

**City of Chicago
Department of Water Management
Sewer Fund**

**Comprehensive Annual Financial Report
For the Years Ended December 31, 2016 and 2015**



**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, 2016 and 2015**



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

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INTRODUCTORY SECTION



**DEPARTMENT OF WATER MANAGEMENT
CITY OF CHICAGO**

June 30, 2017

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, 2016. 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 \$28.52 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

As of December 31, 2016, the Department of Water Management, Sewer Fund, has forecasted approximately \$1,186.8M under its Capital Improvement Program (CIP) over the next five years, (2017-2021). 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 increased effort of infrastructure renewal by replacing 24 miles of new sewers and lining 39 miles of existing sewers and lining approximately 5,000 structures in 2017. The Chicago Department of Water Management estimates spending \$125.3 million on new sewers, 52.5 million on 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 2016. 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 late 2016 to start Phase I design of the regional solutions and the selection process is ongoing.

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, 2015.

This was the twenty first 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,

A handwritten signature in blue ink, appearing to read "Alfonzo Conner, Jr.", is written over a light blue circular stamp.

Alfonzo Conner, Jr.
Commissioner



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

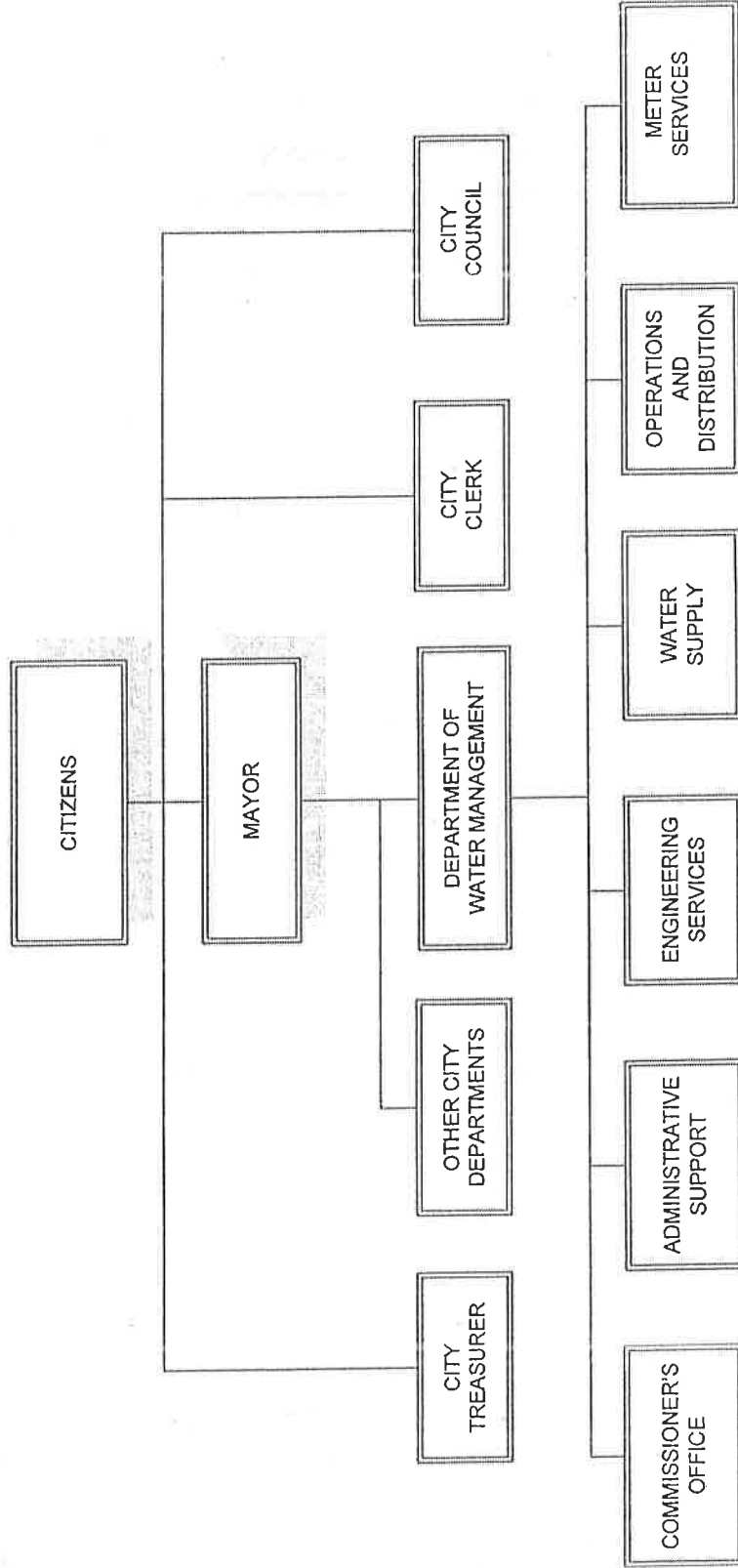
**Sewer Fund, an Enterprise Fund
of the City of Chicago, Illinois**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2015

Executive Director/CEO

CITY OF CHICAGO
 DEPARTMENT OF WATER MANAGEMENT
 As of 12/31/16



List of Principal Officials

Rahm Emanuel	Mayor
Barrett B. Murphy	Commissioner

FINANCIAL SECTION

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, 2016 and 2015, 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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, 2016 and 2015, 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, 2016 and 2015, 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, Schedule of Changes in the Net Pension Liability and Related Ratios, Schedule of Contributions, and 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 and other auditors 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 and other auditors. In our opinion, the procedures

performed as described above, and the reports of the other auditors, 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.

Deloitte & Touche LLP

June 30, 2017

CITY OF CHICAGO, ILLINOIS

SEWER FUND

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, 2016 and 2015. 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

2016

- Operating gross revenues for 2016 decreased by \$6.8 million (1.7%) compared to prior-year 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, net, being depreciated for 2016 were \$318.7 million, primarily due to the completion of sewer construction and rehabilitation projects.

2015

- Operating gross revenues for 2015 increased by \$53.3 million (15.8%) compared to prior-year operating revenues. This increase is primarily due to an increase in sewer billing rates.
- Operating expenses before depreciation and amortization for 2015 increased \$191.4 million compared to 2014. This increase of 160.5% is primarily due to an increase for pension expense related to the implementation of GASB 68.
- The Sewer Fund's total net position for 2015 decreased by \$358.5 million or 48.8% compared to 2014.
- The Sewer Fund's total assets and deferred outflows were greater than total liabilities by \$376.2 million (net position) at December 31, 2015. Net position comprises \$559.7 million of net investment in capital assets, \$116.1 million of restricted for capital projects, and (\$299.6) million of unrestricted.

- Capital asset additions, net, being depreciated for 2015 were \$284.1 million, primarily due to 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, 2016, the Sewer Fund's financial position continues to be strong with total assets and deferred outflows of \$3,163.8 million, total liabilities with deferred inflows of \$2,751.3 million, and net position of \$412.5 million. A comparative condensed summary of the Sewer Fund's net position at December 31, 2016, 2015, and 2014, is as follows:

(In thousands)	Net Position		
	2016	2015	2014
Current assets	\$ 480,086	\$ 389,922	\$ 357,811
Restricted and other assets - Noncurrent	42,975	159,704	293,011
Utility plant—net	<u>2,455,960</u>	<u>2,263,159</u>	<u>2,025,220</u>
Total assets	2,979,021	2,812,785	2,676,042
Deferred outflows	<u>184,729</u>	<u>266,925</u>	<u>89,905</u>
Total assets and deferred outflows	<u>\$ 3,163,750</u>	<u>\$ 3,079,710</u>	<u>\$ 2,765,947</u>
Current liabilities	\$ 279,096	\$ 256,423	\$ 249,313
Derivative instrument liability			71,861
Pension Liability	664,925	663,872	
Long-term liabilities	<u>1,780,155</u>	<u>1,777,496</u>	<u>1,710,019</u>
Total liabilities	2,724,176	2,697,791	2,031,193
Deferred inflows	<u>27,102</u>	<u>5,681</u>	<u>0</u>
Total liabilities and deferred inflows	<u>\$ 2,751,278</u>	<u>\$ 2,703,472</u>	<u>\$ 2,031,193</u>
Net position:			
Net invested in capital assets	\$ 648,644	\$ 559,715	\$ 520,627
Restricted for capital projects	117,295	116,107	111,333
Unrestricted	<u>(353,467)</u>	<u>(299,584)</u>	<u>102,794</u>
Total net position	<u>\$ 412,472</u>	<u>\$ 376,238</u>	<u>\$ 734,754</u>

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.

2015

Current assets increased by \$32.1 million (9.0%) due to an increase in cash and cash equivalents, accounts receivable and inventories with a decrease in due from other funds. Restricted and other assets decreased by \$133.3 million (45.5%) and utility plant—net increased by \$237.9 million (11.8%) due principally to capital activities for sewer construction and rehabilitation projects. Deferred outflows remained consistent with 2015 increased in the amount of \$177.0 million (196.9%) primarily due to the adoption of Government Accounting Standards Board (GASB) Statement No. 68, Accounting and Financial Reporting for Pensions. During 2015, the Sewer Fund lined an additional 55.1 miles of sewers.

Current liabilities increased by \$7.1 million (2.9%), which is primarily related to increase related to accounts payable and accrued liabilities with offsetting decrease in due to other funds and unearned revenue. Derivative instrument liability decreased by \$71.9 million (100%) due to changes in the fair value of interest rate swaps. Long-term liabilities increased by \$67.5 million (3.9%). Pension liability in the amount of \$663.9 million and \$5.7 million in deferred inflows were recorded to the Sewer Fund basic financial statement in connection with the adoption of GASB Statement No. 68, Accounting and Financial Reporting for Pensions.

Net position may serve, over a period of time, as a useful indicator of the Sewer Fund's financial position. As of December 31, 2015, total net position was \$376.2 million, a decrease of \$358.5 million (48.8%) from 2014.

A summary of revenues, expenses, and changes in net position for the years ended December 31, 2016, 2015, and 2014, is as follows:

(In thousands)	<u>Revenues, Expenses, and Changes in Net Position</u>		
	2016	2015	2014
Revenues:			
Operating revenues:			
Sewer service—net	\$367,820	\$ 374,770	\$321,100
Other operating revenues	<u>1,146</u>	<u>1,107</u>	<u>1,128</u>
Total operating revenues	368,966	375,877	322,228
Nonoperating revenues	<u>1,137</u>	<u>3,921</u>	<u>3,813</u>
Revenues before Capital grants	370,103	379,798	326,041
Capital grants	<u>16,639</u>		
Total revenues	<u>386,742</u>	<u>379,798</u>	<u>326,041</u>
Expenses:			
Operating expenses before depreciation and amortization	227,932	310,689	119,279
Depreciation and amortization	40,734	40,444	36,701
Interest expense	81,722	83,656	69,620
Swap termination fee		70,243	
Transfer out	<u>120</u>		
Total expenses	<u>350,508</u>	<u>505,032</u>	<u>225,600</u>
Change in net position	36,234	(125,234)	100,441
Net position—beginning of year (as restated 2015 and 2014)	<u>376,238</u>	<u>501,472</u>	<u>634,313</u>
Net position—end of year	<u>\$412,472</u>	<u>\$ 376,238</u>	<u>\$734,754</u>

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 \$6.9million (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.

2015

Net sewer service revenues for the years ended 2015 and 2014 were \$374.8 million and \$321.1 million, respectively. Other revenue, which consists primarily of inspection fees and house drain fees, for the years ended 2015 and 2014 was \$1.1 million respectively. The increase in 2015 net sewer service revenue of \$53.3 million (15.8%) is primarily due to an increase in water and sewer rates of 15% and 4%, respectively.

Nonoperating revenues increased slightly by \$.1 million compared to 2014 as a result of proceeds primarily from other nonoperating revenue.

A comparative summary of the Sewer Fund's operating expenses, as classified in the basic financial statements, for the years ended December 31, 2016, 2015, and 2014, is as follows:

(In thousands)	Operating Expenses		
	2016	2015	2014
Repairs	\$ 36,408	\$ 42,131	\$ 40,435
Pension	104,864	187,593	
General Fund reimbursements	50,760	40,007	36,740
Maintenance	21,941	25,322	24,374
Engineering	2,158	3,299	3,336
Administrative and general	<u>11,801</u>	<u>12,337</u>	<u>14,394</u>
Operating expenses before depreciation and amortization	227,932	310,689	119,279
Depreciation and amortization	<u>40,734</u>	<u>40,444</u>	<u>36,701</u>
Total operating expenses	<u>\$268,666</u>	<u>\$351,133</u>	<u>\$155,980</u>

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.

2015

Overall, operating expenses before depreciation and amortization for 2015 increased by \$191.4 million (160.5%) in 2014 primarily due to increases in pension expense due to the implementation of 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, 2016, 2015, and 2014, is as follows:

(In thousands)	Cash Flows		
	2016	2015	2014
Cash from activities:			
Operating	\$ 247,425	\$ 239,225	\$ 191,355
Capital and related financing	(267,154)	(356,905)	63,122
Investing	<u>(694)</u>	<u>204,436</u>	<u>(208,731)</u>
Net change in cash and cash equivalents	(20,423)	86,756	45,746
Cash and cash equivalents:			
Beginning of year	<u>177,208</u>	<u>90,452</u>	<u>44,706</u>
End of year	<u>\$ 156,785</u>	<u>\$ 177,208</u>	<u>\$ 90,452</u>

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.

2015

As of December 31, 2015, the Sewer Fund’s cash and cash equivalents of \$177.2 million represented an increase of \$86.8 million from December 31, 2014, as compared to an increase of \$45.7 million from December 31, 2013 to December 31, 2014, primarily due to investment related activities in 2015. Total cash and cash equivalents at December 31, 2015, were composed of unrestricted and restricted cash and cash equivalents of \$37.4 million and \$69.2 million, respectively.

CAPITAL ASSET AND DEBT ADMINISTRATION

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.

2015

At the end of 2015 and 2014, the Sewer Fund had net utility plant of \$2,263.2 million and \$2,025.2 million, respectively. During 2015, the Sewer Fund had capital additions being depreciated of \$211.1 million, and completed projects totaling \$17.2 million were transferred from construction in progress to applicable facilities and structures capital accounts.

The Sewer Fund's net utility plant at December 31, 2016, 2015, and 2014, is summarized as follows:

(In thousands)	Net Utility Plant at Year-End		
	2016	2015	2014
Utility plant not depreciated:			
Land and land rights	\$ 560	\$ 560	\$ 560
Construction in progress	<u>35,498</u>	<u>92,339</u>	<u>25,703</u>
Total utility plant not depreciated	<u>36,058</u>	<u>92,899</u>	<u>26,263</u>
Utility plant being depreciated:			
Facilities and structures	2,958,973	2,671,508	2,462,714
Furniture and equipment	<u>31,006</u>	<u>30,575</u>	<u>32,196</u>
Total utility plant being depreciated	<u>2,989,979</u>	<u>2,702,083</u>	<u>2,494,910</u>
Less accumulated depreciation:			
Facilities and structures	(548,233)	(509,550)	(474,136)
Furniture and equipment	<u>(21,844)</u>	<u>(22,273)</u>	<u>(21,817)</u>
Total accumulated depreciation	<u>(570,077)</u>	<u>(531,823)</u>	<u>(495,953)</u>
Utility plant being depreciated—net	<u>2,419,902</u>	<u>2,170,260</u>	<u>1,998,957</u>
Utility plant—net	<u>\$2,455,960</u>	<u>\$2,263,159</u>	<u>\$2,025,220</u>

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, 2016, 2015, and 2014, is summarized as follows:

(In thousands)	Long-Term Outstanding Debt at Year-End		
	2016	2015	2014
Revenue bonds	\$1,692,820	\$1,686,179	\$1,638,935
Add interest accretion on Series 1998 capital appreciation bonds	59,018	54,193	49,615
Unamortized net bond discount/premium	<u>77,642</u>	<u>83,551</u>	<u>61,306</u>
Outstanding debt—net	<u>\$1,829,480</u>	<u>\$1,823,923</u>	<u>\$1,749,856</u>

The Sewer Fund's revenue bonds at December 31, 2016, 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+	NotRated	NotRated
Junior Lien Wastewater Revenue Bonds	Baa3	A	AA	AA-

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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATEMENTS OF NET POSITION
AS OF DECEMBER 31, 2016 AND 2015
(In thousands)**

	2016	2015		2016	2015
ASSETS			LIABILITIES		
CURRENT ASSETS:			CURRENT LIABILITIES:		
Cash and cash equivalents (Note 2)	\$ 30,301	\$ 37,383	Accounts payable	\$ 3,197	\$ 2,320
Investments (Note 2)	112,110	34,044	Due to other City funds	11,581	14,132
Accounts receivable—net of allowance for doubtful accounts of approximately \$80,651 in 2016 and \$66,885 in 2015	106,874	107,060	Unearned revenue	14,414	15,933
Due from other City funds	17,473	26,192	Accrued liabilities unrestricted	38,304	40,225
Inventories	992	809	Liabilities payable from restricted assets:		
Cash and cash equivalents—restricted (Note 2)	126,484	139,825	Accounts payable	45,570	63,599
Investments—restricted (Note 2)	85,116	43,986	Accrued liabilities	75,249	37,985
Interest receivable	<u>736</u>	<u>623</u>	Current portion of long-term debt (Note 4)	49,325	46,427
			Interest payable	<u>41,456</u>	<u>35,802</u>
Total current assets	<u>480,086</u>	<u>389,922</u>	Total current liabilities unrestricted	<u>279,096</u>	<u>256,423</u>
NONCURRENT ASSETS:			NONCURRENT LIABILITIES:		
Investments—restricted (Note 2)	<u>39,644</u>	<u>156,205</u>	Liabilities payable from restricted assets:		
Other assets	<u>3,331</u>	<u>3,499</u>	Net pension liability (Note 6)	664,925	663,872
Utility plant (Note 5):			Long-term debt—net of current maturities (Note 4)	<u>1,780,155</u>	<u>1,777,496</u>
Land and land rights	560	560	Total noncurrent liabilities	<u>2,445,080</u>	<u>2,441,368</u>
Facilities and structures	2,958,973	2,671,508	Total liabilities	<u>2,724,176</u>	<u>2,697,791</u>
Furniture and equipment	31,006	30,575	DEFERRED INFLOWS (Note 10)	<u>27,102</u>	<u>5,681</u>
Construction in progress	<u>35,498</u>	<u>92,339</u>	NET POSITION (Note 1):		
Total utility plant	3,026,037	2,794,982	Net investment in capital assets	648,644	559,715
Less accumulated depreciation	<u>(570,077)</u>	<u>(531,823)</u>	Restricted for capital projects	117,295	116,107
Utility plant—net	<u>2,455,960</u>	<u>2,263,159</u>	Unrestricted	<u>(353,467)</u>	<u>(299,584)</u>
Total noncurrent assets	2,498,935	2,422,863	Total net position	<u>412,472</u>	<u>376,238</u>
DEFERRED OUTFLOWS (Note 10)	<u>184,729</u>	<u>266,925</u>			
TOTAL	<u>\$ 3,163,750</u>	<u>\$ 3,079,710</u>	TOTAL	<u>\$ 3,163,750</u>	<u>\$ 3,079,710</u>

See notes to basic financial statements.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015
(In thousands)**

	2016	2015
OPERATING REVENUES:		
Sewer service:		
Sewer service—gross	\$384,140	\$ 390,924
Less: provision for doubtful accounts	<u>(16,320)</u>	<u>(16,154)</u>
Sewer service—net	367,820	374,770
Other	<u>1,146</u>	<u>1,107</u>
Total operating revenues	<u>368,966</u>	<u>375,877</u>
OPERATING EXPENSES:		
Repairs	36,408	42,131
General Fund reimbursements	50,760	40,007
Pension expense (Note 6)	104,864	187,593
Maintenance	21,941	25,322
Engineering	2,158	3,299
Administrative and general	<u>11,801</u>	<u>12,337</u>
Total operating expenses before depreciation and amortization	227,932	310,689
Depreciation and amortization	<u>40,734</u>	<u>40,444</u>
Total operating expenses	<u>268,666</u>	<u>351,133</u>
OPERATING INCOME	<u>100,300</u>	<u>24,744</u>
NONOPERATING REVENUE (EXPENSES):		
Investment income (loss)	1,025	2,600
Interest expense	(81,722)	(83,656)
Other	112	1,321
Swap termination fees	<u> </u>	<u>(70,243)</u>
Total nonoperating expenses—net	<u>(80,585)</u>	<u>(149,978)</u>
TRANSFERS OUT	<u>(120)</u>	<u> </u>
CAPITAL GRANTS	<u>16,639</u>	<u> </u>
CHANGE IN NET POSITION	36,234	(125,234)
TOTAL NET POSITION—		
Beginning of year	<u>376,238</u>	<u>501,472</u>
TOTAL NET POSITION—End of year	<u>\$412,472</u>	<u>\$ 376,238</u>

See notes to basic financial statements.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015
(In thousands)**

	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Received from customers	\$ 367,632	\$ 358,014
Transactions with other City funds	(46,671)	(42,764)
Payments to vendors	(29,871)	(33,131)
Payments to employees	<u>(43,665)</u>	<u>(42,894)</u>
Net cash provided by operating activities	<u>247,425</u>	<u>239,225</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Acquisition and construction of capital assets	(210,909)	(275,866)
Proceeds from issuance of bonds / grants	70,809	87,081
Interest paid on revenue bonds	(79,525)	(58,040)
Swap termination fees		(70,243)
Principal paid on bonds and notes	<u>(47,529)</u>	<u>(39,837)</u>
Net cash used in capital and related financing activities	<u>(267,154)</u>	<u>(356,905)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Sales and purchases of investments—net	(2,635)	200,252
Investment interest	<u>1,941</u>	<u>4,184</u>
Net cash (used in) provided by investing activities	<u>(694)</u>	<u>204,436</u>
NET CHANGE IN CASH AND CASH EQUIVALENTS	(20,423)	86,756
CASH AND CASH EQUIVALENTS—Beginning of year	<u>177,208</u>	<u>90,452</u>
CASH AND CASH EQUIVALENTS—End of year	<u>\$ 156,785</u>	<u>\$ 177,208</u>

(Continued)

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015
(In thousands)**

	2016	2015
RECONCILIATION TO CASH AND CASH EQUIVALENTS REPORTED ON THE STATEMENTS OF NET POSITION:		
Unrestricted	\$ 30,301	\$ 37,383
Restricted	<u>126,484</u>	<u>139,825</u>
TOTAL	<u>\$ 156,785</u>	<u>\$ 177,208</u>
RECONCILIATION OF OPERATING INCOME TO CASH FLOWS FROM OPERATING ACTIVITIES:		
Operating income	\$ 100,300	\$ 24,744
Adjustments to reconcile:		
Depreciation and amortization	40,734	40,444
Pension expense other than contribution	100,447	183,165
Provision for uncollectible accounts	16,320	16,154
Changes in assets and liabilities:		
Increase in due from other City funds	8,719	3,223
Increase in accounts receivable	(16,135)	(31,874)
Decrease in inventories	(184)	(193)
Increase in accrued liabilities	(1,920)	9,178
(Decrease) increase in accounts payable and due to other City funds	663	(3,473)
Increase (decrease) in unearned revenue	<u>(1,519)</u>	<u>(2,143)</u>
CASH FLOWS FROM OPERATING ACTIVITIES	<u>\$ 247,425</u>	<u>\$ 239,225</u>

SUPPLEMENTAL DISCLOSURE OF NONCASH ITEMS—Property additions in 2016 and 2015 of \$120,819 and \$101,584, respectively, have outstanding accounts payable and accrued liabilities.

The accretion adjustments of Series 1998 capital appreciation bonds for the year ended December 31, 2016 was \$4,825

See notes to basic financial statements.

(Concluded)

CITY OF CHICAGO, ILLINOIS

SEWER FUND

NOTES TO BASIC FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015 (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 market 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 result from 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, the fair value of derivative instruments that are deemed to be effective hedges, 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 2016 and 2015 totaled \$3.9 million and \$7.9 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, \$34.4 million and \$33.1 million represent revenue recognized on sewer service that had not yet been billed to customers at December 31, 2016 and 2015, 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, 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. 72 *Fair Value Measurement and Application* ("GASB 72"), addressed accounting and financial reporting issues related to fair value measurements. The Sewer Fund adopted GASB 72 for the year ended December 31, 2016. This Statement provided guidance for determining a fair value measurement for financial reporting purposes and the related disclosures. This Statement required a government to use valuation techniques that are appropriate under the circumstances and for which sufficient data are available to measure fair value. This Statement established a hierarchy of inputs to valuation techniques used to measure fair value. This Statement also required disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques (see Note 2).

GASB Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments* ("GASB 76"), supersedes Statement No. 55, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*. The Sewer Fund adopted GASB 76 for the year ended December 31, 2016 and there was no impact on the Sewer Fund's financial statements.

GASB Statement No. 77, *Tax Abatement Disclosures* ("GASB 77"), required governments that enter into tax abatement agreements to disclose: (1) Brief descriptive information concerning the agreement; (2) The gross dollar amount of taxes abated during the period; and 3) Commitments made by government, other than to abate taxes, that are part of the tax abatement agreement. The Sewer Fund adopted GASB 77 for the year ended December 31, 2016 and there was no 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. GASB 75 will be effective for the Sewer Fund beginning with its year ending December 31, 2018. 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 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 will be effective for the Sewer Fund beginning with its year ending December 31, 2017.

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 will be effective for the Sewer Fund beginning with its year ending December 31, 2017.

GASB 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.

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

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

	<u>Investment Maturities (in Years)</u>				Fair Value
	<u>Less than 1</u>	<u>1–5</u>	<u>6–10</u>	<u>More than 10</u>	
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	<u>1,223</u>	<u>48,856</u>	<u>13,584</u>		<u>63,663</u>
Subtotal	<u>\$152,804</u>	<u>\$64,704</u>	<u>\$30,739</u>	<u>\$ -</u>	248,247
Share of City's pooled funds					<u>114,190</u>
Total					<u>\$362,437</u>

As of December 31, 2015, the Sewer Fund had the following cash equivalents and investments (in thousands):

	<u>Investment Maturities (in Years)</u>				Fair Value
	<u>Less than 1</u>	<u>1–5</u>	<u>6–10</u>	<u>More than 10</u>	
U.S. agencies	\$ 40,356	\$123,026	\$ 4,007	\$4,288	\$171,677
Commercial paper	32,379				32,379
Certificates of deposits and other short-term	107,551				107,551
Corporate bonds		990	7,897	4,026	12,913
Municipal bonds		<u>12,603</u>		<u>994</u>	<u>13,597</u>
Subtotal	<u>\$180,286</u>	<u>\$136,619</u>	<u>\$11,904</u>	<u>\$9,308</u>	338,117
Share of City's pooled funds					<u>68,680</u>
Total					<u>\$406,797</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 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 recurring fair value measurements of investments as of December 31, 2016 and 2015 are as follows (dollars in thousands):

	2016			2015		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
U.S. agencies	\$ -	\$ 37,690	\$ -	\$ -	\$ 171,677	\$ -
Corporate bonds		15,924			12,913	
Municipal bonds		<u>63,663</u>			<u>13,597</u>	
Total investments at fair value	<u>\$ -</u>	<u>\$117,277</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 198,187</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 \$131.0 million and \$139.9 million as of December 31, 2016 and 2015, respectively.

The Sewer Fund's share in the City's pooled fund of \$114.2 million and \$68.7 million as of December 31, 2016 and 2015, 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, 2016 and 2015, is as follows (in thousands):

Quality Rating	2016	2015
Aaa/AAA	\$118,821	\$ 19,407
Aa/AA	94,221	165,188
A/A	956	951
P1/A1	8,182	
Not rated	<u>26,067</u>	<u>152,571</u>
Total	<u>\$248,247</u>	<u>\$338,117</u>

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 Treasurer's pooled fund is included in the City's 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 \$514.1 million. 84.7 percent of the bank balance was either insured or collateralized with securities held by City agents in the City's name. \$78.7 million was uncollateralized at December 31, 2016, and thus was subject to custodial credit risk.

A schedule summarizing the investments reported in the basic financial statements as of December 31, 2016 and 2015, is as follows (in thousands):

	2016	2015
Per Note 2:		
Investments—Sewer Fund	\$248,247	\$338,117
Investments—City Treasurer pooled fund	<u>114,190</u>	<u>68,680</u>
	<u>\$362,437</u>	<u>\$406,797</u>
Per financial statements:		
Restricted investments—current	\$ 85,116	\$ 43,986
Restricted investments—noncurrent	39,644	156,205
Unrestricted investments	112,110	34,044
Investments included as cash and cash equivalents on the statements of net position	<u>125,567</u>	<u>172,562</u>
	<u>\$362,437</u>	<u>\$406,797</u>

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 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, 2016 and 2015, are as follows (in thousands):

	2016	2015
Construction	\$127,834	\$225,158
Bond principal and interest	90,781	82,229
Sewer rate stabilization	<u>32,629</u>	<u>32,629</u>
Total	<u>\$251,244</u>	<u>\$340,016</u>

At December 31, 2016 and 2015, management was not aware of any instances of noncompliance with the above terms of the ordinances.

4. LONG-TERM DEBT

As of December 31, 2016 and 2015, long-term debt consisted of the following (in thousands):

	2016	2015
\$109,998 Series 1998A Senior Lien Wastewater Transmission Revenue Bonds issued March 18, 1998, due through 2030; interest at 4.0% to 5.25%	\$ 35,168	\$ 35,168
\$73,100 Series 2001 Second Lien Wastewater Transmission Revenue Bonds issued December 6, 2001, due through 2031; interest at 4.0% to 5.5%	54,855	58,575
\$61,925 Series 2004B Second Lien Wastewater Transmission Revenue Bonds issued July 29, 2004, due through 2016; interest at 3.0% to 5.25%		16,185
\$155,030 Series 2006A & B Second Lien Wastewater Transmission Revenue Bonds issued November 1, 2006, due through 2039; Series A interest at 4.0% to 5.0% (4.0% at December 31, 2036); Series B interest at 4.0% to 5.0%	115,965	122,240
\$167,635 Series 2008A Second Lien Wastewater Transmission Revenue Bonds issued November 5, 2008, due through 2038; interest at 3.5% to 5.5%	146,985	150,485
\$332,230 Series 2008C Second Lien Wastewater Transmission Revenue Bonds (2004A Refunded) issued October 16, 2008, due through 2039; interest rate; interest at 4.0% to 5.0% as of December 31, 2016	332,230	332,230
\$275,865 Series 2010A & B Second Lien Wastewater Transmission Revenue Bonds issued November 16, 2010, due through 2040; interest at 2.0% to 6.0%	262,350	266,105
\$1,546 Illinois Environmental Protection Agency Loan Agreement signed May 28, 2008, due through 2027; interest at 2.50%	952	1,027
\$276,470 Series 2012 Second Lien Wastewater Transmission Revenue Bonds issued September 13, 2012, due through 2042; interest at 3.0% to 5.0%	261,545	266,705
\$15,000 Illinois Environmental Protection Agency Loan Agreement signed January 20, 2010, due through 2031; interest at 0%	11,093	11,858
\$17,812 Illinois Environmental Protection Agency Loan Agreement signed October 8, 2010, due through 2032; interest at 1.25%	14,925	15,763
\$17,564 Illinois Environmental Protection Agency Loan Agreement signed September 22, 2011, due through 2033; interest at 1.25%	15,132	15,952
\$15,000 Illinois Environmental Protection Agency Loan Agreement signed October 2, 2012, due through 2034 interest at 2.295%	13,787	14,400
\$292,405 Series 2014 Second Lien Wastewater Transmission Revenue Bonds issued September 22, 2014, due through 2044; interest at 3.0% to 5.0%	287,685	292,405
\$87,080 Series 2015 Bonds issued October 19, 2015 due through 2039; interest at 2.59% to 6.04%	87,080	87,080
\$54,170 Illinois Environmental Protection Agency Loan Agreement signed October 23, 2013, due through 2035 interest at 1.93%	<u>53,068</u>	<u> </u>
Total revenue bonds	1,692,820	1,686,178
Add accretion of Series 1998 Capital Appreciation Bonds	59,018	54,194
Add unamortized net bond (discount)/premium	77,642	83,551
Less current portion (payable from restricted assets)	<u>(49,325)</u>	<u>(46,427)</u>
Long-term portion—net	<u>\$ 1,780,155</u>	<u>\$ 1,777,496</u>

During the years ended December 31, 2016 and 2015, long-term debt changed as follows (in thousands):

	Balance January 1, 2016	Additions	Reductions	Balance December 31, 2016	Due within One Year
Revenue bonds	\$ 1,686,179	\$ 54,170	\$(47,529)	\$ 1,692,820	\$ 49,325
Accretion of series 1998 capital appreciation bonds	54,193	4,825		59,018	
Unamortized net discount/premium	<u>83,551</u>	<u> </u>	<u>(5,909)</u>	<u>77,642</u>	<u> </u>
Total revenue bonds	<u>\$ 1,823,923</u>	<u>\$ 58,995</u>	<u>\$(53,438)</u>	<u>\$ 1,829,480</u>	<u>\$ 49,325</u>

	Balance January 1, 2015	Additions	Reductions	Balance December 31, 2015	Due within One Year
Revenue bonds	\$ 1,638,935	\$ 87,081	\$(39,837)	\$ 1,686,179	\$ 46,427
Accretion of series 1998 capital appreciation bonds	49,615	4,578		54,193	
Unamortized net discount/premium	<u>61,306</u>	<u>26,735</u>	<u>(4,490)</u>	<u>83,551</u>	<u> </u>
Total revenue bonds	<u>\$ 1,749,856</u>	<u>\$ 118,394</u>	<u>\$(44,327)</u>	<u>\$ 1,823,923</u>	<u>\$ 46,427</u>

Interest expense includes amortization of the loss on bond refunding for 2016 and 2015 of \$4.2 million; less amortization of net bond discount/premium of \$5.9 million and \$4.5 million, respectively; and accretion of Series 1998 capital appreciation bonds of \$4.8 million and \$4.6 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. The above requirements were met for 2016 and 2015.

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 2016 and 2015, 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 increased and was \$28.52 per 1,000 cubic feet and \$28.52 per 1,000 cubic feet during 2016 and 2015, respectively.

Issuance of Debt—A loan agreement was signed on October 22, 2013, with the Illinois Environment Protection Agency to line approximately 28 miles of existing sewer line ranging in diameter from 8 inches to 72 inches located throughout City. In 2016, the Sewer Fund drew \$54.2 million from this loan agreement. The loan has an interest rate of 1.93 percent with the maturity dates from January 21, 2016 to July 21, 2035.

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

Years Ending December 31	Principal	Interest	Total Debt Service
2017	\$ 49,325	\$ 82,667	\$ 131,992
2018	53,828	80,448	134,276
2019	56,332	77,980	134,312
2020	52,005	82,736	134,741
2021	51,823	82,960	134,783
2022–2026	294,072	380,530	674,602
2027–2031	326,208	301,679	627,887
2032–2036	406,041	168,071	574,112
2037–2041	333,380	56,776	390,156
2042–2044	<u>69,806</u>	<u>4,464</u>	<u>74,270</u>
Total	<u>\$ 1,692,820</u>	<u>\$ 1,318,311</u>	<u>\$ 3,011,131</u>

5. UTILITY PLANT

During the years ended December 31, 2016 and 2015, utility plant changed as follows (in thousands):

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

	Balance January 1, 2015	Additions	Disposals and Transfers	Balance December 31, 2015
Utility plant not depreciated:				
Land and land rights	\$ 560	\$ -	\$ -	\$ 560
Construction in progress	<u>25,703</u>	<u>96,776</u>	<u>(30,140)</u>	<u>92,339</u>
Total utility plant not depreciated	<u>26,263</u>	<u>96,776</u>	<u>(30,140)</u>	<u>92,899</u>
Utility plant being depreciated:				
Facilities and structures	2,462,714	224,777	(15,983)	2,671,508
Furniture and equipment	<u>32,196</u>	<u> </u>	<u>(1,621)</u>	<u>30,575</u>
Total utility plant being depreciated	<u>2,494,910</u>	<u>224,777</u>	<u>(17,604)</u>	<u>2,702,083</u>
Less accumulated depreciation:				
Facilities and structures	(474,136)	(35,414)		(509,550)
Furniture and equipment	<u>(21,817)</u>	<u>(2,017)</u>	<u>1,561</u>	<u>(22,273)</u>
Total accumulated depreciation	<u>(495,953)</u>	<u>(37,431)</u>	<u>1,561</u>	<u>(531,823)</u>
Utility plant being depreciated—net	<u>1,998,957</u>	<u>187,346</u>	<u>(16,043)</u>	<u>2,170,260</u>
Utility plant—net	<u>\$2,025,220</u>	<u>\$284,122</u>	<u>\$(46,183)</u>	<u>\$2,263,159</u>

6. PENSION PLANS

General Information about the Pension Plan

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); and the Laborers' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (Laborers'). 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 requirement of age and service are different for employees who became members before January 1, 2011, and those who became members on or after January 1, 2011. 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 became members before January 1, 2011 and any eight consecutive years within the last 10 years of credited service for participants who became members on or after January 1, 2011.

Benefit terms provide for annual adjustments to each employee's retirement allowance subsequent to the employees' retirement date. For participants who became members before January 1, 2011, the annual adjustments for Municipal and Laborers are 3.0 percent, compounded, for annuitants born before 1955 and 1.5 percent, simple, born in 1955 or later. For participants that first became members on or after January 1, 2011, the annual adjustments are equal to the lesser of 3.0 percent and 50 percent of CPI-U of the original benefit.

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 was calculated based on the total amount of contributions by employees to the Plan made in the calendar year two years prior, multiplied by 1.25 for the Municipal, and 1.00 for the Laborers'. 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 2016.

The contribution to both pension plans from the Sewer Fund was an annual amount of \$4.4 million for the years ended December 31, 2016 and 2015.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions—At December 31, 2016 and 2015, the Sewer Fund reported a liability of \$664.9 million and \$663.9 million, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2016 and December 31, 2015, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. 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 2016. At December 31, 2016 and 2015, the Sewer Fund's proportion was 2.0 percent of the Municipal Plan and 11.7 percent and 12.1 percent, respectively, of the Laborers' Plan.

For the year ended December 31, 2016 and 2015, the Sewer Fund recognized pension expense of \$104.9 million and \$187.6 million, respectively.

At December 31, 2016 and 2015, the Sewer Fund reported total deferred outflows of resources of \$175.1 million and \$253.1, respectively, and deferred inflows of resources of \$22.4 million and \$5.7 million related to pensions from the following sources:

Municipal (dollars in thousands):

	<u>2016</u>		<u>2015</u>	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ 3,286	\$ -	\$ 1,719
Changes of assumptions	102,492	9,081	136,319	
Net difference between projected and actual earnings on pension plan investments	<u>3,650</u>	<u> </u>	<u>3,883</u>	<u> </u>
Total	<u>\$106,142</u>	<u>\$12,367</u>	<u>\$140,202</u>	<u>\$ 1,719</u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to Municipal pensions will be recognized in pension expense as follows:

Year Ended

December 31:

2017	\$32,120
2018	32,120
2019	32,120
2020	<u>(2,585)</u>
Total	<u>\$93,775</u>

Laborers' (dollars in thousands):

	<u>2016</u>		<u>2015</u>	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ 4,792	\$ -	\$ 3,962
Changes of assumptions	57,634	5,237	101,103	
Net difference between projected and actual earnings on pension plan investments	<u>11,357</u>	<u> </u>	<u>11,800</u>	<u> </u>
Total	<u>\$68,991</u>	<u>\$10,029</u>	<u>\$112,903</u>	<u>\$ 3,962</u>

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

Year Ended

December 31:

2017	\$38,751
2018	17,450
2019	2,055
2020	<u>706</u>
Total	<u>\$58,962</u>

Deferred Inflows Related to Changes in Proportionate Share of Contributions

For the year ended December 31, 2016, the Sewer Fund reported pension benefit of \$1.5 million and deferred inflows of \$4.7 million related to changes in its proportionate share of contributions. This deferred amount will be recognized as a pension benefit over a period of three years.

Actuarial Assumptions—The total pension liability in the December 31, 2016 and 2015 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

	Municipal	Laborers'
Inflation	3.00 %	3.00 %
Salary increases	4.5%-8.25% ^(a)	3.75 % ^(b)
Investment rate of return	7.50 % ^(c)	7.50 % ^(d)

(a) Varying by years of service

(b) Plus a service—based increase in the first 15 years

(c) Net of investment expense

(d) Net of investment expense, including inflation

Mortality rates were based on the RP-2000 Health Annuitant Mortality Table for Males or Females, as appropriate.

The mortality actuarial assumptions used in the December 31, 2016 valuation were adjusted based on the results of actuarial experience study for the period:

Municipal—January 1, 2005–December 31, 2009

Laborers'—January 1, 2004–December 31, 2011

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, 2016 and 2015, are summarized in the following table:

2016 Asset Class	Target Allocation		Long-Term Expected Real Rate of Return	
	Municipal	Laborers'	Municipal	Laborers'
Domestic equity	26.0 %	- %	4.80 %	- %
U.S. equity		12.0		6.40
Non U.S. equity		18.0		8.00
Global equity		20.0		6.80
International equity	22.0		5.00	
Fixed income	27.0	16.0	0.50	2.60
Hedge funds	10.0	8.0	2.80	3.90
Private equity	5.0		8.60	
Private markets		7.0		7.20
GAA		7.0		4.30
Real estate	10.0	8.0	5.20	4.60
Private real assets		4.0		
Risk parity				
Total	<u>100.0 %</u>	<u>100.0 %</u>		

2015 Asset class:	Target Allocation		Long-Term Expected Real Rate of Return	
	Municipal	Laborers'	Municipal	Laborers'
Domestic equity	26.0 %	22.0 %	4.9 %	5.9 %
Non U.S. equity		13.0		7.9
Global equity		14.0		6.5
International equity	22.0		5.0	
Fixed income	27.0	16.0	0.5	2.6
Hedge funds	10.0	8.0	3.0	3.8
Private equity	5.0		8.6	
Private markets		11.0		6.9
GAA		8.0		4.7
Real estate	10.0	6.0	6.0	4.4
Risk Parity		2.0		5.0
Total	<u>100.0 %</u>	<u>100.0 %</u>		

Discount Rate

Municipal—The discount rate used to measure the total pension liability as of December 31, 2016 and 2015 was 3.91 percent and 3.73 percent, respectively. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.5% and a

municipal bond rate of 3.78 percent and 3.6 percent, as of December 31, 2016 and 2015, respectively. The projection of cash flows used to determine the discount rate assumed member contributions will be made at the current contribution rate and that employer contributions will be made at the 1.25 multiple of member contributions from two years prior. 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 not projected to be available to make all projected future benefit payments of current plan members. The projected benefit payments through 2023 were discounted at the expected long-term rate of return. Starting in 2024, the projected benefit payments were discounted at the municipal bond rate. Therefore, a single equivalent, blended discount rate of 3.91 percent and 3.73 percent as of December 31, 2016 and 2015, respectively, was calculated using the long-term expected rate of return and the municipal bond index.

Laborers—A Single Discount Rate of 4.17 and 4.04 percent, as of December 31, 2016 and 2015, respectively, was used to measure the total pension liability. This Single Discount Rate was based on an expected rate of return on pension plan investments of 7.5 percent as of December 31, 2016 and 2015, and a municipal bond rate of 3.78 and 3.6 percent as of December 31, 2016 and 2015, respectively. 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 through the year 2027. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2027, and the municipal bond rate was applied to all benefit payments after that date.

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

Municipal—The following presents the Sewer's allocated share of the net pension liability as of December 31, 2016 and 2015, calculated using the discount rate of 3.91 percent and 3.73 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):

Net pension liability December 31, 2016	Current		
	1% Decrease	Discount Rate	1% Increase
Municipal discount rate	2.91 %	3.91 %	4.91 %
Municipal liability	\$438,265	\$369,711	\$313,413

Net pension liability December 31, 2015	Current		
	1% Decrease	Discount Rate	1% Increase
Municipal discount rate	2.73 %	3.73 %	4.73 %
Municipal liability	\$434,365	\$364,150	306,610

Laborers'—The following presents the Sewer's allocated share of the net pension liability as of December 31, 2016 and 2015, calculated using the discount rate of 4.17 percent and 4.04 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):

Net pension liability December 31, 2016	Current		
	1% Decrease	Discount Rate	1% Increase
Laborers' discount rate	3.17 %	4.17 %	5.17 %
Laborers' liability	\$356,983	\$295,214	\$244,430

Net pension liability December 31, 2015	Current		
	1% Decrease	Discount Rate	1% Increase
Laborers' discount rate	3.04 %	4.04 %	5.04 %
Laborers' liability	\$365,562	\$299,722	\$245,750

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

Funded Status and Funding Progress—

State law authorized the two respective Pension Funds (Municipal 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 are authorized. The liabilities for the monthly dollar Pension Fund subsidies contributed on behalf of annuitants enrolled in the medical plan by their respective Pension Funds are included in the NPO actuarial valuation reports of the respective two Pension Funds under GASB 43.

Pursuant to the provisions contained in P.A. 98-0043, the City terminated health insurance supplement payments to eligible annuitants as of December 31, 2016, resulting in no OPEB liability at December 31, 2016.

Other Post Employment Benefits—City Obligation

Up to June 30, 2013, the annuitants who retired prior to July 1, 2005 received a 55 percent subsidy from the City and the annuitants who retired on or after July 1, 2005 received a 50, 45, 40 and zero percent subsidy from the City based on the annuitant's length of actual employment with the City for the gross cost of retiree health care under a court approved settlement agreement, known as the "Settlement Plan." The pension funds contributed their subsidies of \$65 per month for each Medicare eligible annuitant and \$95 per month for each Non-Medicare eligible annuitant to their gross cost. The annuitants contributed a total of \$110.9 million in 2016 to the gross cost of their retiree health care pursuant to premium amounts set by the City.

As described above, the City of Chicago subsidized a portion of the cost (based upon service) for hospital and medical coverage for eligible retired employees and their dependents based upon a settlement agreement entered in 2003 and which expired on June 30, 2013.

On May 15, 2013, the City announced plans to, among other things: (i) continue the then current plan for the remaining six months of 2013; then, as of January 1, 2014, (ii) provide a healthcare plan to, and for the lifetimes of, former employees who retired before August 23, 1989 with a contribution from the City of up to 55 percent of the cost of that plan to the annuitant; and (iii) provide employees who retired on or after August 23, 1989 with healthcare benefits in a new Retiree Health Plan (Health Plan), but with significant changes to the terms including increases in premiums and deductibles, reduced benefits and the phase-out of the Health Plan for such employees by December 31, 2016.

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. In 2016, the net expense to the City for providing these benefits to approximately 22,195 annuitants plus their dependents was approximately \$45.7 million.

Plan Description Summary— The City of Chicago was party to a written legal settlement agreement outlining the provisions of the Settlement Plans, which ended June 30, 2013, but the City voluntarily continued those Settlement Plans until the end of 2013. As of January 1, 2014, the Health Plan provided for annual modifications to the City's level of subsidy during the three-year phase out. The Health Plan, along with any further City subsidy expired as of December 31, 2016, for all but the group of former employees (the Korshak class of members) who retired before August 23, 1989, who shall have lifetime benefits. 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.

The provisions of the Health Plan provide, in general, that the City pay a percentage of the cost (based upon an employee's service) for hospital, medical, and drug coverage to eligible retired employees and their dependents for the specified period, ending December 31, 2016. During the three-year phase out of the Health Plan, the percentage subsidies were revised to reduce by approximately 25 percent of 2013 subsidy levels in 2014, 50 percent of 2013 subsidy levels in 2015, and 75 percent of 2013 subsidy levels in 2016.

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 Plans, the amount actually contributed to the Plans, and changes in the City's net OPEB obligation to the retiree Health Plan. 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 2016 is the Annual OPEB Cost (benefit) (dollars in thousands).

Annual OPEB Cost and Contributions Made	Health Plan	
	2016	2015
Contribution rates:		
City	Pay as you go	Pay as you go
Plan members	N/A	N/A
Annual required contribution	\$ 98,517	\$106,723
Interest on net OPEB obligation	5,185	5,326
Adjustment to annual required contribution	<u>(19,673)</u>	<u>(20,209)</u>
Annual OPEB cost	84,029	91,840
Contributions made	<u>89,671</u>	<u>96,551</u>
Decrease in net OPEB obligation	(5,642)	(4,711)
Net OPEB obligation—beginning of year	<u>172,851</u>	<u>177,562</u>
Net OPEB obligation—end of year	<u>\$167,209</u>	<u>\$172,851</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 2016, 2015 and 2014 are as follows (dollars in thousands):

**Schedule of Contributions,
OPEB Costs and Net Obligations**

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
12/31/2016	\$ 84,029	106.7 %	\$167,209
12/31/2015	91,840	105.10	172,851
12/31/2014	112,432	113.90	177,562

Funded Status and Funding Progress—As of January 1, 2016, the most recent actuarial valuation date, the actuarial accrued liability for benefits was \$715.5 million all of which was unfunded. The covered payroll (annual payroll of active employees covered by the plan) was approximately \$2,563.6 million and the ratio of the unfunded actuarial liability to the covered payroll was 27.9%.

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, supplementary information following the notes to the financial statements (dollars in thousands, unaudited).

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
12/31/2015	\$ -	\$715,522	\$715,522	- %	\$2,563,649	27.9 %
12/31/2014		780,637	780,637		2,487,787	31.4

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 (not provided by the Pension Funds), 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 2027. 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 the provisions under the new Health Plan, which will be completely phased-out by December 31, 2016, except for the Korshak category, which is entitled to lifetime benefits.

Summary of Assumptions and Methods	Health Plan	
	2016	2015
Actuarial valuation date	December 31, 2015	December 31, 2014
Actuarial cost method	Entry age normal	Entry age normal
Amortization method	Level dollar, open	Level dollar, open
Remaining amortization period	10 years	10 years
Asset valuation method	Market value	Market value
Actuarial assumptions:		
Investment rate of return	3.0%	3.0%
Projected salary increases	2.5%	2.5%
Healthcare inflation rate	8.0 % initial to 5.0 % in 2027	8.0 % initial to 5.0 % in 2026

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 \$155.6 million and \$227.6 million in 2016 and 2015, 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, 2016 and 2015, are as follows (in thousands):

	2016	2015
Balance—January 1	\$ 25,129	\$ 17,374
Claims incurred on current and prior-year events	9,894	21,479
Claims paid on current and prior-year events	<u>(12,395)</u>	<u>(13,724)</u>
Balance—December 31	<u>\$ 22,628</u>	<u>\$ 25,129</u>

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, 2016 and 2015, the Sewer Fund entered into contracts with outstanding commitments of approximately \$120.8 million and \$101.6 million, respectively, for construction projects.

10. DEFERRED OUTFLOWS / INFLOWS OF RESOURCES

(In thousands)	2016	2015
Deferred outflows of resources:		
Deferred outflows from pension activities	\$175,133	\$253,105
Unamortized deferred bond refunding costs	<u>9,596</u>	<u>13,820</u>
Total deferred outflows of resources	<u>\$184,729</u>	<u>\$266,925</u>
Deferred inflows of resources:		
Deferred inflows from pension activities	<u>\$ (27,102)</u>	<u>\$ (5,681)</u>

11. SUBSEQUENT EVENTS

In May 2017, Fitch's Investors Service downgraded the ratings of the Wastewater second lien from AA to AA-, with a negative outlook.

In June 2017, the City sold Second Lien Wastewater Transmission Revenue Bonds, Project Series 2017A (\$180.6 million) and Refunding Series 2017B (\$215.5 million). The 2017A bonds were issued at interest rates between 4.0% and 5.25% and mandatory sinking fund or maturity dates between January 1, 2020 and January 1, 2052. The 2017B bonds were issued at an interest rate of 5.0% and maturity dates between January 1, 2018 and January 1, 2038. Proceeds will be used to pay a portion of the costs of 2017 and 2018 capital improvement plan projects, to refund a portion of certain outstanding wastewater transmission bonds, and pay costs of issuance.

* * * * *

REQUIRED SUPPLEMENTAL INFORMATION

CITY OF CHICAGO, ILLINOIS

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS LAST TWO FISCAL YEARS (Dollars in thousands)

Municipal Employees'	2015	2016
TOTAL PENSION LIABILITY:		
Service cost	\$ 226,816	\$ 619,743
Interest	909,067	878,369
Benefit changes	2,140,009	
Differences between expected and actual experience	(109,835)	(127,119)
Assumption changes	8,711,755	(578,920)
Benefit payments including refunds	(826,036)	(859,672)
Pension plan administrative expense		
Net change in total pension liability	11,051,776	(67,599)
Total pension liability—beginning	<u>12,307,094</u>	<u>23,358,870</u>
Total pension liability—ending (a)	23,358,870	23,291,271
PLAN FIDUCIARY NET POSITION:		
Contributions-employer	149,225	149,718
Contributions-employee	131,428	130,391
Net investment income	114,025	281,419
Benefit payments including refunds of employee contribution	(826,036)	(859,672)
Administrative expenses	(6,701)	(7,056)
Other		
Net change in plan fiduciary net position	(438,059)	(305,200)
Plan fiduciary net position—beginning	<u>5,179,486</u>	<u>4,741,427</u>
Plan fiduciary net position—ending (b)	<u>4,741,427</u>	<u>4,436,227</u>
NET PENSION LIABILITY—Ending (a) - (b)	<u>\$ 18,617,443</u>	<u>\$ 18,855,044</u>
PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY	<u>20.30 %</u>	<u>19.05 %</u>
COVERED-EMPLOYEE PAYROLL *	<u>\$ 1,643,481</u>	<u>\$ 1,646,939</u>
EMPLOYER'S NET PENSION LIABILITY AS A PERCENTAGE OF COVERED-EMPLOYEE PAYROLL	<u>1,132.81 %</u>	<u>1,144.85 %</u>
ALLOCATED NET PENSION LIABILITY	<u>\$ 364,150</u>	<u>\$ 369,711</u>
ALLOCATED PERCENTAGE	<u>1.96 %</u>	<u>1.96 %</u>

* Covered-employee payroll is the amount in force as of the 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)

CITY OF CHICAGO, ILLINOIS

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS LAST TWO FISCAL YEARS (Dollars in thousands)

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

* Includes pension plan administrative expense.

** Covered-employee payroll is the amount in force as of the 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.

(Concluded)

CITY OF CHICAGO, ILLINOIS

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 Employee Payroll**	Contributions as a percentage of Covered Employee Payroll
2007	\$ 343,123	\$ 139,606	\$ 203,517	\$ 1,564,459	8.92 %
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

* 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-employee payroll is the amount in force as of the valuation date and likely differs from actual payroll paid during fiscal year.

Laborers'

Years Ended December 31,	Actuarially Determined Contributions*	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency	Covered Employee Payroll**	Contributions as a percentage of Covered Employee Payroll
2007	\$ 21,726	\$ 13,256	\$ 8,470	\$ 192,847	6.87 %
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

* 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-employee payroll is the amount in force as of the valuation date and likely differs from actual payroll paid during fiscal year.

(Continued)

CITY OF CHICAGO, ILLINOIS

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF CONTRIBUTIONS

Actuarial Methods and Assumptions	Municipal Employees'		Laborers'	
Actuarial valuation date	12/31/2016	(a)	12/31/2016	(b)
Actuarial cost method	Entry age normal		Entry age normal	
Amortization method	Level dollar, open		Level dollar, open (c)	
Remaining amortization period	30 years		30 years	
Asset valuation method	5-yr. Smoothed Market		5-yr. Smoothed Market	
Actuarial assumptions:				
Inflation	3.0 %		3.0 %	
Salary increases	4.5%-8.25% (d)		3.75 % (e)	
Investment rate of return	7.5 % (f)		7.5 % (g)	
Retirement Age	(h)		(i)	
Mortality	(j)		(k)	
Other information	(l)		(m)	

- (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) The statutory contributions are based on a multiple of member contributions from the second prior year. The statutory contribution multiple is 1.00
- (d) Varying by years of service.
- (e) Plus a service-based increase in the first 15 years.
- (f) Salary increase rates based on age-related productivity and merit rates plus inflation.
- (g) Net of investment expense.
- (h) For employees first hired prior to January 1, 2011, rates of retirement are based on the recent experience of the Fund (adopted December 31, 2010). For employees first hired on or after January 1, 2011, rates of retirement for each age from 62 to 80 were used (adopted December 31, 2011).
- (i) Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the December 31, 2012, valuation pursuant to an experience study of the period January 1, 2004, through December 31, 2011.
- (j) Post-retirement mortality rates were based on the RP-2000 Healthy Mortality Tables with mortality improvements projected to 2010 using Scale AA. Pre-retirement mortality rates were based on the post-retirement mortality assumption, multiplied by 85% for males and 70% for females.
- (k) RP2000 Combined Healthy mortality table, sex distinct, set forward one year for males and setback two years for females. No adjustment is made for post-disabled mortality.
- (l) Other assumptions: Same as those used in the December 31, 2016, actuarial funding valuations.
- (m) There were no benefit changes during the year.

(Concluded)

CITY OF CHICAGO, ILLINOIS

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF OTHER POSTEMPLOYMENT BENEFITS FUNDING PROGRESS
LAST THREE YEARS
(Dollars in thousands)**

	Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded Actuarial Liability (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded (Surplus) AAL as a Percentage of Covered Payroll ((b-a)/c)
City of Chicago							
Settlement Plan							
2014	12/31/2013	\$ -	\$ 498,205	\$ 498,205	- %	\$ 2,425,000	20.5 %
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 %
CBA Special Benefits							
2014	12/31/2013	\$ -	\$ 466,421	\$ 466,421	- %	\$ 1,400,269	33.3 %
2015	12/31/2014		468,889	468,889		1,438,428	32.6 %
2016	12/31/2015		460,612	460,612		1,499,552	30.7 %

* * * * *

STATISTICAL DATA

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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
NET POSITION BY COMPONENT
TEN YEARS ENDED DECEMBER 31, 2007–2016 (UNAUDITED)
(In thousands)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NET POSITION:										
Net investment in										
capital assets	\$ 417,138	\$ 413,481	\$ 391,248	\$ 408,564	\$ 448,720	\$ 448,414	\$ 481,946	\$ 520,627	\$ 559,715	\$ 648,644
Restricted for										
capital projects	4,544		9,533	11,110	24,610	50,014	73,858	111,333	116,107	117,295
Unrestricted	<u>43,445</u>	<u>54,333</u>	<u>52,920</u>	<u>64,828</u>	<u>25,588</u>	<u>60,436</u>	<u>78,509</u>	<u>102,794</u>	<u>(299,584)</u>	<u>(353,467)</u>
TOTAL	<u>\$ 465,127</u>	<u>\$ 467,814</u>	<u>\$ 453,701</u>	<u>\$ 484,502</u>	<u>\$ 498,918</u>	<u>\$ 558,864</u>	<u>\$ 634,313</u>	<u>\$ 734,754</u>	<u>\$ 376,238</u>	<u>\$ 412,472</u>

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
CHANGES IN NET POSITION
TEN YEARS ENDED DECEMBER 31, 2007–2016 (UNAUDITED)
(In thousands)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
OPERATING INCOME:										
Operating revenues	\$ 138,681	\$ 160,005	\$ 175,163	\$ 198,229	\$ 203,349	\$ 253,912	\$ 279,829	\$ 322,228	\$ 375,877	\$ 368,966
Operating expenses	86,294	98,487	109,643	113,881	113,930	113,575	109,333	119,279	310,689	227,932
Depreciation and amortization	<u>19,897</u>	<u>20,982</u>	<u>21,878</u>	<u>23,775</u>	<u>25,074</u>	<u>27,187</u>	<u>31,280</u>	<u>36,701</u>	<u>40,444</u>	<u>40,734</u>
Total operating income	32,490	40,536	43,642	60,573	64,345	113,150	139,216	166,248	24,744	100,300
NONOPERATING EXPENSES	<u>(29,723)</u>	<u>(37,849)</u>	<u>(57,755)</u>	<u>(26,706)</u>	<u>(51,793)</u>	<u>(55,704)</u>	<u>(66,267)</u>	<u>(65,807)</u>	<u>(149,978)</u>	<u>(80,705)</u>
INCOME (LOSS) BEFORE CAPITAL GRANTS	2,767	2,687	(14,113)	33,867	12,552	57,446	72,949	100,441	(125,234)	19,595
CAPITAL GRANTS	<u>321</u>	<u>_____</u>	<u>_____</u>	<u>3,136</u>	<u>1,864</u>	<u>2,500</u>	<u>2,500</u>	<u>_____</u>	<u>_____</u>	<u>16,639</u>
CHANGE IN NET POSITION	<u>\$ 3,088</u>	<u>\$ 2,687</u>	<u>\$ (14,113)</u>	<u>\$ 37,003</u>	<u>\$ 14,416</u>	<u>\$ 59,946</u>	<u>\$ 75,449</u>	<u>\$ 100,441</u>	<u>\$ (125,234)</u>	<u>\$ 36,234</u>

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

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
HISTORICAL FINANCIAL OPERATIONS
TEN YEARS ENDED DECEMBER 31, 2007–2016 (UNAUDITED)
(In thousands)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
OPERATING REVENUES:										
Sewer sales	\$ 137,021	\$ 158,698	\$ 173,906	\$ 197,455	\$ 202,323	\$ 252,943	\$ 291,110	\$ 337,657	\$ 390,924	\$ 384,140
Less provision for bad debt							(12,461)	(16,557)	(16,154)	(16,320)
Other operating revenue	<u>1,660</u>	<u>1,307</u>	<u>1,257</u>	<u>774</u>	<u>1,026</u>	<u>969</u>	<u>1,180</u>	<u>1,128</u>	<u>1,107</u>	<u>1,146</u>
Total operating revenues	<u>138,681</u>	<u>160,005</u>	<u>175,163</u>	<u>198,229</u>	<u>203,349</u>	<u>253,912</u>	<u>279,829</u>	<u>322,228</u>	<u>375,877</u>	<u>368,966</u>
OPERATING EXPENSES:										
Repairs	35,759	37,786	42,110	42,509	38,805	35,708	38,910	40,435	42,131	36,408
Maintenance	19,034	18,626	24,380	24,075	23,655	21,819	23,004	24,374	25,322	21,941
Administrative and general	7,796	15,746	14,403	17,179	18,802	21,254	12,008	14,394	12,337	11,801
General Fund reimbursements	22,973	23,287	25,431	27,065	29,124	31,709	32,144	36,740	227,600	155,624
Engineering	<u>732</u>	<u>3,042</u>	<u>3,319</u>	<u>3,053</u>	<u>3,544</u>	<u>3,085</u>	<u>3,267</u>	<u>3,336</u>	<u>3,299</u>	<u>2,158</u>
Total operating expenses	<u>86,294</u>	<u>98,487</u>	<u>109,643</u>	<u>113,881</u>	<u>113,930</u>	<u>113,575</u>	<u>109,333</u>	<u>119,279</u>	<u>310,689</u>	<u>227,932</u>
NONOPERATING REVENUES	<u>939</u>	<u>817</u>	<u>234</u>	<u>643</u>	<u>2,870</u>	<u>867</u>	<u>(2,754)</u>	<u>3,813</u>	<u>3,921</u>	<u>1,137</u>
NET REVENUES—As defined (Note 4)	<u>\$ 53,326</u>	<u>\$ 62,335</u>	<u>\$ 65,754</u>	<u>\$ 84,991</u>	<u>\$ 92,289</u>	<u>\$ 141,204</u>	<u>\$ 167,742</u>	<u>\$ 206,762</u>	<u>\$ 69,109</u>	<u>\$ 142,171</u>

Source: City of Chicago Comptroller's Office.

Note:

(1) of the \$104.9 million of pension for 2016, \$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.

(2) of the \$187.6 million of pension for 2015, \$4.4 million is the portion of the City's pension contribution payable in 2015 to the pension funds and allocable to the Sewer Fund. The remaining portion of the pension expense for 2015 (i.e. \$183.2 million) is recognized on the income statement of the Sewer Fund for 2015 pursuant to GASB 68 but is not due and payable by the City during 2015.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

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

	Amount of Sales									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Department of Aviation	\$ 848	\$ 1,230	\$ 1,331	\$ 1,744	\$ 1,593	\$ 1,927	\$ 2,165	\$ 1,857	\$ 3,634	\$ 4,498
Humboldt Park	263	494	754	435	1,842	1,179	1,393	1,307		
Chicago Park Dist	247									
WR Grace and Company		285	347							
Calumet Park			270	315	316		635	652		
Pepsi Cola General Bottlers			237							
Lincoln Park	810	692			310	745	1,418		1,344	1,267
Northwestern University		541								
Columbus Park				258						
Cook County 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						1,647			834	
Hometown	<u>212</u>			<u>546</u>						<u>546</u>
	<u>\$ 2,380</u>	<u>\$ 3,242</u>	<u>\$ 2,939</u>	<u>\$ 3,298</u>	<u>\$ 4,400</u>	<u>\$ 6,926</u>	<u>\$ 6,752</u>	<u>\$ 5,191</u>	<u>\$ 7,291</u>	<u>\$ 8,069</u>

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

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

	Amount of Sales									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Residential	\$ 97,909	\$ 105,072	\$ 124,600	\$ 144,145	\$ 139,598	\$ 178,399	\$ 195,542	\$ 233,830	\$ 266,878	\$ 246,997
Industrial/ Commercial	32,313	34,363	38,376	44,540	50,915	57,598	74,696	82,811	95,473	109,655
Governmental	<u>8,459</u>	<u>8,931</u>	<u>10,930</u>	<u>9,544</u>	<u>12,836</u>	<u>17,915</u>	<u>22,052</u>	<u>22,318</u>	<u>29,680</u>	<u>28,634</u>
	<u>\$ 138,681</u>	<u>\$ 148,366</u>	<u>\$ 173,906</u>	<u>\$ 198,229</u>	<u>\$ 203,349</u>	<u>\$ 253,912</u>	<u>\$ 292,290</u>	<u>\$ 338,959</u>	<u>\$ 392,031</u>	<u>\$ 385,286</u>

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

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
RECENT SEWER SERVICE RATES
(Unaudited)**

Effective Date	Gross Water Rate Per 1,000 Cubic Feet	Sewer Rate	
		Percent of Water Bill	Per 1,000 Cubic Feet
January 1, 2007	\$ 9.95	83 %	\$ 8.26
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

Source: City of Chicago Department of Water Management.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
SEWER SYSTEM ACCOUNTS
TEN YEARS ENDED DECEMBER 31, 2007–2016
(Unaudited)**

Years Ended December 31	Water Accounts			Exempt	Sewer Accounts
	Non- Metered	Metered	Total		
2007	320,579	175,256	495,835	61,700	434,135
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

Source: City of Chicago Department of Water Management.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
REVENUE BOND COVERAGE
TEN YEARS ENDED DECEMBER 31, 2007–2016 (UNAUDITED)
(In thousands)**

Combined Senior Lien and Second Lien Debt Service Calculation	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
REVENUES AVAILABLE FOR BONDS:										
Net revenues—as defined	\$ 53,326	\$ 62,335	\$ 65,754	\$ 84,991	\$ 92,289	\$ 141,204	\$ 167,742	\$ 206,762	\$ 69,109	\$ 142,171
Pension Expense other than contribution (Note 1)									183,165	100,447
Transfer to sewer rate stabilization account				10,000		5,000	3,000			
Other Available Funds (Note 2)	<u>28,661</u>	<u>28,847</u>	<u>22,090</u>	<u>4,403</u>	<u>17,755</u>	<u>19,215</u>	<u>65,298</u>	<u>103,864</u>	<u>108,498</u>	<u>133,501</u>
Net revenues available for bonds	81,987	91,182	87,844	79,394	110,044	155,419	230,040	310,626	360,772	376,119
PRIOR LIEN DEBT SERVICE REQUIREMENT										
NET REVENUES AVAILABLE FOR BONDS	<u>\$ 81,987</u>	<u>\$ 91,182</u>	<u>\$ 87,844</u>	<u>\$ 79,394</u>	<u>\$ 110,044</u>	<u>\$ 155,419</u>	<u>\$ 230,040</u>	<u>\$ 310,626</u>	<u>\$ 360,772</u>	<u>\$ 376,119</u>
DEBT SERVICE REQUIREMENTS:										
Senior lien debt service requirement	<u>\$ 16,957</u>	<u>\$ 17,752</u>	<u>\$ 17,777</u>	<u>\$ 16,017</u>	<u>\$ 15,287</u>	<u>\$ 9,231</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Senior lien debt service coverage (1.15 required)	<u>4.83</u>	<u>5.14</u>	<u>4.94</u>	<u>4.96</u>	<u>7.20</u>	<u>16.84</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
DEBT SERVICE REQUIREMENTS:										
2000 second lien bonds	748	2,707	2,710	2,711						
2001 second lien bonds	4,195	4,193	4,200	4,196	6,920	5,036	6,923	6,935	6,942	6,947
2001A second lien bonds	352	2,043	2,050	2,047	2,055	1,886				
2004A and B second lien bonds	18,947	20,387	5,505	17,558	17,448	17,301	26,910	27,102	27,242	
2006A and B second lien bonds	8,570	8,759	8,768	8,770	8,765	15,184	15,201	15,210	12,358	12,364
2008A second lien bonds			11,539	11,528	11,537	11,537	8,650	11,536	11,534	11,535
2008C second lien bonds		2,291	11,792	542	485	2,732	2,786	3,346	14,725	31,907
IEPA Loans				101	383	665	866	2,916	3,309	4,934
2010A & B second lien bonds				2,284	19,332	21,036	21,039	21,054	21,627	21,646
2012A & B second lien bonds							17,485	17,486	17,483	17,485
2014 second lien bonds								3,292	19,127	19,180
Second lien debt service requirement	<u>32,812</u>	<u>40,380</u>	<u>46,564</u>	<u>49,737</u>	<u>66,925</u>	<u>75,377</u>	<u>99,860</u>	<u>108,877</u>	<u>134,347</u>	<u>125,999</u>
COMBINED SENIOR AND SECOND LIEN DEBT SERVICE REQUIREMENTS	<u>\$ 49,769</u>	<u>\$ 58,132</u>	<u>\$ 64,341</u>	<u>\$ 65,754</u>	<u>\$ 82,212</u>	<u>\$ 84,608</u>	<u>\$ 99,860</u>	<u>\$ 108,877</u>	<u>\$ 134,347</u>	<u>\$ 125,999</u>
COMBINED SENIOR AND SECOND LIEN DEBT SERVICE COVERAGE (1.15 REQUIRED)	<u>1.65</u>	<u>1.57</u>	<u>1.37</u>	<u>1.21</u>	<u>1.34</u>	<u>1.84</u>	<u>2.30</u>	<u>2.85</u>	<u>2.69</u>	<u>2.99</u>
SEWER RATE STABILIZATION ACCOUNT YEAR-END BALANCE	<u>\$ 14,629</u>	<u>\$ 14,629</u>	<u>\$ 14,629</u>	<u>\$ 25,629</u>	<u>\$ 25,703</u>	<u>\$ 29,629</u>	<u>\$ 32,629</u>	<u>\$ 32,629</u>	<u>\$ 32,629</u>	<u>\$ 32,629</u>

Source: City of Chicago Comptroller's Office.

Note:

- (1) of the \$104.9 million of pension expense for 2016, \$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. \$100.4 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; 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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
LONG-TERM DEBT
TEN YEARS ENDED DECEMBER 31, 2007–2016 (UNAUDITED)
(In thousands)**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
First lien	\$ 134,473	\$ 123,068	\$ 110,958	\$ 71,343	\$ 57,988	\$ 43,928	\$ 35,168	\$ 35,168	\$ 35,168	\$ 35,168
Second lien	636,055	799,475	790,440	1,053,272	1,041,436	1,290,296	1,284,355	1,541,690	1,592,010	1,548,696
Subordinate lien—IEPA loan	<u> </u>	<u>1,506</u>	<u>1,442</u>	<u>1,377</u>	<u>12,665</u>	<u>29,550</u>	<u>49,936</u>	<u>62,077</u>	<u>59,000</u>	<u>108,956</u>
Total revenue bonds and notes	<u>770,528</u>	<u>924,049</u>	<u>902,840</u>	<u>1,125,992</u>	<u>1,112,089</u>	<u>1,363,774</u>	<u>1,369,459</u>	<u>1,638,935</u>	<u>1,686,178</u>	<u>1,692,820</u>
Unamortized premium (discount)	16,394	14,791	14,240	15,883	16,142	37,701	34,707	61,306	83,551	77,642
Unamortized deferred loss	(47,421)	(45,376)	(43,332)	(38,063)	(32,276)					
Accretion of Series 1998 CAB	<u>23,506</u>	<u>26,673</u>	<u>30,013</u>	<u>33,532</u>	<u>37,242</u>	<u>41,151</u>	<u>45,272</u>	<u>49,615</u>	<u>54,194</u>	<u>59,018</u>
Sub-total	<u>(7,521)</u>	<u>(3,912)</u>	<u>921</u>	<u>11,352</u>	<u>21,108</u>	<u>78,852</u>	<u>79,979</u>	<u>110,921</u>	<u>137,745</u>	<u>136,660</u>
Total revenue bonds payable—net of unamortized premium (discount)	<u>\$ 763,007</u>	<u>\$ 920,137</u>	<u>\$ 903,761</u>	<u>\$ 1,137,344</u>	<u>\$ 1,133,197</u>	<u>\$ 1,442,626</u>	<u>\$ 1,449,438</u>	<u>\$ 1,749,856</u>	<u>\$ 1,823,923</u>	<u>\$ 1,829,480</u>

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

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
CAPITAL IMPROVEMENT PROGRAM
2017–2021 (UNAUDITED)
(In thousands)**

Years	Amount
2017	\$ 194,500
2018	238,300
2019	245,900
2020	250,900
2021	<u>257,200</u>
Total	<u>\$ 1,186,800</u>

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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
FULL-TIME EQUIVALENT SEWER FUND EMPLOYEES BY FUNCTION
TEN YEARS ENDED DECEMBER 31, 2007–2016
(Unaudited)**

Function	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agency management	7	5	5	5	5	4	4	4	4	4
Capital design and construction services	22	21	21	21	23	23	24	26	24	24
Engineering services	13									
Inspection services	17	18	18	18	18	18	18	16	18	24
System installation	10	10	10	9	8	8	8	8	9	9
System maintenance and evaluations	566	517	521	521	521	523	523	521	521	515
Communications and coordination	<u>32</u>	<u>29</u>	<u>31</u>	<u>27</u>	<u>26</u>	<u>17</u>	<u>16</u>	<u>16</u>	<u>15</u>	<u>15</u>
	<u>667</u>	<u>600</u>	<u>606</u>	<u>601</u>	<u>601</u>	<u>593</u>	<u>593</u>	<u>591</u>	<u>591</u>	<u>591</u>

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

Source: City of Chicago's 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007 Program and Budget Summary.

Note: Schedule includes only Department of Water Management employees.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**STATISTICAL DATA
OPERATING INDICATORS BY FUNCTION
(Unaudited)**

	2015	2016
Catch basins repaired	<u>2,818</u>	<u>2,603</u>

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

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

	2015	2016
Sewers lined	55.1	61.0
New construction	25.4	25.6

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

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

Employer	2016 ⁽¹⁾			2007 ⁽⁴⁾		
	Number of Employees	Rank	Percentage of Total City Employment	Number of Employees	Rank	Percentage of Total City Employment
Advocate Health Care	18,930	1	1.48 %			%
University of Chicago	16,374	2	1.28			
Northwestern Memorial Healthcare	15,747	3	1.23			
JP Morgan Chase & Co. ⁽²⁾	15,229	4	1.19	9,114	1	0.73
United Continental Holdings Inc.	15,157	5	1.18	6,102	2	0.49
Walgreen Boots Alliance Inc.	12,685	6	0.99			
Northwestern University	10,241	7	0.80			
Presence Health	10,183	8	0.79			
Abbott Laboratories	9,800	9	0.76			
Jewel Food Stores, Inc.	9,660	10	0.75	5,424	3	0.43
Northern Trust Corporation				4,787	4	0.38
Accenture LLP				4,283	5	0.34
SBC/AT&T ⁽³⁾				4,002	6	0.32
American Airlines				3,645	7	0.29
Ford Motor Company				3,367	8	0.27
CVS Corporation				3,120	9	0.25
Deloitte & Touche				2,988	10	0.24

NOTES:

⁽¹⁾ Source: Reprinted with permission, Crain's Chicago Business January 16, 2017 issue of Crain's Chicago Business.

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⁽²⁾ J.P. Morgan Chase formerly known as Banc One.

⁽³⁾ AT&T Inc. formerly known as SBC Ameritech.

⁽⁴⁾ 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.

**CITY OF CHICAGO, ILLINOIS
SEWER FUND**

**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⁾
2007	2,896,016	33.7	1,033,328	1,249,238	5.7	43,714	\$126,596,443,424
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	N/A	N/A ⁽⁵⁾	1,282,117	* 5.4	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 2016

⁽³⁾ Source: Bureau of Labor Statistics 2016, 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.

* December 2016 data