

Forest Preserve District Employees' Annuity and Benefit Fund of Cook County

A Component Unit of the
Forest Preserve District of Cook County, Illinois

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Years Ended December 31, 2016 and 2015

Forest Preserve District Employees' Annuity and Benefit Fund of Cook County

A Component Unit of the Forest Preserve District of Cook County, Illinois

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Years Ended December 31, 2016 and 2015

**Prepared by the staff of the
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County**

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Introductory Section

This section provides information regarding the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County's Certificate of Achievement, Board of Trustees, consultants, and organizational structure, as well as a letter of transmittal.

Certificate of Achievement



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

**Forest Preserve District Employees'
Annuity and Benefit Fund
of Cook County, Illinois**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2015



Executive Director/CEO

Principal Officials

Retirement Board

John E. Fitzgerald

President

Elected Cook County Annuitant

Patrick J. McFadden

Vice-President

Elected Cook County Annuitant

Diahann Goode

Secretary

Elected Cook County Employee

Robert DeGraff

Elected Cook County Employee

Joseph Nevius

Elected Forest Preserve District Annuitant

Andrew Jatico

Elected Cook County Employee

Dennis White

Elected Forest Preserve District Employee

Bill Kouruklis

Ex Officio Cook County Treasurer (Designee)

Lawrence L. Wilson, CPA

Ex Officio Cook County Comptroller

Professional Consultants

Legal Counsel

Burke Burns & Pinelli, Ltd.

Auditor

Legacy Professionals, LLP

Investment Consultant

Callan Associates, Inc.

Consulting Actuary

Conduent HR Services

Master Custodian

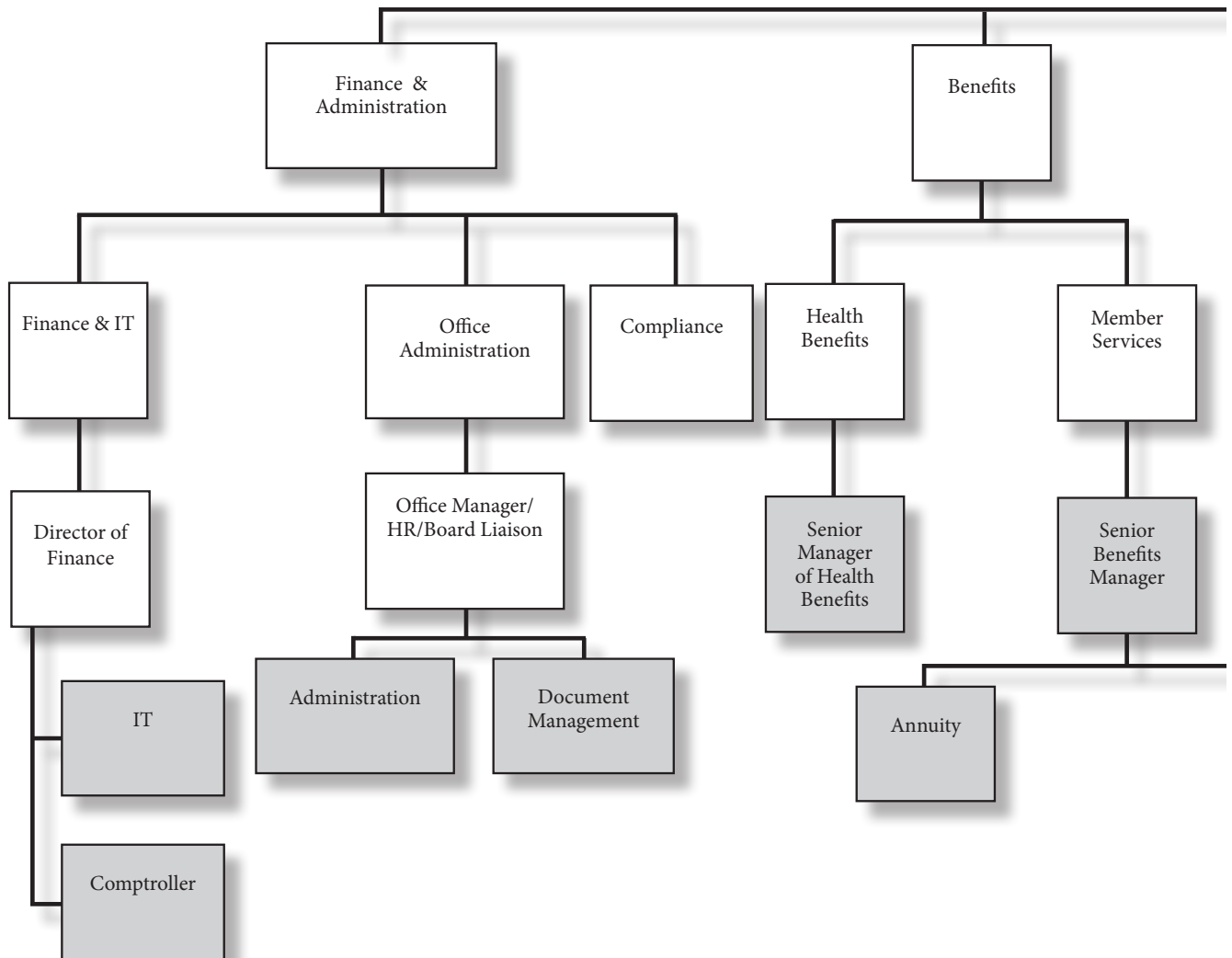
BNY Mellon

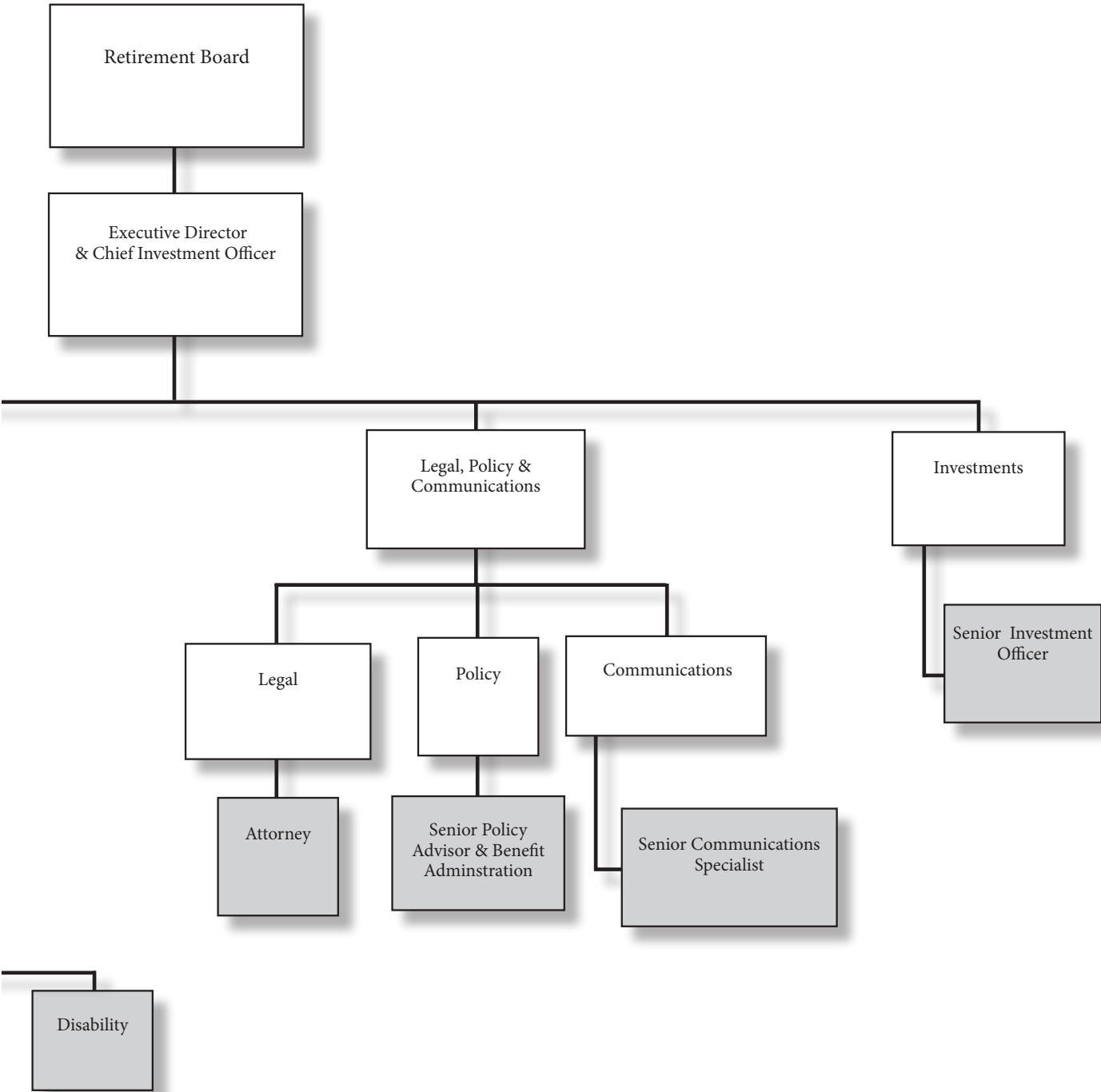
Custodian

Cook County Treasurer

Investment Managers are listed on page 74.
Brokers used by Investment Managers are listed on pages 75-76.

Organizational Chart





Letter of Transmittal



June 12, 2017

Retirement Board
County Employees and Officers' Annuity and Benefit Fund of Cook County
and *ex officio* for the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
33 N Dearborn St, Suite 1000
Chicago, IL 60602

To the Retirement Board and Our Members:

We are pleased to submit to you the Comprehensive Annual Financial Report ("CAFR") of the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("the fund") for the calendar year ended December 31, 2016. Fund management is responsible for the contents of this report, including the financial, investment, actuarial, and statistical information contained herein.

To the best of our knowledge and belief, the information contained in this report is complete and accurate in all material respects. This report is provided to allow the reader to gain an understanding of the fund's financial position and operational activities. Readers should review this report in conjunction with the Management's Discussion and Analysis (MD&A) found in the Financial Section.

Fund Profile

As of December 31, 2016, the Forest Preserve Fund consisted of 572 active employees, 378 retirement annuitants, 152 survivor annuitants, and 1,296 inactive members. It was established in 1931 by an act of the Illinois General Assembly and is administered in accordance with 40 ILCS 5/10-101, et seq. It is a defined benefit pension plan that provides retirement, survivor, death, health, and disability benefits to qualified employees and retirees of the Forest Preserve District of Cook County, Illinois, and their eligible dependents and beneficiaries. The fund is considered to be a component unit of Forest Preserve District and is included in the Forest Preserve District's financial statements as a pension trust fund.

The fund is governed by a nine-member Retirement Board ("Board") combined with County Employees' and Officers' Annuity and Benefit Fund of Cook County (CEABF). The nine Trustees are elected as follows: four are elected by the employees of Cook County and the Forest Preserve District, three are elected by the annuitants of Cook County and the Forest Preserve District and two are *ex officio* seats appointed by the Comptroller and Treasurer of Cook County. Elected Trustees serve staggered three-year terms, so that no more than three positions are subject to election each year. The fund also shares office space and administrative services with CEABF.

Letter of Transmittal

Summary of Financial Experience

The following table summarizes the changes in the Forest Preserve Fund's net position between December 31, 2016 and December 31, 2015 (numbers in millions):

Change in Net Position	2016	2015	\$ Change	% Change
Total additions	\$18.5	\$10.2	\$8.3	81.4%
Total deductions	\$19.7	\$19.1	\$0.6	3.1%
Change in net position from prior year	(\$1.2)	(\$8.9)	\$7.7	86.5%

A more detailed analysis of the fund's financial experience can be found in the Financial Section.

Funding

The fund engages an independent actuary, Conduent HR Services, formerly Buck Consultants, LLC, to perform an actuarial valuation on an annual basis pursuant to the provisions of the Illinois Pension Code.

As of December 31, 2016, the Forest Preserve Fund's combined actuarial accrued liability for pension and retiree health benefits was \$330.2 million and the actuarial value of assets was \$198.2 million, resulting in an unfunded actuarial accrued liability of \$132.0 million.

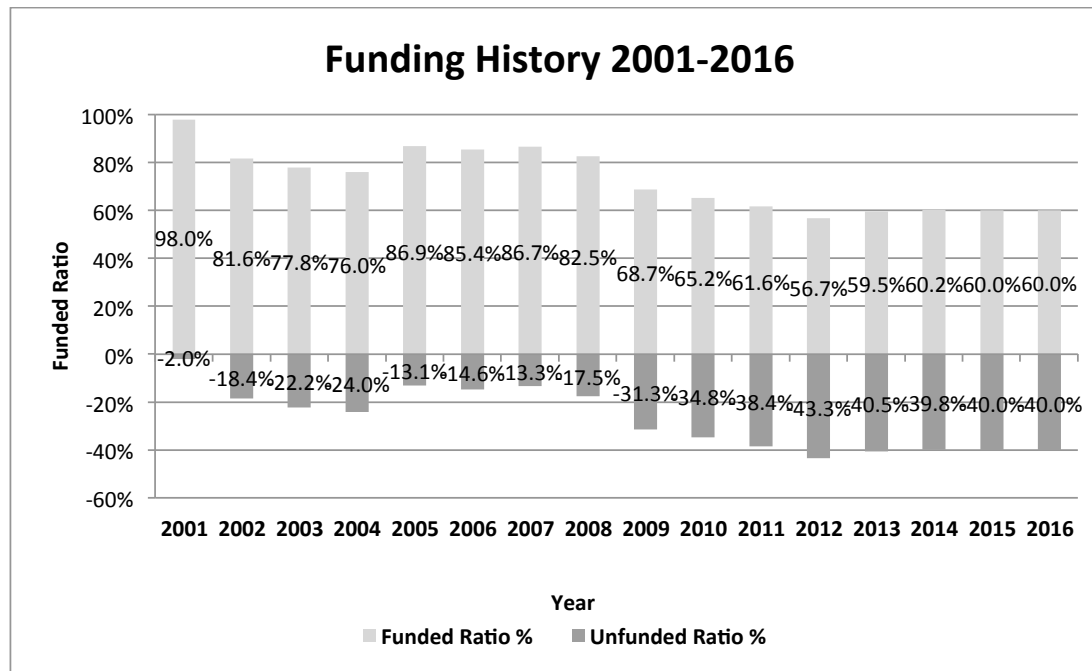
The funded ratio (the ratio of assets to liabilities) for pension benefits and retiree health benefits combined remained at 60.0%. The fund's actuarial accrued liability for pension benefits solely was \$300.3 million and the actuarial value assets was \$198.2 million, resulting in an unfunded liability of \$102.1 million and a funded ratio of 66.0%. The fund's actuarial accrued liability for retiree health benefits was \$44.7 million. As there are no dedicated funding assets, the actuarial value of assets was \$0 for the retiree health benefits, resulting in an unfunded liability of \$44.7 million.

According to the actuarial valuation, the ever increasing combined actuarial liability for pension benefits and retiree health benefits was offset by strong investment performance and expected cost savings from the implementation of an Employee Group Waiver Plan (EGWP), which enables the fund to address the rise of prescription drug costs for Medicare-eligible members.

While the Board continuously works to identify and implement strategies that help the Forest Preserve Fund manage costs while administering pension and health benefits, the fund continues to face a long-term funding shortfall. As employer contributions did not meet the fund's actuarial needs in 2016, the current funding policy projects insolvency in 2042. The employer contribution is determined as a multiple of employee contributions from two years earlier. Based on the most recent actuarial valuation, an actuarially-determined tax multiple of 5.18 is needed to adequately finance the fund as compared with the current tax multiple of 1.30, which has been less than the actuarially-determined contribution requirement for more than 20 years. This methodology currently represents less than 25% of the actuarially-required contribution. According to the actuary, without legislative action that establishes an actuarially-based funding policy, the fund's assets will be depleted in 25 years.

INTRODUCTORY SECTION

Letter of Transmittal (continued)



A detailed discussion of funding is provided in the Actuarial Section of this report.

Investments

The Board's authority to invest the fund's assets is governed by 40 ILCS 5/1-101 et seq. And 40 ILCS 5/10-101 et seq. The fund's Investment Policy, which provides additional strategies and safeguards for the fund's investment objectives, can be found at CookCountyPension.com.

At year-end, the total invested assets of the fund were valued at \$187.9 million compared with \$189.4 million at the end of 2015. The investment portfolio's net rate of return for the year ended December 31, 2016 was 5.7% compared with 1.5% for the previous year. For the eighth consecutive year, the Forest Preserve Fund generated positive returns for its member by earning \$10.5 million in net investment income before benefit payments of approximately \$19.4 million in 2016.

The Board works to maintain a diversified asset allocation designed to exceed the fund's 7.5% long-term actuarial rate of return within acceptable risk parameters. On a cash flow basis, \$18.5 million in total additions made up of employer contributions, employee contributions, annuitant healthcare benefit contributions, net investment earnings and miscellaneous income were offset by \$19.7 million in deductions consisting of benefits, refunds, employee transfers and administrative expenses.

Additional information regarding performance and investment professionals who provide services to the fund can be found in the Investment Section.

2016 Initiatives

The Forest Preserve Fund continues to implement strategic initiatives across member services, organizational flexibility, systems and performance measurement, and liability and risk management. As the annuitant membership grows, the fund continually reviews its strategic and operating imperatives to maintain quality member service.

Among these initiatives for 2016, was the implementation of EGWP to offset rising prescription costs associated with the retiree group health benefit. Beginning January 1, 2017, Medicare-enrollees would receive a comparable prescription drug benefit at a lower cost with expected savings for the fund. As a result of the EGWP implementation, the Forest Preserve Fund will no longer receive the Retiree Drug Subsidy.

Benefits Administration

The fund maintains its commitment to delivering high-touch customer service amid high volumes of benefit requests, processing over 750 retirement applications in the past year. Member engagement remains a primary focus as the fund implemented targeted stakeholder campaigns and enhanced member communications to address issues ranging from retiree health benefits to local pension reform efforts.

The fund continued to transition from paper to electronic document management in 2016. Systems enhancements improved workflow and collaboration between departments, leading to increased efficiency of benefits administration and enhanced information security.

Legislation

For 2016, there were no statutory changes to benefits or funding. The Retirement Board continues to monitor the status of proposals for pension reform that would have an impact on Cook County Fund members.

Accounting System & Internal Control

This report and the financial statements included within were prepared to conform to the principles of governmental accounting and reporting pronounced by the Governmental Accounting Standards Board and the American Institute of Certified Public Accountants.

The financial statements were prepared using the accrual basis of accounting. Under the accrual basis, revenues are recognized in the accounting period in which they are earned, without regard to the date of collection, and expenses are recognized when the corresponding liabilities are incurred, regardless of when payment is made.

The fund maintains a system of internal controls to adequately safeguard its assets and assure the reliability of its financial records. The controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that first, the cost of the control should not exceed the benefits likely to be derived and second, the valuation of the cost and benefits requires estimates and judgments by management. Management and the outside auditor continually review the controls for adequacy.

The financial statements included in this report were audited by Legacy Professionals, LLP, who have issued an unqualified opinion for calendar year ended December 31, 2016. A copy of their report is contained in the Financial Section.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the fund for its CAFR for the fiscal year ended December 31, 2015. This was the seventh year that the fund has earned this prestigious award. In order to be awarded a Certificate of Achievement, the fund must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that this current CAFR 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 was prepared through the combined efforts of the fund's staff under the direction of the Board. On behalf of the Board, I would like to thank the staff and professional consultants for their efforts in compiling this report.

Respectfully submitted,



Nickol R. Hackett
Executive Director and Chief Investment Officer

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Financial Section

This section contains the report of the independent auditors, financial statements, analysis, and supplemental financial information.

Report of Independent Auditors



REPORT OF INDEPENDENT AUDITORS

To the Board of Trustees of
Forest Preserve District Employees' Annuity
and Benefit Fund of Cook County

Report on the Financial Statements

We have audited the accompanying financial statements of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (the Plan), a fiduciary fund of Forest Preserve District of Cook County, Illinois, which comprise the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position as of December 31, 2016 and 2015, and the related combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits 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 Plan'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 Plan's internal control. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. 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 in the first paragraph present fairly, in all material respects, the plan net position of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County as of December 31, 2016 and 2015, and the changes in plan net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Other Matters***Required Supplementary Information***

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

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the Plan's basic financial statements as a whole. The accompanying supplementary information, consisting of the schedules of net administrative expenses and professional and consulting fees, schedules of investment expenses, additions by source, deductions by type and schedule of employer contributions receivable, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits 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 financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

FINANCIAL SECTION

Report of Independent Auditors (continued)

Other Matters (continued)

Previously Audited Information

We also have previously audited the basic financial statements for the years ended December 31, 2014, 2013, 2012, and 2011 (which are not presented herein), and we expressed unmodified opinions on those financial statements. In our opinion, the previously audited information presented on the additions by source and deductions by type is fairly stated in all material respects in relation to the basic financial statements from which it has been derived.

Legacy Professionals LLP

Chicago, Illinois

June 12, 2017

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Management's Discussion and Analysis (Unaudited)

This section presents Management's Discussion and Analysis of the financial position and performance of the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (the Plan) for the years ended December 31, 2016 and 2015. This discussion is presented as an overview of the financial activities of the Plan and should be read in conjunction with the Plan's financial statements.

Overview of the Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's basic financial statements. The basic financial statements are prepared on an economic sources focus and accrual basis of accounting in accordance with Governmental Accounting Standards Board (GASB) pronouncements. The basic components of the financial package are described below:

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position provides a snapshot of account balances and net position held in trust for future benefit payments and any liabilities as of the Plan's year end. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial position of the Plan is improving or deteriorating.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position shows the revenues (additions) and expenses (deductions) during the year, where additions less deductions equal net increase (decrease) in net position. The net increase (decrease) in net position reports the change in net position as reported in the Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position of the prior year and the current year.

Notes to the Financial Statements provides additional information that is essential to achieving a better understanding of the data provided in the basic financial statements.

Required Supplementary Information provides schedules and related notes concerning actuarial information, funding progress, employer contributions and investment returns.

Supplementary Information includes schedules of administrative expenses, professional and consulting fees, investment expenses, additions by source, deductions by type and employer contributions receivable.

Financial Highlights

Net position decreased by \$1,119,972 or 0.6% from \$192,322,370 at December 31, 2015 to \$191,202,398 at December 31, 2016. Comparatively, net position decreased by \$8,986,804 or 4.5% from \$201,309,174 at December 31, 2014 to \$192,322,370 at December 31, 2015. The change in net position for both years was primarily due to the fluctuation in the fair value of the investments.

The **rate of return** of the Plan's investment portfolio was 5.67% for 2016, 1.50% for 2015 and 7.10% for 2014.

Net Position

The condensed Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position reflect the resources available to pay benefits to members. A summary of the Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position is as follows:

	Net Position as of December 31,			Current Year (Decrease) in	
	2016	2015	2014	Dollars	Percent
Total assets	\$207,496,922	\$211,067,343	\$221,724,409	\$ (3,570,421)	-1.7%
Total liabilities	16,294,524	18,744,973	20,415,235	(2,450,449)	-13.1%
Net position	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$ (1,119,972)</u>	-0.6%

Changes in Plan Net Position

The condensed Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position reflect the changes in the resources available to pay benefits to members. A summary of the Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position is as follows:

	Changes in Net Position for the Years Ended December 31,			Current Year Increase/(Decrease) in	
	2016	2015	2014	Dollars	Percent
Additions					
Employer contributions	\$ 3,391,381	\$ 3,462,037	\$ 3,136,752	\$ (70,656)	-2.0%
Employee contributions	3,184,051	2,771,533	2,645,164	412,518	14.9%
Annuitant healthcare benefits contributions	1,177,887	1,134,920	1,193,549	42,967	3.8%
Net investment income (includes security lending activities)	10,477,792	2,549,975	13,525,606	7,927,817	310.9%
Other	317,217	240,278	204,853	76,939	32.0%
Total additions	<u>18,548,328</u>	<u>10,158,743</u>	<u>20,705,924</u>	<u>8,389,585</u>	82.6%
Deductions					
Benefits	18,636,138	18,347,316	17,858,418	288,822	1.6%
Refunds	740,586	635,908	961,637	104,678	16.5%
Employee transfers to Cook County	133,999	18,370	175,370	115,629	629.4%
Administrative expenses	157,577	143,953	142,067	13,624	9.5%
Total deductions	<u>19,668,300</u>	<u>19,145,547</u>	<u>19,137,492</u>	<u>522,753</u>	2.7%
Net increase (decrease)	(1,119,972)	(8,986,804)	1,568,432	7,866,832	87.5%
Net position					
Beginning of year	192,322,370	201,309,174	199,740,742	(8,986,804)	-4.5%
End of year	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$ (1,119,972)</u>	-0.6%

FINANCIAL SECTION

Management's Discussion and Analysis (continued)

Additions to Plan Net Position

Total additions were \$18,548,328 in 2016, \$10,158,743 in 2015 and \$20,705,924 in 2014.

Employer contributions decreased to \$3,391,381 in 2016 from \$3,462,037 in 2015 and were \$3,136,752 in 2014. Employer contributions are statutorily set at 1.30 times employee contributions collected two years prior.

Employee contributions, including permissive service credit purchases, increased to \$3,184,051 in 2016 from \$2,771,533 in 2015 and were \$2,645,164 in 2014. Employees contribute 8.5% of covered wages.

Annuitant healthcare benefits contributions increased to \$1,177,887 in 2016 from \$1,134,920 in 2015 and were \$1,193,549 in 2014. Annuitant healthcare benefits contributions fluctuate from year to year based on participation and healthcare costs.

Net investment income totaled \$10,477,792 for 2016 compared to \$2,549,975 for 2015. Comparatively, net investment income totaled \$13,525,606 for 2014. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

Deductions to Plan Net Position

Total deductions were \$19,668,300 in 2016, \$19,145,547 in 2015 and \$19,137,492 in 2014.

Benefits increased to \$18,636,138 in 2016 from \$18,347,316 in 2015 and \$17,858,418 in 2014 primarily due to the 3% annual cost of living increases for annuitants.

Refunds increased to \$740,586 in 2016 from \$635,908 in 2015 and decreased from \$961,637 in 2014. These changes are due to fluctuations in refund applications.

Employee transfers to Cook County resulted from Forest Preserve District employees transferring employment to Cook County. The accrued pension benefit obligation is transferred to the Forest Preserve Fund from the Cook County Fund.

The cost to administer the Plan increased to \$157,577 in 2016 from \$143,953 in 2015. Comparatively, the cost to administer the Plan increased to \$143,953 in 2015 from \$142,067 in 2014.

Actuarial Information

Pension Benefits

Under GASB Statement No. 67, *Financial Reporting for Pension Plans*, the Plan's funding for pension benefits is as follows:

	Funding for Pension Benefits		
	For the Years Ended December 31,		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 438,859,466	\$ 457,577,963	\$ 416,145,173
Plan fiduciary net position	<u>(191,202,398)</u>	<u>(192,322,370)</u>	<u>(201,309,174)</u>
Employer's net pension liability	<u>\$ 247,657,068</u>	<u>\$ 265,255,593</u>	<u>\$ 214,835,999</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>43.57%</u>	<u>42.03%</u>	<u>48.37%</u>

Postemployment Healthcare Benefits

Under GASB Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, the Plan's funding for postemployment healthcare benefits is as follows:

	Funding for Postemployment Healthcare Benefits		
	For the Years Ended December 31,		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Unfunded actuarial accrued liability	<u>\$ 44,708,189</u>	<u>\$ 49,478,790</u>	<u>\$ 47,212,173</u>
Funded ratio	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>

Contributions for postemployment healthcare benefits are made on a "pay-as-you-go" basis, resulting in a 0.00% funded ratio.

FINANCIAL SECTION

Management's Discussion and Analysis (continued)

Actuarial Information (continued)

Combined

The Plan actuary has performed a combined valuation of the pension and postemployment healthcare benefits provided by the Plan to measure the overall funded status and contribution requirements of the Plan. Such a valuation is required under Chapter 40, Article 5/9-199 of the Illinois Pension Code which provides that the Plan shall submit a report each year containing a detailed statement of the affairs of the Plan, its income and expenditures, and assets and liabilities. The combined valuation reflects the actuarial assumptions adopted by the Board based on the results of an actuarial experience study. These assumptions conform to the actuarial standards recommended by the Plan's actuary and were used by the Plan's actuary to present the combined funding status in accordance with *Section 9-199*. The Plan's funding under the combined actuarial valuation is as follows:

	Funding for Combined Pension and Postemployment Healthcare Benefits For the Years Ended December 31,		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Unfunded actuarial accrued liability	<u>\$131,962,737</u>	<u>\$129,035,098</u>	<u>\$125,316,848</u>
Funded ratio	<u>60.04%</u>	<u>60.02%</u>	<u>60.25%</u>

Contact Information

This financial report is designed to provide the employer, Plan participants and others with a general overview of the Plan's finances and show accountability for money it receives. Questions concerning any data provided in the report or requests for additional information should be addressed to:

Forest Preserve Employees' Annuity
and Benefit Fund of Cook County
Attention: Executive Director
33 North Dearborn Street
Suite 1000
Chicago, Illinois 60602

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FINANCIAL SECTION

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position

December 31, 2016

<u>ASSETS</u>	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Receivables			
Employer contributions less allowance of \$134,866 in 2016	\$ 3,382,303	\$ 3,226,023	\$ 156,280
Employee contributions	3,194	3,194	-
Accrued investment income	280,241	280,241	-
Receivable for securities sold	577,903	577,903	-
Medicare Part D subsidy	28,102	-	28,102
Other	46,082	-	46,082
Total receivables	<u>4,317,825</u>	<u>4,087,361</u>	<u>230,464</u>
Investments			
U.S. and international equities	97,193,590	97,193,590	-
U.S. Government and government agency obligations	11,442,228	11,442,228	-
Corporate bonds	5,868,280	5,868,280	-
Collective international equity fund	12,456,752	12,456,752	-
Commingled fixed income fund	18,807,947	18,807,947	-
Exchange traded funds	4,485,230	4,485,230	-
Hedge fund	20,282,707	20,282,707	-
Real estate funds	12,627,540	12,627,540	-
Short-term investments	4,707,634	4,707,634	-
Total investments	<u>187,871,908</u>	<u>187,871,908</u>	<u>-</u>
Collateral held for securities on loan	15,307,189	15,307,189	-
Total assets	<u>207,496,922</u>	<u>207,266,458</u>	<u>230,464</u>
 <u>LIABILITIES</u>			
Accounts payable	81,343	81,343	-
Healthcare benefits payable	230,464	-	230,464
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	463,181	463,181	-
Payable for securities purchased	212,347	212,347	-
Securities lending collateral	15,307,189	15,307,189	-
Total liabilities	<u>16,294,524</u>	<u>16,064,060</u>	<u>230,464</u>
Net position			
Net position restricted for pensions	191,202,398	191,202,398	-
Net position held in trust for postemployment healthcare benefits	-	-	-
Total	<u>\$191,202,398</u>	<u>\$191,202,398</u>	<u>\$ -</u>

See accompanying notes to combining financial statements.

Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

December 31, 2015			
<u>ASSETS</u>	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Receivables			
Employer contributions less allowance of \$105,112 in 2015	\$ 3,442,879	\$ 3,168,538	\$ 274,341
Employee contributions	15,650	15,650	-
Accrued investment income	246,588	246,588	-
Receivable for securities sold	400,073	400,073	-
Medicare Part D subsidy	27,795	-	27,795
Other	44,997	500	44,497
Total receivables	<u>4,177,982</u>	<u>3,831,349</u>	<u>346,633</u>
Investments			
U.S. and international equities	98,025,342	98,025,342	-
U.S. Government and government agency obligations	11,425,544	11,425,544	-
Corporate bonds	5,537,245	5,537,245	-
Collective international equity fund	9,804,800	9,804,800	-
Commingled fixed income fund	20,557,963	20,557,963	-
Exchange traded funds	6,398,130	6,398,130	-
Hedge fund	19,670,830	19,670,830	-
Real estate funds	11,720,644	11,720,644	-
Short-term investments	6,245,539	6,245,539	-
Total investments	<u>189,386,037</u>	<u>189,386,037</u>	<u>-</u>
Collateral held for securities on loan	17,503,324	17,503,324	-
Total assets	<u>211,067,343</u>	<u>210,720,710</u>	<u>346,633</u>
<u>LIABILITIES</u>			
Accounts payable	81,260	81,260	-
Healthcare benefits payable	346,633	-	346,633
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	515,876	515,876	-
Payable for securities purchased	297,880	297,880	-
Securities lending collateral	17,503,324	17,503,324	-
Total liabilities	<u>18,744,973</u>	<u>18,398,340</u>	<u>346,633</u>
Net position			
Net position restricted for pensions	192,322,370	192,322,370	-
Net position held in trust for postemployment healthcare benefits	-	-	-
Total	<u>\$192,322,370</u>	<u>\$192,322,370</u>	<u>\$ -</u>

See accompanying notes to combining financial statements.

FINANCIAL SECTION

**Combining Statements of Changes in Pension Plan Fiduciary
Net Position and Postemployment Healthcare Plan Net Position**

Year Ended December 31, 2016

	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Additions			
Employer contributions	\$ 3,391,381	\$ 1,971,946	\$ 1,419,435
Employee contributions			
Salary deductions	2,980,457	2,980,457	-
Refund repayments	127,639	127,639	-
Former and miscellaneous service payments	2,571	2,571	-
Deductions in lieu of disability	73,384	73,384	-
Total employee contributions	<u>3,184,051</u>	<u>3,184,051</u>	<u>-</u>
Annuitant healthcare benefits contributions	<u>1,177,887</u>	<u>-</u>	<u>1,177,887</u>
Investment income			
Net appreciation (depreciation) in fair value of investments	8,074,762	8,074,762	-
Dividends	2,268,706	2,268,706	-
Interest	686,973	686,973	-
	<u>11,030,441</u>	<u>11,030,441</u>	<u>-</u>
Less investment expenses	(622,361)	(622,361)	-
Net investment income	<u>10,408,080</u>	<u>10,408,080</u>	<u>-</u>
Securities lending			
Income	83,244	83,244	-
Expenses	(13,532)	(13,532)	-
Net securities lending income	<u>69,712</u>	<u>69,712</u>	<u>-</u>
Other			
Medicare Part D subsidy	130,116	-	130,116
Prescription plan rebates	187,101	-	187,101
Miscellaneous	-	-	-
Total other additions	<u>317,217</u>	<u>-</u>	<u>317,217</u>
Total additions	<u>18,548,328</u>	<u>15,633,789</u>	<u>2,914,539</u>
Deductions			
Benefits			
Annuity			
Employee	12,896,736	12,896,736	-
Spouse and children	2,523,376	2,523,376	-
Disability			
Ordinary	245,271	245,271	-
Duty	56,216	56,216	-
Healthcare	2,914,539	-	2,914,539
Total benefits	<u>18,636,138</u>	<u>15,721,599</u>	<u>2,914,539</u>
Refunds	740,586	740,586	-
Employee transfers to Cook County Employees' and Officers' Annuity and Benefit of Cook County	133,999	133,999	-
Administrative expenses	157,577	157,577	-
Total deductions	<u>19,668,300</u>	<u>16,753,761</u>	<u>2,914,539</u>
Net (decrease)	(1,119,972)	(1,119,972)	-
Net position			
Beginning of year	192,322,370	192,322,370	-
End of year	<u>\$191,202,398</u>	<u>\$191,202,398</u>	<u>\$ -</u>

See accompanying notes to combining financial statements.

FINANCIAL SECTION

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position (continued)

Year Ended December 31, 2015

	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Additions			
Employer contributions	\$ 3,462,037	\$ 1,763,345	\$ 1,698,692
Employee contributions			
Salary deductions	2,687,866	2,687,866	-
Refund repayments	44,383	44,383	-
Former and miscellaneous service payments	358	358	-
Deductions in lieu of disability	38,926	38,926	-
Total employee contributions	<u>2,771,533</u>	<u>2,771,533</u>	<u>-</u>
Annuitant healthcare benefits contributions	<u>1,134,920</u>	<u>-</u>	<u>1,134,920</u>
Investment income			
Net appreciation (depreciation)			
in fair value of investments	(75,184)	(75,184)	-
Dividends	2,509,137	2,509,137	-
Interest	603,654	603,654	-
	<u>3,037,607</u>	<u>3,037,607</u>	<u>-</u>
Less investment expenses	(583,256)	(583,256)	-
Net investment income	<u>2,454,351</u>	<u>2,454,351</u>	<u>-</u>
Securities lending			
Income	116,652	116,652	-
Expenses	(21,028)	(21,028)	-
Net securities lending income	<u>95,624</u>	<u>95,624</u>	<u>-</u>
Other			
Medicare Part D subsidy	125,196	-	125,196
Prescription plan rebates	103,640	-	103,640
Miscellaneous	11,442	11,442	-
Total other additions	<u>240,278</u>	<u>11,442</u>	<u>228,836</u>
Total additions	<u>10,158,743</u>	<u>7,096,295</u>	<u>3,062,448</u>
Deductions			
Benefits			
Annuity			
Employee	12,820,708	12,820,708	-
Spouse and children	2,281,100	2,281,100	-
Disability			
Ordinary	163,707	163,707	-
Duty	19,353	19,353	-
Healthcare			
Healthcare	3,062,448	-	3,062,448
Total benefits	<u>18,347,316</u>	<u>15,284,868</u>	<u>3,062,448</u>
Refunds	635,908	635,908	-
Employee transfers to Cook County Employees' and Officers' Annuity and Benefit of Cook County	18,370	18,370	-
Administrative expenses	143,953	143,953	-
Total deductions	<u>19,145,547</u>	<u>16,083,099</u>	<u>3,062,448</u>
Net (decrease)	(8,986,804)	(8,986,804)	-
Net position			
Beginning of year	201,309,174	201,309,174	-
End of year	<u>\$192,322,370</u>	<u>\$192,322,370</u>	<u>\$ -</u>

See accompanying notes to combining financial statements.

Notes to Financial Statements

Note 1: Summary of Significant Accounting Policies

The Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (the Plan) is administered in accordance with Chapter 40, Article 5/10 of the Illinois Compiled Statutes.

Financial Reporting Entity - Accounting principles generally accepted in the United States of America define a financial reporting entity as consisting of the primary government and its component units for which the primary government is financially accountable. Financial accountability includes appointing a voting majority of a component unit's governing board, the ability of a primary government to impose its will on the component unit, or a potential for a component unit to provide specific financial benefits to or impose specific financial burdens on the primary government. The Plan has determined that no other outside entity meets the above criteria and, therefore, no other entity has been included as a component unit in the Plan's financial statements.

Based on the above criteria, the Plan is considered to be a fiduciary fund of Forest Preserve District of Cook County, Illinois (the Forest Preserve District) and is included in the Forest Preserve District's financial statements.

New Accounting Pronouncement - The Plan has implemented Governmental Accounting Standards Board (GASB) Statement No. 72, *Fair Value Measurement and Application* (GASB 72), which addresses accounting and financial reporting issues related to fair value measurements. GASB 72 provides guidance for determining a fair value measurement for financial reporting purpose and applying fair value to certain investments and disclosures related to all fair value measurements.

Method of Accounting - The financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized as income pursuant to legal requirements as specified by the Illinois Compiled Statutes. Employee contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Investments - Investments are reported at fair value, which generally represents reported market value as of the last business day of the year. Where less than an entire investment holding is sold, average value is used to determine realized gain or loss.

Allocated Expenses - Administrative expenses are initially paid by the County Employees' and Officers' Annuity and Benefit Fund of Cook County (the County Fund). These expenses are allocated between the County Fund and the Plan on a pro rata basis as applicable.

Capital Assets - The Plan has set a capitalization threshold of \$100,000 for all capital asset types. As of December 31, 2016 and 2015, the Plan does not have any capital assets.

Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures in the financial statements. Actual results could differ from those estimates.

Reclassifications - Certain prior year amounts have been reclassified to conform to the current year presentation.

Subsequent Events - Subsequent events have been evaluated through June 12, 2017, which is the date the financial statements were available to be issued.

Note 2: Plan Description

The Plan was established on July 1, 1931, and is governed by legislation contained in the Illinois Compiled Statutes (the Statutes), particularly Chapter 40, Article 5/10 (the Article). Effective with the signing of Public Act 96-0889 into law on April 14, 2010, participants that first became contributors on or after January 1, 2011 are Tier 2 participants. All other participants that were contributing prior to January 1, 2011 are Tier 1 participants. The Plan can be amended only by the Illinois Legislature. The Plan is a single employer defined benefit pension plan with a defined contribution minimum. The Plan was created for the purpose of providing retirement, death and disability benefits for full-time employees of the Forest Preserve District and the dependents of such employees. The Plan is considered to be a fiduciary fund of Forest Preserve District of Cook County, Illinois and is included in the Forest Preserve District's financial statements.

The Statutes authorize a Board of Trustees (the Board) of nine members to carry out the provisions of the Article. According to the Article, two members of the Board are ex officio, four are elected by the employee members of the Plan and three are elected by the annuitants of the Plan. The two ex officio members are the Comptroller of Cook County, or someone chosen by the Comptroller, and the Treasurer of Cook County, or someone chosen by the Treasurer. All members of the Board are fiduciaries with respect to the Plan and are statutorily mandated to discharge their duties, as such, solely in the interest of the Plan's participants and beneficiaries.

The Board has the powers and duties required in the Article to collect all contributions due to the Plan, to invest the Plan's reserves, to have an annual audit, to appoint employees, to authorize or suspend payment of any benefit and to have exclusive original jurisdiction in all matters relating to or affecting the Plan. The Board approves its own budget, which is prepared by the administrative staff of the Plan. The Board is required annually to submit to the Forest Preserve District Board of Cook County a detailed report of the financial affairs and status of the Plan. Provisions in other articles of Chapter 40 require the Board to submit its annual audit and actuarial valuation reports to the State of Illinois Department of Insurance, as well as another detailed annual report, the form and content of which is specified by the Department of Insurance.

Covered employees are required to contribute 8.5% of their salary to the Plan, subject to the salary limitations for Tier 2 participants in Article 5/1-160. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest (3% or 4% depending on when the employee became a participant). The Forest Preserve District's total contribution is the amount of contributions made by the employees to the Plan in the calendar year two years prior to the year for which annual applicable tax is levied, multiplied by 1.30. The source of funds for the Forest Preserve District's contributions has been designated by State Statute as the Forest Preserve District's annual property tax levy. The Forest Preserve District's payroll for employees covered by the Plan for the years ended December 31, 2016 and 2015 was \$34,509,011 and \$32,007,657 respectively.

The Plan provides retirement as well as death and disability benefits. Tier 1 employees age 50 or older and Tier 2 employees age 62 or older are entitled to receive a minimum formula annuity of 2.4% for each year of credited service if they have at least 10 years of service. The maximum benefit is 80% of the final average monthly salary. For Tier 1 employees under age 60 and Tier 2 employees under age 67, the monthly retirement benefit is reduced by ½% for each month the participant is below that age. The reduction is waived for Tier 1 participants having 30 or more years of credited service.

Participants should refer to the applicable State Statutes for more complete information.

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 2: Plan Description (continued)

At December 31, 2016 and 2015, participants consisted of the following:

	<u>2016</u>	<u>2015</u>
Active Members	572	568
Retired Members	378	383
Beneficiaries	152	146
Inactive Members	<u>1,296</u>	<u>1,149</u>
Total	<u>2,398</u>	<u>2,246</u>

Note 3: Employer's Pension Liability

Net Pension Liability

The components of the employer's net pension liability of the Plan for the years ended December 31, 2016 and 2015 are as follows

	<u>2016</u>	<u>2015</u>
Total pension liability	\$438,859,466	\$457,577,963
Plan fiduciary net position	<u>191,202,398</u>	<u>192,322,370</u>
Employer's net pension liability	<u>\$247,657,068</u>	<u>\$265,255,593</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>43.57%</u>	<u>42.03%</u>

See the schedule of changes in the employer's net pension liability and related ratios in the required supplementary information for additional information related to the funded status of the Plan.

Note 3: Employers' Pension Liability (continued)

The net pension liability was determined by actuarial valuations performed as of December 31, 2016 and 2015 using the following actuarial methods and assumptions:

Actuarial valuation dates	December 31, 2016 and 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Asset valuation method	Five Year Smoothed Average Market
Actuarial assumptions:	
Inflation	3.25% per year, compounded annually
Salary increases	3.75% to 8.00%, based on age
Investment Rate of Return	7.50% per year, compounded annually
Retirement age	Rates of retirement for each age from 50 to 75 based on recent experience of the Plan where all employees are assumed to retire by age 75.
Mortality	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB
Postretirement annuity increase	Tier 1 participants - 3.0% compounded annually Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index

The actuarial assumptions used in the December 31, 2016 and 2015 valuations were based on the results of an actuarial experience study conducted by Buck Consultants, LLC dated January 2014.

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 3: Employers' Pension Liability (continued)

Discount Rate

The blended discount rates used to measure the total pension liability at December 31, 2016 and 2015 were 4.62% and 4.23%, respectively. The projection of cash flows used to determine the discount rate assumed that the employer's contributions will continue to follow the current funding policy. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. Municipal bond rates of 3.71% and 3.20% at December 31, 2016 and 2015, respectively, and the long-term investment rate of return of 7.50% were used in the development of the blended discount rates. The municipal bond rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following is an analysis of the net pension liability's sensitivity to changes in the discount rate at December 31, 2016 and 2015. The following table presents the net pension liability of the employer using the blended discount rate as well as the employer's net pension liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

December 31, 2016			
	1% Decrease	Current Discount Rate	1% Increase
	3.62%	4.62%	5.62%
Net Pension Liability	<u>\$319,995,043</u>	<u>\$247,657,068</u>	<u>\$190,280,122</u>
December 31, 2015			
	1% Decrease	Current Discount Rate	1% Increase
	3.23%	4.23%	5.23%
Net Pension Liability	<u>\$344,128,366</u>	<u>\$265,255,593</u>	<u>\$203,107,690</u>

Note 4: Summary of Employer Funding Policies

Employer contributions are funded primarily through a tax levied by the Forest Preserve District of Cook County, Illinois. The tax levy, when extended, is limited to an amount not to exceed an amount equal to the total contributions by the employees to the Plan made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 1.30.

Note 5: Investments

Investment Policy

The Board of Trustees is responsible for establishing reasonable and consistent investment objectives, policies and guidelines governing the investment of Plan assets in accordance with the Illinois Compiled Statutes. The Plan is authorized to invest in bonds, notes, certificates of indebtedness, mortgage notes, real estate, stocks, shares, debentures, or other obligations or securities as set forth in the “prudent person” provisions of the state statutes. All of the Plan’s financial instruments are consistent with the permissible investments outlined in the state statutes and any index-linked financial instruments are limited to those indices that replicate the permissible investments outlined in the State Statutes. During the year ended December 31, 2016 and 2015, there were no changes to the investment policy.

The Plan’s investment policy in accordance with the Illinois Compiled Statutes establishes the following target allocation across asset classes:

<u>Asset Class</u>	<u>Target Allocation %</u>	<u>Long-term Expected Rate of Return</u>
Domestic equities	30.00%	9.05%
International equities	23.00%	7.61%
Fixed income	29.00%	1.79%
Real estate	9.00%	6.91%
Hedge funds	9.00%	4.68%
Total investments	<u>100.00%</u>	

Note 5: Investments (continued)

Long-term expected rate of return

The long-term expected rate of return on the Plan's investments was determined based on the results of an experience study performed by Buck Consultants. The results of the experience study were adopted by the Board in January 2014. The investment return assumption was based on the current asset allocation of the Plan. In the experience study, Buck Consultants developed best estimate ranges of expected future real rates of return (net of pension plan investment expense and inflation) for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates or geometric real rates of return for each major asset class included in the Plan's target asset allocation as of December 31, 2013 are listed in the previous table.

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 5.67% and 1.50% for the years ended December 31, 2016 and 2015, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Note 5: Investments (continued)**Credit Risk**

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Plan's investment policy is an average credit quality for each manager's total fixed income portfolio (corporate and U.S. Government holdings) of not less than A- by two out of three credit agencies (Moody's Investor Service, Standard & Poor's and/or Fitch). The following table presents a summarization of the Plan's credit quality ratings of investments at December 31, 2016 and 2015 as valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

<u>Type of Investment</u>	<u>Rating</u>	<u>2016</u>	<u>2015</u>
U.S. Government and government agency obligations	Aa/AA	\$ 11,243,062	\$ 11,425,544
	Not Rated	199,166	-
		<u>\$11,442,228</u>	<u>\$ 11,425,544</u>
Corporate bonds	A/A	\$ 2,046,395	\$ 1,837,174
	Baa/BBB	3,286,284	3,348,446
	Ba/BB	535,601	351,625
		<u>\$ 5,868,280</u>	<u>\$ 5,537,245</u>
Commingled fixed income fund	Not Rated	<u>\$ 18,807,947</u>	<u>\$ 20,557,963</u>
Short-term investments	Not Rated	<u>\$ 4,707,634</u>	<u>\$ 6,245,539</u>

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 5: Investments (continued)

Investment Risk (continued)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments held for longer periods are subject to increased risk of adverse interest rate changes. The Plan's investment policy for duration for each manager's total fixed income portfolio is within plus or minus 30% of the duration for the fixed income performance benchmark (*Bloomberg Barclays US Aggregate Fixed Income*, which was 5.89 years at December 31, 2016 and 5.68 years at December 31, 2015). The following table presents a summarization of the Plan's debt investments at December 31, 2016 and 2015 using the segmented time distribution method:

<u>Type of Investment</u>	<u>Maturity</u>	<u>2016</u>	<u>2015</u>
U.S. Government and government agency obligations	< 1 year	\$ 1,335	\$ -
	1 - 5 years	2,212,010	2,413,146
	5 - 10 years	3,834,266	3,328,693
	Over 10 years	5,394,617	5,683,705
		<u>\$11,442,228</u>	<u>\$11,425,544</u>
Corporate bonds	1 - 5 years	\$ 1,744,603	\$ 768,998
	5 - 10 years	2,978,752	3,802,893
	Over 10 years	1,144,925	965,354
		<u>\$ 5,868,280</u>	<u>\$ 5,537,245</u>
Commingled fixed income fund	5-10 years	<u>\$18,807,947</u>	<u>\$20,557,963</u>
Short-term investments	< 1 year	<u>\$ 4,707,634</u>	<u>\$ 6,245,539</u>

Note 5: Investments (continued)**Investment Risk (continued)****Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Plan's investment policy limits the amount of investments in foreign equities to 20% of total Plan assets. The Plan's exposure to foreign currency risk at December 31, 2016 and 2015 is as follows:

<u>Type of Investment</u>	<u>Fair Value (USD) 2016</u>	<u>Fair Value (USD) 2015</u>
U.S. and international equities		
Australian dollar	\$ 1,659,083	\$ 2,251,796
British pound sterling	9,571,732	10,120,800
Canadian dollar	2,025,413	932,056
Danish krone	1,185,771	849,768
European euro	8,863,401	7,824,192
Israeli shekel	914,471	351,277
Japanese yen	5,992,539	6,733,868
New Zealand dollar	756,403	825,020
Norwegian krone	1,790,782	885,152
Singapore	402,083	-
Swedish krona	1,197,883	2,218,225
Swiss franc	884,198	2,999,393
U.S. dollar	61,949,831	62,033,795
Total U.S. and international equities	<u>\$ 97,193,590</u>	<u>\$ 98,025,342</u>

For the years ended December 31, 2016 and 2015, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was \$4,337,995 and \$10,927,194 respectively. These amounts are included in the net appreciation (depreciation) in fair value of investments as reported on the combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position. The calculation of realized gains and losses is independent of the calculation of net appreciation (depreciation) in the fair value of plan investments. Investments purchased in a previous year and sold in the current year result in their realized gains and losses being reported in the current year and their net appreciation (depreciation) in plan assets being reported in both the current year and the previous years.

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 6: Fair Value Measurements

GASB Statement No. 72, *Fair Value Measurement and Application*, established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Basis of Fair Value Measurement

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities
Level 2	Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable either directly or indirectly
Level 3	Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable

The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Plan has the following recurring fair value measurements as of December 31, 2016 and 2015:

Fair Value Measurements at 12/31/2016 Using

	<u>Total</u>	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	\$ 97,193,590	\$ 97,193,590	\$ -	\$ -
U.S. Government and government agency obligations	11,442,228	-	11,442,228	-
Corporate bonds	5,868,280	-	5,868,280	-
Exchange traded funds	4,485,230	4,485,230	-	-
Total investments by fair value level	118,989,328	<u>\$ 101,678,820</u>	<u>\$ 17,310,508</u>	<u>\$ -</u>
Investments measured at net asset value	<u>68,882,580</u>			
Total investments at fair value	<u>\$187,871,908</u>			

Note 6: Fair Value Measurements (continued)

	<u>Total</u>	Fair Value Measurements at 12/31/2015 Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	\$ 98,025,342	\$ 98,025,342	\$ -	\$ -
U.S. Government and government agency obligations	11,425,544	-	11,425,544	-
Corporate bonds	5,537,245	-	5,537,245	-
Exchange traded funds	6,398,130	6,398,130	-	-
Total investments by fair value level	<u>121,386,261</u>	<u>\$ 104,423,472</u>	<u>\$ 16,962,789</u>	<u>\$ -</u>
Investments measured at net asset value	<u>67,999,776</u>			
Total investments at fair value	<u>\$189,386,037</u>			

Level 1 Measurements

U.S. and international equities and exchange traded funds are traded in active markets on national and international securities exchanges and are valued at closing prices on the measurement date.

Level 2 Measurements

U.S. Government and government agency obligations and corporate bonds are generally valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that include inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker to dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Securities that trade infrequently and therefore have little or no price transparency are valued using the investment manager's best estimates.

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 6: Fair Value Measurements (continued)

The valuation methods for investments measured at net asset value (NAV) are presented on the following table:

	<u>Fair Value</u> <u>12/31/16</u>	<u>Fair Value</u> <u>12/31/15</u>	<u>Unfunded</u> <u>Commitments</u>	<u>Redemption</u> <u>Frequency</u> <u>(If Eligible)</u>	<u>Redemption</u> <u>Notice</u> <u>Period</u>
Investments measured at net asset value					
Collective international equity fund (1)					
Lazard/Wilmington Emerging Markets Sudan Free Portfolio	\$12,456,752	\$ 9,804,800	-	Daily	N/A
Commingled fixed income fund (2)					
EB DV Non-SL Aggregate Bond Index Fund	18,807,947	20,557,963	-	Daily	N/A
Hedge fund (3)					
Burnham Harbor Fund Ltd.	20,282,707	19,670,830	-	Monthly	95 days
Real estate funds (4)					
JPMCB Strategic Property Fund	6,685,531	6,220,644	-	Quarterly	45 days
PRISA Separate Account	5,942,009	5,500,000	-	Quarterly	90 days
Short-term investments (5)					
BNY Mellon EB Temporary Investment Fund	4,707,634	6,245,539	-	Daily	N/A
Total investments measured at net asset value	<u>\$68,882,580</u>	<u>\$67,999,776</u>			

(1) Collective international equity fund - The fund's investment objective is to achieve long-term capital appreciation by investing primarily in equity and equity-related securities of issuers that are located, or do significant business, in emerging market countries. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(2) Commingled fixed income fund - The fund's investment objective is to track the performance of the Barclays U.S. Aggregate Index. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(3) Hedge fund - The fund was organized for the primary purpose of developing and actively managing an investment portfolio of non-traditional portfolio managers. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(4) Real estate funds - This investment includes a commingled pension trust fund and an insurance company separate account that are both designed as funding vehicles for tax-qualified pension plans. Their investments are comprised primarily of real estate investments either directly owned or through partnership interests and mortgage and other loans on income producing real estate. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Due to the nature of the investments and available cash on hand, significant redemptions in this type of investment may at times be subject to additional restrictions.

(5) Short-term investments - This investment's objective is to invest in short-term investments of high quality and low risk to protect capital while achieving investment returns. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

Note 7: Derivatives

The Plan's investment policy permits the use of financial futures for hedging purposes only. Speculation and leveraging of financial futures within the portfolio is prohibited. The Plan uses financial futures to manage portfolio risk and to facilitate international portfolio trading.

A derivative security is a financial contract whose value is based on, or "derived" from, a traditional security, an asset, or a market index. Derivative instruments include forward currency contracts as part of the Plan's investment portfolio.

Derivative transactions involve, to varying degrees, credit risk, interest rate risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the previously agreed upon terms. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle.

Forward currency contracts are used to hedge against fluctuations in foreign currency-denominated assets used primarily in portfolio trade settlements. These contracts are a cash contract in which a seller agrees to deliver a specific cash commodity to a buyer sometime in the future. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions. Forward currency contracts are reported at fair value in the receivable for securities sold and payable for securities purchased on the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position. The gain or loss on forward currency contracts is recognized and recorded on the combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position as part of investment income. The forward currency contracts are short term in nature, typically ranging from one week to three months.

At December 31, 2016 and 2015, the Plan's investments included the following forward currency contract balances:

	<u>2016</u>	<u>2015</u>
Hedging derivative instruments		
Forward currency contract receivables	<u>\$ 95,055</u>	<u>\$132,957</u>
Forward currency contract payables	<u>\$ 95,591</u>	<u>\$132,957</u>

For the years ended December 31, 2016 and 2015, the change in fair value of the deferred inflows and outflows of the foreign currency contracts was not material to these financial statements.

Note 8: Securities Lending

State Statutes and the investment policy permit the Plan to lend its securities to broker-dealers and other entities with a simultaneous agreement to return collateral for the same securities in the future. The Plan's custodian, acting as the lending agent, lends securities for collateral in the form of cash, U.S. Government obligations and irrevocable letters of credit equal to 102% of the fair value of domestic securities plus accrued interest and 105% of the fair value of foreign securities plus accrued interest.

The Plan does not have the right to sell or pledge securities received as collateral unless the borrower defaults. The average term of securities loaned was 46 days for 2016 and 137 days for 2015; however, any loan may be terminated on demand by either the Plan or the borrower. Cash collateral is invested in a separately managed portfolio, which had an average weighted maturity at December 31, 2016 and 2015 of 10 and 78 days, respectively.

As of December 31, 2016 and 2015, the fair value (carrying amount) of loaned securities was \$18,981,757 and \$20,744,664 respectively. As of December 31, 2016 and 2015, the fair value (carrying amount) of cash collateral received by the Plan was \$15,307,189 and \$17,503,324 respectively. The cash collateral is included as an asset and a corresponding liability on the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position. As of December 31, 2016 and 2015, the fair value (carrying amount) of noncash collateral received by the Plan was \$4,147,183 and \$3,710,684 respectively.

Although the Plan's securities lending activities are collateralized as described above, they involve both market and credit risk. In this context, market risk refers to the possibility that the borrower of securities will be unable to collateralize the loan upon a sudden material change in the fair value of the loaned securities. Credit risk refers to the possibility that counterparties involved in the securities lending program may fail to perform in accordance with the terms of their contracts.

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower. The contract with the lending agent requires indemnification to the Plan if borrowers fail to return the securities or fail to pay the Plan for income distributions by the issuers of securities while the securities are on loan.

During 2016 and 2015, there were no losses due to default of a borrower or the lending agent.

Note 8: Securities Lending (continued)

A summary of securities loaned at fair value as of December 31, 2016 and 2015 is as follows:

	<u>2016</u>	<u>2015</u>
Securities loaned - cash collateral		
U.S. and international equities	\$10,492,107	\$ 10,323,768
U.S. Government and government agency obligations	-	131,141
Exchanged traded funds	4,231,327	6,092,686
Corporate bonds	219,850	561,066
Total securities loaned - backed by cash collateral	<u>14,943,284</u>	<u>17,108,661</u>
Securities loaned - non-cash collateral		
U.S. and international equities	2,866,394	677,845
U.S. Government and government agency obligations	1,172,079	2,602,603
Exchange traded funds	-	355,555
Total securities loaned - non-cash collateral	<u>4,038,473</u>	<u>3,636,003</u>
Total	<u>\$18,981,757</u>	<u>\$20,744,664</u>

Note 9: Postemployment Group Healthcare Benefit Plan**Plan Description**

The Plan administers a Postemployment Group Healthcare Benefit Plan (PGHBP), a single-employer defined benefit postemployment healthcare plan. PGHBP is administered in accordance with Chapter 40, Article 5/10 of the Illinois Compiled Statutes, which assigns the authority to establish and amend benefit provisions to the Plan's Board of Trustees. PGHBP provides a healthcare benefit to annuitants who elect to participate in PGHBP.

All benefit elections under the PGHBP are fully self-insured. The Plan is currently allowed, in accordance with State Statutes, to pay all or a portion of medical costs for the annuitants. Presently, the employee and spouse annuitants pay approximately 48% and 33% of the annual medical costs, respectively. The remaining costs are borne by the Plan. The Plan does not maintain stop-loss insurance coverage for the PGHBP.

At December 31, 2016 and 2015, the number of annuitants and surviving spouses participating in the PGHBP, totaled 281 and 278 respectively.

FINANCIAL SECTION

Notes to Financial Statements (continued)

Note 9: Postemployment Group Healthcare Benefit Plan (continued)

The following is a reconciliation of healthcare benefits payable for the years ended December 31, 2016 and 2015:

	<u>2016</u>	<u>2015</u>
Healthcare benefits payable, January 1	\$ 346,633	\$ 312,860
Claims incurred	2,798,370	3,096,221
Claims paid	(2,914,539)	(3,062,448)
Healthcare benefits payable, December 31	<u>\$ 230,464</u>	<u>\$ 346,633</u>

The Plan's actuary, Segal Consultants, estimated medical claims incurred but not reported (IBNR) as of December 31, 2016 and 2015 based on industry standards including historical IBNR levels, insurance company studies, lag studies and actuarial assumptions. The Plan estimated the prescription claims liability for both December 31, 2016 and 2015 based on claims paid subsequent to year end.

Summary of Significant Accounting Policies

Method of Accounting - PGHBP's financial statements have been combined with the Plan's financial statements and are presented using the accrual basis of accounting. The Plan subsidizes the cost for postemployment group health benefits in excess of the retiree healthcare premiums with no contribution rate or asset allocation associated with it. Post-employment group healthcare costs are recognized when incurred and estimable.

Contributions - The Plan funds PGHBP on a "pay-as-you-go" basis.

Administrative Costs - Administrative costs associated with PGHBP are paid by the Plan's employer contributions and annuitant health benefit contributions.

Health Care Cost Trend Rates

2016 - 7.50% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare. 6.00% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.
2015 - 7.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare. 6.25% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.

Inflation Rate Assumption - 3.25% per year.

Actuarial Valuations - Actuarial valuations of the Plan involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Actuarial calculations of the Plan reflect a long-term perspective and are based on the benefits provided under the terms of the Plan in effect at the time of each valuation and on the historical pattern of sharing of costs between the employer and plan members to that point.

Note 9: Postemployment Group Healthcare Benefit Plan (continued)**Funded Status and Funding Progress**

As of December 31, 2016, the most recent actuarial valuation date, PGHBP was 0.00% funded on an actuarial basis. The actuarial accrued liability for benefits was \$44,708,189 and the actuarial value of assets was \$0 resulting in an unfunded actuarial accrued liability (UAAL) of \$44,708,189. The covered payroll (annual payroll of active employees covered by the Plan) was \$34,512,652 and the ratio of the UAAL to the covered payroll was 129.54%.

As of December 31, 2015, PGHBP was 0.00% funded on an actuarial basis. The actuarial accrued liability for benefits was \$49,478,790 and the actuarial value of assets was \$0 resulting in an unfunded actuarial accrued liability (UAAL) of \$49,478,790. The covered payroll (annual payroll of active employees covered by the Plan) was \$32,007,657 and the ratio of the UAAL to the covered payroll was 154.58%.

The schedule of funding progress, presented as required supplementary information (RSI) following the notes to the financial statements, presents multi-year trend information about whether the actuarial value of Plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

Note 10: Related Party Transactions

The Plan has common Trustees and shares office space with the County Employees' and Officers' Annuity and Benefit Fund of Cook County (the County Fund). The Plan reimburses the County Fund for shared administrative services provided by the County Fund. During the years ended December 31, 2016 and 2015, the County Fund allocated administrative expenditures of \$101,167 and \$92,675 respectively.

As of December 31, 2016 and 2015, the Plan owes the County Fund \$463,181 and \$515,876 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

Note 11: Pronouncements Issued Not Yet Effective

In June 2015, GASB issued Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets that are not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. Statement No. 73 establishes requirements for pension plans that are not administered through a trust (not covered by Statements 67 and 68). The requirements in Statement No. 73 for reporting pensions generally are the same as Statement 68, however, the lack of a trust that meets specified criteria is reflected in the measurements. Statement No. 73 is effective for the Plan's fiscal year ending December 31, 2016, except for provisions that address employers and governmental nonemployer contributing entities for pensions that are not within the scope of GASB Statement No. 68, which are effective for the Plan's fiscal year ending December 31, 2017.

In June 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. Statement No. 74 replaces the requirements of Statement No. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. This Statement addresses the financial reports of defined benefit Other Postemployment Benefit Plans that are administered through trusts that meet specified criteria. The Statement requires more extensive note disclosures and required supplementary information related to the measurement of the Other Postemployment Benefit liabilities for which assets have been accumulated, including information about the annual money-weighted rates of return on plan investments. Statement No. 74 is effective for the Plan's fiscal year ending December 31, 2017.

In June 2015, GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Statement No. 75 replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Statement No. 75 requires governments to report a liability on the financial statements for the other postemployment benefits that they provide. Statement No. 75 also requires more extensive note disclosures and required supplementary information about the other postemployment benefit liabilities. Statement No. 75 is effective for the Plan's fiscal year ending December 31, 2018.

In January 2016, GASB issued Statement No. 80, *Blending Requirements for Certain Component Units - an amendment of GASB Statement No. 14*. Statement No. 80 amends the blending requirements for the financial statement presentation of component units of all state and local governments established in Statement No. 14, *The Financial Reporting Entity*, as amended. Statement No. 80 is effective for the Plan's fiscal year ending December 31, 2017.

In March 2016, GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. Statement No. 81 improves accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. Statement No. 81 is effective for the Plan's fiscal year ending December 31, 2017.

Note 11: Pronouncements Issued Not Yet Effective (continued)

In March 2016, GASB issued Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73*. Statement No. 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. Statement No. 82 is effective for the Plan's fiscal year ending December 31, 2017.

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. Statement No. 83 addresses accounting and financial reporting for certain asset retirement obligations and establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. Statement No. 83 is effective for the Plan's fiscal year ending December 31, 2019.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*. Statement No. 84 improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. Statement No. 84 is effective for the Plan's fiscal year ending December 31, 2019.

In March 2017, GASB issued Statement No. 85, *Omnibus 2017*. Statement No. 85 addresses practice issues that have been identified during implementation and application of certain GASB Statements. It addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). Statement No. 85 is effective for the Plan's fiscal year ending December 31, 2018.

In May 2017, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. Statement No. 86 was issued to improve consistency in 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 are placed in an irrevocable trust for the sole purpose of extinguishing debt. Statement No. 86 also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. Statement No. 86 is effective for the Plan's fiscal year ending December 31, 2018.

The Plan is currently evaluating the impact of adopting the above GASB Statements.

Required Supplementary Information - Pension

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

	<u>December 31, 2016</u>
Total pension liability	
Service cost	\$ 11,224,976
Interest	19,482,189
Difference between expected and actual experience	(6,776,942)
Changes of assumptions	(26,186,535)
Expected benefit payments, including refunds of employee contributions	<u>(16,462,185)</u>
Net change in total pension liability	(18,718,497)
Total pension liability	
Beginning of year	<u>457,577,963</u>
End of year	<u>\$438,859,466</u>
Plan fiduciary net position	
Contributions - employer	\$ 1,971,946
Contributions - employee	3,184,051
Net investment income	10,477,792
Expected benefit payments, including refunds of employee contributions	(16,462,185)
Administrative expenses	(157,577)
Other	<u>(133,999)</u>
Net change in plan fiduciary net position	(1,119,972)
Plan fiduciary net position	
Beginning of year	<u>192,322,370</u>
End of year	<u>\$191,202,398</u>
Employer's net pension liability	<u>\$247,657,068</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>43.57%</u>
Covered-employee payroll	<u>\$ 34,509,011</u>
Employer's net pension liability as a percentage of covered-employee payroll	<u>717.66%</u>

*This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.*

See Report of Independent Auditors.

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios (continued)

	<u>December 31, 2015</u>
Total pension liability	
Service cost	\$ 9,656,955
Interest	19,471,424
Difference between expected and actual experience	(270,033)
Changes of assumptions	28,495,220
Expected benefit payments, including refunds of employee contributions	<u>(15,920,776)</u>
Net change in total pension liability	41,432,790
Total pension liability	
Beginning of year	<u>416,145,173</u>
End of year	<u>\$ 457,577,963</u>
Plan fiduciary net position	
Contributions - employer	\$ 1,763,345
Contributions - employee	2,771,533
Net investment income	2,549,975
Expected benefit payments, including refunds of employee contributions	(15,920,776)
Administrative expenses	(143,953)
Other	<u>(6,928)</u>
Net change in plan fiduciary net position	(8,986,804)
Plan fiduciary net position	
Beginning of year	<u>201,309,174</u>
End of year	<u>\$192,322,370</u>
Employer's net pension liability	<u>\$265,255,593</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>42.03%</u>
Covered-employee payroll	<u>\$ 32,007,657</u>
Employer's net pension liability as a percentage of covered-employee payroll	<u>828.73%</u>

*This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.*

See Report of Independent Auditors.

FINANCIAL SECTION**Required Supplementary Information - Pension (continued)****Schedule of Changes in the Employer's Net Pension Liability and Related Ratios (continued)**

	<u>December 31, 2014</u>
Total pension liability	
Service cost	\$ 9,575,195
Interest	18,880,782
Difference between expected and actual experience	-
Changes of assumptions	-
Expected benefit payments, including refunds of employee contributions	<u>(15,805,217)</u>
Net change in total pension liability	12,650,760
Total pension liability	
Beginning of year	<u>403,494,413</u>
End of year	<u>\$416,145,173</u>
Plan fiduciary net position	
Contributions - employer	\$ 1,520,316
Contributions - employee	2,645,164
Net investment income	13,525,606
Expected benefit payments, including refunds of employee contributions	(15,805,217)
Administrative expenses	(142,067)
Other	<u>(175,370)</u>
Net change in plan fiduciary net position	1,568,432
Plan fiduciary net position	
Beginning of year	<u>199,740,742</u>
End of year	<u>\$201,309,174</u>
Employer's net pension liability	<u>\$214,835,999</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>48.37%</u>
Covered-employee payroll	<u>\$ 29,811,912</u>
Employer's net pension liability as a percentage of covered-employee payroll	<u>720.64%</u>

*This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.*

See Report of Independent Auditors.

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FINANCIAL SECTION

Required Supplementary Information - Pension (continued)

Schedule of Employer Contributions - Last Ten Fiscal Years

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Actuarially determined contribution	\$10,678,782	\$10,230,872	\$10,166,661	\$10,921,946	\$ 9,608,247
Contributions in relation to the actuarially determined contribution	(1,971,946)	(1,763,345)	(1,520,316)	(1,403,628)	(2,117,976)
Contribution deficiency	<u>\$ 8,706,836</u>	<u>\$ 8,467,527</u>	<u>\$ 8,646,345</u>	<u>\$ 9,518,318</u>	<u>\$ 7,490,271</u>
Covered employee payroll	<u>\$34,509,011</u>	<u>\$32,007,657</u>	<u>\$29,811,912</u>	<u>\$29,485,857</u>	<u>\$26,252,071</u>
Contributions as a percentage of covered employee payroll	<u>5.71%</u>	<u>5.51%</u>	<u>5.10%</u>	<u>4.76%</u>	<u>8.07%</u>

See Report of Independent Auditors.

Notes to Schedule of Employer Contributions

Actuarially determined contribution rates are calculated as of December 31, one year prior to the fiscal year in which contributions are reported.

Valuation Date: December 31, 2016

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Asset valuation method	Five Year Smoothed Average Market
Inflation	3.25% per year, compounded annually
Salary increases	3.75% to 8%, based on age
Investment rate of return	7.5% per year, compounded annually
Retirement age	Based on actual past experience, assume all employees retire by age 75
Mortality	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB.
Postretirement annuity increases	Tier 1 participants - 3.0% compounded annually. Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index.

Schedule of Employer Contributions - Last Ten Fiscal Years (continued)

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially determined contribution	\$ 8,590,721	\$ 7,626,778	\$ 4,498,036	\$ 3,329,502	\$ 2,809,494
Contributions in relation to the actuarially determined contribution	(2,457,405)	(1,333,140)	(1,282,642)	(523,928)	(1,995,300)
Contribution deficiency	<u>\$ 6,133,316</u>	<u>\$ 6,293,638</u>	<u>\$ 3,215,394</u>	<u>\$ 2,805,574</u>	<u>\$ 814,194</u>
Covered employee payroll	<u>\$22,678,566</u>	<u>\$24,397,376</u>	<u>\$24,967,115</u>	<u>\$23,474,621</u>	<u>\$21,078,316</u>
Contributions as a percentage of covered employee payroll	<u>10.84%</u>	<u>5.46%</u>	<u>5.14%</u>	<u>2.23%</u>	<u>9.47%</u>

See Report of Independent Auditors.

Schedule of Investment Returns

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	5.67%	1.50%	7.10%

Note:

This schedule is intended to show information for ten years.

The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

Required Supplementary Information - Postemployment Healthcare

Schedule of Funding Progress

Year Ended <u>December 31,</u>	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) <u>(b)</u>	Unfunded AAL (UAAL) <u>(b-a)</u>	Funded Ratio <u>(a/b)</u>	Covered Payroll <u>(c)</u>	UAAL as a Percentage of Covered Payroll <u>(b-a)/(c)</u>
2011	\$ -	\$40,406,196	\$40,406,196	0.00%	\$22,678,566	178.17%
2012	\$ -	\$45,713,760	\$45,713,760	0.00%	\$26,252,071	174.13%
2013 (1)	\$ -	\$47,113,653	\$47,113,653	0.00%	\$29,485,857	159.78%
2014	\$ -	\$47,212,173	\$47,212,173	0.00%	\$29,811,912	158.37%
2015	\$ -	\$49,478,790	\$49,478,790	0.00%	\$32,007,657	154.58%
2016	\$ -	\$44,708,189	\$44,708,189	0.00%	\$34,512,652	129.54%

(1) = Change in actuarial assumptions.

See Notes to Schedule of Funding Progress and Schedule of Employer Contributions.

Schedule of Employer Contributions

Year Ended <u>December 31,</u>	Annual Required Contribution (ARC) <u>(a)</u>	Required Statutory Basis <u>(b)</u>	Employer Contributions <u>(c)</u>	Percent of ARC Contributed <u>(c/a)</u>
2011	\$3,830,933	\$ -	\$ 798,204	20.84%
2012	\$3,541,064	\$ -	\$ 991,000	27.99%
2013	\$4,234,545	\$ -	\$1,459,517	34.47%
2014	\$4,641,151	\$ -	\$1,616,436	34.83%
2015	\$4,637,519	\$ -	\$1,698,692	36.63%
2016	\$5,099,567	\$ -	\$1,419,435	27.83%

See Notes to Schedule of Funding Progress and Schedule of Employer Contributions.

Notes to Schedule of Funding Progress and Schedule of Employer Contributions

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2016 and 2015
Actuarial cost method	Entry age actuarial cost as a percentage of earnings
Amortization method	Level Dollar - Open
Amortization period	30 years
Actuarial assumptions	
Discount rate	4.5% per year
Inflation	3.25% per year
Health care cost trend rate	2016 - 7.50% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.00% in the first year decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare. 2015 - 7.75% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.25% in the first year decreasing by .25% per year until an ultimate rate of 4.75% is reached for post-medicare
Mortality rates	RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB
Retirement age assumptions	Based on actual past experience assume all employees retire by age 75

Supplementary Information

Schedules of Administrative Expenses and Professional and Consulting Fees

Years Ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Administrative expenses		
Administrative expenses allocated from County		
Employees' and Officers' Annuity and Benefit		
Fund of Cook County	\$101,167	\$ 92,675
Bank charges	9,603	9,460
Election expense	2,919	2,626
Membership	435	435
Miscellaneous	3,229	-
Professional and consulting fees	32,224	30,757
Regulatory filing fees	8,000	8,000
Total	<u>\$157,577</u>	<u>\$143,953</u>
 Professional and consulting fees		
Actuarial service	\$ 2,915	\$ 1,857
Audit	25,175	23,080
Consulting	1,302	1,191
Legal	1,939	3,782
Lobbyist	893	847
Total	<u>\$ 32,224</u>	<u>\$ 30,757</u>

Schedules of Investment Expenses

Years Ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Investment manager expense		
Blackstone Alternative Asset Management	\$196,665	\$198,139
Channing Capital Management	73,373	72,513
J.P. Morgan Asset Management	57,104	44,212
Lazard Asset Management, LLC	105,689	120,214
LM Capital Group, LLC	27,198	26,310
Mellon Capital	5,239	6,454
Prudential Real Estate Investors	40,969	-
RhumbLine Advisers	4,150	4,477
William Blair & Company	<u>98,769</u>	<u>98,412</u>
Total investment manager expenses	<u>609,156</u>	<u>570,731</u>
Investment consulting fees		
Callan Associates Inc.	8,205	7,525
Investment custodian fees		
BNY Mellon	<u>5,000</u>	<u>5,000</u>
Total investment expenses	<u><u>\$622,361</u></u>	<u><u>\$583,256</u></u>

FINANCIAL SECTION

Supplementary Information (continued)

Additions By Source

<u>Year Ended December 31,</u>	<u>Employer Contributions</u>	<u>Employee Contributions</u>	<u>Annuitant Healthcare Benefits Contributions</u>	<u>Net Investment and Net Securities Lending Income (1)</u>	<u>Other (2)</u>	<u>Total Additions</u>
2011	\$3,255,609	\$2,289,027	\$1,120,842	\$ 2,021,094	\$512,709	\$ 9,199,281
2012	\$3,108,976	\$2,426,776	\$1,127,026	\$22,209,855	\$212,447	\$29,085,080
2013	\$2,863,145	\$2,687,211	\$1,190,706	\$30,383,512	\$159,383	\$37,283,957
2014	\$3,136,752	\$2,645,164	\$1,193,549	\$13,525,606	\$204,853	\$20,705,924
2015	\$3,462,037	\$2,771,533	\$1,134,920	\$ 2,549,975	\$240,278	\$10,158,743
2016	\$3,391,381	\$3,184,051	\$1,177,887	\$10,477,792	\$317,217	\$18,548,328

1 - Includes realized and unrealized net gain or loss on investments and net securities lending income.

2 - Includes Medicare Part D, prescription plan rebates and miscellaneous income.
The Early Retirement Reinsurance Program is included in 2011 and 2012.

Deductions By Type

<u>Year Ended December 31,</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Employee Transfers to (from) Cook County</u>	<u>Administrative Expenses</u>	<u>Total Deductions</u>
2011	\$14,723,330	\$ 604,314	\$ (328,586)	\$103,220	\$15,102,278
2012	\$15,287,183	\$1,188,639	\$ 205,887	\$111,662	\$16,793,371
2013	\$16,858,913	\$ 958,707	\$ (106,012)	\$119,019	\$17,830,627
2014	\$17,858,418	\$ 961,637	\$ 175,370	\$142,067	\$19,137,492
2015	\$18,347,316	\$ 635,908	\$ 18,370	\$143,953	\$19,145,547
2016	\$18,636,138	\$ 740,586	\$ 133,999	\$157,577	\$19,668,300

Schedule of Employer Contributions Receivable

<u>Levy Year</u>	<u>December 31, 2016</u>			
	<u>Contributions Receivable</u>	<u>Uncollected Balance</u>	<u>Reserved</u>	<u>Net Contributions Receivable</u>
2015	\$3,493,374	\$ 78,456	\$ 42,031	\$ 36,425
2016	\$3,438,713	3,438,713	92,835	3,345,878
		<u>\$3,517,169</u>	<u>\$134,866</u>	<u>\$3,382,303</u>

Notes: Employer contributions are funded primarily through property taxes levied by the Forest Preserve District of Cook County
Uncollected employer contributions for the 2014 and prior levy years are fully reserved.

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Investment Section

This section includes an investment report, Investment Consultant's Commentary, the Master Custodian's Certification, a summary of investment policy, and summary tables of investment data.

Investment Report



June 12, 2017

To the Retirement Board and Our Members:

As an institutional investor, the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("the fund") employs a prudent investment strategy to meet its long-term actuarial objective of growing the assets to support member benefits. Together with fund staff and the investment consultant, Callan Associates, the Retirement Board oversees the investment strategy through ongoing study of the portfolio structure, return assumptions, and projected funding needs.

As of December 31, 2016, the fund's investment portfolio was valued at \$187.9 million, returning 5.7% net of investment management fees over the previous 12-month period.

- Performance (net of fees) over the last five years reflects outperformance of 101 basis points annually (8.9% vs. 7.8% custom benchmark).
- Positive absolute returns were broad-based across all asset classes with leadership primarily driven by the fund's domestic equity and real estate programs as global political events created swings in market sentiment and confidence about the future.
- Of note, the fund generated approximately \$10.5 million of net investment income, which offset most of the \$12.1 million in liquidations to fund benefit payments in 2016.

In summary, despite underperformance against its custom benchmark in 2016, the fund generated positive absolute returns among all asset classes.

The Consultant's Commentary; Master Custodian's certification letter; a summary of the fund's goals, objectives, and guidelines; and selected investment schedules follow for your review.¹

Sincerely,

A handwritten signature in black ink, appearing to read "Nickol R. Hackett".

Nickol R. Hackett
Executive Director and Chief Investment Officer

¹ Data provided to the fund by its custodian and its investment consultant form the basis of the information that is presented throughout the Investment Section. All portfolio rates of return are presented using time and asset-weighted returns. Returns are calculated net of investment manager fees.

Investment Consultant's Commentary

Callan

Callan Associates Inc.
120 North LaSalle Street
Suite 2400
Chicago, IL 60602

Main 312.346.3536
Fax 312.346.1356

www.callan.com

June 12, 2017

Board of Trustees
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
33 North Dearborn Street, Suite 1000
Chicago, IL 60602

Dear Trustees,

Callan Associates, Inc. is pleased to present the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("Fund") results for fiscal year ended December 31, 2016. As of year-end, the Fund's fair value totaled \$187.9 million, an approximate \$1.5 million decrease from December 31, 2015.

The global economy proved to be resilient in 2016 as political surprises in the U.K. Brexit vote in June, and the U.S. presidential election in November created wild swings in sentiment and confidence about the future moved markets around the globe without regard to the underlying economic data.

Domestic equity markets as measured by the S&P 500 Index overcame a significant downturn early to post an +11.96% return for the year. Non-U.S. developed equity markets were positive with a +1.00% return as measured by the MSCI EAFE Index, despite a strengthening dollar that detracted from returns for U.S. investors. Emerging markets saw a rebound from a difficult 2015 with an +11.19% return for the year. Bond markets as represented by Bloomberg Barclays Aggregate Index generated a return of +2.65% for the year, despite a fourth quarter that produced negative returns due to an increase in rates. Real Estate returns were strong once again in 2016 as the NCREIF Open End Diversified Core Equity Index (ODCE) produced a +7.79% return.

As noted in the Schedule of Investment Results, the Fund generated a total return of 5.67% net-of-fees for the year ended December 31, 2016, which underperformed the 7.65% return of the Fund's target benchmark (the Policy Benchmark). In aggregate, on a net-of-fee basis, the Fund's real estate portfolio exceeded its benchmark, while public equity managers underperformed their respective benchmarks.

Sincerely,



John P. Jackson, CFA
Senior Vice President

Master Custodian's Certification



Asset Servicing

Michael J. Beggy
Vice President

June 12, 2017

To the Board of Trustees and the Executive Director of the Forest Preserve District Employees Annuity and Benefit Fund:

BNY Mellon as custodian of the Forest Preserve District Employees Annuity And Benefit Fund (the "client") has established an "Account" that holds the clients property in safekeeping facilities of the Custodian (or other custodian banks or clearing operations), provided the recordkeeping of certain property of the client and completed the annual accounting certification for the year January 1, 2016 through December 31, 2016.

In addition, in accordance with the terms of the Custody Agreement dated, October 1, 2007, BNY Mellon also provides the following services as Custodian:

- Market settlement of purchases and sales and engage in other transactions, including free receipts and deliveries, exchanges and other voluntary corporate actions, with respect to securities or property received by the Custodian
- Take actions necessary to settle transactions in futures and/or options contracts, short selling programs, foreign exchange or foreign exchange contracts, swaps and other derivative investments with third parties
- Lend the assets of the Account in accordance with a separate Securities Lending Agreement.
- Invest available cash in any collective fund, including a collective investment fund maintained by the Custodian or and affiliate of the Custodian for collective investment of employee benefit trusts or deposit in an interest bearing account of banking department of Custodian.
- Appoint subcustodians, including affiliates of the custodian, as to part or all of the Account.
- Hold property in nominee name, in bearer form or in book entry form, in a clearinghouse corporation or in a depository.
- Take all action necessary to pay for, and settle authorized transactions.
- Collect income payable to and distributions due to the Account.
- Collect all proceeds from securities, certificates of deposit or other investments which may mature or be called.
- Forward to the authorized party as designated by the client, proxies or ballots that are to be a voted by the authorized party.
- Attend to corporate actions that have no discretionary decision requirement
- Report the value of the Account as agreed upon by the client and custodian.
- Credit the account with income and maturity proceeds on securities contractual payment date.

Sincerely,

A handwritten signature in black ink that reads "Michael J. Beggy".

Michael J. Beggy
Relationship Executive

Summary of Investment Policy

Overview

Under the guidance and direction of the Board and governed by the “prudent man rule,” it is the mission of the Forest Preserve District Employees’ Annuity and Benefit Fund (“the Fund”) and the Investment Staff to optimize the total return of the Fund’s investment portfolio through a policy of diversified investments using parameters of prudent risk management as measured on the total portfolio, acting at all times in the exclusive interest of the participants and beneficiaries of the Fund.

To accomplish this mission, the Board and Investment Staff understand and accept their fiduciary obligations to the members of the Fund. These obligations are legal in nature and are outlined in the Illinois Pension Code [40 ILCS 5]. Investments made by the Fund shall satisfy the conditions of the Illinois Pension Code and applicable Illinois law and, in particular, the prudent man rule set forth in the Illinois Pension Code [40 ILCS 5/1-109].

Subject to these fiduciary standards, the Board and Investment Staff shall endeavor at all times to implement the Statement of Investment Policy in a manner consistent with the stated mission of the Fund, while ensuring transparency and compliance with all applicable laws and regulations.

The Policy is set forth by the Board in order to:

- Establish a clear understanding of all involved parties of the investment goals and objectives of the Fund.
- Define and assign the responsibilities of all involved parties.
- Establish the relevant investment horizon for which the Fund assets will be managed.
- Establish risk parameters governing assets of the Fund.
- Establish target asset allocation and re-balancing procedures.
- Establish a methodology and criteria for selecting, retaining and terminating Investment Professionals.
- Offer specific guidance to and define limitations for all Investment Managers regarding the investment of Fund assets.

In summary, the purpose of the Statement of Investment Policy is to formalize the Board’s investment objectives, policies and procedures and to define the duties and responsibilities of the various entities involved in the investment process. The Statement of Investment Policy is intended to serve as a guide, reference tool and communication link between the Board, Investment Staff and Investment Professionals.

INVESTMENT SECTION

Summary of Investment Policy (continued)

Investment Objectives

The primary return objectives of the Fund are to:

- Preserve the safety of principal.
- Exceed, after investment management fees, a customized blended benchmark consistent with prudent levels of risk.
- Create a stream of investment returns to ensure the systematic and adequate funding of actuarially determined benefits through contributions and professional management of Fund assets.

To achieve these objectives, the assets of the Fund have been allocated to meet its actuarial assumed rate of return of 7.5%. To evaluate success, the Board compares the performance of the Fund to the actuarial assumed rate of return and its custom benchmark. This benchmark represents a passive implementation of the historical investment policy targets and it is re-balanced regularly.

While achieving the return objectives, the Fund is able to tolerate certain levels of risk, which are:

- To accept prudent levels of short-term and long-term volatility consistent with the near-term cash flow needs, funding level, and long-term liability structure of the Fund.
- To tolerate appropriate levels of downside risk relative to the Fund's actuarial assumed rate of return of 7.5%. In doing so, the Board will attempt to minimize the probability of underperforming the Fund's actuarial assumed rate of return over the long term and to minimize the shortfall in the event such underperformance occurs.
- To accept certain variances in the asset allocation structure of the Fund relative to the broad financial markets and peer groups.
- To tolerate certain levels of short-term underperformance by the Fund's Investment Managers.

The investment objectives of the Fund are constrained by applicable law, time, taxes and liquidity. The Fund will operate in accordance with applicable law, as amended. The Fund has a long-term time horizon as the assets are used to pay qualified participant pension benefits. The Fund is a tax-exempt entity, but can be subject to taxes involving unrelated business taxable income ("UBTI"). UBTI is income earned by a tax-exempt entity that does not result from tax-exempt activities. The Fund will attempt to minimize or to avoid incurring UBTI. The liquidity needs of the Fund are to meet the regular cash flow requirements of the Fund.

Asset Allocation and Rebalancing Procedures

The Board reviews the target asset allocation of the Fund at least once every three years. It will take into consideration applicable statutes, the actuarial rate of return of the Fund, the long term nature of the asset pool, the cash flow needs of the Fund and the general asset allocation structure of the Fund's peers. It will make assumptions on the capital markets over the long term and optimize the asset allocation to best meet the actuarial and cash flow needs of the Fund at prudent levels of risk.

The Board establishes the asset allocation targets and ranges and reviews them periodically. To ensure that the allocations meet the risk/return objectives of the Fund, the target allocations will be reviewed annually for reasonableness relative to significant economic market changes or changes to the long-term goals and objectives. Proper implementation of this guideline may require that a periodic adjustment or rebalancing be made to ensure conformance with asset allocation targets. Rebalancing requirements shall be reviewed on a continual basis. Rebalancing may also occur in the event of a change in the allocation percentages by asset class by the Board or as a result of extraordinary market events. Rebalancing shall take place as soon as practical after said change or amendment has been approved.

Schedule of Investment Results

For Year Ended December 31, 2016

	Annualized Returns		
	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>
Total Fund	5.7%	4.7%	8.9%
Policy Benchmark *	7.7%	4.7%	7.8%
Domestic Equity	11.8%	8.2%	14.8%
Russell 3000	13.0%	8.1%	14.5%
International Equity	1.2%	0.2%	9.0%
MSCI ACWI ex. U.S.	4.5%	-1.8%	5.0%
Fixed Income	2.4%	3.0%	2.2%
BloomBarc Aggregate	2.7%	3.0%	2.2%
Real Estate	8.7%	9.1%	9.7%
NFI-ODCE Value Weight Net	7.8%	11.0%	11.2%
Hedge Funds	2.5%	4.6%	N/A
Libor-3 Month+4%	4.8%	4.4%	4.4%

*The Policy Benchmark is as follows:

- As of December 31, 2016: 32% Russell 3000 Index, 27% MSCI ACWI ex. U.S., 21% BloomBarc Aggregate Index, 10% Libor-3 Month+4%, 9% NFI-ODCE Value Weight Net and 1% 3-month Treasury Bill.
- As of December 31, 2013: 29% Barclays Aggregate, 23% MSCI ACWI ex. U.S., 21% S&P 500, 9% Russell 2500, 9% Libor-3 Month+4% and 9% NCREIF.
- As of December 31, 2012: 30% Barclays Aggregate, 15% MSCI ACWI ex. U.S., 25% S&P 500, 5% Russell 2000 Value, 7.5% Russell 1000 Value, 7.5% Russell 1000 Growth, 10% BarCap Int. Gov./Cred.

N/A-Not Available. Investments not held during that time period.

Note: Returns are calculated using time and asset-weighted returns.
Returns are calculated net of investment manager fees.

Schedule of Investment Summary and Asset Allocation

For Year Ended December 31,

Asset Class	2016			2015		
	Fair Value	Percent of Total	Target	Fair Value	Percent of Total	Target
Domestic Equity	\$ 61,949,831	33%	30%	\$ 62,033,795	33%	30%
International Equity	47,700,511	25%	23%	45,796,347	24%	23%
Fixed Income	36,118,455	19%	29%	37,520,752	20%	29%
Real Estate	17,112,770	9%	9%	18,118,774	10%	9%
Hedge Funds-of-Funds	20,282,707	11%	9%	19,670,830	10%	9%
Short Term Investments	4,707,634	3%	0%	6,245,539	3%	0%
Total Investments	<u>\$187,871,908</u>	<u>100%</u>	<u>100%</u>	<u>\$189,386,037</u>	<u>100%</u>	<u>100%</u>

Schedule of Top Ten Largest Holdings

For Year Ended December 31, 2016

<u>Top 10 Domestic Equity Holdings</u>	<u>Sector</u>	<u>Shares</u>	<u>Fair Value</u>	<u>% of Total</u>
Apple Inc.	Technology	8,742	\$ 1,012,498	1.6%
Booz Allen Hamilton Holding Corp.	Management Services	23,859	860,594	1.4%
Microsoft Corp.	Technology	12,765	793,217	1.3%
Affiliated Managers Group Inc.	Financial Services	4,772	693,372	1.1%
Hexcel Corp.	Industrial Goods	12,676	652,053	1.1%
Exxon Mobil Corp.	Energy	6,795	613,317	1.0%
Comerica Inc.	Financial Services	8,837	601,888	1.0%
Microsemi Corp.	Technology	10,168	548,767	0.9%
Iberiabank Corp.	Banking	6,388	534,995	0.9%
Johnson & Johnson	Health Care	4,460	513,837	0.8%
Total Top 10 Domestic Equity Holdings		<u>99,462</u>	<u>\$ 6,824,538</u>	<u>11.0%</u>
Total Domestic Equity			<u>\$61,949,831</u>	<u>100.0%</u>

<u>Top 10 International Equity Holdings</u>	<u>Sector</u>	<u>Shares</u>	<u>Fair Value</u>	<u>% of Total</u>
Sampo OYJ (Finland)	Insurance	33,749	\$ 1,516,066	3.2%
Prudential PLC (United Kingdom)	Financial Services	72,533	1,458,653	3.1%
Daiwa House Industry Co. Ltd. (Japan)	Home Builders	52,000	1,424,890	3.0%
Don Quijote Holdings Co. Ltd. (Japan)	Retail	34,200	1,268,187	2.7%
Shire PLC (Ireland)	Biotechnology	21,354	1,235,924	2.6%
British American Tobacco PLC (United Kingdom)	Tobacco	19,619	1,120,354	2.3%
Valeo SA (France)	Automotive	18,141	1,044,920	2.2%
Informa PLC (United Kingdom)	Publishing	122,908	1,032,725	2.2%
Statoil ASA (Norway)	Energy	52,298	962,395	2.0%
Carlsberg A/S (Denmark)	Beverages	10,911	943,359	2.0%
Total Top 10 International Equity Holdings		<u>437,713</u>	<u>\$12,007,473</u>	<u>25.2%</u>
Total International Equity			<u>\$45,796,347</u>	<u>100.0%</u>

INVESTMENT SECTION

Schedule of Top Ten Largest Holdings (continued)

For Year Ended December 31, 2016

<u>Top 10 Fixed Income Holdings</u>	<u>Sector</u>	<u>Par</u>	<u>Fair Value</u>	<u>% of Total</u>
U.S. Treasury Note 2.000% 02/15/2023	U.S. Governments	725,000	\$ 719,026	2.0%
U.S. Treasury Note 2.125% 08/15/2021	U.S. Governments	600,000	605,694	1.7%
U.S. Treasury Note 2.500% 05/15/2024	U.S. Governments	570,000	578,527	1.6%
U.S. Treasury Note 3.125% 05/15/2019	U.S. Governments	400,000	417,048	1.2%
U.S. Treasury Note 2.000% 02/25/2025	U.S. Governments	425,000	413,644	1.1%
FNMA Pool #0AS5385 4.000% 07/01/2045	U.S. Agencies	381,376	401,177	1.1%
U.S. Treasury Note 2.000% 08/15/2025	U.S. Governments	400,000	387,468	1.1%
U.S. Treasury Note 3.500% 05/15/2020	U.S. Governments	350,000	372,026	1.0%
U.S. Treasury Note 3.125% 05/15/2021	U.S. Governments	350,000	368,827	1.0%
American International Group Inc. 6.400% 12/15/2020	Financial Services	300,000	341,574	0.9%
Total Top 10 Fixed Income Holdings		<u>4,501,376</u>	<u>\$ 4,605,011</u>	<u>12.7%</u>
Total Fixed Income			<u>\$36,118,455</u>	<u>100.0%</u>

A complete list of the portfolio holdings is available for review upon request.

Schedule of Investment Manager Fees and Assets Under Management

For Year Ended December 31, 2016

<u>Asset Category</u>	<u>Investment Manager Fees</u>	<u>Assets Under Management</u>
Domestic Equity		
Channing Capital Management	\$ 73,373	\$ 14,966,204
RhumbLine Advisers	4,150	32,890,635
William Blair & Company	98,769	14,092,992
Total Domestic Equity	<u>176,292</u>	<u>61,949,831</u>
International Equity		
Lazard Asset Management, LLC	105,689	47,700,511
Fixed Income		
LM Capital Group, LLC	27,198	17,310,508
Mellon Capital	5,239	18,807,947
Total Fixed Income	<u>32,437</u>	<u>36,118,455</u>
Real Estate		
J.P. Morgan Asset Management	57,104	6,685,531
Prudential Real Estate Investors	40,969	5,942,009
Russell Implementation Services Inc.	-	4,485,230
Total Real Estate	<u>98,073</u>	<u>17,112,770</u>
Hedge Funds of Funds		
Blackstone Alternative Asset Management	196,665	20,282,707
Short-Term Investments		
BNY Mellon	-	4,707,634
Total	<u>\$609,156</u>	<u>\$187,871,908</u>

Schedule of Brokerage Commissions

For Year Ended December 31, 2016

<u>Broker Name</u>	<u>Number of Shares</u>	<u>Commissions</u>	<u>Cost per Share</u>
Domestic Equity Commissions			
Stifel, Nicolaus & Co.	57,928	\$ 1,822	\$ 0.031
National Financial Services Corp.	54,269	1,633	0.030
Williams Capital Group, LP*	68,761	1,600	0.023
Pershing LLC	78,615	1,562	0.020
Merrill Lynch Securities	50,892	1,303	0.026
Loop Capital Markets LLC *	44,999	1,106	0.025
Robert W. Baird & Co., Inc.	26,068	1,015	0.039
Keybanc Capital Markets, Inc.	26,479	936	0.035
Keefe Bruyette and Woods	29,143	911	0.031
Cabrera Capital Markets*	42,527	892	0.021
Cheevers & Co., Inc.*	28,349	850	0.030
RBC Capital Markets LLC	27,501	827	0.030
Brokers with < \$800 of Commissions	<u>273,679</u>	<u>6,533</u>	<u>0.024</u>
Total Domestic Equity Commissions	<u>809,210</u>	<u>\$20,990</u>	<u>\$0.026</u>

**Women/minority-owned brokerage firm. The Retirement Board's brokerage policy encourages investment managers, as they search for best possible trade execution, to utilize women/minority-owned enterprises, specifically firms headquartered in the State of Illinois.*

(continued)

INVESTMENT SECTION

Schedule of Brokerage Commissions (continued)

For Year Ended December 31, 2016

<u>Broker Name</u>	<u>Number of Shares</u>	<u>Commissions</u>	<u>Cost per Share</u>
International Equity Commissions			
BNY Convergenx	322,689	\$ 4,904	\$0.015
Merrill Lynch Securities	454,049	4,112	0.009
Loop Capital Markets LLC*	117,801	2,770	0.024
Cheevers & Co., Inc.*	145,253	2,131	0.015
Citigroup Global Markets, Inc.	142,512	1,427	0.010
Deutsche Bank Securities, Inc.	48,976	1,354	0.028
Goldman Sachs	977,653	1,167	0.001
Morgan Stanley & Co.	51,717	1,051	0.020
Brokers with < \$1,000 of Commissions	<u>464,503</u>	<u>10,253</u>	<u>0.022</u>
Total International Equity Commissions	<u>2,725,153</u>	<u>\$29,169</u>	<u>\$0.011</u>

**Women/minority-owned brokerage firm. The Retirement Board's brokerage policy encourages investment managers, as they search for best possible trade execution, to utilize women/minority-owned enterprises, specifically firms headquartered in the State of Illinois.*

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Actuarial Section

This section includes the actuarial reports and summarizes actuarial liability and unfunded actuarial liability. Schedules of data summarizing information about members and beneficiaries, actuarial assumptions, principal provisions, and a glossary of terms are also included.

Actuarial Certification - Pension Benefits



June 2017

Board of Trustees
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
Chicago, Illinois

Certification of Actuarial Valuation

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") as of December 31, 2016 performed by Conduent HR Consulting, LLC ("Conduent"), formerly Buck Consultants, LLC.

The actuary performs the valuation annually. The last valuation for the Plan was completed for the December 31, 2015 plan year. All Schedules in the report, with the exception of pages 96-97, were prepared by the actuary. The actuarial valuation is based on audited financial and member data provided by the FPEABF staff and summarized in this report. The benefits considered are those delineated in the Plan, the FPEABF was established on July 1, 1931 and is governed by legislation contained in the Illinois Compiled statutes, particularly Chapter 40, as amended and restated effective December 31, 2016. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Certain historical information with respect to costs, liabilities, assets, accounting disclosure information, etc. has been derived from the prior actuary's reports and information provided by the Plan sponsor. That information is presented for comparison purposes and Conduent HR Consulting has not verified the validity of any of those calculations or data. Conduent HR Consulting, LLC is solely responsible for the actuarial data and actuarial results presented in this report, excluding the historical information and data just described. This report fully and fairly discloses the actuarial position of the Plan.

The FPEABF is funded by Employer and Member Contributions. The Forest Preserve levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.30. This funding mechanism is insufficient to meet the needs of the FPEABF. We project that the FPEABF will become insolvent in 2041. We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of payroll (or salary) over a period no longer than 30 years.

The economic and demographic assumptions used in the valuation were adopted by the Board in consultation with Conduent HR Consulting. The Board's established practice is to review the experience of the FPEABF at least once every five years to determine if any changes to the valuation assumptions are warranted.



The assumptions used in the valuation are based on recommendations made and approved by the Board as part of an Experience Study covering plan years from January 1, 2009 through December 31, 2012. This experience study was performed by Conduent in January, 2014 and resulted in changes in the following assumptions:

- Permanent Withdrawal from Active Status
- Retirement
- Salary Increase
- Inflation
- Mortality and future mortality improvement

In selecting economic assumptions, the interest rate of 7.50% is based upon a review of the existing portfolio structure, a review of recent experience, and information from the Board. The salary increase assumption is based on actual experience and future expectations of inflation, merit, and productivity components. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the FPEABF and to reasonable long-term expectations. The mortality improvement assumption was selected in accordance with Actuarial Standard of Practice No. 35. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown on pages 109-113.

The assumptions and methods used to determine the Annual Determined Contributions (ADC) of the FPEABF as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. Based on member data and asset information provided by the Executive Director and the FPEABF staff, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report. Because of the risk of misinterpretation of actuarial results, you should ask us to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statement made without our prior review.

Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

Please note that GASB Statement No. 25 (Financial Reporting for Defined Benefit Pension Plans) is applicable for fiscal years ending prior to 2014 and has been replaced by GASB Statement No. 67 (Financial Reporting for Pension Plans) for fiscal years ending 2014 and later. Similarly, GASB Statement No. 27 (Accounting for Pensions by State and Local Governmental Employers) is applicable for fiscal years ending prior to 2015 and has been replaced by GASB Statement No. 68 (Accounting and Financial Reporting for Pensions) for fiscal years ending 2015 and later. We have prepared required accounting information for GASB Statement Nos. 67 and 68 for the measurement year ending December 31, 2016, based on valuation dates of December 31, 2015 and December 31, 2016.

ACTUARIAL SECTION

Actuarial Certification - Pension Benefits (continued)



The undersigned is an Enrolled Actuary, an Associate of the Society of Actuaries and Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. He is available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "LL", written over a light gray rectangular background.

Larry Langer, EA, ASA, MAAA, FCA
Principal, Wealth Consulting
Conduent

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Actuarial Valuation - Pension Benefits

Overview

The Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") provides pension and ancillary benefit payments to the active, retired and separated employees of the Forest Preserve District. A Retirement Board comprised of retiree, employee, and appointed representatives is responsible for administering the Plan and providing oversight of the investment policy. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of December 31, 2016.

Purpose

An actuarial valuation is performed on the Plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the employer contribution necessary to fund the FPEABF in an actuarially sound manner;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To disclose the accounting measures for the Plan required by GASB No. 67 as of the end of the last fiscal year;
4. To review the current funded status of the Plan;
5. To compare actual and expected experience under the Plan during the last fiscal year;
6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

Because of the risk of misinterpretation of actuarial results, you should ask us to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statement made without our prior review. This actuarial valuation provides a "snapshot" of the funded position of the Plan based on the Plan provisions, membership, assets, and actuarial assumptions as of the valuation date.

Membership

Actives: As of December 31, 2016, there were 572 employees in active service (including 6 on disability) covered under the provisions of the Plan. The significant age, service, salary and accumulated contribution information for these employees is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Number of active employees	572	568
Average age	45.2	44.7
Average years of service	9.1	9.2
Total annual salary	\$34,509,011	\$32,007,657
Average annual salary	\$ 60,330	\$ 56,352
Total accumulated contributions	\$28,775,015	\$27,676,276
Average accumulated contributions	\$ 50,306	\$ 48,726

The number of active members increased by 0.7% from the previous valuation date. The average age of the active members increased by 0.5 years, and the average service decreased by 0.1 years. The total annual salary increased by 7.8%. The average salary increased by 7.1% from the previous valuation.

Disabilities: There were 6 disabled members (included in the active data). There were 5 disabilities in the prior year.

Retirees and Beneficiaries: In addition to the active members, there were 378 retired members and 152 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Number of members receiving payments		
Retirees	378	383
Beneficiaries	152	146
Total	530	529
Average Age	72.0	71.3
Annual benefit amounts		
Retirees	\$13,112,177	\$12,924,371
Beneficiaries	\$ 2,625,741	\$ 2,340,177
Total	\$15,737,918	\$15,264,548
Average annual benefit payments	\$ 29,694	\$ 28,855

The number of retired members and beneficiaries increased by 0.2% from the previous valuation date. The average age of the retired members increased by 0.7 years. The total annual benefit payments for these members increased by 3.1% from the previous valuation date.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Membership (continued)

Inactives: In addition to the active and retired members, there were 1,296 inactive members who did not elect to receive their accumulated contributions when they left covered employment. The age information for these inactive members is summarized below with comparative figures from the last actuarial valuation one year earlier.

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Number of inactive members	1,296	1,149
Average age	42.00	42.60

The number of inactive members increased by 12.8% from the previous valuation. The average age of the inactive members decreased by 0.6 years.

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of Plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with Plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has a Net Position Available for Benefits of \$191.2 million as of December 31, 2016. This includes a decrease of \$1.1 million over the Net Position Available for Benefits of \$192.3 million as of December 31, 2015. During the prior year, the fair value of assets experienced an investment rate of return of 5.7% (net of investment expenses), as reported by the investment consultant.

In order to reduce the volatility investment gains and losses can have on the Plan's actuarially required contribution and funded status, the Board has adopted a five-year smoothing method to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, on a level basis over a five year period. In our opinion, this method complies with Actuarial Standards of Practice No. 44.

As of December 31, 2016, the assets available for benefits on an actuarial value basis were \$198.2 million. This includes an increase of \$4.5 million over the actuarial value of assets of \$193.7 million as of December 31, 2015. During 2016, the actuarial value of assets experienced an actuarial rate of return of 8.6% which is based on a five-year averaging of investment returns.

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown on pages 96-98.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial gain of \$3.9 million during the prior year. This net gain is about 1.4% of the Plan's prior year actuarial accrued liability. The net gain is a combination of two principal factors, demographic experience and investment performance under actuarial smoothing. Below is a more detailed discussion.

The demographic experience tracks actual changes in the Plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases.

The Plan experienced a demographic gain of \$1.9 million during the year ending December 31, 2016. This gain decreased the unfunded actuarial accrued liability by \$1.9 million and increased the funded ratio by 0.4%.

There were 482 active members who were also reported active in the December 31, 2015 actuarial valuation. The total salary for this group increased by 8.1%, which was higher than the 4.4% increase we expected for the group.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the Plan liabilities and normal cost can be found on pages 109-113. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the rate of return on the fair value of assets for the year ending December 31, 2016 was reported to be 5.7%, which was lower than the assumed rate of 7.5%.

The Plan experienced a gain on an actuarial value of assets basis. The rate of return on the actuarial value of Plan assets for the year ending December 31, 2016 was approximately 8.6% compared to the assumption of 7.5%, resulting in an asset gain of \$2.0 million. This gain decreased the unfunded actuarial accrued liability by \$2.0 million and increased the funded ratio by 0.7%. The rate of return on the fair value of assets for the year ending December 31, 2016 was lower than the assumed rate of 7.5%. The actuarial value of the assets recognizes only 20% of the 2016 unexpected change in fair value, delaying the recognition of the remaining 80% over the next four years. Moreover, the actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. The investment gain recognized this year is primarily due to the investment gain in 2013. It should be noted that the Plan's assumed asset return of 7.5% is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown on page 93.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Actuarial Contributions

The current contribution mechanism is not sufficient to fund the FPEABF in an actuarially sound manner. The Forest Preserve levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.30. This funding policy is insufficient to meet the needs of the FPEABF. We project that the FPEABF will become insolvent in 2041. We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the unfunded actuarial accrued liability as a level percent of payroll (or salary) over a period no longer than 30 years. We summarize those costs in the next paragraph.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Entry Age Actuarial Cost Method. It is determined as a level percentage of pay which, if paid from entry age to the assumed retirement age, assuming all the actuarial assumptions are exactly met by experience, would accumulate to a fund sufficient to pay all benefits provided by the Plan. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2017 has been determined to be \$2.6 million, or 7.66% of pay. This represents a decrease in the employer normal cost rate of 0.19% of pay from last year's employer normal cost rate of 7.85%.

The cost method also determines the actuarial accrued liability which represents the value of all accumulated past normal cost payments. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the employer normal cost to determine the annual actuarially required employer contribution for the year.

The unfunded actuarial accrued liability as of December 31, 2016 is \$102.0 million. This represents an increase of \$4.0 million in the unfunded actuarial accrued liability from last year's amount of \$98.0 million. The annual payment required to amortize the unfunded actuarial accrued liability of \$102.0 million as of December 31, 2016 is \$8.0 million, or 23.28% of pay.

The annual actuarially required employer contribution for 2017 is \$10.7 million, or 30.9% of pay. This represents an increase of \$0.5 million in the employer contribution amount of \$10.2 million for 2016, or a decrease of 1.1% of pay from last year's employer contribution rate of 32.0%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown on pages 91-92.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Plan is performed in compliance with Actuarial Standards of Practice No. 4.

Funded Status

The funded status is a measure of the progress that has been made in funding the Plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a Plan that is ahead in funding, and a ratio of less than 100% represents a Plan that is behind in funding on the valuation date.

As of December 31, 2016 the funded ratio of the Plan is 66.0%. This represents a decrease of 0.4% from last year's funded ratio of 66.4% as of December 31, 2015.

Where presented, references to "funded ratio" and "unfunded accrued liability" are typically measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

A history of the unfunded actuarial accrued liability and the funded ratio is shown on page 95.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension Plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan and the Employer under GASB No. 67 can be found on pages 100-103.

Changes in Plan Provisions

There were no changes in benefits or other Plan provisions considered in this actuarial valuation since the last valuation since the last valuation performed as of December 31, 2015.

Changes in Actuarial Assumptions, Methods, or Procedures

There have been no changes in asset valuation method or actuarial assumptions since the last actuarial valuation performed as of December 31, 2015.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of	
	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Summary of Member Data		
Number of Members Included in the Valuation		
Active Members	572	568
Retirees and Beneficiaries	530	529
Inactive Members	1,296	1,149
Total	<u>2,398</u>	<u>2,246</u>
Annual Payroll		
Average (actual)	\$ 60,330	\$ 56,352
Annual Benefit Payments		
Retirees and Beneficiaries (Average) ¹	\$ 29,694	\$ 28,855
Investment Returns		
Fair Value - Rate of Return (net of investment expenses) ²	5.7%	1.5%
Actuarial Value - Rate of Return	8.6%	7.9%
Summary of Assets and Liabilities		
Total Actuarial Accrued Liability	\$300,259,728	\$ 291,739,068
Actuarial Value of Assets	<u>\$198,244,885</u>	<u>\$ 193,729,042</u>
Unfunded Actuarial Accrued Liability	\$102,014,843	\$ 98,010,026
Funded Ratio	66.02%	66.40%
Employer Actuarial Required Contribution		
	<u>December 31, 2018</u>	<u>December 31, 2017</u>
Employer Normal Cost	\$ 2,643,691	\$ 2,511,216
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	<u>\$ 8,035,091</u>	<u>\$ 7,719,656</u>
Employer Actuarial Required Contribution	\$ 10,678,782	\$ 10,230,872

¹ The average annual benefit payments for retirees only is \$34,688 as of December 31, 2016 and \$33,745 as of December 31, 2015.

² Rate of return determined by the investment consultant.

Actuarial Liabilities and Normal Cost

For the Fiscal Year ending December 31, 2016

Actuarial Liabilities	<u>Totals</u>
1. Present Value of Projected Benefits	
Active Members	
Retirement Benefits	\$125,131,223
Withdrawal Benefits	7,909,473
Death Benefits	<u>3,233,977</u>
Total	136,274,673
2. Retired Members and Beneficiaries Receiving Benefits	183,610,860
3. Inactive Members with Deferred Benefits	<u>18,584,197</u>
4. Total Present Value of Projected Benefits (1. + 2. + 3.)	338,469,730
5. Present Value of Future Normal Costs	<u>38,210,002</u>
6. Total Actuarial Accrued Liability (4. – 5.)	<u>\$300,259,728</u>

Normal Cost	<u>Totals</u>	<u>% of Pay</u>
1. Active Members		
a. Retirement Benefits	\$4,153,724	12.04%
b. Withdrawal Benefits	1,089,851	3.16%
c. Duty Disability Benefits	3,188	0.01%
d. Ordinary Disability Benefits	10,445	0.03%
e. Death Benefits	154,293	0.45%
f. Administrative Expenses	<u>165,456</u>	<u>0.48%</u>
2. Total Normal Cost	5,576,957	16.16%
3. Expected Member Contribution	<u>2,933,266</u>	<u>8.50%</u>
4. Employer Normal Cost (2. - 3.)	<u>\$2,643,691</u>	<u>7.66%</u>

ACTUARIAL SECTION**Actuarial Valuation - Pension Benefits (continued)****Actuarial Contributions***

Development of Employer Contribution	Fiscal Year Ending December 31,	
	<u>2016</u>	<u>2015</u>
1. Valuation Payroll	\$ 34,509,011	\$ 32,007,657
2. Total Actuarial Accrued Liability		
a. Active Members		
i. Retirement Benefits	93,442,793	87,622,639
ii. Withdrawal Benefits	2,524,592	2,240,165
iii. Death Benefits	2,097,286	1,993,975
iv. Total	98,064,671	91,856,779
b. Retired Members and Beneficiaries Receiving Benefits	183,610,860	180,566,467
c. Inactive Members with Deferred Benefits	18,584,197	19,315,822
d. Total (2.a.iv. + 2.b. + 2.c.)	300,259,728	291,739,068
3. Actuarial Value of Assets	198,244,885	193,729,042
4. Unfunded Actuarial Accrued Liability (UAAL) (2.d. - 3.)	102,014,843	98,010,026
5. Funded Ratio (3. / 2.d.)	66.02%	66.40%
6. UAAL as a Percent of Annual Payroll (4. / 1.)	295.62%	306.21%
	Fiscal Year Ending December 31,	
	<u>2018</u>	<u>2017</u>
7. Amortization Payment for UAAL		
a. Amount	8,035,091	7,719,656
b. As a % of pay	23.28%	24.12%
8. Employer Normal Cost		
a. Amount	2,643,691	2,511,216
b. As a % of pay	7.66%	7.85%
9. Employer Actuarial Required Contribution		
a. Amount	10,678,782	10,230,872
b. As a % of pay	30.94%	31.97%
10. Funding Period (years)	30	30

* *The contribution rates above are amounts needed to fund the FPEABF in an actuarially responsible manner.*

Actuarial (Gain)/Loss

Development of Actuarial (Gain) / Loss	Amount
1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at December 31, 2015	\$ 291,739,068
b. Normal Cost at December 31, 2015	5,231,867
c. Interest on a. + b. to End of Year	22,272,820
d. Benefit Payments and Refunds, with Interest to End of Year	17,068,357
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	<u>302,175,398</u>
f. Change in Actuarial Accrued Liability at December 31, 2016, due to Change in Actuarial Assumptions	0
g. Change in Actuarial Accrued Liability at December 31, 2016, due to Change in Actuarial Methods	<u>0</u>
h. Expected Actuarial Accrued Liability at December 31, 2016 (e. + f. + g.)	302,175,398
2. Actuarial Accrued Liability at December 31, 2016	<u>300,259,728</u>
3. Liability (Gain) / Loss (2. - 1.h.)	(1,915,670)
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at December 31, 2015	193,729,042
b. Interest on a. to End of Year	14,529,678
c. Contributions Made for December 31, 2016	5,021,998
d. Interest on c. to End of Year	184,920
e. Benefit Payments and Administrative Expenses with Interest to End of Year	17,231,736
f. Change in Actuarial Value of Assets at December 31, 2016 due to Change in Method	<u>0</u>
g. Expected Actuarial Value of Assets at December 31, 2016 (a. + b. + c. + d. - e. - f.)	196,233,902
5. Actuarial Value of Assets as of December 31, 2016	<u>198,244,885</u>
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	<u>(2,010,983)</u>
7. Actuarial (Gain) / Loss (3. + 6.)	\$ (3,926,653)

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Analysis of Experience

Resulting From Differences Between Assumed Experience and Actual Experience

Type of (Gain) or Loss	Year End <u>December 31, 2016</u>	As % of <u>Last Year's AAL</u>
1. COLA Experience	\$ 0	0.00%
2. Salary Experience	2,722,397	0.93%
3. Investment Experience	(2,010,983)	-0.69%
4. Retiree Mortality Experience	(3,471,860)	-1.19%
5. Contribution Shortfall	<u>8,005,752</u>	<u>2.74%</u>
6. (Gain) or Loss During Year From Experience, (1. + 2. + 3. + 4. + 5.)	5,245,306	1.80%
7. Asset Valuation Method	0	0.00%
8. Past Service Amortization Change	0	0.00%
9. Assumption and Method Changes	0	0.00%
10. Coding Changes	0	0.00%
11. Other (turnover, retirement ages, service purchase, etc.)	<u>(9,171,959)</u>	<u>-3.14%</u>
12. Total (Gain) or Loss During Year, (6. + 7. + 8. + 9. + 10. + 11.)	\$ <u>(3,926,653)</u>	<u>-1.35%</u>

Actuarial Balance Sheet

Financial Resources	<u>December 31, 2016</u>
1. Actuarial Value of Assets	\$ 198,244,885
2. Present Value of Future Contributions	
a. Expected Member Contributions	20,096,999
b. Employer Normal Cost	<u>18,113,003</u>
c. Total	<u>38,210,002</u>
3. Unfunded Actuarial Accrued Liability/(Reserve)	<u>102,014,843</u>
4. Total Assets (1. + 2.c. + 3.)	<u>338,469,730</u>
Benefit Obligations	
1. Present Value of Future Benefits	
a. Active Members	136,274,673
b. Retirees and Beneficiaries	183,610,860
c. Inactive Members	<u>18,584,197</u>
d. Total	<u>\$ 338,469,730</u>

History of UAAL and Funded Ratio

Valuation Date	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
December 31,				
2007	\$205,392,258	\$203,043,217	98.86%	\$ 2,349,041
2008	212,373,326	196,277,679	92.42%	16,095,647
2009	244,625,664	188,396,534	77.01%	56,229,130
2010	252,877,596	184,077,516	72.79%	68,800,080
2011	261,509,175	178,126,063	68.11%	83,383,112
2012	273,136,730	172,566,956	63.18%	100,569,774
2013	277,560,212	182,554,587	65.77%	95,005,625
2014	285,960,963	189,917,999	66.41%	96,042,964
2015	291,739,068	193,729,042	66.40%	98,010,026
2016	300,259,728	198,244,885	66.02%	102,014,843

Reconciliation of Change in Unfunded Actuarial Liability

Development of Unfunded Actuarial Liability	Amount
1. Unfunded Actuarial Accrued Liability as of December 31, 2015	\$98,010,026
2. Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period January 1, 2016 to December 31, 2016	10,050,309
3. Actual Employer Contribution for the Year, Plus Interest	<u>2,044,557</u>
4. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (2. - 3.)	8,005,752
5. Increase/(Decrease) in Unfunded Liability Due to Investment Return Lower/(Higher) Than Assumed	(2,010,983)
6. Increase/(Decrease) in Unfunded Liability Due to Salary Increases Higher/(Lower) Than Assumed	2,722,397
7. Increase/(Decrease) in Unfunded Liability Due to Other Sources	<u>(4,712,349)</u>
8. Net Increase/(Decrease) in Unfunded Liability for the Year (4. + 5. + 6. + 7.)	<u>4,004,817</u>
9. Unfunded Actuarial Liability as of December 31, 2016 (1. + 8.)	\$102,014,843

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Summary of Fair Value of Assets

Asset Category	Fair Value as of December 31,			
	<u>2016</u>		<u>2015</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
1. Short-Term Investments	\$ 4,707,634	2.32%	\$ 6,245,539	3.02%
2. Investments at Fair Value				
a. U.S. and International Equities	97,193,590	47.84%	98,025,342	47.38%
b. U.S. Government and Government Agency Obligations	11,442,228	5.63%	11,425,544	5.52%
c. Corporate Bonds	5,868,280	2.89%	5,537,245	2.68%
d. Collective International Equity Fund	12,456,752	6.13%	9,804,800	4.74%
e. Commingled Fixed Income Fund	18,807,947	9.26%	20,557,963	9.94%
f. Exchange Traded Funds	4,485,230	2.21%	6,398,130	3.09%
g. Private Equities	0	0.00%	0	0.00%
h. Hedge Funds	20,282,707	9.98%	19,670,830	9.51%
i. Real Estate	12,627,540	6.21%	11,720,644	5.67%
j. Total	<u>183,164,274</u>	<u>90.15%</u>	<u>183,140,498</u>	<u>88.52%</u>
3. Collateral Held for Securities Lending	<u>15,307,189</u>	<u>7.53%</u>	<u>17,503,324</u>	<u>8.46%</u>
4. Total Assets (1. + 2.i + 3.)	203,179,097	100.00%	206,889,361	100.00%
5. Receivables				
a. Interest and Dividends	280,241		246,588	
b. Investments Sold	577,903		400,073	
c. Other Receivables	<u>3,229,217</u>		<u>3,112,396</u>	
d. Total	4,087,361		3,759,057	
6. Payables				
a. Investments Purchased	212,347		297,880	
b. Securities Lending Collateral	15,307,189		17,503,324	
c. Other Payables	<u>544,524</u>		<u>524,844</u>	
d. Total	16,064,060		18,326,048	
7. Net Assets for Pension Benefits (4. + 5.d. – 6.d.)	\$191,202,398		\$192,322,370	

Changes in Fair Value of Assets

Transactions	<u>December 31, 2016</u>	<u>December 31, 2015</u>
<i>Additions</i>		
1. Contributions		
a. Contributions from Employers	\$ 1,971,946	\$ 1,763,345
b. Contributions from Plan Members	<u>3,184,051</u>	<u>2,771,533</u>
c. Total	5,155,997	4,534,878
2. Net Investment Income		
a. Interest and Dividends	2,955,679	3,112,791
b. Net Appreciation (Depreciation)	8,074,762	(75,184)
c. Net Securities Lending Income	<u>69,712</u>	<u>95,624</u>
d. Total	11,100,153	3,133,231
e. Less Investment Expense	<u>622,361</u>	<u>583,256</u>
f. Net Investment Income	10,477,792	2,549,975
g. Miscellaneous	0	11,442
h. Employee Transfers	<u>0</u>	<u>0</u>
3. Total Additions	15,633,789	7,096,295
<i>Deductions</i>		
4. Benefits and Expenses		
a. Retirement Benefits	15,721,599	15,284,868
b. Refund of Contributions	740,586	635,908
c. Administrative Expenses	157,577	143,953
d. Employee Transfers	<u>133,999</u>	<u>18,370</u>
5. Total Deductions	<u>16,753,761</u>	<u>16,083,099</u>
6. Net Increase (Decrease)	(1,119,972)	(8,986,804)
7. Net Position Held in Trust for Pension Benefits		
a. Beginning of Year	<u>192,322,370</u>	<u>201,309,174</u>
b. End of Year	\$ 191,202,398	\$ 192,322,370

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Actuarial Value of Assets

Development of Actuarial Value of Assets	<u>Amount</u>		
1. Actuarial Value of Assets as of December 31, 2015	\$ 193,729,042		
2. Unrecognized Return as of December 31, 2015	<u>(1,406,672)</u>		
3. Fair Value of Assets as of December 31, 2015 (1. + 2.)	192,322,370		
4. Contributions			
a. Member (includes purchased service)	3,184,051		
b. Employer	1,971,946		
c. Miscellaneous contributions	<u>(133,999)</u>		
d. Total	5,021,998		
5. Distributions			
a. Benefit payments	15,721,599		
b. Refund of contributions	740,586		
c. Administrative expenses	<u>157,577</u>		
d. Total	16,619,762		
6. Expected Return at 7.50% on			
a. Item 1.	14,529,678		
b. Item 2.	(105,500)		
c. Item 4.d.	184,920		
d. Item 5.d.	<u>611,974</u>		
e. Total (a. + b. + c. - d.)	13,997,124		
7. Actual Return on Fair Value for Fiscal Year, Net of Investment Expenses	<u>10,477,792</u>		
8. Return to be Spread for Fiscal Year (7. - 6.e.)*	(3,519,332)		
9. Total Fair Value of Assets as of December 31, 2016	191,202,398		
10. Return to be Spread			
<u>Fiscal Year</u>	<u>Return to</u>	<u>Unrecognized</u>	<u>Unrecognized</u>
2016	(3,519,332)	80%	(2,815,466)
2015	(12,123,404)	60%	(7,274,042)
2014	(1,014,662)	40%	(405,865)
2013	17,264,428	20%	3,452,886
2012	9,975,383	0%	<u>0</u>
		Total	<u>(7,042,487)</u>
11. Actuarial Value of Assets (9. - 10.)			\$ 198,244,885
12. Recognized Rate of Return for the Year on Actuarial Value of Assets			8.57%
13. Rate of Return for the Year on Fair Value of Assets (reported by investment consultant - net of inv. exp.)			5.70%

* Annual Return to be Spread calculation based on assumed 7.50% investment return which includes an assumption that all expenses and revenues are on average paid at mid-year

Schedule of Funding Progress

The liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued		Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/(c)
		Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)			
December 31, 2007	\$203,043,217	\$205,392,258	\$ 2,349,041	98.86%	\$21,078,316	11.14%
December 31, 2008	196,277,679	212,373,326	16,095,647	92.42%	23,474,621	68.57%
December 31, 2009	188,396,534	244,625,664	56,229,130	77.01%	24,967,115	225.21%
December 31, 2010	184,077,516	252,877,596	68,800,080	72.79%	24,397,376	282.00%
December 31, 2011	178,126,063	261,509,175	83,383,112	68.11%	22,678,566	367.67%
December 31, 2012	172,566,956	273,136,730	100,569,774	63.18%	26,252,071	383.09%
December 31, 2013	182,554,587	277,560,212	95,005,625	65.77%	29,485,857	322.21%
December 31, 2014	189,917,999	285,960,963	96,042,964	66.41%	29,811,912	322.16%
December 31, 2015	193,729,042	291,739,068	98,010,026	66.40%	32,007,657	306.21%
December 31, 2016	198,244,885	300,259,728	102,014,843	66.02%	34,509,011	295.62%

Schedule of Employer Contributions

The required contributions and actual percentages contributed over the last ten years are as follows:

Fiscal Year Ended December 31,	Employer Annual		Percentage Contributed
	Required Contribution (ARC)	Employer Contribution	
2007	\$ 2,809,494	\$1,995,300	71.02%
2008	3,329,502	523,928	15.74%
2009	4,498,036	1,282,642	28.52%
2010	7,626,778	1,333,140	17.48%
2011	8,590,721	2,457,405	28.61%
2012	9,608,247	2,117,976	22.04%
2013	10,921,946	1,403,628	12.85%
2014	10,040,561	1,520,316	15.14%
2015	10,166,661	1,763,345	17.34%
2016	10,230,872	1,971,946	19.27%

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Schedule of Expected Changes in Net Pension Liability

The GASB Statement No. 67 Change in Net Pension Liability

Total Pension Liability	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Service Cost	\$ 11,224,976	\$ 9,656,955
Interest	19,482,189	19,471,425
Changes of Benefit Terms	-	-
Difference between Expected and Actual Experience	(6,776,942)	(270,033)
Change of Assumptions	(26,186,535)	28,495,220
Benefit Payments, including Refund of Member Contributions	<u>(16,462,185)</u>	<u>(15,920,776)</u>
Net Change in Total Pension Liability	(18,718,497)	41,432,790
Total Pension Liability - Beginning of Year	457,577,963	416,145,173
Total Expected Pension Liability - End of Year	\$438,859,466	\$457,577,963

Plan Fiduciary Net Position

Employer Contributions	\$ 1,971,946	\$ 1,763,345
Member Contributions	3,184,051	2,771,533
Net Investment Income	10,477,792	2,549,975
Benefit Payments, including Refund of Member Contributions	(16,462,185)	(15,920,776)
Administrative Expenses	(157,577)	(143,953)
Other	<u>(133,999)</u>	<u>(6,928)</u>
Net Change in Plan Fiduciary Net Position	(1,119,972)	(8,986,804)
Plan Fiduciary Net Position - Beginning of Year	192,322,370	201,309,174
Expected Plan Fiduciary Net Position - End of Year	\$191,202,398	\$192,322,370

Net Pension Liability (Asset)

The GASB Statement No. 67 Net Pension Liability

Net Pension Liability (Asset)

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Total Pension Liability	\$438,859,466	\$457,577,963
Plan Fiduciary Net Position	191,202,398	192,322,370
Net Pension Liability (Asset)	<u>\$247,657,068</u>	<u>\$265,255,593</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	43.57%	42.03%

Sensitivity

The GASB Statement No. 67 Sensitivity of Net Pension Liability

Sensitivity of the Expected Net Pension Liability to Changes in the Discount Rate

	<u>1% Decrease</u>	<u>Current</u>	<u>1% Increase</u>
Discount Rate	3.62%	4.62%	5.62%
Net Pension Liability (Asset)	\$319,995,043	\$247,657,068	\$190,280,122

The discount rate used to measure the total pension liability was 4.62%. The discount rate used to measure the total pension liability at December 31, 2015 was 4.23%. The projection of cash flows used to determine the discount rate assumed that FPEABF contributions will continue to follow the current funding policy, which levies a tax annually equal to the total amount of contributions made by the members in the calendar year 2 years prior to the year of the levy, multiplied by 1.30. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. A municipal bond rate of 3.71% was used in the development of the blended GASB discount rate after that point. The 3.71% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 30, 2016. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.71%, the blended GASB discount rate would be 4.62%. Please see the supporting exhibits for additional detail.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Pension Expense

The GASB Statement No. 68 Pension Expense

Measurement Year Ending	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Service Cost	\$11,224,976	\$ 9,656,955
Interest	19,482,189	19,471,425
Difference between Expected and Actual Experience	(2,740,822)	(115,894)
Change of Assumptions	2,086,818	12,229,708
Member Contributions	(3,184,051)	(2,771,533)
Projected Earnings on Plan Investments	(13,997,124)	(14,673,380)
Difference between Expected and Actual Earnings	3,128,548	2,424,681
Administrative Expense	157,577	143,953
Other	133,999	6,928
Changes of Benefit Terms	-	-
Total Pension Expense	<u>\$16,292,110</u>	<u>\$26,372,843</u>

Actuarial Assumptions and Methods:

Valuation date:	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Actuarial cost method:	Entry Age	Entry Age
Asset valuation method:	Market	Market
Total Pension Liability Discount Rate	4.62%	4.23%
Actuarial assumptions:		
- Investment Rate of Return	7.50%	7.50%
- Municipal Bond Rate	3.71%	3.20%
- Projected Salary Increases	8.00% - 3.75%	8.00% - 3.75%
- Inflation Assumption	3.25%	3.25%

The projection of cash flows used to determine the discount rate assumed that FPEABF contributions will continue to follow the current funding policy based on the tax levy. Based on this assumption, the Plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. A municipal bond rate of 3.71% was used in the development of the blended GASB discount rate after that point. The 3.71% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 30, 2016. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.71%, the blended GASB discount rate would be 4.62%. See the preceding exhibits for more detail.

Investment Rate of Return Detail

The long-term expected rate of return on the Fund's investments was determined based on the results of an experience review performed by Buck Consultants. The results of the experience review were presented to the Board by Buck Consultants at the Board's January 9, 2014 Meeting and adopted at the same meeting. The rate of return assumption was based on the target asset allocation of the fund. In the experience review, Buck Consultants developed best estimate ranges of expected future real rates of return (net of inflation) for the portfolio, based on the expected returns of each major asset class and their weights in the portfolio. Buck used an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between the economic variables and the asset classes. Expected Investment expenses were subtracted and expected inflation was added to arrive at the long term expected nominal return. A value for the expected long term expected return was selected for the portfolio such that there was a better than 50% likelihood of the emerging returns exceeding the expected return.

Best estimates of arithmetic real rates of return (net of inflation) for each major asset class included in the Fund's target asset allocation as of December 31, 2013 are listed in the table below:

	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	30.00%	9.05%
International Equity	23.00%	7.61%
Fixed Income	29.00%	1.79%
Real Estate	9.00%	6.91%
Hedge Funds	9.00%	4.68%
	<u>100.00%</u>	

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Brief Summary of Benefit Provisions

Participant. A person employed by the Forest Preserve District whose salary or wages is paid in whole or in part by the Forest Preserve District. An employee in service on or after January 1, 1984 shall be deemed as a participant regardless of when he or she became an employee.

Service. For all purposes except the minimum retirement annuity and ordinary disability benefit, service during four months in any calendar year constitutes one year of service. For the minimum retirement annuity, all service is computed in whole calendar months. Service for any 15 days in a calendar month shall constitute a month of service.

For purposes of the minimum retirement annuity, service shall include:

- a. Any time during which the employee performed the duties of his or her position and contributed to the Fund.
- b. Vacations and leaves of absence with whole or part pay.
- c. Periods during which the employee receives a disability benefit from the Fund, and
- d. Certain periods of accumulated sick leave.

Retirement Annuity - Eligibility. An employee who withdraws from service with 10 or more years of service is entitled to a retirement annuity upon attainment of age 50.

Retirement Annuity - Amount

Money Purchase Annuity. The amount of annuity based on the sum accumulated from the employee's salary deductions for age and service annuity plus 1/10 of the sum accumulated from the contributions by the Forest Preserve District for age and service annuity for each completed year of service after the first 10.

Minimum Formula Annuity. The amount of annuity provided is equal to 2.4% of final average salary for each year of service. Final average salary is the highest average monthly salary for any 48 consecutive months within the last 10 years of service. Salary for pension purposes is actual salary earned exclusive of overtime or extra salary. The maximum amount of annuity is 80% of final average salary.

If an employee retires before age 60, the annuity is reduced by .5% for each full month or fraction thereof that the employee is under age 60 when the annuity begins, unless the employee has 30 or more years of service, in which case there is no reduction for retirement before age 60.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the employee is entitled to receive the Minimum Formula Annuity.

Automatic Increase in Retirement Annuity. Employees who retire from service having attained age 60 or more, or, if retirement occurs on or after January 1, 1991, with at least 30 years of service, 3% of the annuity beginning January of the year following the year in which the first anniversary of retirement occurs. If retirement is before age 60 with less than 30 years of service, increases begin in January of the year immediately following the year in which age 60 is attained. Beginning January 1, 1998, increases are calculated as 3% of the monthly annuity payable at the time of the increase.

Brief Summary of Benefit Provisions (continued)

Optional Plan of Contributions and Benefits. During the period through June 30, 2005, an employee may establish optional credit for additional benefits by making additional contributions of 3% of salary. The additional benefit is equal to 1% of final average salary for each year of service for which optional contributions have been paid. The additional benefit shall be included in the calculation of the automatic annual increase and the calculation of the survivor's annuity.

Surviving Spouse's Annuity- Death in Service

Money Purchase Annuity - Death in Service. The amount of annuity based on the accumulated salary deductions and Forest Preserve District contributions for both the employee and the spouse.

Minimum Formula Annuity. A minimum annuity is provided for the eligible surviving spouse of an employee who dies in service with any number of years of service. The amount of such minimum spouse's annuity is equal to 65% of the annuity the employee would have been entitled to as of the date of death, provided the spouse on such date is age 55 or older, or that the employee had 30 or more years of service. If the spouse is under age 55 and the employee had less than 30 years of service, the amount of the spouse's annuity shall be discounted by .5% for each month that the spouse is less than age 55 on the date of the employee's death. The amount of the surviving spouse's annuity shall not be less than 10% of the employee's final average salary as of the date of death.

If the Minimum Formula Annuity is greater than the Money Purchase Annuity, the surviving spouse shall be entitled to receive the Minimum Formula Annuity.

Surviving Spouse's Annuity - Death after Retirement. The amount of the annuity is the greater of the money purchase annuity or the minimum formula annuity. The surviving spouse of an annuitant who dies on or after July 1, 2002 shall be entitled to an annuity of 65% of the employee's annuity at the time of death if the employee had at least 10 years of service, reduced by .5% per month that the spouse is under age 55 at the time of the employee's death. There is no reduction for age if the employee had at least 30 years of service.

Automatic Annual Increase in Surviving Spouse's Annuity. On the January 1 occurring on or immediately after the first anniversary of the deceased employee's death, the surviving spouse's annuity shall be increased by 3% of the amount of annuity payable at the time of the increase. On each January 1, thereafter, the annuity shall be increased by an additional 3% of the amount of annuity payable at the time of the increase.

Child's Annuity. Annuities are provided for unmarried children of a deceased employee who are under age 18. An adopted child is entitled to the child's annuity if such child was legally adopted at least one year before the child's annuity becomes payable. The child's annuity is payable under the following conditions:

(a) the death of the employee was a duty related death; or (b) if the death is not a duty related death, the employee died while in service and had completed at least four years of service from the date of his or her original entrance in service and at least two years from the latest re-entrance; or (c) if the employee died while in receipt of an annuity, her or she must have withdrawn from service after attainment of age 50

The amount of the annuity is the greater of 10% of the employee's final salary at the date of death or \$140 per month for each child.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Brief Summary of Benefit Provisions (continued)

Duty Disability Benefits. Duty disability benefits are payable to an employee who becomes disabled as a result of an accidental injury incurred while in the performance of an act of duty. Benefits begin on the first regular and normal work date for which the employee does not receive a salary. The amount of the duty disability benefit is equal to 75% of the employee's salary at the date of injury, reduced by the amount the employee receives from Workers' Compensation. However, if the disability, in any measure has resulted from any physical defect or disease that existed at the time such injury was sustained, the duty disability benefit shall be 50% of salary. The Fund contributes the 8.5% of salary normally contributed by the employee for pension purposes.

If the disability commences prior to age 60, duty disability benefits are payable during disability until the employee attains age 65. If the disability begins after age 60, the benefit is payable during disability for a period of 5 years.

Recipients of duty disability benefits also have a right to receive child's disability benefits of \$10 per month on account of each unmarried child less than age 18. Total children's disability benefits shall not exceed 15% of the employee's salary.

Ordinary Disability Benefits. Ordinary disability benefits are provided for employees who become disabled as the result of any cause other than injury incurred in the performance of an act of duty. The amount of the benefit is 50% of the employee's annual salary at the time of disability. The Fund contributes the 8.5% of salary normally contributed by the employee for pension purposes.

Ordinary disability benefits are payable after the first 30 days of disability provided the employee is not then in receipt of salary. Ordinary disability benefits are payable until the first of the following shall occur:

- (a) the disability ceases; or
- (b) the date that total payments equal the lesser of (1) 1/4 of the total service rendered prior to disability, and (2) five years.

An employee unable to return to work at the expiration of ordinary disability benefit is entitled to an annuity beginning on the date of the employee's withdrawal from service regardless of age on such date.

Death Benefit. Upon the death of an active or retired employee, a death benefit of \$1,000 is payable to the employee's designated beneficiary or to the employee's estate if no beneficiary has been designated.

Group Health Benefits. The Fund may pay all or any portion of the premium for health insurance on behalf of each annuitant who participates in any of the Fund's health care Plans. As of January 1, 2006, the Fund is paying 55% of the premiums for retiree annuitants and 70% of the premiums for survivor annuitants.

Refund to Employee Upon Withdrawal From Service. Upon withdrawal from service, an employee under the age of 55, or anyone with less than 10 years of service is eligible for a refund. The employee is entitled to a refund of the amount accumulated to his or her credit for age and service annuity and the survivor's annuity together with the total amount contributed for the automatic annual increase, without interest. Upon receipt of such refund, the employee forfeits all rights to benefits from the Fund.

Brief Summary of Benefit Provisions (continued)

Election of Refund in Lieu of Annuity. If an employee's annuity or spouse's annuity is less than \$150.00 per month, such employee or spouse annuitant may elect a refund of the employee's accumulated contributions in lieu of a monthly annuity.

Refund For Surviving Spouse's Annuity. If employee is unmarried at the time of retirement, all contributions for surviving spouse's annuity will be refunded with interest at the rate of 3% per year, compounded annually.

Refund of Remaining Amounts. In the event that the total amount accumulated to the account of employee from employee contributions for annuity purposes has not been paid to the employee and surviving spouse as a retirement or surviving spouse's annuity before the death of the survivor of the employee and spouse, a refund of any excess amount shall be paid to the children of the employee, in equal parts, or if there are no children, to the beneficiaries of the employee or the administrator of the estate.

Employee Contributions. Employees contribute through salary deductions 8.5% of salary to the Fund, 6.5% being for the retirement annuity, 1.5% being for the surviving spouse's annuity, and .5% being for the automatic increase in retirement annuity.

Employer Contributions. The Forest Preserve District levies a tax annually equal to the total amount of contributions made by employees in the calendar year 2 years prior to the year of the levy, multiplied by 1.30.

Employer Pick-up of Employee Contributions. Since April 15, 1982, regular employee contributions have been designated for federal income tax purposes as being made by the employer. The employee's W-2 salary is therefore reduced by the amount of contribution. For pension purposes, the salary remains unchanged. For purposes of benefits, refunds, and financing, these contributions are treated as employee contributions.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Brief Summary of Benefit Provisions (continued)

Persons Who First Become Participants On or After January 1, 2011

The following changes to the aforementioned provisions apply to persons who first become participants on or after January 1, 2011:

1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.
2. For 2011, the annual salary is limited to the Social Security wage base of \$106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half of percentage change in the Consumer Price Index-U for the 12 months ending in September.
3. A participant is eligible to retire with unreduced benefits at age 67 with at least 10 years of service credit. However, a participant may elect to retire at age 62 with at least 10 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 67.
4. The initial survivor's annuity is equal to 66-2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U for the 12 months ending in September, based on the originally granted survivor's annuity.
5. Automatic annual increases in the retirement annuity then being paid are equal to the lesser of 3% or one-half the annual change in the Consumer Price Index-U, whichever is less, based on the originally granted retirement annuity.
6. Refund upon withdrawal from service. Upon withdrawal from service, an employee who withdraws from service before age 62 regardless of length of service or withdraws with less than 10 years of service regardless of age is entitled to a refund of total contributions made by the employee without interest.

Description of Actuarial Methods and Valuation Procedures

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a “funding method,” this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension Plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the Plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The Normal Cost for the Plan is determined by summing individual results for each active Member and determining an average normal cost rate by dividing the summed individual normal costs by the total payroll of Members before assumed retirement age.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.)

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level percent of payroll over an open 30-year period.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Description of Actuarial Methods and Valuation Procedures (continued)

Asset Valuation Method

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Fair Value of assets at the valuation date is reduced by the sum of the following:

- (i) 80% of the return to be spread during the first year preceding the valuation date,
- (ii) 60% of the return to be spread during the second year preceding the valuation date,
- (iii) 40% of the return to be spread during the third year preceding the valuation date, and
- (iv) 20% of the return to be spread during the fourth year preceding the valuation date.

The return to be spread is the difference between (1) the actual investment return on Fair Value and (2) the expected return on Fair Value.

Valuation Procedures

No actuarial liability is included for members who terminated non-vested prior to the valuation date, except those due a refund of contributions.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental Plans.

Annual increases in salary were limited to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected members.

Summary of Actuarial Assumptions and Changes in Assumptions

The actuarial assumptions used for the December 31, 2016 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate, and salary assumptions are based on an experience analysis of the Fund over the period 2009 through 2012. These assumptions were adopted by the Board as of December 31, 2013, based on the recommendation from the actuary.

Mortality Rates. RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB.

Termination Rates. Termination rates based on the recent experience of the Fund were used. The following is a sample of the termination rates used:

Rates of Termination Age at Entrance

Attained Age	Males				Females			
	22	27	32	37	22	27	32	37
22	.225				.200			
27	.128	.145			.115	.183		
32	.030	.116	.165		.030	.117	.165	
37	.030	.030	.105	.141	.030	.030	.093	.114
42	.030	.030	.030	.085	.030	.030	.030	.060
47	.030	.030	.030	.030	.030	.030	.030	.030

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Summary of Actuarial Assumptions and Changes in Assumptions (continued)

Retirement Rates. For persons who became participants prior to January 1, 2011, rates of retirement for each age from 50 to 75 based on the recent experience of the Fund. The following are samples of the rates of retirement used:

Less Than 30 Years of Service at Retirement

<u>Age</u>	<u>Rates of Retirement</u>	
	<u>Males</u>	<u>Females</u>
50-54	.040	.040
55-58	.080	.060
59	.150	.100
60	.150	.150
61-64	.125	.145
65-69	.225	.200
70	.250	.200
71	.300	.240
72	.350	.280
73	.400	.320
74	.450	.360
75	1.000	1.000

30 or More Years of Service at Retirement

<u>Age</u>	<u>Rates of Retirement</u>	
	<u>Males</u>	<u>Females</u>
50-54	.350	.300
55-59	.275	.200
60	.225	.400
61-64	.225	.250
65-69	.270	.200
70	.450	.200
71	.540	.240
72	.630	.280
73	.720	.320
74	.810	.360
75	1.000	1.000

Summary of Actuarial Assumptions and Changes in Assumptions (continued)

Retirement Rates. For persons who became or will become participants on or after January 1, 2011, rates of retirement for each age from 62 to 75 were used. The following are samples of the rates of retirement that were used:

<u>Age</u>	<u>Rates of Retirement</u>	
	<u>Males</u>	<u>Females</u>
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Interest Rate. 7.5% per year, compounded annually.

Inflation Rate. 3.25% per year, compounded annually.

Salary Rate (net of inflation):

<u>Age</u>	<u>Rate:</u>
25	.0375
30	.0275
35	.0175
40	.0075
45+	.0050

Loading for Reciprocal Benefits. Costs and liabilities of active employees were loaded by 1% for reciprocal annuities where the Forest Preserve District is the last employer. It was assumed that 50% of inactive members with one or more year of service would receive a reciprocal annuity where the Forest Preserve District is not the last employer. These reciprocal annuities were valued as of the member's retirement date as 10 times an inactive member's accumulated contributions.

Marital Status. 85% of participants were assumed to be married.

Spouse's Age. The spouse of a male employee was assumed to be four years younger than the employee. The spouse of a female employee was assumed to be four years older than the age of the employee.

Inactives. Benefits were estimated based on service and pay and valued as deferred to 55 annuities.

ACTUARIAL SECTION

Actuarial Valuation - Pension Benefits (continued)

Glossary of Terms

<i>Actuarial Accrued Liability</i>	Total accumulated cost to fund pension benefits arising from service in all prior years.
<i>Actuarial Cost Method</i>	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension plan for a group of Plan members to the years of service that give rise to that cost.
<i>Actuarial Present Value of Future Benefits</i>	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
<i>Actuarial Valuation</i>	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
<i>Actuary</i>	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
<i>Annual Required Contribution</i>	Disclosure measure of annual pension cost.
<i>GASB 67</i>	Governmental Accounting Standards Board Statement Number 67.
<i>Maturity Ratio</i>	The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
<i>Normal Cost</i>	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
<i>Vested Benefits</i>	Benefits which are unconditionally guaranteed regardless of employment status.

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Actuarial Certification - Postemployment Healthcare



June 7, 2017

Board of Trustees

Forest Preserve District Employees' Annuity and Benefit Fund of Cook County
Chicago, Illinois

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") as of December 31, 2016 performed by Conduent HR Services ("Conduent").

The purpose of this valuation is to determine the Annual Required Contribution ("ARC") for the Plan year January 1, 2017 through December 31, 2017, as well as the funded status of the Plan as of the valuation date December 31, 2016. The ARC and funded status are determined in accordance with GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans ("GASB 43"). The results may also be used by the government of Forest Preserve District for use in determining the District's ARC and Annual OPEB Cost ("AOC") in accordance with GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefit Other Than Pensions ("GASB 45").

The actuarial valuation is based on unaudited financial data, working rates, plan information and census data provided by Fund staff and summarized in this report. The calculations rely on this information and are only as accurate as the information provided. The benefits considered in this valuation are postretirement health only. The Forest Preserve District may offer other postemployment benefits that warrant measurement under GASB 45. However, the scope of this valuation is limited to the Forest Preserve District's postretirement health and welfare benefit program as described in this report. The actuary did not verify the data and information submitted but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable.

The actuary for FPEABF performs an analysis of plan experience periodically and recommends changes in basic assumptions if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. On January 9, 2014 the Retirement Board adopted revised assumptions for use in valuing the Plan. These assumptions were based on an experience analysis performed by Conduent, which reviewed experience for the four-year period ending December 31, 2012. Additional changes to health care specific assumptions were made in the current year to account for recent experience and trends. We believe the economic and



demographic assumptions used are reasonable for financial accounting purposes and represent a reasonable estimate of the plan's future economic and demographic experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown at the end of this section.

The assumptions and methods used to determine the ARC of FPEABF as outlined in this report and all supporting schedules meet the parameters and requirements pursuant to GASB 43 and GASB 45. Based on member data and asset information provided by the Fund staff, we have prepared the Schedule of Funding Progress and Schedule of Employer Contributions that are included in the Financial Section of the Comprehensive Annual Financial Report.

The undersigned are Members of the American Academy of Actuaries and in combination meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. To the best of the undersigned actuaries' knowledge, the actuarial statement contained in this report is complete and accurate. The calculations in this report have been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

CONDUENT, INC

A handwritten signature in black ink, appearing to read "Rob Besenhofer".

Robert Besenhofer, ASA, MAAA
Director, Health

A handwritten signature in black ink, appearing to read "Larry Langer".

Larry Langer, EA, ASA, MAAA, FCA
Principal, Retirement

Actuarial Valuation - Postemployment Healthcare

Overview

The Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") offers health benefits to separated and retired employees of the Forest Preserve District and their eligible dependents. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of December 31, 2016.

Purpose

This report had been prepared at the request of the Fund for use in financial reporting of FPEABF under GASB 43. The results may also be used for purposes of the Forest Preserve District's financial statements under GASB 45. It may not be appropriate for other purposes, such as analyzing proposed design alternatives, funding, pricing or option evaluation. Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without the written consent of Buck.

Membership

Summary of Membership Data

	Year Ending December 31,	
	<u>2016</u>	<u>2015</u>
1. Annuitants Currently Receiving Benefits	281	278
2. Separated Employees Entitled To Benefits But Not Yet Receiving Them	36	35
3. Active Employees	<u>572</u>	<u>568</u>
4. Total Number of Members	889	881

Changes in Plan Provisions

The following changes in benefits and other plan provisions in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2015:

- Beginning on January 1, 2017, Medicare prescription drugs are provided through an Employee Group Waiver Plan (“EGWP”) with a wrap. The plan provides the same benefits to retirees, but the EGWP is a Medicare Part D plan specifically for Cook County retirees. As a result of this change, Cook County no longer applies for the Retiree Drug Subsidy.
- Working premium rates were updated for 2017.

Changes in Actuarial Assumptions, Methods, or Procedures

The following changes in the actuarial assumptions or valuation procedures in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2015:

- The per capita plan costs were updated to reflect the most recent year of claims experience.
- Future retirees are assumed to elect among the plan choices in the same proportion as employees who retired during the last year. This election percentage was updated to reflect current retiree experience.
- The estimate of the High-Cost Plan Excise Tax was updated based on the 2017 working premium rates.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Changes in the Actuarial Accrued Liability (AAL)

	<u>AAL (\$ millions)</u>	<u>% Change</u>
December 31, 2015 Report	\$49,478,790	
Expected Growth Due to the Passage of Time	2,586,007	5.2%
Demographic Experience	(597,769)	-1.1%
Updated Per Capita Health Plan Experience	40,429	0.1%
Change in Participant Contributions	(871,824)	-1.7%
Update EGWP	(7,071,085)	-14.0%
Change in Estimated Excise Tax	1,143,640	2.6%
December 31, 2016 Report	<u>\$44,708,189</u>	<u>-9.6%</u>

Development of Annual Required Contribution (ARC)

Development of Employer Contribution	December 31, 2015 Valuation ARC for Fiscal Year <u>2016</u>	December 31, 2014 Valuation ARC for Fiscal Year <u>2015</u>
1. Annual Payroll	\$34,512,652	\$32,007,658
2. Actuarial Accrued Liability		
a. Active Members	19,875,873	21,497,137
b. Inactive Members with Deferred Benefits	1,349,590	1,420,877
c. Retired Members and Beneficiaries Receiving Benefits	<u>23,482,726</u>	<u>26,560,776</u>
d. Total	44,708,189	49,478,790
3. Actuarial Value of Assets	-	-
4. Unfunded Actuarial Accrued Liability (UAAL)	44,708,189	49,478,790
5. UAAL as a Percent of Annual Payroll	129.5%	154.6%
6. Amortization Payment for UAAL		
a. Amount	2,626,512	2,906,774
b. As a % of pay	7.6%	9.1%
7. Employer Normal Cost		
a. Amount	1,884,473	2,009,448
b. As a % of pay	5.5%	6.3%
8. Interest Cost	170,613	183,345
9. Annual Required Contribution (6. + 7. + 8.)	4,681,598	5,099,567
10. Pay-go Costs for the Year ¹	1,455,172	1,549,551
11. Amortization Period (years)	30	30

¹ Source: Estimated amount for 2017; for 2016 as provided by FPEABF. 2016 Pay-as-you-go costs are net of prescription drug rebates, but do not reflect the Retiree Drug Subsidy offset, due to GASB 43/45 accounting rules.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Schedule of Funding Progress

A history of the GASB Statement No. 45 liabilities and assets follows:

<u>Actuarial Valuation Date December 31,</u>	<u>Actuarial Value of Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded Liability</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll</u>
2009	\$ -	\$43,142,977	\$43,142,977	0.0%	\$24,967,115	172.8%
2010	-	43,102,510	43,102,510	0.0%	24,397,376	176.7%
2011	-	40,406,196	40,406,196	0.0%	22,678,566	178.2%
2012	-	45,713,760	45,713,760	0.0%	26,252,071	174.1%
2013	-	47,113,653	47,113,653	0.0%	29,485,857	159.8%
2014	-	47,212,173	47,212,173	0.0%	29,811,912	158.4%
2015	-	49,478,790	49,478,790	0.0%	32,007,657	154.6%
2016	-	44,708,189	44,708,189	0.0%	34,512,652	129.5%

Schedule of Employer Contributions

A history of the GASB Statement No. 45 required contributions and actual percentages follow:

<u>Fiscal Year Ended December 31,</u>	<u>Annual Required Contribution (ARC)</u>	<u>Employer Contribution¹</u>	<u>Employer Contribution as a Percent of ARC</u>
2009	\$3,490,173	\$1,261,052	36.13%
2010	3,876,537	1,326,894	34.23%
2011	3,830,933	798,204	20.84%
2012	3,541,064	991,000	27.99%
2013	4,234,545	1,459,517	34.47%
2014	4,641,151	1,616,436	34.83%
2016	5,099,567	1,419,435	27.83%

¹ Source: Total Employer's Contribution for 2016 as provided by FPEABF

GASB 45 Net OPEB Obligation (NOO) as of December 31, 2016

1.	NOO as of December 31, 2015	\$20,285,290
2.	Annual Required Contribution (ARC)	5,099,567
3.	Interest on NOO	912,838
4.	Adjustment to ARC	<u>(1,245,345)</u>
5.	Annual OPEB Cost for 2016 (2. + 3. + 4.)	4,767,060
6.	Total Employer Contribution for 2016 ¹	<u>1,419,435</u>
7.	NOO as of December 31, 2016 (1. + 5. - 6.)	\$23,632,915

¹ Source: Total Employer's Contribution for 2016 as provided by FPEABF

Summary of Substantive Plan Provisions

Eligibility

Tier 1 retirement (hired before January 1, 2011)

- Age 50 and 10 years of service

Tier 2 retirement (hired on or after January 1, 2011)

- Age 62 and 10 years of service

All active employee members who separate with 10 or more years of service can receive postretirement health benefits under the Plan upon receipt of annuity benefits, provided that if they elect to retire under the Illinois Reciprocal Act, FPEABF is their final retirement system.

Surviving dependents of actively employed members and surviving dependents of covered annuitants are eligible for postretirement health benefits under the Plan upon receipt of annuity benefits.

Eligible annuitants may cover their spouses and dependent children under the age of 26 and all disabled children (no age limitation).

Medical Plans

Non-Medicare retirees can choose from:

- United Healthcare Choice HMO
- United Healthcare Choice Plus PPO

Medicare eligible retirees can choose from:

- United Healthcare Choice HMO
- United Healthcare Choice Plus PPO

All Medicare plans are supplemental to Medicare Part A & B benefits.

A retail and mail pharmacy benefit through CVS/Caremark is included with the election of any medical plan.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Summary of Substantive Plan Provisions (continued)

Contributions FPEABF pays 52% of the total premium for all post-Medicare retiree annuitants and pre-Medicare retiree annuitants on the Choice plan, including the cost of family coverage, and 67% of the total premium for all post-Medicare survivor annuitants and pre-Medicare survivor annuitants on the Choice plan, including the cost of family coverage.

FPEABF pays 47% of the total premium for all pre-Medicare retiree annuitants on the Choice Plus plan, including the cost of family coverage, and 62% of the total premium for all pre-Medicare survivor annuitants on the Choice Plus plan.

The following are the annual working rates effective January 1, 2017. These rates represent an estimated cost of self-insured coverage and include administrative expenses.

	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Single w/o Medicare	\$14,388	\$18,036
Two w/o Medicare	\$28,776	\$36,072
Single w/ Medicare	\$5,760	\$5,208
Two w/ Medicare	\$11,520	\$10,416

Assumptions and Methods

The actuarial assumptions used for the December 31, 2016 actuarial valuation are summarized below. The mortality rate, termination rate, retirement rate and salary assumptions are based on an experience analysis of FPEABF, over the period 2009 through 2012. These assumptions were adopted by the Board on January 9, 2014.

Valuation Date December 31, 2016

Discount Rate 4.50%

Salary Scale	<u>Age</u>	<u>Inflation</u>	<u>Merit</u>	<u>Total</u>
	<21	3.25%	4.75%	8.00%
	21	3.25%	4.55%	7.80%
	22	3.25%	4.35%	7.60%
	23	3.25%	4.15%	7.40%
	24	3.25%	3.95%	7.20%
	25	3.25%	3.75%	7.00%
	26	3.25%	3.55%	6.80%
	27	3.25%	3.35%	6.60%
	28	3.25%	3.15%	6.40%
	29	3.25%	2.95%	6.20%
	30	3.25%	2.75%	6.00%
	31	3.25%	2.55%	5.80%
	32	3.25%	2.35%	5.60%
	33	3.25%	2.15%	5.40%
	34	3.25%	1.95%	5.20%
	35	3.25%	1.75%	5.00%
	36	3.25%	1.55%	4.80%
	37	3.25%	1.35%	4.60%
	38	3.25%	1.15%	4.40%
	39	3.25%	0.95%	4.20%
	40	3.25%	0.75%	4.00%
	41	3.25%	0.55%	3.80%
	42+	3.25%	0.50%	3.75%

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Assumptions and Methods (continued)

Termination Rates The following is a sample of the termination rates used:

Attained	Age at Entrance						
	Age	Males			Females		
		27	32	37	27	32	37
27	.145			.183			
32	.116	.165		.117	.165		
37	.030	.105	.141	.030	.093	.114	
42	.030	.030	.085	.030	.030	.060	
47	.030	.030	.030	.030	.030	.030	

Retirement Rates For other members who became participants prior to January 1, 2011 (Tier 1):

Service at retirement	< 30 Years		≥30 Years		
	Age	Male	Female	Male	Female
50		.040	.040	.350	.300
55		.080	.060	.275	.200
60		.150	.150	.225	.400
65		.225	.200	.270	.200
70		.250	.200	.450	.200
75		1.000	1.000	1.000	1.000

For members who became participants on or after January 1, 2011 (Tier 2):

Age	Male	Female
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Mortality Rates The RP-2000 Blue Collar table, base year 2000, fully generational based on scale BB.

Assumptions and Methods (continued)

Disability Rates Included in termination and retirement rates.

Anticipated Plan Participation 70% of eligible employees are assumed to elect retiree medical benefits.

30% of vested terminated employees are assumed to elect retiree medical benefits upon retirement, and are assumed to retire according to the rates below:

<u>Age</u>	<u>% Who Elect</u>
55-59	6%
60-61	20%
62-64	5%
65-69	20%
70-74	25%
75	15%
76+	0%

Based on recent experience, future annuitants are assumed to elect from among the available plans as follows:

<u>% Who Elect</u>	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Pre-Medicare	94%	6%
Post-Medicare	71%	29%

Current annuitants who elect coverage are assumed to remain in coverage. Current annuitants who have waived or deferred coverage are not assumed to participate in the future.

Dependent Coverage 40% of future annuitants are assumed to cover a dependent. 40% of surviving dependents are assumed to elect coverage upon the death of an actively employed member and are assumed to commence benefits when the actively employed member would have reached age 61. Males are assumed to be 4 years older than females. Actual ages were used for dependents of current annuitants.

Medicare Coordination Medicare is assumed to remain the primary payer for current and future retirees and spouses who are at least age 65 and who are currently on Medicare. Medicare is assumed to become primary for 95% of retirees and spouses who retired before January 1, 2014 and who are not yet age 65, when they attain that age. For all other retirees and spouses, Medicare is assumed to be the primary payer at the time they reach age 65.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Assumptions and Methods (continued)

Per Capita Health Plan Costs Estimated net annual per capita incurred claim costs per covered adult for fiscal 2017 at age 65, reflecting administrative expenses, drug rebates, and the Retiree Drug Subsidy.

	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Not Medicare eligible	\$15,732	\$17,556
Medicare eligible	\$ 4,896	\$ 3,924

Per capita medical costs were developed using a 50/50 blend of a methodology which bases the costs on the medical working rates provided by the Fund for calendar year 2017, and a methodology which bases the costs on 2016 claims experience. The resulting costs were adjusted for age morbidity.

The valuation relies on the accuracy of the rate calculations. We understand that the rates represent medical benefit costs only for annuitants under the Fund.

Assumptions and Methods (continued)

**Age-Based
Morbidity**

Per capita costs are adjusted to reflect expected cost differences due to age and gender. The morbidity factors for pre-Medicare morbidity were developed from “Health Care Costs—From Birth to Death” sponsored by the Society of Actuaries and prepared by Dale H. Yamamoto (May 2013). Table 4 from Mr. Yamamoto’s study formed the basis of Medicare morbidity factors that are gender distinct and assumed a cost allocation of 60% for pharmacy, 20% for inpatient, 10% for outpatient, and 10% for professional services. Adjustments were made to Table 4 factors for inpatient costs at age 70 and below to smooth out what appears to be a spike in utilization for Medicare retirees gaining healthcare for the first time through Medicare. While such retirees were included in the study, their specific experience is not applicable for a valuation of an employer retiree medical plan where participants had group active coverage before retirement. Morbidity factors at sample ages are shown below:

<u>Age</u>	<u>Male</u>	<u>Female</u>
50	0.4612	0.5736
55	0.6085	0.6667
60	0.7829	0.7791
65	1.0000	0.9438
70	1.1873	1.1094
75	1.2752	1.2009
80	1.3381	1.2697
85	1.3479	1.3171
90	1.3235	1.3303

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Assumptions and Methods (continued)

**Health Care Cost
Trend Rates**

Health care cost trend rates apply to expected claims, premiums and retiree contributions:

<u>Year</u>	<u>Pre-Medicare</u>	<u>Post-Medicare</u>
2017	7.50%	6.00%
2018	7.25%	5.75%
2019	7.00%	5.50%
2020	6.75%	5.25%
2021	6.50%	5.00%
2022	6.25%	4.75%
2023	6.00%	4.75%
2024	5.75%	4.75%
2025	5.50%	4.75%
2026	5.25%	4.75%
2027	5.00%	4.75%
2028+	4.75%	4.75%

Census Data

The active, deferred vested, and retiree census were provided by the Fund.

Actuarial Cost Method

The entry age actuarial cost as a percentage of earnings was used.

Amortization Method

30 years open, level dollar.

Assets

The valuation assumes FPEABF or the Forest Preserve District has not set aside any assets to prefund its retiree medical liabilities.

IBNR

The calculations do not include any explicit amount for incurred but not reported claims (IBNR).

Retiree Drug Subsidy

FPEABF will no longer be receiving the Retiree Drug Subsidy due to their switch to an EGWP plan effective January 1, 2017.

Miscellaneous

The valuation was prepared on an on-going plan basis. This assumption does not imply that an obligation to continue the plan actually exists.

Assumptions and Methods (continued)

Considerations of the Patient Protection and Affordable Care Act (PPACA)

Summary of Effects of Selected Provisions

Early Retiree Reinsurance Program: Effective 6/1/2010. Due to the short-term nature of the payments expected to be received under this program it is assumed to have no future impact on FPEABF.

Removal of Lifetime/Annual Maximum: The plan is not subject to the requirement to eliminate lifetime maximums, since it is a retiree only plan.

Expansion of Child Coverage to Age 26: The impact of covering retiree children to age 26 is assumed to have already been reflected in the working rates provided and in the claims experience.

Medicare Part D Retiree Drug Subsidy: FPEABF will no longer be receiving the Retiree Drug Subsidy due to their switch to an EGWP plan effective January 1, 2017.

Excise Tax on High-Cost Employer Health Plans (aka “Cadillac Tax”) - Effective 1/1/2020: We performed a projection of the calculation on the Plan using a CPI of 3.25%, separating non-Medicare and Medicare retiree coverage for testing purposes. The tax amount expected is based on projected net employer costs for Medicare retirees, as this is the way we expect costs to be determined for tax purposes. The projection indicates that the overall increase in liability would be approximately 2.6% and we have adjusted the results accordingly. Additional commentary on this issue can be found on the following page.

Other Revenue Raisers: The legislation includes a variety of other revenue raisers that involve additional costs on employers, providers (such as medical device manufacturers) and insurers. We considered these factors when developing the trend assumption used.

Other: We have not identified any other specific provision of the PPACA legislation that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Assumptions and Methods (continued)

High-Cost Plan Excise Tax: The PPACA legislation added a new High-Cost Plan Excise Tax (also known as the “Cadillac Tax”) starting in calendar year 2020. For valuation purposes, we assumed that the value of the tax will be passed back to the Plan in higher premium rates.

Based on our understanding of the tax, we think it is clear that the tax does not apply directly to FPEABF. Rather, the tax applies to the administrator of the benefits, UnitedHealthcare, which in turn is then expected to pass the additional cost along to FPEABF.

The tax is 40% of the excess of a) the cost of coverage over b) the limit. We modeled the cost of the tax by calculating “a” (the cost of coverage) using the working rates projected with trend. We calculated “b” (the limit) starting with the statutory limits (\$10,200 single and \$27,500 family), adjusted for the following:

- Limits will increase from 2018 to 2019 by 4.25% (CPI plus 1%);
- Limits will increase after 2019 by 3.25% (CPI); and
- For retirees over age 55 but not on Medicare, the limit is increased by an additional dollar amount of \$1,650 for single coverage, \$3,450 for family coverage¹.

We also examined the possibility that the limits would be increased due to excess trend. An estimate of trend for the period from 2010 through 2018 for the federal standard Blue Cross Blue Shield option (using actual increase rates from 2010 to 2016 and the valuation trend from 2016 to 2018) is compared to the statutory “assumed” 55% trend, with trend in excess of 55% applied on the base amount before the additional amount for “early” retirees. However, it appears due to favorable experience in the federal benchmark Blue Cross Blue Shield plan that there will not be any excess trend.

¹ These additional amounts are available at other ages for plans sponsored by an employer where the majority of employees are engaged in high risk professions including law enforcement officers and fire fighters. Since only a minority of the retirees included in this valuation is police and fire, we are assuming that this exception would not apply.

Description of Actuarial Methods

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a “funding method,” this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of funding that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date).

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level dollar amount over an open 30-year period.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

Glossary of Terms

<i>Actuarial Accrued Liability</i>	Total accumulated cost to fund OPEB benefits and expenses arising from service in all prior years.
<i>Actuarial Cost Method</i>	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a OPEB plan for a group of plan members to the years of service that give rise to that cost.
<i>Actuarial Present Value of Future Benefits</i>	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
<i>Actuarial Valuation</i>	Study of probable amounts of future OPEB benefits and the necessary amount of contributions to fund those benefits.
<i>Actuary</i>	Person who performs mathematical calculations pertaining to OPEB and insurance benefits based on specific procedures and assumptions.
<i>Annual Required Contribution</i>	Disclosure measure of annual OPEB cost.
<i>GASB 43</i>	Governmental Accounting Standards Board Statement Number 43 which specifies how the Annual Required Contribution (ARC) is to be calculated and disclosure requirement for FPEABF.
<i>GASB 45</i>	Government Accounting Standards Board Statement Number 45 which specifies how to calculate the Annual OPEB Cost that the employer recognizes.
<i>Employer Normal Cost</i>	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the Plan as a whole.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The portion of the actuarial accrued liability not offset by Plan assets.

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Additional Actuarial Tables

Schedule of Active Member Valuation Data - Pension Benefits

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Change In Average Pay</u>
12/31/07	418	\$21,078,316	\$50,427	3.6%
12/31/08	442	23,474,621	53,110	5.3%
12/31/09	461	24,967,115	54,159	2.0%
12/31/10	448	24,397,376	54,458	0.6%
12/31/11	408	22,678,566	55,585	2.1%
12/31/12	467	26,252,071	56,214	1.1%
12/31/13	534	29,485,857	55,217	-1.8%
12/31/14	525	29,811,912	56,785	2.8%
12/31/15	568	32,007,657	56,352	-0.8%
12/31/16	572	34,509,011	60,330	7.1%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Pension Benefits

<u>Year Ended</u>	<u>Added to Rolls</u>		<u>Removed from Rolls</u>		<u>End of Year Rolls</u>		<u>Average Annual Benefit</u>	<u>% Increase in Average Annual Benefit</u>
	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u>		
2007	16	\$ 615,191	25	\$559,530	490	\$ 9,956,546	\$20,319	2.4%
2008	34	789,897	35	570,647	489	10,175,796	20,809	2.4%
2009	27	1,124,442	26	454,966	490	10,845,272	22,133	6.4%
2010	30	1,108,528	26	632,898	494	11,320,902	22,917	3.5%
2011	35	1,400,374	31	480,969	498	12,240,307	24,579	7.3%
2012	30	1,051,757	17	259,746	511	13,032,318	25,504	3.8%
2013	48	1,547,583	28	324,780	531	14,255,121	26,846	5.3%
2014	32	1,287,991	28	629,998	535	14,913,114	27,875	3.8%
2015	24	1,007,969	30	656,536	529	15,264,547	28,855	3.5%
2016	21	888,082	20	414,711	530	15,737,918	29,694	2.9%

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Postemployment Healthcare

<u>Year Ended</u>	<u>Added to Rolls</u>		<u>Removed from Rolls</u>		<u>End of Year Rolls</u>		<u>Average Annual Benefit</u>	<u>% Change in Average Annual Benefit</u>
	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u> ¹	<u>Number</u>	<u>Annual Benefits</u>		
2011	22	\$169,227	18	\$346,462	279	\$1,324,476	\$4,747	-13.1%
2012	18	91,062	16	218,153	281	1,197,385	4,261	-10.2%
2013	24	120,344	14	(277,417)	291	1,595,146	5,482	28.7%
2014	18	87,347	22	88,900	287	1,771,393	6,172	12.6%
2015	8	132,420	17	79,925	278	1,823,888	6,561	6.3%
2016	16	(206,717)	13	67,620	281	1,549,551	5,514	-15.9%

1. Includes Liability from changes in benefit levels.

Solvency Test - Pension Benefits

Year Ended	Accrued Liabilities for				Percent of Accrued Liabilities Covered by Assets		
	(1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	(1)	(2)	(3)
2007	\$29,282,123	\$100,022,189	\$76,087,946	\$203,043,217	100%	100%	97%
2008	30,401,379	111,439,986	70,531,961	196,277,679	100%	100%	77%
2009	31,830,611	130,528,419	82,266,634	188,396,534	100%	100%	32%
2010	32,798,650	136,132,530	83,946,416	184,077,516	100%	100%	18%
2011	32,856,582	147,529,997	81,122,596	178,126,063	100%	98%	0%
2012	30,638,516	155,638,787	86,859,427	172,566,956	100%	91%	0%
2013	29,531,719	169,355,865	78,672,628	182,554,587	100%	90%	0%
2014	29,765,059	177,169,877	79,026,027	189,917,999	100%	90%	0%
2015	31,403,346	180,566,467	79,769,255	192,729,042	100%	89%	0%
2016	32,875,566	183,610,860	83,773,302	198,244,885	100%	90%	0%

Solvency Test - Postemployment Healthcare

Year Ended	Accrued Liabilities for				Percent of Accrued Liabilities Covered by Assets		
	(1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	(1)	(2)	(3)
2011	-	\$21,172,862	\$19,233,334	-	0%	0%	0%
2012	-	25,571,863	20,141,897	-	0%	0%	0%
2013	-	26,785,364	20,328,289	-	0%	0%	0%
2014	-	27,165,388	20,046,785	-	0%	0%	0%
2015	-	26,560,776	22,918,014	-	0%	0%	0%
2016	-	23,482,726	21,225,463	-	0%	0%	0%

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Statistical Section

This section contains additional schedules that are designed to supplement the information in the Comprehensive Annual Financial Report:

Statements of Changes in Plan Net Position – Pension Benefits and Postemployment Healthcare provides details on the specific sources and uses of funds.

Schedules of Retired Members by Benefit Type – Pension Benefits and Postemployment Healthcare provides details on the monthly pension amounts for retirement and survivor members, including those with postemployment healthcare.

Schedule of Average Benefit Payments – Pension Benefits and Postemployment Healthcare provides details on years of credited service, average monthly pension, average monthly final average salary, and the number of new retirees, including those with postemployment healthcare.

Additional Schedules Required by Employer provides details on historical financial, investment and actuarial performance.

Statement of Changes in Pension Plan Fiduciary Net Position

For year ended December 31, 2016, with comparative totals for 9 years

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Additions:					
Employer contributions	\$ 1,971,946	\$ 1,763,345	\$ 1,520,316	\$ 1,403,628	\$ 2,117,976
Employee contributions	3,184,051	2,771,533	2,645,164	2,687,211	2,426,776
Net investment and net securities					
lending income (loss)	10,477,792	2,549,975	13,525,606	30,383,512	22,209,855
Other	-	11,442	-	691	6,062
Total additions	<u>15,633,789</u>	<u>7,096,295</u>	<u>17,691,086</u>	<u>34,475,042</u>	<u>26,760,669</u>
Deductions:					
Benefits					
Retirement	12,896,736	12,820,708	12,464,872	11,719,920	10,714,092
Survivors	2,523,376	2,281,100	2,206,512	2,052,205	1,901,171
Disability	301,487	183,060	172,196	277,873	347,509
Refunds					
Death	118,565	41,539	75,826	111,783	174,789
Separation	434,654	486,280	644,017	545,613	786,951
Other	187,367	108,089	241,794	301,311	226,899
Employee transfers to (from)					
Cook County	133,999	18,370	175,370	(106,012)	205,887
Net administrative and miscellaneous expenses					
	<u>157,577</u>	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>	<u>111,662</u>
Total deductions	<u>16,753,761</u>	<u>16,083,099</u>	<u>16,122,654</u>	<u>15,021,712</u>	<u>14,468,960</u>
Net increase (decrease)	(1,119,972)	(8,986,804)	1,568,432	19,453,330	12,291,709
Net position:					
Beginning of year	192,322,370	201,309,174	199,740,742	180,287,412	167,995,703
End of year	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$199,740,742</u>	<u>\$180,287,412</u>

Statement of Changes in Pension Plan Fiduciary Net Position (continued)

For year ended December 31, 2016, with comparative totals for 9 years (continued)

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Additions:					
Employer contributions	\$ 2,441,301	\$ 1,333,140	\$ 1,282,642	\$ 523,928	\$ 1,995,300
Employee contributions	2,289,027	2,452,696	2,418,794	2,119,208	1,986,605
Net investment and net securities					
lending income (loss)	2,021,094	20,250,639	24,683,791	(46,414,013)	9,989,189
Other	2,541	52,736	1,798	18,744	2,446
Total additions	<u>6,753,963</u>	<u>24,089,211</u>	<u>28,387,025</u>	<u>(43,752,133)</u>	<u>13,973,540</u>
Deductions:					
Benefits					
Retirement	10,042,232	9,559,956	9,144,321	8,955,164	8,847,306
Survivors	1,815,262	1,615,256	1,552,939	1,368,001	1,296,424
Disability	420,518	366,484	247,088	227,996	189,742
Refunds					
Death	79,428	19,000	23,360	160,624	60,125
Separation	338,069	182,773	318,195	221,159	342,470
Other	186,817	142,090	131,398	136,617	62,071
Employee transfers to (from)					
Cook County	(328,586)	257,975	118,754	(119,434)	130,674
Net administrative and miscellaneous expenses	103,220	104,765	112,729	138,550	114,674
Total deductions	<u>12,656,960</u>	<u>12,248,299</u>	<u>11,648,784</u>	<u>11,088,677</u>	<u>11,043,486</u>
Net increase (decrease)	(5,902,997)	11,840,912	16,738,241	(54,840,810)	2,930,054
Net position:					
Beginning of year	173,898,700	162,057,788	145,319,547	200,160,357	197,230,303
End of year	<u>\$167,995,703</u>	<u>\$173,898,700</u>	<u>\$162,057,788</u>	<u>\$145,319,547</u>	<u>\$200,160,357</u>

Statement of Changes in Postemployment Healthcare Plan Net Position

For year ended December 31, 2016, with comparative totals for 9 years

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Additions:					
Employer contributions	\$1,419,435	\$1,698,692	\$1,616,436	\$1,459,517	\$ 991,000
Annuitant healthcare benefits contributions	1,177,887	1,134,920	1,193,549	1,190,706	1,127,026
Other	317,217	228,836	204,853	158,692	206,385
Total additions	<u>2,914,539</u>	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>	<u>2,324,411</u>
Deductions:					
Healthcare benefits	<u>2,914,539</u>	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>	<u>2,324,411</u>
Net increase (decrease)	-	-	-	-	-
Net position:					
Beginning of year	-	-	-	-	-
End of year	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Statement of Changes in Postemployment Healthcare Plan Net Position (continued)

For year ended December 31, 2016, with comparative totals for 9 years (continued)

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Additions:					
Employer contributions	\$ 814,308	\$1,326,894	\$1,261,052	\$1,499,520	\$1,291,740
Annuitant healthcare benefits contributions	1,120,842	984,039	1,039,073	1,090,141	1,101,172
Other	510,168	174,817	218,121	108,720	243,505
Total additions	<u>2,445,318</u>	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</u>	<u>2,636,417</u>
Deductions:					
Healthcare benefits	<u>2,445,318</u>	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</u>	<u>2,636,417</u>
Net increase (decrease)	-	-	-	-	-
Net position:					
Beginning of year	-	-	-	-	-
End of year	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Schedule of Retired Members by Benefit Type - Pension Benefits

As of December 31, 2016

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit		Option Selected		
		1	2	1	2	3
\$ 1 – \$ 500	70	36	34	36	23	11
501 – 1,000	70	34	36	47	23	0
1,001 – 1,500	58	36	22	40	18	0
1,501 – 2,000	57	40	17	36	21	0
2,001 – 2,500	42	28	14	23	19	0
2,501 – 3,000	46	35	11	33	13	0
3,001 – 3,500	48	38	10	25	23	0
3,501 – 4,000	35	31	4	15	20	0
4,001 – 4,500	20	19	1	6	14	0
4,501 – 5,000	25	23	2	7	18	0
5,001 – 5,500	15	14	1	4	11	0
5,501 – 6,000	22	22	0	3	19	0
6,001 – 6,500	7	7	0	2	5	0
6,501 – 7,000	7	7	0	1	6	0
7,001 – 7,500	3	3	0	0	3	0
7,501 – 8,000	2	2	0	0	2	0
8,001 – 8,500	2	2	0	0	2	0
8,501 – 9,000	0	0	0	0	0	0
9,001 – 9,500	0	0	0	0	0	0
9,501 – 10,000	0	0	0	0	0	0
10,001 – 10,500	0	0	0	0	0	0
10,501 – 11,000	0	0	0	0	0	0
11,001 – 11,500	0	0	0	0	0	0
11,501 – 12,000	0	0	0	0	0	0
12,001 – 12,500	0	0	0	0	0	0
12,501 – 13,000	1	1	0	0	1	0
13,001 – 13,500	0	0	0	0	0	0
13,501 – 14,000	0	0	0	0	0	0
14,001 – 14,500	0	0	0	0	0	0
14,501 – 15,000	0	0	0	0	0	0
Over \$15,000	0	0	0	0	0	0
Totals	530	378	152	278	241	11

Type of Pension Benefit

1. Regular retirement
2. Survivor payment

Option Selected

1. Whole Life Annuity
2. 65% Joint and Contingent Annuity
3. Temporary Annuity

Schedule of Retired Members by Benefit Type - Postemployment Healthcare

As of December 31, 2016

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit		Option Selected		
		1	2	1	2	3
\$ 1 – \$ 500	3	0	3	3	0	0
501 – 1,000	31	7	24	26	5	0
1,001 – 1,500	22	8	14	18	4	0
1,501 – 2,000	36	24	12	23	13	0
2,001 – 2,500	24	15	9	15	9	0
2,501 – 3,000	34	25	9	25	9	0
3,001 – 3,500	34	26	8	20	14	0
3,501 – 4,000	27	24	3	13	14	0
4,001 – 4,500	13	12	1	6	7	0
4,501 – 5,000	17	15	2	5	12	0
5,001 – 5,500	6	5	1	3	3	0
5,501 – 6,000	19	19	0	3	16	0
6,001 – 6,500	4	4	0	2	2	0
6,501 – 7,000	5	5	0	0	5	0
7,001 – 7,500	3	3	0	0	3	0
7,501 – 8,000	1	1	0	0	1	0
8,001 – 8,500	1	1	0	0	1	0
8,501 – 9,000	0	0	0	0	0	0
9,001 – 9,500	0	0	0	0	0	0
9,501 – 10,000	0	0	0	0	0	0
10,001 – 10,500	0	0	0	0	0	0
10,501 – 11,000	0	0	0	0	0	0
11,001 – 11,500	0	0	0	0	0	0
11,501 – 12,000	0	0	0	0	0	0
12,001 – 12,500	0	0	0	0	0	0
12,501 – 13,000	1	1	0	0	1	0
13,001 – 13,500	0	0	0	0	0	0
13,501 – 14,000	0	0	0	0	0	0
14,001 – 14,500	0	0	0	0	0	0
14,501 – 15,000	0	0	0	0	0	0
Over \$15,000	0	0	0	0	0	0
Totals	281	195	86	162	119	0

Type of Pension Benefit

1. Regular retirement
2. Survivor payment

Option Selected

1. Whole Life Annuity
2. 65% Joint and Contingent Annuity
3. Temporary Annuity

Schedule of Average Benefit Payments - Pension Benefits

		Years of Credited Service						
		<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>
2007	Average Monthly Pension	\$ 0	\$ 778	\$1,957	\$1,197	\$4,570	\$4,536	\$2,197
	Average Monthly Final Average Salary	\$ 0	N/A	\$7,208	N/A	\$7,323	\$6,010	\$2,816
	Number of New Retirees	0	1	2	2	1	1	1
2008	Average Monthly Pension	\$ 314	\$ 459	\$1,030	\$1,540	\$2,270	\$3,298	\$4,323
	Average Monthly Final Average Salary	N/A	N/A	\$4,917	\$3,224	\$3,109	\$4,926	\$5,877
	Number of New Retirees	3	4	2	3	3	3	1
2009	Average Monthly Pension	\$ 0	\$ 580	\$ 265	\$ 0	\$2,389	\$5,070	\$3,587
	Average Monthly Final Average Salary	\$ 0	N/A	N/A	\$ 0	\$4,015	\$6,662	\$4,789
	Number of New Retirees	0	2	1	0	4	2	2
2010	Average Monthly Pension	\$ 463	\$ 0	\$3,266	\$2,775	\$ 0	\$3,513	\$3,572
	Average Monthly Final Average Salary	\$ 6,589	\$ 0	\$8,104	\$5,544	\$ 0	\$4,774	\$4,478
	Number of New Retirees	3	0	1	5	0	3	7
2011	Average Monthly Pension	\$ 524	\$ 1,121	\$2,214	\$3,913	\$3,192	\$4,870	\$4,653
	Average Monthly Final Average Salary	\$ 5,692	\$10,070	\$6,735	\$8,560	\$5,068	\$6,742	\$5,817
	Number of New Retirees	1	2	7	1	5	2	5
2012	Average Monthly Pension	\$ 0	\$ 0	\$2,765	\$2,269	\$2,321	\$3,298	\$3,930
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$7,434	\$5,636	\$4,079	\$4,557	\$4,941
	Number of New Retirees	0	0	2	2	8	4	5
2013	Average Monthly Pension	\$ 321	\$ 568	\$1,439	\$1,942	\$2,864	\$5,285	\$3,732
	Average Monthly Final Average Salary	\$ 6,012	\$ 2,898	\$5,512	\$3,355	\$4,971	\$6,966	\$4,691
	Number of New Retirees	3	2	6	1	9	1	14
2014	Average Monthly Pension	\$ 1,331	\$ 982	\$1,427	\$1,505	\$2,760	\$3,408	\$3,173
	Average Monthly Final Average Salary	\$15,150	\$ 6,266	\$4,789	\$3,558	\$4,810	\$4,892	\$4,044
	Number of New Retirees	1	4	4	4	3	7	6
2015	Average Monthly Pension	\$ 639	\$ 150	\$1,141	\$ 0	\$2,069	\$2,840	\$3,591
	Average Monthly Final Average Salary	\$ 6,768	\$ 1,491	\$4,313	\$ 0	\$5,402	\$4,669	\$4,500
	Number of New Retirees	2	1	2	0	2	2	5
2016	Average Monthly Pension	\$ 177	\$ 0	\$ 0	\$ 974	\$ 0	\$3,632	\$3,640
	Average Monthly Final Average Salary	\$ 5,805	\$ 0	\$ 0	\$3,397	\$ 0	\$5,049	\$4,671
	Number of New Retirees	2	0	0	1	0	5	4

Schedule of Average Benefit Payments - Postemployment Healthcare

		Years of Credited Service						
		<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>
2007	Average Monthly Pension	\$ 0	\$ 0	\$1,957	\$1,937	\$4,570	\$ 0	\$2,197
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$7,208	N/A	\$7,323	\$ 0	\$2,816
	Number of New Retirees	0	0	2	1	1	0	1
2008	Average Monthly Pension	\$ 0	\$ 337	\$ 0	\$1,987	\$2,032	\$3,118	\$4,323
	Average Monthly Final Average Salary	\$ 0	N/A	\$ 0	\$3,339	N/A	\$5,165	\$5,877
	Number of New Retirees	0	1	0	1	2	1	1
2009	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$2,341	\$5,070	\$3,587
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$4,210	\$6,662	\$4,789
	Number of New Retirees	0	0	0	0	3	2	2
2010	Average Monthly Pension	\$ 0	\$ 0	\$3,266	\$3,002	\$ 0	\$3,413	\$3,479
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$8,104	\$5,948	\$ 0	\$4,267	\$4,372
	Number of New Retirees	0	0	1	4	0	1	4
2011	Average Monthly Pension	\$ 0	\$ 0	\$2,066	\$3,913	\$2,998	\$4,239	\$4,361
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$6,073	\$8,560	\$4,857	\$5,299	\$5,352
	Number of New Retirees	0	0	5	1	4	1	3
2012	Average Monthly Pension	\$ 0	\$ 0	\$3,346	\$ 0	\$2,341	\$2,647	\$4,265
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$7,819	\$ 0	\$4,115	\$3,889	\$5,367
	Number of New Retirees	0	0	1	0	7	3	4
2013	Average Monthly Pension	\$ 0	\$ 737	\$1,616	\$1,942	\$2,763	\$5,285	\$3,594
	Average Monthly Final Average Salary	\$ 0	\$4,049	\$5,217	\$3,355	\$4,418	\$6,966	\$4,528
	Number of New Retirees	0	1	2	1	6	1	8
2014	Average Monthly Pension	\$ 0	\$ 0	\$1,675	\$ 0	\$2,314	\$3,643	\$3,167
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$5,856	\$ 0	\$3,915	\$5,155	\$4,076
	Number of New Retirees	0	0	2	0	1	6	4
2015	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$3,473	\$ 0	\$3,181
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$5,365	\$ 0	\$3,995
	Number of New Retirees	0	0	0	0	1	0	3
2016	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$3,611	\$3,640
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$4,996	\$4,671
	Number of New Retirees	0	0	0	0	0	3	4

N/A - Not Available

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Additional Schedules Required by Employer

Schedule of Investment Rate of Return - Pension Benefits and Postemployment Healthcare Combined

<u>Year Ended December 31,</u>	<u>Investment Rate of Return (Net of Fees)</u>
2007	5.1%
2008	-24.1%
2009	17.9%
2010	13.1%
2011	1.1%
2012	13.8%
2013	17.5%
2014	7.1%
2015	1.5%
2016	5.7%

Schedule of Actuarial Value of Assets vs. Fair Value of Assets - Pension Benefits and Postemployment Healthcare Combined

<u>Year Ended December 31,</u>	<u>Actuarial Value of Assets</u>	<u>Fair Value of Assets</u>	<u>Actuarial Value as a Percentage of Fair Value</u>
2007	\$203,043,217	\$200,160,357	101.4%
2008	196,277,679	145,319,547	135.1%
2009	188,396,534	162,057,788	116.3%
2010	184,077,516	173,898,700	105.9%
2011	178,126,063	167,995,703	106.0%
2012	172,566,956	180,287,412	95.7%
2013	182,554,587	199,740,742	91.4%
2014	189,917,999	201,309,174	94.3%
2015	193,729,043	192,322,370	100.7%
2016	198,244,885	191,202,398	103.7%

Schedule of Employer Contributions - Pension Benefits and Postemployment Healthcare Combined

<u>Year Ended December 31,</u>	<u>Actuarially Required Contribution (ARC)</u>	<u>Tax Levy Requested</u>	<u>Actual Employer Contribution</u>	<u>Percentage of ARC Contributed</u>
2007	\$ 5,927,422	\$3,416,000	\$3,287,040	55.5%
2008	6,094,316	2,198,000	2,023,448	33.2%
2009	7,273,214	2,582,587	2,543,694	35.0%
2010	10,653,889	2,754,970	2,660,034	25.0%
2011	11,606,636	3,144,432	3,255,609	28.0%
2012	12,429,935	3,188,505	3,108,976	25.0%
2013	14,045,708	2,975,735	2,863,145	20.4%
2014	13,072,570	3,154,809	3,136,752	24.0%
2015	13,191,203	3,493,374	3,462,037	26.2%
2016	13,547,803	3,438,713	3,391,381	25.0%

STATISTICAL SECTION

Additional Schedules Required by Employer (continued)

Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2016, with comparative totals for 9 years

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Beginning Net Position (Fair Value)	\$ 192,322,370	\$ 201,309,174	\$ 199,740,742	\$ 180,287,412	\$ 167,995,703
Additions:					
Employer contributions	3,391,381	3,462,037	3,136,752	2,863,145	3,108,976
Employee contributions	3,184,051	2,771,533	2,645,164	2,687,211	2,426,776
Annuitant health benefit contributions	1,177,887	1,134,920	1,193,549	1,190,706	1,127,026
Net investment income (loss)	10,477,792	2,549,975	13,525,606	30,383,512	22,209,855
Other	<u>317,217</u>	<u>240,278</u>	<u>204,853</u>	<u>159,383</u>	<u>212,447</u>
Total additions	<u>18,548,328</u>	<u>10,158,743</u>	<u>20,705,924</u>	<u>37,283,957</u>	<u>29,085,080</u>
Deductions:					
Benefits	18,636,138	18,347,316	17,858,418	16,858,913	15,287,183
Refunds	740,586	635,908	961,637	958,707	1,188,639
Employee transfers to (from)					
Cook County	133,999	18,370	175,370	(106,012)	205,887
Administrative expenses	<u>157,577</u>	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>	<u>111,662</u>
Total deductions	<u>19,668,300</u>	<u>19,145,547</u>	<u>19,137,492</u>	<u>17,830,627</u>	<u>16,793,371</u>
Ending Net Position (Fair Value)	<u>\$ 191,202,398</u>	<u>\$ 192,322,370</u>	<u>\$ 201,309,174</u>	<u>\$ 199,740,742</u>	<u>\$ 180,287,412</u>
Actuarial Value of Assets	198,244,885	193,729,043	189,917,999	182,554,587	172,566,956
Actuarial Accrued Liabilities (AAL)	330,207,622	322,764,141	315,234,847	306,919,270	304,451,002
Unfunded AAL (UAAL) (Fair Value)	139,005,224	130,441,771	113,925,673	107,178,528	124,163,590
Unfunded AAL (UAAL) (Actuarial Value)	131,962,737	129,035,098	125,316,848	124,364,683	131,884,046
Funded Ratio (Fair Value)	57.9%	59.6%	63.9%	65.1%	59.2%
Funded Ratio (Actuarial Value)	60.0%	60.0%	60.2%	59.5%	56.7%

Additional Schedules Required by Employer (continued)

Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2016, with comparative totals for 9 years (continued)

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Beginning Net Position (Fair Value)	\$ 173,898,700	\$ 162,057,788	\$ 145,319,547	\$ 200,160,357	\$ 197,230,303
Additions:					
Employer contributions	3,255,609	2,660,034	2,543,694	2,023,448	3,287,040
Employee contributions	2,289,027	2,452,696	2,418,794	2,119,208	1,986,605
Annuitant health benefit contributions	1,120,842	984,039	1,039,073	1,090,141	1,101,172
Net investment income (loss)	2,021,094	20,250,639	24,683,791	(46,414,013)	9,994,768
Other	512,709	227,553	219,919	127,464	245,951
Total additions	<u>9,199,281</u>	<u>26,574,961</u>	<u>30,905,271</u>	<u>(41,053,752)</u>	<u>16,615,536</u>
Deductions:					
Benefits	14,723,330	14,027,446	13,462,594	13,249,542	12,969,889
Refunds	604,314	343,863	472,953	518,400	464,666
Employee transfers to (from)					
Cook County	(328,586)	257,975	118,754	(119,434)	130,674
Administrative expenses	103,220	104,765	112,729	138,550	120,253
Total deductions	<u>15,102,278</u>	<u>14,734,049</u>	<u>14,167,030</u>	<u>13,787,058</u>	<u>13,685,482</u>
Ending Net Position (Fair Value)	<u>\$ 167,995,703</u>	<u>\$ 173,898,700</u>	<u>\$ 162,057,788</u>	<u>\$ 145,319,547</u>	<u>\$ 200,160,357</u>
Actuarial Value of Assets	178,126,063	184,077,516	188,396,534	196,277,679	203,043,217
Actuarial Accrued Liabilities (AAL)	289,321,074	282,391,153	274,032,351	237,927,630	234,120,194
Unfunded AAL (UAAL) (Fair Value)	121,325,371	108,492,453	111,974,563	92,608,083	33,959,837
Unfunded AAL (UAAL) (Actuarial Value)	111,195,011	98,313,637	85,635,817	41,649,951	31,076,977
Funded Ratio (Fair Value)	58.1%	61.6%	59.1%	61.1%	85.5%
Funded Ratio (Actuarial Value)	61.6%	65.2%	68.7%	82.5%	86.7%

STATISTICAL SECTION

Additional Schedules Required by Employer (continued)

Schedule of Funding Progress - Pension Benefits and Postemployment Healthcare Combined

<u>Year Ended December 31,</u>	<u>Actuarial Accrued Liabilities (AAL)</u>	<u>Actuarial Value of Assets</u>	<u>Fair Value of Net Position</u>	<u>Unfunded AAL (UAAL) (Actuarial Value)</u>
2007	\$234,120,194	\$203,043,217	\$200,160,357	\$ 31,076,977
2008	237,927,630	196,277,679	145,319,547	41,649,951
2009	274,032,351	188,396,534	162,057,788	85,635,817
2010	282,391,153	184,077,516	173,898,700	98,313,637
2011	289,321,074	178,126,063	167,995,703	111,195,011
2012	304,451,002	172,566,956	180,287,412	131,884,046
2013	306,919,270	182,554,587	199,740,742	124,364,683
2014	315,234,847	189,917,999	201,309,174	125,316,848
2015	322,764,141	193,729,043	192,322,370	129,035,098
2016	330,207,622	198,244,885	191,202,398	131,962,737

Schedule of Funding Progress - Pension Benefits

<u>Year Ended December 31,</u>	<u>Actuarial Accrued Liabilities (AAL)</u>	<u>Actuarial Value of Assets</u>	<u>Fair Value of Net Position</u>	<u>Unfunded AAL (UAAL) (Actuarial Value)</u>
2007	\$205,392,258	\$203,043,217	\$200,160,357	\$ 2,349,041
2008	212,373,326	196,277,679	145,319,547	16,095,647
2009	244,625,664	188,396,534	162,057,788	56,229,130
2010	252,877,596	184,077,516	173,898,700	68,800,080
2011	261,509,175	178,126,063	167,995,703	83,383,112
2012	273,136,730	172,566,956	180,287,412	100,569,774
2013	277,560,212	182,554,587	199,740,742	95,005,625
2014	285,960,963	189,917,999	201,309,174	96,042,964
2015	291,739,068	193,729,043	192,322,370	98,010,025
2016	300,259,728	198,244,885	191,202,398	102,014,843

Schedule of Funding Progress - Pension Benefits and Postemployment Healthcare Combined (cont'd)

<u>Unfunded AAL (UAAL) Fair Value</u>	<u>Funded Ratio Actuarial Value</u>	<u>Funded Ratio Fair Value</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll (Actuarial Value)</u>	<u>UAAL as a Percentage of Covered Payroll (Fair Value)</u>
\$ 33,959,837	86.7%	85.5%	\$21,078,316	147.4%	161.1%
92,608,083	82.5%	61.1%	23,474,621	177.4%	394.5%
111,974,563	68.7%	59.1%	24,967,115	343.0%	448.5%
108,492,453	65.2%	61.6%	24,397,376	403.0%	444.7%
121,325,371	61.6%	58.1%	22,678,566	490.3%	535.0%
124,163,590	56.7%	59.2%	26,252,071	502.4%	473.0%
107,178,528	59.5%	65.1%	29,485,857	421.8%	363.5%
113,925,673	60.2%	63.9%	29,811,912	420.4%	382.1%
130,441,771	60.0%	59.6%	32,007,657	403.1%	407.5%
139,005,224	60.0%	57.9%	34,509,011	382.4%	402.8%

Schedule of Funding Progress - Pension Benefits (continued)

<u>Unfunded AAL (UAAL) Fair Value</u>	<u>Funded Ratio Actuarial Value</u>	<u>Funded Ratio Fair Value</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll (Actuarial Value)</u>	<u>UAAL as a Percentage of Covered Payroll (Fair Value)</u>
\$ 5,231,901	98.9%	97.5%	\$21,078,316	11.1%	24.8%
67,053,779	92.4%	68.4%	23,474,621	68.6%	285.6%
82,567,876	77.0%	66.2%	24,967,115	225.2%	330.7%
78,978,896	72.8%	68.8%	24,397,376	282.0%	323.7%
93,513,472	68.1%	64.2%	22,678,566	367.7%	412.3%
92,849,318	63.2%	66.0%	26,252,071	383.1%	353.7%
77,819,470	65.8%	72.0%	29,485,857	322.2%	263.9%
84,651,789	66.4%	70.4%	29,811,912	322.2%	284.0%
99,416,698	66.4%	65.9%	32,007,657	306.2%	310.6%
109,057,330	66.0%	63.7%	34,509,011	295.6%	316.0%

STATISTICAL SECTION

Additional Schedules Required by Employer (continued)

Schedule of Funding Progress - Postemployment Healthcare

<u>Year Ended December 31,</u>	<u>Actuarial Accrued Liabilities (AAL)</u>	<u>Actuarial Value of Assets</u>	<u>Fair Value of Net Position</u>	<u>Unfunded AAL (UAAL) (Actuarial Value)</u>
2007	\$40,605,811	\$ -	\$ -	\$40,605,811
2008	36,004,405	-	-	36,004,405
2009	43,142,977	-	-	43,142,977
2010	43,102,510	-	-	43,102,510
2011	40,406,196	-	-	40,406,196
2012	45,713,760	-	-	45,713,760
2013	47,113,653	-	-	47,113,653
2014	47,212,173	-	-	47,212,173
2015	49,478,790	-	-	49,478,790
2016	44,708,189	-	-	44,708,189

**Schedule of Components of Change in Unfunded Liability -
Pension Benefits and Postemployment Healthcare Combined**

<u>Year Ended December 31,</u>	<u>Salary Increase Higher/Lower than Assumed</u>	<u>Investment Returns Higher/Lower than Assumed</u>	<u>Employer Contributions Higher/Lower than Normal Cost Plus Interest</u>	<u>Changes in Actuarial Assumptions</u>	<u>Other Sources (1)</u>	<u>Total Change in Unfunded Liability</u>
2007	\$ 2,200,509	\$ (2,343,691)	\$ 3,014,714	\$ -	\$(4,864,399)	\$(1,992,867)
2008	1,179,009	13,247,300	3,928,697	-	(7,782,032)	10,572,974
2009	(1,015,614)	14,363,849	4,512,235	24,746,310	1,379,086	43,985,866
2010	(3,394,112)	9,729,368	7,483,382	-	(1,140,818)	12,677,820
2011	(3,690,231)	11,541,394	7,734,557	-	(2,704,346)	12,881,374
2012	1,939,324	8,635,210	5,369,563	-	4,744,938	20,689,035
2013	(2,208,899)	(17,264,428)	10,855,083	-	1,098,881	(7,519,363)
2014	(2,333,548)	(6,069,280)	9,597,999	-	(243,006)	952,165
2015	(2,503,098)	(1,528,781)	9,379,058	-	(1,628,929)	3,718,250
2016	2,722,397	(2,010,983)	9,799,700	-	(7,583,475)	2,927,639

(1) Includes but is not limited to health insurance, optional retirement experience and death, retirement and withdrawal experience.

Schedule of Funding Progress - Postemployment Healthcare (continued)

<u>Unfunded AAL (UAAL) Fair Value</u>	<u>Funded Ratio Actuarial Value</u>	<u>Funded Ratio Fair Value</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll (Actuarial Value)</u>	<u>UAAL as a Percentage of Covered Payroll (Fair Value)</u>
\$ 40,605,811	0.0%	0.0%	\$21,078,316	192.6%	192.6%
36,004,405	0.0%	0.0%	23,474,621	153.4%	153.4%
43,142,977	0.0%	0.0%	24,967,115	172.8%	172.8%
43,102,510	0.0%	0.0%	24,397,376	176.7%	176.7%
40,406,196	0.0%	0.0%	22,678,566	178.2%	178.2%
45,713,760	0.0%	0.0%	26,252,071	174.1%	174.1%
47,113,653	0.0%	0.0%	29,485,857	159.8%	159.8%
47,212,173	0.0%	0.0%	29,811,912	158.4%	158.4%
49,478,790	0.0%	0.0%	32,007,658	154.6%	154.6%
44,708,189	0.0%	0.0%	34,512,652	129.5%	129.5%

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FOREST PRESERVE DISTRICT EMPLOYEES' ANNUITY
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