Benefit Plans Other than Pension Plans. This Statement improves the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in general purpose external financial reports of state and local governmental other postemployment benefit plans for making decisions assessing accountability.

The objective for Statement No. 77: Tax Abatement Disclosures is to require governments that enter into tax abatement agreements to disclose a description of the tax being abated, the gross dollar amount of taxes abated during the period, and commitments made by the government other than abated taxes as part of the tax abatement agreement.[6]

The objective for Statement No. 80: Blending Requirements for Certain Component Units is to improve financial reporting by clarifying the financial statement presentation for certain component units. This Statement amends the blending requirements established in paragraph 53 of Statement No, 14: The Financial Reporting Entity, as amended.[7]

The objective of Statement No. 81: Irrevocable Split-Interest Agreements, is to improve accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement.[8]

The objective for Statement No. 82: Pension Issues—An Amendment of GASB Statements No. 67, No. 68, and No. 73. This Statement addresses certain issues that have been raised with respect to Statement No. 67, Financial Reporting for Pension Plans, No. 68, Accounting and Financial Reporting for Pensions, and No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68.

GASB Statements Nos. 74, 77, 80, 81 and 82 do not impact on MSD's financial reporting at this time.

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

- Statement No. 75: *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (fiscal 2018)*
- Statement No. 83*: Certain Asset Retirement Obligations (fiscal 2019)*

[6] Government Accounting Standards Board, Statement No, 77, page 1, from the Government Accounting Standards Board website, http://www.gasb.org/cs/ContentServer?c=Pronouncement_C&pagename=GASB%2FPronouncement_C%2FGASBSummaryPage&cid=1176166392168, accessed June 15, 2017.

[7] Government Accounting Standards Board, Statement No, 80, page 1, from the Government Accounting Standards Board website, http://www.gasb.org/cs/ContentServer?c=Pronouncement_C&pagename=GASB%2FPronouncement_C%2FGASBSummaryPage&cid=1176167883389, accessed June 15, 2017.

[8] Government Accounting Standards Board, Statement No, 81, page 1, from the Government Accounting Standards Board website, http://www.gasb.org/cs/ContentServer?c=Pronouncement_C&pagename=GASB%2FPronouncement_C%2FGASBSummaryPage&cid=1176168022710, accessed June 15, 2017.

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- Statement No. 84*: Fiduciary Activities (fiscal 2020)*
- Statement No. 85*: Omnibus 2017 (fiscal 2018)*
- Statement No. 86*: Certain Debt Extinguishment Issues (fiscal 2018)*
- Statement No. 87: *Leases (fiscal 2021)*

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

NOTE 2 - DEPOSITS AND INVESTMENTS

A comparative statement of cash, cash equivalents and investments held in MSD's portfolio follows:

June 30, 2017	Reported Value	Weighted Average Maturity in Years	Credit Rating
U S agency discount notes	$ -		
U S agency securities	27,820	1.53	Aaa
Municipal bonds	81,405	20.36	Aa
Money market funds	71,405	0.18	Aaa
Commercial paper	9,995	0.04	Prime-1
Repurchase agreement/cash	28,140		
Certificate of deposit	100		
Total	218,865	9.90	
Accrued interest	1,066		
Total cash, cash equivalents and investments	$ 219,931		

June 30, 2016	Reported Value	Weighted Average Maturity in Years	Credit Rating
U S agency discount notes	$ 37,728	0.24	Aaa
U S agency securities	5,219	1.43	Aaa
Municipal bonds	92,264	22.53	Aa
Money market funds	77,201	0.10	Aaa
Commercial paper	-		
Repurchase agreement/cash	26,894		
Certificate of deposit	100		
Total	239,406	9.90	
Accrued interest	1,193		
Total cash, cash equivalents and investments	$ 240,599		

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. MSD bond resolutions and covenants contain similar restrictions.

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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.

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 VIII of The Policy outlines the permitted investments and identifies the limitations placed on the types of investments to minimize the risk.

Interest Rate Risk: The Policy also requires that all investments have among the highest category of ratings by the nationally recognized rating agencies. Credit ratings of current applicable investments are shown in the preceding table. 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, 2017 and 2016.

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

	June 30, 2017	June 30, 2016
Cash and cash equivalents - unrestricted	$ 42,449	$ 69,481
Investments - unrestricted	10,095	100
Cash and cash equivalents - restricted	57,096	34,614
Investments - restricted	109,225	135,211
Total	$ 218,865	$ 239,406

GASB 72 requires MSD to disclose how we measure the fair value of investments and the underlying valuation techniques. A comparative statement of fair value measurements and valuation techniques follows:

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	Fair Value Measurements at June 30, 2017 Using:			
	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	$ -	$ 9,995	$ -	$ 9,995
U.S. agencies	-	27,820	-	27,820
U.S. agency discount notes	-	-	-	-
State and municipal obligations	-	81,405	-	81,405
Repurchase agreement/cash	28,140	-	-	28,140
Total investments by fair value level	$ 28,140	$ 119,220	$ -	$ 147,360

	Fair Value Measurements at June 30, 2016 Using:			
	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	$ -	$ -	$ -	$ -
U.S. agencies	-	5,219	-	5,219
U.S. agency discount notes	-	37,728	-	37,728
State and municipal obligations	-	92,264	-	92,264
Repurchase agreement/cash	26,894	-	-	26,894
Total investments by fair value level	$ 26,894	$ 135,211	$ -	$ 162,105

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.

NOTE 3 - RESTRICTED CASH, CASH EQUIVALENTS, AND INVESTMENTS

MSD's revenue bond resolution provides that MSD shall maintain in a debt service reserve account a balance equal to the maximum annual aggregate gross principal and interest due on all outstanding revenue bonds; or, in lieu of cash and investments in that amount, a letter of credit or policy of bond insurance payable in that amount. Cash, cash equivalents and investments segregated as accounts restricted for authorized construction include proceeds from issuance of MSD bonds. Total restricted cash, cash equivalents, and investments at June 30, 2017 and June 30, 2016 was $166,364 and $169,825, respectively.

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NOTE 4 - SCHEDULE OF NET POSITION

A comparative schedule of net position follows:

	2017	2016
Net investment in capital assets:		
Plant, lines and other facilities net of depreciation	$ 2,742,037	$ 2,573,262
Outstanding debt that applies to plant, lines and other facilities	(2,167,901)	(2,050,444)
Accounts payable and accrued expenses (capital)	(30,764)	(33,271)
Deferred outflows and inflows of resources	19,412	12,128
Total	562,784	501,675
Restricted for:		
Assets restricted for debt service	166,321	169,825
Liabilities associated with restricted debt service	(82,654)	(85,186)
Net position, restricted	83,667	84,639
Unrestricted net position	22,037	14,266
Total net position	$ 668,488	$ 600,580

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

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

Year ended June 30, 2017	Beginning Balance	Transfers In/ Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	$ 1,379,153	$ 4,663	$ 56,544	$ 1,440,360
Wastewater treatment facilities/goodwill	629,083	420	8,545	638,048
Stormwater drainage facilities	515,898	2,252	24,121	542,271
Pumping and lift stations	139,651	1,408	25,099	166,158
Administrative facilities	49,342	17	1,459	50,818
Maintenance facilities	8,504	-	-	8,504
Machinery and equipment	60,043	-	6,126	66,169
Miscellaneous	30,659	-	427	31,086
Capitalized interest	343,363	20,074	-	363,437
Total capital assets	3,155,696	28,834	122,321	3,306,851
Less accumulated depreciation and amortization:				
Sewer lines	(303,082)	(17,127)	-	(320,209)
Wastewater treatment facilities/goodwill	(366,714)	(26,852)	-	(393,566)
Stormwater drainage facilities	(130,488)	(10,054)	-	(140,542)
Pumping and lift stations	(55,672)	(7,401)	-	(63,073)
Administrative facilities	(35,690)	(1,717)	-	(37,407)
Maintenance facilities	(6,153)	(232)	-	(6,385)
Machinery and equipment	(57,369)	(1,220)	-	(58,589)
Miscellaneous	(24,237)	(2,699)	-	(26,936)
Capitalized interest	(90,703)	(8,626)	-	(99,329)
Total accumulated depreciation/amortization	(1,070,108)	(75,928)	-	(1,146,036)
Construction in progress	487,674	215,869	(122,321)	581,222
Net capital assets	$ 2,573,262	$ 168,775	$ -	$ 2,742,037

Capital assets include non-depreciable assets for land related to the facilities and pumping and lift stations. The carrying value was $16,160 and $14,732 at June 30, 2017 and 2016 respectively.

NOTES TO THE FINANCIAL STATEMENTS
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Year ended June 30, 2016	Beginning Balance	Transfers In/ Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	$ 1,277,745	$ 9,514	$ 91,894	$ 1,379,153
Wastewater treatment facilities/goodwill	489,292	46	139,745	629,083
Stormwater drainage facilities	448,853	396	66,649	515,898
Pumping and lift stations	96,812	2,717	40,122	139,651
Administrative facilities	49,342	-	-	49,342
Maintenance facilities	8,037	-	467	8,504
Machinery and equipment	58,335	-	1,708	60,043
Miscellaneous	27,060	42	3,557	30,659
Capitalized interest	322,312	21,051	-	343,363
Total capital assets	2,777,788	33,766	344,142	3,155,696
Less accumulated depreciation and amortization:				
Sewer lines	(287,087)	(15,995)	-	(303,082)
Wastewater treatment facilities/goodwill	(346,625)	(20,089)	-	(366,714)
Stormwater drainage facilities	(124,842)	(5,646)	-	(130,488)
Pumping and lift stations	(50,828)	(4,844)	-	(55,672)
Administrative facilities	(33,962)	(1,728)	-	(35,690)
Maintenance facilities	(5,920)	(233)	-	(6,153)
Machinery and equipment	(55,697)	(1,672)	-	(57,369)
Miscellaneous	(20,941)	(3,296)	-	(24,237)
Capitalized interest	(82,601)	(8,102)	-	(90,703)
Total accumulated depreciation/amortization	(1,008,503)	(61,605)	-	(1,070,108)
Construction in progress	623,181	208,792	(344,299)	487,674
Net capital assets	$ 2,392,466	$ 180,953	$ (157)	$ 2,573,262

NOTE 6 - CAPITALIZED INTEREST

A comparative schedule of capitalized interest and net interest expense reported in non-operating expenses in 2017 and 2016 follows:

	2017	2016
Interest incurred	$ 97,728	$ 94,830
Less interest capitalization	(20,074)	(21,051)
Interest expense, net	$ 77,654	$ 73,779

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NOTE 7 - LONG-TERM DEBT

A comparative schedule of long-term debt outstanding at June 30, 2017 and 2016 follows:

Revenue Bonds	Original Issue Amount	Interest Rates	Final Payment In	Outstanding as of: 2017	2016
2007 Sewer and Drainage System Revenue Bonds Series 2007A	61,125	4.00% - 5.00%	2025	42,965	44,425
2008 Sewer and Drainage System Revenue Bonds Series 2008A	105,000	4.00% - 5.00%	2038	65,520	97,860
2009A Sewer and Drainage System Revenue Bonds Series 2009A	76,275	5.00%	2022	13,040	41,485
2009B Sewer and Drainage System Revenue Bonds Series 2009B	225,770	2.00% - 5.00%	2023	69,725	136,115
2009C Sewer and Drainage System Revenue Bonds Series 2009C	180,000	5.98%	2040	180,000	180,000
2010A Sewer and Drainage System Revenue Bonds Series 2010A	330,000	6.25%	2043	330,000	330,000
2011A Sewer and Drainage System Revenue Bonds Series 2011A	263,360	3.00% - 5.00%	2034	252,610	254,590
2013A Sewer and Drainage System Revenue Bonds Series 2013A	115,790	4.00%	2036	115,790	115,790
2013B Sewer and Drainage System Revenue Bonds Series 2013B	119,515	4.00% - 5.00%	2038	116,940	118,255
2013C Sewer and Drainage System Revenue Bonds Series 2013C	100,000	3.00% - 5.00%	2044	99,625	99,750
2014A Sewer and Drainage System Revenue Bonds Series 2014A	80,000	4.00% - 5.00%	2045	79,900	79,950
2015A Sewer and Drainage System Revenue Bonds Series 2015A	175,000	3.125% - 5.00%	2046	174,280	175,000
2015B Sewer and Drainage System Revenue Bonds Series 2015B	81,750	2.625% - 5.00%	2038	79,085	81,350
2016A Sewer and Drainage System Revenue Bonds Series 2016A	150,000	3.00% - 5.00%	2047	150,000	-
2016B Sewer and Drainage System Revenue Bonds Series 2016B	28,315	2.00% - 5.00%	2036	28,095	-
2016C Sewer and Drainage System Revenue Bonds Series 2016C	67,685	5.00%	2023	67,685	-
Total long-term debt				1,865,260	1,754,570
Less: current maturities				(33,655)	(31,825)
Add : unamortized premium/discount				74,328	67,462
Total long-term debt, net				$ 1,905,933	$ 1,790,207

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A schedule of future debt service requirements after June 30, 2017 follows:

	Revenue Bonds		
	Principal	**Interest**	**Total**
Year ending June 30,			
2018	$ 33,655	$ 90,155	$ 123,810
2019	35,310	88,481	123,791
2020	35,715	86,719	122,434
2021	39,060	85,015	124,075
2022	41,020	83,065	124,085
2023-2027	228,010	383,820	611,830
2028-2032	197,435	324,602	522,037
2033-2037	387,915	276,363	664,278
2038-2042	554,785	167,803	722,588
2043-2047	312,355	29,239	341,594
	$ 1,865,260	$ 1,615,262	$ 3,480,522

A comparative summary of current and long-term revenue bond activity for the years ended June 30, 2017 and 2016 follows:

	2017	**2016**
Revenue bonds - beginning of year, net	$ 1,754,570	$ 1,612,805
Bonds issued	246,000	256,750
Principal paid on bonds and bond refunding	(135,310)	(114,985)
Revenue bonds - end of year, net	$ 1,865,260	$ 1,754,570

MSD long-term debt is issued to provide sufficient funding for sewer and drainage projects approved for construction. MSD has pledged all revenues to the payment of principal and interest on its outstanding revenue bonds.

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, 2017 and 2016, MSD's accrued liability for arbitrage rebate was $295 and $760, respectively.

A summary of significant debt transactions follows:

On August 30, 2016, MSD issued $150,000 of revenue bonds, series 2016A. The proceeds of the series 2016A bonds were used to: (i) pay the costs of issuing the series 2016A bonds; (ii) make a deposit to the reserve account; and (iii) make a deposit to the construction and acquisition fund to pay the costs of improvements to MSD's sewer and drainage system.

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On August 30, 2016, MSD issued $28,315 of revenue refunding bonds, series 2016B. The proceeds of the series 2016B bonds, together with certain amounts in the reserve account, were used to: (i) refund in advance of maturity $30,250 of outstanding principal amount on MSD's sewer and drainage system revenue bonds, series 2008A, maturing May 15, 2019 through May 15, 2026, the proceeds of which were used to finance the costs of improvements to MSD's sewer and drainage system, and (ii) pay the cost of issuance of the series 2016B bonds. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding reduced debt service payments over the next 20 years by $7,790 and resulted in a net present value savings of $5,349.

On August 30, 2016 MSD issued $67,685 of revenue refunding bonds, series 2016C. The proceeds of the series 2016C bonds, together with certain amounts in the reserve account, were used to: (i) refund in advance of maturity $22,350 of outstanding principal on MSD's sewer and drainage system revenue bonds, Series 2009A, maturing May 15, 2020 through May 15, 2022 and $50,665 of the outstanding principal amount on MSD's sewer and drainage system revenue bonds, series 2009B, maturing May 15, 2020 through May 15, 2023, the proceeds of which were used to refund an earlier series of bonds, which in turn were used to finance or refinance the costs of improvements to MSD's sewer and drainage system and (ii) pay the cost of issuance of the series 2016C bonds. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding reduced debt service payments over the next 7 years by $7,754 and resulted in a net present value savings of $4,774.

On October 6, 2015, MSD issued $175,000 of sewer and drainage system revenue bonds, series 2015A. Proceeds of the 2015A bonds, net of issuance cost were used to pay the cost of improvements to MSD's sewer and drainage system.

On October 6, 2015, MSD issued $81,750 of sewer and drainage system revenue bonds, series 2015B. Proceeds of the 2015B bonds, net of issuance cost and together with funds released from the reserve account were used to currently refund $87,290 of MSD's outstanding sewer and drainage system revenue bonds, series 2006A. The refunded bonds are considered defeased and the liability was removed from MSD's statement of net position. The refunding reduced debt service payments over the next 23 years by $18,420 and resulted in a net present value savings of $12,278.

Refunded bonds outstanding being paid from escrow accounts was $103,265 and $0 at June 30, 2017 and 2016, respectively.

Debt Service Covenant: A debt service coverage ratio covenant has been established under the 1993 Sewer and Drainage System Revenue Master Bond Resolution. MSD was in compliance with the ratio covenant as of June 30, 2017 and 2016.

Derivatives: At June 30, 2017 and 2016 MSD had the following derivative instruments outstanding:

Item	Counter-Party	Initial Notional Amount	Current Notional Amount	MSD Payment Terms	6/30/2017 Fair Value	6/30/2016 Fair Value	Bond Issue to which Swap Relates	Change in Fair Value
A	Wells Fargo	$180,716	$180,716	4.4215%	$ (60,594)	$ (81,445)	1999	$ 20,851
B	Bank of America	56,433	45,284	4.4215%	(15,166)	(20,387)	1999	5,221
	Total	$237,149	$226,000		$ (75,760)	$(101,832)		$ 26,072

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Both swaps have termination dates of May 15, 2033. Payments are due on the fifteenth of each month beginning December 15, 2009. MSD receipt terms are 67% of 30-day LIBOR.

A comparative summary of the change in fair value of the swaps for the years ended June 30, 2017 and 2016 follows:

	2017	2016
Fair value - beginning of year	$(101,832)	$ (78,880)
Change in fair value	26,072	(22,952)
Fair value - end of year	$ (75,760)	$(101,832)

MSD's swaps are measured at fair value using significant other observable inputs (level 2) with a mid-market derivative valuation using a 67% of LIBOR Fixed Payer Swap rate.

MSD originally entered into these interest rate swaps as a hedging derivative instrument in anticipation of refinancing the 1999 series bonds at their call date. The swaps remain in the portfolio to lower interest rate risk associated with the Bond Anticipation Note (BAN). The total of investment derivatives is reported as interest rate swaps 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). MSD's two outstanding swaps are structured so that the notional amount of the swap decreases over time corresponding to the proposed payoff of the BAN.

Credit Risk: MSD has implemented steps to safeguard it against the risks associated with the aforementioned swap transactions. If the counter-party does not maintain A1/A+ ratings from Moody's and Standard and Poor's, 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 October 2002 (A and B) swaps were awarded to multiple firms to further mitigate the credit risk associated with the transactions. The credit ratings as of June 30th, 2017 for the counter-parties 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 positive and negative fair values of the swap agreements were provided by a third-party financial advisor. The net swap payments made in fiscal 2017 and fiscal 2016 were $8,926 and $9,514, respectively.

MSD secured a $25,000 line of credit in October 2015. As of June 30, 2017 MSD does not owe anything on its line of credit.

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:

- On January 24, 2001, MSD terminated a nineteen-year interest rate swap agreement for $100,000 of its fixed-rate 1999 series sewer and drainage revenue bonds. The termination of this swap agreement resulted in the receipt of a payment in the amount of $7,935. This payment will be amortized annually into income until 2019, the original termination date on the agreement.

- In April 2006, MSD entered into a swap agreement with Deutsche Bank AG for an initial notional amount of $171,405 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 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. 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. This payment will be amortized annually into income until 2033, the original termination date of the agreement.

- In May and June of 2013, MSD terminated two floating to fixed interest rate swap agreements, two basis swap agreements and three reversal swap agreements. Additionally, MSD partially terminated two floating to fixed interest rate swap agreements. The termination value of all swap agreements resulted in a net payment by MSD of $152.0. This action will result in a savings of $13.5 over the next ten years.

NOTE 8 – BOND ANTICIPATION NOTES

On November 15, 2016 MSD issued $226,340 of sewer and drainage system subordinated bond anticipation notes (BAN), series 2016, with a coupon rate of 3.5% and an effective interest rate of 0.89%. The proceeds of the notes were used to refinance the 2015 notes. The 2016 notes mature on November 15, 2017.

On November 3, 2015 MSD issued $226,340 of sewer and drainage system subordinated bond anticipation notes, series 2015, with a coupon rate of 5.00% and an effective interest rate of 0.49%. The proceeds of the notes were used to refinance the 2014 notes. The 2015 notes matured on November 22, 2016, and were refinanced with series 2016 notes described above.

A comparative summary of subordinated debt for the years ended June 30, 2017 and 2016 follows:

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	June 30, 2017		June 30, 2016	
Subordinated debt - beginning of year	$	228,412	$	228,508
Debt incurred		226,340		226,340
Principal paid on debt		(226,439)		(226,436)
Subordinated debt - end of year	$	228,313	$	228,412

Under GASB 62, the BAN is considered a noncurrent liability because MSD intends to replace the series 2016 BAN with a new BAN in November 2017 which will extend the debt to November 2018. The BAN is used to finance capital projects.

NOTE 9 - RETIREMENT PLAN AND POSTRETIREMENT BENEFITS

General Information about the Pension 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 Retirement System (KRS), an agency of the Commonwealth. Under the provisions of Kentucky Revised Statute Section 78.520, the Board of Trustees (the Board) of KRS 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 used only for the payment of benefits to members of that plan, and a pro rata share of administrative costs.

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 KRS also administers the Kentucky Retirement Systems 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 KRS. The assets of the insurance fund are invested as a whole. KRS and the Commonwealth have statutory authority to determine Plan benefits and employer contributions.

KRS 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 Retirement System, Perimeter Park West, 1260 Louisville Road, Frankfort, Kentucky 40601, or it may be found at the KRS website at www.kyret.ky.gov.

Basis of Accounting: For purposes of measuring the net pension liability, deferred outflow of resources and deferred inflow of resources related to pensions, pension 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.

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

Nonhazardous Normal Retirement:

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.

DOLLARS IN THOUSANDS

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.

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

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

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

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

Benefit: Each year that a member is an active contributing member to the System, the member contributes 5% of creditable compensation, and the member's employer contributes 4.00% of creditable compensation, which is a portion of the total employer contribution, into a hypothetical retirement 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 previous 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.

Contributions: MSD was 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 KRS Board on the basis of an annual valuation last preceding July 1 of a new biennium. The KRS 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 KRS Board.

For the fiscal years ended June 30, 2017 and 2016, participating employers contributed 13.95% and 12.42% as set by KRS, respectively, of each nonhazardous employee's creditable compensation. Administrative costs of KRS are financed through employer contributions and investments earnings.

MSD has met 100% of its contribution funding requirement for the fiscal years ended June 30, 2017, 2016, and 2015. Employer pension contributions were $5,279 and $4,767 for the years ended June 30, 2017 and 2016.

Members whose participation began before 9/1/2008:

Nonhazardous 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%. Member entitled to a full refund of contributions with interest.

Members whose participation began on or after 9/1/2008:

Nonhazardous contributions equal to 6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KRS 401(h) account. Interest paid on the members' accounts will be set at 2.5%. Member 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 on or after 1/1/2014

Nonhazardous contribution equal to 6% of all creditable compensation, with 5% being credited to the member's account and 1% deposited to the KRS 401(h) Account. Members 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.

Healthcare Plan: The Kentucky Retirement Systems Insurance Fund ("Fund") was established to provide hospital and medical insurance for members receiving benefits from CERS, the Kentucky Employees Retirement System and the State Police Retirement System. The Fund pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal years ended June 30, 2016 and 2015, insurance premiums withheld from benefit payments for members of CERS were $22.6 and $22.6, respectively.

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Plan Information for June 30, 2017 Financial Statements:

Total Pension Liability: The total pension liability (TPL) was determined by an actuarial valuation as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25 percent
Salary increases	4.00 percent, average, including inflation
Investment rate of return	7.50 percent, net of pension plan investment expense, including inflation

The mortality table used for active members is RP-2000 Combined Mortality Table projected with Scale BB to 2013 (multiplied by 50% for males and 30% for females). For healthy retired members and beneficiaries, the mortality table used is the RP-2000 Combined Mortality Table projected with Scale BB to 2013 (set back 1 year for females). For disabled members, the RP-2000 Combined Disabled Mortality Table projected with Scale BB to 2013 (set back 4 years for males) is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted. The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2008 – June 30, 2013.

Discount rate assumptions:

(a) Discount rate: The discount rate used to measure the total pension liability was 7.50%.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate assumed that local employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 27-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 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. Several factors are considered in evaluating the long-term rate of return assumption including long term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The assumption is intended to be a long term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

(d) Municipal bond rate: The discount rate determination does not use a municipal bond rate.

(e) Periods of projected benefit payments: Projected future benefit payments for all current plan members were projected through 2117. The long-term assumed investment rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

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(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
Combined equity	44%	5.40%
Combined fixed income	19%	1.50%
Real return (diversified inflation strategies)	10%	3.50%
Real estate	5%	4.50%
Aboslute return (diversified hedge gunds)	10%	4.25%
Private equity	10%	8.50%
Cash equivalent	2%	-0.25%
	100%	

The long-term expected rate of return on pension plan assets was established by the KRS Board of Trustees at 7.50% based on a blending of the factors described above.

(g) Sensitivity Analysis: This paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents MSD's allocated portion of the net pension liability ("NPL") of the System, calculated using the discount rate of 7.50 percent, as well as what MSD's allocated portion of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.50 percent) or one percentage-point higher (8.50 percent) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
MSD's net pension liability	$ 92,380	$ 74,132	$ 58,489

Employer's Portion of the Collective Net Pension Liability: MSD's proportionate share of the Plan's net pension liability, as indicated in the prior table, is $74,132. MSD's proportionate share of the CERS plan was approximately 1.506% for nonhazardous service employees. The liability was distributed based on 2016 actual employer contributions to the plan.

Measurement Date: June 30, 2016 is the actuarial valuation date and measurement upon which the total pension liability is based.

Changes Since the Prior Measurement Date: Since the prior measurement date, the demographic and economic assumptions that affect the measurement of the total pension liability have not been updated.

Changes Since Measurement Date: The following changes in the Plan's assumptions and benefit terms will be comprehended at the next measurement date of June 30, 2017. The impact on the District's financial statements from these changes is not known.

- The assumed investment rate of return was decreased from 7.50% to 6.25%
- The salary increase assumption was decreased from 4.00% to 0.00%
- The inflation assumption was decreased from 3.25% to 2.3%

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Pension Expense: MSD's proportionated share of Plan pension expense was $9,029 for nonhazardous service employees.

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. The table below provides a summary of the deferred inflows and outflows as of the Measurement Date.

For year ending June 30, 2017:

	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	$ 324	$ -
Change of assumptions	3,927	-
Changes in proportion and differences between employer contributions and proportionate shares of contributions	-	2,529
Differences between expected and actual investment earning on plan investments	6,969	-
	11,220	2,529
Contributions subsequent to the measurement date	5,279	-
Total	$ 16,499	$ 2,529

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date will be recognized as a reduction of net pension liability in the year ending June 30, 2018. The remainder of the deferred outflow of resources is amortized over five years with remaining amortization as follows:

2018	$ 3,227
2019	2,161
2020	2,104
2021	1,199
	$ 8,691

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

Plan Information for June 30, 2016 Financial Statements:

Total Pension Liability: The TPL was determined by an actuarial valuation as of June 30, 2015, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25 percent
Salary increases	4.00 percent, average, including inflation
Investment rate of return	7.50 percent, net of pension plan investment expense, including inflation

The mortality table used for active members is RP-2000 Combined Mortality Table projected with Scale BB to 2013 (multiplied by 50% for males and 30% for females). For healthy retired members and beneficiaries, the mortality table used is the RP-2000 Combined Mortality Table projected with Scale BB to 2013 (set back 1 year for females). For disabled members, the RP-2000 Combined Disabled Mortality Table projected with Scale BB to 2013 (set back 4 years for males) is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted. The actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period July 1, 2008 – June 30, 2013.

Discount rate assumptions:

(a) Discount rate: The discount rate used to measure the total pension liability was 7.50%. The discount rate changed from 7.75% since the last measurement period.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate assumed that local employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 28-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 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. Several factors are considered in evaluating the long-term rate of return assumption including long term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The assumption is intended to be a long term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

(d) Municipal bond rate: The discount rate determination does not use a municipal bond rate.

(e) Periods of projected benefit payments: Projected future benefit payments for all current plan members were projected through 2117. The long-term assumed investment 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:

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Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Combined equity	44%	5.40%
Combined fixed income	19%	1.50%
Real return (diversified inflation strategies)	10%	3.50%
Real estate	5%	4.50%
Aboslute return (diversified hedge gunds)	10%	4.25%
Private equity	10%	8.50%
Cash equivalent	2%	-0.25%
	100%	

The long-term expected rate of return on pension plan assets was established by the KRS Board of Trustees at 7.50% based on a blending of the factors described above.

(g) Sensitivity Analysis: This paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents MSD's allocated portion of the net pension liability ("NPL") of the System, calculated using the discount rate of 7.50 percent, as well as what MSD's allocated portion of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.50 percent) or one percentage-point higher (8.50 percent) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
MSD's net pension liability	$ 87,645	$ 68,653	$ 52,389

Employer's Portion of the Collective Net Pension Liability: MSD's proportionate share of the Plan's net pension liability, as indicated in the prior table, is $68,653. MSD's proportionate share of the CERS plan was approximately 1.597% for nonhazardous service employees. The liability was distributed based on 2015 actual employer contributions to the plan.

Measurement Date: June 30, 2015 is the actuarial valuation date upon which the total pension liability is based. No update procedures were used to determine the total pension liability.

Changes in Assumptions and Benefit Terms: 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,

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the RP-2000 Combined Disabled Mortality Table projected with Scale BB to 2013 (set back 4 years for males) is used for the period after disability retirement. There is some margin in the current mortality tables for possible future improvement in mortality rates and that margin will be reviewed again when the next experience investigation is conducted.

- The assumed rates of Retirement, Withdrawal and Disability were updated to more accurately reflect experience.

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

Pension Expense: MSD's proportionated share of Plan pension expense was $7,474 for nonhazardous service employees.

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. The table below provides a summary of the deferred inflows and outflows as of the Measurement Date.

For year ending June 30, 2016:

	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	$ 571	$ -
Change of assumptions	6,923	-
Changes in proportion and differences between employer contributions and proportionate shares of contributions	-	(145)
Differences between expected and actual investment earning on plan investments	615	-
	8,109	(145)
Contributions subsequent to the measurement date	3,471	-
Total	$ 11,580	$ (145)

Deferred outflows of resources resulting from employer contributions subsequent to the measurement date will be recognized as a reduction of net pension liability in the year ending June 30, 2017. The remainder of the deferred outflow of resources is amortized over five years with remaining amortization as follows:

2017	$ 2,720
2018	2,720
2019	1,286
2020	1,238
	$ 7,964

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

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 for through various programs.

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 deductible, various liability coverages up to $5,000 per occurrence. Excess insurance may provide an additional $2,000 of coverage, above the LAGIT $5,000, 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 2017 LAGIT did not make any MSD claim payments.

In December 2016 MSD's Board authorized the Secretary/Treasurer to increase liability insurance coverage beyond the $7,000 provided by LAGIT. Two additional policies were purchased that covered the period of January 2017 through June 2017. Arch Specialty Insurance Company (A+) provided $10,000 of excess liability coverage beyond $7,000. Gemini Insurance Company (A+) provided another $10,000 of excess liability coverage beyond $17,000.

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 per occurrence and aggregate.

A roll forward of worker's compensation claims follows:

	June 30, 2017	June 30, 2016	June 30, 2015
Liability - beginning of year	$ 1,270	$ 1,755	$ 1,728
Claims and changes in estimates	1,207	474	1,063
Payments	(776)	(959)	(1,036)
Liability - end of year	$ 1,701	$ 1,270	$ 1,755

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, except for flood and vehicle collision coverage, which have separate deductibles. LAGGIT provides coverage for the next $1,000 per occurrence, except for Flood Zone A locations. An excess insurance policy with a third-party carrier covers claims in excess of $1,100.

LAGGIT increased members shared limits of liability as follows for fiscal 2017: the blanket loss limit increased from $250,000 to $500,000; the flood limit increased from $50,000 to $100,000; and the earthquake limit increased from $200,000 to $250,000.

In the past three fiscal years LAGGIT paid $1,000 on a lightning/flood claim which exceeded MSD's deductibles under the Trust. Additionally, FM Global (excess carrier) paid $5,760 on the lightning/flood claim.

NOTE 11 - DEFERRED COMPENSATION

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

NOTE 12 - COMMITMENTS AND CONTINGENCIES

Sale of Sewer Assessments: MSD has entered into agreements to sell sanitary sewer assessments to a local bank. These assessments reflect the portion of the cost that residents pay to have sewer lines installed in their neighborhood. Residents 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 of outstanding assessments and for MSD to receive 104% of the face value of the assessments.

The subsequent agreement allows an additional $5,000 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, 2017 and 2016 was $1,337 and $1,728, respectively.

EPA Consent Decree: In April 2005, MSD agreed to enter into a Consent Decree with the Commonwealth of Kentucky's Environmental and Public Protection Cabinet (The Cabinet) 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 Cabinet/EPA for review and joint approval by December 31, 2008, which was completed. The final LTCP includes schedules, deadlines, and timetables for projects to be completed by December 31, 2020. In addition, a Sanitary Sewer Discharge Plan (SSDP) was due by December 31, 2008, which was completed. The SSDP includes schedules and deadlines for capital projects to be completed by the end of 2024. The cost of the projects is estimated to be $850,000.

Also, MSD agreed to pay a civil penalty to the Commonwealth of Kentucky in the amount of one million dollars ($1,000) to resolve the violations alleged in The Cabinet's and EPA's complaints up through the date of entry of the Consent Decree. The agreement also calls for MSD to perform supplemental environmental projects (SEPS) at an amount of not less than $2,250. MSD neither admitted nor denied the alleged violations but acknowledged that discharges occurred and accepted the obligations imposed in the Consent Decree. The Consent Decree, as negotiated, was entered by the U.S. District Court Judge on August 12, 2005. 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 EPA. The agreement called for MSD to design and implement projects within specified deadlines that will eliminate sewer overflows in its service area. In a letter dated June 6, 2014, MSD requested approval from the KEPPC and the EPA for the IOAP 2012 Modifications, dated May 2014. The IOAP 2012 Modifications represent a revision to 28 separate projects set forth in the original IOAP, dated September 30, 2009. The IOAP Modifications were approved and will supersede and replace the 2009 IOAP. To date, MSD has complied with all submittals and reports requirements contained in the Amended Consent Decree. The enforcement actions initiated by the EPA are not unique in the wastewater treatment industry. Several wastewater utilities have signed, or are in the process of signing, Consent Decrees. In the opinion of MSD, the resolution of any violations will not result in material adverse effect on the operation, property or finances of MSD.

Claims and Litigation: Whittenberg Construction Company v. MSD; In the Jefferson County Circuit Court; Case No. 13-CI-000742. This is a breach of contract case stemming from the construction of a wastewater pump station and screening building at the Derek R. Guthrie Water Quality Treatment Center. Among other claims, Whittenberg contends MSD violated the terms of the construction contract pertaining to withholding of superior knowledge and that MSD's contract violates Kentucky's Fairness in Construction Act, KRS 371.425. Extensive discovery has been conducted and is on-going. Although the outcome is not certain, MSD believes it is probable that MSD could lose on these two claims and has, as such, accrued for a loss contingency as of June 30, 2017 and 2016.

MSD is a defendant in various other 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.

Construction Commitments: The value of construction contracts signed where work has not yet been performed amounted to $169,708 at June 30, 2017 and was $148,748 at June 30, 2016.

NOTE 13 - SUBSEQUENT EVENTS

On August 1, 2017, MSD's rates for wastewater and stormwater service charges increased by 6.9%.

On August 22, 2017, MSD issued $175,000 of revenue bonds (series 2017A). The proceeds of the series 2017A bonds will be used to: (i) pay the costs of issuing the series 2017A bonds; (ii) make a deposit to the reserve account; and (iii) make a deposit to the construction and acquisition fund to pay the costs of improvements to MSD's sewer and drainage system.

On August 29, 2017, MSD issued $37,725 of revenue refunding bonds (series 2017B). The proceeds of the series 2017B Bonds, together with certain amounts in the reserve account, will be used to: (i) currently refund the outstanding principal of MSD's sewer and drainage system revenue bonds, series 2007A, the proceeds of which were used to pay, or to refund earlier series of bonds issued to pay the costs of improvements to MSD's sewer and drainage system, and (ii) pay the cost of issuance of the series 2017B bonds. The refunding reduces debt service payments over the next 8 years by $9,570 and results in a net present value savings of $7,861.

REQUIRED SUPPLEMENTARY INFORMATION

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
COUNTY EMPLOYEES' RETIREMENT SYSTEM - NONHAZARDOUS
FOR THE YEARS ENDED JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY
June 30, 2017

	2017	2016	2015
MSD's proportion of the net pension liability	1.506%	1.597%	1.602%
MSD's proportionate share of the net pension liability	$ 74,132	$ 68,653	$ 51,988
MSD's covered payroll	39,596	37,900	37,100
MSD's proportion of the net pension liability as a percentage of its covered payroll	187.2%	181.1%	140.1%
Plan fiduciary net postion as a percentage of the total pension liability	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, which information is available.

Changes in Assumptions and Benefit Terms:

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

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

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

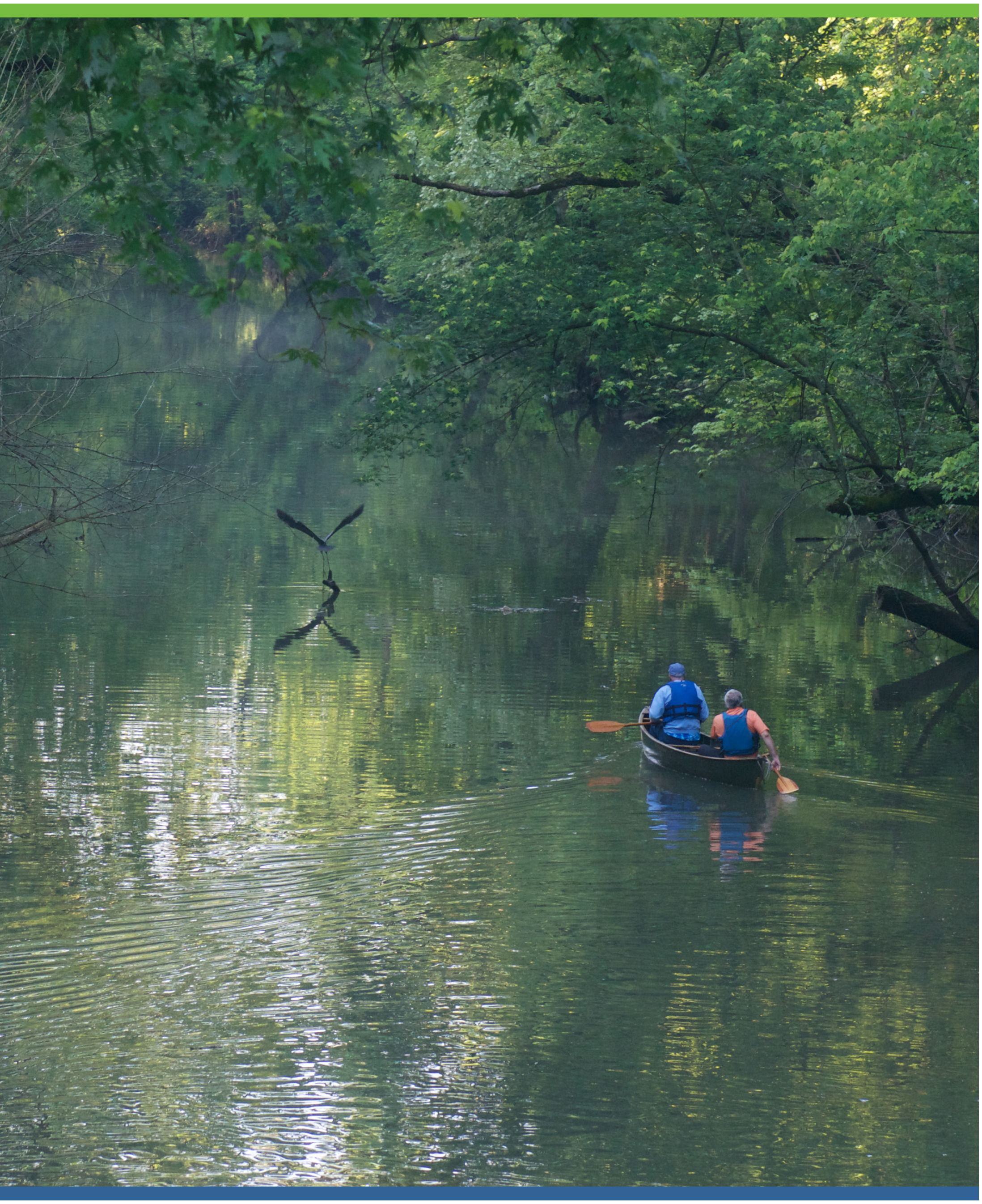
LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS
COUNTY EMPLOYEES' RETIREMENT SYSTEM - NONHAZARDOUS
FOR THE YEARS ENDED JUNE 30, 2017 AND 2016
DOLLARS IN THOUSANDS

SCHEDULE OF EMPLOYER CONTRIBUTIONS
June 30, 2017

	2017	2016	2015
Statutorily required contribution for pension	$ 5,279	$ 4,767	$ 4,576
MSD contribution in relation to the statutorily required contribution	(5,279)	(4,767)	(4,576)
Annual contribution deficiency (excess)	$ -	$ -	$ -
MSD contributions as a percentage of statutorily required contribution for pension	100%	100%	100%
MSD covered payroll	$ 43,084	$ 39,596	$ 37,900
Contributions as a percentage of MSD's covered payroll	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, which information is available.



Canoeists on Beargrass Creek startle a great blue heron from its perch.
Photo courtesy John Nation.

STATISTICAL SECTION

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

Debt Service Coverage 46

This schedule presents information to help readers assess MSD's debt burden and MSD's ability to issue additional debt in the future.

Financial Trends 47

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

Revenue Capacity 51

This schedule contains information to help readers assess MSD's most significant revenue sources.

Operating Information...52

These schedules contain service and infrastructure data to help the reader understand how the information in MSD's financial report relates to the services that it provides. The information provided includes service and administration costs, project schedules, and water treatment capacity.

Demographic and Economic Information 56

These schedules offer demographic and economic indicators to help readers understand the environment within which MSD operates.

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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Revenues:										
Service charges	$ 253,943	$ 238,480	$ 225,462	$ 214,056	$ 205,222	$ 190,482	$ 183,297	$ 168,610	$ 163,004	$ 156,889
Other operating income	5,691	4,810	4,407	2,576	4,823	1,756	2,379	2,980	4,552	4,394
Assessments	1,375	9,457	1,901	2,129	2,392	2,405	2,740	7,093	4,387	2,251
Investment income	14,273	17,278	17,623	20,330	20,119	40,687	33,700	36,045	25,568	6,085
Less: capitalized investment income	-	-	-	-	(3,817)	(1,851)	(12,134)	(5,990)	-	(1,190)
Total revenues	275,282	270,025	249,393	239,091	228,739	233,479	209,982	208,738	197,511	168,429
Operating expenses:										
Service and administrative costs[1]	119,586	117,671	106,301	106,921	108,041	108,325	107,307	101,068	93,935	96,845
Less: capitalized overhead	(31,949)	(30,516)	(30,056)	(33,568)	(33,110)	(33,200)	(30,308)	(28,129)	(25,257)	(26,510)
Capitalization Rate	27%	26%	28%	31%	31%	31%	28%	28%	27%	27%
Total operating expenses	87,637	87,155	76,118	75,246	74,931	75,125	76,999	72,939	68,678	70,335
Net revenues	187,645	182,870	173,275	163,845	153,808	158,354	132,983	135,799	128,833	98,094
Aggregate debt service:										
Current maturities of long-term debt	33,655	31,825	29,415	28,525	27,035	25,740	24,840	23,785	23,105	21,255
Interest expense	90,117	86,818	83,404	80,613	92,616	89,243	78,954	69,949	68,610	64,995
Less: capitalized interest expense	(20,074)	(21,051)	(20,511)	(19,103)	(26,358)	(26,384)	(25,195)	(13,910)	-	(10,530)
Aggregate net debt service	$ 103,698	$ 97,592	$ 92,308	$ 90,035	$ 93,293	$ 88,599	$ 78,599	$ 79,824	$ 91,715	$ 75,720
Debt service coverage ratio[2]	181%	187%	188%	182%	165%	179%	169%	170%	134%	130%

[1]Excludes GASB 68 pension expense

[2]Excludes GASB 68 pension expense

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 STATEMENT OF NET POSITION
ASSETS AND DEFERRED OUTFLOW OF RESOURCES
JUNE 30
DOLLARS IN THOUSANDS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Current Assets:										
Unrestricted cash and cash equivalents	$ 42,449	$ 69,481	$ 63,013	$ 84,780	$ 66,376	$ 12,040	$ 34,508	$ 24,700	$ 22,552	$ 10,524
Unrestricted investments	10,095	100	100	100	100	100	100	100	7,733	14,379
Restricted cash and cash equivalents	19,454	5,379	16,342	27,886	62,249	227,327	112,559	58,923	35,988	105,299
Restricted investments	22,675	14,999	-	-	90,574	94,639	294,868	394,880	61,303	27,202
Accounts receivable	23,480	26,696	23,787	21,809	18,465	16,666	17,789	15,779	18,065	16,732
Inventories	4,184	4,210	3,981	3,808	3,579	3,484	3,435	3,110	3,027	3,020
Prepaid expenses and other current assets	2,877	3,184	2,880	2,636	2,110	1,862	2,841	2,513	1,965	2,020
Total current assets	**125,214**	**124,049**	**110,103**	**141,019**	**243,453**	**356,118**	**466,100**	**500,005**	**150,633**	**179,176**
Plant, Lines and Other facilities:										
Completed projects	3,306,851	3,155,696	2,777,788	2,753,762	2,702,448	2,560,403	2,498,355	2,445,755	2,314,406	2,281,413
Less: Accumulated depreciation	(1,146,036)	(1,070,108)	(1,008,503)	(946,427)	(884,199)	(825,205)	(768,423)	(734,552)	(680,380)	(628,296)
	2,160,815	2,085,588	1,769,285	1,807,335	1,818,249	1,735,198	1,729,932	1,711,203	1,634,026	1,653,117
Construction in progress	581,222	487,674	623,181	463,167	371,816	370,350	272,850	140,134	182,711	136,695
Net plant, lines and other facilities	2,742,037	2,573,262	2,392,466	2,270,502	2,190,065	2,105,548	2,002,782	1,851,337	1,816,737	1,789,812
Other non-current assets	156,960	178,762	169,587	167,537	36,262	35,876	36,611	35,945	99,623	59,039
Total non-current assets	**2,898,997**	**2,752,024**	**2,562,053**	**2,438,039**	**2,226,327**	**2,141,424**	**2,039,393**	**1,887,282**	**1,916,360**	**1,848,851**
Total assets	**3,024,211**	**2,876,073**	**2,672,156**	**2,579,058**	**2,469,780**	**2,497,542**	**2,505,493**	**2,387,287**	**2,066,993**	**2,028,027**
Deferred outflow of resources	35,911	23,708	20,407	22,862	13,511	15,176	16,842	18,507	14,743	16,020
Total assets and deferred outflows	**$ 3,060,122**	**$ 2,899,781**	**$ 2,692,563**	**$ 2,600,721**	**$ 2,483,291**	**$ 2,512,718**	**$ 2,522,335**	**$ 2,405,794**	**$ 2,081,736**	**$ 2,044,047**

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

COMPARATIVE STATEMENT OF NET POSITION

LIABILITIES, DEFERRED INFLOW OF RESOURCES AND NET POSITION

JUNE 30

DOLLARS IN THOUSANDS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Liabilities:										
Current liabilities (payable from current assets):										
Accounts payable and accrued expenses	$ 16,550	$ 17,420	$ 14,936	$ 13,653	$ 12,693	$ 16,470	$ 15,732	$ 11,141	$ 11,035	$ 10,548
Total current liabilities (payable from current assets)	16,550	17,420	14,936	13,653	12,693	16,470	15,732	11,141	11,035	10,548
Current liabilities (payable from restricted assets):										
Accounts payable and accrued expenses	30,764	33,271	30,607	14,712	16,168	12,656	15,105	13,692	7,735	5,250
Accrued interest	15,935	17,533	13,036	12,834	12,458	13,959	12,360	14,701	8,143	8,597
Current maturities of bonds payable	33,655	31,825	29,415	28,525	27,035	25,740	24,840	23,785	23,105	21,255
Refundable Deposits	2,300	2,557	1,639	1,568	1,137	1,013	1,341	1,622	3,478	4,209
Total current liabilities (payable from restricted assets)	82,654	85,186	74,697	57,639	56,798	53,368	53,646	53,800	42,461	39,311
Non-current liabilities:										
Bonds payable	1,831,605	1,722,745	1,583,390	1,549,700	1,478,225	1,536,770	1,591,670	1,302,000	1,385,185	1,421,825
Subordinated Debt	228,313	228,412	228,508	228,601	228,691	226,340	226,340	452,680	-	-
Unamortized debt premium/discount	74,328	67,462	60,797	60,263	56,764	45,841	25,646	9,562	8,912	16,685
Net Pension Liability	74,132	68,653	51,988	58,825	-	-	-	-	-	-
Other long-term liabilities	-	690	944	761	973	5,663	5,561	1,630	2,114	2,375
Total long-term debt	2,208,378	2,087,962	1,925,627	1,898,150	1,764,653	1,814,614	1,849,217	1,765,872	1,396,211	1,440,885
Total liabilities	2,307,582	2,190,568	2,015,260	1,969,442	1,834,144	1,884,452	1,918,595	1,830,813	1,449,707	1,490,744
Deferred inflow of resources	84,052	108,633	92,233	82,293	82,233	119,680	67,948	82,185	74,942	2,784
Net position:										
Net investment in capital assets	562,784	501,675	506,187	418,784	365,225	313,575	363,334	450,753	470,445	478,833
Restricted for payment of bond principal & interest	83,667	84,639	80,424	148,451	136,939	157,002	141,217	334,186	100,225	135,537
Unrestricted	22,037	14,266	(1,541)	(18,249)	64,750	38,009	31,241	(292,143)	(13,583)	(63,851)
Total net assets	668,488	600,580	585,070	548,986	566,914	508,586	535,792	492,796	557,087	550,519
Total liabilities, deferred inflows and net position	**$ 3,060,122**	**$ 2,899,781**	**$ 2,692,563**	**$ 2,600,721**	**$ 2,483,291**	**$ 2,512,718**	**$ 2,522,335**	**$ 2,405,794**	**$ 2,081,736**	**$ 2,044,047**

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

COMPARATIVE STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

YEARS ENDED JUNE 30

DOLLARS IN THOUSANDS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Operating revenue:										
Wastewater service charges	$ 194,965	$ 183,592	$ 173,895	$ 165,599	$ 159,791	$ 149,626	$ 145,880	$ 133,853	$ 130,661	$ 125,782
Stormwater service charges	58,978	54,888	51,567	48,457	45,431	40,856	37,417	34,757	32,343	31,107
Other operating income	5,691	4,810	4,407	2,576	4,823	1,756	2,379	2,980	4,552	4,394
Total operating revenue	259,634	243,290	229,869	216,632	210,045	192,238	185,676	171,590	167,556	161,283
Operating expenses:										
Service and administrative costs	122,098	121,674	106,174	106,921	108,041	108,326	107,307	101,068	93,935	96,845
Capitalization/recovery of cost	(31,949)	(30,516)	(30,056)	(33,568)	(32,200)	(30,860)	(30,472)	(28,129)	(24,401)	(26,510)
Capitalized overhead (over) under applied	-	-	-	-	(910)	(2,340)	164	(2,988)	(856)	-
Depreciation and amortization	77,156	62,820	63,321	63,516	60,335	60,527	58,741	58,513	56,727	55,363
Total operating expenses	167,305	153,978	139,439	138,762	135,266	135,653	135,740	128,464	125,405	125,698
Income (loss) from operations	92,329	89,312	90,430	77,870	74,779	56,585	49,936	43,126	42,151	35,585
Non-operating revenue (expense):										
Gain (loss) on disposal of assets	10	614	-	-	45	(19)	194	-	(64)	(122)
Investment Income	14,263	17,278	17,623	20,330	16,301	40,687	33,700	36,045	25,568	4,895
Interest expense - bonds	(90,117)	(86,818)	(83,404)	(80,613)	(92,616)	(89,243)	(78,954)	(69,949)	(69,893)	(64,995)
Interest expense - swaps	(8,926)	(9,514)	(9,737)	(9,733)	(10,200)	(11,235)	(11,627)	(8,815)	(2,883)	(1,922)
Interest expense - other	1,314	1,501	1,296	115	241	437	(1,833)	(3,723)	-	-
Capitalized Interest	20,074	21,051	20,511	19,103	26,358	26,384	25,195	13,910	-	10,530
Decrease upon hedge termination	-	-	-	-	-	-	-	(58,556)	-	-
Change in fair values - swaps	26,072	(22,951)	(5,240)	(1,222)	36,286	(52,897)	22,638	(19,889)	-	-
Total non-operating revenue (expenses), net	(37,310)	(78,839)	(58,951)	(52,020)	(23,585)	(85,886)	(10,687)	(110,977)	(47,272)	(51,614)
Net income / (loss) before contributions	55,019	10,473	31,479	25,850	51,194	(29,301)	39,249	(67,851)	(5,121)	(16,029)
Contributions										
Property owner assessments	2,376	-	-	-	-	-	334	(545)	2,239	164
All other	10,513	5,037	4,605	8,103	7,134	2,095	3,413	4,105	9,450	15,011
Increase (decrease) in net position	67,908	15,510	36,084	33,953	58,328	(27,206)	42,996	(64,291)	6,568	(854)
Net position, beginning of year	600,580	585,070	548,986	515,033	508,586	535,792	492,796	557,087	550,519	551,374
Net position, end of year	$ 668,488	$ 600,580	$ 585,070	$ 548,986	$ 566,914	$ 508,586	$ 535,792	$ 492,796	$ 557,087	$ 550,520

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

COMPARATIVE STATEMENTS OF CASH FLOWS

YEARS ENDED JUNE 30

DOLLARS IN THOUSANDS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Cash flows from operating activities:										
Cash received from customers	$ 262,055	$ 240,202	$ 227,976	$ 213,215	$ 207,905	$ 193,446	$ 182,976	$ 171,641	$ 166,123	$ 159,539
Cash paid to suppliers and employees	(88,300)	(85,202)	(75,258)	(73,175)	(79,926)	(76,077)	(72,566)	(72,426)	(66,297)	(72,227)
Net cash provided by operating activities	173,755	155,000	152,718	140,040	127,979	117,369	110,410	99,215	99,826	87,312
Cash flows from capital and related financing activities:										
Proceeds from issuance of revenue bonds	150,000	175,000	80,000	100,000	115,790	263,360	330,000	405,770	76,275	166,125
Proceeds from subordinated debt	226,340	226,340	226,340	226,340	228,735	226,340	226,340	452,680	-	-
Premium from sale of bonds	15,715	16,887								
Build America bond refund	10,226	10,332	10,096	10,096	10,986	10,986	7,978	2,260	-	-
Principal paid on debt	(271,064)	(255,291)	(271,853)	(253,465)	(399,424)	(543,700)	(491,955)	(488,275)	(95,045)	(84,350)
Interest and fees paid on debt	(103,919)	(92,246)								
Interest paid on swaps	(8,926)	(9,514)	(9,737)	(9,733)	(10,200)	(11,235)	(11,627)	(8,832)	(4,166)	-
Proceeds from capital grants	6,386	91								
Proceeds from sale of capital assets	10	614								
Payments for capital assets	(220,892)	(213,996)								
Proceeds from assessments	1,254	2,329								
Assessments extended	(2,376)	-								
Capital contributed by governments, property owners & developers	-	-	4,605	8,103	7,134	2,095	3,747	3,560	11,689	15,174
Assessments receivable	-	-	2,050	1,695	1,833	1,930	1,676	2,998	557	2,703
Interest income - assessments	-	-	340	687	731	852	994	1,588	1,471	1,405
Interest paid on revenue bonds	-	-	(87,813)	(91,719)	(98,944)	(94,240)	(86,191)	(70,192)	(69,063)	(69,145)
Acquisition and construction of capital assets	-	-	(147,842)	(121,237)	(113,144)	(119,988)	(167,816)	(86,590)	(75,970)	(80,614)
Acquisition of non-operating property	-	-	(247)	(211)	(223)	(213)	(221)	(484)	(261)	(257)
Net cash provided (used) by capital and related financing activities	(197,246)	(139,454)	(194,061)	(129,444)	(256,726)	(263,813)	(187,075)	214,483	(154,513)	(48,959)
Cash flows from investing activities:										
Change in investments	15,990	(15,047)	1,052	(30,642)	4,064	200,229	100,012	(325,944)	(27,455)	56,211
Investment income	2,951	5,626	13,974	15,708	13,941	38,515	40,097	37,329	24,859	16,214
Net cash provided (used) by investing activities	18,941	(9,421)	15,026	(14,934)	18,005	238,744	140,109	(288,615)	(2,596)	72,425
Net increase (decrease) in cash and cash equivalents	(4,550)	6,125	(26,317)	(4,338)	(110,742)	92,300	63,444	25,083	(57,283)	110,778
Cash and cash equivalents, beginning of year	104,095	97,970	124,287	128,625	239,367	147,067	83,623	58,540	115,823	5,045
Cash and cash equivalents, end of year	$ 99,545	$ 104,095	$ 97,970	$ 124,287	$ 128,625	$ 239,367	$ 147,067	$ 83,623	$ 58,540	$ 115,823

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

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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Service charges:										
Wastewater service charges:										
Residential	$ 108,809	$ 101,405	$ 96,563	$ 89,691	$ 86,409	$ 80,779	$ 78,552	$ 73,228	$ 71,159	$ 64,978
Commercial	61,860	58,343	62,257	58,812	57,192	53,116	46,598	42,741	42,312	38,935
Industrial	21,218	19,878	17,605	19,738	19,536	18,063	21,498	18,948	18,216	21,324
Other - net	6,853	8,186	2,806	2,611	2,267	2,219	1,847	1,756	1,601	2,382
Free sewer to Metro Government	(3,775)	(4,220)	(5,336)	(5,253)	(5,613)	(4,551)	(2,615)	(2,820)	(2,627)	(1,837)
Total wastewater service charges	194,965	183,592	173,895	165,599	159,791	149,626	145,880	133,853	130,661	125,782
Stormwater service charges:										
Residential	22,111	20,439	20,090	18,522	17,372	15,907	14,776	13,613	12,709	12,198
Commercial	35,372	32,971	28,936	27,910	26,123	23,017	20,862	19,433	18,012	17,276
Industrial	3,445	3,219	3,030	3,112	2,956	2,575	2,351	2,189	2,064	1,988
Free drainage to Metro Government	(1,950)	(1,741)	(489)	(1,087)	(1,020)	(643)	(572)	(478)	(442)	(355)
Total stormwater service charges	58,978	54,888	51,567	48,457	45,431	40,856	37,417	34,757	32,343	31,107
Total service charges	253,943	238,480	225,462	214,056	205,222	190,482	183,297	168,610	163,004	156,889
Other operating income:										
Capacity charges	3,318	2,087	2,667	1,620	1,624	335	446	564	820	2,521
Connection fees	(723)	1,118	379	133	93	64	71	68	47	172
Regional facilities fees	-	16	34	-	-	-	-	-	-	-
Reserve capacity charges	-	-	-	-	64	-	-	11	28	37
Wastewater miscellaneous	3,096	1,589	1,327	823	2,984	1,299	1,804	2,279	3,599	1,606
Stormwater miscellaneous	-	-	-	-	58	58	58	58	58	58
Total other operating income	5,691	4,810	4,407	2,576	4,823	1,756	2,379	2,980	4,552	4,394
Total operating revenue	$ 259,634	$ 243,290	$ 229,869	$ 216,632	$ 210,045	$ 192,238	$ 185,676	$ 171,590	$ 167,556	$ 161,283

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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Service and administrative costs:										
Labor	$ 59,183	$ 55,229	$ 54,378	$ 55,356	$ 55,028	$ 55,010	$ 56,358	$ 52,945	$ 49,354	$ 49,431
Utilities	14,427	18,256	13,817	14,563	12,821	14,555	13,853	11,879	10,818	12,989
Materials and supplies	7,976	4,183	9,706	8,151	8,990	8,972	9,043	9,031	8,742	8,707
Professional services	4,127	4,169	2,839	1,932	3,942	2,416	2,624	2,363	2,730	3,126
Maintenance and repairs	9,116	10,007	7,915	9,096	10,866	11,090	10,054	8,847	9,675	8,926
Billing and collections	5,467	4,853	4,327	4,095	4,904	4,309	4,318	4,461	3,623	5,319
Chemicals and fuel	6,375	5,697	5,297	5,143	5,907	5,714	5,702	6,099	5,687	5,148
Biosolids disposal	2,651	2,245	1,967	1,795	1,709	1,759	2,035	2,186	2,063	1,661
All other	11,142	13,960	6,520	7,238	4,369	4,901	3,694	3,638	2,817	2,800
Service and administrative costs[1]	120,464	118,599	106,766	107,369	108,536	108,726	107,681	101,449	95,509	98,107
Less: Recovery of cost										
Capitalized project cost	(31,949)	(30,516)	(30,056)	(33,568)	(33,110)	(33,200)	(30,472)	(28,129)	(24,401)	(26,510)
Revenue recoveries	(878)	(928)	(465)	(448)	(495)	(400)	(374)	(381)	(1,574)	(1,262)
Recovery of cost	(32,827)	(31,444)	(30,521)	(34,016)	(33,605)	(33,600)	(30,846)	(28,510)	(25,975)	(27,772)
Net service and administrative costs	$ 87,637	$ 87,155	$ 76,245	$ 75,246	$ 74,931	$ 75,126	$ 76,835	$ 72,939	$ 69,534	$ 70,335

[1]Excludes GASB 68 pension expense

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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Completed projects										
Sewer lines	$ 1,440,360	$ 1,379,153	$ 1,277,745	$ 1,274,180	$ 1,265,437	$ 1,179,685	$ 1,159,437	$ 1,134,637	$ 1,042,742	$ 1,022,859
Wastewater treatment facilities	638,048	629,083	489,292	489,289	479,998	479,226	471,190	470,527	459,238	456,955
Stormwater drainage facilities	542,271	515,898	448,853	448,899	443,577	437,139	434,943	427,431	400,118	390,699
Pumping and lift stations	166,158	139,651	96,812	96,819	89,503	73,023	71,122	70,643	69,301	66,990
Administrative facilities	50,818	49,342	49,342	49,342	49,317	46,068	46,078	45,561	45,561	45,561
Maintenance facilities	8,504	8,504	8,037	8,037	8,037	8,037	8,037	7,827	7,827	7,833
Machinery, equipment and other	97,255	90,702	85,395	85,395	83,882	77,068	71,923	93,240	74,975	75,872
Capitalized interest	363,437	343,363	322,312	301,800	282,697	260,157	235,624	222,564	214,644	214,644
Total completed projects	3,306,851	3,155,696	2,777,788	2,753,761	2,702,448	2,560,403	2,498,354	2,472,430	2,314,406	2,281,413
Less accumulated depreciation	(1,146,036)	(1,070,108)	(1,008,503)	(946,426)	(884,199)	(825,205)	(768,423)	(734,552)	(680,380)	(628,296)
Total completed projects - net	2,160,815	2,085,588	1,769,285	1,807,335	1,818,249	1,735,198	1,729,931	1,737,878	1,634,026	1,653,117
Total construction in progress	581,222	487,674	623,181	463,167	371,816	370,350	272,850	140,134	182,711	136,695
Total net plant, lines and other facilities	$ 2,742,037	$ 2,573,262	$ 2,392,466	$ 2,270,502	$ 2,190,065	$ 2,105,548	$ 2,002,781	$ 1,878,012	$ 1,816,737	$ 1,789,812

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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Miscellaneous Operating Indicators										
Miles of sewers	3,322	3,293	3,240	3,263	3,240	3,332	3,200	3,207	3,197	3,200
Number of treatment plants	5	5	16	19	19	20	20	21	21	21
Number of service connections	280,489	280,063	253,462	240,174	239,334	235,136	230,240	228,580	226,711	226,430
Daily average treatment (MGD)	112	139	143	141	131	145	142	143	127	152
Daily treatment capacity (MGD)	170	170	177	177	177	173	173	174	174	174

MGD - millions of gallons per day

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
WASTEWATER TREATMENT PLANT CAPACITY
2017

Plant	Design Capacity MGD	Avg Daily Flow MGD	Eventual Capacity MGD	Customer Base Residential	Commercial	Industrial	Total	Year Built	Treatment Process
Morris Forman	120.0	72.3	120.0	131,304	15,594	365	147,263	1958	Secondary added in 1972.
Derek R. Guthrie*	30.0	28.3	65.0	65,530	3,933	24	69,487	1986	Secondary
Hite Creek	6.0	4.4	9.0	10,427	630	8	11,065	1970	Tertiary: sand filter
Cedar Creek	7.5	4.5	11.3	17,248	1,119	9	18,376	1995	Tertiary: sand filter
Floyd's Fork	6.5	3.2	9.8	8,337	378	1	8,716	2001	Tertiary: sand filter
Total treatment system	170.0	112.8	215.0	232,846	21,654	407	254,907		

* Formerly known as the West County WTP
** Jeffersontown was eliminated in December 2015
Source: MSD Engineering Department

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
GREATER LOUISVILLE, KENTUCKY / INDIANA
EMPLOYERS OF 1,000 EMPLOYEES OR MORE

	2017		2016		2015		2014		2013		2012		2011		2010		2009		2008			
Employers	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees	Rank	Employees		Type of business
United Parcel Service, Inc.	1	22,354	1	22,080	1	22,189	1	20,931	1	20,047	1	20,117	1	20,388	1	20,125	1	20,513	1	20,560	P	Air cargo transport and distribution
Jefferson County, KY Public Schools	2	14,553	2	14,739	2	14,719	2	14,676	2	14,269	2	14,366	2	13,840	2	13,964	2	13,326	2	13,917	G	Primary and secondary education
Ford Motor Company	3	12,600	3	12,990	5	9,028	5	8,987	6	8,512	5	8,696	11	3,847	9	5,397	8	5,624	6	5,929	P	Vehicle manufacturing
Humana, Inc.	4	12,500	4	12,500	3	12,900	3	12,371	3	11,235	3	11,000	3	10,017	3	9,400	3	10,096	3	9,854	P	Group health insurance/HMOs
Norton Healthcare (formerly Alliant Health)	5	11,944	5	11,389	4	10,739	4	10,245	4	9,666	4	9,658	4	9,421	4	8,698	4	8,142	4	7,978	N	Hospital and health care facilities
University of Louisville	6	7,065	7	6,375	6	6,264	7	6,161	7	6,187	6	6,273	6	5,746	5	6,352	6	6,135	7	5,866	G	Higher education
Baptist Healthcare System	7	6,786	10	4,995	9	5,116	11	5,339	11	4,854	11	4,219	12	3,752	12	3,889	12	3,305	12	3,089	N	Hospital and health care facilities
Amazon.com	8	6,500	6	6,500	7	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Logistics & Customer Service
Louisville-Jefferson County Metro Government	9	6,192	8	6,095	8	5,584	8	5,654	9	5,651	8	5,689	7	5,706	7	5,765	7	5,811	8	5,639	G	City/County Government
General Electric Company	10	6,000	9	6,000	7	6,000	6	6,230	8	6,000	9	5,000	10	3,988	11	4,100	11	4,000	9	5,000	P	Appliance manufacturing
Kentucky One Health Inc (formerly Jewish Hosp)	10	6,000	9	6,000	7	6,000	9	5,602	5	8,893	7	5,898	5	5,819	6	5,782	5	6,500	5	6,203	N	Hospital and health care facilities
The Kroger Company	12	3,079	11	4,626	10	4,892	10	5,417	10	5,152	-	-	-	-	-	-	-	-	-	-	P	Grocery Retailer
Roman Catholic Archdiocese of Louisville	13	2,660	17	2,263	17	2,237	14	2,260	14	2,345	13	2,352	15	2,416	17	2,142	17	2,343	15	2,351	N	Religious, educational, social services
Manna Inc	14	2,600	12	3,120	13	2,400	16	2,250	-	-	-	-	-	-	-	-	-	-	-	-	P	Food service provider
Charter Communications	15	2,400	33	1,200	35	1,131	34	1,200	-	-	-	-	-	-	-	-	-	-	-	-	P	Call Center
Kindred Healthcare (formerly Vencor Inc.)	16	2,216	16	2,381	16	2,244	17	2,249	17	2,130	15	2,252	18	2,297	16	2,224	18	2,153	19	2,079	P	Long-term health care, facilities
LG&E and KU Energy (formerly EON)	17	2,201	18	2,211	18	1,993	18	2,178	16	2,131	16	2,066	19	1,976	19	1,976	20	1,902	-	-	P	Gas & Electric Utility
Papa John's International	18	2,088	19	2,088	30	1,279	25	1,503	35	1,143	-	-	-	-	-	-	-	-	-	-	P	Quick service restaurant
ResCare Inc	19	1,948	14	2,435	28	1,312	35	1,054	-	-	-	-	-	-	-	-	-	-	-	-	P	Health care provider
U.S. Postal Service	20	1,896	23	1,659	12	2,401	13	2,546	13	2,509	-	-	14	2,653	18	1,991	14	2,626	14	2,651	G	Mail distribution
Robley Rex VA Medical Center	21	1,800	21	1,900	19	1,800	20	1,703	18	1,799	18	1,728	22	1,671	24	1,596	-	-	-	-	N	Hospital and health care facilities
Bullitt County Public Schools	22	1,718	22	1,739	21	1,671	22	1,633	21	1,629	-	-	-	-	-	-	-	-	-	-	G	Primary and secondary education
Oldham County Public Schools	23	1,638	24	1,604	15	2,300	23	1,576	22	1,602	19	1,690	21	1,689	28	1,500	25	1,568	25	1,519	G	Primary and secondary education
Signature Healthcare	24	1,558	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	Post-acute and long-term care provider
Churchill Downs Inc.	25	1,526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Racing, gaming and online entertainment
New Albany - Floyd County Schools	26	1,405	25	1,600	22	1,622	21	1,648	20	1,640	-	-	-	-	-	-	-	-	-	-	G	Primary and secondary education
Centerstone of Kentucky (formerly Seven Counties)	27	1,340	36	1,165	34	1,168	33	1,129	36	1,111	30	1,215	32	1,202	40	1,187	36	1,118	40	1,110	N	Health care provider
Rawlings Group	28	1,332	30	1,211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Insurance subrogation
Texas Roadhouse Inc.	29	1,320	35	1,179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Food service provider
Yum! Brands Inc. (formerly Tricon)	30	1,314	28	1,343	32	1,226	30	1,270	23	1,544	22	1,558	23	1,640	21	1,757	19	2,076	18	2,243	P	Food service provider
Brown-Forman Corp.	31	1,304	29	1,300	31	1,266	31	1,256	32	1,244	31	1,196	34	1,184	37	1,240	37	1,081	35	1,256	P	Distilled spirits manufacturing
Greater Clark County, IN School Corp.	32	1,295	32	1,247	24	1,447	24	1,303	30	1,357	27	1,346	28	1,364	30	1,395	27	1,409	27	1,491	G	Primary and secondary education
Horseshoe Southern IN (formerly Caesars')	33	1,239	31	1,252	29	1,303	29	1,404	26	1,418	25	1,437	31	1,244	26	1,540	22	1,697	21	1,858	P	Gaming and entertainment resort
Anthem, Inc.	34	1,238	29	1,300	26	1,350	32	1,139	37	1,100	34	1,122	35	1,150	36	1,276	29	1,358	31	1,381	P	Health Insurance sales and services
Samtec Inc.	35	1,200	29	1,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Electronic connectors & microelectronics products
JBS USA	36	1,189	34	1,180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Pork Products
US Census Bureau	37	1,185	38	1,037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	Government
PNC Bank	38	1,175	26	1,500	23	1,569	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Financial Services
Faurecia	39	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Exhaust systems, interiors & seat systems
Al J Schneider Co	39	1,000	37	1,047	37	1,000	36	1,050	-	-	-	-	-	-	-	-	-	-	-	-	P	Hotel / Restaurants
Shelby County Public Schools	39	1,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G	Primary and secondary education
Commonwealth of Kentucky	-	-	13	2,514	11	3,794	12	4,042	12	4,161	10	4,232	9	4,488	10	4,361	10	4,253	11	4,498	G	General purpose government
U.S. Federal Government	-	-	15	2,406	14	2,397	15	2,252	15	2,191	12	2,676	13	2,855	13	3,575	13	2,985	13	2,853	G	General purpose government
Floyd Memorial Hospital & Health Services	-	-	20	1,950	20	1,756	19	1,769	19	1,711	20	1,612	24	1,546	29	1,473	32	1,338	33	1,316	P	Hospital and health services provider
Publishers Printing Company	-	-	27	1,400	25	1,413	28	1,432	24	1,516	24	1,450	27	1,367	27	1,500	23	1,600	20	1,860	P	Trade, professional, special printing
Clark Memorial Hospital	-	-	33	1,225	33	1,225	30	1,270	-	-	-	-	-	-	-	-	-	-	-	-	P	Health care provider
Securitas Security Services USA Inc.	-	-	-	-	27	1,328	26	1,476	25	1,476	21	1,598	33	1,191	41	1,150	35	1,150	-	-	P	Security Services
American Commercial Lines	-	-	-	-	36	1,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	Marine Transportation Service
Total employees		161,358		164,045		155,163		144,205		136,223		120,446		114,457		115,355		114,109		112,501		

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

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
LOUISVILLE/JEFFERSON COUNTY PRINCIPAL EMPLOYERS

Employer	Employees	2017 Rank	Percentage of Total Employment
United Parcel Service, Inc.	22,354	1	3.32%
Jefferson County, KY Public Schools	14,553	2	2.16%
Ford Motor Company	12,600	3	1.87%
Humana, Inc.	12,500	4	1.86%
Norton Healthcare (formerly Alliant Health)	11,944	5	1.77%
University of Louisville	7,065	6	1.05%
Baptist Healthcare System	6,786	7	1.01%
Amazon.com	6,500	8	0.97%
Louisville-Jefferson County Metro Government	6,192	9	0.92%
General Electric Company	6,000	10	0.89%
Kentucky One Health Inc (formerly Jewish Hosp)	6,000	10	0.89%
Total	112,494		16.71%
Total Employment (MSA) Louisville, KY-IN	673,300		

Employer	Employees	2008 Rank	Percentage of Total Employment
United Parcel Service, Inc.	20,560	1	3.33%
Jefferson County, KY Public Schools	13,917	2	2.25%
Humana, Inc.	9,854	3	1.60%
Norton Healthcare (formerly Alliant Health)	7,978	4	1.29%
Kentucky One Health Inc (formerly Jewish Hosp)	6,203	5	1.00%
Ford Motor Company	5,929	6	0.96%
University of Louisville	5,866	7	0.95%
Louisville-Jefferson County Metro Government	5,639	8	0.91%
General Electric Company	5,000	9	0.81%
Commonwealth of Kentucky	4,498	10	0.73%
	85,444		13.83%
Total Employment (MSA) Louisville, KY-IN	617,700		

Source: U.S. Census Bureau (census.gov)
Source: Workforce Kentucky Website (www.workforcekentucky.ky.gov)
Source: Bureau of Labor Statistics (www.bls.gov)

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
ROLE OF OUTSTANDING DEBT AND MISCELLANEOUS DEMOGRAPHIC INFORMATION

Fiscal Year	Revenue Bonds *(In 000's)*	Population*	Personal Income***	Percentage of Personal Income	Unemployment Rate**	# of MSD Employees	# of MSD Service Connections	Miles of Sewer Line
2008	$ 1,443,080	730,194	$ 30,196,557	4.78%	6.4%	625	226,430	3,200
2009	$ 1,408,290	736,705	$ 29,191,601	4.82%	10.4%	633	226,711	3,197
2010	$ 1,325,785	742,324	$ 29,921,911	4.43%	9.8%	651	228,580	3,207
2011	$ 1,616,510	746,372	$ 31,154,544	5.19%	9.9%	655	230,240	3,200
2012	$ 1,562,510	750,828	$ 32,592,092	4.79%	8.4%	666	235,136	3,232
2013	$ 1,505,260	756,832	$ 33,314,513	4.52%	8.2%	649	239,334	3,240
2014	$ 1,578,225	760,026	$ 34,609,792	4.56%	6.4%	606	240,174	3,263
2015	$ 1,612,805	763,623	$ 34,575,582	4.66%	4.9%	591	253,462	3,288
2016	$ 1,754,570	765,352	N/A	N/A	4.6%	617	280,063	3,293
2017	$ 1,865,260	N/A	N/A	N/A	4.6%	626	256,858	3,322

*Source: U.S. Census Bureau (https://www.census.gov/quickfacts/fact/table/jeffersoncountykentucky/PST045216)
**Source: Workforce Kentucky Website (www.workforcekentucky.ky.gov)
***Source: Bureau of Economic Analysis website (www.bea.gov)

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

Rank	Customer Name		FY '17 Wastewater Billed	Percent Total Wastewater Revenue
1	Swift & Company	$	3,275,551.18	1.68%
2	Heaven Hill Distilleries	$	2,895,242.74	1.49%
3	Early Times Distillery	$	2,346,981.08	1.20%
4	Lubrizol Advanced Material**	$	2,233,568.89	1.15%
5	General Electric (Haier)	$	1,547,456.87	0.79%
6	Ford Motor Co.	$	1,026,321.51	0.53%
7	Louisville Metro Housing Authority	$	582,277.60	0.30%
8	Rohm & Haas	$	503,873.29	0.26%
9	Dean Milk	$	502,837.53	0.26%
10	Parrallel Products	$	431,279.08	0.22%
	Total	**$**	**15,345,390**	**7.87%**
	Total FY 17 Wastewater Revenue:	$	194,965,047	

Customer Name		FY '16 Wastewater Billed	Percent Total Wastewater Revenue
Lubrizol Advanced Material**	$	2,619,739	1.43%
Early Times Distillery	$	2,238,317	1.22%
Swift & Company	$	1,437,109	0.78%
Heaven Hill Distilleries	$	1,280,739	0.70%
Ford Motor Co.	$	1,126,387	0.61%
Louisville Metro Housing Authority	$	921,314	0.50%
UPS Air District	$	646,401	0.35%
Sunopta Ingredients Group	$	550,815	0.30%
General Electric	$	513,223	0.28%
BYK Additives Inc	$	499,133	0.27%
Total	**$**	**11,833,178**	**6.45%**
Total FY 16 Wastewater Revenue:	$	183,592,113	

Rank	Customer Name		FY '17 Stormwater Billed	Percent Total Stormwater Revenue
1	Regional Airport Auth	$	1,144,524	1.94%
2	United Parcel Service	$	567,604	0.96%
3	Ford Motor Co	$	437,886	0.74%
4	Lit Industrial Limited Partner	$	238,337	0.40%
5	Kentucky State Fair	$	233,353	0.40%
6	The U of L Campus	$	214,726	0.36%
7	Seaboard Systems	$	201,299	0.34%
8	Churchill Downs	$	193,808	0.33%
9	Lou Jeff City Redev Auth	$	182,589	0.31%
10	Norfolk Southern	$	154,154	0.26%
	Total	**$**	**3,568,280**	**6.05%**
	Total FY 17 Stormwater Revenue:	$	58,978,108	

Customer Name		FY '16 Stormwater Billed	Percent Total Stormwater Revenue
Regional Airport Auth	$	1,282,627	2.34%
United Parcel Service	$	571,955	1.04%
Ford Motor Co	$	412,279	0.75%
Lit Industrial Limited Partner	$	260,106	0.47%
Kentucky State Fair	$	221,565	0.40%
Seaboard System	$	220,606	0.40%
The U of L Campus	$	199,824	0.36%
Lou Jeff City Redev Auth	$	172,925	0.32%
UPS Supply Chain	$	163,223	0.30%
Norfolk Southern	$	145,622	0.27%
Total	**$**	**3,650,733**	**6.65%**
Total FY 16 Stormwater Revenue:	$	54,888,331	

* LIT Industrial Limited was formerly known as Trammell Crow Co.
**Lubrizol Advanced Material was formerly known as Oxy Vinyls

Safe, clean waterways

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