METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY

SINGLE AUDIT

FOR THE YEAR ENDED DECEMBER 31, 2017

Dave Yost • Auditor of State

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY

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INDEPENDENT AUDITOR'S REPORT

Metropolitan Sewer District of Greater Cincinnati
Hamilton County
1600 Gest Street
Cincinnati, Ohio 45204

To the Hamilton County Board of Commissioners:

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, Ohio (the District), as of and for the years ended December 31, 2017 and December 31, 2016, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for preparing and fairly presenting these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes designing, implementing, and maintaining internal control relevant to preparing and fairly presenting financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to opine on these financial statements based on our audit. We audited in accordance with auditing standards generally accepted in the United States of America and the financial audit standards in the Comptroller General of the United States' *Government Auditing Standards*. Those standards require us to plan and perform the audit to reasonably assure the financial statements are free from material misstatement.

An audit requires obtaining evidence about financial statement amounts and disclosures. The procedures selected depend on our judgment, including assessing the risks of material financial statement misstatement, whether due to fraud or error. In assessing those risks, we consider internal control relevant to the Districts preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not to the extent needed to opine on the effectiveness of the District's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of management's accounting policies and the reasonableness of their significant accounting estimates, as well as our evaluation of the overall financial statement presentation.

We believe the audit evidence we obtained is sufficient and appropriate to support our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities of the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, Ohio, as of December 31, 2017 and December 31, 2016, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with the 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 this presentation to include *management's discussion and analysis*, and schedules of net pension liabilities and pension contributions listed in the table of contents, to supplement the basic financial statements. Although this information is not part of the basic financial statements, the Governmental Accounting Standards Board considers it essential for placing the basic financial statements in an appropriate operational, economic, or historical context. We applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, consisting of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, to the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not opine or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to opine or provide any other assurance.

Supplementary and Other Information

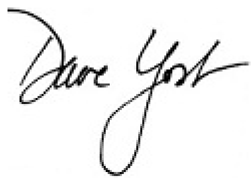
Our audit was conducted to opine on the District's basic financial statements taken as a whole.

The Schedule of Expenditures of Federal Awards presents additional analysis as required by Title 2 U.S. Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards and is not a required part of the financial statements.

The schedules are management's responsibility, and derive from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. We subjected this information to the auditing procedures we applied to the basic financial statements. We also applied certain additional procedures, including comparing and reconciling this information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves in accordance with auditing standards generally accepted in the United States of America. In our opinion, this information is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated June 19, 2018, on our consideration of the District's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. That report describes the scope of our internal control testing over financial reporting and compliance, and the results of that testing, and does not opine on 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 District's internal control over financial reporting and compliance.



Dave Yost
Auditor of State

Columbus, Ohio

June 19, 2018

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MANAGEMENT DISCUSSION AND ANALYSIS
(UNAUDITED)

This section of the Metropolitan Sewer District's annual financial report presents our discussion and analysis of the District's financial performance during the fiscal years ended December 31, 2017, December 31, 2016. Please read it in conjunction with the District's basic financial statements, beginning on page 13.

FINANCIAL HIGHLIGHTS FOR THE YEAR

- Assets and deferred outflows exceeded liabilities and deferred inflows by $1,091 million at the close of the 2017 fiscal year.
- The Net Pension Expense had a net decrease of $55.2 million in fiscal year 2017, and a decrease of $106.3 million in fiscal year 2016.
- The District's net position increased by $142.9 million, or 15.1%, during fiscal year 2017, and $184.0 million, or 24.1%, during fiscal year 2016.
- Total long-term liabilities had a net increase of $10.0 million in fiscal year 2017, and a net decrease of $190.9 million in fiscal year 2016.
- Current Liabilities –In fiscal year 2017, total current liabilities decreased by $25.0 million, and in fiscal year 2016 increased $6.8 million.

FINANCIAL STATEMENTS OVERVIEW

Financial Reporting Entity– The Metropolitan Sewer District of Greater Cincinnati (District) is a Hamilton County enterprise fund managed and operated by the City of Cincinnati. The District is operated pursuant to the authority of the Revised Code authorizing the formation of joint sewer districts, agreements between counties and municipal corporations. The District provides sewage treatment within a service area of approximately 400 square miles and encompasses portions of four counties in southwestern Ohio. The District provides wastewater removal and treatment to over 220,000 residential, commercial and industrial sewer connections and operates and maintains over 3,000 miles of sanitary and combined sewers, seven major wastewater treatment plants and 100 pump stations. As an enterprise fund, operations are reported on the full accrual basis of accounting: revenues are recognized when earned, and expenses are recognized when incurred. The County issues a separate Comprehensive Annual Financial Report which includes the District as a separate enterprise fund of the County. The financial statements of the District report information about the District using accounting methods similar to those used by private-sector companies. These statements provide both long-term and short-term information about the District's overall financial status.

Financial Statement Structure–

In addition to the Independent Auditor's Report, the annual financial report consists of three segments:

- The Management's Discussion and Analysis provides explanations for and analysis of the Department's financial activities based upon currently known facts, conditions, and decisions of the Department's management. While primarily focused on current year results compared with prior years, this discussion also addresses certain long-term issues, which may, in management's opinion, impact the District's financial performance.

- Basic Financial Statements, which depict the District's financial position as of December 31, 2017, and 2016, along with earnings performance and cash flow information. These statements include the Statement of Net Position, the Statement of Revenues, Expenses, and Changes in Net Position and the Statement of Cash Flows.
- The accompanying notes explain some of the financial statement data and provide more detailed information.

Required Basic Financial Statements -- The Statement of Net Position is the first required statement; it includes the District's assets and liabilities and provides information about the nature and amounts of investments in resources (assets) and nature and extent of obligations (liabilities) with the difference being reported as net position. It also provides the basis for computing the rates of return, evaluating the capital structure of the District, and assessing the liquidity and financial flexibility of the District. Over time, increases or decreases in the District's net position is one indicator of whether its financial health is improving or deteriorating. Other non-financial factors such as changes in economic conditions, population growth, and new or changed legislation also need to be considered in assessing the District's financial condition. The Statement of Revenues, Expenses, and Change in Net Position is the second required financial statement which demonstrates the changes in net position from one fiscal period to the next by accounting for revenues and expenditures and measuring the financial results of operations. This statement measures the profitability (i.e. change in net position) of the District's operations over the past year and can be used to determine whether the District has successfully recovered all of its costs through its user fees and other charges. The final required financial statement is the Statement of Cash Flows. The primary purpose of this statement is to provide information about the District's cash receipts, cash payments, and net changes in cash and cash equivalents resulting from operations, investing, and capital and noncapital financing activities. It also provides information regarding sources of cash, uses of cash, and changes in cash balances during the reporting period

Notes to the audited financial statements contain information essential to understanding them, such as the District's significant accounting policies and information about certain financial statement account balances

FINANCIAL ANALYSIS

Table A below shows in FY 2017, 64% of the District's net positions reflect its investment in capital assets (e.g., buildings, sewer laterals, and equipment), less any related debt used to acquire those assets that is still outstanding in 2017. These capital assets are used primarily in the collection and treatment of wastewater throughout the District's service area.

- The related liabilities will be repaid with resources provided by system users through rates and fees. Long-term liabilities (net of the current portion) increased by $10.0 million, or 1% in FY 2017, decreased by $190.9 million, or -15.9% in FY 2016.

Net position increased $142.9 million in 2017. The increase is a combination of income before contributions and contributions in the form of connection fees, assessments and developer contributions and pension liability changes.

MANAGEMENT DISCUSSION AND ANALYSIS
(UNAUDITED)

Table A
Condensed Summary of Net Position
(In Thousands)

	2017	Percentage Increase (Decrease) over 2016	2016	Percentage Increase (Decrease) over 2015	2015	Percentage Increase (Decrease) over 2014
Current and other assets	$ 598,559	4.4%	$ 573,532	7.1%	$ 535,742	-7.0%
Capital assets, net	$1,576,529	3.3%	$ 1,526,257	1.4%	$ 1,504,444	4.4%
Total assets	2,175,088	3.6%	2,099,789	2.9%	2,040,186	1.2%
Deferred Outflows	$ 18,983	-38.8%	$ 30,997	-26.9%	$ 42,413	177.5%
Current liabilities	$ 75,425	-24.9%	$ 100,396	7.3%	$ 93,606	7.7%
Noncurrent liabilities	$1,023,100	1.0%	$ 1,013,072	-15.9%	$ 1,203,939	16.1%
Total liabilities	$1,098,525	-1.3%	$ 1,113,468	-14.2%	$ 1,297,545	15.5%
Deferred Inflows	$ 4,396	-93.6%	$ 69,100	231.0%	$ 20,874	100.0%
Net investment in capital assets	$ 694,743	8.7%	$ 639,364	7.0%	$ 597,418	19.2%
Restricted	$ 6,973	-16.1%	$ 8,313	0.9%	$ 8,238	-2.6%
Unrestricted	$ 389,434	29.6%	$ 300,541	89.6%	$ 158,524	-60.2%
Total Net Position	$1,091,150	15.1%	$ 948,218	24.1%	$ 764,180	-15.9%

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MANAGEMENT DISCUSSION AND ANALYSIS (UNAUDITED)

Table B below shows that total operating revenues in FY 2017 $291.4 million, (an increase of $11.7 million or 4.2%), compared with FY 2016 $279.7 million, (an increase of 1.4 million or .5%). Meanwhile total expenses increased $53.9 million or 49.1%, in 2017, and decreased $127.2M or (-53.6%) in 2016.

Table B
Condensed Summary of Revenues
Expenses and Changes in Net Position
(In Thousands)

	2017	Percentage Increase (Decrease) over 2016	2016	Percentage Increase (Decrease) over 2015	2015	Percentage Increase (Decrease) over 2014
Operating revenues	$ 291,400	4.2%	$ 279,665	0.5%	$ 278,226	4.9%
Nonoperating revenues	10,695	5.4%	10,146	6.5%	9,530	-20.0%
Total revenues	302,095	4.2%	289,811	0.7%	287,756	4.7%
Depreciation and amortization expense	$ 59,073	4.2%	$ 56,672	2.0%	$ 55,581	-1.0%
Other operating expenses	119,032	1.2%	117,625	2.0%	115,271	-4.0%
Pension Expense	(55,154)	-48.1%	(106,278)	-100.0%	0	0.0%
Nonoperating expenses	40,943	-2.3%	41,926	-36.7%	66,264	536.3%
Total expenses	$ 163,894	49.1%	$ 109,945	-53.6%	$ 237,116	27.1%
Income from operations	$ 138,201	-23.2%	$ 179,866	255.2%	$ 50,640	-42.6%
Capital contributions	$ 4,731	13.4%	$ 4,172	-2.2%	$ 4,267	7.8%
Change in net position	$ 142,932	-22.3%	$ 184,038	235.2%	$ 54,907	-40.4%
Total Net Position, beginning	948,218	24.1%	764,180	7.7%	709,273	-13.1%
Total Net Position, ending	$1,091,150	15.1%	$ 948,218	24.1%	$ 764,180	-15.9%

- Operating expenses, excluding depreciation, amortization, and net pension expense, increased 1.4 million, to $119.0 million, or 1.2% in 2017, primarily due to purchased services and other expenses. Operating expenses, excluding depreciation, amortization and net pension expense, increased by $2.4 million to $117.6 million, or 2.0% in 2016, primarily to purchased services and other expenses.
- The 2016 MSD Statement of Revenue and Expenses and Changes in Fund Net Position has separated the costs for Salary and Wages, and Net Pension Expense. The 2016 Salary and Wages amount is $46,366, and the Net Pension Expense is ($106,278). The 2015 Salary and Wages amount is $43,041, and the Net Pension Expense is $13,433.
- Depreciation expenses increased 4.2% or 2.4 million in 2017. Depreciation expenses increased 2.0% or 1.1 million in 2016. The Fixed Assets are now in PeopleSoft Asset System.
- Non-operating expenses for 2017 decrease $.9M (or 2.3%), for 2016 decreased $24.3M (or -36.7%), due to changes in interest expense and change in the fair value of investments.

MANAGEMENT DISCUSSION AND ANALYSIS (UNAUDITED)

CAPITAL ASSETS, DEBT AND RATES Change In Capital Asset Determination - As of December 31, the District's investment in capital assets (net of accumulated depreciation) amounted to $1,576 million in 2017, and $1,526 million in 2016, as shown in Table C. In 2017, the District's depreciable capital assets increased $66.9 million on capital improvement projects and equipment replacement, and received about $4.7 million in capital contributions. In 2016, the District's depreciable capital assets increased by $141.3 million on capital improvement projects and equipment replacement and, received about $4.2 million in capital contributions.

Sewer replacement and improvement projects were about 28.0% of the program in 2017, 60.0% of the program in 2016. Additional information on the District's capital assets can be found in Note 5 to the financial statements.

Table C
Capital Assets
(In Thousands)

	2017	Percentage Increase (Decrease) over 2016	2016	Percentage Increase (Decrease) over 2015	2015	Percentage Increase (Decrease) over 2014
Land	$ 6,481	0.0%	$ 6,481	0.0%	$ 6,481	0.0%
Buildings	353,520	0.0%	353,520	0.5%	351,707	0.0%
Equipment	593,496	8.7%	546,230	11.0%	492,247	0.6%
Sewer Laterals	1,177,893	0.7%	1,169,727	6.7%	1,095,898	1.1%
Construction in progress	392,004	12.1%	349,606	-15.2%	412,382	29.1%
Subtotal	$2,523,394	4.0%	$ 2,425,564	2.8%	$ 2,358,715	4.8%
Less accumulated depreciation	946,865	5.3%	899,307	5.3%	854,271	5.4%
Net capital assets	$1,576,529	3.3%	$ 1,526,257	1.4%	$ 1,504,444	4.4%

Bond Issuances

The District finances its construction program through a combination of revenue bonds, state revolving loans through the State of Ohio and cash, with the primary source being tax-exempt revenue bonds. The District's revenue bond rates are:

- Moody's Investors Services Aa2
- Standard & Poor's Corporation AA+

Revenue bond service Debt Coverage in 2017 was 607% and 2016 was 358%, compared to an Agency policy of 150% (25% higher than indenture requirements). The total debt coverage for 2017 was 412%, and 2016 was 263% compared to the indenture requirement of 125%

Rate Increase – The Hamilton County Commissioners did not approve a rate increase in 2016, 2017 or 2018 of the District's sewer fee. An increase would provide additional revenues necessary to ensure that all expenses (including debt service) are covered as well as meeting all bond indenture requirements. Debt service necessary to cover the issuance of municipal bonds required to pay for the District's large capital program will require annual rate increases into the near future.

GASB 68

During 2015, the Metropolitan Sewer District of Greater Cincinnati adopted GASB Statement 68, “Accounting and Financial Reporting for Pensions—an Amendment of GASB Statement 27,” which significantly revises accounting for pension costs and liabilities. For reasons discussed below, many end users of this financial statement will gain a clearer understanding of the Metropolitan Sewer District of Greater Cincinnati’s actual financial condition by adding deferred inflows related to pension and the net pension liability to the reported net position and subtracting deferred outflows related to pension.

Governmental Accounting Standards Board standards are national and apply to all government financial reports prepared in accordance with generally accepted accounting principles. When accounting for pension costs, GASB 27 focused on a funding approach. This approach limited pension costs to contributions annually required by law, which may or may not be sufficient to fully fund each plan’s *net pension liability*. GASB 68 takes an earnings approach to pension accounting; however, the nature of Ohio’s statewide pension systems and state law governing those systems requires additional explanation in order to properly understand the information presented in these statements.

Under the new standards required by GASB 68, the net pension liability equals the Metropolitan Sewer District of Greater Cincinnati’s proportionate share of each plan’s collective:

1. Present value of estimated future pension benefits attributable to active and inactive employees’ past service
2 Minus plan assets available to pay these benefits

GASB notes that pension obligations, whether funded or unfunded, are part of the “employment exchange” – that is, the employee is trading his or her labor in exchange for wages, benefits, and the promise of a future pension. GASB noted that the unfunded portion of this pension promise is a present obligation of the government, part of a bargained-for benefit to the employee, and should accordingly be reported by the government as a liability since they received the benefit of the exchange. However, the Metropolitan Sewer District of Greater Cincinnati is not responsible for certain key factors affecting the balance of this liability. The Metropolitan Sewer District of Greater Cincinnati employees are covered by two pension systems. They are the City of Cincinnati Retirement System (CRS), and the Ohio Public Employees Retirement System (OPERS). The City of Cincinnati Retirement System (CRS) is accounted for as a single employer defined benefit pension plan. For CRS, the employee shares the obligation of funding pension benefits with the employer. Both employer and employee contribution rates are set by the City of Cincinnati ordinance. The CRS system provides retirement and disability benefits, annual cost of living adjustments, and death benefits to plan members and beneficiaries. The City of Cincinnati makes employer contributions based on a percentage of covered payroll of all CRS members. For Ohio PERS, the employee shares the obligation of funding pension benefits with the employer. Both employer and employee contribution rates are capped by State statute. A change in these caps requires action of both Houses of the General Assembly and approval of the Governor. Benefit provisions are also determined by State statute. The employee enters the employment exchange with the knowledge that the employer's promise is limited not by contract but by law. The employer enters the exchange also knowing that there is a specific, legal limit to its contribution to the pension system. In Ohio, there is no legal means to enforce the unfunded liability of the pension system *as against the public employer.* State law operates to mitigate/lessen the moral obligation of the public employer to the employee, because all parties enter the employment exchange with notice as to the law. The pension system is responsible for the administration of the plan.

Most long-term liabilities have set repayment schedules or, in the case of compensated absences (i.e. sick and vacation leave), are satisfied through paid time-off or termination payments. There is no repayment schedule for the net pension liability. As explained above, changes in pension benefits, contribution rates, and return on investments affect the balance of the net pension liability, but are outside the control of the local government. In the event that contributions, investment returns, and other changes are insufficient to keep up with required pension payments, State statute does not assign/identify the responsible party for the unfunded portion. Due to the unique nature of how the net pension liability is satisfied, this liability is separately identified within the long-term liability section of the statement of net position.

In accordance with GASB 68, the Metropolitan Sewer District of Greater Cincinnati's statements prepared on an accrual basis of accounting include an annual pension expense for their proportionate share of each plan's *change* in net pension liability not accounted for as deferred inflows/outflows.

The City of Cincinnati offered an Early Retirement Incentive Program (ERIP) in 2007. The City Retirement System requested MSD's share of the remaining liability in the amount of $8,723,061. This amount represents in full the liability for 2015-2023 years. The payment was processed in March 2016.

For additional information on the Management Discussion and Analysis please contact:

Metropolitan Sewer District of Greater Cincinnati
Office of the Director
1600 Gest Street
Cincinnati, OH 45204

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Metropolitan Sewer District
Statement of Net Position
For The Periods Ended December 31, 2017 And December 31, 2016
(All amounts expressed in thousands)

	2017	2016
ASSETS		
Current assets:		
Cash, cash equivalents and pooled investments held by the City of Cincinnati (Note 2)	10,566	1,555
Accounts receivable (Note 3)	57,601	49,850
Prepaid expenses and other (Note 13)	6,571	7,698
Total current assets	74,738	59,103
Noncurrent assets:		
Restricted assets:		
Cash, cash equivalents, and pooled investments held by the City of Cincinnati		
Construction account (Note 2)	102,575	94,102
Amount to be transferred to surplus account (Note 2)	50,697	85,680
Held by trustee: (Note 4)		
Cash and cash equivalents (Note 2)	93,077	48
Investments - Held to maturity (Note 2)	277,316	334,443
Total restricted assets	523,665	514,273
Other assets:		
Other	156	156
Total other assets	156	156
Capital assets: (Note 5)		
Land	6,481	6,481
Buildings	353,520	353,520
Sewer Laterals	1,177,893	1,169,727
Equipment	593,496	546,230
Construction in progress	392,004	349,606
Total capital assets	2,523,394	2,425,564
Less:		
Accumulated depreciation	(946,865)	(899,307)
Net capital assets	1,576,529	1,526,257
Total noncurrent assets	2,100,350	2,040,686
Total assets	2,175,088	2,099,789
Deferred outflow of resources		
Deferred charges on refunding	11,329	12,656
Deferred Pension Outflows	7,654	18,341
Total Deferred Outflow of Resources	18,983	30,997

The notes to the financial statements are an integral part of the financial statements

Metropolitan Sewer District
Statement of Net Position
For The Periods Ended December 31, 2017 And December 31, 2016
(All amounts expressed in thousands)

	2017	2016
LIABILITIES		
Current liabilities:		
Payable from current assets:		
Current portion of long-term debt (Note 6)	49,615	66,323
Current portion of compensated absences (Note 8)	4,240	3,808
Accounts payable	9,296	19,151
Accrued payroll expenses	1,936	1,855
Total current liabilities payable from current assets	65,087	91,137
Payable from restricted assets:		
Construction accounts payable	7,698	6,456
Accrued interest payable	2,640	2,803
Total current liabilities payable from restricted assets	10,338	9,259
Total current liabilities	75,425	100,396
Noncurrent liabilities:		
Accrued compensated absences (Note 8)	6,311	5,930
Long-term debt (Note 6)	907,069	895,035
Net Pension Liability CRS	95,384	100,203
Net Pension Liability OPERS	3,923	2,541
Net Other Post Employment Benefit Obligation	10,413	9,363
Total noncurrent liabilities	1,023,100	1,013,072
Total liabilities	1,098,525	1,113,468
Deferred Inflow of resources		
Deferred Pension Inflows	4,396	69,100
Net position:		
Net investment in capital assets	694,743	639,364
Restricted	6,973	8,313
Unrestricted	389,434	300,541
Total Net Position	1,091,150	948,218

The notes to the financial statements are an integral part of the financial statements

Metropolitan Sewer District
Statement of Revenue, Expenses and Changes in Fund Net Position
For The Periods Ended December 31, 2017 And December 31, 2016
(All amounts expressed in thousands)

	2017	2016
REVENUES		
Operating revenues:		
Sewerage service charges	269,243	257,002
Sewer surcharges	18,351	19,621
All other revenues	3,806	3,042
Total operating revenues	291,400	279,665
EXPENSES		
Operating expenses:		
Personnel services:		
Salary and Wages	52,299	46,366
Pension Expense	(55,154)	(106,278)
Purchased services	32,744	35,312
Utilities, fuel and supplies	18,910	18,564
Depreciation and amortization	59,073	56,672
Other expenses	15,079	17,383
Total operating expenses	122,951	68,019
Operating income	168,449	211,646
NONOPERATING		
Nonoperating revenues (expenses):		
Interest income	10,695	10,146
Change in fair value of investments	(1,822)	(782)
Interest expense	(39,121)	(41,144)
Total nonoperating revenues	(30,248)	(31,780)
Income (Loss) before contributions	138,201	179,866
Capital contributions	4,731	4,172
Change in net position	142,932	184,038
Total net position, beginning	948,218	764,180
Total net position, ending	1,091,150	948,218

The notes to the financial statements are an integral part of the financial statements

Metropolitan Sewer District

Statement of Cash Flow

For The Periods Ended December 31, 2017 And December 31, 2016

	2017	2016
Cash flows from Operating Activities:		
Cash received from customers	276,749	269,569
Cash payments for goods and services	(76,783)	(64,729)
Cash payments for personnel costs	(51,351)	(45,312)
Other operating revenues	2,964	2,572
Net Cash Provided by Operating Activities	151,579	162,100
Cash Flows from Capital and Related Financing Activities:		
Principal and interest payments on long-term debt	(98,541)	(98,506)
Acquisition and construction of capital assets	(75,303)	(69,071)
Loan proceeds	33,792	29,669
Transfer into construction account from trustee investment account	50,000	79,658
Transfer from operating cash account to trustee investment account	(85,680)	(79,658)
Transfer to trustee investment account from operating cash	86,000	0
Tap-in fees	4,045	2,444
Proceeds from the sale of capital assets	219	237
Net Cash (Used) by Capital and Related Financing Activities	(85,468)	(135,227)
Cash Flows from Investing Activities:		
Purchase of government securities	8,899	0
Net decrease in fair value of cash and investments	(1,822)	0
Interest earned on investments	2,390	1,762
Net Cash Provided (Used) by Investing Activities	9,467	1,762
Net Increase (Decrease) in Cash and Cash Equivalents	75,578	28,635
Cash and Cash Equivalents at January 1	181,337	152,702
Cash and Cash Equivalents at December 31	256,915	181,337
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:		
Income from operations	168,449	211,646
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	59,073	56,672
Capital Expenses moved to Operating	98	(2,218)
Changes in assets and liabilities:		
Net change in customer accounts receivable	(7,751)	(7,750)
Net change in other assets	(123)	26
Net change in operating accounts payable	(9,855)	10,250
Net change in accrued payroll and related expenses	760	1,118
Net Pension Liability	(3,437)	(164,131)
Net Other Post Employment Benefit Obligation	1,050	(805)
Net Change in cash received from customers	(10)	98
Net Change in Deferred Charges on Refunding Outflows	1,327	2,234
Net Change in Deferred Pension Outflows	10,687	9,182
Net Change in Deferred Pension Inflows	(64,704)	48,226
Net Change in Capital Expenses 7600 moved to Fixed Assets in Fund 701	(3,985)	(2,448)
Net Cash Provide by Operating Activities	151,579	162,100
Non-cash Transactions:		
Structures donated as contributed capital in aid of construction	2,726	2,834
Acquisition and construction of capital asset paid directly by WPCLF loan proceeds	27,660	11,526
Construction accounts payable related to acquisition of capital assets	7,698	6,456

NOTE 1 - ACCOUNTING POLICIES

A summary of the significant accounting policies applied in the accompanying financial statements follows:

Organization

The Metropolitan Sewer District of Greater Cincinnati (MSD), an enterprise fund of the County of Hamilton, Ohio, collects and treats industrial and residential wastewater for municipalities and unincorporated areas of Hamilton County. MSD was formed on April 10, 1968, pursuant to resolutions of the Board of County Commissioners of Hamilton County and Ordinances of the City of Cincinnati, providing for a consolidation of the City Sewer Department and the County Sewer District. Under a contract with the City of Cincinnati, the Board designated the City as its agent for the maintenance and operation of MSD. The annual budget, prepared on a non-GAAP budgetary basis of accounting, is approved by the Board and administered by the City. Budgetary control is exercised at the divisional level, and between personnel and all other costs. The County issues a separate Comprehensive Annual Financial Report which includes MSD as a separate enterprise fund of the County.

Basis of Accounting

The accompanying financial statements were prepared on the accrual basis of accounting, whereby revenues and expenses are recognized in the period earned or incurred.

Use of Estimates

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

Statement of Cash Flows

For purposes of the Statements of Cash Flows, all highly liquid investments with a maturity of three months or less when purchased are considered to be cash equivalents. Pooled cash and investments held by the City of Cincinnati are considered cash equivalents by MSD.

Investments

MSD is required by Ohio law to invest in only United States obligations; federal agency securities; Ohio bonds and other obligations or such obligations of political subdivisions of the state, provided that the subdivisions are located within Hamilton County; time certificates of deposit or deposit accounts in an eligible institution; and no load money market mutual funds consisting only of investments mentioned above. Investments are required to mature within five years from the date of settlement, unless the investment is matched to a specific obligation or debt of MSD.

GASB Statement No. 72, *Fair Value Measurement and Application*, addresses accounting and financial reporting issues related to fair value measurements. This Statement provides guidance for determining a fair value measurement for financial reporting purposes for applying fair value to certain investments and disclosures related to all fair value measurements. These changes were incorporated in MSD's fiscal year 2016 financial statements; however, there was no effect on beginning net position.

Prepaids

Payments made for services that will benefit periods beyond fiscal year end December 31, 2017, are recorded as prepaids using the consumption method. A current asset for the prepaid amount is recorded at the time of the purchase and an expense is reported in the year in which services are consumed.

Inventory

Supplies and materials are stated at the lower cost or market on a first-in, first-out (FIFO) basis.

Capital Assets

Capital assets include land, construction in progress, buildings, sewer laterals, studies, and equipment. Capital assets are defined as assets with an initial, individual cost of more than $5,000.

Capital assets are stated at historical cost for assets acquired after MSD's inception in 1968. Assets which were acquired prior to 1968 and not identifiable with specific historical costs are not included in the capital assets balance. Assets acquired by MSD through contributions, such as contributions from land developers and federal and state grants, are capitalized and recorded in the plant records at the contributors' reported cost. Construction costs include interest capitalized on debt during the period of construction and the cost of in-force labor. See note 5 for more information on capital assets.

Land acquired for MSD's use is titled to either the City of Cincinnati or Hamilton County. The cost of this land has been recorded on the books of MSD since it has the full benefit of the land as an economical resource.

Depreciation expense is computed on the straight-line method over the estimated useful lives of the respective assets. The estimated lives are as follows:

Building	40 years
Sewer Laterals	40 years
Equipment	5-25 years

Any gain or loss arising from the disposal of capital assets has been credited or charged to income.

Unamortized Financing Costs

The unamortized financing costs include insurance, consulting and attorney fees incurred in connection with the revenue bond obligations. These amounts are being amortized on the straight-line method over the lives of the revenue bonds. Bond premiums and discounts are being amortized on the interest method over the lives of the revenue bonds.

Deferred Outflows/Inflows of Resources

In addition of assets, the statement of financial position will sometimes report a separate section for deferred outflows of resources. Deferred outflows of resources represent a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense) until then. For MSD, deferred outflows of resources are reported on the statement of net position for deferred charges on refunding and for pension. A deferred charge on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. The deferred outflows of resources related to pension are explained in Note 9.

In addition to liabilities, the statement of financial position reports a separate section for deferred inflows of resources. Deferred inflows of resources represent an acquisition of net position that applies to a future period and will not be recognized until that time. For MSD, deferred inflows of resources have been recorded in the statement of net position for pension, as explained in Note 9.

Pension Plans

Employees participate in either the City of Cincinnati's Retirement System or the Ohio Public Employees Retirement System. For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the pension plans and additions to/deductions from their fiduciary net position have been determined on the same basis as they are reported by the pension systems. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. The pension systems report investments at fair values.

Compensated Absences

Compensated absences include accrued vacation time, sick leave, compensatory time and other related payments. Compensatory time and vacation time are paid out in full upon termination and are expensed in the year earned. Sick leave is paid out at various levels. The liability for sick leave is computed with the Termination Payment Method using an historical average of total years worked and total amount paid. The current amounts are an average of the annual expenditures. The entire compensated absence liability is reported on the financial statements.

Net Position

Net positions are the difference between assets, deferred outflows, deferred inflows, and liabilities. Net investment in capital assets are capital assets less accumulated depreciation and any outstanding long-term debt related to the acquisition, construction or improvement of those assets. Net positions are reported as restricted when there are legal limitations that are imposed on their use by county legislation or external restrictions by other governments, creditors or grantors. Restricted net positions of the MSD relate to debt service.

MSD applies restricted resources when an expense is incurred for purposes for which both restricted and unrestricted net positions are available. MSD does not have net position restricted by enabling legislation.

Operating Revenues and Expenses

Operating revenues are those revenues that are generated directly from the primary activity of the proprietary fund. For the District, these revenues are charges for services for wastewater treatment. Operating expenses are necessary costs incurred to provide the service that is the primary activity of the fund.

Contributions of Capital

Contributions of capital arise from outside contributions of capital assets or outside contributions of resources restricted to capital acquisition and construction.

NOTE 2 - DEPOSITS AND INVESTMENTS

Deposits

State statues classify monies held by the District into three categories.

Active deposits are public deposits necessary to meet current demands on the treasury. Such monies must be maintained either as cash in the District's Treasury, in commercial accounts payable or withdrawable on demand, including negotiable order of withdrawal (NOW) accounts, or in money market deposit accounts.

Inactive deposits are public deposits that the District has identified as not required for use within the current two-year period of designation of depositories. Inactive deposits must either be evidenced by certificates of deposit maturing not later than the end of the current period of designation of depositories, or by savings or deposit accounts including, but not limited to, passbook accounts.

Interim deposits are deposits of interim monies. Interim monies are those monies which are not needed for immediate use but which will be needed before the end of the current period of designation of depositories. Interim deposits must be evidenced by time certificates of deposit maturing not more than one year from the date of deposit or by savings or deposit accounts including passbook accounts.

Protection of the District's deposits is provided by the Federal Deposit Insurance Corporation (FDIC), by eligible securities pledged by financial institution as security for repayment, by surety company bonds deposited with the finance director by the financial institution or by a single collateral pool established by the financial institution to secure the repayment of all public monies deposited with the institution.

Custodial credit risk is the risk that in the event of a bank failure, the government's deposits may not be returned to it. The District's policy for deposits is collateral is required for demand deposits and certificates of deposit at 105 percent of all deposits not covered by federal deposit insurance. Obligations that may be pledged as collateral are obligations of the United States and its agencies and obligations of the State and its municipalities, school districts, and district corporations. Obligations pledged to secure deposits must be delivered to a bank other than the institution in which the deposit is made. Written custodial agreements are required. The District is required to categorize deposits and investments according to GASB Statement No. 3 *Deposits with Financial Institutions, Investments, and Reverse Purchase Agreements*. The carrying value of the District's deposits was $163,838,000 and $181,337,000 at December 31, 2017 and 2016, respectively.

Amounts held by the City of Cincinnati are invested on MSD's behalf in accordance with the Cincinnati Municipal Code. Amounts held by the City are collateralized as part of the City's cash and investment balances. For GASB 40 disclosure requirements, refer to the financial statements as of June 30, 2017 for the City of Cincinnati.

Although the pledging bank has an investment and securities pool used to collateralize all public deposits, which are held in the financial institution's name, noncompliance with federal requirements could potentially subject the District to a successful claim by the FDIC. The deposits not covered by federal depository insurance are considered uninsured and uncollateralized and subject to custodial credit risk.

Investments

State Statute, board of county commissioners resolutions, and the 1985 Trust Indenture as amended authorize the District to invest in obligations of U. S. Treasury, agencies and instrumentalities, certificates of deposit, repurchase agreements, money market deposit accounts, municipal depository funds, super NOW accounts, sweep accounts, separate trading of registered interest and principal of securities, mutual funds, bonds and other obligations of this State, and the State Treasurer's investment pool. Repurchase agreements are limited to 30 days and the market value of the securities must exceed the principal value of the agreement by at least 2 percent and be marked to market daily. Investments in stripped principal or interest obligations reverse repurchase agreements and derivatives are prohibited. The issuance of taxable notes for the purpose of arbitrage, the use of leverage and short selling are also prohibited. An investment must mature within five years from the date of purchase unless matched to a specific obligation or debt of the District, and must be purchased with the expectation that it will be held to maturity. Investments may only be made through specified dealers and institutions. Payment for investments may be made only upon delivery of the securities representing the investments to the finance director or, if the securities are not represented by a certificate, upon receipt of confirmation of transfer from the custodian. The District has no investment policy that addresses interest rate risk.

Custodial Credit Risk – For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty the District will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The Federal National Mortgage Association Notes, Federal Home Loan Mortgage Corporation Notes, and the Federal Home Loan Bank Notes are exposed to custodial credit risk in that they are uninsured, unregistered, and held by the counterparty's trust department or agent but not in the District's name. The District has no investment policy dealing with investment custodial risk beyond the requirement in state statute that prohibits payment for investments prior to the delivery of the securities representing such investments to the Treasurer or qualified trustee.

Funds held by the trustee are eligible investments as defined by the Trust Agreement and are in the name of the trustee for the benefit of MSD.

Investments made by MSD are summarized below. Trustee account investments are categorized according to credit risk into the following categories: (1) insured or registered, or securities held by MSD or its agent (bank trust department) in the MSD's name; or (2) uninsured and unregistered, with securities held by the counterparty's trust department or agent in the MSD's name; or (3) uninsured, unregistered securities held by the counterparty, or its trust department or agent but not in MSD's name. Money market funds are unclassified investments since they are not evidenced by securities that exist in physical or book entry form. As stated in GASB Statement No. 40, obligations of the U. S. government or obligations explicitly guaranteed by the U. S. government are not considered to have credit risk and do not require disclosure of credit quality.

The money market funds are invested in a treasury obligation fund with a Moody's credit rating of Aaa.

Concentration of Credit Risk: The Metropolitan Sewer District uses the City of Cincinnati's Investment Policy which addresses concentration of credit risk by requiring investments to be diversified to reduce risk of loss resulting from over concentration of assets in a specific issue or class of security. The following table includes the percentage of each investment type held by MSD at December 31, 2017.

Investment Type	**Fair Value**	**% of Total**
Deposits held by the City of Cincinnati	$163,838	30.67
U.S. Agency Securities	156,065	29.21
U.S. Treasury Securities	121,251	22.70
Investment with maturity less than three months	86,000	16.10
Money Market Funds	7,077	1.32
	$534,231	100.00

The classification of cash and cash equivalents and investments on the financial statements is based on criteria set forth in GASB Statement No. 9. A reconciliation between the classifications of cash and investments of the financial statements and the classification per GASB Statement No. 3 is as follows:

(all amounts in thousands)

December 31, 2017	Cash and Cash Equivalents	Investments
GASB Statement No. 9	$256,915	$277,316
Money Market Funds	(93,077)	93,077
Total	$163,838	$370,393

(all amounts in thousands)

December 31, 2016	Cash and Cash Equivalents	Investments
GASB Statement No. 9	$181,385	$334,443
Money Market Funds	(48)	48
Total	$181,337	$334,491

Fair Value Measurements: MSD categorizes its fair value measurements within the fair value hierarchy establish by GASB Statement No. 72. MSD has the following recurring fair value measurements as of December 31, 2017:

	Fair Value Measurements Using (amounts in thousands)			
Investments by Fair Value Level	Fair Value	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Deposits held by City of Cincinnati	$ 163,838			163,838
U.S. Treasury Securities	121,251	121,251		
U.S. Agency Securities	242,065		$ 242,065	
	$ 527,154	$ 121,251	$ 242,065	$ 163,838

U.S. Treasury securities classified in Level 1 of the fair value hierarchy are valued using quoted market prices. U.S. Agency securities classified in Level 2 of the fair value hierarchy are valued using pricing sources as provided by the investment managers. Investments held by city of Cincinnati classified in Level 3 of the fair value hierarchy are valued using pricing provided by the city of Cincinnati's investment managers

NOTE 3 - ACCOUNTS RECEIVABLE

Accounts receivable consist of the following:

(all amounts in thousands)

Sewer charges and surcharges:	2017	2016
Unbilled amount	$ 40,215	$ 25,315
Billed amount	21,948	26,720
Less Allowance for doubtful accounts	(5,461)	(4,756)
Other	899	2,571
Total	$ 57,601	$ 49,850

NOTE 4 - RESTRICTED ASSETS

The Trust Agreement for the Series A Revenue Bonds (see Long-Term Debt Note) requires the establishment of certain trust accounts including a Bond Account, Bond Reserve Account, and a Surplus Account to be held by the Trustee. The Bond Account will be used to accumulate periodic principal and interest payments. The Bond Reserve Account will be funded in an amount equal to the highest annual future debt service requirement. The Surplus Account is available to be used for any other Sewer System purpose. The Trust Agreement also requires the creation of a Construction Account to be held by the City to pay for project costs. At December 31, 2017 and 2016 the following balances (at fair value) were maintained in the trust accounts:

(all amounts in thousands)

Held by trustee:	2017	2016
Reserve	$ 63,568	$ 63,116
Bond retirement	6,973	8,315
Surplus	299,852	263,060
Total	$ 370,393	$ 334,491

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NOTE 5 - CAPITAL ASSETS

(all amounts in thousands)

December 31,2017	Beginning Balance	Increase	Decrease	Ending Balance
Capital Assets, not being depreciated:				
Land	$ 6,481	$ -		$ 6,481
Construction in progress	349,606	104,540	(62,142)	392,004
	$ 356,087	$ 104,540	$ (62,142)	$ 398,485
Capital Assets, being depreciated:				
Buildings	353,520	-	-	353,520
Equipment	546,230	48,321	(1,055)	593,496
Sewer Laterals	1,169,727	18,626	(10,460)	1,177,893
	2,069,477	66,947	(11,515)	2,124,909
Total Capital Assets	2,425,564	171,487	(73,657)	2,523,394
Less accumulated depreciation:				
Buildings	140,932	7,610		148,542
Equipment	315,898	13,555	(1,054)	328,399
Sewer Laterals	442,477	27,447		469,924
Total Accumulated Depreciation	899,307	48,612	(1,054)	946,865
Net Capital Assets	$ 1,526,257	$ 122,875	$ (72,603)	$ 1,576,529

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(all amounts in thousands)

December 31,2016	Beginning Balance	Increase	Decrease	Ending Balance
Capital Assets, not being depreciated:				
Land	$ 6,481	$ -		$ 6,481
Construction in progress	412,382	87,161	(149,937)	349,606
	$ 418,863	$ 87,161	$ (149,937)	$ 356,087
Capital Assets, being depreciated:				
Buildings	351,707	1,813	-	353,520
Equipment	492,247	55,091	(1,108)	546,230
Sewer Laterals	1,095,898	84,360	(10,531)	1,169,727
	1,939,852	141,264	(11,639)	2,069,477
Total Capital Assets	2,358,715	228,425	(161,576)	2,425,564
Less accumulated depreciation:				
Buildings	133,047	7,885		140,932
Equipment	304,676	12,327	(1,105)	315,898
Sewer Laterals	416,548	25,929		442,477
Total Accumulated Depreciation	854,271	46,141	(1,105)	899,307
Net Capital Assets	$ 1,504,444	$ 182,284	$ (160,471)	$ 1,526,257

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NOTE 6 - LONG-TERM DEBT

Long-term debt consisted of the following:

(all amounts in thousands)

	Principal Issue	Interest Rate %	Year of Maturity	2017	2016
Revenue Bonds					
2015	52,520	3.00-5.00	2025	$ 24,845	$ 36,380
2014	162,650	4.00-5.00	2032	155,360	160,530
2013 (a)	258,695	0.45-5.00	2038	160,210	184,105
2010 (b)	130,675	2.00-5.37	2035	116,890	118,825
2009 (c)	149,815	4.00-6.50	2034	143,025	143,025
2007 (f)	72,385	3.50-5.25	2032	-	2,330
				600,330	645,195
Ohio Water and Sewer Rotary Commission	-	-	-	50	50
Ohio Public Works Commission	-	0.00-3.00	2041	858	1,110
Water Pollution Control Loan Fund	-	2.50-3.50		292,588	247,783
Capital Lease Payable	15,000	2.00-5.00	2029	10,230	10,880
Total obligations				904,056	905,018
Bond Premiums				52,627	56,340
Deferred loss on defeasance				(11,329)	(12,656)
Current maturities				(49,615)	(66,323)
Long-term portion				$ 895,739	$ 882,379

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Principal and interest payments on long-term debt for the next five years and thereafter are as follows:

(all amounts in thousands)

	Revenue Bonds		WPCLF		OPWC		Capital Lease	
Year	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
2018	29,050	31,685	$ 19,710	$ 7,642	$ 185	$ 12	$ 670	$ 443
2019	30,475	30,260	21,384	7,465	158	9	690	423
2020	31,500	28,774	18,604	6,990	161	6	720	395
2021	33,100	27,213	20,759	7,365	73	3	755	359
2022	34,270	25,554	22,615	7,692	39	2	795	321
2023-2027	192,855	99,805	48,467	12,363	96	1	4,515	1,054
2028-2032	164,795	48,767	106,011	14,857	52	-	2,085	142
2033-2037	76,100	11,706	35,038	1,517	52	-	-	-
2038-2042	8,185	409			42	-	-	-
	$600,330	$ 304,173	$ 292,588	$ 65,891	$ 858	$ 33	$ 10,230	$ 3,137

This represents the WPCLF loan balances outstanding at 12/31/2017. The total WPCLF loan availability is $455,510.

Bond discount, premium, and loss on defeasance activity for the year:

December 31, 2017	Beginning Balance	Amortized	Refunded	Issued	Ending Balance
Bond Premium	$ 56,340	$ (3,713)	$ -	$ -	$ 52,627
Loss on defeasance	(12,656)	1,327	-	-	(11,329)
Total	$ 43,684	$ (2,386)	$ -	$ -	$ 41,298

December 31, 2016	Beginning Balance	Amortized	Refunded	Issued	Ending Balance
Bond Premium	$ 60,429	$ (4,089)	$ -	$ -	$ 56,340
Loss on defeasance	(14,890)	2,234	-	-	(12,656)
Total	$ 45,539	$ (1,855)	$ -	$ -	$ 43,684

Long-term debt activity for the year:

(all amounts in thousands)

December 31, 2017	Beginning Balance	Additions	Reductions	Ending Balance
Revenue Bonds	$ 645,195		$ 44,865	$ 600,330
Ohio Water and Sewer Rotary Commission	50	-	-	$ 50
Ohio Public Works Commission	1,110	-	252	$ 858
Water Pollution Control Loan Fund	247,783	61,833	17,028	$ 292,588
Capital Lease Payable	10,880	-	650	10,230
Total	$ 905,018	$ 61,833	$ 62,795	$ 904,056

December 31, 2016	Beginning Balance	Additions	Reductions	Ending Balance
Revenue Bonds	$ 688,320	$ -	$ 43,125	$ 645,195
Ohio Water and Sewer Rotary Commission	50	-	-	$ 50
Ohio Public Works Commission	1,359	-	249	$ 1,110
Water Pollution Control Loan Fund	221,961	41,257	15,435	$ 247,783
Capital Lease Payable	11,515	-	635	10,880
Total	$ 923,205	$ 41,257	$ 59,444	$ 905,018

Revenue Bonds

a) Effective March 3, 2015, MSD issued $52,520,000 Series A, Sewer System Refunding Revenue Bonds dated March 3, 2015. The proceeds from the 2015 Series A Bonds were used to defease portions of the 2005A revenue bonds and pay for the cost of issuance. The 2015A bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on parity with the 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, 2007, 2009A, and 2009B bonds, secured equally and ratably under the Trust Agreement.

A portion of the proceeds was used to purchase U.S. Government Securities which were deposited in an irrevocable trust with an escrow agent to provide for all future debt service to refund $60,360,000 of outstanding 2005A Bonds. As a result, these bonds are considered defeased and the liability for those bonds removed from the balance sheet.

Although the refunding resulted in the recognition of an accounting loss of $1,464,000 in accordance with GASB 23, Accounting and Financial Reporting for Refunding of Debt Reported by Proprietary Activities, MSD has, in effect, reduced its aggregate debt service payments by $16,845,000, and obtained a present value of savings of $6,363,000.

b) Effective November 19, 2014, MSD issued $162,650,000 Series A, Sewer System Refunding Revenue Bonds dated November 19, 2014. The proceeds from the 2014 Series A Bonds were used to defease portions of the 2003, 2005, and 2006 revenue bonds and pay for the cost of issuance. The 2014A bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on parity with the 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, 2007, 2009A, and 2009B bonds, secured equally and ratably under the Trust Agreement.

A portion of the proceeds was used to purchase U.S. Government Securities which were deposited in an irrevocable trust with an escrow agent to provide for all future debt service to refund $750,000 of outstanding 2003 Series A Bonds, $61,190,000, of outstanding 2005 Series B Bonds, $60,620,000 of outstanding 2006 Series A Bonds, $52,505,000 of outstanding 2007 Series A Bonds, and $6,790,000 of outstanding 2009 Series A Bonds. As a result, these bonds are considered defeased and the liability for those bonds removed from the balance sheet.

Although the refunding resulted in the recognition of an accounting loss of $14,949,000 in accordance with GASB 23, Accounting and Financial Reporting for Refunding of Debt Reported by Proprietary Activities, MSD has, in effect, reduced its aggregate debt service payments by $70,966,000, and obtained a present value of savings of $24,543,000.

c) Effective July 31, 2013, MSD issued $178,760,000 Series A, Sewer System Refunding Revenue Bonds and $79,935,000 Series B, Sewer System Refunding Revenue Bonds dated July 31, 2013. A portion of the proceeds from the 2013 Series A and 2013 Series B Bonds were used to defease portions of the 2003 and 2004 revenue bonds and pay for the cost of issuance. The 2013A bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on parity with the 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, 2007, 2009A, 2009B, 2010A, and 2010B bonds, secured equally and ratably under the Trust Agreement.

A portion of the proceeds was used to purchase U.S. Government Securities which were deposited in an irrevocable trust with an escrow agent to provide for all future debt service to refund $112,720,000 of outstanding 2003 Series A Bonds, and $28,470,000 of outstanding 2004 Series A Bonds. As a result, these bonds are considered defeased and the liability for those bonds removed from the balance sheet.

The remaining proceeds from the 2013 Series A and 2013 Series B bonds were used to permanently fund certain previous capital expenditures and fund the new bond reserve requirements.

d) Effective November 3, 2010, MSD issued $43,595,000 Series A, Sewer System Refunding Revenue Bonds dated November 3, 2010. The proceeds from the 2010 Series A Bonds were used to defease portions of the 2000, 2001, and 2003 revenue bonds and pay for the cost of issuance. The 2010A bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on parity with the 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, 2007, 2009A, and 2009B bonds, secured equally and ratably under the Trust Agreement.

A portion of the proceeds was used to purchase U.S. Government Securities which were deposited in an irrevocable trust with an escrow agent to provide for all future debt service to refund $2,730,000 of outstanding 2000 Series A Bonds, $25,290,000 of outstanding 2001 Series A Bonds, and $17,035,000 of outstanding 2003 Series A Bonds. As a result, these bonds are considered defeased and the liability for those bonds removed from the balance sheet.

Although the refunding resulted in the recognition of an accounting loss of $3,379,000 in accordance with GASB 23, the District in effect reduced its aggregate debt service payments by $8,824,000 and obtained and economic gain (difference between the present values of the old and new debt service payments) of $5,304,000.

Effective November 3, 2010, MSD issued $87,080,000 Series B Sewer System Improvement Revenue Bonds (Build America Bonds) dated November 3, 2010. The proceeds from the 2010 Series B bonds were used to permanently fund certain previous capital expenditures, fund the new bond reserve requirements and pay the cost of issuance. The 2010 Series B bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on a parity with the 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, 2007, 2009A, and 2009B bonds, secured equally and ratably under the Trust Agreement.

e) Effective August 25, 2009, MSD issued $19,515,000 Series A Sewer System Improvement Revenue Bonds dated August 11, 2009, and $130,300,000 Series B Sewer System Improvement Revenue Bonds (Build America Bonds) dated August 11, 2009. The proceeds from the 2009 Series A bonds and 2009 Series B bonds were used to permanently fund certain previous capital expenditures, fund the new bond reserve requirements and pay the cost of issuance. The 2009 Series A bonds and 2009 Series B bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on a parity with the 1993, 1995, 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B, 2006, and 2007 bonds, secured equally and ratably under the Trust Agreement.

f) Effective December 20, 2007, MSD issued $72,385,000 Series A Sewer System Improvement Revenue Bonds dated December 1, 2007. The proceeds from the 2007 Series A bonds were used to permanently fund certain previous capital expenditures fund the new bond reserve requirements and pay the cost of issuance. The 2007 Series A bonds are special obligations of the District, payable solely from the net revenues of the District and were issued on a parity with the 1993, 1995, 1997, 2000, 2001, 2003A, 2003B, 2004, 2005A, 2005B and 2006 bonds, secured equally and ratably under the Trust Agreement.

The 2010, 2009, 2007 bonds may be redeemed prior to their maturities in accordance with provisions of the bond resolutions. The redemption process for the bonds includes declining premiums up to 2 percent of principal.

At December 31, 2017, and December 31, 2016 the amount of defeased debt outstanding was $180,205,000, $196,910,000 respectively.

Maturities for bonds over the next five years and thereafter are shown below:

(all amounts in thousands)

Year	2015 Bonds	2014 Bonds	2013 Bonds	2010 Bonds	2009 Bonds	Total
2018	4,280	7,675	3,090	7,785	6,220	$ 29,050
2019	4,560	8,065	3,240	8,105	6,505	$ 30,475
2020	4,545	15,255	3,415	8,285	-	$ 31,500
2021	3,670	8,895	7,765	5,635	7,135	$ 33,100
2022	1,810	9,330	8,155	7,590	7,385	$ 34,270
2023-2027	5,980	54,640	53,575	37,220	41,440	$ 192,855
2028-2032		51,500	37,365	25,065	50,865	$ 164,795
2033-2037			35,420	17,205	23,475	$ 76,100
2038-2042			8,185			$ 8,185
	$24,845	$155,360	$ 160,210	$116,890	$143,025	$600,330

Under the terms of the amended revenue bond trust indenture, MSD has agreed to certain covenants, among other things, to restrict additional borrowing, maintain rates sufficient to meet debt service requirements, and maintain specified fund balances under trust agreements.

The Revenue bond issues as discussed above contain covenants which require the MSD to maintain a level of debt service coverage. The following calculation reflects MSD's debt service coverage.

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(all amounts in thousands)

	2017	2016
Revenues:		
Total operating revenues	$ 291,400	$ 279,665
Interest income	10,695	10,146
Tap-in/connection fees	2,726	2,742
Total pledged revenue	304,821	292,553
Total operating and maintenance expenses less depreciation and amortization	63,878	(11,347)
Net income available for debt service (a)	$ 368,699	$ 281,206
Principal and interest requirement on revenue bonds (b)	$ 60,735	$ 78,500
Principal and interest requirements on obligations (c)	$ 89,397	$ 106,988
Debt service coverage		
Revenue bonds (a) divided by (b)	607%	358%
All obligations (a) divided by (c)	412%	263%
Maximum debt service coverage required on revenue bonds	125%	125%

Ohio Water Development Authority Contracts

All contracts between the Ohio Water Development Authority (OWDA) and the Metropolitan Sewer District require MSD to prescribe and charge such rates for sewer usage which are sufficient (after expenses of operation and maintenance) to pay principal and interest on OWDA contracts. The principal is repayable in equal semi-annual installments to maturity.

Ohio Water and Sewer Rotary Commission

Advances from Ohio Water and Sewer Rotary Commission represent tap-in fees and acreage assessments to be forwarded to the Commission upon collection from customers. Such advances do not bear interest unless they are determined to be in default.

Ohio Public Works Commission

The MSD has entered into agreements with the Ohio Public Works Commission (OPWC) for financing of certain qualified capital projects. As the projects progress the commitments are drawn down as funds are paid by OPWC directly to the contractors. The principal is repayable in semi-annual installments to the date of maturity for each project.

Water Pollution Control Loan Fund

The MSD has received low interest loan commitments from the Ohio Water Pollution Control Loan fund for certain qualified projects. As the projects progress the commitments are drawn down. The principal is repayable in semi-annual installments to the date of maturity for each project.

Interest on Long-Term Obligations

The following interest costs were incurred and expensed or capitalized as part of the cost of MSD's additions to capital assets.

(all amounts in thousands)

	2017	2016
Interest incurred	$ 39,121	$ 41,144
Less interest capitalization	(233)	(63)
Interest expense	$ 38,888	$ 41,081

NOTE 7 – CAPITAL LEASE

The District issued a capital lease for a new engineering building in FY2010. The District's lease obligation meets the criteria of a capital lease. The leased assets have been capitalized for the amount of the present value of the minimum lease payments at the inception of the lease.

The following is a schedule of the future minimum lease payments required under the capital lease and the present value of the minimum lease payments as of fiscal year end.

(all amounts in thousands)

Fiscal Year Ending December 31,	Long-Term Debt
2018	$ 1,113
2019	1,113
2020	1,115
2021	1,114
2022	1,116
2023-2027	5,569
2028-2029	2,227
Total Minimum Lease Payments	13,367
Less: Amount Representing Interest	(3,137)
Present value of Minimum Lease Payments	$ 10,230

Capital assets acquired under capital leases are as follows:

Buildings and Sewer Laterals	$15,000,000

NOTE 8 – COMPENSATED ABSENCES

Compensated Absences

Compensated absences consist of vacation time, sick pay and compensatory time. The following is a summary of activity for 2017 and 2016. $4,240 is considered due within one year for compensated absences as of December 31, 2017.

(all amounts in thousands)

	Beginning Balance	Increase	Decrease	Ending Balance
2017	$ 9,738	$ 4,896	$ 4,083	$ 10,551
2016	$ 8,916	$ 4,505	$ 3,683	$ 9,738

NOTE 9 – PENSION AND RETIREMENT

Net Pension Liability

The net pension liability reported on the statement of net position represents a liability to employees for pensions. Pensions are a component of exchange transactions-–between an employer and its employees—of salaries and benefits for employee services. Pensions are provided to an employee—on a deferred-payment basis—as part of the total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension liability represents the MSD’s proportionate share of each pension plan’s collective actuarial present value of projected benefit payments attributable to past periods of service, net of each pension plan’s fiduciary net position. The net pension liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting this estimate annually.

The proportionate share of each plan’s unfunded benefits is presented as a long-term *net pension liability* on the accrual basis of accounting.

City of Cincinnati Retirement System (CRS)

Plan Description and Plan Benefits

The majority of MSD full-time employees participate in the Retirement System of the City of Cincinnati (CRS). CRS is accounted for as a single employer defined benefit pension plan. CRS provides retirement and disability benefits, annual cost of living adjustments, and death benefits to plan members and beneficiaries. CRS is considered part of the City of Cincinnati's financial reporting entity and is included in the City's financial report as a pension trust fund. The financial report that includes financial statements, required supplementary information and detailed information about CRS' fiduciary net position may be obtained by visiting http://www.cincinnati-oh.gov/finance/cafr/. Article XV of the Administrative Code of the City of Cincinnati provides the statutory authority vesting the general administration and responsibility for the proper operation of the System in the Board of Trustees of the City of Cincinnati Retirement System.

Information in the remainder of this footnote is provided for the MSD's portion, being reported as an agency fund of the City, which also participates and contributes to CRS, with a measurement date of June 30, 2017.

A major plan revision was approved by the City Council on March 16, 2011 and adopted by the Board. The plan allows for a two and half year transition period from July 1, 2011 to January 1, 2014. Active members who are eligible or become eligible to retire and elect to retire during this transition period can retire with 30 years of creditable service or at age 60 with at least five years of creditable service and will receive benefits according to the current plan as described below.

A Collaborative Settlement Agreement (CSA) was executed on May 7, 2015 and approved by the United States District Court on October 5, 2015. The CSA impacts employees who were retired on or before July 1, 2011 and employees who were in service on July 1, 2011 and who were vested (had 5 years' service credit) on that date. Employees who are members of the CRS who did not meet those criteria remained subject to the plan provisions adopted in Ordinances No. 84-2011 and 85-2011.

The CSA implemented a number of changes to the CRS, including but not limited to:

- Normal retirement eligibility;
- Early retirement eligibility;
- Retiree healthcare eligibility;
- Retirement benefit calculations;
- Cost of living adjustments payable to retirees;
- Establishment of a Deferred Retirement Option Program (DROP);
- Creation of a 115 Trust for retiree healthcare benefits;
- Changes to the composition of the Board of Trustees; and
- Payoff of the 2007 Early Retirement Incentive Program (ERIP) liability.

Retirement Benefits

Groups C& D Eligible to retire on or before July 1, 2011; or December 31, 2013	**Group E** Eligible to retire on or before December 31, 2013	**Group F** Hired before January 1, 2010 and not eligible for other groups	**Group G** Hired on or after January 1, 2010
Normal Retirement: Age 60 with 5 years of service, or any age with 30 years of service	**Normal Retirement:** Age 60 with 5 years of service, or any age with 30 years of service	**Normal Retirement:** Age 60 with 5 years of service, or any age with 30 years of service	**Normal Retirement:** Age 67 with 5 years of service, or age 62 with 30 years of service
Early Retirement: Age 55 with 25 years of service	**Early Retirement:** Age 55 with 25 years of service	**Early Retirement:** Age 55 with 25 years of service	**Early Retirement:** Age 57 with 15 years of service
Benefit Formula: 2.5% of FAS times years of service	**Benefit Formula:** 2.5% of FAS times years of service up to greater of 20 years or years of service as of July 1, 2011, and 2.2% thereafter	**Benefit Formula:** 2.5% of FAS times years of service up to greater of 20 years or years of service as of July 1, 2011, and 2.2% thereafter	**Benefit Formula:** 2.2% of FAS times years of service

Final average Salary (FAS) represents the average of the highest three consecutive years of earnings for Groups C and D. Group E will have a FAS with two separate components based upon the average of the highest three consecutive years of earnings for service through December 31, 2013 and the highest five consecutive years of earnings for service after January 1, 2014. Group F will have a FAS with two components based upon the on the average of the highest three consecutive years of earnings for service through June 30, 2011 and the highest five consecutive years of earnings for service after July 1, 2011. Group G is based on the average of the highest five consecutive years of earnings.

Upon retirement, members will not receive a cost-of-living-adjustment (COLA) for the first three retirement anniversary dates. Thereafter, a 3% simple COLA benefit will be provided. A COLA poverty exception is available for members who meet certain financial requirements.

Funding Policy

Each member contributes at a rate of 9.0% of their salary for fiscal year 2017. The percent contributed by employees is provided by Chapter 203 Section 73 of the Cincinnati Municipal Code.

The MSD makes employer contributions based on a percentage of the covered payroll of all CRS members. For 2017, the contribution rate was 16.25% on covered payroll. MSD’s contributions to the City of Cincinnati Retirement System’s Pension Fund for the year ending December 31, 2017 were $5,941,000.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to CRS

The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of December 31, 2016. MSD reported a net pension liability of $95,384,000 and negative pension expense of $58,245,000.

Actuarial Assumptions: Total pension liability was determined by an actuarial valuation as of December 31, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.0%
Salary increases, including inflation	4.0% to 7.5%
Long-term investment rate of return	7.5%, net of pension plan investment expense, including inflation
Municipal bond index rate	
Prior measurement date	3.01%
Measurement date	3.56%
Year Fiduciary Net Position is projected to be Depleted	N/A
Single equivalent interest rate	
Prior measurement date	7.5%, net of pension plan investment expense, including inflation
Measurement date	7.5%, net of pension plan investment expense, including inflation
Mortality	Both pre-retirement and post-retirement mortality rates were based on the RP 2000 combined mortality table, male rates set forward 2 years and female rates set forward 1 year and using a Scale AA projection to 2020. Post-disability mortality rates were based on the RP 2000 disabled retiree mortality table, female rates set back 5 years.

The actuarial assumptions used in the December 31, 2016 valuation were based on the results of the last actuarial experience study, dated October 28, 2011.

Long Term Expected Rate of Return: The long term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class as listed in the last actuarial experience study, dated October 28, 2011 are summarized in the following table:

CRS Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Core Bond	14.00%	2.80%
High Yield Bonds	3.00%	4.90%
Large-Cap Value Equity	7.00%	7.20%
Large-Cap Growth Equity	5.00%	7.10%
Mid-Cap Value Equity	4.00%	7.50%
Mid-Cap Core Equity	4.00%	7.50%
Small-Cap Value Equity	7.50%	8.00%
Non-U.S. Developed Large Cap	10.00%	7.40%
Non-U.S. Small Cap	5.00%	8.10%
Emerging Markets All-Cap	5.00%	8.50%
Emerging Markets Small-Cap	3.00%	8.50%
Real Estate Core Equity	10.00%	7.40%
Infrastructure	7.50%	7.80%
Risk Parity	5.00%	4.10%
Private Equity	10.00%	11.10%
Total	100.00%	

** Geometric mean*

Discount Rate: The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that employer contributions will be made as set out in the Collaborative Settlement Agreement. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Employer's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate: The following chart represents MSD's proportionate share of the net pension liability (in thousands) calculated using the current period discount rate assumption of 7.50%, as well as the sensitivity to a 1% increase and 1% decrease in the current discount rate (in thousands):

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
MSD's Portion of CRS Net Pension Liability	$ 137,030	$ 95,384	$ 59,799

Change in the Net Pension Liability: Changes in the MSD' net pension liability for the year ended June 30, 2017 were as follows (amounts in thousands):

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balances at June 30, 2016	$ 393,362	$ 293,159	$ 100,203
Changes for the year:			
Service cost	3,764	-	3,764
Interest	29,256	-	29,256
Benefit changes	5,344	-	5,344
Difference between expected and actual experience	649	-	649
Contributions - employer	-	5,647	(5,647)
Contributions - employee	-	3,246	(3,246)
Net investment income	-	38,292	(38,292)
Benefit payments, including refunds of employee contributions	(30,612)	(30,612)	-
Administrative expense	-	(288)	288
Other changes	-	(3,065)	3,065
Net changes	8,401	13,220	(4,819)
Balances at June 30, 2017	$ 401,763	$ 306,379	$ 95,384

The date of the actuarial valuation upon which the total pension liability (TPL) is based is December 31, 2016. An expected TPL is determined as of June 30, 2017 using standard roll forward techniques. The roll forward calculation adds the normal cost for the first half of 2017 (also called the service cost), subtracts the actual benefit payments and refunds for the six months, and then applies the expected single equivalent interest rate (SEIR) for the period. This procedure was used to determine the TPL as of June 30, 2017, as shown in the following table (amounts in thousands). In addition, an expected TPL as of June 30, 2017 is determined by rolling forward the June 30, 2016 TPL using similar techniques. The difference between this expected TPL and the actual TPL as of June 30, 2017 is the experience gain or loss for the period. The impact of the plan provision changes due to Ordinance 336-2016 are

	(1)	Benefit Changes (2)
(a) Interest Rate (SEIR)	7.50%	7.50%
(b) TPL as of December 31, 2016	$ 407,093	$ 412,171
(c) Entry Age Normal Cost for the period January 1, 2017 - June 30, 2017	1,951	2,031
(d) Actual Benefit Payments and Refunds for January 1, 2017 - June 30, 2017	15,306	15,306
(e) TPL as of June 30, 2017 $= [(b) \times (1+ (a))^{1/2}] + (c) - [(d) \times (1 + (a))^{1/4}]$	408,449	413,793
(f) June 30, 2016 TPL Rolled Forward to June 30, 2017	407,801	
(g) Experience (Gain)/Loss: (1e) - (1f)	$ 648	
(h) Assumption (Gain)/Loss: (2e) - (1e)		$ 5,344

shown as a benefit change gain.

At December 31, 2017, the MSD reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (amounts in thousands):

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net
Contributions subsequent to the measurement date	$ 3,001	$ -	$ 3,001
Differences between expected and actual experience	356	-	356
Net difference between projected and actual investment earnings	233	-	233
Change in proportion	2,261	(605)	1,656
Change in assumptions	-	(3,566)	(3,566)
	$ 5,851	$ (4,171)	$ 1,680

$3,001,000 reported as deferred outflows of resources related to pension resulting from City contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending December 31, 2018. Other amounts reported as deferred inflows of resources related to pension will be recognized in pension expense as follows (amounts in thousands):

Year Ended June 30,:	Net Deferred Outflows/ (Inflows) of Resources
2018	$ (3,524)
2019	4,008
2020	1,488
2021	(3,293)
	$ (1,321)

Plan Description – Ohio Public Employees Retirement System (OPERS)

Plan Description – A limited number of MSD employees participate in the Ohio Public Employees Retirement System (OPERS). OPERS administers three separate pension plans. The traditional pension plan is a cost-sharing, multiple-employer defined benefit pension plan. The member-directed plan is a defined contribution plan and the combined plan is a cost-sharing, multiple-employer defined benefit pension plan with defined contribution features. While members (e.g. MSD employees) may elect the member-directed plan and the combined plan, substantially all employee members are in OPERS’ traditional plan; therefore, the following disclosure focuses on the traditional pension plan.

OPERS provides retirement, disability, survivor and death benefits, and annual cost of living adjustments to members of the traditional plan. Authority to establish and amend benefits is provided by Chapter 145 of the Ohio Revised Code. OPERS issues a stand-alone financial report that includes financial statements, required supplementary information and detailed information about OPERS' fiduciary net position that may be obtained by visiting https://www.opers.org/financial/reports.shtml, by writing to the Ohio Public Employees Retirement System, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling 800-222-7377.

Senate Bill (SB) 343 was enacted into law with an effective date of January 7, 2013. In the legislation, members were categorized into three groups with varying provisions of the law applicable to each group. The following table provides age and service requirements for retirement and the retirement formula applied to final average salary (FAS) for the three member groups under the traditional plan as per the reduced benefits adopted by SB 343 (see OPERS CAFR referenced above for additional information):

Group A Eligible to retire prior to January 7, 2013 or five years after January 7, 2013	**Group B** 20 years of service credit prior to January 7, 2013 or eligible to retire ten years after January 7, 2013	**Group C** Members not in other Groups and members hired on or after 7-Jan-13
State and Local	**State and Local**	**State and Local**
Age and Service Requirements:	**Age and Service Requirements:**	**Age and Service Requirements:**
Age 60 with 60 months of service credit	Age 60 with 60 months of service credit	Age 57 with 25 years of service credit
or Age 55 with 25 years of service credit	or Age 55 with 25 years of service credit	or Age 62 with 5 years of service credit
Formula:	**Formula:**	**Formula:**
2.2% of FAS multiplied by year of service for the first 30 years and 2.5% for service years in excess of 30	2.2% of FAS multiplied by year of service for the first 30 years and 2.5% for service years in excess of 30	2.2% of FAS multiplied by year of service for the first 35 years and 2.5% for service years in excess of 35

Final average Salary (FAS) represents the average of the three highest years of earnings over a member's career for Groups A and B. Group C is based on the average of the five highest years of earnings over a member's career.

Members who retire before meeting the age and years of service credit requirement for unreduced benefits receive a percentage reduction in the benefit amount.

When a benefit recipient has received benefits for 12 months, an annual cost of living adjustment (COLA) is provided. This COLA is calculated on the base retirement benefit at the date of retirement and is not compounded. For those retiring prior to January 7, 2013, the COLA will continue to be a 3 percent simple annual COLA. For those retiring subsequent to January 7, 2013, beginning in calendar year 2019, the COLA will be based on the average percentage increase in the Consumer Price Index, capped at 3 percent.

Funding Policy - The Ohio Revised Code (ORC) provides statutory authority for member and employer contributions were 10 percent and 14 percent, respectively. The portion of employer contributions allocated to health care for members in the Traditional Pension Plan was 1.0 percent during calendar year 2017. Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll. The MSD's contractually required contribution was $332,000 for 2017.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

The net pension liability for OPERS was measured as of December 31, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. MSD's proportion of the net pension liability was based on the MSD's share of contributions to the pension plan relative to the contributions of all participating entities. MSD's proportion, change in proportion, and proportionate share of the net pension liability was 0.017319 percent, an increase of 0.00256 percent, and $3,923,000, respectively. Pension expense for MSD was $767,000.

At December 31, 2017, MSD reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net
MSD contributions subsequent to the measurement date	$ 309	$ -	$ 309
Net difference between projected and actual investment earnings	623	-	623
Difference between expected and actual experience	5	(26)	(21)
Change in assumptions	623	-	623
Change in MSD's proportionate share	243	(199)	44
	$ 1,803	$ (225)	$ 1,578

$309,000 reported as deferred outflows of resources related to pension resulting from MSD contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending December 31, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

Year Ended December 31:		Net Deferred Outflows/ (Inflows) of Resources
2018	$	577
2019		495
2020		215
2021		(18)
	$	1,269

Actuarial Assumptions – OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. The total pension liability in the December 31, 2016, actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Wage inflation	3.25 percent
Future salary increases, including inflation	3.25 to 10.75 percent including wage inflation
COLA or Ad Hoc COLA	Pre 1/7/2013 Retirees: 3 percent, simple; Post 1/7/2013 Retirees: 3 percent simple through 2018, then 2.15 percent simple
Investment rate of return	7.50 percent
Actuarial cost method	Individual entry age

These assumptions have been updated from the previous actuarial valuation, based on the updated experience study. The most recent experience study was completed from the five-year period ended December 31, 2015. See the notes to the required supplementary information on the changes in assumptions.

Mortality rates are based on the RP-2014 Healthy Annuitant mortality table. For males, Healthy Annuitant Mortality tables were used, adjusted for mortality improvement back to the observation period base of 2006 and then established the base year as 2015. For females, Healthy Annuitant Mortality tables were used, adjusted for mortality improvements back to the observation period base year of 2006 and then established the base year as 2010. The mortality rates used in evaluating disability allowances were based on the RP-2014 Disabled mortality tables, adjusted for mortality improvement back to the observation base year of 2006 and then established the base year as 2015 for males and 2010 for females. Mortality rates for a particular calendar year for both healthy and disabled retiree mortality tables are determined by applying the MP-2015 mortality improvement scale to the above described tables.

The long-term rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2016, OPERS managed investments in four investment portfolios: the Defined Benefit portfolio, the 401(h) Health Care Trust portfolio, the 115 Health Care Trust portfolio and the Defined Contribution portfolio. The 401(h) Health Care Trust portfolio was closed as of June 30, 2016. The Defined Benefit portfolio contains the investment assets of the Traditional Pension Plan, the defined benefit component of the Combined Plan and the annuitized accounts of the Member-Directed Plan. The Defined Benefit portfolio historically included the assets of the Member-Directed retiree medical accounts funded through the VEBA Trust. However, the VEBA Trust was closed as of June 30, 2016 and the net position transferred to the 115 Health Care Trust portfolio on July 1, 2016. Within the Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Defined Benefit portfolio is 8.3% for 2016.

The allocation of investment assets with the Defined Benefit portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The table below displays the Board-approved asset allocation policy for 2015 and the long-term expected real rates of return:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed income	23.00%	2.75%
Domestic equities	20.70%	6.34%
Real estate	10.00%	4.75%
Private equity	10.00%	8.97%
International equities	18.30%	7.95%
Other investments	18.00%	4.92%
Total	100.00%	5.66%

Discount Rate The discount rate used to measure the total pension liability was 7.50 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the statutorily required rates. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefits payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of MSD's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate The following table presents MSD's proportionate share of the net pension liability calculated using the current period discount rate assumption of 7.50 percent, as well as what MSD's proportionate share 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 (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
MSD' proportionate share of the net pension liability	$ 6,009	$ 3,923	$ 2,185

Other Postemployment Benefits

City of Cincinnati Retirement System (CRS)

The CRS provides health care coverage to eligible retirees, their spouse and dependent children. Active members in Group C who have earned fifteen years of membership service at the time of termination are eligible upon retirement. All other active members are eligible for retiree health care upon their retirement after reaching age 60 with 20 years of membership service, or any age with 30 years of service, of which 20 years must be earned with CRS.

The health care coverage provided by the CRS is considered an Other Postemployment Benefit (OPEB) as described in GASB Statement No. 45. It is advance-funded on an actuarially determined basis as a portion of the employer contribution requirement to the CRS. The Cincinnati Municipal Code provides authority for employer contributions. The CRS System's health care coverage was established under, and is administered in accordance with, Internal Revenue Code 115. The CRS is considered part of the City of Cincinnati's financial reporting entity and is included in the City's financial report as a OPEB trust fund. The financial report that includes financial statements, required supplementary information and detailed information about CRS' fiduciary net position may be obtained by visiting http://www.cincinnati-oh.gov/finance/cafr/.

The actuarial assumptions used for the December 31, 2016 valuation included an assumption for hospital and surgical benefits recognizing adjusted premiums based on experience for recent years. The actuarial valuations for OPEB plans are estimates of the value of reported amounts and assumptions about the probability of events far into the future. Amounts determined are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Additional actuarial assumptions are as follows:

Actuarial cost method	Entry age
Amortization period	Level dollar open

Remaining amortization period	30 years
Asset valuation method	Five-year smoothed market value
Actuarial assumptions:	Individual entry age
Investment rate of return (including inflation)	7.50%
Projected salary increase (including inflation)	4.00%-7.50%
Health care trend rate (including inflation)	7.75%/5.75% initially (varies by age)
	5.00% ultimate
Inflation	3.00%

The valuation reflects the plan and funding changes included in the CSA. The valuation represents the understanding of the CSA as of the valuation. Some of the changes outlined in the CSA were not finalized or may be subject to interpretation as of the valuation date.

The cost of OPEB is recognized as an expense as claims are paid. No employer contributions were used to fund postemployment benefits for the fiscal years ended June 30, 2017, 2016 and 2015. As of December 31, 2016, Citywide valuation, the healthcare plan's unfunded actuarial accrued liability was a ($35,819,000). The actuarial value of assets was $485,845,000. The actuarial accrued liability was $450,026,000. The unfunded actuarial accrued liability as a percentage of covered payroll of $168,785,000 was (21.2%). Calculations are based on the OPEB benefits provided under the terms of the plan in effect at the time of each valuation and on the pattern of cost sharing between the employer and plan members at that point. The actuarial calculations of the OPEB plan reflect a long-term perspective. The required supplementary schedule, which immediately follows the notes, contains multiyear trend information about the actuarial value of the plan assets and if it is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

Annual OPEB Cost and Net OPEB Obligation. The MSD's annual OPEB cost and net OPEB obligation to CRS for the current and prior two fiscal years were as follows:

Annual OPEB Costs and Net OPEB Obligation (amounts in thousands)	FY 2017	FY 2016	FY 2015
Annual required contributions	$ 1,153	$ (600)	$ 249
Interest on net obligation	1,171	1,189	1,193
Adjustment to annual required contribution	(1,275)	(1,295)	(1,349)
Annual OPEB costs	1,049	(706)	93
Annual contribution	-	(99)	(2,381)
Increase (decrease) in net OPEB obligation	1,049	(805)	(2,288)
Net OPEB Obligation, beginning of year	9,363	10,168	12,456
Net OPEB Obligation, end of year	$ 10,412	$ 9,363	$ 10,168
Annual OPEB Costs	$ 1,049	$ (706)	$ 93
Percentage of annual OPEB cost contributions	0.00%	-14.02%	2560.22%

Ohio Public Employees Retirement System

Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: The Traditional Pension Plan—a cost-sharing, multiple-employer defined benefit pension plan; the Member-Directed Plan—a defined contribution plan; and the Combined Plan—a cost sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care trust, which funds multiple health care plans including medical coverage, prescription drug coverage and deposits to a Health Reimbursement Arrangement to qualifying benefit recipients of both the Traditional Pension and Combined plans. This trust is also used to fund health care for Member-Directed Plan participants, in the form of a Retiree Medical Account (RMA). At retirement or refund, Member-Directed Plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

In order to qualify for health care coverage, age-and-service retirees under the Traditional Pension and Combined plans must have 20 or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement 45. Please see the Plan Statement in the OPERS 2016 CAFR.

The Ohio Revised Code permits, but does not mandate, OPERS to provide health care benefits to its eligible benefit recipients. Authority to establish and amend health care coverage is provided by Chapter 145 of the Ohio Revised Code. OPERS issues a stand-alone financial report. Interested parties may obtain a copy by writing to OPERS, 277 East Town Street, Columbus, OH 43215-4642, or by calling 614-222-5601 or 800-222-7377.

The Ohio Revised Code provides the statutory authority requiring public employers to fund health care through their contributions to OPERS. A portion of each employer's contribution to OPERS is set aside to fund OPERS health care plans.

Employer contribution rates are expressed as a percentage of the covered payroll of active members. In 2017, state and local employers contributed at a rate of 14.0% of earnable salary. These are the maximum employer contribution rates permitted by the Ohio Revised Code. Active members' contributions do not fund health care.

Each year, the OPERS Board determines the portion of the employer contribution rate that will be set aside to fund health care plans. The portion of employer contributions allocated to health care for members in the Traditional Pension Plan and Combined Plan was 1.0% during calendar year 2017. As recommended by OPERS' actuary, the portion of employer contributions allocated to health care beginning January 1, 2018 decreased to 0.0% for both plans. The OPERS Board is also authorized to establish rules for the retiree or their surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected. The employer contribution as a percentage of covered payroll deposited into the RMA for participants in the Member-Directed Plan for 2017 was 4.0%.

Actual employer contributions for 2017, 2016 and 2015 which were used to fund post-employment benefits were approximately $24,000, $51,000 and $47,000, respectively.

NOTE 10 - RELATED PARTY TRANSACTIONS

Cincinnati Water Works provides billing and collection services on customers' accounts for MSD. Fees for these services for 2017 and 2016 were $5,880,482, and $5,411,119 respectively. Fees are also paid to other municipalities and villages within Hamilton County for collection of sewerage bills.

The City of Cincinnati provides "overhead" services to MSD, such as check disbursement, investment and legal services, etc. The fees for these services for 2017 and 2016 were $2,234,875, and $2,386,110 respectively. In addition, the City's Municipal Garage provides gasoline and repairs vehicles for MSD. Fees for these services were $1,442,665 and $1,564,240 for 2017 and 2016, respectively.

NOTE 11 - COMMITMENTS AND CONTINGENCIES

The City of Cincinnati and the Board of County Commissioners of Hamilton County, Ohio are parties to a Global Consent Decree, which was lodged, in 2003, with the U.S. District Court for the Southern District of Ohio, Western Division. This decree focuses on combined sewer overflows, the implementation of the Sanitary Sewer Overflow Correction plan established in the Interim Partial Consent Decree, and other wet weather issues. The court approved the decrees on June 9, 2004. In August 2010, MSD's Revised Wet Weather Improvement Plan was approved by the federal government. The Plan commits MSD to complete a Phase 1 group of projects totaling $1.145 billion (in 2006 dollars and including $526 million that MSD has already spent on projects) by 2018 before scheduling future work (Phase 2). The consent decree documents are posted on the MSD web site, msdgc.org, under consent decree.

As part of MSD's capital improvement program, MSD has entered into a number of contracts for construction, design, and other services. Commitments under these contracts aggregate approximately $82.7 million as of December 31, 2017.

NOTE 12 - RISK MANAGEMENT

MSD is part of the City of Cincinnati Risk Management Program. The City purchases commercial insurance to cover losses due to: theft of, damage to, or destruction of assets and purchases general liability insurance for specific operations and professional liability insurance for certain operations. All other risks of loss are self-insured. Separately, MSD carries property insurance pursuant to an all-risk policy on MSD's buildings and equipment per the revenue bond trust agreement. There has been no reduction in insurance coverage from coverage in 2003. Insurance settlements for claims resulting from risks covered by commercial insurance have not exceeded the insurance coverage in any of the past four years.

NOTE 13 – PREPAID EXPENSES AND OTHER

The City of Cincinnati offered an Early Retirement Incentive Program (ERIP) in 2007. The City Retirement System requested MSD's share of the remaining liability in the amount of $8,723,061. This amount represents in full the liability for 2015-2023 years. The payment was processed in March 2016.
The remaining prepaid expense is $5,023,061 at December 31, 2017.

NOTE 14 - SUBSEQUENT EVENTS

The Hamilton County Board of Commissioners did not approve a rate increase in 2018 of the Districts sewer fee.

The customer billing period for the MSD services for wastewater treatment fees has changed from a Quarterly to Monthly billing period, as of January 2018.

The District is currently undergoing a special audit. The effects of the outcome of this special audit on the information reported and disclosed are currently unknown.

As of August 14, 2017, the City of Cincinnati and Hamilton County entered into an agreement via Commitment Letter, which shall be binding upon the parties and memorializes in a MSD Operation Transition and Cooperation Agreement. The 1968 Operating Agreement shall be terminated and replaced by the Agreement that shall transfer all the operations of the Ohio Revised ("ORC") Chapter 6117 County Sewer District known as the Metropolitan Sewer District of Great Cincinnati or MSD ("Sewer District") from the City to the BOCC. Since April 30, 2018, the City and the County have agreed to a short-term extension of the 1968 Agreement through September 30, 2018.

Metropolitan Sewer District (MSD), Hamilton County, Ohio
Required Supplementary Information
Schedule of the MSD's Proportionate Share of the Net Pension Liability
Ohio Public Employees Retirement System - Traditional Pension Plan
Last Four Measurement Years (1) (2)
Table 1
(Amounts in thousands)

	2016	2015	2014	2013
MSD's Proportion of the Net Pension Liability	0.014757990%	0.014757990%	0.015177505%	0.014994790%
MSD's Proportonate Share of the Net Pension Liability (Asset)	$ 3,923	$ 2,541	$ 1,825	$ 1,766
MSD's Covered Payroll	$ 2,200	$ 2,336	$ 2,479	$ 2,443
MSD's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll	178.32%	108.78%	73.62%	72.29%
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	77.25%	81.08%	86.45%	86.36%

(1) Amounts presented for each year were determined as of MSD's measurement date, which is the prior year-end.
(2) Information prior to 2014 is not available.

Notes to Schedule:

Change in assumptions . In 2017, changes in assumptions were made based upon an updated experience study that was completed for the five-year period ended December 31, 2015. Significant changes included a reduction of the discount rate from 8.0% to 7.5%, a reduction in the wage inflation rate from 3.75% to 3.25%, and transition from the RP-2000 mortality tables to the RP-2014 mortality tables.

Metropolitan Sewer District (MSD), Hamilton County, Ohio
Required Supplementary Information
Schedule of MSD Contributions
Ohio Public Employees Retirement System - Traditional Pension Plan
Last Calendar Ten Years
Table 2
(Amounts in thousands)

	2017	2016	2015	2014	2013
Contractually Required Contributions	$ 309	$ 264	$ 280	$ 297	$ 318
Contributions in Relation to the Contractually Contractually Required Contributions	$ (309)	$ (264)	$ (280)	$ (297)	$ (318)
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ -	$ -
MSD Covered-Employee Payroll	$ 2,377	$ 2,200	$ 2,336	$ 2,479	$ 2,443
Contributions as a Percentage of Covered- Employee Payroll	13.00%	12.00%	12.00%	12.00%	13.00%

	2012	2011	2010	2009	2008
Contractually Required Contributions	$ 275	$ 237	$ 196	$ 156	$ 134
Contributions in Relation to the Contractually Contractually Required Contributions	$ (275)	$ (237)	$ (196)	$ (156)	$ (134)
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ -	$ -
MSD Covered-Employee Payroll	$ 2,750	$ 2,371	$ 2,200	$ 1,893	$ 1,914
Contributions as a Percentage of Covered- Employee Payroll	10.00%	10.00%	8.91%	8.24%	7.00%

Metropolitan Sewer District (MSD),Hamilton County, Ohio
Required Supplementary Information
Schedule of MSD's Changes in Net Pension Liability and Related Ratios
Cincinnati Retirement System
Last Four Measurement Years (2)
Table 3
(Amounts in thousands)

	2017	2016	2015	2014
Total pension liability				
Service cost	$ 3,764	$ 5,639	$ 5,346	$ 4,919
Interest	29,256	25,454	28,680	28,146
Benefit changes	5,344	(13,545)	-	-
Difference between expected and actual experience	649	734	(2,698)	-
Changes of assumptions	-	(111,431)	30,007	(3,381)
Benefit payments	(30,368)	(28,777)	(30,628)	(29,614)
Refunds of contributions	(244)	(325)	(429)	(339)
Other	-	(35,654)	-	-
Net change in total pension liability	$ 8,401	$ (157,905)	$ 30,278	$ (269)
Total pension liability - beginning	$ 393,362	$ 551,267	$ 520,989	$ 521,258
Total pension liability - ending (a)	$ 401,763	$ 393,362	$ 551,267	$ 520,989
Plan net position				
Contributions - employer	$ 5,647	$ 4,639	$ 5,596	$ 7,252
Contributions - member	3,246	1,599	3,115	2,761
Contributions - ERIP payoff	-	8,723	-	-
Net investment income	38,292	(2,065)	9,455	49,002
Benefit payments	(30,368)	(28,777)	(30,628)	(29,614)
Administrative expense	(288)	(962)	(302)	(262)
Refunds of contributions	(244)	(325)	(429)	(333)
Other	(3,065)	24,110	-	-
Net change in plan net position	$ 13,220	$ 6,942	$ (13,193)	$ 28,806
Plan net position - beginning	$ 293,159	$ 286,217	$ 299,410	$ 270,609
Plan net position - ending (b)	$ 306,379	$ 293,159	$ 286,217	$ 299,410
Net pension liability - ending (a) - (b)	$ 95,384	$ 100,203	$ 265,050	$ 221,579
Ratio of plan net position to total pension liability	76.26%	74.53%	51.92%	57.47%
Covered payroll	$ 34,942	$ 31,809	$ 31,232	$ 30,550
Net pension liability as a percentage of covered payroll	272.98%	315.01%	848.65%	725.30%

(1) Information prior to 2014 was not available. MSD will continue to present information for years available until a full ten-year trend is available.
(2) The measurement year is from July 1 through June 30.

Metropolitan Sewer District (MSD),Hamilton County, Ohio
Required Supplementary Information
Schedule of MSD's Contributions
Cincinnati Retirement System
Last Ten Calendar Years
Table 4
(Amounts in thousands)

	2017	2016	2015	2014	2013
Actuarially determined employer contributions	$ 8,541	$ 12,356	$ 13,756	$ 16,087	$ 13,051
Actual employer contributions	$ (5,941)	$ (5,169)	$ (4,328)	$ (5,303)	$ (6,179)
Contribution Deficiency (Excess)	$ 2,600	$ 7,187	$ 9,428	$ 10,784	$ 6,872
MSD Covered-Employee Payroll	$ 34,942	$ 31,809	$ 31,232	$ 30,550	$ 31,369
Actual contributions as a Percentage of Covered- Employee Payroll	17.00%	16.25%	13.86%	17.36%	19.70%

	2012	2011	2010	2009	2008
Actuarially determined employer contributions	$ 9,923	$ 10,792	$ 15,289	$ 7,765	$ 6,527
Actual employer contributions	$ (6,676)	$ (6,128)	$ (5,676)	$ (4,805)	$ (4,201)
Contribution Deficiency (Excess)	$ 3,247	$ 4,664	$ 9,613	$ 2,960	$ 2,326
MSD Covered-Employee Payroll	$ 33,671	$ 31,651	$ 30,976	$ 29,549	$ 26,694
Actual contributions as a Percentage of Covered- Employee Payroll	19.83%	19.36%	18.32%	16.26%	15.74%

Metropolitan Sewer District (MSD), Hamilton County, Ohio
Required Supplementary Information
Schedule of Funding Progress OPEB
Cincinnati Retirement System (1)
Health Care Plan
Table 5
(Amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)- Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
12/31/2008	688,870	998,491	309,621	68.99%	164,640	188.06%
12/31/2009	746,029	877,399	131,370	85.03%	170,416	77.09%
12/31/2010	726,412	657,045	(69,367)	110.56%	167,589	-41.39%
12/31/2011	668,392	653,404	(14,988)	102.29%	165,029	-9.08%
12/31/2012	634,173	641,876	7,703	98.80%	167,148	4.61%
12/31/2013	674,709	618,508	(56,201)	109.09%	163,477	-34.38%
12/31/2014	706,959	590,902	(116,057)	119.64%	164,575	-70.52%
12/31/2015	474,746	484,833	10,087	97.92%	174,963	5.77%
12/31/2016	485,845	450,026	(35,819)	107.96%	168,785	-21.22%

(1) - Information presented for the entire System.

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METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
FOR THE YEAR ENDED DECEMBER 31, 2017

FEDERAL GRANTOR ***Pass Through Grantor*** **Program / Cluster Title**	**Federal CFDA Number**	**Pass Through Entity Identifying Number**	**Total Federal Expenditures**
U.S. DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY			
Passed Through Ohio Water Development Authority			
Capitalization Grants for State Revolving Funds	66.458	CS391525-0062	$959,013
Capitalization Grants for State Revolving Funds	66.458	CS391525-0063	982,557
Total U.S. Department of of Environmental Protection Agency			**1,941,570**
Total Expenditures of Federal Awards			**$1,941,570**

The accompanying notes are an integral part of this schedule.

NOTES TO THE SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
2 CFR 200.510(b)(6)
FOR THE YEAR ENDED DECEMBER 31, 2017

NOTE A – BASIS OF PRESENTATION

The accompanying Schedule of Expenditures of Federal Awards (the Schedule) includes the federal award activity of Metropolitan Sewer District of Greater Cincinnati (the District's) under programs of the federal government for the year ended December 31, 2017. The information on this Schedule is prepared in accordance with the requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the District, it is not intended to and does not present the financial position, changes in net position, or cash flows of the District.

NOTE B – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying Schedule of Federal Awards Expenditures (the Schedule) reports the Metropolitan Sewer District of Greater Cincinnati (the District's) federal award programs' disbursements. The expenditures reported on the Schedule are reported on a cash basis of accounting.

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS REQUIRED BY *GOVERNMENT AUDITING STANDARDS*

Metropolitan Sewer District of Greater Cincinnati
Hamilton County
1600 Gest Street
Cincinnati, Ohio 45204

To the Hamilton County Board of Commissioners:

We have audited, in accordance with auditing standards generally accepted in the United States and the Comptroller General of the United States' *Government Auditing Standards*, the financial statements of the business-type activities of the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, (the District) as of and for the year ended December 31, 2017 and the related notes to the financial statements, which collectively comprise the District's basic financial statements and have issued our report thereon dated June 19, 2018.

Internal Control Over Financial Reporting

As part of our financial statement audit, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures appropriate in the circumstances to the extent necessary to support our opinion on the financial statements, but not to the extent necessary to opine on the effectiveness of the District's internal control. Accordingly, we have not opined on it.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, when performing their assigned functions, to prevent, or detect and timely correct misstatements. A *material weakness* is a deficiency, or combination of internal control deficiencies resulting in a reasonable possibility that internal control will not prevent or detect and timely correct a material misstatement of the District's financial statements. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all internal control deficiencies that might be material weaknesses or significant deficiencies. Given these limitations, we did not identify any deficiencies in internal control that we consider material weaknesses. However, unidentified material weaknesses may exist.

Compliance and Other Matters

As part of reasonably assuring whether the District's financial statements are free of material misstatement, we tested its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could directly and materially affect the determination of financial statement amounts. However, opining on compliance with those provisions was not an objective of our audit and accordingly, we do not express an opinion. The results of our tests disclosed no instances of noncompliance or other matters we must report under *Government Auditing Standards*.

Purpose of this Report

This report only describes the scope of our internal control and compliance testing and our testing results, and does not opine on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed under *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this report is not suitable for any other purpose.

Dave Yost
Auditor of State

Columbus, Ohio

June 19, 2018

INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE WITH REQUIREMENTS APPLICABLE TO THE MAJOR FEDERAL PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE UNIFORM GUIDANCE

Metropolitan Sewer District of Greater Cincinnati
Hamilton County
1600 Gest Street
Cincinnati, Ohio 45204

To the Hamilton County Board of Commissioners:

Report on Compliance for the Major Federal Program

We have audited the Metropolitan Sewer District of Greater Cincinnati's (the District) compliance with the applicable requirements described in the U.S. Office of Management and Budget (OMB) *Compliance Supplement* that could directly and materially affect the Metropolitan Sewer District of Greater Cincinnati's major federal programs for the year ended December 31, 2017. The *Summary of Auditor's Results* in the accompanying schedule of findings identifies the District's major federal programs.

Management's Responsibility

The District's Management is responsible for complying with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditor's Responsibility

Our responsibility is to opine on the District's compliance for the District's major federal programs based on our audit of the applicable compliance requirements referred to above. Our compliance audit followed auditing standards generally accepted in the United States of America; the standards for financial audits included in the Comptroller General of the United States' *Government Auditing Standards*; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). These standards and the Uniform Guidance require us to plan and perform the audit to reasonably assure whether noncompliance with the applicable compliance requirements referred to above that could directly and materially affect a major federal program occurred. An audit includes examining, on a test basis, evidence about the District's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe our audit provides a reasonable basis for our compliance opinion on the District's major programs. However, our audit does not provide a legal determination of the District's compliance.

Opinion on the Major Federal Program

In our opinion, the Metropolitan Sewer District of Greater Cincinnati complied, in all material respects with the compliance requirements referred to above that could directly and materially affect its major federal programs for the year ended December 31, 2017.

Report on Internal Control Over Compliance

The District's management is responsible for establishing and maintaining effective internal control over compliance with the applicable compliance requirements referred to above. In planning and performing our compliance audit, we considered the District's internal control over compliance with the applicable requirements that could directly and materially affect a major federal program, to determine our auditing procedures appropriate for opining on each major federal program's compliance and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not to the extent needed to opine on the effectiveness of internal control over compliance. Accordingly, we have not opined on the effectiveness of the District's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, when performing their assigned functions, to prevent, or to timely detect and correct, noncompliance with a federal program's applicable compliance requirement. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a federal program compliance requirement will not be prevented, or timely detected and corrected. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with federal program's applicable compliance requirement that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance**.**

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

This report only describes the scope of our internal control over compliance tests and the results of this testing based on Uniform Guidance requirements. Accordingly, this report is not suitable for any other purpose.

Dave Yost

Dave Yost
Auditor of State

Columbus, Ohio

June 19, 2018

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI
HAMILTON COUNTY

SCHEDULE OF FINDINGS
2 CFR § 200.515
DECEMBER 31, 2017

1. SUMMARY OF AUDITOR'S RESULTS

(d)(1)(i)	**Type of Financial Statement Opinion**	Unmodified
(d)(1)(ii)	**Were there any material weaknesses in internal control reported at the financial statement level (GAGAS)?**	No
(d)(1)(ii)	**Were there any significant deficiencies in internal control reported at the financial statement level (GAGAS)?**	No
(d)(1)(iii)	**Was there any reported material noncompliance at the financial statement level (GAGAS)?**	No
(d)(1)(iv)	**Were there any material weaknesses in internal control reported for major federal programs?**	No
(d)(1)(iv)	**Were there any significant deficiencies in internal control reported for major federal programs?**	No
(d)(1)(v)	**Type of Major Programs' Compliance Opinion**	Unmodified
(d)(1)(vi)	**Are there any reportable findings under 2 CFR § 200.516(a)?**	No
(d)(1)(vii)	**Major Programs (list):**	CFDA 66.458 Clean Water Revolving Fund
(d)(1)(viii)	**Dollar Threshold: Type A\B Programs**	Type A: > $ 750,000 Type B: all others
(d)(1)(ix)	**Low Risk Auditee under 2 CFR §200.520?**	No

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS

None

3. FINDINGS AND QUESTIONED COSTS FOR FEDERAL AWARDS

None

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METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

HAMILTON COUNTY

CLERK'S CERTIFICATION

This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
JULY 26, 2018

88 East Broad Street, Fourth Floor, Columbus, Ohio 43215-3506
Phone: 614-466-4514 or 800-282-0370 Fax: 614-466-4490
www.ohioauditor.gov