City of Chicago Department of Water Management Sewer Fund

Comprehensive Annual Financial Report For the Years Ended December 31, 2017 and 2016



Rahm Emanuel, Mayor Carole L. Brown, Chief Financial Officer Erin Keane, City Comptroller Alfonzo Conner, Jr. Commissioner

Sewer Fund

An Enterprise Fund of The City of Chicago

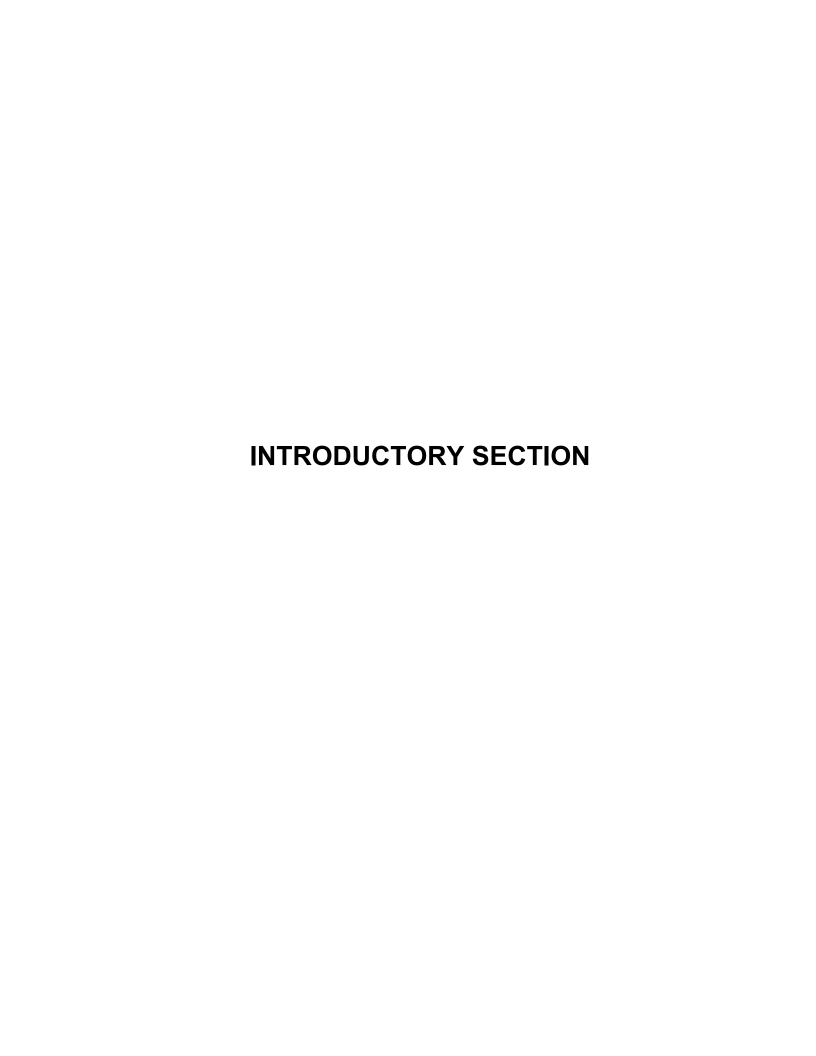
Comprehensive Annual Financial Report For the Year Ended December 31, 2017 and 2016



Prepared By:
The Department of Water Management
Bureau of Administrative Support

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DEPARTMENT OF WATER MANAGEMENT CITY OF CHICAGO

June 29, 2018

To the Honorable Mayor Rahm Emanuel, Members of the City Council and Citizens of the City of Chicago:

I am pleased to submit to you the Comprehensive Annual Financial Report (CAFR) for the City of Chicago Department of Water Management, Sewer Fund, for the year ended December 31, 2017. Responsibility for both the accuracy of the data and completeness and fairness of the presentation, including all disclosures, rests with management. The purpose of the CAFR is to provide complete and accurate information, which complies with the requirements of the Municipal Code of the City of Chicago.

The CAFR is presented in three sections: introductory, financial and statistical. The financial section includes management's discussion and analysis (MD & A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it.

REPORTING ENTITY

The Department of Water Management, Sewer Fund, has been accounted for as a separate enterprise fund of the City of Chicago (City) which operates and maintains the City's Sewer system. Effective January 1, 2003 the Sewer Department merged with the Water Department to form the Department of Water Management. The Sewer system collects and transports sanitary and industrial waste and storm water to the interceptor sewers of the Metropolitan Water Reclamation District of Greater Chicago. The system provides sewage and drainage collection and conveyance through over 4,400 miles of sewers and a service area of roughly 230 square miles inhabited by approximately 2.7 million people.

ECONOMIC CONDITION AND OUTLOOK

The Sewer Fund's primary source of revenue is a sewer service charge which is set by City ordinance. The sewer service charge is billed through the water usage charge on customer billings. The sewer service charge covers the costs of operations, maintenance and debt service.

Because of its rate structure, sewer fund revenue is largely dependent upon water usage. As of January 1, 2015, the sewer service charge is set at 100 percent of the water service charge and

the metered water rate is set at \$29.04 per 1,000 per cubic feet. There are no large industrial or commercial users that account for more than five percent of sewer system revenues. It is not expected that there will be a significant change in the population base of the City that would lead to a significant change in revenues.

MAJOR INITIATIVES

The Department of Water Management's, Sewer Division's Five-Year Capital Improvement Program (CIP) for the years 2018 – 2022 is forecasted to be approximately \$1.3 billion. The Sewer Fund's five-year CIP addresses the aggressive efforts to increase the renewal and replacement of the Sewer System's infrastructure and continue to focus on two major areas: sewer replacement and sewer lining.

The Department of Water Management, Sewer Fund, will support the effort of infrastructure renewal by replacing 22 miles of new sewers and lining 42 miles of existing sewers and lining approximately 5,000 structures in 2018. The Chicago Department of Water Management estimates spending \$120.7 million on new sewers, \$63.5 million in lining existing sewers and \$8.0 million in lining catch basins and manholes structures to prevent failures leading to cave-ins in the street.

The Department of Water Management may revise the list of specific improvements and revise cost allocations among improvements, as well as make substitutions to meet current needs and to provide for the efficient operation of the Sewer System.

A master plan for large trunk sewer improvements to provide regional solutions to the sewer system was completed in 2013. The plan continued to be reviewed and refined throughout 2015. This plan describes not only the current conditions, but presents solutions to solve regional flooding problems in a strategic fashion. The plan provides justification for funding large capital expenditures related to regional solutions. A request for proposals was issued in 2016 to start Phase I design of the regional solutions and the selection process was completed. Contract negotiation will start shortly.

In all, the 5-year CIP is reevaluated annually updated to ensure that areas of the City with the greatest need are given priority.

PROPRIETARY OPERATIONS

The Department of Water Management, Sewer Fund, is responsible for implementing and maintaining an internal control structure to ensure the integrity of the Sewer Fund's operations and to allow for the preparation of financial statements in conformity with accounting principles generally accepted in the United States of America.

The internal control structure is designed to provide that the assets, resources and operations of the Department of Water Management, Sewer Fund, are handled in a manner that protects against waste, theft or neglect that may hinder the financial operations of the Sewer Fund. The objective of these controls is to provide reasonable, rather than absolute assurance, that the financial statements are free of any material misstatement. This objective is being met by adequate supervision of employees, segregation of duties and multiple approval and budgetary controls over all expenditures.

The Sewer Fund's budget is developed and implemented along with the City's annual budget

based upon an analysis of its historical operations and maintenance costs. The Commissioner of the Department of Water Management recommends the final proposed budget to the Budget Director. After approval by the Budget Director, the proposed budget is recommended to the Mayor for submission to the City Council for its approval following public hearings.

The budget process is designed to ensure that the Department of Water Management, Sewer Fund, will have adequate funding to meet its operational objectives. The Department of Water Management, Sewer Fund, cannot by law exceed the level of funding as established by the City Council-approved budget. The Budget Director uses an allotment system to manage each department's expenditures against its respective annual appropriation.

The Budget Director, through the allotment system, has the authority to institute economic measures for the Department of Water Management, Sewer Fund, to ensure that its expenditures do not exceed its revenue collections. The Sewer Fund uses encumbrances to control expenditures by preventing appropriated dollars from being used for any purpose other than that for which they have been legally appropriated.

DEBT ADMINISTRATION

The Department of Water Management, Sewer Fund, issues bonds to finance its capital improvement program. The City has covenanted to establish, maintain and collect at all times fees, charges and rates sufficient to produce net revenues available for bonds equal to at least 115 percent of current annual debt service requirements on the outstanding senior lien bonds and equal to at least 100 percent of the maximum annual senior and second lien debt service requirement. The City conducts an annual review of the sewer service charge to ensure that sufficient revenue is being generated to comply with the rate covenant. The ordinances authorizing the issuance of revenue bonds provide for the creation of separate accounts into which net revenues, as defined, or bond proceeds are to be credited, as appropriate.

Any net revenues remaining after providing sufficient funds for all required deposits into bond accounts may be transferred to the Sewer Rate Stabilization Account to be used for any lawful purpose of the Sewer Fund.

The Department of Water Management, Sewer Fund, has entered into continuing disclosure undertakings with respect to bonds issued after July 3, 1995. The Sewer Fund has provided certain annual financial information disclosure for its revenue bonds in the statistical section of this report.

LONG TERM FINANCIAL PLANNING

The Department of Water Management, Sewer Fund's, capital activities are funded through the Sewer Fund revenue bonds and Sewer Fund revenue. The Department of Water Management, Sewer Fund, has realized savings through advance refunding as interest rates have changed.

INDEPENDENT AUDIT

City ordinances require the Department of Water Management's, Sewer Fund, financial statements to be audited by independent certified public accountants. The audit was conducted by Deloitte & Touche LLP and a consortium of Chicago-based of minority and women-owned certified public accounting firms. An unmodified audit opinion rendered by Deloitte & Touche, LLP, is included in the financial section of this report.

AWARD

The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Certificate of Achievement for Excellence in Financial Reporting to Chicago Department of Water Management - Sewer Fund, an Enterprise Fund of the City of Chicago, for its CAFR for the fiscal year ended December 31, 2016.

This was the twenty second year that the government has achieved this prestigious award, which is the highest form of recognition for excellence in state and local government financial reporting. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

The Certificate of Achievement is valid for a period of one year only. I believe our current report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

ACKNOWLEDGMENTS

This report could not have been prepared without the dedication and effective assistance of the entire staff of the Department of Water Management and the Department of Finance. I wish to express my appreciation to them, and particularly those who contributed directly to the preparation of this report.

Respectfully submitted,

ALFONZO CONNER, JR.

Commissioner



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Sewer Fund, an Enterprise Fund of the City of Chicago, Illinois

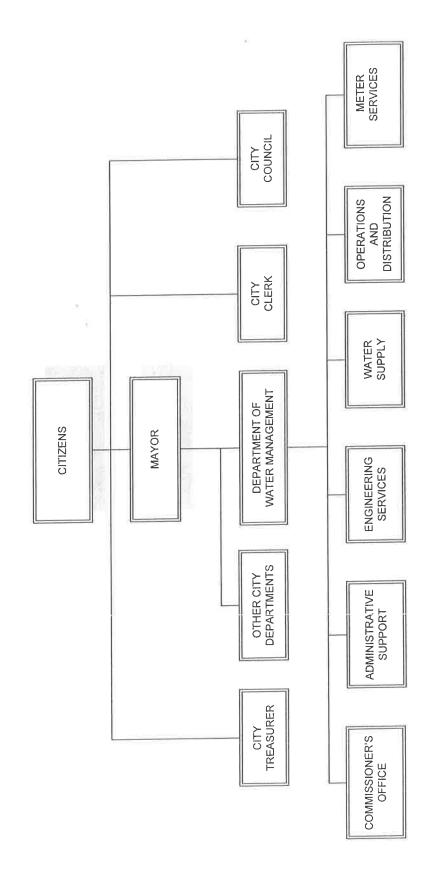
For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2016

Christopher P. Morrill

Executive Director/CEO

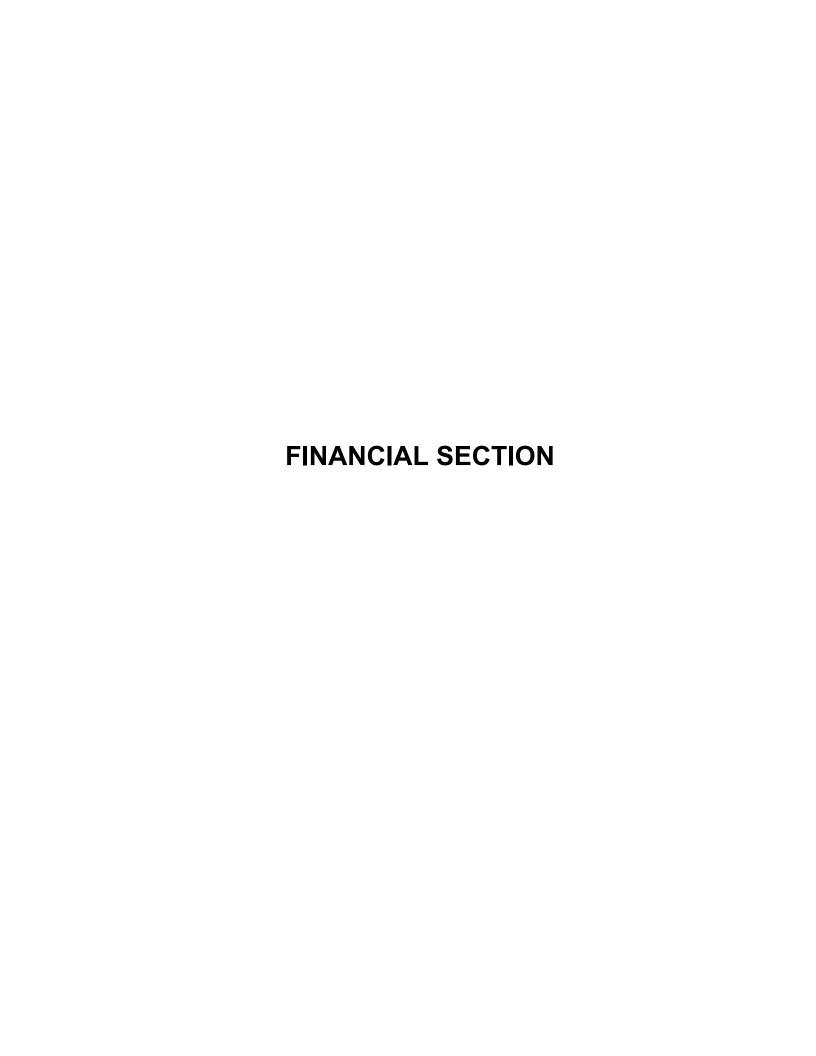
CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT As of 12/31/17



List of Principal Officials

Rahm Emanuel Alfonzo Conner, Jr.

Mayor Commissioner





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INDEPENDENT AUDITORS' REPORT

To the Honorable Rahm Emanuel, Mayor And Members of the City Council City of Chicago, Illinois

Report on the Financial Statements

We have audited the accompanying financial statements of the Sewer Fund ("Sewer Fund"), an enterprise fund of the City of Chicago, Illinois (the "City"), as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Sewer Fund's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Sewer Fund, as of December 31, 2017 and 2016, and the changes in its financial position, and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1 to the basic financial statements, the basic financial statements referred to above present only the Sewer Fund, an enterprise fund of the City, and do not purport to, and do not, present the financial position of the City as of December 31, 2017 and 2016, changes in its financial position, or, where applicable, its cash flows, thereof, in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability and Related Ratios, the Schedule of Contributions, and the Schedule of Other Postemployment Benefits Funding Progress, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Sewer Fund's basic financial statements. The introductory section, additional supplementary information, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The additional supplementary information as listed in the table of contents is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America by us. In our opinion, the additional supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory section and statistical section have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

June 29, 2018

Deloitte F. Souche LLP

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion and analysis of the City of Chicago, Illinois (the "City"), Sewer Fund (the "Sewer Fund") financial performance provides an introduction and overview of the Sewer Fund's basic financial activities for the fiscal years ended December 31, 2017 and 2016. Please read this discussion in conjunction with the Sewer Fund's basic financial statements and the notes to basic financial statements following this section.

FINANCIAL HIGHLIGHTS

2017

- Operating gross revenues for 2017 decreased by \$6.9 million (1.8%) compared to prioryear gross operating revenues. This decrease is primarily due to the continued conversion of non-metered customers to metered customers. There was a rate increase of 1.83% during 2017.
- Operating expenses before depreciation and amortization decreased by \$64.4 million (28.3%) compared to 2016 primarily due to a decrease in pension expenses as a result of the changes under Public Act 100-0023 (P.A. 100-0023) which requires increased future contributions to the two single-employer defined benefit pension plans, the Municipal Employees' Annuity and Benefit Fund of Chicago (Municipal Employees'); and the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (Laborers') (collectively, the "Plans"). The increase in future required contributions increased the discount rate used to determine the total pension liability and decreased the current year pension expense.
- The Sewer Fund's total net position for 2017 increased by \$75.2 million or 18.2% compared to 2016.
- The Sewer Fund's total assets and deferred outflows were greater than total liabilities by \$487.7 million (net position) at December 31, 2017. Net position comprises \$735.6 million of net investment in capital assets, \$116.3 million of restricted for capital projects, and (\$364.2) million of unrestricted.
- Depreciable capital asset additions, net, for 2017 were \$144.3 million, primarily due to the completion of sewer construction and rehabilitation projects.

2016

- Operating gross revenues for 2016 decreased by \$6.8 million (1.7%) compared to prioryear gross operating revenues. This decrease is primarily due to the continued conversion of non-metered customers to metered customers. There was no rate increase during 2016.
- Operating expenses before depreciation and amortization for 2016 decreased \$82.7 million compared to 2015. This decrease of 26.6% is primarily due to the decrease of pension expense calculated under the Governmental Accounting Standards Board ("GASB")

Statement No. 68. "Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27" ("GASB 68").

- The Sewer Fund's total net position for 2016 increased by \$36.3 million or 9.7% compared to 2015.
- The Sewer Fund's total assets and deferred outflows were greater than total liabilities by \$412.5 million (net position) at December 31, 2016. Net position comprises \$648.6 million of net investment in capital assets, \$117.3 million of restricted for capital projects, and (\$353.4) million of unrestricted.
- Capital asset additions being depreciated for 2016 were \$318.7 million, primarily due to the completion of sewer construction and rehabilitation projects.

OVERVIEW OF THE BASIC FINANCIAL STATEMENTS

This discussion and analysis is intended to serve as an introduction to the Sewer Fund's basic financial statements. The Sewer Fund's basic financial statements comprise the basic financial statements and the notes to basic financial statements. In addition to the basic financial statements, this report also presents statistical data after the notes to basic financial statements.

The statements of net position present all of the Sewer Fund's assets, deferred outflows, and liabilities using the accrual basis of accounting. The difference between assets, deferred outflows, and liabilities is reported as net position. The increase or decrease in net position may serve as an indicator, over time, whether the Sewer Fund's financial position is improving or deteriorating. However, the consideration of other nonfinancial factors may be necessary in the assessment of overall financial position and health of the Sewer Fund.

The statements of revenues, expenses, and changes in net position present all current fiscal year revenues and expenses, regardless of when cash is received or paid, and the ensuing change in net position.

The statements of cash flows report how cash and cash equivalents were provided and used by the Sewer Fund's operating, capital financing, and investing activities. These statements are prepared on a cash basis and present the cash received and disbursed, the net increase or decrease in cash and cash equivalents for the year, and the cash and cash equivalents balance at year-end.

The notes to basic financial statements are an integral part of the basic financial statements; accordingly, such disclosures are essential for a full understanding of the information provided in the basic financial statements.

In addition to the basic financial statements, this report includes statistical data. The statistical data section presents unaudited debt-service coverage calculations and includes certain unaudited information related to the Sewer Fund's historical financial and nonfinancial operating results and capital activities.

FINANCIAL ANALYSIS

At December 31, 2017, the Sewer Fund's financial position continues to be strong with total assets and deferred outflows of \$3,390.3 million, total liabilities with deferred inflows of

\$2,902.6 million, and net position of \$ 487.7 million. A comparative condensed summary of the Sewer Fund's net position at December 31, 2017, 2016, and 2015, is as follows:

	Net Position			
(In thousands)	2017	2016	2015	
Current assets	\$ 504,031	\$ 480,086	\$ 389,922	
Restricted and other assets—noncurrent	201,837	42,975	159,704	
Utility plant—net	2,576,059	2,455,960	2,263,159	
Total assets	3,281,927	2,979,021	2,812,785	
Deferred outflows	108,421	184,729	266,925	
Total assets and deferred outflows	\$3,390,348	\$3,163,750	\$3,079,710	
Current liabilities	\$ 280,884	\$ 279,096	\$ 256,423	
Derivative instrument liability	-	-	-	
Pension liability	392,602	664,925	663,872	
Long-term liabilities	1,982,359	1,780,155	1,777,496	
Total liabilities	2,655,845	2,724,176	2,697,791	
Deferred inflows	246,802	27,102	5,681	
Total liabilities and deferred inflows	\$2,902,647	\$2,751,278	\$2,703,472	
Net position:				
Net invested in capital assets	\$ 735,564	\$ 648,644	\$ 559,715	
Restricted for capital projects	116,376	117,295	116,107	
Unrestricted	(364,239)	(353,467)	(299,584)	
Total net position	\$ 487,701	<u>\$ 412,472</u>	\$ 376,238	

2017

Current assets increased by \$23.9 million (5.00%) due to an increase in cash and cash equivalents and due from other funds with a slight decrease in accounts receivable and inventories. Noncurrent restricted investments and other assets increased by \$158.9 million (369.7%) and utility plant—net increased by \$120.1 million (4.9%) due primarily to capital activities for sewer construction and rehabilitation projects, funded by the restricted investments. During 2017, the Sewer Fund lined an additional 40.7 miles of sewers.

Current liabilities increased by \$1.8 million (.6%), which was primarily due to increased accounts payable, accrued liabilities, with an offsetting decrease in due to other funds, unearned revenue. Long-term liabilities increased by \$202.2 million (11.4%). Pension liability in the amount of \$392.6 million decreased \$272.3 million (41.0%) compared to 2016 as a result of the changes under P.A. 100-0023 which requires increased future contributions to the Plans. The increase in future required contributions increased the discount rate used to determine the total pension liability and therefore decreased the pension liability.

Deferred outflows decreased by \$76.3 (41.3%) and deferred inflows increased by \$219.7 million (810.6%) compared with 2016 due to the changes under P.A. 100-0023 as discussed above.

As of December 31, 2017, total net position was \$487.7 million, an increase of \$75.2 million (18.2%) from 2016.

2016

Current assets increased by \$90.2 million (23.1%) due to an increase in cash and cash equivalents and inventories with a decrease in accounts receivable and due from other funds. Noncurrent restricted investments and other assets decreased by \$116.7 million (73.1%) and utility plant—net increased by \$192.8 million (8.5%) due primarily to capital activities for sewer construction and rehabilitation projects. Deferred outflows decreased by \$82.2 (30.8%) compared with 2015. During 2016, the Sewer Fund lined an additional 61.0 miles of sewers.

Current liabilities increased by \$22.7 millions (8.8%), which was primarily due to increased accrued liabilities with offsetting decreases in accounts payable and due to other funds with slight decrease in unearned revenue. Long-term liabilities increased by \$2.7 million (.2%). Pension liability in the amount of \$664.9 million increased \$1.1 million (.2%) compared to 2015 and deferred inflows increased \$21.4 million (377.1%) compared to 2015.

As of December 31, 2016, total net position was \$412.5 million, an increase of \$36.2 million (9.6%) from 2015.

A summary of revenues, expenses, and changes in net position for the years ended December 31, 2017, 2016, and 2015, is as follows:

	Revenues, Expe	nses, and Change	es in Net Position
(In thousands)	2017	2016	2015
Revenues:			
Operating revenues:	+ 0.5.6 .4.7.0	+ D.C.T. 0.0.0	
Sewer service—net	\$356,473	\$367,820	\$374,770
Other operating revenues	1,150	1,146	1,107
Total operating revenues	357,623	368,966	375,877
Operating expenses:			
Repairs	41,881	36,408	42,131
General Fund reimbursements	47,522	50,760	40,007
Pension expense (Note 6)	34,397	104,864	187,593
Maintenance	24,660	21,941	25,322
Engineering	2,466	2,158	3,299
Administrative and general	12,591	11,801	12,337
Depreciation and amortization	48,171	40,734	40,444
Total operating expenses	211,688	268,666	351,133
Operating income	145,935	100,300	24,744
Nonoperating revenues	4,354	1,137	3,921
Nonoperating expenses	(81,479)	(81,842)	<u>(153,899</u>)
Total nonoperating expenses / revenues	s <u>(77,125</u>)	(80,705)	(149,978)
Income (loss) before capital grants	68,810	19,595	(125,234)
Capital grants	6,419	16,639	
Change in net position	75,229	36,234	(125,234)
Net position beginning of year (as restated in 2015)	412,472	376,238	501,472
Net position end of year	<u>\$487,701</u>	\$412,472	\$376,238

2017

Net sewer service revenues for the years ended 2017 and 2016 were \$356.5 million and \$367.8 million, respectively. Other revenue, which consists primarily of inspection fees and house drain fees, for the years ended 2017 and 2016 was \$1.1 million and \$1.1 million respectively. The decrease in 2017 net sewer service revenue of \$11.3 million (3.1%) is primarily conversion of non-meter customers to metered customers. There was a rate increase of 1.83% during 2017.

Pension expense decreased \$70.5 million (67.2%) from \$104.9 million in 2016 to \$34.4 million in 2017 as a result of the changes in P.A. 100-0023 which requires increased future contributions to the Plans. The increase in future required contributions increased the discount rate used to determine the total pension liability and decreased the current year pension expense. During 2017, \$9.5 million of the \$34.4 million was paid under statutory requirements.

Nonoperating revenues decreased by \$7.0 million compared to 2016 as a result of proceeds primarily from community development block grant during 2016.

2016

Net sewer service revenues for the years ended 2016 and 2015 were \$367.8 million and \$374.8 million, respectively. Other revenue, which consists primarily of inspection fees and house drain fees, for the years ended 2016 and 2015 was \$1.1 million respectively. The decrease in 2016 net sewer service revenue of \$6.9 million (1.9%) is primarily conversion of non-meter customers to metered customers. There was no rate increase during 2016.

Pension expense for 2016 for the Sewer Fund was \$104.9 million as calculated under GASB 68, of which \$4.4 million was paid under statutory requirements.

Nonoperating revenues increased by \$13.8 million compared to 2015 as a result of proceeds primarily from community development block grant.

A comparative summary of the Sewer Fund's operating expenses, as classified in the basic financial statements, for the years ended December 31, 2017, 2016, and 2015, is as follows:

	Operating Expenses			
(In thousands)	2017	2016	2015	
Repairs	\$ 41,881	\$ 36,408	\$ 42,131	
Pension	34,397	104,864	187,593	
General Fund reimbursements	47,522	50,760	40,007	
Maintenance	24,660	21,941	25,322	
Engineering	2,466	2,158	3,299	
Administrative and general	12,591	11,801	12,337	
Operating expenses before depreciation and				
amortization	163,517	227,932	310,689	
Depreciation and amortization	48,171	40,734	40,444	
Total operating expenses	\$211,688	\$268,666	\$351,133	

2017

Overall, operating expenses before depreciation and amortization for 2017 decreased by \$64.4 million (28.3%) in 2017 primarily due to decrease in pension expense of \$70.5 million. Depreciation and amortization increased due to an increase in utility plant.

2016

Overall, operating expenses before depreciation and amortization for 2016 decreased by \$82.7 million (26.6%) in 2016 primarily due to reduction in pension expense calculated under GASB 68. Depreciation and amortization increased due to an increase in utility plant.

A comparative summary of the Sewer Fund's cash flows for the years ended December 31, 2017, 2016, and 2015, is as follows:

	Cash Flows		
(In thousands of dollars)	2017	2016	2015
Cash from activities:			
Operating	\$ 213,928	\$ 247,425	\$ 239,225
Capital and related financing	(38,281)	(267,154)	(356,905)
Investing	(169,434)	(694)	204,436
Net change in cash and cash equivalents	6,213	(20,423)	86,756
Cash and cash equivalents: Beginning of year	156,785	177,208	90,452
End of year	\$ 162,998	\$ 156,785	\$ 177,208

2017

As of December 31, 2017, the Sewer Fund's unrestricted and restricted cash and cash equivalents of \$163.0 million represented an increase of \$6.2 million from December 31, 2016, as compared to a decrease of \$20.4 million from December 31, 2015 to December 31, 2016, primarily due to investment related activities in 2017. Total unrestricted cash and cash equivalents at December 31, 2017 and 2016, was \$55.3 million and \$30.3 million, respectively.

2016

As of December 31, 2016, the Sewer Fund's cash and cash equivalents of \$156.8 million represented an decrease of \$20.4 million from December 31, 2015, as compared to an increase of \$86.8 million from December 31, 2014 to December 31, 2015, primarily due to investment related activities in 2016. Total cash and cash equivalents at December 31, 2016, were composed of unrestricted and restricted cash and cash equivalents of \$30.3 million and \$37.4 million, respectively.

UTILITY PLANT AND DEBT ADMINISTRATION

2017

At the end of 2017 and 2016, the Sewer Fund had net utility plant of \$2,576.1 million and \$2,456.0 million, respectively. During 2017, the Sewer Fund had capital additions being depreciated of \$144.3 million, and completed projects totaling \$9.1 million were transferred from construction in progress to applicable facilities and structures capital accounts.

2016

At the end of 2016 and 2015, the Sewer Fund had net utility plant of \$2,456.0 million and \$2,263.2 million, respectively. During 2016, the Sewer Fund had capital additions being depreciated of \$323.1 million, and completed projects totaling \$70.5 million were transferred from construction in progress to applicable facilities and structures capital accounts.

The Sewer Fund's net utility plant at December 31, 2017, 2016, and 2015, is summarized as follows:

	Net Utility Plant at Year-End			
(In thousands)	2017	2016	2015	
Utility plant not depreciated:				
Land and land rights Construction in progress	\$ 560 <u>88,343</u>	\$ 560 <u>35,498</u>	\$ 560 <u>92,339</u>	
Total utility plant not depreciated	88,903	36,058	92,899	
Utility plant being depreciated:				
Facilities and structures	3,071,099	2,958,973	2,671,508	
Furniture and equipment	30,923	31,006	30,575	
Total utility plant being depreciated	3,102,022	2,989,979	2,702,083	
Less accumulated depreciation:				
Facilities and structures	(591,481)	(548,233)	(509,550)	
Furniture and equipment	(23,385)	(21,844)	(22,273)	
Total accumulated depreciation	(614,866)	(570,077)	(531,823)	
Utility plant being depreciated—net	2,487,156	2,419,902	2,170,260	
Utility plant—net	\$2,576,059	\$2,455,960	\$2,263,159	

The Sewer Fund's capital activities are funded through Sewer Fund revenue bonds, Illinois Environmental Protection Agency Loans and Sewer Fund revenues. Additional information on the Sewer Fund's capital assets is presented in Note 5 of the notes to basic financial statements.

The Sewer Fund's outstanding debt at December 31, 2017, 2016, and 2015, is summarized as follows:

	Long-Term Outstanding Debt at Year-End			
(In thousands)	2017	2016	2015	
Revenue bonds Add interest accretion on Series 1998	\$1,861,381	\$1,692,820	\$1,686,179	
capital appreciation bonds	64,105	59,018	54,193	
Unamortized net bond discount/premium	113,074	77,642	83,551	
Outstanding debt—net	\$2,038,560	\$1,829,480	\$1,823,923	

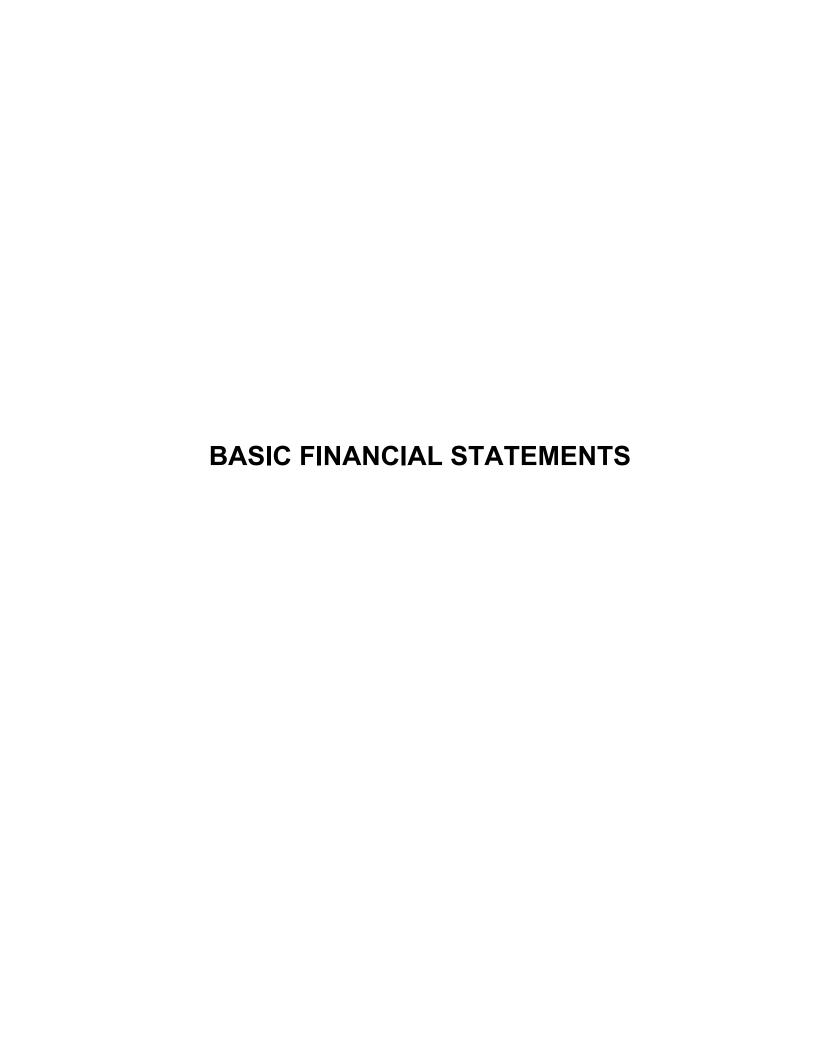
The Sewer Fund's revenue bonds at December 31, 2017, have underlying credit ratings with each of the three major rating agencies as follows:

	Moody's Investor Services	Standard & Poor's	Fitch Ratings	Kroll
Senior Lien Wastewater Revenue Bonds	Baa2	A+	NR	NR
Junior Lien Wastewater Revenue Bonds	Baa3	Α	AA-	AA-

At December 31, 2017, the Sewer Fund was in compliance with the debt covenants as stated within the bond ordinances. Additional information on certain of the Sewer Fund's debt covenants is presented in Note 4 of the notes to the basic financial statements.

REQUESTS FOR INFORMATION

This financial report is designed to provide the reader with a general overview of the Sewer Fund's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the City of Chicago Department of Finance.



STATEMENTS OF NET POSITION AS OF DECEMBER 31, 2017 AND 2016 (In thousands)

ASSETS	2017	2016	LIABILITIES	2017	2016
ASSETS			LIABILITIES		
CURRENT ASSETS:			CURRENT LIABILITIES:		
Cash and cash equivalents (Note 2)	\$ 55,338	\$ 30,301	Accounts payable	\$ 3,728	\$ 3,197
Investments (Note 2)	102,703	112,110	Due to other City funds	8,904	11,581
Accounts receivable—net of allowance for			Unearned revenue	13,671	14,414
doubtful accounts of approximately \$98,927			Accrued liabilities unrestricted	38,597	38,304
in 2017 and \$80,651 in 2016	105,155	106,874	Liabilities payable from restricted assets:		
Due from other City funds	22,238	17,473	Accounts payable	47,679	45,570
Inventories	975	992	Accrued liabilities	67,439	75,249
Cash and cash equivalents—restricted (Note 2)	107,660	126,484	Current portion of long-term debt (Note 4)	56,201	49,325
Investments—restricted (Note 2)	108,324	85,116	Interest payable	44,665	41,456
Interest receivable—restricted (Note 2)	1,638	736			
			Total current liabilities unrestricted	280,884	279,096
Total current assets	504,031	480,086			
			NONCURRENT LIABILITIES:		
NONCURRENT ASSETS:			Net pension liability (Note 6)	392,602	664,925
Investments—restricted (Note 2)	200,538	39,644	Long-term debt—net of current maturities (Note 4)	1,982,359	1,780,155
Other assets	1,299	3,331	Total noncurrent liabilities	2,374,961	2,445,080
Utility plant (Note 5):			Total liabilities	2,655,845	2,724,176
Land and land rights	560	560			
Facilities and structures	3,071,099	2,958,973	DEFERRED INFLOWS (Note 10)	246,802	27,102
Furniture and equipment	30,923	31,006			
Construction in progress	88,343	35,498	NET POSITION (Note 1):		
			Net investment in capital assets	735,564	648,644
Total utility plant	3,190,925	3,026,037	Restricted for capital projects	116,376	117,295
			Unrestricted	(364,239)	(353,467)
Less accumulated depreciation	(614,866)	(570,077)			
			Total net position	487,701	412,472
Utility plant—net	2,576,059	2,455,960			
	2 777 00/	2 400 025			
Total noncurrent assets	2,777,896	2,498,935			
DEFENDED OUTELOWS (Note 10)	108,421	184,729			
DEFERRED OUTFLOWS (Note 10)	100,721	104,727			
TOTAL ASSETS AND DEFERRED OUTFLOWS	\$ 3,390,348	\$ 3,163,750	TOTAL	\$ 3,390,348	\$ 3,163,750
TOTAL ASSETS AND DELENKED OUT LOWS	\$ 0,0,0,040	+ 511001100	IVIAL	* 0,0,0,040	+ 01.001.00

See notes to basic financial statements.

See notes to basic financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 (In thousands)

	2017	2016
OPERATING REVENUES:		
Sewer service: Sewer service—gross Less: provision for doubtful accounts	\$377,286 (20,813)	\$384,140 (16,320)
Sewer service—net	356,473	367,820
Other	1,150	1,146
Total operating revenues	357,623	368,966
OPERATING EXPENSES: Repairs General Fund reimbursements Pension expense (Note 6) Maintenance Engineering Administrative and general	41,881 47,522 34,397 24,660 2,466 12,591	36,408 50,760 104,864 21,941 2,158 11,801
Total operating expenses before depreciation and amortization	163,517	227,932
Depreciation and amortization	48,171	40,734
Total operating expenses	211,688	268,666
OPERATING INCOME	145,935	100,300
NONOPERATING REVENUE (EXPENSES): Investment income (loss) Interest expense Other	4,348 (81,359) <u>6</u>	1,025 (81,722) <u>112</u>
Total nonoperating expenses—net	(77,005)	(80,585)
TRANSFERS OUT	(120)	(120)
CAPITAL GRANTS	6,419	16,639
CHANGE IN NET POSITION	75,229	36,234
TOTAL NET POSITION—Beginning of year	412,472	376,238
TOTAL NET POSITION—End of year	<u>\$487,701</u>	\$412,472

STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 (In thousands)

	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Received from customers	\$ 358,600	\$ 367,632
Transactions with other City funds	(63,423)	(46,671)
Payments to vendors	(29,299)	(29,871)
Payments to employees	(51,950)	(43,665)
Net cash provided by operating activities	213,928	247,425
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Acquisition and construction of capital assets	(165,650)	(210,909)
Proceeds from issuance of bonds	506,380	70,809
Payment to refund bonds	(240,400)	- -
Bond issuance costs	(5,394)	-
Interest paid on revenue bonds	(87,983)	(79,525)
Proceeds from Community Development Block Grant	6,419	-
Principal paid on bonds and notes	(51,653)	(47,529)
Net cash used in capital and related		
financing activities	(38,281)	(267,154)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Sales and purchases of investments—net	(174,695)	(2,635)
Investment interest	5,261	1,941
Net cash (used in) provided by investing activities	(169,434)	(694)
NET CHANGE IN CASH AND CASH EQUIVALENTS	6,213	(20,423)
CASH AND CASH EQUIVALENTS—Beginning of year	<u>156,785</u>	177,208
CASH AND CASH EQUIVALENTS—End of year	\$ 162,998	\$ 156,785
		(Continued)

STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 (In thousands)

	2017	2016
RECONCILIATION TO CASH AND CASH EQUIVALENTS REPORTED ON THE STATEMENTS OF NET POSITION:		
Unrestricted Restricted	\$ 55,338 107,660	\$ 30,301
TOTAL	\$ 162,998	\$ 156,785
RECONCILIATION OF OPERATING INCOME TO		
CASH FLOWS FROM OPERATING ACTIVITIES:		
Operating income	\$ 145,935	\$ 100,300
Adjustments to reconcile:		
Depreciation and amortization	48,171	40,734
Pension expense other than contribution	24,921	100,447
Provision for uncollectible accounts	20,813	16,320
Changes in assets and liabilities:		
Increase in due from other City funds	(4,766)	8,719
Increase in accounts receivable	(19,093)	(16,135)
Decrease in inventories	18	(184)
Increase in accrued liabilities	(201)	(1,920)
(Decrease) increase in accounts payable and due to		
other City funds	(1,127)	663
Increase (decrease) in unearned revenue	(743)	(1,519)
CASH FLOWS FROM OPERATING ACTIVITIES	\$ 213,928	\$ 247,425

SUPPLEMENTAL DISCLOSURE OF NONCASH ITEMS—Property additions in 2017 and 2016 of \$115,648 and \$120,819, respectively, have outstanding accounts payable and accrued liabilities.

The accretion adjustments of Series 1998 capital appreciation bonds for the year ended December 31, 2017 was \$5,087

See notes to basic financial statements.

(Concluded)

NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016 (In thousands)

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization—The Sewer Fund (the "Sewer Fund") collects and transmits wastewater to the treatment facilities of the Metropolitan Water Reclamation District of Greater Chicago. The Sewer Fund is included in the City of Chicago, Illinois (the "City"), reporting entity as an enterprise fund.

The accompanying basic financial statements present only the Sewer Fund and are not intended to present the financial position of the City or the results of its operations and cash flows.

Basis of Accounting—The accounting policies of the Sewer Fund are based upon accounting principles generally accepted in the United States of America as prescribed by the Governmental Accounting Standards Board (GASB). The accounting and financial reporting treatment applied to a fund is determined by its measurement focus. The accounts of the Sewer Fund are reported using the flow of economic resources measurement focus.

The Sewer Fund uses the accrual basis of accounting under which revenues are recognized when earned and expenses are recognized when the liability is incurred.

When both restricted and unrestricted resources are available for use, it is the City's policy to use restricted resources first, then unrestricted resources as they are needed.

Annual Appropriated Budget—The Sewer Fund has a legally adopted annual budget that is not required to be reported.

Management's Use of Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, 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.

Cash, Cash Equivalents, and Investments—Cash, cash equivalents, and investments generally are held with the City Treasurer as required by the Municipal Code of Chicago (the "Code"). Interest earned on pooled investments is allocated to participating funds based upon their average combined cash and investment balances. Due to contractual agreements or legal restrictions, the cash and investments of certain funds are segregated and earn and receive interest directly.

The Code permits deposits only to City Council-approved depositories, which must be organized state or national banks and federal and state savings and loan associations, located within the City, whose deposits are federally insured.

Investments authorized by the Code include interest-bearing general obligations of the City, the State of Illinois (the "State"), and the U.S. government; U.S. Treasury bills and other non-interest-bearing general obligations of the U.S. government purchased in the open market below face value; domestic money market funds regulated by and in good standing with the Securities and Exchange Commission; and tax anticipation warrants issued by the City. The City is prohibited by ordinance from investing in derivatives, as defined, without City Council approval.

The Sewer Fund values its investments at fair value or amortized cost, as applicable. U.S. government securities purchased at a price other than par with a maturity of less than one year are reported at amortized cost. The fair value of U.S. agency securities, corporate bonds, and municipal bonds are estimated using recently executed transactions, market price quotations (where observable), or bond spreads.

Repurchase agreements can be purchased only from banks and certain other institutions authorized to do business in the State. The City Treasurer requires that securities pledged to secure these agreements have a fair value equal to the cost of the repurchase agreement, plus accrued interest.

Investments, generally, may not have a maturity in excess of 30 years from the date of purchase. Certain other investment balances are held in accordance with the specific provisions of applicable bond ordinances.

Cash equivalents include certificates of deposit and other investments with maturities of three months or less when purchased.

Accounts Receivable—The Sewer Fund accounts receivable is comprised of billings and collections for sewer services processed by the Department of Water Management. Management has provided an allowance for amounts recorded at year-end that may be uncollectible.

Transactions with the City—The City's General Fund provides services to all other funds. The amounts allocated to other funds for these services are treated as operating expenses by the Sewer Fund and consist mainly of employee benefits, self-insured risks, and administrative expenses.

Inventories—Inventories, composed mainly of materials and supplies, are stated at cost, determined principally on the first-in, first-out method.

Utility Plant—Utility plant is recorded at cost or, for donated assets at acquisition cost. Utility plant is defined by the Sewer Fund as assets with an initial cost of more than \$5,000 and an estimated useful life in excess of two years. Such assets are recorded at historical cost if purchased. Depreciation is provided using the straight-line method and begins in the year following the year of acquisition or completion. Estimated useful lives are as follows:

Facilities and structures 75 years
Furniture and equipment 5–20 years
Sewer rehabilitation 50 years

Costs of repairs and maintenance that do not significantly extend the useful life of assets are charged to operations.

Deferred Outflows—Deferred outflows represent unamortized loss on bond refundings, differences between estimated and actual investment earnings related to pensions, and changes in actuarial assumptions related to pensions.

Deferred Inflows—Deferred inflows represent the differences between projected and actual actuarial experience related to pensions.

Net Position—Net position is composed of net earnings from operating and nonoperating revenues, expenses, and capital grants. Net position is displayed in three components: net investment in capital assets, restricted for capital projects, and unrestricted. Net investment in capital assets consists of all capital assets, net of accumulated depreciation and reduced by outstanding debt, net of debt service reserve, and unspent bond proceeds. Restricted for capital projects consists of assets on which constraints are placed by external parties (such as lenders and grantors) and laws, regulations, and enabling legislation, reduced by liabilities and deferred inflows of resources related to those assets. Unrestricted consists of the net amount of all other assets, deferred outflows, liabilities, and deferred inflows not categorized as either of the above.

Employee Benefits—Employee benefits are granted for vacation and sick leave, workers' compensation, and health care. Unused vacation leave is accrued and may be carried over for one year. Sick leave is accumulated at the rate of one day for each month worked, up to a maximum of 200 days. Severance of employment terminates all rights to receive compensation for any unused sick leave. Sick leave pay is not accrued. Employee benefit claims outstanding, including claims incurred but not reported, are estimated and recorded as liabilities.

Employees are eligible to defer a portion of their salaries until future years under the City's deferred compensation plan created in accordance with Internal Revenue Code Section 457. The deferred compensation is not available to employees until termination, retirement, death, or unforeseeable emergency. The plan is administered by third-party administrators who maintain the investment portfolio. The plan's assets have been placed in trust accounts with the plan administrators for the exclusive benefit of participants and their beneficiaries and are not considered assets of the City.

The City is subject to the State Unemployment Compensation Act and has elected the reimbursing employer option for providing unemployment insurance benefits for eligible former employees. Under this option, the City reimburses the State for claims paid by the State.

Bond Insurance Costs, Bond Premiums Discounts, and Refunding Transactions— Bond insurance costs and bond premiums discounts are deferred and amortized over the term of the related debt, except in the case of refunding debt transactions where the amortization period is over the term of the refunding or refunded debt, whichever is shorter.

Capitalized Interest—Interest expense is capitalized during construction of those capital projects that are paid for from the bond proceeds and are being amortized over the depreciable life of the related assets on a straight-line basis. Interest expense capitalized for 2017 and 2016 totaled \$2.8 million and \$3.9 million, respectively.

Capital Grants—Capital grants are reported as contributed revenue in the statements of revenues, expenses, and changes in net position.

Revenue Recognition—Sewer service revenue is billed as a percentage of the City's water billings and is recorded as revenue when the water is consumed by the customers. Of the accounts receivable balances, \$32.4 million and \$34.4 million represent revenue recognized on sewer service that had not yet been billed to customers at December 31, 2017 and 2016, respectively. Unearned revenue represents amounts collected from nonmetered customers prior to usage.

Revenues and Expenses—The Sewer Fund distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the Sewer Fund's principal ongoing operations. The principal operating revenues of the Sewer Fund are charges to customers for sales and services. Operating expenses include the cost of sales and services, pension expense, administrative expenses, and depreciation and amortization on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

Adopted Accounting Standards—GASB Statement No. 80, *Blending Requirements for Certain Component Units*, an amendment of GASB Statement No. 14 ("GASB 80"), amends the blending requirements for the financial statement presentation of component units of all state and local governments. GASB 80 was effective for the Sewer Fund for its year ended December 31, 2017. The adoption of this Statement had no impact on the Sewer Fund's financial statements.

GASB Statement No. 82, Pension Issues—An Amendment of GASB Statements No. 67, No. 68 and No. 73 ("GASB 82"), addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (Plan member) contribution requirements. GASB 82 was effective for the Sewer Fund for its year ended December 31, 2017. The adoption of this Statement adjusted the presentation of payroll-related measures in the required supplementary information, but did not have an impact on the Sewer Fund's financial statements.

Upcoming Accounting Standards—Other accounting standards that the Sewer Fund is currently reviewing for applicability and potential impact on the financial statements include:

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions ("GASB 75"), replaces the requirements of Statements No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB. This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures. In addition, this Statement details the recognition and disclosure requirements for employers with payables to defined benefit OPEB plans that are administered through trusts that meet the specified criteria and for employers whose employees are provided with defined contribution OPEB. GASB 75 will be effective for the Sewer Fund beginning with its year ending December 31, 2018.

ASB Statement No. 83, *Certain Asset Retirement Obligations*—("GASB 83"), addresses accounting and financial reporting for certain asset retirement obligations (AROs). A government that has legal obligations to perform future asset retirement activities related

to its tangible capital assets will have to recognize a liability based on the guidance in this statement. This Statement also requires disclosure of information about the nature of a government's AROs, the methods and assumptions used for the estimates of the liabilities, and the estimated remaining useful life of the associated tangible capital assets. GASB 83 will be effective for the Sewer Fund beginning with its year ending December 31, 2019.

GASB Statement No. 84, *Fiduciary Activities*—("GASB 84") will improve the guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. GASB 84 will be effective for the Sewer Fund beginning with its year ending December 31, 2019.

GASB Statement No. 85, *Omnibus*—("GASB 85") the objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. The statement addresses various miscellaneous issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (OPEB). GASB 85 will be effective for the Sewer Fund beginning with its year ending December 31, 2018.

GASB Statement No. 86, *Certain Debt Extinguishment Issues*—("GASB 86") establishes accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources (resources other than the proceeds of refunding debt) are placed in an irrevocable trust for the sole purpose of extinguishing debt. GASB 86 will be effective for the Sewer Fund beginning with its year ending December 31, 2018.

GASB Statement No. 87, Leases – ("GASB 87") will improve accounting and financial reporting for leases by governments by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The Statement will establish a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. This Statement will increase the usefulness of governments' financial statements by requiring reporting of certain lease liabilities that are currently not reported. GASB 87 will be effective for the Sewer Fund beginning with its year ending December 31, 2020.

GASB Statement No. 88, Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements – ("GASB 88") will improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. GASB 88 will be effective for the Sewer Fund beginning with its year ending December 31, 2019.

2. RESTRICTED AND UNRESTRICTED CASH, CASH EQUIVALENTS, AND INVESTMENTS

Cash Equivalents and Investments—As of December 31, 2017, the Sewer Fund had the following cash equivalents and investments (in thousands):

	Maturities (in Years)					
				More	_	
	Less than 1	1–5	6–10	than 10	Fair Value	
U.S. Treasuries	\$180,550	\$ -	\$ -	\$ -	\$180,550	
U.S. agencies	2,496	4,597	9,426	-	16,519	
Certificates of deposits						
and other short-term	104,663	-	-	-	104,663	
Corporate bonds	-	2,935	-	-	2,935	
Municipal bonds	20,326	88,532			108,858	
Subtotal	\$308,035	\$96,064	\$9,426	<u>\$ -</u>	\$413,525	
Share of City's pooled funds					115,349	
Total					\$528,874	

As of December 31, 2016, the Sewer Fund had the following cash equivalents and investments (in thousands):

	Maturities (in Years)						
	Less than 1	1–5	6–10	than 10	Fair Value		
U.S. agencies	\$ 16,603	\$11,900	\$ 9,187	\$ -	\$ 37,690		
Commercial paper	8,182	-	-	-	8,182		
Certificates of deposits							
and other short-term	122,788	-	-	-	122,788		
Corporate bonds	4,008	3,948	7,968	-	15,924		
Municipal bonds	1,223	48,856	13,584		63,663		
Subtotal	\$152,804	\$64,704	\$30,739	<u>\$ -</u>	\$248,247		
Share of City's pooled funds					114,190		
Total					\$362,437		

U.S. agencies include investments in government-sponsored enterprises, such as Federal National Mortgage Association, Federal Home Loan Banks, and Federal Home Loan Mortgage Corporation.

Investment Fair Value Measurements—The Sewer Fund categorizes the fair value measurements of its investments based the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation techniques used to measure fair value.

Level 1—Inputs are unadjusted quoted prices in active markets for identical assets

Level 2—Observable inputs other than quoted market prices, and

Level 3—Unobservable Inputs

The investments measured at fair value as of December 31, 2017 and 2016 were (dollars in thousands):

	2017			2016		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
U.S. Treasuries	\$ -	\$ 19,902	\$ -	\$ -	\$ -	\$ -
U.S. agencies	-	16,519	-	-	37,690	-
Corporate bonds	-	2,935	-	-	15,924	-
Municipal bonds		103,525			63,663	
Total investments at fair value	<u>\$ -</u>	<u>\$142,881</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$117,277</u>	<u>\$ -</u>

U.S. agencies include investments in government-sponsored enterprises, such as Federal National Mortgage Association, Federal Home Loan Banks, and Federal Home Loan Mortgage Corp.

Money market investments and participating interest-earning investment contracts that have a remaining maturity at the time of purchase of one year or less and are held by governments other than the external investment pools are measured at amortized cost and are not reflected in the table above. The total of these investments at amortized cost for Sewer are \$270.6 million and \$131.0 million as of December 31, 2017 and 2016, respectively.

The Sewer Fund's share in the City's pooled fund of \$115.3 million and \$114.2 million as of December 31, 2017 and 2016, respectively, is categorized as Level 2 in the fair value hierarchy; however, pooled funds are not reflected in the table above.

Interest Rate Risk—As a means of limiting its exposure to fair value losses arising from rising interest rates, the City's investment policy requires that investments generally may not have a maturity date in excess of 30 years from the date of purchase. Certain other investments are held in accordance with the specific provisions of applicable ordinances.

Credit Risk—With regard to credit risk, the Code limits the investments in securities to:

- (1) Interest-bearing general obligations of the United States and the State of Illinois;
- (2) United States treasury bills and other non-interest bearing general obligations of the United States or United States government agencies when offered for sale at a price below the face value of same, so as to afford the city a return on such investment in lieu of interest;

- (3) Tax anticipation warrants, municipal bonds, notes, commercial paper or other instruments representing a debt obligation issued by the City of Chicago;
- (4) Commercial paper which: (1) at the time of purchase, is rated in the two highest classifications by at least two accredited ratings agencies; and (2) matures not more than 270 days after the date of purchase;
- (5) Reverse repurchase agreement if: (1) the term does not exceed 90 days; and (2) the maturity of the investment acquired with the proceeds of the reverse repurchase agreement does not exceed the expiration date of the reverse repurchase agreement; Reverse repurchase agreements may be transacted with primary dealers and financial institutions, provided that the City has on file a master repurchase agreement;
- (6) Certificates of deposit of banks or savings and loan associations designated as municipal depositories which are insured by federal deposit insurance; provided that any amount of the deposit in excess of the federal deposit insurance shall be collateralized as noted in Custodial Credit Risk—Cash and Certificates of Deposit below:
- (7) Bankers acceptance of banks whose senior obligations, at the time of purchase, are rated in either the AAA or AA rating categories by at least two accredited ratings agencies;
- (8) Tax-exempt securities exempt from federal arbitrage provisions applicable to investments of proceeds of the City's tax-exempt debt obligations;
- (9) Domestic money market mutual funds regulated by and in good standing with the Securities and Exchange Commission; provided that such money market mutual funds' portfolios are limited to investments authorized by this section;
- (10) Any other suitable investment instrument permitted by state laws governing municipal investments generally, subject to the reasonable exercise of prudence in making investments of public funds;
- (11) Except where otherwise restricted or prohibited, a non-interest-bearing savings account, non-interest-bearing checking account or other non-interest bearing demand account established in a national or state bank, or a federal or state savings and loan association, when, in the determination of the treasurer, the placement of such funds in the non-interest bearing account is used as compensating balances to offset fees associated with that account that will result in cost savings to the City;
- (12) Bonds of companies organized in the United States with assets exceeding \$500.0 million that, at the time of purchase, are rated not less than A-, or equivalent rating, by at least two accredited ratings agencies;
- (13) Debt instruments of international financial institutions, including but not limited to the World Bank and the International Monetary Fund, that, at the time of purchase, are rated within 4 intermediate credit ratings of the United States sovereign credit rating by at least two accredited ratings agencies, but not less than an A-rating, or equivalent rating. The maturity of investments authorized in this subsection shall not exceed 10 years. For purposes of this subsection, an "international financial institution" means a financial institution that has been established or chartered by more than one country and the owners or shareholders are generally national governments or other international institutions such as the United Nations;

- (14) United States dollar denominated debt instruments of foreign sovereignties that, at the time of purchase, are rated within 4 intermediate credit ratings of the United States sovereign credit rating by at least two accredited ratings agencies, but not less than an A-rating or equivalent rating;
- (15) Interest-bearing bonds of any county, township, city, village, incorporated town, municipal corporation, or school district, of the State of Illinois, of any other state, or of any political subdivision or agency of the State of Illinois or of any other state, whether the interest earned thereon is taxable or tax-exempt under federal law. The bonds shall be registered in the name of the city or held under a custodial agreement at a bank. The bonds shall be rated, at the time of purchase, not less than A-, or equivalent rating, by at least two accredited rating agencies with nationally recognized expertise in rating bonds of states and their political subdivisions;
- (16) Bonds registered and regulated by the Securities and Exchange Commission and for which the full faith and credit of the State of Israel is pledged for payment; provided that the bonds have an A-rating or above or equivalent rating by at least two accredited ratings agencies;
- (17) Bonds, notes, debentures, or other similar obligations of agencies of the United States rated, at the time of purchase, no less than AAA by at least two accredited rating agencies.

Total holdings across all funds held by the Treasurer shall have no less than an overall average rating of Aa1 on a quarterly basis, as rated by two accredited rating agencies. A schedule summarizing the Sewer Fund's exposure to credit risk as of December 31, 2017 and 2016, is as follows (in thousands):

Quality Rating	2017	2016
Aaa/AAA*	\$112,382	\$118,821
Aa/AA	296,324	94,221
A/A	4,819	956
P1/A1	-	8,182
Not rated*	-	26,067
Total	<u>\$413,525</u>	\$248,247

^{*} The Sewer Fund was able to obtain quality ratings for a portion of money market mutual funds as of December 31, 2017 that were previously classified as not rated as of December 31, 2016. The remaining investments that are not rated are primarily composed of money market mutual funds.

The Sewer Fund participates in the City's pooled cash and investments account, which includes amounts from other City funds and is maintained by the City Treasurer. Individual cash or investments are not specifically identifiable to any participant in the pool. The City Treasurer's pooled fund is included in the City's Comprehensive Annual Financial Statements.

Custodial Credit Risk—Cash and Certificates of Deposit—This is the risk that in the event of a bank failure, the City's Deposits may not be returned. The City's Investment Policy states that in order to protect the City public fund deposits, depository institutions are to maintain collateral pledges on City deposits and certificates of deposit during the term of the deposit.

For certificates of deposit of banks or savings and loan associations designated as municipal depositories which are insured by federal deposit insurance, any amount of the deposit in excess of the federal deposit insurance shall be either: (1) fully collateralized at least 102 percent by: (i) marketable U.S. government securities marked to market at least monthly; (ii) bonds, notes, or other securities constituting the direct and general obligation of any agency or instrumentality of the United States; or (iii) bonds, notes or other securities constituting a direct and general obligation of any county, township, city, village, incorporated town, municipal corporation, or school district, of the State of Illinois or of any other state, or of any political subdivision or agency of the State of Illinois or any other state which are rated in either the AAA or AA rating categories by at least two accredited ratings agencies and maintaining such rating during the term of such investments; (2) secured by a corporate surety bond issued by an insurance company licensed to do business in Illinois and having a claims-paying rating in the top rating category as rated by a nationally recognized statistical rating organization and maintaining such rating during the term of such investment; or (3) fully collateralized at least 102 percent by an irrevocable letter of credit issued in favor of the City of Chicago by the Federal Home Loan Bank, provided that the Federal Home Loan Bank's short-term debt obligations are rated in the highest rating category by at least one accredited ratings agency throughout the term of the certificate of deposit.

The collateral required to secure City funds must be held in safekeeping and pursuant to collateral agreements which would prohibit release or substitution of pledged assets without proper written notification and authorization of the City Treasurer. The final maturity of acceptable collateral pledged shall not exceed 120 months.

The bank balance of cash and certificates of deposit with the City's various municipal depositories was \$902.3 million. 96.6 percent of the bank balance was either insured or collateralized with securities held by City agents in the City's name. \$30.6 million was uncollateralized at December 31, 2017, and thus was subject to custodial credit risk.

A schedule summarizing the investments reported in the basic financial statements as of December 31, 2017 and 2016, is as follows (in thousands):

	2017	2016
Per Note 2: Investments—Sewer Fund Investments—City Treasurer pooled fund	\$413,525 115.349	\$248,247 114,190
investments only reasoner pooled fund	\$528,874	\$362,437
Per financial statements:		
Restricted investments—current	\$108,324	\$ 85,116
Restricted investments—noncurrent	200,538	39,644
Unrestricted investments Investments included as cash and cash equivalents	102,703	112,110
on the statements of net position	117,309	125,567
	\$528,874	\$362,437

3. RESTRICTED ASSETS AND ACCOUNTS

Sewer service revenues are pledged to pay outstanding Wastewater Revenue Bonds. The ordinances authorizing the issuance of outstanding Wastewater Revenue Bonds provide for the creation of separate accounts into which net revenues, as defined, or proceeds to be credited, are as follows:

Wastewater Revenue Bonds, Refunding Bonds Series 1993 (the "Senior Lien Bonds"), and 1998A Wastewater Capital Appreciation Bonds:

Bond Principal and Interest Account—No later than 10 days prior to each principal or interest payment date, an amount to pay principal; premium, if any; and interest becoming due, whether upon maturity, redemption, or otherwise.

Debt Service Reserve Account—For each series, an amount equal to the least of (i) the maximum annual debt service requirement; (ii) 10% of the original principal amount, less original issue discount; or (iii) 125% of the average annual debt service requirement. The required balance in this account was met by the purchase of surety bonds.

Construction Account—Proceeds of the Senior Lien Bonds were deposited in this account for the purpose of paying construction costs of projects as defined in the ordinance.

Wastewater Revenue Bonds, Series 2017, 2015, 2014, 2012, 2010, 2008, 2001, Refunding Series 2004, and Refunding Series 2006 (the "Second Lien Bonds"):

Bond Principal and Interest Account—No later than the business day immediately preceding January 1 and July 1, an amount to pay principal; redemption premium, if any; and interest on the bonds. The City is also required to make deposits in the Second Lien Bonds' account to meet other payment obligations under the indenture authorizing Second Lien Parity Bonds.

Debt Service Reserve Account—For each series, an amount equal to the least of (i) the highest future debt service requirement; (ii) 10% of the original principal amount, less original issue discount; or (iii) 125% of the average annual debt service requirement. The required balance in this account was met by the purchase of a surety bond.

Construction Account—Proceeds of the Second Lien Bonds were deposited in this account for the purpose of paying construction cost of projects as defined in the ordinance.

Sewer Rate Stabilization Account—Any net revenues remaining after providing sufficient funds for all required deposits in the bond accounts may be transferred to the sewer rate stabilization account upon the direction of the City to be used for any lawful purpose of the Sewer Fund.

For accounts established by ordinances with balances, the amounts as of December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
Construction	\$283,460	\$127,834
Bond principal and interest Sewer rate stabilization	100,866 32,196	90,781 32,629
Total	\$416,522	\$251,244

The 2017 Sewer rate stabilization balance above includes a fair value adjustment of \$655. In 2016, the fair value adjustment was \$789, which was not included in the 2016 balance.

At December 31, 2017 and 2016, management was not aware of any instances of noncompliance with the above terms of the ordinances.

4. LONG-TERM DEBT

As of December 31, 2017 and 2016, long-term debt consisted of the following (in thousands):

	2017	2016
\$62,423 Series 1998A Wastewater Transmission Revenue Bonds issued April 7, 1998, due through 2028; interest at 4.55% to 5.0%	\$ 35,168	\$ 35,168
\$73,100 Series 2001 Wastewater Transmission Revenue Bonds issued December 6, 2001, due through 2030; interest at 4.0% to 5.5% \$155,030 Series 2006A & B Wastewater Transmission Revenue Bonds	50,925	54,855
November 21, 2006, due through 2039; Series A interest at 4.0% to 5.0% (4.0% at December 31, 2006); Series B interest at 4.0% to 5.0% \$167,635 Series 2008A Wastewater Transmission Revenue Bonds issued	-	115,965
November 18, 2008, due through 2038; interest at 3.5% to 5.5% \$332,230 Series 2008C Wastewater Transmission Revenue Bonds (2004A Refunded) issued October 16, 2008, due through 2039;	12,255	146,985
(2004A Refunded) issued October 16, 2008, due through 2039; interest rate at 4.0% to 5.0% \$275,865 Series 2010A & B Wastewater Transmission Revenue Bonds	316,780	332,230
issued November 16, 2010, due through 2040; interest at 2.0% to 6.9% \$1,546 Illinois Environmental Protection Agency Loan Agreement	258,440	262,350
signed May 28, 2008, due through 2027; interest at 2.50% \$276,470 Series 2012 Wastewater Transmission Revenue Bonds issued	874	952
September 13, 2012, due through 2042; interest at 3.0% to 5.0% \$15,000 Illinois Environmental Protection Agency Loan Agreement	256,165	261,545
signed January 20, 2010, due through 2031; interest at 0% \$17,812 Illinois Environmental Protection Agency Loan Agreement	10,328	11,093
signed October 8, 2010, due through 2032; interest at 1.25% \$17,564 Illinois Environmental Protection Agency Loan Agreement	14,077	14,925
signed September 22, 2011, due through 2033; interest at 1.25% \$15,000 Illinois Environmental Protection Agency Loan Agreement	14,300	15,132
signed October 2, 2012, due through 2034; interest at 2.295% \$292,405 Series 2014 Wastewater Transmission Revenue Bonds issued	13,160	13,787
September 22, 2014, due through 2044; interest at 3.0% to 5.0% \$87,080 Series 2015 Bonds issued October 19, 2015 due through	282,770	287,685
January 1, 2039; interest at 2.59% to 6.04% \$54,170 Illinois Environmental Protection Agency Loan Agreement	87,080	87,080
signed October 22, 2013, due through 2035; interest at 1.93% \$56,198 Illinois Environmental Protection Agency Loan Agreement	50,732	53,068
signed October 8, 2014, due through 2036; interest at 1.99% \$4,118 Illinois Environmental Protection Agency Loan Agreement	53,950	-
signed January 22, 2016, due through 2036; interest at 1.86%	4,039	_

(Continued)

	2017	2016
\$4,263 Illinois Environmental Protection Agency Loan Agreement signed November 4, 2016, due through 2037; interest at 1.75% \$180.590 Series 2017A Wastewater Transmission Revenue Bonds	\$ 4,263	\$ -
issued June 21, 2017, due through 2052; interest at 4.0% to 5.25% \$215,485 Series 2017B Wastewater Transmission Revenue Bonds	180,590	-
issued June 21, 2017, due through 2044; interest at 5.0%	215,485	
Total revenue bonds	1,861,381	1,692,820
Add accretion of Series 1998 Capital Appreciation Bonds	64,105	59,018
Add unamortized net bond (discount)/premium	113,074	77,642
Less current portion (payable from restricted assets)	(56,201)	(49,325)
Long-term portion—net	\$1,982,359	\$1,780,155
		(Concluded)

Long-term debt during the years ended December 31, 2017 and 2016, changed as follows (dollars in thousands):

	Balance January 1, 2017	Additions	Reductions	Balance December 31, 2017	Due within One Year
Revenue bonds and loans Accretion of Series 1998	\$ 1,692,820	\$ 460,654	\$ (292,093)	\$ 1,861,381	\$ 56,201
capital appreciation bonds Unamortized net	59,018	5,087	-	64,105	-
discount/premium	77,642	45,720	(10,288)	113,074	
Total revenue bonds and loans	\$ 1,829,480	\$ 511,461	\$ (302,381)	\$ 2,038,560	\$ 56,201
	Balance January 1,			Balance December 31,	Due within One
		Additions	Reductions		
Revenue bonds and loans Accretion of Series 1998	January 1,	Additions \$ 54,170	Reductions \$ (47,529)	December 31,	One
	January 1, 2016			December 31, 2016	One Year
Accretion of Series 1998 capital appreciation bonds	January 1, 2016 \$ 1,686,179	\$ 54,170		December 31, 2016 \$ 1,692,820	One Year

Interest expense includes amortization of the loss on bond refunding for 2017 and 2016 of \$1.5 million and \$4.2 million; less amortization of net bond discount/premium of \$7.2 million and \$5.9 million, respectively; and accretion of Series 1998 capital appreciation bonds of \$5.1 million and \$4.8 million, respectively.

As defined in the ordinances, net revenues are pledged for the payment of principal and interest on the bonds. The ordinances require that net revenues available for bonds equal 115% of the senior lien debt service requirement and that net revenues available for bonds

equal the sum of 100% of the aggregate annual senior lien debt service requirement and 100% of the aggregate annual second lien debt service requirement and 115% of the annual subordinate lien debt service requirement and annual debt service requirement for the fiscal year on aggregate outstanding debt service on any outstanding IEPA loans, wastewater line of credit and commercial paper notes. The above requirements were met for 2017 and 2016.

Rate Increases—Sewer service rates are set by ordinance. The sewer service charge is established in an amount designed to pay the costs of Sewer Fund operations and capital improvements, including any related debt service. During 2017 and 2016, the charge for sewer service was increased and was an amount equal to 100% of the gross amount charged for water service, whether such water service is metered or nonmetered. The rate charged for water was \$28.52 per 1,000 cubic feet for 2016 and effective June 1, 2017, increased to \$29.04 per 1,000 cubic feet.

Issuance of Debt—A loan agreement was signed on October 8, 2014, with the Illinois Environment Protection Agency to line approximately 20 miles of existing sewer line ranging in diameter from 8 inches to 72 inches located throughout City. In 2017, the Sewer Fund drew \$56.2 million from this loan agreement. The loan has an interest rate of 1.99 percent with the maturity dates from June 9, 2017 to June 9, 2036.

A loan agreement was signed on January 22, 2016, with the Illinois Environment Protection Agency to install approximately 4,900 lineal feet of reinforced concrete sewer main ranging from 36 to 72 inch diameter pipe on the 56th street corridor. In 2017, the Sewer Fund drew \$4.1 million from this loan agreement. The loan has an interest rate of 1.86 percent with the maturity dates from August 18, 2017 to August 18, 2036.

A loan agreement was signed on November 4, 2016, with the Illinois Environment Protection Agency to install approximately 5,300 lineal feet of reinforced concrete sewer main ranging from 24 to 55 inch diameter pipe on Avenue "L" corridor. In 2017, the Sewer Fund drew \$4.3 million from this loan agreement. The loan has an interest rate of 1.75 percent with the maturity dates from May 3, 2018 to November 3, 2037.

Second Lien Wastewater Transmission Revenue Project, Series 2017A (\$180.6 million) were sold at a premium in June 2017. The bonds have interest rate ranging from 4% to 5.25% and maturity date from January 1, 2020 to January 1, 2052. Net Proceeds of \$197.9 million will be used to fund certain costs of improvements and extensions to the Wastewater system (\$196.0 million).

Second Lien Wastewater Refunding Bonds, Series 2017B (\$215.5 million) were sold at a premium in June 2017. The bonds have interest rate of 5% and maturity date from January 1, 2018 to January 1, 2038. Net proceeds of \$243.9 million were used to refund certain maturities of wastewater revenue bonds outstanding (\$242.5 million). The current and advance refunding resulted in a difference between the acquisition price and the net carrying amount of \$5.3 million that will be charged to operations over 4 to 20 years using the straight-line method. The current and advance refunding of the bonds decreased the Wastewater system's total debt service payments by \$54.1 million and resulted in an economic gain (difference between the present values of the debt service on the old and new debt) of \$32.6 million.

Following is a schedule of debt service requirements to maturity (in thousands):

December 31	Principal	Interest	Total Debt Service
2018	\$ 56,202	\$ 89,118	\$ 145,320
2019	58,520	86,097	144,617
2020	56,469	90,774	147,243
2021	56,420	90,861	147,281
2022	58,495	88,838	147,333
2023–2027	323,514	413,674	737,188
2028–2032	375,079	298,662	673,741
2033–2037	438,967	174,180	613,147
2038–2042	314,345	62,832	377,177
2043–2047	74,965	16,542	91,507
2048–2052	48,405	4,993	53,398
Total	\$1,861,381	<u>\$1,416,571</u>	\$3,277,952

Defeased Bonds—Defeased bonds have been removed from the balance sheet because the related assets have been placed in irrevocable trusts, together with interest earned thereon, will provide amount sufficient for payment of all principal and interest. Defeased bonds at December 31, 2017 are as follows (dollars in thousands):

	Defeased	Outstanding
Wastewater Revenue Second Lien Bonds, Series 2008A	\$131,055	\$131,055

Debt Covenants— The ordinances authorizing the issuance of outstanding Wastewater Transmission Revenue Bonds provide for the creation of separate accounts into which monies will be deposited, as appropriate. The ordinances require that net revenues available for bonds, as adjusted shall each fiscal year at least equal (A) 115% percent of the aggregate debt service requirement for the fiscal year on the outstanding senior lien bonds, plus (B) the sum of the aggregate annual debt service requirements for the fiscal year on of the outstanding second lien bonds, plus (C) 115% of the aggregate outstanding debt service requirements for the fiscal year on of the outstanding IEPA loans, plus (D) annual debt service requirement for the fiscal year on aggregate outstanding debt service on any outstanding wastewater line of credit and commercial paper notes. This requirement was met at December 31, 2017.

5. UTILITY PLANT

During the years ended December 31, 2017 and 2016, utility plant changed as follows (in thousands):

	Balance January 1, 2017	Additions	Disposals and Transfers	Balance December 31, 2017
Utility plant not depreciated: Land and land rights Construction in progress	\$ 560 <u>35,498</u>	\$ - 65,463	\$ - _(12,618)	\$ 560 88,343
Total utility plant not depreciated	36,058	65,463	(12,618)	88,903
Utility plant being depreciated: Facilities and structures Furniture and equipment	2,958,973 31,006	144,247 <u>97</u>	(32,121) (180)	3,071,099 30,923
Total utility plant being depreciated	2,989,979	144,344	(32,301)	3,102,022
Less accumulated depreciation: Facilities and structures Furniture and equipment	(548,233) (21,844)	(43,249) (1,721)	- 181	(591,482) (23,384)
Total accumulated depreciation	(570,077)	(44,970)	181	(614,866)
Utility plant being depreciated—net	2,419,902	99,374	(32,120)	2,487,156
Utility plant—net	\$2,455,960	\$164,837	<u>\$(44,738)</u>	\$2,576,059

	Balance January 1, 2016	Additions	Disposals and Transfers	Balance December 31, 2016
Utility plant not depreciated: Land and land rights Construction in progress	\$ 560 92,339	\$ - 35,912	\$ - (92,753)	\$ 560 35,498
Total utility plant not depreciated	92,899	35,912	(92,753)	36,058
Utility plant being depreciated: Facilities and structures Furniture and equipment	2,671,508 30,575	320,522 2,608	(33,057) (2,177)	2,958,973 31,006
Total utility plant being depreciated	2,702,083	323,130	(35,234)	2,989,979
Less accumulated depreciation: Facilities and structures Furniture and equipment	(509,550) (22,273)	(38,683) (1,664)	- 2,093	(548,233) (21,844)
Total accumulated depreciation	(531,823)	(40,347)	2,093	(570,077)
Utility plant being depreciated—net	2,170,260	282,783	(33,141)	2,419,902
Utility plant—net	\$2,263,159	<u>\$318,695</u>	<u>\$(125,894</u>)	\$2,455,960

6. PENSION PLANS

Plan Description—Eligible Sewer employees participate in one of two single-employer defined benefit pension plans (Plans). These Plans are: the Municipal Employees' Annuity and Benefit Fund of Chicago (Municipal Employees'); and the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (Laborers'). The Plans are administered by individual retirement boards of trustees comprised of City officials or their designees and of trustees elected by plan members. Certain employees of the Chicago Board of Education participate in the Municipal Employees' Fund or the Laborers' and Retirement Board Employees' Annuity and Benefit Fund. Each Plan issues a publicly available financial report that includes financial statements and required supplementary information that can be obtained at www.meabf.org and www.labfchicago.org.

Benefits Provided— The Plans provide retirement, disability, and death benefits as established by State law. Benefits generally vest after 10 years of credited service. Employees qualify for an unreduced retirement age minimum formula annuity based on a combination of years of service and age of retirement. Employees may also receive a reduced retirement age minimum formula annuity if they do not meet the age and service requirements for the unreduced retirement age annuity. The requirements of age and service are different for employees depending on when they first became members of their respective Plans. For all the Plans, employees who became members before January 1,

2011 are considered Tier 1 Employees. For those employees who became members on or after January 1, 2011 but before July 6, 2017 are considered Tier 2 Employees. For those employees who became members on or after July 6, 2017 are considered Tier 3 Employees. Public Act 100-0023 (P.A. 100-0023), which established the requirements for Tier 3 employees, includes a provision for Tier 2 employees to elect to be considered as Tier 3 employees. The annuity is computed by multiplying the final average salary by a percentage ranging from 2.2 percent to 2.5 percent per year of credited service. The final average salary is the employee's highest average annual salary for any four consecutive years within the last 10 years of credited service for participants who are Tier 1 Employees and any eight consecutive years within the last 10 years of credited service for participants who are Tier 2 Employees or Tier 3 Employees.

Benefit terms provide for annual adjustments to each employee's retirement allowance subsequent to the employees' retirement date. For Tier 1 Employees, the annual adjustments for Municipal Employees' and Laborers' are 3.0 percent, compounded, for annuitants born before January 1, 1966 and 1.5 percent, simple, born after January 1, 1966 or later. For Tier 2 Employees and Tier 3 Employees, the annual adjustments are equal to the lesser of 3.0 percent and 50 percent of CPI-U of the original benefit.

Employees Covered by Benefit Terms—At December 31, 2017, the following employees were covered by the benefit terms:

	Municipal		
	Employees'	Laborers'	Total
Inactive employees or beneficiaries currently			
receiving benefits	25,383	3,703	29,086
Inactive employees entitled to but not yet			
receiving benefits	17,549	1,469	19,018
Active employees	30,922	2,794	33,716
	73,854	7,966	81,820

Contributions—Historically State law required City contributions at statutorily, not actuarially, determined rates. State law also requires covered employees to contribute a percentage of their salaries. The City's contribution for payment year 2017 for Municipal Employees' and Laborers' was calculated based on the total amount of contributions by employees to the respective Plans made in the calendar year two years prior, multiplied by 1.25 for Municipal Employees', and 1.00 for Laborers'.

For the Municipal Employees' and Laborers' Plans, Public Act 100-0023 (P.A. 100-0023) was enacted on July 06, 2017. P.A. 100-0023 requires the City to contribute specific amounts to the Municipal Employees' and the Laborers' Plans in the aggregate amounts as follows: in payment year 2018, \$302.0 million; in payment year 2019, \$392.0 million; in payment year 2020, \$481.0 million; in payment year 2021, \$571.0 million; and in payment year 2022, \$660.0 million. Additionally, P.A. 100-0023 requires that the City's contributions are at actuarially determined rates beginning in payment year 2023 and future funding be sufficient to produce a funding level of 90% by the year end of 2058.

The City's contributions are budgeted in the same year as the applicable levy year for the property taxes funding the contributions. The City's contributions are then paid to the pension funds in the following year (which is when the levy property taxes are collected and paid to the City by the Cook County Treasurer). The Sewer Fund's proportion of the contribution was determined based on the rates of Sewer Fund's salaries within each corresponding pension plan to the total budgeted salaries for 2017.

The contribution to the two pension plans from the Sewer Fund was \$9.5 million and \$4.4 million for the years ended December 31, 2017 and 2016, respectively.

Net Pension Liability, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions—At December 31, 2017 and 2016, the Sewer Fund reported a liability of \$392.6 million and \$664.9 million, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2017 and 2016, respectively and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date.

Changes in Actuarial Assumptions—Changes under P.A. 100-0023 and other actuarial assumptions resulted in an increase in future required contributions to the Municipal Employees' and Laborers' pension plans resulting in an increase in the discount rate for the Municipal Employees' and Laborers' Pension Plans as discussed in the discount rate section below.

The change in the discount rate and other assumptions decreased the net pension liability by \$151.8 million for Municipal Employees' and \$120.7 million for Laborers'. This change is being amortized into expense over a 5 year period for Municipal Employees' and 4 year period for Laborers'.

The Sewer Fund's proportion of the net pension liability was determined based on the rates of budgeted Sewer Fund's salaries within each corresponding pension plan to the total budgeted salaries for 2017 and 2016. At December 31, 2017 and 2016, the Sewer Fund's proportion was 2.0 percent of the Municipal Employees' Plan and 11.2 percent and 11.7 percent, respectively, of the Laborers' Plan.

For the years ended December 31, 2017 and 2016, the Sewer Fund recognized pension expense of \$34.4 million and \$104.9 million, respectively.

At December 31, 2017 and 2016, the Sewer Fund reported total deferred outflows of resources of \$95.7 million and \$175.1 million, respectively, and deferred inflows of resources of \$243.6 million and \$22.4 million related to pensions from the following sources:

Municipal Employees' (dollars in thousands):

	2017		20	16
	Deferred	Deferred	Deferred	Deferred
	Outflows of	Inflows of	Outflows of	Inflows of
	Resources	Resources	Resources	Resources
Differences between expected and			_	
actual experience	\$ -	\$ 5,359	\$ -	\$ 3,286
Changes of assumptions Net difference between projected and actual earnings on pension	71,172	128,515	102,492	9,081
plan investments	-	2,243	3,650	-
Total	\$71,172	\$136,117	\$106,142	\$12,367

Amounts reported as deferred outflows of resources and deferred inflows of resources related to Municipal Employees' pensions will be recognized in pension expense/(benefit) as follows:

Year Ende	ed
December	r 31:

\$ 1,166	2018
1,166	2019
(34,985)	2020
(32,292)	2021
\$ (64,945)	Total

Laborers' (dollars in thousands):

	20	17	2016		
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources		
Differences between expected and actual experience Changes of assumptions Net difference between projected and actual earnings on pension	\$ - 17,043	\$ 7,104 89,158	\$ - 57,634	\$ 4,792 5,237	
plan investments	7,503	11,178	11,357		
Total	\$24,546	\$107,440	\$68,991	\$10,029	

Amounts reported as deferred outflows of resources and deferred inflows of resources related to Laborers' pensions will be recognized in pension benefit as follows:

Year Ended December 31:

2018	\$(22,597)
2019	(37,394)
2020	(20,108)
2021	(2,795)
Total	\$(82,894)

Deferred Inflows Related to Changes in Proportionate Share of Contributions—For the years ended December 31, 2017 and 2016, the Sewer Fund reported pension benefit/(charge) of \$0.9 million and \$1.5 million, respectively, related to changes in proportionate share of contributions. As of December 31, 2017 and 2016, the Sewer Fund reported deferred inflows of \$3.3 million and \$4.7 million, respectively, and deferred outflows of \$1.9 million and \$0, respectively, related to changes in its proportionate share of contributions. This deferred amount will be recognized as a pension benefit/(charge) over a period of three years.

Actuarial Assumptions—The total pension liability in the December 31, 2017 and 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

	Municipal		
	Employees'	Laborers'	
Inflation	2.50 %	2.25 %	
Salary increases	3.50–7.75 ^(a)	3.00 ^(b)	
Investment rate of return	7.00 ^(c)	7.25 ^(d)	

- (a) (1.50%-6.50% for 2018-2022), varying by years of service
- (b) Plus a service—based increase in the first 9 years
- (c) Net of investment expense
- (d) Net of investment expense, including inflation

Post-retirement Mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table (Blue Collar mortality table for Laborers') for males or females, as appropriate. Pre-retirement mortality rates were based on RP-2014 Employee Mortality Table (Blue Collar mortality table for Laborers'). The actuarial assumptions used in the December 31, 2017 valuation were adjusted based on the results of actuarial experience study for the periods:

Municipal Employees'—January 1, 2012-December 31, 2016

Laborers'—January 1, 2012-December 31, 2016

The long term expected rate of return on pension plan investments was determined using the building-block method 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 allocation and best estimates of arithmetic real rates of return for each major asset class as of December 31, 2017 and 2016, are summarized in the following table:

	Target Allocation		Long-Term Expected Real Rate of Return		
	Municipal		Municipal		
2017	Employees'	Laborers'	Employees '	Laborers'	
Asset class:					
Domestic equity	26.0 %	- %	5.6 %	- %	
U.S. equity	-	25.0	-	5.8	
Non U.S. equity	-	20.0	-	5.7	
Global low volatility equity	-	5.0	-	5.0	
International equity	22.0	-	5.7	-	
Fixed income	27.0	20.0	1.0	(0.2)	
Hedge funds	10.0	10.0	3.6	3.6	
Private debt	-	3.0	-	8.2	
Private equity	5.0	4.0	9.4	9.4	
Real estate	10.0	10.0	5.4	5.4	
Private real assets		3.0	-	5.8	
Total	100.0 %	100.0 %			

			Long-Term	Expected
	Target All	Target Allocation		f Return
	Municipal	_	Municipal	
2016	Employees'	Laborers'	Employees'	Laborers'
Asset Class:				
Domestic equity	26.0 %	- %	4.8 %	6.4 %
U.S. equity	-	12.0	-	-
Non U.S. equity	-	18.0	-	8.0
Global equity	-	20.0	-	6.8
International equity	22.0	-	5.0	-
Fixed income	27.0	16.0	0.5	2.6
Hedge funds	10.0	8.0	2.8	3.9
Private equity	5.0	-	8.6	-
Private markets	-	7.0	-	7.2
GAA	-	7.0	-	4.3
Real estate	10.0	8.0	5.2	4.6
Private real assets	-	4.0	-	-
Risk parity			-	-
Total	100.0 %	100.0 %		

Discount Rate

Municipal Employees'-The discount rate used to measure the total pension liability as of December 31, 2017 was 7.0 percent, which is an increase from the discount rate of 3.91 percent used to measure the total pension liability as of December 31, 2016. The increase in the discount rate was mainly a result of the increased projected contributions as specified by Public Act 100-0023. This Single Discount Rate for December 31, 2017, was based on an expected rate of return on pension plan investments of 7.0 percent. The Single Discount Rate for December 31, 2016 was based on an expected rate of return of 7.5 percent and a municipal bond rate of 3.78 percent (based on the Bond Buyer 20- Bond Index of general obligation municipal bonds). The projection of cash flows used to determine the discount rate assumed plan member contributions will be made according to the contribution rate applicable for each member's tier and that employer contributions will be made as specified by Public Act 100-0023. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions and contributions from future plan members that are intended to fund the service costs of future plan members and their beneficiaries are not included. 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 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. The valuation as of December 31, 2016, projected that the pension plan's fiduciary net position would be available to make payments through 2023. As a result of the increase in projected contributions, the pension plan's fiduciary net position is now projected to be available to make all projected future benefit payments of current plan members.

Laborers'—A Single Discount Rate of 7.07 percent was used to measure the total pension liability as of December 31, 2017, which is an increase from the discount rate of 4.17 percent used to measure the total pension liability as of December 31, 2016. The increase in the discount rate was mainly a result of the increased projected contributions as specified by Public Act 100-0023. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.25 percent and 7.5 percent as of December 31, 2017 and 2016, respectively, and a municipal bond rate of 3.31 percent and 3.78 percent as of December 31, 2017 and 2016, respectively (based on the weekly rate closest to but not later than the measurement date of the "state and local bonds" rate from Federal Reserve statistical release (H.15)). The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at under the statutory funding policy. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments only through the year 2071. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2071, and the municipal bond rate was applied to all benefit payments after that date. The valuation as of December 31, 2016, projected that the pension plan's fiduciary net position would be available to make payments through 2027. As a result of the increase in projected contributions, the pension plan's fiduciary net position is now projected to be available to make all projected future benefit payments of current plan members through 2071.

Sensitivity of the Sewer Proportionate Share of the Net Pension Liability to Changes in the Discount Rate.

Municipal Employees'—The following presents the Sewer's allocated share of the net pension liability as of December 31, 2017 and 2016, calculated using the discount rate of 7.0 percent and 3.91 percent, respectively, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate (dollars in thousands):

	Current			
Net Pension Liability	1%	Discount	1%	
December 31, 2017	Decrease	Rate	Increase	
Municipal Employees'discount rate	6.00 %	7.00 %	8.00 %	
Municipal Employees' net pension liability	\$282,012	\$239,542	\$204,366	
		Current		
Net Pension Liability	1%	Discount	1%	
December 31, 2016	Decrease	Rate	Increase	
Municipal Employees' discount rate	2.91 %	3.91 %	4.91 %	
Municipal Employees' net pension liability	\$438,265	\$369,711	\$313,413	

Laborers'—The following presents the Sewer's allocated share of the net pension liability as of December 31, 2017 and 2016, calculated using the discount rate of 7.07 percent and 4.17 percent, respectively, as well as what the net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate (dollars in thousands):

	Current			
Net Pension Liability	1%	Discount	1%	
December 31, 2017	Decrease	Rate	Increase	
Laborers' discount rate	6.07 %	7.07 %	8.07 %	
Laborers' net pension liability	\$188,768	\$153,060	\$123,193	
		Current		
Net Pension Liability	1%	Discount	1%	
December 31, 2016	Decrease	Rate	Increase	
Laborers' discount rate	3.17 %	4.17 %	5.17 %	
Laborers' net pension liability	\$356,983	\$295,214	\$244,430	

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

7. OTHER POSTEMPLOYMENT BENEFITS (OPEB)—PENSION FUNDS

Applicable State law authorized the two respective Pension Funds (Municipal Employees' and Laborers') to provide a fixed monthly dollar subsidy to each annuitant who has elected coverage under any City health plan through December 31, 2016. After that date, no Pension Fund subsidies were authorized by state law.

Underwood litigation- In 2017, the Illinois Appellate Court held that current and future annuitants hired prior to the execution of a court approved settlement agreement in 2003 in the *City of Chicago v. Korshak* (those who retired prior to August 23, 1989 and their dependents, Korshak group) litigation, and subject to certain eligibility requirements, are entitled to receive lifetime fixed rate monthly subsidies equal to the subsidy amounts provided in the 1983 and 1985 amendments to the Pension Code. Those subsidies range from \$21 - \$55 per month, depending on the retiree's Pension Fund and Medicare eligibility. The issue of whether the Pension Funds or the City is obligated to make the subsidy payments to the annuitants is still subject to litigation. The 1983 and 1985 statutes state that the Pension Funds are obligated to make the payments but none of the Pension Funds included the liabilities for the monthly subsidies in their respective actuarial valuation reports under GASB 43. For that reason, the City has included the liabilities for the monthly fixed subsidies for this limited group under GASB 45 and is reported together with the Retirees' Settlement Health Plan liability.

Other Post Employment Benefits—City Obligation— As of January 1, 2014, the City of Chicago agreed to provide a healthcare plan with a subsidy of 55% of the cost of that plan to those City annuitants who retired prior to August 23, 1989, for their lifetimes. The cost of health benefits is recognized as an expenditure in the accompanying financial statements as claims are reported and are funded on a pay-as-you-go basis. The net expense to the City in 2017 for providing these benefits was \$22.7 million. Of that amount, \$14.8 million was attributed to runoff claims for the retirees who no longer received subsidized healthcare from the City after December 31, 2016, and \$7.9 million was attributed to the class of retirees and their dependents (those who retired prior to August 23, 1989), who will continue to receive lifetime subsidized healthcare from the City. The average number of annuitants in this latter group is 2,978 and a total of 3,378 covered lives including dependents. Duty Disabled retirees who have statutory pre-63/65 coverage will continue to have fully subsidized coverage under the active health plan until age 65.

Funding Policy—No assets are accumulated or dedicated to funding the retiree health plan benefits.

Annual OPEB Cost and Net OPEB Obligation—The City's annual other post-employment benefit (OPEB) cost (expense) is calculated based on the annual required contribution of the employer (ARC). The ARC (Annual Required Contribution) represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and to amortize any unfunded actuarial liabilities over a period of ten years.

The following table shows the components of the City's annual OPEB costs for the year for the Health Plan, the amount actually contributed to the Plan, and changes in the City's net OPEB obligation. The *Net OPEB Obligation* is the amount entered upon the City's Statement of Net Position as of year-end as the net liability for the other post-employment benefits—the Health Plan. The amount of the annual cost that is recorded in the Statement of Changes in Net Position for 2017 is the Annual OPEB Cost (expense).

Annual OPEB Cost and Contributions Made (Dollars in thousands)

	Retiree Settlement Health Plan 2017
Contribution rates:	
City Plan members	Pay as you go N/A
Plan members	IV/A
Annual required contribution	\$50,871
Interest on net OPEB obligation	81
Adjustment to annual required contribution	(307)
Annual OPEB cost	50,645
Contributions made	38,967
Increase (Decrease) in net OPEB obligation	11,678
Net OPEB obligation—beginning of year	2,698
Net OPEB obligation—end of year	<u>\$14,376</u>

The City's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for fiscal year 2017, 2016 and 2015 are as follows (dollars in thousands):

Schedule of Contributions, OPEB Costs and Net Obligations

		Percentage of Annual				
Fiscal Year Ended	Annual OPEB Cost	OPEB Cost Contributed	Net OPEB Obligation			
Settlement plan						
12/31/2017	\$ 50,645	76.9 %	\$ 14,376			
12/31/2016	38,469	130.1	2,698			
12/31/2015	43,645	133.5	14,280			

Funded Status and Funding Progress—As of January 1, 2017, the most recent actuarial valuation date, the actuarial accrued liability for benefits was \$331.5 million all of which was unfunded. The covered payroll (annual payroll of active employees covered by the plan) was approximately \$2,627.7 million and the ratio of the unfunded actuarial liability to the covered payroll was 12.6 percent.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revisions as the results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presents, as required, (unaudited) supplementary information following the notes to the financial statements (dollars in thousands)).

			Unfunded			UAAL
		Actuarial	Actuarial			as a
Actuarial	Actuarial	Accrued	Accrued			Percentage
Valuation	Value of	Liability	Liability	Funded	Covered	of Covered
Date	Assets	(AAL)	(UAAL)	Ratio	Payroll	Payroll
Settlement plan						
12/31/2016	<u>\$ -</u>	<u>\$ 331,496</u>	<u>\$ 331,496</u>	<u> </u>	\$ 2,627,662	<u>12.6</u> %

Actuarial Method and Assumptions—Projections of benefits for financial reporting purposes are based on the substantive plan (the plan understood by the employer and plan members) and included the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial method and assumptions used include techniques that are designed to reduce the effects of short term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long term perspective of the calculations.

For the Health Plan benefits, the entry age normal actuarial cost method was used. The actuarial assumptions included an annual healthcare cost trend rate of 8.0% initially, reduced by decrements to an ultimate rate of 5.0% in 2029. The range of rates included a 3.0% inflation assumption. Rates included a 2.5% inflation assumption. The plan has not accumulated assets and does not hold assets in a segregated trust. However, the funds expected to be used to pay benefits are assumed to be invested for durations which will yield an annual return rate of 3.0%. The remaining Unfunded Accrued Actuarial Liability is being amortized as a level dollar amount over ten years. The benefits include lifetime benefits for the class of retirees (those who retired prior to August 23, 1989, Korshak group) and their dependents, lifetime fixed subsidy benefits for the annuitant category (except Korshak) hired prior to 2003.

Summary of Assumptions and Methods

Settlement Health Plan 2017

Actuarial valuation date
Actuarial cost method
Amortization method
Remaining amortization period
Asset valuation method
Actuarial assumptions:
Investment rate of return
Projected salary increases
Healthcare inflation rate

December 31, 2016 Entry age normal Level dollar, open 10 years Market value

3.0% 2.5% 1.9% for 2017 then 8.0% to 5.0% in 2029

The OPEB benefit information pertaining expressly to the Sewer Fund employees is not available as the obligation is the responsibility of the general government. Accordingly, no obligation has been recorded in the accompanying basic financial statements. Amounts for the City are recorded within the City's government-wide basic financial statements.

8. RELATED-PARTY TRANSACTIONS

Included in operating expenses are reimbursements to the General Fund of the City and certain other funds for services provided by other City departments, employee fringe benefits, and certain payments made on behalf of the Sewer Fund. Such reimbursements amounted to \$81.9 million and \$155.6 million in 2017 and 2016, respectively.

9. COMMITMENTS AND CONTINGENCIES

The Sewer Fund has certain contingent liabilities resulting from litigation, claims, or commitments incident to the ordinary course of business. Management expects that final resolution of these contingencies will not have a material adverse effect on the financial position or results of operations of the Sewer Fund.

The Sewer Fund provides workers' compensation benefits and employee health benefits under self-insurance programs administered by the City. Such claims outstanding, including claims incurred but not reported, are estimated and recorded as liabilities in the basic financial statements.

Uninsured claim expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. These losses include an estimate for claims that have been incurred, but not reported. Changes in the claims liability amount for the years ended December 31, 2017 and 2016, are as follows (in thousands):

	2017	2016
Balance—January 1 Claims incurred on current and prior-year events Claims paid on current and prior-year events	\$ 22,628 11,240 (11,490)	\$ 25,129 9,894 (12,395)
Balance—December 31	\$ 22,378	\$ 22,628

The City purchases annuity contracts from commercial insurers to satisfy certain liabilities; accordingly, no liability is reported for those claims. Property and casualty risks for the Sewer Fund are transferred to commercial insurers. Claims have not exceeded the purchased insurance coverage in the past three years.

At December 31, 2017 and 2016, the Sewer Fund entered into contracts with outstanding commitments of approximately \$115.6 million and \$120.8 million, respectively, for construction projects.

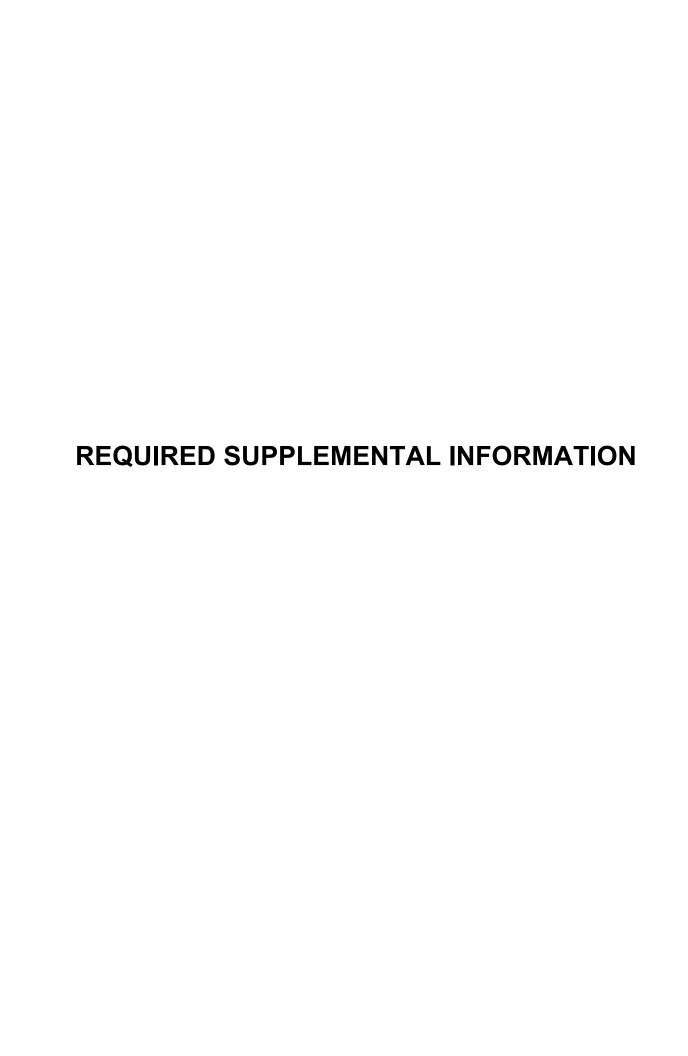
10. DEFERRED OUTFLOWS/INFLOWS OF RESOURCES

(In thousands)	2017	2016
Deferred outflows of resources:		
Deferred outflows from pension activities	\$ 95,718	\$175,133
Changes in proportionate share of pension contribution	1,871	-
Unamortized deferred bond refunding costs	10,832	9,596
Total deferred outflows of resources	\$ 108,421	<u>\$184,729</u>
Deferred inflows of resources:		
Deferred inflows from pension activities	\$(243,556)	\$ (22,395)
Changes in proportionate share of pension contribution	(3,246)	(4,707)
Total deferred inflows of resources	<u>\$(246,802</u>)	<u>\$ (27,102)</u>

11. SUBSEQUENT EVENTS

The Sewer Fund has evaluated subsequent events through June 29, 2018, the date the financial statements were available to be issued and concluded no subsequent events have occurred that would require recognition that have not already been recognized or that require disclosure that have not already been disclosed.

* * * * * *



REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS LAST THREE FISCAL YEARS

(Dollars in thousands)

Municipal Employees'	2017	2016	2015
TOTAL PENSION LIABILITY:			
Service cost	\$ 572,534	\$ 619,743	\$ 226,816
Interest	915,711	878,369	909,067
Benefit changes	-	-	2,140,009
Differences between expected and actual experience	(177,755)	(127,119)	(109,835)
Assumption changes	(7,431,191)	(578,920)	8,711,755
Benefit payments including refunds	(888,174)	(859,672)	(826,036)
Net change in total pension liability	(7,008,875)	(67,599)	11,051,776
Total pension liability—beginning	23,291,271	23,358,870	12,307,094
Total pension liability—ending (a)	16,282,396	23,291,271	23,358,870
PLAN FIDUCIARY NET POSITION:			
Contributions-employer	261,764	149,718	149,225
Contributions-employee	134,765	130,391	131,428
Net investment income	610,515	281,419	114,025
Benefit payments including refunds of			
employee contribution	(888,174)	(859,672)	(826,036)
Administrative expenses	(6,473)	(7,056)	(6,701)
Other	5,394	-	-
Net change in plan fiduciary net position	117,791	(305,200)	(438,059)
Plan fiduciary net position—beginning	4,436,227	4,741,427	5,179,486
Plan fiduciary net position—ending (b)	4,554,018	4,436,227	4,741,427
NET PENSION LIABILITY—Ending (a) - (b)	\$ 11,728,378	\$ 18,855,044	\$ 18,617,443
PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF			
THE TOTAL PENSION LIABILITY	27.97 %	19.05 %	20.30 %
COVERED PAYROLL *	\$ 1,686,533	\$ 1,646,939	\$ 1,643,481
EMPLOYER'S NET PENSION LIABILITY AS A PERCENTAGE OF			
COVERED-EMPLOYEE PAYROLL	695.41 %	1,144.85 %	1,132.81 %
ALLOCATED NET PENSION LIABILITY	\$ 239,532	\$ 369,711	\$ 364,150
ALLOCATED PERCENTAGE	2.04 %	1.96 %	1.96 %

^{*} Covered payroll is the amount in force as of the actuarial valuation date and likely differs from actual payroll during fiscal year

Note: Beginning with fiscal year 2015, the City will accumulate ten years of data.

(Continued)

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS LAST THREE FISCAL YEARS

(Dollars in thousands)

Laborers'	2017	2016	2015
TOTAL PENSION LIABILITY:			
Service cost*	\$ 80,232	\$ 82,960	\$ 38,389
Interest	154,047	150,166	153,812
Benefit changes	150	-	384,033
Differences between expected and actual experience	(62,178)	(30,428)	(46,085)
Assumption changes	(1,074,754)	(62,905)	1,175,935
Benefit payments including refunds	(157,050)	(154,683)	(152,530)
Pension plan administrative expense	(3,985)	(4,080)	(3,844)
Net change in total pension liability	(1,063,538)	(18,970)	1,549,710
Total pension liability—beginning	3,693,645	3,712,615	2,162,905
Total pension liability—ending (a)	2,630,107	3,693,645	3,712,615
PLAN FIDUCIARY NET POSITION:			
Contributions-employer	35,457	12,603	12,412
Contributions-employee	17,411	17,246	16,844
Net investment income	207,981	57,997	(22,318)
Benefit payments including refunds of			
employee contribution	(157,050)	(154,683)	(152,530)
Administrative expenses	(3,985)	(4,080)	(3,844)
Other	-	-	-
Net change in plan fiduciary net position	99,814	(70,917)	(149,436)
Plan fiduciary net position—beginning	1,167,740	1,238,657	1,388,093
Plan fiduciary net position—ending (b)	1,267,554	1,167,740	1,238,657
NET PENSION LIABILITY—Ending (a) - (b)	\$ 1,362,553	\$ 2,525,905	\$ 2,473,958
PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF			
THE TOTAL PENSION LIABILITY	48.19 %	31.61 %	33.36 %
COVERED PAYROLL **	\$ 208,442	\$ 208,155	\$ 204,773
EMPLOYER'S NET PENSION LIABILITY AS A PERCENTAGE OF COVERED PAYROLL	653.68 %	1,213.47 %	1,208.15 %
ALLOCATED NET PENSION LIABILITY	\$ 153,060	\$ 295,214	\$ 299,722
ALLOCATED PERCENTAGE	11.23 %	11.69 %	12.12 %

^{*} Includes pension plan administrative expense.

Note: Beginning with fiscal year 2015, the City will accumulate ten years of data.

(Concluded)

^{**} Covered payroll is the amount in force as of the actuarial valuation date and likely differs from actual payroll during fiscal year

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CONTRIBUTIONS LAST TEN YEARS

(Dollars in thousands)

Municipal Employees' Years Ended December 31,	Actuarially Determined Contributions*	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency	Covered Payroll**	Contributions as a percentage of Covered Payroll
2008	\$ 360,387	\$ 146,803	\$ 213,584	\$ 1,543,977	9.51 %
2009	413,509	148,047	265,462	1,551,973	9.54
2010	483,948	154,752	329,196	1,541,388	10.04
2011	611,756	147,009	464,747	1,605,993	9.15
2012	690,823	148,859	541,964	1,590,794	9.36
2013	820,023	148,197	671,826	1,580,289	9.38
2014	839,039	149,747	689,292	1,602,978	9.34
2015	677,200	149,225	527,975	1,643,481	9.08
2016	961,770	149,718	812,052	1,646,939	9.09
2017	1,005,457	261,764	743,693	1,686,533	15.52

^{*} The funding method mandated by the Illinois Pension Code is insufficient to avoid insolvency, and without a change, Therefore, the Fund is projected to become insolvent within the next 10 years (during 2025). The actuarially determined contribution is comprised of an employer normal cost payment and a 30-year, level dollar amortization payment on the unfunded actuarial accrued liability.

^{**} Covered payroll is the amount in force as of the actuarial valuation date and likely differs from actual payroll paid during fiscal year.

Years Ended December 31,	Actuarially Determined Contributions*	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency	Covered Payroll**	Contributions as a percentage of Covered Payroll
2008	\$ 17,652	\$ 15,233	\$ 2,419	\$ 216,744	7.03 %
2009	33,518	14,627	18,891	208,626	7.01
2010	46,665	15,352	31,313	199,863	7.68
2011	57,259	12,779	44,480	195,238	6.55
2012	77,566	11,853	65,713	198,790	5.96
2013	106,199	11,583	94,616	200,352	5.78
2014	106,019	12,161	93,858	202,673	6.00
2015	79,851	12,412	67,439	204,773	6.06
2016	117,033	12,603	104,430	208,155	6.05
2017	124,226	35,457	88,769	208,442	17.01

^{*} The LABF Statutory Funding does not conform to Actuarial Standards of Practice, therefore, the actuarially determined contribution is equal to the normal cost plus an amount to amortize the unfunded liability using dollar payments and a 30 year open amortization period.

^{**} Covered payroll is the amount in force as of the actuarial valuation date and likely differs from actual payroll paid during fiscal year.

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CONTRIBUTIONS

Actuarial Methods and Assumptions	Municipal Employees'	Laborers'				
Actuarial valuation date	12/31/2017 (a)	12/31/2017 (b)				
Actuarial cost method Asset valuation method	Entry age normal 5-yr. Smoothed Market	Entry age normal 5-yr. Smoothed Market				
Actuarial assumptions:	2.50.0/	2.25.04				
Inflation Salary increases	2.50 % 3.50–7.75 (c)	2.25 % 3.00 (d)				
Investment rate of return	3.50–7.75 (c) 7.00 (e)	3.00 (d) 7.25 (f)				
Retirement Age	(g)	(h)				
Mortality	(i)	(j)				
Other information	(k)	(I)				

- (a) Actuarially determined contribution amount is determined as of December 31, with appropriate interest to the middle of the year.
- (b) Actuarially determined contribution rates are calculated as of December 31, which is 12 months prior to the end of the fiscal year in which contributions are reported.
- (c) (1.50%-6.50% for 2018-2022), varying by years of service.
- (d) Plus a service-based increase in the first 9 years.
- (e) Net of investment expense.
- (f) Net of investment expense, including inflation.
- (g) For employees first hired prior to January 1, 2011, rates of retirement are based on the recent experience of the Fund (effective December 31, 2017).
 - For employees first hired on or after January 1, 2011 and before July 6, 2017, rates of retirement for each age from 62 to 80 were used (effective December 31, 2011).
 - For employees first hired on or after July 6, 2017, rates of retirement for each age from 62 to 80 were used (effective December 31, 2017).
- (h) Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the December 31, 2017, valuation pursuant to an experience study of the period January 1, 2012, through December 31, 2016.
- (i) Post-retirement mortality rates were based on the RP-2014 Healthy Annuitant Mortality Tables, set forward two years for males and one year for females, and projected generationally using scale MP-2016. Pre-retirement mortality rates were based on 120% of the RP-2014 Employee Mortality Tables projected generationally using scale MP-2016.
- (j) Post Retirement Mortality: Scaling factors of 117% for males, and 102% for females of the RP-2014 Blue Collar Healthy Annuitant mortality table, sex distinct, with generational mortality improvement using MP-2017 2-dimensional mortality improvement scales. No adjustment is made for post-disabled mortality. Other assumptions: Same as those used in the December 31, 2017, actuarial funding valuations. Pre Retirement Mortality: Scaling factors of 109% for males, and 103% for females of the RP-2014 Blue Collar Employee mortality table, sex distinct, with Pre Retirement Mortality: Scaling factors of 109% for males, and 103% for females of the RP-2014 Blue Collar Employee mortality table, sex distinct, with generational mortality improvement using MP-2017 2-dimensional mortality improvement scales.
- (k) Other assumptions: same as those used in December 31, 2017, actuarial funding valuations.
- (I) The actuarial valuation is based on the statutes in effect as of December 31, 2017. Benefit changes as a result of Public Act 100-0023 were recognized in the Total Pension Liability as of December 31, 2017.

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF OTHER POSTEMPLOYMENT BENEFITS FUNDING PROGRESS LAST THREE YEARS

(Dollars in thousands)

City of Chicago	Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded (Surplus) AAL as a Percentage of Covered Payroll ((b-a)/c)
Settlement Plan							
2015	12/31/2014	\$ -	\$ 311,748	\$ 311,748	- %	\$ 2,487,787	12.5 %
2016	12/31/2015	-	254,910	254,910	-	2,563,649	9.9
2017	12/31/2016	-	331,496	331,496	-	2,627,662	12.6

* * * * * *

STATISTICAL DATA (UNAUDITED)

STATISTICAL DATA (UNAUDITED)

The statistical data section includes selected financial and operating information, generally presented on a multiyear basis. The statistical section information is presented in five categories: financial trends, revenue capacity, debt capacity, operating information, and demographic and economic information. Schedules in the statistical section are the following:

Financial Trends—These schedules contain trend information to help the reader understand how the Sewer Fund's financial performance and well-being have changed over time.

Revenue Capacity—These schedules contain information to help the reader assess the Sewer Fund's most significant revenue source and sewer sales charge.

Debt Capacity—These schedules present information to help the reader assess the affordability of the Sewer Fund's current levels of outstanding debt and the Sewer Fund's ability to issue additional debt in the future.

Operating Information—These schedules contain service and infrastructure data to help the reader understand how the information in the Sewer Fund's financial report relates to the services the Sewer Fund provides and the activities it performs.

Demographic and Economic Information—These schedules offer demographic and economic indicators to help the reader understand the environment within which the City's financial activities take place.

STATISTICAL DATA
NET POSITION BY COMPONENT
TEN YEARS ENDED DECEMBER 31, 2008–2017 (UNAUDITED)
(In thousands)

	2008		2009	2010		2011	2012	2013	2014	2015	2016	2017
NET POSITION: Net investment in capital assets	\$ 413,481	\$	391,248	\$ 408,564	\$	448,720	\$ 448,414	\$ 481,946	\$ 520,627	\$ 559,715	\$ 648,644	\$ 735,564
Restricted for capital projects Unrestricted	 - 54,333	_	9,533 52,920	11,110 64,828	_	24,610 25,588	 50,014 60,436	 73,858 78,509	111,333 102,794	116,107 (299,584)	117,295 (353,467)	 116,376 (364,239)
TOTAL	\$ 467,814	\$	453,701	\$ 484,502	\$	498,918	\$ 558,864	\$ 634,313	\$ 734,754	\$ 376,238	\$ 412,472	\$ 487,701

^{*} Amounts were restated for the implementation of GASB 65

^{**} Amounts were restated for the implementation of GASB 68

STATISTICAL DATA
CHANGES IN NET POSITION
TEN YEARS ENDED DECEMBER 31, 2008–2017 (UNAUDITED)
(In thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
OPERATING INCOME:										
Operating revenues	\$ 160,005	\$ 175,163	\$ 198,229	\$ 203,349	\$ 253,912	\$ 279,829	\$ 322,228	\$ 375,877	\$ 368,966	\$ 357,623
Operating expenses	98,487	109,643	113,881	113,930	113,575	109,333	119,279	310,689	227,932	163,517
Depreciation and amortization	20,982	21,878	23,775	25,074	27,187	31,280	36,701	40,444	40,734	48,171
Total operating income	40,536	43,642	60,573	64,345	113,150	139,216	166,248	24,744	100,300	145,935
NONOPERATING EXPENSES	(37,849)	(57,755)	(26,706)	(51,793)	(55,704)	(66,267)	(65,807)	(149,978)	(80,705)	(77,125)
INCOME (LOSS) BEFORE CAPITAL GRANTS	2,687	(14,113)	33,867	12,552	57,446	72,949	100,441	(125,234)	19,595	68,810
CAPITAL GRANTS			3,136	1,864	2,500	2,500		<u> </u>	16,639	6,419
CHANGE IN NET POSITION	\$ 2,687	<u>\$ (14,113)</u>	\$ 37,003	\$ 14,416	\$ 59,946	\$ 75,449	\$ 100,441	\$ (125,234)	\$ 36,234	\$ 75,229

^{*} Amounts were restated due to the implementation of GASB 65.

^{**} Amounts were restated due to the implementation of GASB 68.

STATISTICAL DATA HISTORICAL FINANCIAL OPERATIONS TEN YEARS ENDED DECEMBER 31, 2008–2017 (UNAUDITED) (In thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
OPERATING REVENUES:										
Sewer sales	\$ 158,698	\$173,906	\$197,455	\$202,323	\$252,943	\$291,110	\$337,657	\$390,924	\$384,140	\$377,286
Less provision for bad debt	-	-	-	-	-	(12,461)	(16,557)	(16,154)	(16,320)	(20,813)
Other operating revenue	1,307	1,257	774	1,026	969	1,180	1,128	1,107	1,146	1,150
Total operating revenues	160,005	175,163	198,229	203,349	253,912	279,829	322,228	375,877	368,966	357,623
OPERATING EXPENSES:										
Repairs	37,786	42,110	42,509	38,805	35,708	38,910	40,435	42,131	36,408	41,881
Maintenance	18,626	24,380	24,075	23,655	21,819	23,004	24,374	25,322	21,941	24,660
Administrative and general	15,746	14,403	17,179	18,802	21,254	12,008	14,394	12,337	11,801	12,591
General Fund reimbursements ₍₁₎	23,287	25,431	27,065	29,124	31,709	32,144	36,740	227,600	155,624	81,919
Engineering	3,042	3,319	3,053	3,544	3,085	3,267	3,336	3,299	2,158	2,466
Total operating expenses	98,487	109,643	113,881	113,930	113,575	109,333	119,279	310,689	227,932	163,517
NONOPERATING REVENUES	817	234	643	2,870	867	(2,754)	3,813	3,921	1,137	4,354
NET REVENUES—As										
defined	\$ 62,335	\$ 65,754	\$ 84,991	\$ 92,289	\$141,204	\$167,742	\$ 206,762	\$ 69,109	\$142,171	\$198,460

Source: City of Chicago Comptroller's Office.

Note 1:

During 2017 the Sewer Fund incurred expenses of the \$34.4 million of pension, \$9.5 million is the portion of the City's pension contribution payable in 2017 to the pension funds and allocable to the Sewer Fund. The remaining portion of the pension expense for 2017 (i.e. \$24.9 million) is recognized on the income statement of the Sewer Fund for 2017 pursuant to GASB 68 but is not due and payable by the City during 2017.

During 2016 the Sewer Fund incurred expenses of the \$104.9 million of pension, \$4.4 million is the portion of the City's pension contribution payable in 2016 to the pension funds and allocable to the Sewer Fund. The remaining portion of the pension expense for 2016 (i.e. \$100.5 million) is recognized on the income statement of the Sewer Fund for 2016 pursuant to GASB 68 but is not due and payable by the City during 2016.

STATISTICAL DATA FIVE LARGEST CUSTOMERS (UNAUDITED) (In thousands)

Department of Aviation \$1,230 \$1,331 \$1,744 \$1,593 \$1,927 \$2,165 \$1,857 \$3,634 \$4,498 \$4 Humboldt Park 494 754 435 1,842 1,179 1,393 1,307 C Chicago Park Dist WR Grace and Company 285 347						Amoun	t of Sales				
Aviation \$1,230 \$1,331 \$1,744 \$1,593 \$1,927 \$2,165 \$1,857 \$3,634 \$4,498 \$4,49		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Humboldt Park	Department of										
Chicago Park Dist	Aviation	\$1,230	\$1,331	\$1,744	\$1,593	\$1,927	\$2,165	\$1,857	\$3,634	\$4,498	\$4,025
WR Grace and Company 285 347	Humboldt Park	494	754	435	1,842	1,179	1,393	1,307	-	_	759
WR Grace and Company 285 347	Chicago Park Dist	-	-	-	-	-	-	-	-	-	-
Calumet Park - 270 315 316 - 635 652 - - Pepsi Cola General Bottlers - 237 -<											
Pepsi Cola General Bottlers - 237 - </td <td>Company</td> <td>285</td> <td>347</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	Company	285	347	-	-	-	-	-	-	-	-
General Bottlers 237 2 237 2 2 2 2 2 2 2 2 310 745 1,418 2 3 1,344 1,267 1 1,267 1 1,418 2 3 3 3 3 3 3 3 3 3	Calumet Park	-	270	315	316	-	635	652	-	-	-
Bottlers - 237 -	Pepsi Cola										
Lincoln Park 692 310 745 1,418 - 1,344 1,267 1 Northwestern University 541 258	General										
Northwestern University 541	Bottlers	-	237	-	-	-	-	-	-	-	-
University 541 258	Lincoln Park	692	-	-	310	745	1,418	-	1,344	1,267	1,325
Columbus Park - 258	Northwestern										
Cook County Sheriff - - - - 1,141 - - 846 University of -	University	541	-	-	-	-	-	-	-	-	-
Sheriff - - - - - 1,141 - - 846 University of Chicago—HCC - - - 339 1,428 - - - - - Uniquema - - - - - 680 551 - Ford Motor Co - - - - - 695 928 912 University of Illinois at Chicago - - - - - - - 834 -	Columbus Park	-	-	258	-	-	-	-	-	-	-
University of Chicago—HCC 339 1,428 Chicago—HCC	Cook County										
Chicago—HCC - - 339 1,428 - - - - - Uniquema - - - - - 680 551 - Ford Motor Co - - - - 695 928 912 University of Illinois at Chicago - - - - 1,647 - - 834 -	Sheriff	-	-	-	-	-	1,141	-	-	846	-
Uniquema 680 551 Ford Motor Co 695 928 912 University of Illinois at Chicago 1,647 834 -	University of										
Ford Motor Co 695 928 912 University of Illinois at Chicago 1,647 834 -	Chicago—HCC	-	-	-	339	1,428	-	-	-	-	-
University of Illinois at Chicago 1,647 834 -	Uniquema	-	-	-	-	-	-	680	551	-	-
Illinois at Chicago 1,647 834 -	Ford Motor Co	-	-	-	-	-	-	695	928	912	995
Chicago 1,647 834 -	University of										
	Illinois at										
Hometown 546 546		-	-	-	-	1,647	-	-	834	-	-
	Hometown			546						546	<u>551</u>
\$3,242 \$2,939 \$3,298 \$4,400 \$6,926 \$6,752 \$5,191 \$7,291 \$8,069 \$7		\$3 242	\$ 2 939	\$3.298	\$4.400	\$6 926	\$6.752	\$5 191	\$7 291	\$8.069	\$7,655

The Sewer Fund intends to provide ten years of information as it becomes available.

STATISTICAL DATA CUSTOMERS BY COMPONENT (UNAUDITED) (In thousands)

	Amount of Sales											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
Residential Industrial/	\$105,072	\$124,600	\$144,145	\$139,598	\$178,399	\$195,542	\$233,830	\$266,878	\$246,997	\$242,899		
commercial Governmental	34,363 8,931	38,376 10,930	44,540 9,544	50,915 12,836	57,598 17,915	74,696 22,052	82,811 22,318	95,473 29,680	109,655 28,634	99,620 35,917		
	\$148,366	\$173,906	\$198,229	\$203,349	\$253,912	\$292,290	\$338,959	\$392,031	\$385,286	\$378,436		

The Sewer Fund intends to provide ten years of information as it becomes available.

STATISTICAL DATA RECENT SEWER SERVICE RATES (Unaudited)

	Gross Water	Sewe	er Rate
Effective Date	Rate Per 1,000 Cubic Feet	Percent of Water Bill	Per 1000 Cubic Feet
January 1, 2008	\$ 11.44	84 %	\$ 9.61
January 1, 2009	13.16	85	11.18
January 1, 2010	15.00	86	12.90
January 1, 2011	15.00	86	12.90
January 1, 2012	18.75	89	16.69
January 1, 2013	21.56	92	19.84
January 1, 2014	24.80	96	23.81
January 1, 2015	28.52	100	28.52
January 1, 2016	28.52	100	28.52
June 1, 2017	29.04	100	29.04

Source: City of Chicago Department of Water Management.

STATISTICAL DATA
SEWER SYSTEM ACCOUNTS
TEN YEARS ENDED DECEMBER 31, 2008–2017
(Unaudited)

	V	Vater Account	s	_	
Years Ended	Non-				Sewer
December 31	Metered	Metered	Total	Exempt	Accounts
2000	210 205	170 457	407 (()	/2.020	422 722
2008	319,205	178,457	497,662	63,929	433,733
2009	318,088	179,649	497,737	64,965	432,772
2010	314,002	183,618	497,620	65,450	432,170
2011	304,519	192,304	496,823	65,903	430,920
2012	290,863	205,097	495,960	61,502	434,458
2013	273,426	220,759	494,185	62,393	431,792
2014	250,304	241,304	491,608	62,856	428,752
2015	227,801	266,284	494,085	64,781	429,304
2016	206,913	287,351	494,264	67,130	427,134
2017	190,276	303,877	494,153	66,995	427,158

Source: City of Chicago Department of Water Management.

STATISTICAL DATA REVENUE BOND COVERAGE TEN YEARS ENDED DECEMBER 31, 2008–2017 (UNAUDITED) (In thousands)

Combined Senior Lien and Second Lien Debt Service Calculation	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
REVENUES AVAILABLE FOR BONDS: Net revenues—as defined Pension Expense other than contribution (Note 1)	\$ 62,335	\$ 65,754	\$84,991	\$ 92,289	\$ 141,204 -	\$ 167,742	\$ 206,762	\$ 69,109 183,165	\$ 142,171 100,447	\$ 198,460 24,921
Transfer to sewer rate stabilization account Other Available Funds (Note 2)	28,847		10,000 4,403	- 17,755	5,000 19,215	3,000 65,298	103,864	108,498	133,501	200,990
Net revenues available for bonds	91,182	87,844	79,394	110,044	155,419	230,040	310,626	360,772	376,119	424,371
PRIOR LIEN DEBT SERVICE REQUIREMENT										
NET REVENUES AVAILABLE FOR BONDS	\$ 91,182	\$87,844	\$79,394	\$110,044	\$155,419	\$230,040	\$310,626	\$360,772	\$376,119	\$424,371
DEBT SERVICE REQUIREMENTS:										
Senior lien debt service requirement	\$17,752	\$17,777	\$16,017	\$ 15,287	\$ 9,231	\$ -	\$ -	\$ -	\$ -	\$ -
Senior lien debt service coverage (1.15 required)	5.14	4.94	4.96	7.20	16.84					
DEBT SERVICE REQUIREMENTS:										
1998A first lien bonds	-	-	-	-	-	-	-	-	-	-
2000 second lien bonds	2,707	2,710	2,711	-	-	-	-	-	-	-
2001 second lien bonds	4,193	4,200	4,196	6,920	5,036	6,923	6,935	6,942	6,947	6,951
2001A second lien bonds	2,043	2,050	2,047	2,055	1,886	-	-	-	-	-
2004A and B second lien bonds	20,387	5,505	17,558	17,448	17,301	26,910	27,102	27,242	-	-
2006A and B second lien bonds	8,759	8,768	8,770	8,765	15,184	15,201	15,210	12,358	12,364	2,734
2008A second lien bonds	-	11,539	11,528	11,537	11,537	8,650	11,536	11,534	11,535	8,031
2008C second lien bonds	2,291	11,792	542	485	2,732	2,786	3,346	14,725	31,907	31,809
IEPA Loans	-	-	101	383	665	866	2,916	3,309	4,934	10,612
2010A & B second lien bonds	-	-	2,284	19,332	21,036	21,039	21,054	21,627	21,646	21,654
2012A & B second lien bonds	-	-	-	-	-	17,485	17,486	17,483	17,485	17,480
2014 second lien bonds	-	-	-	-	-	-	3,292	19,127	19,180	19,188
2015 second lien bonds	-	-	-	-	-	-	-	-	-	6,902
2017A & B second lien bonds										16,751
Second lien debt service requirement	40,380	46,564	49,737	66,925	75,377	99,860	108,877	134,347	125,999	142,112
COMBINED SENIOR AND SECOND LIEN DEBT SERVICE REQUIREMENTS	\$58,132	\$64,341	\$65,754	\$ 82,212	\$ 84,608	\$ 99,860	\$108,877	\$134,347	\$125,999	\$142,112
COMBINED SENIOR AND SECOND LIEN DEBT SERVICE COVERAGE (1.15 REQUIRED)	1.57	1 27	1 21	1 24	1.84	2 20	2.05	2.69	2.00	2.99
SERVICE COVERAGE (1.15 REQUIRED)	1.57	1.37	1.21	1.34	1.84	2.30	2.85	2.69	2.99	2.99
SEWER RATE STABILIZATION ACCOUNT YEAR-END BALANCE	\$14,629	\$14,629	\$25,629	\$ 25,703	\$ 29,629	\$ 32,629	\$ 32,629	\$ 32,629	\$ 32,629	\$ 32,196

Source: City of Chicago Comptroller's Office.

Note

⁽¹⁾ of the \$34.4 million of pension expense for 2017, \$9.5 million is the portion of the City's pension contribution payable in 2017 to the pension funds and allocable to the Sewer Fund.

The remaining portion of the pension expense for 2017 (i.e. \$24.9 million) is recognized on the income statement of the Sewer Fund for 2017 pursuant to GASB 68 but is not due and payable by the City during 2017; accordingly, that portion is not included in Operating Expenses for purposes of calculation of the debt service coverage ratio.

⁽²⁾ As provided in the Ordinance, Gross Revenues remaining in any period after providing sufficient funds for Operations and Maintenance Costs, for paying required debt service on all bonds and notes secured by Sewer System revenues, for paying any required amounts into any other accounts established for any bonds or notes secured by Sewer System revenues and to make any deposits into the Sewer Rate Stabilization Account ("Other Available Funds"), can be applied to debt service for any future period.

⁽³⁾ The 2017 Sewer Rate Stabililization balance aboe includes a fair value adjustment of \$655; a fair value adjustment was not included in prior year.

STATISTICAL DATA
LONG-TERM DEBT
TEN YEARS ENDED DECEMBER 31, 2008–2017 (UNAUDITED)
(In thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
First lien Second lien	\$123,068 799,475	\$110,958 790,440	\$ 71,343 1,053,272	\$ 57,988 1,041,436	\$ 43,928 1,290,296	\$ 35,168 1,284,355	\$ 35,168 1,541,690	\$ 35,168 1,592,010	\$ 35,168 1,548,696	\$ 35,168 1,660,490
Subordinate lien—IEPA loan	1,506	1,442	1,377	12,665	29,550	49,936	62,077	59,000	108,956	165,723
Total revenue bonds and notes	924,049	902,840	1,125,992	1,112,089	1,363,774	1,369,459	1,638,935	1,686,178	1,692,820	1,861,381
Unamortized premium										
(discount)	14,791	14,240	15,883	16,142	37,701	34,707	61,306	83,551	77,642	113,074
Unamortized deferred loss Accretion of Series 1998 CAB	(45,376) <u>26,673</u>	(43,332) 30,013	(38,063) 33,532	(32,276) <u>37,242</u>	41,151	45,272	49,615	54,194	59,018	64,105
Sub-total	(3,912)	921	11,352	21,108	78,852	79,979	110,921	137,745	136,660	177,179
Total revenue bonds payable—net of unamortized premium (discount)	\$920,137	\$ 903,761	\$1,137,344	\$1,133,197	\$1,442,626	\$1,449,438	\$1,749,856	\$1,823,923	\$1,829,480	\$2,038,560

The Sewer Fund intends to provide ten years of information as it becomes available.

STATISTICAL DATA
CAPITAL IMPROVEMENT PROGRAM
2018–2022 (UNAUDITED)
(In thousands)

Years	Amount			
2018 \$ 277	7,422			
2019	2,436			
2020 253	3,448			
2021 260	0,679			
<u>266</u>	5,97 <u>2</u>			
Total \$1,320),957			

Note: The information presented in the table above reflects the Sewer Fund's expected allocation of resources to various projects, but does not necessarily represent an expectation of actual cash expenditures for these projects.

Source: City of Chicago Department of Water Management.

STATISTICAL DATA FULL-TIME EQUIVALENT SEWER FUND EMPLOYEES BY FUNCTION TEN YEARS ENDED DECEMBER 31, 2008–2017 (Unaudited)

Function	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Agency management Capital design and	5	5	5	5	4	4	4	4	4	4
construction services	21	21	21	23	23	24	26	24	24	25
Engineering services	-	-	-	-	-	-	-	-	-	-
Inspection services	18	18	18	18	18	18	16	18	24	24
System installation System maintenance	10	10	9	8	8	8	8	9	9	8
and evaluations Communications and	517	521	521	521	523	523	521	521	515	426
coordination	29	<u>31</u>	27	<u>26</u>	<u>17</u>	<u>16</u>	16	<u>15</u>	<u>15</u>	13
	600	606	601	601	593	593	591	591	591	500

The Sewer Fund intends to provide ten years of information as it becomes available.

Source: City of Chicago's 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008 Program and Budget Summary.

Note: Schedule includes only Department of Water Management employees.

STATISTICAL DATA OPERATING INDICATORS BY FUNCTION (Unaudited)

	2016	2017
Catch basins repaired	2,603	3,011

Sewers lined

New construction

STATISTICAL DATA CAPITAL ASSET STATISTICS BY FUNCTION (UNAUDITED) (In miles)

2016	2017

61.0

25.6

40.7

22.3

STATISTICAL DATA
POPULATION OF SERVICE AREA
LAST FIVE CENSUS PERIODS
(Unaudited)

Years	Population
1970	3,369,357
1980	3,005,072
1990	2,783,726
2000	2,896,016
2010	2,695,598

Source: U.S. Department of Commerce—Census Bureau.

STATISTICAL DATA PRINCIPAL EMPLOYERS (NONGOVERNMENT) CURRENT YEAR AND NINE YEARS AGO (Unaudited)

	2017 ⁽¹⁾			2008 (4)			
Employer	Number of Employees	Rank	Percentage of Total City Employment	Number of Employees	Rank	Percentage of Total City Employment	
Advocate Health Care	19,049	1	1.48 %	-		- %	
Northwestern Memorial Healthcare	16,667	2	1.29	-		-	
University of Chicago	16,583	3	1.29	-		-	
JP Morgan Chase & Co. ⁽²⁾	15,701	4	1.22	8,865	1	0.81	
Amazon.com Inc	13,240	5	1.03	-		-	
United Continental Holdings Inc.	12,994	6	1.01	6,403	2	0.58	
Walgreen Boots Alliance Inc.	12,751	7	0.99	-		-	
Northwestern University	10,847	8	0.84	-		-	
Presence Health	10,225	9	0.79	-		-	
Wal-Mart Stores Inc.	10,220	10	0.79	-		-	
Jewel Food Stores, Inc.	-		-	5,977	3	0.55	
Northern Trust	-		-	5,084	4	0.46	
Accenture LLP	-		-	4,532	5	0.41	
American Airlines	-		-	3,582	6	0.33	
SBC/AT&T	-		-	3,459	7	0.32	
Ford Motor Company	-		-	3,325	8	0.30	
CVS Corporation	-		-	3,161	9	0.29	
Bonded Maintenance Company	-		-	2,955	10	0.27	

NOTES:

⁽¹⁾ Source: Reprinted with permission, Crain's Chicago Business January 15, 2018 issue of Crain's Chicago Business. @ 2018 Crain Communications Inc. All Rights Reserved.

⁽²⁾ United Continental Holdings Inc. formerly known as United Airlines

⁽³⁾ Source: City of Chicago, Department of Revenue, Employer's Expense Tax Returns.

Prior to 2014, the information was the City of Chicago, Bureau of Revenue-Tax Division report, which is no longer available.

STATISTICAL DATA POPULATION AND INCOME STATISTICS (Unaudited)

Year	Population (1)	Median Age ⁽²⁾	Number of Households ⁽²⁾	City Employment	Unemployment Rate ⁽³⁾	Per Capita Income ⁽⁴⁾	Total Income ⁽⁶⁾
2008	2,896,016	34.1	1,032,746	1,237,856	6.4	\$45,328	\$ 131,270,613,248
2009	2,896,016	34.5	1,037,069	1,171,841	10.0	43,727	126,634,091,632
2010	2,695,598	34.8	1,045,666	1,116,830	10.1	45,957	123,881,597,286
2011	2,695,598	33.2	1,048,222	1,120,402	9.3	45,977	123,935,509,246
2012	2,695,598	33.0	1,030,746	1,144,896	8.9	48,305	130,210,861,390
2013	2,695,598	33.5	1,062,029	1,153,725	8.3	49,071	132,275,689,458
2014	2,695,598	33.9	1,031,672	1,264,234	5.7	50,690	136,639,862,620
2015	2,695,598	34.2	1,053,229	1,273,727	5.7	53,886	145,254,993,828
2016	2,695,598	34.4	1,053,986	1,282,117	5.4	55,621	149,931,856,358
2017	2,695,598	N/A (5)	N/A (5)	1,289,325	4.7	N/A (5)	N/A ⁽⁵⁾

Notes:

⁽¹⁾ Source: U.S. Census Bureau.

⁽²⁾ Source: American Fact Finder - United States Census Bureau data estimates. Data not available for 2017

⁽³⁾ Source: Bureau of Labor Statistics 2017, Unemployment rate for Chicago-Naperville-Illinois Metropolitan Area

⁽⁴⁾ Source: U.S. Department of Commerce, Bureau of Economic Analysis, Per Capita Personal Income for Chicago-Naperville-Illinois Metropolitan Area.

 $^{^{(5)}}$ N/A means not available at time of publication.