



**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, 2015 and 2014**





# **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, 2015 and 2014**

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

This page is intentionally left blank.

## INTRODUCTORY SECTION - PAGE 5

- 6 Certificate of Achievement
- 7 Principal Officials
- 8 Organizational Chart
- 9 Letter of Transmittal

## FINANCIAL SECTION - PAGE 13

- 14 Report of Independent Auditors
- 18 Management's Discussion and Analysis

### BASIC FINANCIAL STATEMENTS

- 24 Combining Statements of Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position
- 26 Combining Statements of Changes in Pension Plan Fiduciary Net Position and Postemployment Healthcare Plan Net Position
- 28 Notes to Financial Statements

### REQUIRED SUPPLEMENTARY INFORMATION - PENSION

- 46 Schedule of Changes in the Employer's Net Pension Liability and Related Ratios
- 48 Schedule of Employer Contributions
- 48 Notes to Schedule of Employer Contributions
- 49 Schedule of Investment Returns

### REQUIRED SUPPLEMENTARY INFORMATION - POSTEMPLOYMENT HEALTHCARE

- 50 Schedule of Funding Progress
- 50 Schedule of Employer Contributions
- 51 Notes to Schedule of Funding Progress and Schedule of Employer Contributions

### SUPPLEMENTARY INFORMATION

- 52 Schedules of Administrative Expenses and Professional and Consulting Fees
- 53 Schedules of Investment Expenses
- 54 Additions by Source
- 54 Deductions by Type
- 54 Schedule of Employer Contributions Receivable

## INVESTMENT SECTION - PAGE 57

- 58 Investment Report
- 59 Investment Consultant's Commentary
- 60 Master Custodian's Certification
- 61 Summary of Investment Policy
- 64 Schedule of Investment Results
- 65 Schedule of Investment Summary and Asset Allocation
- 66 Schedule of Top Ten Largest Holdings
- 68 Schedule of Investment Manager Fees and Assets Under Management
- 69 Schedule of Brokerage Commissions

## ACTUARIAL SECTION - PAGE 73

- 74 Actuarial Certification - Pension Benefits
- 76 Actuarial Valuation - Pension Benefits
- 108 Actuarial Certification - Postemployment Healthcare
- 110 Actuarial Valuation - Postemployment Healthcare

### ADDITIONAL ACTUARIAL TABLES

- 128 Schedule of Active Member Valuation Data - Pension Benefits
- 128 Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Pension Benefits
- 128 Schedule of Retirees and Beneficiaries Added to and Removed from Rolls - Postemployment Healthcare
- 129 Solvency Test - Pension Benefits
- 129 Solvency Test - Postemployment Healthcare

## STATISTICAL SECTION - PAGE 131

- 132 Statement of Changes in Pension Plan Fiduciary Net Position
- 134 Statement of Changes in Postemployment Healthcare Plan Net Position
- 136 Schedule of Retired Members by Benefit Type - Pension Benefits
- 137 Schedule of Retired Members by Benefit Type - Postemployment Healthcare
- 138 Schedule of Average Benefit Payments - Pension Benefits
- 139 Schedule of Average Benefit Payments - Postemployment Healthcare
- 141 Additional Schedules Required by Employer

# Table of Contents

This page is intentionally left blank.





# 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, 2014**

Executive Director/CEO



**Retirement Board**

**Alexis Herrera**  
President  
Elected Cook County Employee

**Patrick J. McFadden**  
Vice-President  
Elected Cook County Annuitant

**Diahann Goode**  
Secretary  
Elected Cook County Employee

**John E. Fitzgerald**  
Elected Cook County Annuitant

**Joseph Nevius**  
Elected Forest Preserve District Annuitant

**Bill Kouruklis**  
*Ex Officio* Cook County Treasurer (Designee)

**Dennis White**  
Elected Forest Preserve District Employee

**Brent Lewandowski**  
Elected Cook County Employee  
(resigned July 7, 2016)

**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.

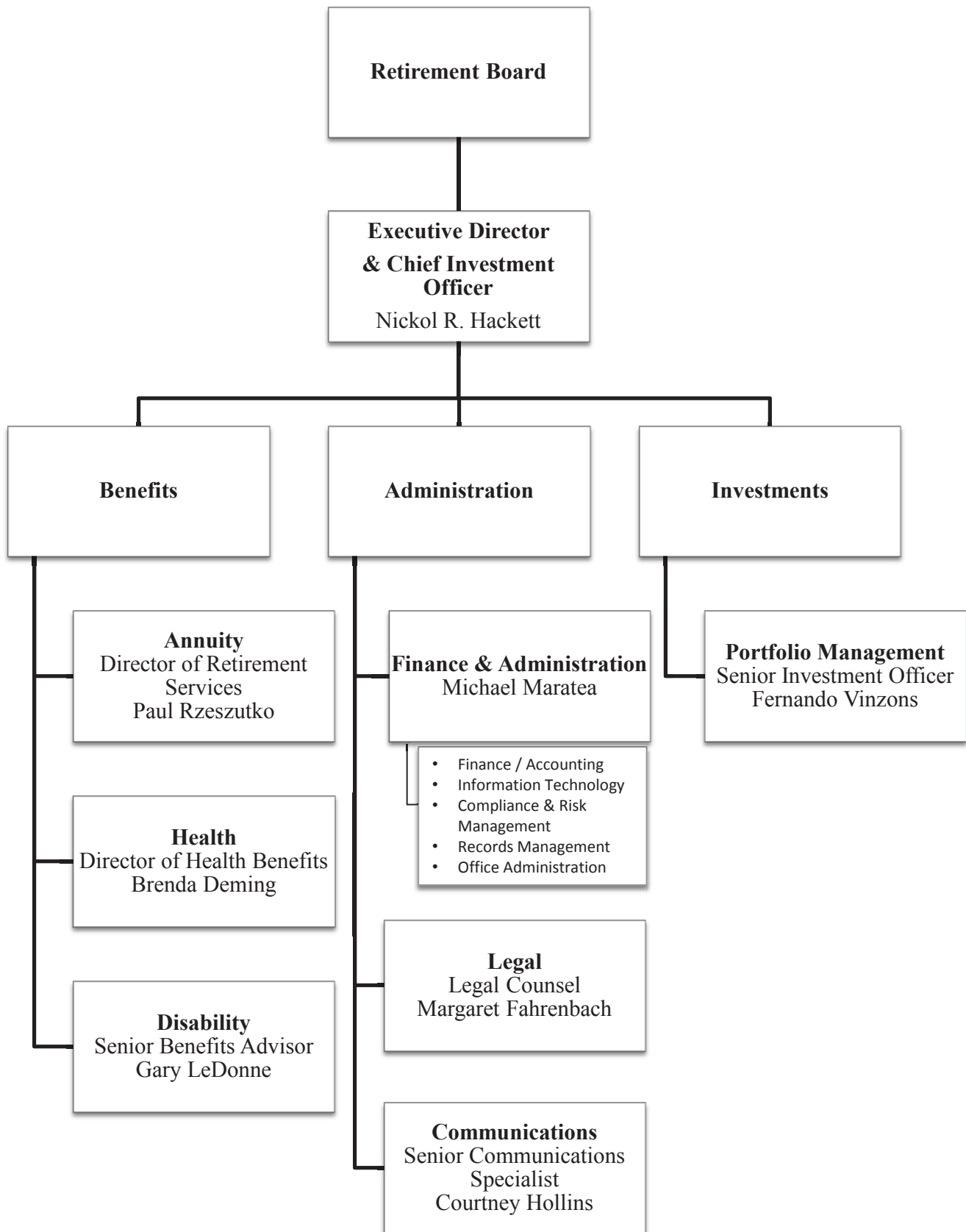
**Consulting Actuary**  
Buck Consultants, LLC

**Master Custodian**  
BNY Mellon

**Custodian**  
Cook County Treasurer

Investment Managers are listed on page 68.  
Brokers used by Investment Managers are listed on pages 69-70.

# Organizational Chart



# Letter of Transmittal



June 2, 2016

## 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 Members of the fund:

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, 2015. 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, 2015, the Forest Preserve Fund consisted of 568 active employees, 383 retirement annuitants, 146 survivor annuitants, and 1,149 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.

## Summary of Financial Experience

The following table summarizes the changes in the Forest Preserve Fund's net position between December 31, 2015 and December 31, 2014 (numbers in millions):

Change in Net Position	2015	2014	\$ Change	% Change
Total additions	\$10.2	\$20.7	(\$10.5)	(-50.7%)
Total deductions	\$19.2	\$19.1	\$0.1	0.5%
Change in net position from prior year	(\$9.0)	\$ 1.6	(\$10.6)	(-662.5%)

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



## INTRODUCTORY SECTION

---

### Letter of Transmittal (continued)

#### **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](http://CookCountyPension.com).

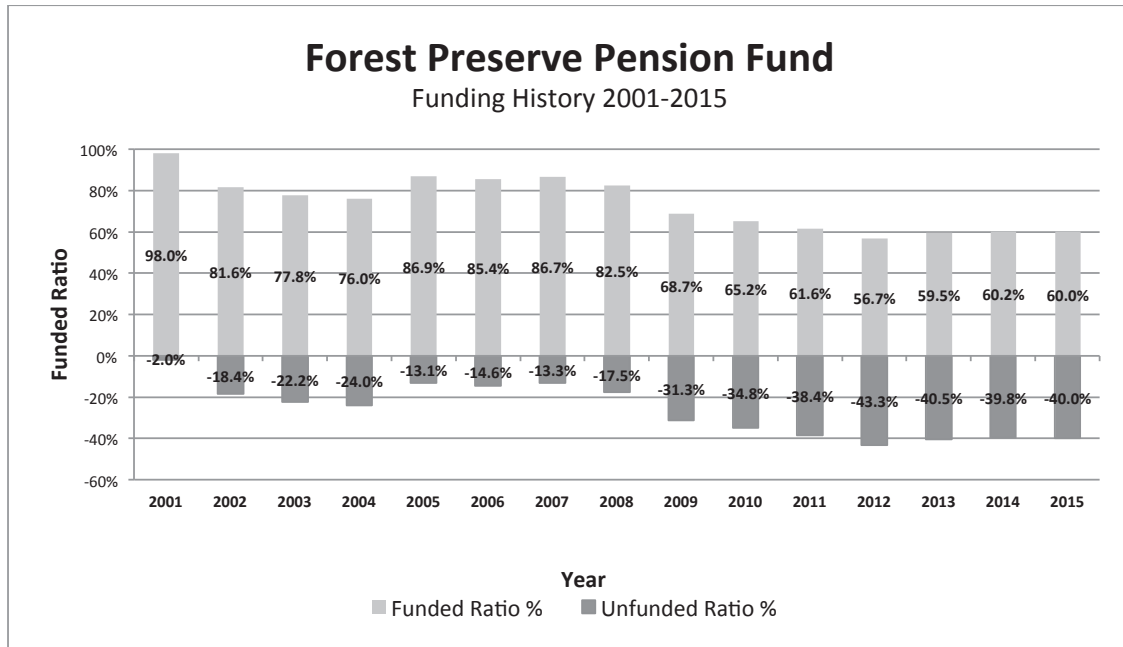
At year-end, the total invested assets of the fund were valued at \$189.4 million compared to \$193.6 million at the end of 2014. The investment portfolio's net rate of return for the year ended December 31, 2015 was 1.5% compared to 7.1% for the previous year. For the seventh consecutive year, the Forest Preserve Fund generated positive absolute returns for its members by earning approximately \$2.5 million in net investment income before benefit payments of approximately \$18 million in 2015. 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, \$10.2 million in total additions made up of employer contributions, employee contributions, annuitant healthcare benefit contributions, net investment earnings and miscellaneous income were offset by \$19.2 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.

#### **Funding**

The fund engages an independent actuary, 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, 2015, the fund's combined actuarial accrued liability for pension and retiree health benefits was \$322.8 million and the actuarial value of assets was \$193.7 million, resulting in an unfunded actuarial accrued liability of \$129.0 million. The funded ratio (the ratio of assets to liabilities) for pension benefits and retiree health benefits combined was 60.0% (vs. 60.2% in 2014). The fund's actuarial accrued liability for pension benefits only was \$291.7 million and the actuarial value assets was \$193.7 million, resulting in an unfunded liability of \$98.0 million and a funded ratio of 66.4%. The fund's actuarial accrued liability for retiree health benefits was \$49.5 million. Because there are no dedicated assets for retiree health benefits, the actuarial value of assets was \$0, resulting in an unfunded liability of \$49.5 million and a funded ratio for retiree health benefits of 0.0%.

Over the last decade, the Forest Preserve Pension Fund has been facing a long-term funding shortfall. The current funding policy projects insolvency in 2040 as employer contribution did not meet the fund's actuarial needs in 2015. 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 5.78 is needed to adequately finance the fund in 2016 and the current tax multiple of 1.30 has been less than the actuarially determined contribution requirement for more than 20 years. This methodology currently represents less than 22% of the required contribution and results in projected insolvency of the fund by 2040. As identified by the actuary, in the absence of action by the legislature to establish an actuarially based funding policy, the funded ratio is expected to trend downward until the fund's assets are depleted in 25 years. No new measures have been put forward to address the contributions. A detailed discussion of funding is provided in the Actuarial Section of this report.



### 2015 Initiatives

The fund, in combination with CEABF, continues to implement strategic initiatives by enhancing communications to stakeholder groups, 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.

#### *Health Benefits Administration*

Approximately 50% of annuitants utilize the fund's health benefits and pharmacy coverage offerings. The plan year 2015 marked the first full year of self-funded coverage under the medical plan. The Board and staff continued efforts to stabilize medical plan expenses while addressing the rising costs of prescription drug coverage. Several changes were made to the pharmacy program, resulting in a total net cost per member reduction of 5.4% as compared to 2014. Drug copays were also increased to keep pace with drug price inflation.

In the absence of dedicated funding to support health benefits, the Board and fund staff continues to implement strategies designed to reduce the cost of the program with minimal member disruption. A longer-term strategy of helping retirees to manage and improve their health has resulted in additional savings both in 2015 and in future years.

#### *Benefits Administration*

The fund, in combination with CEABF, maintains its commitment to delivering high-touch customer service amid high volumes of benefit requests, processing over 1,000 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 2015. Systems enhancements improved workflow and collaboration between departments, leading to increased efficiency of benefits administration and enhanced information security.

## INTRODUCTORY SECTION

---

### Letter of Transmittal (continued)

#### *Legislation*

The Cook County administration reintroduced the pension legislation (formally HB1154) as SB843, in the Illinois Senate on May 15, 2015. SB843 passed the Senate (House Amendment 1), 5 to 4, however was not called for a vote in the House before the end of the 2015 legislative session. As a result, no changes to benefits or funding related to the bill moved forward in 2015. The employer's pension reform proposal aims to return the Cook County and Forest Preserve District funds to 100% funding in 30 years through increased employee and employer contributions. Under current conditions, the fund receives insufficient contributions to meet cumulative benefit obligations and are projected to become insolvent in 2040.

#### **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, 2015. 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, 2014. This was the sixth 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





# 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 component unit 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, 2015 and 2014, 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 net position of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County as of December 31, 2015 and 2014, and the changes in 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, 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, 2013, 2012, 2011, and 2010 (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 2, 2016

This page is intentionally left blank.

---

# 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, 2015 and 2014. 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 \$8,986,804 or 4.5% from \$201,309,174 at December 31, 2014 to \$192,322,370 at December 31, 2015. Comparatively, net position increased by \$1,568,432 or .8% from \$199,740,742 at December 31, 2013 to \$201,309,174 at December 31, 2014. 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 1.5% for 2015, 7.1% for 2014 and 17.5% for 2013.



## Plan 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	
	2015	2014	2013	Dollars	Percent
Total assets	\$210,995,051	\$221,724,409	\$219,932,655	\$(10,729,358)	-4.8%
Total liabilities	18,672,681	20,415,235	20,191,913	(1,742,554)	-8.5%
Net position	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$199,740,742</u>	<u>\$ (8,986,804)</u>	-4.5%

## 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	
	2015	2014	2013	Dollars	Percent
<b>Additions</b>					
Employer contributions	\$ 3,462,037	\$ 3,136,752	\$ 2,863,145	\$ 325,285	10.4%
Employee contributions	2,771,533	2,645,164	2,687,211	126,369	4.8%
Annuitant healthcare benefits contributions	1,134,920	1,193,549	1,190,706	(58,629)	-4.9%
<b>Net investment income</b>					
(includes security lending activities)	2,549,975	13,525,606	30,383,512	(10,975,631)	-81.1%
Other	240,278	204,853	159,383	35,425	17.3%
Total additions	<u>10,158,743</u>	<u>20,705,924</u>	<u>37,283,957</u>	<u>(10,547,181)</u>	-50.9%
<b>Deductions</b>					
Benefits	18,347,316	17,858,418	16,858,913	488,898	2.7%
Refunds	635,908	961,637	958,707	(325,729)	-33.9%
Employee transfers to (from) Cook County	18,370	175,370	(106,012)	(157,000)	-89.5%
Administrative expenses	143,953	142,067	119,019	1,886	1.3%
Total deductions	<u>19,145,547</u>	<u>19,137,492</u>	<u>17,830,627</u>	<u>8,055</u>	0.0%
Net increase (decrease)	(8,986,804)	1,568,432	19,453,330	(10,555,236)	-673.0%
<b>Net position</b>					
Beginning of year	<u>201,309,174</u>	<u>199,740,742</u>	<u>180,287,412</u>	<u>1,568,432</u>	0.8%
End of year	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$ 199,740,742</u>	<u>\$(8,986,804)</u>	-4.5%

## FINANCIAL SECTION

### Management's Discussion and Analysis (continued)

---

#### Additions to Plan Net Position

Total additions were \$10,158,743 in 2015, \$20,705,924 in 2014 and \$37,283,957 in 2013.

Employer contributions increased to \$3,462,037 in 2015 from \$3,136,752 in 2014 and were \$2,863,145 in 2013. Employer contributions are statutorily set at 1.30 times employee contributions collected two years prior.

Employee contributions, including permissive service credit purchases, increased to \$2,771,533 in 2015 from \$2,645,164 in 2014 and were \$2,687,211 in 2013. Employees contribute 8.5% of covered wages.

Annuitant healthcare benefits contributions decreased to \$1,134,920 in 2015 from \$1,193,549 in 2014 and were \$1,190,706 in 2013. Annuitant healthcare benefits contributions fluctuate from year to year based on participation and healthcare costs.

Net investment income totaled \$2,549,975 for 2015 compared to \$13,525,606 for 2014. Comparatively, net investment income totaled \$30,383,512 for 2013. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

#### Deductions to Plan Net Position

Total deductions were \$19,145,547 in 2015, \$19,137,492 in 2014 and \$17,830,627 in 2013.

Benefits increased to \$18,347,316 in 2015 from \$17,858,418 in 2014 and \$16,858,913 in 2013 primarily due to the 3% annual cost of living increases for annuitants.

Refunds decreased to \$635,908 in 2015 from \$961,637 in 2014 and decreased from \$958,707 in 2013. These changes are due to fluctuations in refund applications.

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

The cost to administer the Plan increased to \$143,953 in 2015 from \$142,067 in 2014. Comparatively, the cost to administer the Plan increased to \$142,067 in 2014 from \$119,019 in 2013.

## Actuarial Information

### Pension Benefits

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

	<b>Funding for Pension Benefits</b>		
	<b>For the Years Ended December 31,</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>2013</u></b>
Total pension liability	\$ 457,577,963	\$ 416,145,173	\$ 403,494,413
Plan fiduciary net position	<u>(192,322,370)</u>	<u>(201,309,174)</u>	<u>(199,740,742)</u>
Employer's net pension liability	<u>\$ 265,255,593</u>	<u>\$ 214,835,999</u>	<u>\$ 203,753,671</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>42.03%</u>	<u>48.37%</u>	<u>49.50%</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:

	<b>Funding for Postemployment Healthcare Benefits</b>		
	<b>For the Years Ended December 31,</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>2013</u></b>
Unfunded actuarial accrued liability	<u>\$ 49,478,790</u>	<u>\$ 47,212,173</u>	<u>\$ 47,113,653</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:

	<b>Funding for Combined Pension and Postemployment Healthcare Benefits For the Years Ended December 31,</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>	<b><u>2013</u></b>
Unfunded actuarial accrued liability	<u>\$129,035,098</u>	<u>\$125,316,848</u>	<u>\$124,364,683</u>
Funded ratio	<u>60.02%</u>	<u>60.25%</u>	<u>59.48%</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



This page is intentionally left blank.

FINANCIAL SECTION

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

Year Ended 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	\$ 3,096,246	\$ 346,633
Employee contributions	15,650	15,650	-
Accrued investment income	246,588	246,588	-
Receivable for securities sold	400,073	400,073	-
Other	500	500	-
Total receivables	<u>4,105,690</u>	<u>3,759,057</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	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>210,995,051</u>	<u>210,648,418</u>	<u>346,633</u>
 <u>LIABILITIES</u>			
Accounts payable	81,260	81,260	-
Healthcare insurance payable	346,633	-	346,633
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	443,584	443,584	-
Payable for securities purchased	297,880	297,880	-
Securities lending collateral	17,503,324	17,503,324	-
Total liabilities	<u>18,672,681</u>	<u>18,326,048</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.

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

**Year Ended December 31, 2014**

<u>ASSETS</u>	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Receivables			
Employer contributions less allowance of \$114,201 in 2014	\$ 3,100,949	\$ 2,788,089	\$ 312,860
Employee contributions	13,230	13,230	-
Accrued investment income	263,808	263,808	-
Receivable for securities sold	5,514,847	5,514,847	-
Other	-	-	-
Total receivables	<u>8,892,834</u>	<u>8,579,974</u>	<u>312,860</u>
Investments			
U.S. and international equities	104,512,209	104,512,209	-
U.S. Government and government agency obligations	11,237,365	11,237,365	-
Corporate bonds	5,583,643	5,583,643	-
Collective international equity fund	11,097,933	11,097,933	-
Commingled fixed income fund	26,112,720	26,112,720	-
Exchange traded funds	5,945,592	5,945,592	-
Hedge fund	19,255,350	19,255,350	-
Real estate	7,684,241	7,684,241	-
Short-term investments	2,209,864	2,209,864	-
Total investments	<u>193,638,917</u>	<u>193,638,917</u>	<u>-</u>
Collateral held for securities on loan	19,192,658	19,192,658	-
Total assets	<u>221,724,409</u>	<u>221,411,549</u>	<u>312,860</u>
 <u>LIABILITIES</u>			
Accounts payable	75,361	75,361	-
Healthcare insurance payable	312,860	-	312,860
Due to County Employees' and Officers'			
Annuity and Benefit Fund of Cook County	542,267	542,267	-
Payable for securities purchased	292,089	292,089	-
Securities lending collateral	19,192,658	19,192,658	-
Total liabilities	<u>20,415,235</u>	<u>20,102,375</u>	<u>312,860</u>
Net position			
Net position restricted for pensions	201,309,174	201,309,174	-
Net position held in trust for postemployment healthcare benefits	-	-	-
Total	<u>\$201,309,174</u>	<u>\$201,309,174</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, 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	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 (from) 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 increase (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.



**FINANCIAL SECTION**

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

Year Ended December 31, 2014

	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
<b>Additions</b>			
Employer contributions	\$ 3,136,752	\$ 1,520,316	\$ 1,616,436
Employee contributions			
Salary deductions	2,542,583	2,542,583	-
Refund repayments	65,898	65,898	-
Former and miscellaneous service payments	2,701	2,701	-
Deductions in lieu of disability	33,982	33,982	-
Total employee contributions	<u>2,645,164</u>	<u>2,645,164</u>	<u>-</u>
Annuitant healthcare benefits contributions	<u>1,193,549</u>	<u>-</u>	<u>1,193,549</u>
<b>Investment income</b>			
Net appreciation in fair value of investments	10,686,264	10,686,264	-
Dividends	2,478,640	2,478,640	-
Interest	925,373	925,373	-
	<u>14,090,277</u>	<u>14,090,277</u>	<u>-</u>
Less investment expenses	(613,597)	(613,597)	-
Net investment income	<u>13,476,680</u>	<u>13,476,680</u>	<u>-</u>
<b>Securities lending</b>			
Income	60,237	60,237	-
Expenses	(11,311)	(11,311)	-
Net securities lending income	<u>48,926</u>	<u>48,926</u>	<u>-</u>
<b>Other</b>			
Medicare Part D subsidy	154,957	-	154,957
Prescription plan rebates	49,896	-	49,896
Miscellaneous	-	-	-
Total other additions	<u>204,853</u>	<u>-</u>	<u>204,853</u>
Total additions	<u>20,705,924</u>	<u>17,691,086</u>	<u>3,014,838</u>
<b>Deductions</b>			
<b>Benefits</b>			
<b>Annuity</b>			
Employee	12,464,872	12,464,872	-
Spouse and children	2,206,512	2,206,512	-
<b>Disability</b>			
Ordinary	159,296	159,296	-
Duty	12,900	12,900	-
Healthcare	3,014,838	-	3,014,838
Total benefits	<u>17,858,418</u>	<u>14,843,580</u>	<u>3,014,838</u>
Refunds	961,637	961,637	-
Employee transfers to (from) Cook County Employees' and Officers' Annuity and Benefit of Cook County	175,370	175,370	-
Administrative expenses	142,067	142,067	-
Total deductions	<u>19,137,492</u>	<u>16,122,654</u>	<u>3,014,838</u>
Net increase (decrease)	1,568,432	1,568,432	-
<b>Net position</b>			
Beginning of year	<u>199,740,742</u>	<u>199,740,742</u>	<u>-</u>
End of year	<u>\$201,309,174</u>	<u>\$201,309,174</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 (formerly Chapter 108-1/2, Article 10 of the Illinois Revised Statutes).

**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.

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

**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. The hedge fund and real estate investments are carried at fair value as estimated by each investment manager. Short-term investments are carried at cost which approximates fair value. 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, 2015 and 2014, 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 2, 2016, 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 of Cook County, Illinois (Forest Preserve District) and the dependents of such employees. The Plan is considered to be a component unit of Forest Preserve District of Cook County, Illinois and is included in the Forest Preserve District's financial statements as a pension trust fund.

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, 2015 and 2014 was \$32,007,657 and \$29,811,912 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 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, 2015 and 2014, participants consisted of the following:

	<u>2015</u>	<u>2014</u>
Active Members	568	525
Retired Members	383	384
Beneficiaries	146	151
Inactive Members	<u>1,149</u>	<u>1,186</u>
Total	<u>2,246</u>	<u>2,246</u>

#### Note 3: Employer's Pension Liability

##### Net Pension Liability

The components of the net pension liability of the Plan for the years ended December 31, 2015 and 2014 are as follows:

	<u>2015</u>	<u>2014</u>
Total pension liability	\$457,577,963	\$416,145,173
Plan fiduciary net position	<u>192,322,370</u>	<u>201,309,174</u>
Employer's net pension liability	<u>\$265,255,593</u>	<u>\$214,835,999</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>42.03%</u>	<u>48.37%</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, 2015 and 2014 using the following actuarial methods and assumptions:

Actuarial valuation dates	December 31, 2015 and 2014
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, 2015 and 2014 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, 2015 and 2014 were 4.23% and 4.66% 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 3.20% and 3.34% at December 31, 2015 and 2014, 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.

**Discount Rate Sensitivity**

The following is an analysis of the net pension liability's sensitivity to changes in the discount rate at December 31, 2015 and 2014. 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:

<b>December 31, 2015</b>			
	<b>1% Decrease</b>	<b>Current Discount Rate</b>	<b>1% Increase</b>
	<u>3.23%</u>	<u>4.23%</u>	<u>5.23%</u>
Net Pension Liability	<u>\$344,128,366</u>	<u>\$265,255,593</u>	<u>\$203,107,690</u>

<b>December 31, 2014</b>			
	<b>1% Decrease</b>	<b>Current Discount Rate</b>	<b>1% Increase</b>
	<u>3.66%</u>	<u>4.66%</u>	<u>5.66%</u>
Net Pension Liability	<u>\$283,619,141</u>	<u>\$214,835,999</u>	<u>\$160,243,813</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.

The combined funding information of the pension and postemployment healthcare benefits of the Plan as of December 31, 2015 and 2014 are as follows:

	<b>2015</b>			
	<b><u>Pension</u></b>	<b><u>Postemployment Healthcare</u></b>	<b><u>Assumption Adjustment</u></b>	<b><u>Combined</u></b>
Employer normal cost	\$ 2,762,204	\$ 1,696,693	\$ (1,138,143)	\$ 3,320,754
Amortization of UAAL	8,300,758	2,773,615	(1,203,924)	9,870,449
Interest cost	<u>-</u>	<u>167,211</u>	<u>(167,211)</u>	<u>-</u>
Actuarially determined contribution	11,062,962	4,637,519		13,191,203
Expected net employer contribution	<u>(1,763,345)</u>	<u>(1,698,692)</u>	73,464	<u>(3,388,573)</u>
Expected employer contribution short-fall	<u>\$ 9,299,617</u>	<u>\$ 2,938,827</u>		<u>\$ 9,802,630</u>
Actuarially determined multiplier				<u>5.06</u>
Present authorized multiplier				<u>1.30</u>

	<b>2014</b>			
	<b><u>Pension</u></b>	<b><u>Postemployment Healthcare</u></b>	<b><u>Assumption Adjustment</u></b>	<b><u>Combined</u></b>
Employer normal cost	\$ 2,601,939	\$ 1,706,221	\$ (1,031,042)	\$ 3,277,118
Amortization of UAAL	7,564,722	2,767,828	(537,098)	9,795,452
Interest cost	<u>-</u>	<u>167,102</u>	<u>(167,102)</u>	<u>-</u>
Actuarially determined contribution	10,166,661	4,641,151		13,072,570
Expected net employer contribution	<u>(1,520,316)</u>	<u>(1,616,436)</u>	76,587	<u>(3,060,165)</u>
Expected employer contribution short-fall	<u>\$ 8,646,345</u>	<u>\$ 3,024,715</u>		<u>\$10,012,405</u>
Actuarially determined multiplier				<u>5.55</u>
Present authorized multiplier				<u>1.30</u>

The assumption adjustment is due to a change in the interest rate assumptions, which is 7.5% for the pension and combined valuations and 4.5% for the postemployment healthcare benefits valuation.

## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### 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, 2015 and 2014, 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>	

##### 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 table above.

##### Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 1.5% and 7.1% for the years ended December 31, 2015 and 2014, 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)****Investment Summary**

The following table presents a summarization of the aggregate fair value (carrying amount) of the Plan's investments as of December 31, 2015 and 2014. Investments that represent 5% or more of the Plan's net position are separately identified.

<u>Investments</u>	<u>2015</u>	<u>2014</u>
U.S and international equities	\$ 98,025,342	\$104,512,209
U.S. Government and government agency obligations	11,425,544	11,237,365
Corporate bonds	5,537,245	5,583,643
Collective international equity fund		
Lazard Emerging Markets Sudan Free Fund	9,804,800	11,097,933
Commingled fixed income fund		
BNY Mellon EB DV Non-Securities Lending		
Aggregate Bond Index Fund	20,557,963	26,112,720
Exchange traded funds		
Real estate	6,398,130	5,945,592
Hedge fund		
Burnham Harbor Fund Ltd.	19,670,830	19,255,350
Real estate		
Limited partnerships	11,720,644	7,684,241
Short-term investments	6,245,539	2,209,864
Total investments	<u>\$189,386,037</u>	<u>\$193,638,917</u>

## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### Note 5: Investments (continued)

##### Investment Risk

GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, specifies various disclosure requirements.

##### Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Plan will not be able to recover the value of its investments or collateral securities in the possession of an outside party.

The Plan had no investments that were uninsured and unregistered, with securities held by the counterparty, or by its trust department or agent, but not held in the Plan's name, as of December 31, 2015 and 2014.

##### 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, 2015 and 2014 as valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

<u>Type of Investment</u>	<u>Rating</u>	<u>2015</u>	<u>2014</u>
U.S. Government and government agency obligations	Aa/AA	<u>\$ 11,425,544</u>	<u>\$ 11,237,365</u>
Corporate bonds	A/A	\$ 1,837,174	\$ 1,705,249
	Baa/BBB	3,348,446	3,488,805
	Ba/BB	351,625	389,590
		<u>\$ 5,537,245</u>	<u>\$ 5,583,644</u>
Commingled fixed income fund	Not Rated	<u>\$ 20,557,963</u>	<u>\$ 26,112,720</u>
Short-term investments	Not Rated	<u>\$ 6,245,539</u>	<u>\$ 2,209,864</u>



**Note 5: Investment Summary (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 (Barclays Capital Aggregate Fixed Income, which was 5.68 years at December 31, 2015 and 5.55 years at December 31, 2014). The following table presents a summarization of the Plan's debt investments at December 31, 2015 and 2014 using the segmented time distribution method:

<u>Type of Investment</u>	<u>Maturity</u>	<u>2015</u>	<u>2014</u>
U.S. Government and government agency obligations	1 - 5 years	\$ 2,413,146	\$ 3,219,975
	5 - 10 years	3,328,693	2,752,416
	Over 10 years	5,683,705	5,264,974
		<u>\$11,425,544</u>	<u>\$11,237,365</u>
Corporate bonds	< 1 year	\$ -	\$ 208,052
	1 - 5 years	768,998	322,334
	5 - 10 years	3,802,893	3,934,640
	Over 10 years	965,354	1,118,617
		<u>\$ 5,537,245</u>	<u>\$ 5,583,643</u>
Commingled fixed income fund	5-10 years	<u>\$20,557,963</u>	<u>\$26,112,720</u>
Short-term investments	< 1 year	<u>\$ 6,245,539</u>	<u>\$ 2,209,864</u>

## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### 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, 2015 and 2014 is as follows:

<u>Type of Investment</u>	<u>Fair Value</u> <u>(USD)</u> <u>2015</u>	<u>Fair Value</u> <u>(USD)</u> <u>2014</u>
U.S. and international equities		
Australian dollar	\$ 2,251,796	\$ 3,490,366
British pound sterling	10,120,800	11,141,063
Canadian dollar	932,056	999,604
Danish krone	849,768	-
European euro	7,824,192	7,248,314
Hong Kong dollar	-	405,367
Israeli shekel	351,277	206,526
Japanese yen	6,733,868	7,920,617
New Zealand dollar	825,020	670,884
Norwegian krone	885,152	194,576
Swedish krona	2,218,225	2,390,060
Swiss franc	2,999,393	4,284,551
U.S. dollar	62,033,795	65,560,281
Total U.S. and international equities	<u>\$ 98,025,342</u>	<u>\$104,512,209</u>

For the years ended December 31, 2015 and 2014, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was \$10,927,194 and \$8,379,788 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.

## Note 6: 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 Statement 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 Statement 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, 2015 and 2014, the Plan's investments included the following forward currency contract balances:

	<u>2015</u>	<u>2014</u>
Hedging derivative instruments		
Forward currency contract receivables	<u>\$132,957</u>	<u>\$61,338</u>
Forward currency contract payables	<u>\$132,957</u>	<u>\$61,338</u>

For the years ended December 31, 2015 and 2014, the change in fair value of the deferred inflows and outflows of the foreign currency contracts was not material to these financial statements.

## Note 7: 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 137 days for 2015 and 119 days for 2014; 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, 2015 and 2014 of 78 and 27 days, respectively.

As of December 31, 2015 and 2014, the fair value (carrying amount) of loaned securities was \$20,744,664 and \$20,380,084 respectively. As of December 31, 2015 and 2014, the fair value (carrying amount) of cash collateral received by the Plan was \$17,503,324 and \$19,192,658 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, 2015 and 2014, the fair value (carrying amount) of noncash collateral received by the Plan was \$3,710,684 and \$1,702,899 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 2015 and 2014, there were no losses due to default of a borrower or the lending agent.

**Note 7: Securities Lending (continued)**

A summary of securities loaned at fair value as of December 31, 2015 and 2014 is as follows:

	<u>2014</u>	<u>2013</u>
Securities loaned - cash collateral		
U.S. and international equities	\$ 10,323,768	\$ 12,755,329
U.S. Government and government agency obligations	131,141	2,136,638
Exchanged traded funds	6,092,686	3,201,747
Corporate bonds	561,066	625,219
Total securities loaned - cash collateral	<u>17,108,661</u>	<u>18,718,933</u>
Securities loaned - non-cash collateral		
U.S. and international equities	677,845	319,545
U.S. Government and government agency obligations	2,602,603	525,945
Exchange traded funds	355,555	815,661
Total securities loaned - non-cash collateral	<u>3,636,003</u>	<u>1,661,151</u>
Total	<u>\$20,744,664</u>	<u>\$20,380,084</u>

**Note 8: 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.

As of January 1, 2015, all benefit elections under the PGHBP are fully self-insured. Prior to January 1, 2015, certain benefit elections were insured and others were 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, 2015 and 2014, the number of annuitants and surviving spouses participating in the PGHBP, totaled 278 and 287 respectively.



## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### Note 8: Postemployment Group Healthcare Benefit Plan (continued)

The following is a reconciliation of healthcare benefits payable for the years ended December 31, 2015 and 2014:

	<u>2015</u>	<u>2014</u>
Healthcare benefits payable, January 1	\$ 312,860	\$ 265,164
Claims incurred	3,096,221	3,062,534
Claims paid	(3,062,448)	(3,014,838)
Healthcare benefits payable, December 31	<u>\$ 346,633</u>	<u>\$ 312,860</u>

The Plan's actuary, Segal Consultants, estimated medical claims incurred but not reported (IBNR) as of December 31, 2015 based on industry standards including historical IBNR levels, insurance company studies, lag studies and actuarial assumptions. Prior to January 1, 2015, the Plan estimated the medical claims liability based on actual claims paid and known unpaid claims subsequent to year end. The Plan estimated the prescription claims liability for both December 31, 2015 and 2014 based 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** - 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. 2014 - 8.0% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached pre-medicare. 6.50% 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 8: Postemployment Group Healthcare Benefit Plan (continued)****Funded Status and Funding Progress**

As of December 31, 2015, the most recent actuarial valuation date, 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 9: 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, 2015 and 2014, the County Fund allocated administrative expenditures of \$92,675 and \$90,660 respectively.

As of December 31, 2015 and 2014, the Plan owes the County Fund \$443,584 and \$542,267 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

**Note 10: Pronouncements Issued Not Yet Effective**

In March 2015, GASB issued Statement No. 72, *Fair Value Measurement and Application*, which provides guidance for fair value measurement and application. The Statement defines fair value, provides guidance for determining fair value measurement for financial reporting purposes and specifies required disclosures related to fair value measurements. Statement No. 72 is effective for the Plan's fiscal year ending December 31, 2016.

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.

**Note 10: Pronouncements Issued Not Yet Effective (continued)**

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, *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 June 2015, GASB issued Statement No. 76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*. Statement No. 76 identifies the hierarchy of generally accepted accounting principles (GAAP) which consists of the sources of accounting principles used to prepare financial statements of state and local government entities in conformity with GAAP and the framework for selecting those principles. Statement No. 76 reduces the hierarchy to two categories of authoritative GAAP and addresses the use of authoritative and nonauthoritative literature in the event that the accounting treatment for a transaction or other event is not specified within a source of authoritative GAAP. Statement No. 76 is effective for the Plan's fiscal year ending December 31, 2016.

In August 2015, GASB issued Statement No. 77, *Tax Abatement Disclosures*. Statement No. 77 requires governments that enter into tax abatement agreements to disclose certain information about the agreements including descriptive information, the gross dollar amount of the taxes abated during the period and commitments made by a government as part of the agreement. Statement No. 77 is effective for the Plan's fiscal year ending December 31, 2016.

In December 2015, GASB issued Statement No. 78, *Pensions Provided Through Certain Multiple-Employer Defined Benefit Pension Plans*. Statement No. 78 amends the scope and applicability of Statement No. 68, *Accounting and Financial Reporting for Pensions - an amendment of GASB Statement No. 27*, to exclude pensions provided to employees of state and local governmental employers through cost-sharing multiple-employer defined benefit pension plan that are not a state or local governmental pension plan, are used to provide defined benefit pensions both to employees of state or local governmental employers and to employees of employers that are not state or local governmental employers, and have no predominant state or local governmental employer. Statement No. 78 is effective for the Plan's fiscal year ending December 31, 2016.

**Note 10: Pronouncements Issued Not Yet Effective (continued)**

In December 2015, GASB issued Statement No. 79, *Certain External Investment Pools and Pool Participants*. Statement No. 79 addresses accounting and financial reporting for certain external investment pools and pool participants. Statement No. 79 establishes criteria for an external investment pool to qualify for making the election to measure all of its investments at amortized cost for financial reporting purposes. Statement No. 79 is effective for the Plan's fiscal year ending December 31, 2016.

In January 2016, GASB issued Statement No. 80, *Blending Requirement 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.

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.

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, 2015</u>
Total pension liability	
Service cost	\$ 9,656,955
Interest	19,471,424
Changes of benefit terms	-
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><u>\$457,577,963</u></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><u>\$192,322,370</u></u>
Employer's net pension liability	<u><u>\$265,255,593</u></u>
Plan fiduciary net position as a percentage of the total pension liability	<u>42.03%</u>
Covered-employee payroll	<u><u>\$ 32,007,657</u></u>
Employer's net pension liability as a percentage of covered-employee payroll	<u><u>828.73%</u></u>

*See Report of Independent Auditors.*



## 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
Changes of benefit terms	-
Difference between expected and actual experience	-
Changes of assumptions	-
Expected benefit payments, including refunds of employee contributions	(15,805,217)
Net change in total pension liability	<u>12,650,760</u>
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	199,740,742
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>

*See Report of Independent Auditors.*

**FINANCIAL SECTION**

**Required Supplementary Information - Pension (continued)**

**Schedule of Employer Contributions - Last Ten Fiscal Years**

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Actuarially determined contribution	\$11,062,962	\$10,166,661	\$10,921,946	\$ 9,608,247	\$ 8,590,721
Contributions in relation to the actuarially determined contribution	(1,763,345)	(1,520,316)	(1,403,628)	(2,117,976)	(2,457,405)
Contribution deficiency	<u>\$ 9,299,617</u>	<u>\$ 8,646,345</u>	<u>\$ 9,518,318</u>	<u>\$ 7,490,271</u>	<u>\$ 6,133,316</u>
Covered employee payroll	<u>\$32,007,657</u>	<u>\$29,811,912</u>	<u>\$29,485,857</u>	<u>\$26,252,071</u>	<u>\$22,678,566</u>
Contributions as a percentage of covered employee payroll	<u>5.51%</u>	<u>5.10%</u>	<u>4.76%</u>	<u>8.07%</u>	<u>10.84%</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, 2015

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>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Actuarially determined contribution	\$ 7,626,778	\$ 4,498,036	\$ 3,329,502	\$ 2,809,494	\$ 2,691,753
Contributions in relation to the actuarially determined contribution	(1,333,140)	(1,282,642)	(523,928)	(1,995,300)	(1,532,343)
Contribution deficiency	<u>\$ 6,293,638</u>	<u>\$ 3,215,394</u>	<u>\$ 2,805,574</u>	<u>\$ 814,194</u>	<u>\$ 1,159,410</u>
Covered employee payroll	<u>\$24,397,376</u>	<u>\$24,967,115</u>	<u>\$23,474,621</u>	<u>\$21,078,316</u>	<u>\$19,172,756</u>
Contributions as a percentage of covered employee payroll	<u>5.46%</u>	<u>5.14%</u>	<u>2.23%</u>	<u>9.47%</u>	<u>7.99%</u>

*See Report of Independent Auditors.*

### Schedule of Investment Returns

	December 31, 2015	December 31, 2014
Annual money-weighted rate of return, net of investment expense	1.5%	7.1%

*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>
2010	\$ -	\$43,102,510	\$43,102,510	0.00%	\$24,397,376	176.67%
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%

(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>
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%
2015	\$4,637,519	\$ -	\$1,698,692	36.63%

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, 2015 and 2014
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	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.
	2014 - 8.0% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare and 6.50% 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, 2015 and 2014

	<u>2015</u>	<u>2014</u>
<b>Administrative expenses</b>		
Administrative expenses allocated from County		
Employees' and Officers' Annuity and Benefit		
Fund of Cook County	\$ 92,675	\$ 90,660
Bank charges	9,460	9,660
Election expense	2,626	-
Membership	435	435
Miscellaneous	-	8,345
Professional and consulting fees	30,757	24,967
Regulatory filing fees	8,000	8,000
Total	<u>\$143,953</u>	<u>\$142,067</u>
 <b>Professional and consulting fees</b>		
Actuarial service	\$ 1,857	\$ 2,193
Audit	23,080	18,309
Consulting	1,191	2,402
Legal	3,782	1,212
Lobbyist	847	851
Total	<u>\$ 30,757</u>	<u>\$ 24,967</u>



## Schedules of Investment Expenses

### Years Ended December 31, 2015 and 2014

	<u>2015</u>	<u>2014</u>
<b>Investment manager expense</b>		
American Realty Advisors	\$ -	\$ 36,183
Blackstone Alternative Asset Management	198,139	188,910
Channing Capital Management	72,513	68,496
J.P. Morgan Asset Management	44,212	33,958
Lazard Asset Management, LLC	120,214	112,573
LM Capital Group, LLC	26,310	26,015
Mellon Capital	6,454	6,410
RhumbLine Advisers	4,477	4,967
TIAA-CREF	-	35,747
William Blair & Company	98,412	87,667
<b>Total investment manager expenses</b>	<u>570,731</u>	<u>600,926</u>
<b>Investment consulting fees</b>		
Callan Associates Inc.	7,525	7,671
<b>Investment custodian fees</b>		
BNY Mellon	5,000	5,000
<b>Total investment expenses</b>	<u>\$583,256</u>	<u>\$613,597</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>
2010	\$2,660,034	\$2,452,696	\$ 984,039	\$20,250,639	\$227,553	\$26,574,961
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

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>
2010	\$14,027,446	\$ 343,863	\$ 257,975	\$104,765	\$14,734,049
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

**Schedule of Employer Contributions Receivable**

<u>Levy Year</u>	<u>December 31, 2015</u>			
	<u>Contributions Receivable</u>	<u>Uncollected Balance</u>	<u>Reserved</u>	<u>Net Contributions Receivable</u>
2014	\$3,154,809	\$ 54,617	\$ 10,801	\$ 43,816
2015	\$3,493,374	3,493,374	94,311	3,399,063
		<u>\$3,547,991</u>	<u>\$105,112</u>	<u>\$ 3,442,879</u>

Notes: Employer contributions are funded primarily through a County tax levy.  
Uncollected employer contributions for the 2013 and prior levy years are fully reserved.

This page is intentionally left blank.

This page is intentionally left blank.



# 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 2, 2016

To the Retirement Board and Members of the fund:

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, 2015, the fund's investment portfolio was valued at \$189.4 million, returning 1.5% net of investment management fees over the previous 12-month period. Performance results reflect the seventh consecutive year of positive returns. Of note, the fund generated approximately \$2.5 million of net investment income, which partially offset approximately \$18.3 million in benefit payments in 2015.

Positive absolute returns were broad-based across most asset classes with leadership primarily driven by the fund's real estate and hedge fund-of-fund programs. Domestic markets across asset classes contributed positively for 2015 and all equity managers outperformed their respective benchmarks. Fixed income also contributed positively to performance and returned nearly 1% for the year. In summary, four of the five asset classes generated positive absolute returns and the fund outperformed its custom benchmark by over 100%.

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.

Sincerely,

A handwritten signature in black ink, appearing to read "Nickol R. Hackett". The signature is fluid and cursive.


Nickol R. Hackett  
Executive Director and Chief Investment Officer



# Investment Consultant's Commentary



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



Main 312.346.3536  
Fax 312.346.1356

[www.callan.com](http://www.callan.com)

May 9, 2016

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, 2015. As of December 31, 2015, the Fund's fair value totaled \$189.4 million, an approximate \$4.1 million decrease since December 31, 2014.

The global economy seemed to improve as 2015 unfolded, but market sentiment turned sharply negative as the year drew to a close. Growing unease with economic change is evident in the capital markets. Commodity prices slid further, led by oil, as China struggled with its centrally planned shift to a consumer-driven economy. The S&P 500 was able to finish 2015 in the black with a return of 1.38% despite a middling November and disappointing December stemming from a slowing Chinese economy, other weak emerging markets, commodity price declines, and the strength of the U.S. dollar. Non-U.S. developed markets, as measured by the MSCI EAFE Index, returned -0.81% for the year. Bond markets stuttered in the U.S. after the Federal Reserve announced a rate increase. The Barclays Aggregate Index returned 0.55% in 2015. Real Estate returns were strong in 2015, as the NCREIF Property Index returned 13.33%.

As noted in the Schedule of Investment Results, the Fund generated a total return of 1.49% net-of-fees for the year ended December 31, 2015, which out-performed the 0.73% return of the Fund's target benchmark (the Policy Benchmark). In aggregate, on a net-of-fee basis, the Fund's equity and fixed income managers exceeded their benchmarks.

Sincerely,



Michael J. Joecken  
Senior Vice President

# Master Custodian's Certification



BNY MELLON

Asset Servicing

**Michael J. Beggy**  
Vice President

May 9, 2016

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, 2015 through December 31, 2015.

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,

Michael J. Beggy  
Service Director

---

# 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, 2015

	<u>2015</u>	<u>Annualized Returns</u> <u>3 Years</u>	<u>5 Years</u>
Total Fund	1.5%	8.5%	8.0%
Policy Benchmark *	0.7%	6.7%	6.6%
Domestic Equity	1.9%	15.4%	12.4%
Russell 3000	0.1%	14.4%	12.0%
International Equity	-1.1%	6.5%	6.0%
MSCI ACWI ex. U.S.	-5.3%	1.9%	1.5%
Fixed Income	0.8%	1.5%	3.1%
Barclays Aggregate	0.6%	1.4%	3.1%
Real Estate	3.2%	8.1%	10.6%
NCREIF	13.3%	12.0%	12.2%
Hedge Funds	3.5%	7.3%	N/A
Libor-3 Month+4%	4.3%	4.3%	4.3%

\*The Policy Benchmark is as follows:

- 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 geometrically-linked, 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,

<b><u>Asset Class</u></b>	<b>2015</b>			<b>2014</b>		
	<b><u>Fair Value</u></b>	<b><u>Percent of Total</u></b>	<b><u>Target</u></b>	<b><u>Fair Value</u></b>	<b><u>Percent of Total</u></b>	<b><u>Target</u></b>
Domestic Equity	\$ 62,033,795	33%	30%	\$ 65,560,281	34%	30%
International Equity	45,796,347	24%	23%	50,049,861	26%	23%
Fixed Income	37,520,752	20%	29%	42,933,728	22%	29%
Real Estate	18,118,774	10%	9%	13,629,833	7%	9%
Hedge Funds-of-Funds	19,670,830	10%	9%	19,255,350	10%	9%
Short Term Investments	6,245,539	3%	0%	2,209,864	1%	0%
Total Investments	<u>\$189,386,037</u>	<u>100%</u>	<u>100%</u>	<u>\$193,638,917</u>	<u>100%</u>	<u>100%</u>

# Schedule of Top Ten Largest Holdings

For Year Ended December 31, 2015

<u>Top 10 Domestic Equity Holdings</u>	<u>Sector</u>	<u>Shares</u>	<u>Fair Value</u>	<u>% of Total</u>
Apple Inc.	Technology	10,650	\$ 1,121,019	1.8%
Microsoft Corp.	Technology	15,265	846,902	1.4%
Booz Allen Hamilton Holding Corp.	Management Services	22,995	709,396	1.1%
Exxon Mobil Corp.	Energy	7,955	620,092	1.0%
Affiliated Managers Group Inc.	Financial Services	3,765	601,496	1.0%
General Electric Co.	Capital Goods	18,130	564,750	0.9%
Hexcel Corp.	Industrial Goods	12,053	559,862	0.9%
ManpowerGroup Inc.	Staffing and Outsourcing Services	6,536	550,919	0.9%
Johnson & Johnson	Health Care	5,286	542,978	0.9%
Lazard Ltd.	Financial Services	11,798	530,028	0.9%
<b>Total Top 10 Domestic Equity Holdings</b>		<u>114,433</u>	<u>\$ 6,647,442</u>	<u>10.7%</u>
<b>Total Domestic Equity</b>			<u>\$62,033,795</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	32,121	\$ 1,639,973	3.6%
Daiwa House Industry Co. Ltd. (Japan)	Home Builders	49,000	1,426,884	3.1%
Don Quijote (Japan)	Retail	36,900	1,311,339	2.9%
Prudential (United Kingdom)	Financial Services	56,446	1,273,727	2.8%
British American Tobacco (United Kingdom)	Tobacco	22,757	1,264,852	2.8%
ASSA Abloy (Sweden)	Consumer Manufacturing	57,657	1,217,345	2.7%
Novartis (Switzerland)	Health Care	12,063	1,046,022	2.3%
Lloyds Banking Group (United Kingdom)	Financial Services	942,837	1,015,415	2.2%
Swedbank AB (Sweden)	Financial Services	45,099	1,000,880	2.2%
Informa (United Kingdom)	Publishing	110,059	994,384	2.2%
<b>Total Top 10 International Equity Holdings</b>		<u>1,364,939</u>	<u>\$12,190,821</u>	<u>26.6%</u>
<b>Total International Equity</b>			<u>\$45,796,347</u>	<u>100.0%</u>

**INVESTMENT SECTION**

**Schedule of Top Ten Largest Holdings (continued)**

**For Year Ended December 31, 2015**

<b><u>Top 10 Fixed Income Holdings</u></b>	<b><u>Sector</u></b>	<b><u>Par</u></b>	<b><u>Fair Value</u></b>	<b><u>% of Total</u></b>
U.S. Treasury Note 2.000% 02/15/2023	U.S. Governments	725,000	\$ 720,781	1.9%
U.S. Treasury Note 2.125% 08/15/2021	U.S. Governments	600,000	607,104	1.6%
U.S. Treasury Note 3.125% 05/15/2019	U.S. Governments	550,000	580,228	1.5%
U.S. Treasury Note 1.250% 10/31/2019	U.S. Governments	550,000	543,510	1.4%
U.S. Treasury Note 3.750% 11/15/2018	U.S. Governments	500,000	534,940	1.4%
FNMA Pool #0AS5385 4.000% 07/01/2045	U.S. Agencies	484,868	513,442	1.4%
U.S. Treasury Note 2.500% 05/15/2024	U.S. Governments	370,000	378,081	1.0%
U.S. Treasury Note 3.500% 05/15/2020	U.S. Governments	350,000	376,278	1.0%
American International Goup Inc. 6.400% 12/15/2020	Financial Services	300,000	346,092	0.9%
U.S. Treasury Bond 6.250% 08/15/2023	U.S. Governments	260,000	335,582	0.9%
<b>Total Top 10 Fixed Income Holdings</b>		<u>4,689,868</u>	<u>\$ 4,936,038</u>	<u>13.2%</u>
<b>Total Fixed Income</b>			<u>\$37,520,752</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, 2015

<u>Asset Category</u>	<u>Investment Manager Fees</u>	<u>Assets Under Management</u>
<b>Domestic Equity</b>		
Channing Capital Management	\$ 72,513	\$ 12,769,527
RhumbLine Advisers	4,477	35,895,975
William Blair & Company	98,412	13,368,293
Total Domestic Equity	<u>175,402</u>	<u>62,033,795</u>
<b>International Equity</b>		
Lazard Asset Management, LLC	120,214	45,796,347
<b>Fixed Income</b>		
LM Capital Group, LLC	26,310	16,962,789
Mellon Capital	6,454	20,557,963
Total Fixed Income	<u>32,764</u>	<u>37,520,752</u>
<b>Real Estate</b>		
J.P. Morgan Asset Management	44,212	6,220,644
Prudential Real Estate Investors	-	5,500,000
Russell Implementation Services Inc.	-	6,398,130
Total Real Estate	<u>44,212</u>	<u>18,118,774</u>
<b>Hedge Funds of Funds</b>		
Blackstone Alternative Asset Management	198,139	19,670,830
<b>Short-Term Investments</b>		
BNY Mellon	-	6,245,539
Total	<u>\$570,731</u>	<u>\$189,386,037</u>

## Schedule of Brokerage Commissions

For Year Ended December 31, 2015

<u>Broker Name</u>	<u>Number of Shares</u>	<u>Commissions</u>	<u>Cost per Share</u>
<b>Domestic Equity Commissions</b>			
Robert W. Baird & Co., Inc.	52,676	\$ 1,837	\$0.035
Williams Capital Group, LP*	84,393	1,774	0.021
Loop Capital Markets LLC*	76,629	1,712	0.022
Cheevers & Co., Inc.*	59,631	1,671	0.028
Cabrera Capital Markets*	69,505	1,316	0.019
Merrill Lynch Securities	104,675	1,277	0.012
Pershing LLC	89,250	893	0.010
RBC Capital Markets	22,306	704	0.032
Sandler O'Neill & Partners	15,102	529	0.035
Brokers with < \$500 of Commissions	<u>225,285</u>	<u>5,545</u>	<u>0.025</u>
<b>Total Domestic Equity Commissions</b>	<u><u>799,452</u></u>	<u><u>\$17,258</u></u>	<u><u>\$0.022</u></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, 2015

<b><u>Broker Name</u></b>	<b><u>Number of Shares</u></b>	<b><u>Commissions</u></b>	<b><u>Cost per Share</u></b>
<b>International Equity Commissions</b>			
UBS Securities	300,727	\$ 4,784	\$0.016
J.P. Morgan Securities	351,315	3,825	0.011
Loop Capital Markets LLC*	29,756	2,614	0.088
Credit Suisse	198,992	2,405	0.012
Cheevers & Co., Inc.*	54,018	2,008	0.037
Citigroup Global Markets, Inc.	136,609	1,289	0.009
HSBC Bank	45,038	961	0.021
Merrill Lynch Securities	143,090	952	0.007
Brokers with < \$900 of Commissions	881,011	10,272	0.012
<b>Total International Equity Commissions</b>	<b><u>2,140,556</u></b>	<b><u>\$29,110</u></b>	<b><u>\$0.014</u></b>

*\*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.*



This page is intentionally left blank.

This page is intentionally left blank.



# 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

buckconsultants



May 2016

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, 2015 performed by Buck Consultants, LLC.

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, 2015. 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 Buck Consultants has not verified the validity of any of those calculations or data. Buck Consultants, 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 2037. 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 Buck Consultants. 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 Buck 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 100-105.

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. Buck 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, 2015, based on valuation dates of December 31, 2014 and December 31, 2015.

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,

BUCK CONSULTANTS, LLC



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

cc: Wendy Ludbrook

# 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, 2015.

## 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. Buck 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, 2015, there were 568 employees in active service (including 5 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, 2015</u>	<u>December 31, 2014</u>
Number of active employees	568	525
Average age	44.7	45.4
Average years of service	9.2	9.6
Total annual salary	\$32,007,657	\$29,811,912
Average annual salary	\$ 56,352	\$ 56,785
Total accumulated contributions	\$27,676,276	\$26,224,615
Average accumulated contributions	\$ 48,726	\$ 49,952

The number of active members decreased by 7.2% from the previous valuation date. The average age of the active members decreased by 0.7 years, and the average service decreased by 0.4 years. The total annual salary increased by 7.4%. The average salary decreased by 0.8% from the previous valuation.

**Disabilities:** There were 5 disabled members (included in the active data). There were 3 disabilities in the prior year.

**Retirees and Beneficiaries:** In addition to the active members, there were 383 retired members and 146 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, 2015</u>	<u>December 31, 2014</u>
Number of members receiving payments		
Retirees	383	384
Beneficiaries	146	151
Total	529	535
Average Age	71.3	71.2
Annual benefit amounts		
Retirees	\$12,924,371	\$12,695,589
Beneficiaries	\$ 2,340,177	\$ 2,217,525
Total	\$15,264,548	\$14,913,114
Average annual benefit payments	\$ 28,855	\$ 27,875

The number of retired members and beneficiaries decreased by 1.1% from the previous valuation date. The average age of the retired members increased by 0.1 years. The total annual benefit payments for these members increased by 2.4% 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 1,149 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, 2015</u>	<u>December 31, 2014</u>
Number of inactive members	1,149	1,186
Average age	42.6	41.5

The number of inactive members decreased by 3.1% from the previous valuation. The average age of the inactive members increased by 1.1 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 \$192.3 million as of December 31, 2015. This includes a decrease of \$9.0 million over the Net Position Available for Benefits of \$201.3 million as of December 31, 2014. During the prior year, the fair value of assets experienced an investment rate of return of 1.5% (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, 2015, the assets available for benefits on an actuarial value basis were \$193.7 million. This includes an increase of \$3.8 million over the actuarial value of assets of \$189.9 million as of December 31, 2014. During 2015, the actuarial value of assets experienced an actuarial rate of return of 7.9%.

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 88-90.

## 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 \$6.2 million during the prior year. This net gain is about 2.2% 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 \$4.7 million during the year ending December 31, 2015. This gain decreased the unfunded actuarial accrued liability by \$4.7 million and increased the funded ratio by 1.0%.

There were 464 active members who were also reported active in the December 31, 2014 actuarial valuation. The total salary for this group increased by 2.2%, which was lower 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 103-105. 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 Plan experienced a gain on an actuarial value of assets basis. The actual rate of return on the actuarial value of Plan assets for the year ending December 31, 2015 was approximately 7.9% compared to the assumption of 7.5%, resulting in an asset gain of \$1.5 million. This gain decreased the unfunded actuarial accrued liability by \$1.5 million and increased the funded ratio by 0.5%.

The rate of return on the fair value of assets for the year ending December 31, 2015 was lower than the assumed rate of 7.5%. The actuarial value of the assets recognizes only 20% of the 2015 loss on 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 85.

## 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 2037. 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 2016 has been determined to be \$2.8 million, or 8.63% of pay. This represents a decrease in the employer normal cost rate of 0.14% of pay from last year's employer normal cost rate of 8.77%.

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, 2015 is \$98.0 million. This represents an increase of \$2.0 million in the unfunded actuarial accrued liability from last year's amount of \$96.0 million. The annual payment required to amortize the unfunded actuarial accrued liability of \$98.0 million as of December 31, 2015 is \$8.3 million, or 25.93% of pay.

The annual actuarially required employer contribution for 2016 is \$11.1 million, or 34.6% of pay. This represents an increase of \$0.9 million in the employer contribution amount of \$10.2 million for 2015, or a decrease of 0.3% of pay from last year's employer contribution rate of 34.3%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown on pages 83-84.

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, 2015 the funded ratio of the Plan is 66.4%. This represents no change from last year's funded ratio of 66.4% as of December 31, 2014.

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 87.

## 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 92-95.

## Changes in Plan Provisions

There were no changes in benefits or other Plan provisions considered in this actuarial valuation since the last valuation performed as of December 31, 2014.

## 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, 2014.

## ACTUARIAL SECTION

### Actuarial Valuation - Pension Benefits (continued)

#### Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of	
	<u>December 31, 2015</u>	<u>December 31, 2014</u>
<b>Summary of Member Data</b>		
Number of Members Included in the Valuation		
Active Members	568	525
Retirees and Beneficiaries	529	535
Inactive Members	1,149	1,186
Total	<u>2,246</u>	<u>2,246</u>
Annual Payroll		
Average (actual)	\$ 56,352	\$ 56,785
Annual Benefit Payments		
Retirees and Beneficiaries (Average) <sup>1</sup>	\$ 28,855	\$ 27,875
<b>Investment Returns</b>		
Fair Value - Rate of Return (net of investment expenses) <sup>2</sup>	1.5%	7.1%
Actuarial Value - Rate of Return	7.9%	10.2%
<b>Summary of Assets and Liabilities</b>		
Total Actuarial Accrued Liability	\$ 291,739,068	\$ 285,960,963
Actuarial Value of Assets	<u>\$ 193,729,042</u>	<u>\$ 189,917,999</u>
Unfunded Actuarial Accrued Liability	\$ 98,010,026	\$ 96,042,964
Funded Ratio	66.40%	66.41%
<b>Employer Actuarial Required Contribution</b>		
Employer Normal Cost	\$ 2,762,204	\$ 2,601,939
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	<u>\$ 8,300,758</u>	<u>\$ 7,564,722</u>
Employer Actuarial Required Contribution	<u>\$ 11,062,962</u>	<u>\$ 10,166,661</u>

<sup>1</sup> The average annual benefit payments for retirees only is \$33,745 as of December 31, 2015 and \$33,061 as of December 31, 2014.

<sup>2</sup> Rate of return determined by the investment consultant.

## Actuarial Liabilities and Normal Cost

For the Fiscal Year ending December 31, 2015

Actuarial Liabilities	<u>Totals</u>	
<b>1. Present Value of Projected Benefits</b>		
Active Members		
Retirement Benefits	\$117,644,376	
Withdrawal Benefits	7,308,403	
Death Benefits	<u>3,065,439</u>	
Total	128,018,218	
2. Retired Members and Beneficiaries Receiving Benefits	180,566,467	
3. Inactive Members with Deferred Benefits	<u>19,315,822</u>	
<b>4. Total Present Value of Projected Benefits (1. + 2. + 3.)</b>	<b>327,900,507</b>	
5. Present Value of Future Normal Costs	<u>36,161,439</u>	
<b>6. Total Actuarial Accrued Liability (4. - 5.)</b>	<b>\$291,739,068</b>	
<b>Normal Cost</b>	<u>Totals</u>	<u>% of Pay</u>
<b>1. Active Members</b>		
a. Retirement Benefits	\$3,892,974	12.32%
b. Withdrawal Benefits	1,033,908	3.27%
c. Duty Disability Benefits	0	0.00%
d. Ordinary Disability Benefits	10,426	0.03%
e. Death Benefits	143,408	0.45%
f. Administrative Expenses	<u>151,151</u>	<u>0.48%</u>
<b>2. Total Normal Cost</b>	<u>5,231,867</u>	16.54%
<b>3. Expected Member Contribution</b>	<u>2,720,651</u>	<b>8.60%</b>
<b>4. Employer Normal Cost (2. - 3.)</b>	<b>\$2,511,216</b>	<b>7.94%</b>

## 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	\$ 32,007,657	\$ 29,659,490
2. Total Actuarial Accrued Liability		
a. Active Members		
i. Retirement Benefits	87,622,639	86,115,987
ii. Withdrawal Benefits	2,240,165	2,102,589
iii. Death Benefits	<u>1,993,975</u>	<u>1,955,562</u>
iv. Total	91,856,779	90,174,138
b. Retired Members and Beneficiaries Receiving Benefits	180,566,467	177,169,877
c. Inactive Members with Deferred Benefits	<u>19,315,822</u>	<u>18,616,948</u>
d. Total (2.a.iv. + 2.b. + 2.c.)	291,739,068	285,960,963
3. Actuarial Value of Assets	193,729,042	189,917,999
4. Unfunded Actuarial Accrued Liability (UAAL) (2.d. - 3.)	98,010,026	96,042,964
5. Funded Ratio (3. / 2.d.)	66.40%	66.41%
6. UAAL as a Percent of Annual Payroll (4. / 1.)	306.21%	323.82%
7. Amortization Payment for UAAL		
a. Amount	8,300,758	7,564,722
b. As a % of pay	25.93%	25.51%
8. Employer Normal Cost		
a. Amount	2,762,204	2,601,939
b. As a % of pay	8.63%	8.77%
9. Employer Actuarial Required Contribution		
a. Amount	11,062,962	10,166,661
b. As a % of pay	34.56%	34.28%
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, 2014	\$ 285,960,963
b. Normal Cost at December 31, 2014	5,122,996
c. Interest on a. + b. to End of Year	21,831,297
d. Benefit Payments and Refunds, with Interest to End of Year	16,507,012
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	<u>296,408,244</u>
f. Change in Actuarial Accrued Liability at December 31, 2015, due to Change in Actuarial Assumptions	0
g. Change in Actuarial Accrued Liability at December 31, 2015, due to Change in Actuarial Methods	0
h. Expected Actuarial Accrued Liability at December 31, 2015 (e. + f. + g.)	<u>296,408,244</u>
2. Actuarial Accrued Liability at December 31, 2015	<u>291,739,068</u>
3. Liability (Gain) / Loss (2. - 1.h.)	<b>(4,669,176)</b>
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at December 31, 2014	189,917,999
b. Interest on a. to End of Year	14,243,850
c. Contributions Made for December 31, 2015	4,527,950
d. Interest on c. to End of Year	166,728
e. Benefit Payments and Administrative Expenses with Interest to End of Year	16,656,266
f. Change in Actuarial Value of Assets at December 31, 2015 due to Change in Method	0
g. Expected Actuarial Value of Assets at December 31, 2015 (a. + b. + c. + d. - e. - f.)	<u>192,200,261</u>
5. Actuarial Value of Assets as of December 31, 2015	<u>193,729,042</u>
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	<u>(1,528,781)</u>
7. Actuarial (Gain) / Loss (3. + 6.)	<b>\$ (6,197,957)</b>

## 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, 2015</u>	As % of <u>Last Year's AAL</u>
1. COLA Experience	\$ 0	0.00%
2. Salary Experience	(2,503,098)	-0.88%
3. Investment Experience	(1,528,781)	-0.53%
4. Retiree Mortality Experience	(1,657,876)	-0.58%
5. Contribution Shortfall	<u>8,172,032</u>	<u>2.86%</u>
6. (Gain) or Loss During Year From Experience, (1. + 2. + 3. + 4. + 5.)	2,482,277	0.87%
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>(8,680,234)</u>	<u>-3.04%</u>
12. Total (Gain) or Loss During Year, (6. + 7. + 8. + 9. + 10. + 11.)	\$ <u>(6,197,957)</u>	<u>-2.17%</u>

## Actuarial Balance Sheet

Financial Resources	<u>December 31, 2015</u>
1. Actuarial Value of Assets	\$ 193,729,042
2. Present Value of Future Contributions	
a. Expected Member Contributions	18,804,502
b. Employer Normal Cost	<u>17,356,937</u>
c. Total	<u>36,161,439</u>
3. Unfunded Actuarial Accrued Liability/(Reserve)	<u>98,010,026</u>
4. Total Assets (1. + 2.c. + 3.)	<u>327,900,507</u>
Benefit Obligations	
1. Present Value of Future Benefits	
a. Active Members	128,018,218
b. Retirees and Beneficiaries	180,566,467
c. Inactive Members	<u>19,315,822</u>
d. Total	<u>\$ 327,900,507</u>

### History of UAAL and Funded Ratio

<b>Valuation Date</b>	<b>Actuarial Accrued Liability (AAL)</b>	<b>Actuarial Value of Assets (AVA)</b>	<b>Funded Ratio (AVA as a % of AAL)</b>	<b>Unfunded Actuarial Accrued Liability (UAAL)</b>
<b>December 31,</b>				
2006	\$196,983,226	\$193,511,049	98.24%	\$ 3,472,177
2007 <sup>1</sup>	205,392,258	203,043,217	98.86%	2,349,041
2008 <sup>1</sup>	212,373,326	196,277,679	92.42%	16,095,647
2009 <sup>1</sup>	244,625,664	188,396,534	77.01%	56,229,130
2010 <sup>1</sup>	252,877,596	184,077,516	72.79%	68,800,080
2011 <sup>1</sup>	261,509,175	178,126,063	68.11%	83,383,112
2012 <sup>1</sup>	273,136,730	172,566,956	63.18%	100,569,774
2013 <sup>1</sup>	277,560,212	182,554,587	65.77%	95,005,625
2014 <sup>1</sup>	285,960,963	189,917,999	66.41%	96,042,964
2015 <sup>1</sup>	291,739,068	193,729,042	66.40%	98,010,026

<sup>1</sup> Pension benefits only

### Reconciliation of Change in Unfunded Actuarial Liability

<b>Development of Unfunded Actuarial Liability</b>	<b><u>Amount</u></b>
1. Unfunded Actuarial Accrued Liability as of December 31, 2014	\$96,042,964
2. Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period January 1, 2015 to December 31, 2015	10,000,307
3. Actual Employer Contribution for the Year, Plus Interest	<u>1,828,275</u>
4. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (2. - 3.)	8,172,032
5. Increase/(Decrease) in Unfunded Liability Due to Investment Return Lower/(Higher) Than Assumed	(1,528,781)
6. Increase/(Decrease) in Unfunded Liability Due to Salary Increases Higher/(Lower) Than Assumed	(2,503,098)
7. Increase/(Decrease) in Unfunded Liability Due to Other Sources	<u>(2,173,091)</u>
8. Net Increase/(Decrease) in Unfunded Liability for the Year (4. + 5. + 6. + 7.)	<u>1,967,062</u>
9. Unfunded Actuarial Liability as of December 31, 2015 (1. + 8.)	\$98,010,026

## ACTUARIAL SECTION

### Actuarial Valuation - Pension Benefits (continued)

#### Summary of Fair Value of Assets

Asset Category	Fair Value as of December 31,			
	2015		2014	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
<b>1. Short-Term Investments</b>	\$ 6,245,539	3.02%	\$ 2,209,864	1.04%
<b>2. Investments at Fair Value</b>				
a. U.S. and International Equities	98,025,342	47.38%	104,512,209	49.11%
b. U.S. Government and Government Agency Obligations	11,425,544	5.52%	11,237,365	5.28%
c. Corporate Bonds	5,537,245	2.68%	5,583,643	2.62%
d. Collective International Equity Fund	9,804,800	4.74%	11,097,933	5.21%
e. Commingled Fixed Income Fund	20,557,963	9.94%	26,112,720	12.27%
f. Exchange Traded Funds	6,398,130	3.09%	5,945,592	2.79%
g. Private Equities	0	0.00%	0	0.00%
h. Hedge Funds	19,670,830	9.51%	19,255,350	9.05%
i. Real Estate	11,720,644	5.67%	7,684,241	3.61%
j. Total	<u>183,140,498</u>	<u>88.52%</u>	<u>191,429,053</u>	<u>89.94%</u>
<b>3. Collateral Held for Securities Lending</b>	<u>17,503,324</u>	<u>8.46%</u>	<u>19,192,658</u>	<u>9.02%</u>
<b>4. Total Assets (1. + 2.i + 3.)</b>	206,889,361	100.00%	212,831,575	100.00%
<b>5. Receivables</b>				
a. Interest and Dividends	246,588		263,808	
b. Investments Sold	400,073		5,514,847	
c. Other Receivables	<u>3,112,396</u>		<u>2,801,319</u>	
d. Total	<u>3,759,057</u>		<u>8,579,974</u>	
<b>6. Payables</b>				
a. Investments Purchased	297,880		292,089	
b. Securities Lending Collateral	17,503,324		19,192,658	
c. Other Payables	<u>524,844</u>		<u>617,628</u>	
d. Total	<u>18,326,048</u>		<u>20,102,375</u>	
<b>7. Net Assets for Pension Benefits (4. + 5.d. – 6.d.)</b>	<b>\$192,322,370</b>		<b>\$201,309,174</b>	

## Changes in Fair Value of Assets

Transactions	<u>December 31, 2015</u>	<u>December 31, 2014</u>
<i>Additions</i>		
<b>1. Contributions</b>		
a. Contributions from Employers	\$ 1,763,345	\$ 1,520,316
b. Contributions from Plan Members	<u>2,771,533</u>	<u>2,645,164</u>
c. Total	4,534,878	4,165,48
<b>2. Net Investment Income</b>		
a. Interest and Dividends	3,112,791	3,404,013
b. Net Appreciation (Depreciation)	(75,184)	10,686,264
c. Net Securities Lending Income	<u>95,624</u>	<u>48,926</u>
d. Total	3,133,231	14,139,203
e. Less Investment Expense	<u>583,256</u>	<u>613,597</u>
f. Net Investment Income	2,549,975	13,525,606
g. Miscellaneous	11,442	0
h. Employee Transfers	<u>0</u>	<u>0</u>
<b>3. Total Additions</b>	7,096,295	17,691,086
<i>Deductions</i>		
<b>4. Benefits and Expenses</b>		
a. Retirement Benefits	15,284,868	14,843,580
b. Refund of Contributions	635,908	961,637
c. Administrative Expenses	143,953	142,067
d. Employee Transfers	<u>18,370</u>	<u>175,370</u>
<b>5. Total Deductions</b>	<u>16,083,099</u>	<u>16,122,654</u>
<b>6. Net Increase (Decrease)</b>	(8,986,804)	1,568,432
<b>7. Net Position Held in Trust for Pension Benefits</b>		
a. Beginning of Year	<u>201,309,174</u>	<u>199,740,742</u>
b. End of Year	\$ 192,322,370	\$ 201,309,174

**ACTUARIAL SECTION**

**Actuarial Valuation - Pension Benefits (continued)**

**Actuarial Value of Assets**

<b>Development of Actuarial Value of Assets</b>	<b><u>Amount</u></b>		
1. Actuarial Value of Assets as of December 31, 2014	\$ 189,917,999		
2. Unrecognized Return as of December 31, 2014	<u>11,391,175</u>		
3. Fair Value of Assets as of December 31, 2014 (1. + 2.)	201,309,174		
4. Contributions			
a. Member (includes purchased service)	2,771,533		
b. Employer	1,763,345		
c. Miscellaneous contributions	<u>-6,928</u>		
d. Total	4,527,950		
5. Distributions			
a. Benefit payments	15,284,868		
b. Refund of contributions	635,908		
c. Administrative expenses	<u>143,953</u>		
d. Total	16,064,729		
6. Expected Return at 7.50% on			
a. Item 1.	14,243,850		
b. Item 2.	854,338		
c. Item 4.d.	166,728		
d. Item 5.d.	<u>591,537</u>		
e. Total (a. + b. + c. - d.)	14,673,379		
7. Actual Return on Fair Value for Fiscal Year, Net of Investment Expenses	<u>2,549,975</u>		
8. Return to be Spread for Fiscal Year (7. - 6.e.)	(12,123,404)		
9. Total Fair Value of Assets as of December 31, 2015	192,322,370		
10. Return to be Spread			
<b><u>Fiscal Year</u></b>	<b><u>Return to be Spread</u></b>	<b><u>Unrecognized Percent</u></b>	<b><u>Unrecognized Return</u></b>
2015	(12,123,404)	80%	(9,698,723)
2014	(1,014,662)	60%	(608,797)
2013	17,264,428	40%	6,905,771
2012	9,975,383	20%	1,995,077
2011	(10,729,527)	0%	<u>0</u>
		Total	<u>(1,406,672)</u>
11. Actuarial Value of Assets (9. - 10.)			\$193,729,042
12. Recognized Rate of Return for the Year on Actuarial Value of Assets			7.85%
13. Rate of Return for the Year on Fair Value of Assets (reported by investment consultant - net of inv. exp.)			1.5%

## Schedule of Funding Progress

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

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued</b>		<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll (b-a)/(c)</b>
		<b>Liability (AAL) Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b-a)</b>			
December 31, 2006	\$193,511,049	\$196,983,226	\$ 3,472,177	98.24%	\$19,172,756	18.11%
December 31, 2007 <sup>1</sup>	203,043,217	205,392,258	2,349,041	98.86%	21,078,316	11.14%
December 31, 2008 <sup>1</sup>	196,277,679	212,373,326	16,095,647	92.42%	23,474,621	68.57%
December 31, 2009 <sup>1</sup>	188,396,534	244,625,664	56,229,130	77.01%	24,967,115	225.21%
December 31, 2010 <sup>1</sup>	184,077,516	252,877,596	68,800,080	72.79%	24,397,376	282.00%
December 31, 2011 <sup>1</sup>	178,126,063	261,509,175	83,383,112	68.11%	22,678,566	367.67%
December 31, 2012 <sup>1</sup>	172,566,956	273,136,730	100,569,774	63.18%	26,252,071	383.09%
December 31, 2013 <sup>1</sup>	182,554,587	277,560,212	95,005,625	65.77%	29,485,857	322.21%
December 31, 2014 <sup>1</sup>	189,917,999	285,960,963	96,042,964	66.41%	29,811,912	322.16%
December 31, 2015 <sup>1</sup>	193,729,042	291,739,068	98,010,026	66.40%	32,007,657	306.21%

<sup>1</sup> Pension benefits only

## Schedule of Employer Contributions

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

<b>Fiscal Year Ended December 31,</b>	<b>Employer Annual</b>		<b>Percentage Contributed</b>
	<b>Required Contribution (ARC)</b>	<b>Employer Contribution</b>	
2006	\$ 2,691,753	\$1,532,343	56.93%
2007	2,809,494 <sup>1</sup>	1,995,300 <sup>1</sup>	71.02%
2008	3,329,502 <sup>1</sup>	523,928 <sup>1</sup>	15.74%
2009	4,498,036 <sup>1</sup>	1,282,642 <sup>1</sup>	28.52%
2010	7,626,778 <sup>1</sup>	1,333,140 <sup>1</sup>	17.48%
2011	8,590,721 <sup>1</sup>	2,457,405 <sup>1</sup>	28.61%
2012	9,608,247 <sup>1</sup>	2,117,976 <sup>1</sup>	22.04%
2013	10,921,946 <sup>1</sup>	1,403,628 <sup>1</sup>	12.85%
2014	10,040,561 <sup>1</sup>	1,520,316 <sup>1</sup>	15.14%
2015	10,166,661 <sup>1</sup>	1,763,345 <sup>1</sup>	17.34%

<sup>1</sup> Pension benefits only



## 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

<b>Total Pension Liability</b>	<b><u>December 31, 2015</u></b>	<b><u>December 31, 2014</u></b>
Service Cost	\$ 9,656,955	\$ 9,575,195
Interest	19,471,425	18,880,782
Changes of Benefit Terms	-	-
Difference between Expected and Actual Experience	(270,033)	-
Change of Assumptions	28,495,220	-
Benefit Payments, including Refund of Member Contributions	<u>(15,920,776)</u>	<u>(15,805,217)</u>
Net Change in Total Pension Liability	41,432,790	12,650,760
Total Pension Liability - Beginning of Year	416,145,173	403,494,413
Total Expected Pension Liability - End of Year	\$457,577,963	\$416,145,173
<b>Plan Fiduciary Net Position</b>		
Employer Contributions	\$ 1,763,345	\$ 1,520,316
Member Contributions	2,771,533	2,645,164
Net Investment Income	2,549,975	13,525,606
Benefit Payments, including Refund of Member Contributions	(15,920,776)	(15,805,217)
Administrative Expenses	(143,953)	(142,067)
Other	<u>(6,928)</u>	<u>(175,370)</u>
Net Change in Plan Fiduciary Net Position	(8,986,804)	1,568,432
Plan Fiduciary Net Position - Beginning of Year	201,309,174	199,740,742
Expected Plan Fiduciary Net Position - End of Year	\$192,322,370	\$201,309,174

## Net Pension Liability (Asset)

The GASB Statement No. 67 Net Pension Liability

### Net Pension Liability (Asset)

	<u>December 31, 2015</u>	<u>December 31, 2014</u>
Total Pension Liability	\$457,577,963	\$416,145,173
Plan Fiduciary Net Position	192,322,370	201,309,174
Net Pension Liability (Asset)	<u>\$265,255,593</u>	<u>\$214,835,999</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	42.03%	48.37%

## 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	3.23%	4.23%	5.23%
Net Pension Liability (Asset)	\$344,128,366	\$265,255,593	\$203,107,690

The discount rate used to measure the total pension liability was 4.23%. The discount rate used to measure the total pension liability at December 31, 2014 was 4.66%. 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 3.20% was used in the development of the blended GASB discount rate after that point. The 3.20% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2015. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.20%, the blended GASB discount rate would be 4.23%. 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, 2015</u>	<u>December 31, 2014</u>
Service Cost	\$ 9,656,955	
Interest	19,471,425	Not
Difference between Expected and Actual Experience	(115,894)	Applicable
Change of Assumptions	12,229,708	
Member Contributions	(2,771,533)	
Projected Earnings on Plan Investments	(14,673,380)	
Difference between Expected and Actual Earnings	2,424,681	
Administrative Expense	143,953	
Other	6,928	
Changes of Benefit Terms	-	
Total Pension Expense	<u>\$26,372,843</u>	

Actuarial Assumptions and Methods:

	<u>December 31, 2015</u>	<u>December 31, 2014</u>
Valuation date:		
Actuarial cost method:	Entry Age	Entry Age
Asset valuation method:	Market	Market
Total Pension Liability Discount Rate	4.23%	4.66%
Actuarial assumptions:		
- Investment Rate of Return	7.50%	7.50%
- Municipal Bond Rate	3.20%	3.34%
- 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 3.20% was used in the development of the blended GASB discount rate after that point. The 3.20% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2015. Based on the long-term rate of return of 7.50% and the municipal bond rate of 3.20%, the blended GASB discount rate would be 4.23%. 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:

	<b>Target Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
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, 2015, the Fund is paying 52% of the premiums for retiree annuitants and 67% 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 an 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, 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, 2015 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				.220			
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>Unfunded Actuarial Accrued Liability (UAAL)</i>	The portion of the actuarial accrued liability not offset by plan assets.
<i>Vested Benefits</i>	Benefits which are unconditionally guaranteed regardless of employment status.



This page is intentionally left blank.

# Actuarial Certification - Postemployment Healthcare



May 27, 2016

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 Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") as of December 31, 2015 performed by Buck Consultants, LLC.

The purpose of this valuation is to determine the Annual Required Contribution ("ARC") for the Plan year January 1, 2016 through December 31, 2016, as well as the funded status of the Plan as of the valuation date December 31, 2015. 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 Fund is currently not funded for health liabilities. 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

---

**Actuarial Certification - Postemployment Healthcare (continued)**

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 Buck Consultants, 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.

BUCK CONSULTANTS, LLC



Daniel A. Levin, FSA, MAAA, FCA, CEBS  
Principal, Health



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, 2015.

## 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

	<b>Year Ending December 31,</b>	
	<b><u>2015</u></b>	<b><u>2014</u></b>
1. Annuitants Currently Receiving Benefits	278	287
2. Separated Employees Entitled To Benefits But Not Yet Receiving Them	35	35
3. Active Employees	<u>568</u>	<u>525</u>
4. Total Number of Members	881	847

## Changes in Plan Provisions

The following change in plan provisions has been made since the last valuation performed as of December 31, 2014:

- The Pre-Medicare participant contribution rates for the Choice Plus PPO plan increased from 48% to 53% for annuitants and from 33% to 38% for survivors.
- The preferred-brand and non-preferred brand prescription drug copays increased from \$55 to \$65 and from \$90 to \$100, respectively, for both the Choice HMO and Choice Plus PPO plans.

## Changes in Actuarial Assumptions, Methods, or Procedures

The following changes have been made to the actuarial assumptions or valuation procedures since the last actuarial valuation performed as of December 31, 2014:

- The methodology used to determine per capita plan costs was updated to reflect claims experience. Previously, the per capita costs were solely based on premiums.
- The age morbidity curve was updated to reflect the study “Health Care Costs – From Birth to Death”, sponsored by the Society of Actuaries and prepared by Dale H. Yamamoto (May 2013).

## ACTUARIAL SECTION

### Actuarial Valuation - Postemployment Healthcare (continued)

#### Changes in the Actuarial Accrued Liability (AAL)

	<u>AAL (\$ millions)</u>	<u>% Change</u>
<b>December 31, 2014 Report</b>	\$47,212,173	
Expected Growth Due to the Passage of Time	2,337,839	5.0%
Demographic Experience	(1,088,884)	-2.2%
Updated Per Capita Health Plan Experience	3,204,995	6.5%
Updated Age Morbidity Curve	(1,950,881)	-3.8%
Updated Contribution Rates	(200,107)	-0.4%
Change in Estimated Excise Tax	(36,345)	-0.1%
<b>December 31, 2015 Report</b>	\$49,478,790	4.8%

*Note: AAL does not reflect Retiree Drug Subsidy (RDS) Payments since GASB 43/45 rules do not allow it.*

**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	\$32,007,657	\$29,811,912
2. Actuarial Accrued Liability		
a. Active Members	21,497,137	18,722,214
b. Inactive Members with Deferred Benefits	1,420,877	1,324,571
c. Retired Members and Beneficiaries Receiving Benefits	<u>26,560,776</u>	<u>27,165,388</u>
d. Total	49,478,790	47,212,173
3. Actuarial Value of Assets	-	-
4. Unfunded Actuarial Accrued Liability (UAAL)	49,478,790	47,212,173
5. UAAL as a Percent of Annual Payroll	154.6%	158.4%
6. Amortization Payment for UAAL		
a. Amount	2,906,774	2,773,615
b. As a % of pay	9.1%	9.3%
7. Employer Normal Cost		
a. Amount	2,009,448	1,696,693
b. As a % of pay	6.3%	5.7%
8. Interest Cost	<u>183,345</u>	<u>167,211</u>
9. Annual Required Contribution (6. + 7. + 8.)	5,099,567	4,637,519
10. Pay-go Costs for the Year <sup>1</sup>	1,702,528	1,823,888
11. Amortization Period (years)	30	30

<sup>1</sup> Source: Estimated amount for 2016; for 2015 as provided by FPEABF. 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>
2008	\$ -	\$36,004,405	\$36,004,405	0.0%	\$23,474,621	153.4%
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%

#### 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 Contribution</u>	<u>Employer Contribution as a Percent of ARC</u>
2008	\$3,785,850	\$1,499,520	39.61%
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%
2015	4,637,519	1,698,692 <sup>1</sup>	36.63%

<sup>1</sup> Source: Total Employer's Contribution for 2015 as provided by FPEABF.

#### GASB 45 Net OPEB Obligation (NOO) as of December 31, 2015

1.	NOO as of December 31, 2014	\$17,635,537
2.	Annual Required Contribution (ARC)	4,637,519
3.	Interest on NOO	793,599
4.	Adjustment to ARC	<u>(1,082,673)</u>
5.	Annual OPEB Cost for 2015 (2. + 3. + 4.)	4,348,445
6.	Total Employer Contribution for 2015 <sup>1</sup>	<u>1,698,692</u>
7.	NOO as of December 31, 2015 (1. + 5. - 6.)	\$20,285,290

<sup>1</sup> Source: Total Employer's Contribution for 2015 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, 2016. These rates represent an estimated cost of self-insured coverage and include administrative expenses.

The working rates below reflect expected RDS payments. It was assumed that in the absence of RDS, the working rates would increase by the assumed value of the subsidy.

	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Single w/o Medicare	\$12,396	\$15,600
Two w/o Medicare	24,804	31,212
Single w/ Medicare	5,484	4,716
Two w/ Medicare	10,956	9,444

## Assumptions and Methods

The actuarial assumptions used for the December 31, 2015 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, 2015

**Discount Rate** 4.50%

<b>Salary Scale</b>	<b><u>Age</u></b>	<b><u>Inflation</u></b>	<b><u>Merit</u></b>	<b><u>Total</u></b>
	<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	89%	11%
Post-Medicare	67%	33%

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 2015 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	\$16,370	\$18,550
Medicare eligible	4,533	3,947

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

The working rates reflect expected RDS payments. The claims experience was also adjusted to reflect RDS payments. Since GASB 43/45 requires AAL and ARC to be calculated without reduction for RDS payments, the above per capita costs were then adjusted upward to include the assumed value of RDS payments, an average of \$493 per eligible individual, for fiscal 2016.

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. Age 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>
2016	7.75%	6.25%
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** The value of the Retiree Drug Subsidy under Medicare Part D is not directly reflected in the valuation, in accordance with GASB Technical Bulletin No. 2006-1 Accounting and Financial Reporting by Employers and OPEB Plans for Payments from the Federal Government Pursuant to the Retiree Drug Subsidy Provisions of Medicare Part D, on this issue. An estimate of the value of the subsidy has been reflected in projecting the value of the Excise Tax on High-Cost Employer Plans (see next section). Employer Plans (see next section).

**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:** RDS payments are not reflected as an ongoing offsetting item in GASB 43 valuations, and so no direct impact is reflected. The valuation does reflect the RDS in estimating the future impact of the Excise Tax on High-Cost Employer Health Plan.

**Excise Tax on High-Cost Employer Health Plans (aka “Cadillac Tax”) - Effective 1/1/2018:** We performed a projection of the calculation on the Plan using a CPI of 3.25%, blending non-Medicare and Medicare retiree coverage for testing purposes. The tax amount expected is based on projected net employer costs for Medicare retirees after RDS, 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 0.46% and we have adjusted the results accordingly. Additional commentary on this issue can be found on the following page.

**Other Revenue Raisers:** The PPACA 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, United Healthcare, 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 coverage<sup>1</sup>.

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 2015 and the valuation trend from 2015 to the valuation 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.

<sup>1</sup> 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.

This page is intentionally left blank.

# 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>
12/31/06	394	\$19,172,756	\$48,662	0.4%
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%

## 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>		
2006	29	\$ 759,165	27	\$262,810	499	\$ 9,900,885	\$19,841	4.9%
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%

## 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> <sup>1</sup>	<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%

<sup>1</sup> 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)
2006	\$27,929,859	\$109,562,057	\$59,491,310	\$193,511,049	100%	100%	94%
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%

## 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)
2010	-	\$22,131,960	\$20,970,550	-	0%	0%	0%
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%

This page is intentionally left blank.





# 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, 2015, with comparative totals for 9 years

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Additions:					
Employer contributions	\$ 1,763,345	\$ 1,520,316	\$ 1,403,628	\$ 2,117,976	\$ 2,441,301
Employee contributions	2,771,533	2,645,164	2,687,211	2,426,776	2,289,027
Net investment and net securities					
lending income (loss)	2,549,975	13,525,606	30,383,512	22,209,855	2,021,094
Other	11,442	-	691	6,062	2,541
Total additions	<u>7,096,295</u>	<u>17,691,086</u>	<u>34,475,042</u>	<u>26,760,669</u>	<u>6,753,963</u>
Deductions:					
Benefits					
Retirement	12,820,708	12,464,872	11,719,920	10,714,092	10,042,232
Survivors	2,281,100	2,206,512	2,052,205	1,901,171	1,815,262
Disability	183,060	172,196	277,873	347,509	420,518
Refunds					
Death	41,539	75,826	111,783	174,789	79,428
Separation	486,280	644,017	545,613	786,951	338,069
Other	108,089	241,794	301,311	226,899	186,817
Employee transfers to (from)					
Cook County	18,370	175,370	(106,012)	205,887	(328,586)
Net administrative and miscellaneous expenses					
	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>	<u>111,662</u>	<u>103,220</u>
Total deductions	<u>16,083,099</u>	<u>16,122,654</u>	<u>15,021,712</u>	<u>14,468,960</u>	<u>12,656,960</u>
Net increase (decrease)	(8,986,804)	1,568,432	19,453,330	12,291,709	(5,902,997)
Net position:					
Beginning of year	<u>201,309,174</u>	<u>199,740,742</u>	<u>180,287,412</u>	<u>167,995,703</u>	<u>173,898,700</u>
End of year	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$199,740,742</u>	<u>\$180,287,412</u>	<u>\$167,995,703</u>

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

## For year ended December 31, 2015, with comparative totals for 9 years (continued)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Additions:					
Employer contributions	\$ 1,333,140	\$ 1,282,642	\$ 523,928	\$ 1,995,300	\$ 1,532,343
Employee contributions	2,452,696	2,418,794	2,119,208	1,986,605	1,690,781
Net investment and net securities					
lending income (loss)	20,250,639	24,683,791	(46,414,013)	9,989,189	18,117,244
Other	52,736	1,798	18,744	2,446	10,025
Total additions	<u>24,089,211</u>	<u>28,387,025</u>	<u>(43,752,133)</u>	<u>13,973,540</u>	<u>21,350,393</u>
Deductions:					
Benefits					
Retirement	9,559,956	9,144,321	8,955,164	8,847,306	8,776,342
Survivors	1,615,256	1,552,939	1,368,001	1,296,424	1,175,199
Disability	366,484	247,088	227,996	189,742	160,882
Refunds					
Death	19,000	23,360	160,624	60,125	138,714
Separation	182,773	318,195	221,159	342,470	123,915
Other	142,090	131,398	136,617	62,071	83,488
Employee transfers to (from)					
Cook County	257,975	118,754	(119,434)	130,674	345,410
Net administrative and miscellaneous expenses	104,765	112,729	138,550	114,674	108,566
Total deductions	<u>12,248,299</u>	<u>11,648,784</u>	<u>11,088,677</u>	<u>11,043,486</u>	<u>10,912,516</u>
Net increase (decrease)	11,840,912	16,738,241	(54,840,810)	2,930,054	10,437,877
Net position:					
Beginning of year	<u>162,057,788</u>	<u>145,319,547</u>	<u>200,160,357</u>	<u>197,230,303</u>	<u>186,792,426</u>
End of year	<u>\$173,898,700</u>	<u>\$162,057,788</u>	<u>\$145,319,547</u>	<u>\$200,160,357</u>	<u>\$197,230,303</u>

# Statement of Changes in Postemployment Healthcare Plan Net Position

For year ended December 31, 2015, with comparative totals for 9 years

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Additions:					
Employer contributions	\$1,698,692	\$1,616,436	\$1,459,517	\$ 991,000	\$ 814,308
Annuitant healthcare benefits contributions	1,134,920	1,193,549	1,190,706	1,127,026	1,120,842
Other	228,836	204,853	158,692	206,385	510,168
Total additions	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>	<u>2,324,411</u>	<u>2,445,318</u>
Deductions:					
Healthcare benefits	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>	<u>2,324,411</u>	<u>2,445,318</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, 2015, with comparative totals for 9 years (continued)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Additions:					
Employer contributions	\$1,326,894	\$1,261,052	\$1,499,520	\$1,291,740	\$1,187,670
Annuitant healthcare benefits contributions	984,039	1,039,073	1,090,141	1,101,172	997,695
Other	174,817	218,121	108,720	243,505	165,819
Total additions	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</u>	<u>2,636,417</u>	<u>2,351,184</u>
Deductions:					
Healthcare benefits	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</u>	<u>2,636,417</u>	<u>2,351,184</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, 2015

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit		Option Selected		
		1	2	1	2	3
\$ 1 – \$ 500	72	36	36	38	24	10
501 – 1,000	70	34	36	47	23	0
1,001 – 1,500	64	40	24	44	20	0
1,501 – 2,000	56	42	14	32	24	0
2,001 – 2,500	43	31	12	24	19	0
2,501 – 3,000	50	39	11	34	16	0
3,001 – 3,500	44	35	9	19	25	0
3,501 – 4,000	34	33	1	12	22	0
4,001 – 4,500	22	20	2	7	15	0
4,501 – 5,000	16	15	1	4	12	0
5,001 – 5,500	19	19	0	3	16	0
5,501 – 6,000	20	20	0	4	16	0
6,001 – 6,500	6	6	0	0	6	0
6,501 – 7,000	7	7	0	1	6	0
7,001 – 7,500	2	2	0	0	2	0
7,501 – 8,000	2	2	0	0	2	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
<b>Totals</b>	<b>529</b>	<b>383</b>	<b>146</b>	<b>269</b>	<b>250</b>	<b>10</b>

**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, 2015

Amount of Monthly Pension Benefit		Number of Recipients	Type of Pension Benefit		Option Selected		
			1	2	1	2	3
\$	1 – \$ 500	4	0	4	4	0	0
	501 – 1,000	30	7	23	25	5	0
	1,001 – 1,500	27	10	17	22	5	0
	1,501 – 2,000	35	26	9	20	15	0
	2,001 – 2,500	29	21	8	18	11	0
	2,501 – 3,000	35	25	10	25	10	0
	3,001 – 3,500	29	24	5	13	16	0
	3,501 – 4,000	25	24	1	11	14	0
	4,001 – 4,500	14	12	2	7	7	0
	4,501 – 5,000	11	10	1	3	8	0
	5,001 – 5,500	9	9	0	2	7	0
	5,501 – 6,000	18	18	0	4	14	0
	6,001 – 6,500	3	3	0	0	3	0
	6,501 – 7,000	5	5	0	0	5	0
	7,001 – 7,500	1	1	0	0	1	0
	7,501 – 8,000	2	2	0	0	2	0
	8,001 – 8,500	0	0	0	0	0	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
	<b>Totals</b>	<b>278</b>	<b>198</b>	<b>80</b>	<b>154</b>	<b>124</b>	<b>0</b>

**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>
2006	Average Monthly Pension	\$ 0	\$ 891	\$ 733	\$2,424	\$2,395	\$2,397	\$6,083
	Average Monthly Final Average Salary	\$ 0	N/A	N/A	N/A	\$3,509	\$3,121	\$7,920
	Number of New Retirees	0	4	2	5	1	1	1
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

N/A - Not Available



## 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>
2006	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$2,351	\$2,395	\$2,397	\$ 0
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$4,666	N/A	\$3,121	\$ 0
	Number of New Retirees	0	0	0	2	1	1	0
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	0	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

*N/A - Not Available*

This page is intentionally left blank.

## 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>
2006	9.7%
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%

### 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>
2006	\$193,511,049	\$197,230,303	98.1%
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%

### 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>
2006	\$ 5,375,366	\$2,649,000	\$2,720,013	50.6%
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%

## STATISTICAL SECTION

### Additional Schedules Required by Employer (continued)

#### Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2015, with comparative totals for 9 years

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Beginning Net Position (Fair Value)	\$ 201,309,174	\$ 199,740,742	\$ 180,287,412	\$ 167,995,703	\$ 173,898,700
Additions:					
Employer contributions	3,462,037	3,136,752	2,863,145	3,108,976	3,255,609
Employee contributions	2,771,533	2,645,164	2,687,211	2,426,776	2,289,027
Annuitant health benefit contributions	1,134,920	1,193,549	1,190,706	1,127,026	1,120,842
Net investment income (loss)	2,549,975	13,525,606	30,383,512	22,209,855	2,021,094
Other	<u>240,278</u>	<u>204,853</u>	<u>159,383</u>	<u>212,447</u>	<u>512,709</u>
Total additions	<u>10,158,743</u>	<u>20,705,924</u>	<u>37,283,957</u>	<u>29,085,080</u>	<u>9,199,281</u>
Deductions:					
Benefits	18,347,316	17,858,418	16,858,913	15,287,183	14,723,330
Refunds	635,908	961,637	958,707	1,188,639	604,314
Employee transfers to (from) Cook County	18,370	175,370	(106,012)	205,887	(328,586)
Administrative expenses	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>	<u>111,662</u>	<u>103,220</u>
Total deductions	<u>19,145,547</u>	<u>19,137,492</u>	<u>17,830,627</u>	<u>16,793,371</u>	<u>15,102,278</u>
Ending Net Position (Fair Value)	<u>\$ 192,322,370</u>	<u>\$ 201,309,174</u>	<u>\$ 199,740,742</u>	<u>\$ 180,287,412</u>	<u>\$ 167,995,703</u>
Actuarial Value of Assets	193,729,043	189,917,999	182,554,587	172,566,956	178,126,063
Actuarial Accrued Liabilities (AAL)	322,764,141	315,234,847	306,919,270	304,451,002	289,321,074
Unfunded AAL (UAAL) (Fair Value)	130,441,771	113,925,673	107,178,528	124,163,590	121,325,371
Unfunded AAL (UAAL) (Actuarial Value)	129,035,098	125,316,848	124,364,683	131,884,046	111,195,011
Funded Ratio (Fair Value)	59.6%	63.9%	65.1%	59.2%	58.1%
Funded Ratio (Actuarial Value)	60.0%	60.2%	59.5%	56.7%	61.6%

Additional Schedules Required by Employer (continued)

**Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined for year ended December 31, 2015, with comparative totals for 9 years (continued)**

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Beginning Net Position (Fair Value)	\$ 162,057,788	\$ 145,319,547	\$ 200,160,357	\$ 197,230,303	\$ 186,792,426
Additions:					
Employer contributions	2,660,034	2,543,694	2,023,448	3,287,040	2,720,013
Employee contributions	2,452,696	2,418,794	2,119,208	1,986,605	1,690,781
Annuitant health benefit contributions	984,039	1,039,073	1,090,141	1,101,172	997,695
Net investment income (loss)	20,250,639	24,683,791	(46,414,013)	9,994,768	18,117,244
Other	227,553	219,919	127,464	245,951	175,844
Total additions	<u>26,574,961</u>	<u>30,905,271</u>	<u>(41,053,752)</u>	<u>16,615,536</u>	<u>23,701,577</u>
Deductions:					
Benefits	14,027,446	13,462,594	13,249,542	12,969,889	12,463,607
Refunds	343,863	472,953	518,400	464,666	346,117
Employee transfers to (from) Cook County	257,975	118,754	(119,434)	130,674	345,410
Administrative expenses	104,765	112,729	138,550	120,253	108,566
Total deductions	<u>14,734,049</u>	<u>14,167,030</u>	<u>13,787,058</u>	<u>13,685,482</u>	<u>13,263,700</u>
Ending Net Position (Fair Value)	<u>\$ 173,898,700</u>	<u>\$ 162,057,788</u>	<u>\$ 145,319,547</u>	<u>\$ 200,160,357</u>	<u>\$ 197,230,303</u>
Actuarial Value of Assets	184,077,516	188,396,534	196,277,679	203,043,217	193,511,049
Actuarial Accrued Liabilities (AAL)	282,391,153	274,032,351	237,927,630	234,120,194	226,580,893
Unfunded AAL (UAAL) (Fair Value)	108,492,453	111,974,563	92,608,083	33,959,837	29,350,590
Unfunded AAL (UAAL) (Actuarial Value)	98,313,637	85,635,817	41,649,951	31,076,977	33,069,844
Funded Ratio (Fair Value)	61.6%	59.1%	61.1%	85.5%	87.0%
Funded Ratio (Actuarial Value)	65.2%	68.7%	82.5%	86.7%	85.4%

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>
2006	\$226,580,893	\$193,511,049	\$197,230,303	\$ 33,069,844
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

**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>
2006	\$196,983,226	\$193,511,049	\$197,230,303	\$ 3,472,177
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

**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>
\$ 29,350,590	85.4%	87.0%	\$19,172,756	172.5%	153.1%
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%

**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>
\$ (247,077)	98.2%	100.1%	\$19,172,756	18.1%	-1.3%
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%

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>
2006	\$39,448,815	\$ -	\$ -	\$39,448,815
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

**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>
2006	\$ (150,731)	\$ 1,773,170	\$ 2,485,073	\$ -	\$ 440,412	\$ 4,547,924
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



**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>
\$ 39,448,815	0.0%	0.0%	\$19,172,756	205.8%	205.8%
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%

This page is intentionally left blank.





FOREST PRESERVE DISTRICT EMPLOYEES' ANNUITY  
AND BENEFIT FUND OF COOK COUNTY

33 North Dearborn Street, Suite 1000

Chicago, IL 60602

312.603.1200

[www.cookcountypension.com](http://www.cookcountypension.com)



*Our objective is to provide exceptional service in the support and administration of your annuity, health and disability benefits. In addition, along with your Board of Trustees, we are also committed to effectively managing the assets of both the Cook County and Forest Preserve Funds.*