



# 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, 2017 and 2016





# **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, 2017 and 2016**

**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
- 10 Letter of Transmittal

## FINANCIAL SECTION - PAGE 15

- 16 Report of Independent Auditors
- 20 Management's Discussion and Analysis

### BASIC FINANCIAL STATEMENTS

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

### REQUIRED SUPPLEMENTARY INFORMATION - PENSION

- 50 Schedule of Changes in the Employer's Net Pension Liability and Related Ratios
- 54 Schedule of Employer Contributions
- 54 Notes to Schedule of Employer Contributions
- 55 Schedule of Investment Returns

### REQUIRED SUPPLEMENTARY INFORMATION - POSTEMPLOYMENT HEALTHCARE

- 56 Schedule of Changes in the Employer's Net Postemployment Healthcare Liability and Related Ratios
- 58 Schedule of Employer Contributions and Related Notes-
- 58 Notes to Schedule

### SUPPLEMENTARY INFORMATION

- 60 Schedules of Administrative Expenses and Professional and Consulting Fees
- 61 Schedules of Investment Expenses
- 62 Additions by Source
- 62 Deductions by Type
- 62 Schedule of Employer Contributions Receivable

## INVESTMENT SECTION - PAGE 63

- 64 Investment Report
- 65 Investment Consultant's Commentary
- 66 Master Custodian's Certification
- 67 Summary of Investment Policy
- 70 Schedule of Investment Results
- 71 Schedule of Investment Summary and Asset Allocation
- 72 Schedule of Top Ten Largest Holdings
- 74 Schedule of Investment Manager Fees and Assets Under Management
- 75 Schedule of Brokerage Commissions

## ACTUARIAL SECTION - PAGE 79

- 80 Actuarial Certification - Pension Benefits
- 84 Actuarial Valuation - Pension Benefits
- 116 Actuarial Certification - Postemployment Healthcare
- 118 Actuarial Valuation - Postemployment Healthcare

### ADDITIONAL ACTUARIAL TABLES - PAGE 140

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

## STATISTICAL SECTION - PAGE 143

- 144 Statement of Changes in Pension Plan Fiduciary Net Position
- 146 Statement of Changes in Postemployment Healthcare Plan Net Position
- 148 Schedule of Retired Members by Benefit Type - Pension Benefits
- 149 Schedule of Retired Members by Benefit Type - Postemployment Healthcare
- 150 Schedule of Average Benefit Payments - Pension Benefits
- 151 Schedule of Average Benefit Payments - Postemployment Healthcare
- 153 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, 2016**

*Christopher P. Morill*

Executive Director/CEO



---

# Principal Officials

## Retirement Board

**Lawrence L. Wilson, CPA**

President

Ex Officio Cook County Comptroller

**Dennis White**

Vice-President

Elected Forest Preserve District Employee

**Diahann Goode**

Secretary

Elected Cook County Employee

**Robert DeGraff**

Elected Cook County Employee

**Joseph Nevius**

Elected Forest Preserve District Annuitant

**Kevin Ochalla**

Elected Cook County Employee

**John E. Fitzgerald**

Elected Cook County Annuitant

**Bill Kouruklis**

*Ex Officio* Cook County Treasurer (Designee)

**Patrick J. McFadden**

Elected Cook County Annuitant

## Professional Consultants

**Legal Counsel**

Burke Burns & Pinelli, Ltd.

**Auditor**

Legacy Professionals, LLP

**Investment Consultant**

Callan Associates, Inc.

**Consulting Actuary**

Conduent HR Services

**Master Custodian**

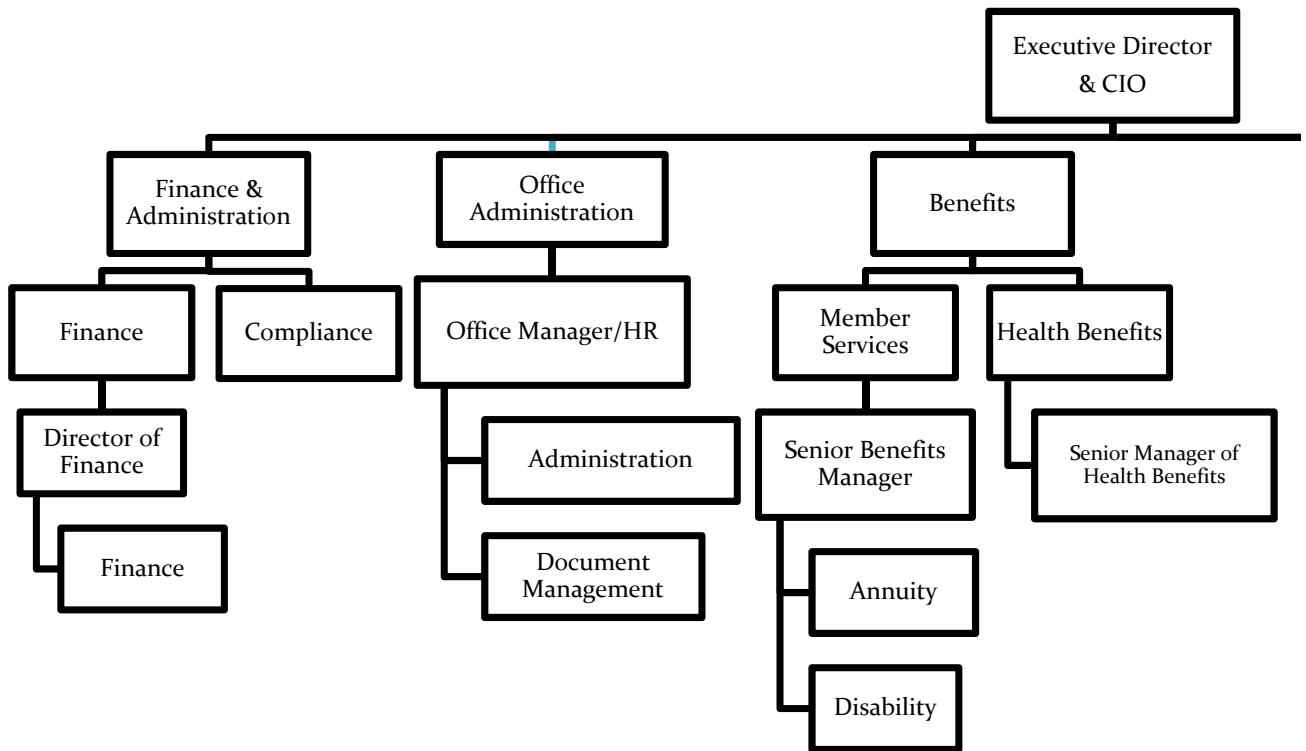
BNY Mellon

**Custodian**

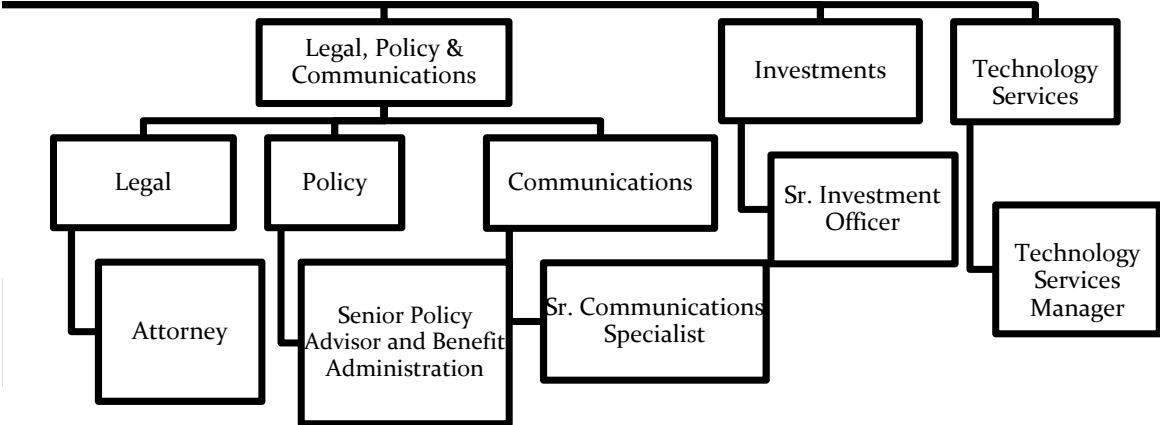
Cook County Treasurer

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

# Organizational Chart







# Letter of Transmittal



June 14, 2018

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

To the Retirement Board and Our Members:

We are pleased to submit to you the Comprehensive Annual Financial Report ("CAFR") of the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("the fund") for the calendar year ended December 31, 2017. 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**

Established in 1931 by an act of the Illinois General Assembly, the Forest Preserve District Fund is a defined benefit public pension fund governed by Illinois Pension Code 40 ILCS 5/1-101 et. seq. The fund administers pension, as well as survivor, death, disability, and retiree health benefits to employees and retirees of the Forest Preserve District of Cook County, Illinois as well as their eligible dependents and beneficiaries. It is considered a component unit of the Forest Preserve District and is included in the Forest Preserve District's financial statements as a pension trust fund. As of December 31, 2017, the fund consisted of 548 active employees, 381 retiree annuitants, 146 survivor annuitants, and 1,365 inactive members.

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, resulting in no more than three positions being subject to election each year. The fund also shares office space and administrative services with CEABF. The fund is administered in accordance with Illinois Compiled Statutes (ILCS) Chapter 40, Articles 1,9,10, and 20.



# Letter of Transmittal

## Summary of Financial Experience

The following table illustrates the changes in the Forest Preserve Fund's net position between December 31, 2017 and December 31, 2016 (numbers in millions):

<b>Change in Net Position</b>	<b>2017</b>	<b>2016 *</b>	<b>\$ Change</b>	<b>% Change</b>
Total additions	\$37.9	\$17.4	\$19.4	104.9%
Total deductions	\$18.8	\$18.5	(\$0.9)	(4.6%)
Change in net position from prior year	\$19.1	(\$1.1)	\$20.3	1691.7%

\* Reclassified to conform with the 2017 presentation due to annuitants Healthcare contribution amount.

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

## Funding

The fund engages an independent actuary, Conduent HR Services (formerly Buck Associates), to perform an actuarial valuation on an annual basis and experience study pursuant to the provisions of the Illinois Pension Code. In an effort to ensure that the actuarial assumptions used to estimate the plan's liability are aligned with current plan experience, the fund conducted an experience review covering the four-year period ending December 31, 2016. Assumption changes of the experience study that were adopted by the Board in April 2018 are reflected in the 2017 valuation. Among the approved changes were revisions to annuitant mortality rates, retirement rates, salary increases, and most notably, the expected actuarial rate of return, which was reduced from the longstanding 7.50% to 7.25%. The combination of changes had the net effect of reducing the plan's actuarial liability by \$8 million and helping improve the plan's financial position overall.

As of December 31, 2017, the Forest Preserve Fund's combined actuarial accrued liability for pension and retiree health benefits was \$330.9 million and the actuarial value of assets was \$204.3 million, resulting in an unfunded actuarial accrued liability of \$126.6 million.

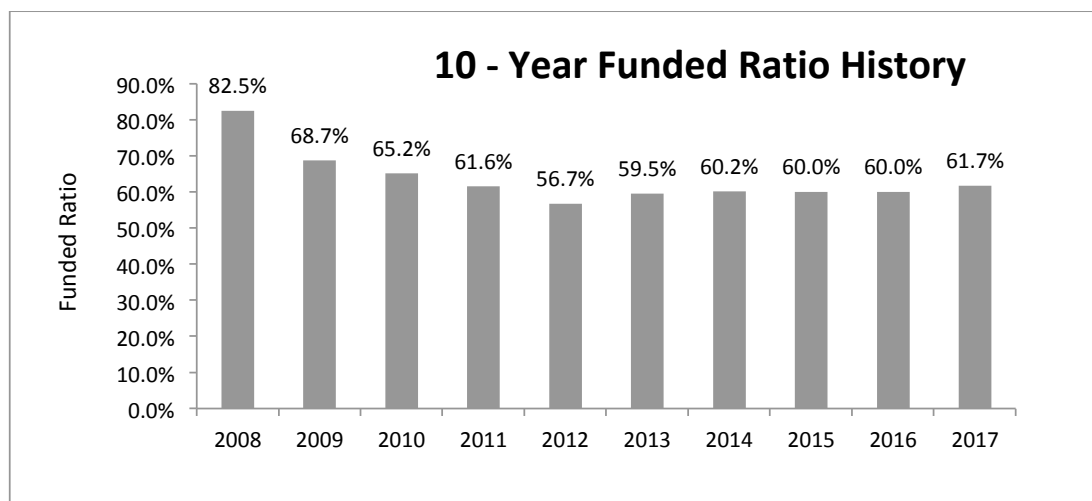
According to the actuary, the assumption changes and strong investment performance were key drivers in offsetting the plan's anticipated growth in liabilities, which resulted in a higher funded ratio (the ratio of assets to liabilities) of 61.73% for pension benefits and retiree health benefits combined compared with 60.04% in 2016.

The fund's actuarial accrued liability for solely pension benefits was \$302.2 million and the actuarial value assets was \$204.3 million, resulting in an unfunded liability of \$97.9 million and a funded ratio of 67.59%. The fund's actuarial accrued liability for retiree health benefits was \$43.4 million. As there are no dedicated funding assets, the actuarial value of assets was \$0 for the retiree health benefits, resulting in an unfunded liability of \$43.4 million.

While the Board continuously works to identify and implement strategies that help the Forest Preserve Fund manage costs while administering pension and health benefits, the fund continues to face a long-term funding shortfall. As employer contributions did not meet the fund's actuarial needs in 2017 and active membership for the plan continued to decline, the actuary projected an earlier solvency date of 2040, compared with the projection of 2042 the year prior.

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 4.26 is needed to adequately finance the fund as compared with the current tax multiple of 1.30, which has been less than the actuarially-determined contribution requirement for more than 20 years. This methodology currently represents less than 30.52% of the actuarially-required contribution. According to the actuary, without legislative action that establishes an actuarially-based funding policy, the fund's assets will be depleted in 22 years.

The following chart depicts historical funding ratios for Forest Preserve District Fund.



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

**Investments**

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

At year-end, the total invested assets of the fund were valued at \$207.1 million compared with \$187.9 million at the end of 2016. The investment portfolio’s net rate of return for the year ended December 31, 2017 was 16.58% compared with 5.7% for the previous year. For the ninth consecutive year, the Forest Preserve Fund generated positive returns for its members by earning \$30.5 million in net investment income before benefit payments of approximately \$18.6 million in 2017.

The Board works to maintain a diversified asset allocation designed to exceed the fund’s 7.25% actuarial rate of return within acceptable risk parameters. On a cash flow basis, \$37.9 million in total additions made up of employer contributions, employee contributions, annuitant healthcare benefit contributions, net investment earnings and miscellaneous income were offset by \$18.8 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.

**2017 Initiatives**

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



*Retiree Health Benefit*

Beginning January 1, 2017, Medicare eligible members began receiving a comparable prescription drug benefit at a lower cost with cost savings for the fund. Last year, \$6.3 million in savings resulting from the EGWP implementation was a contributing factor to the increase in the 2017 actuarial funded ratio.

In an effort to maximize Medicare as the primary payor of health claims for Medicare eligible members, the fund kicked off planning for a Medicare education program to launch in 2018. Targeted to retiree members at or approaching the Medicare eligibility age of 65, the seminars aim to improve coordination with Medicare by providing members critical information on Medicare eligibility, enrollment, and coverage, and how it works with the fund's retiree health plan. During these events, members also have an opportunity to meet with representatives from the Social Security Administration and the plan's healthcare and pharmacy providers, as well as learn about wellness improvement programs available to them.

*Benefits Administration*

The fund maintains its commitment to delivering high-touch customer service amid an increasing volume of benefit requests that included the processing of over 860 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 and member experience at the fund.

The fund moved its office location in November 2017 to improve member services functions. The new office location, which is a block away from the previous location, provides members' greater privacy, security and more access to counselors for their retirement, disability, and health benefit needs.

In 2017, the fund continued to transition from paper to electronic document management to bring greater ease to member services and reduce the organization's footprint. Systems enhancements improved workflow and collaboration between departments, leading to increased efficiency of benefits administration and enhanced information security. As of December 31, 2017, more than \$6 million pages of documents were digitized.

*Legislation*

The following Public Acts were enacted in calendar year 2017:

**Public Act 100-0023 Provisions**

- Added Optional Tier 3 for new hires. The public act added section 1-162 which allows the Cook County Board (Employer) to opt into a Tier 3 plan. If the plan is adopted by Employer ordinance, it would allow any future new hire to elect the current Tier 2 plan or the new Tier 3 plan.
- Changes will be effective the late of July 1, 2018 or the date the Board adopts an ordinance to adopt the changes.
- If adopted it would then impact any new hires after six months after the adoption date. The earliest impact would be for new hires on or after January 1, 2019. New hires after January 1, 2019 (or later depending on ordinance date) would have option of the current Tier 2 benefit under section n1-160 or the new hybrid plan established under section 1-162.
- New hires must make an election of which plan within 30 days of becoming a participant. The Fund has the obligation to establish process for making this election and can adopt rules for participation.

**Public Act 100-0542 Provisions**

- Investment consultants to report annually to the Fund regarding search disclosures for MBE, WBE, and DBE, which has been implemented.
- Annual disclosure of all compensation or economic opportunity received during the last 24 months from investment advisors retained by the Fund which has been implemented.

**Public Act 100-0554 Provisions**

- Requires the Fund, as a lobbying entity, to have a sexual harassment policy, which has been implemented.

**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 unmodified opinion for calendar year ended December 31, 2017. A copy of their report is contained in the Financial Section.

**Awards**

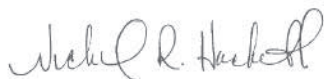
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the fund for its CAFR for the fiscal year ended December 31, 2016. This was the eight year that the fund has earned this prestigious award. 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



A grayscale photograph of a forest path. In the foreground, a wooden bench sits on the left side of the path. The path leads into a dense forest of tall trees with thick foliage. The overall scene is peaceful and natural.

# Financial Section

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



# Report of Independent Auditors



## REPORT OF INDEPENDENT AUDITORS

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

### *Report on the Financial Statements*

We have audited the accompanying financial statements of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (the Plan), a fiduciary fund of Forest Preserve District of Cook County, Illinois, which comprise the combining statements of pension plan fiduciary net position and postemployment healthcare plan net position as of December 31, 2017 and 2016, and the related combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements.

### *Management's Responsibility for the Financial Statements*

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

### *Auditors' Responsibility*

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

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

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



***Opinion***

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the plan net position of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County as of December 31, 2017 and 2016, and the changes in plan net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

***Emphasis of Matter***

As discussed in Note 1, the Plan implemented GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. As a result, the financial statements now include substantially different note disclosures and required supplementary information. Our opinion is not modified with respect to this matter.

***Other Matters******Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the required supplementary information, consisting of the schedule of changes in the employer's net pension liability and related ratios, schedule of employer contributions and related notes, schedule of investment returns, schedule of changes in the employer's net postemployment healthcare liability and related ratios, and schedule of employer contributions and related notes, 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 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, 2015, 2014, 2013, and 2012 (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*

Westchester, Illinois

June 14, 2018

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, 2017 and 2016. 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** increased by \$19,168,548 or 10.0% from \$191,202,398 at December 31, 2016 to \$210,370,946 at December 31, 2017. Comparatively, net position decreased by \$1,119,972 or .6% from \$192,322,370 at December 31, 2015 to \$191,202,398 at December 31, 2016. The change in net position for both years was primarily due to the fluctuation in the fair value of the investments.

**Rate of return** of the Plan's investment portfolio was 16.58% for 2017, 5.67% for 2016 and 1.50% for 2015.

## 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	
	2017	2016	2015	Dollars	Percent
Total assets	\$217,122,394	\$207,496,922	\$211,067,343	\$ 9,625,472	4.6%
Total liabilities	6,751,448	16,294,524	18,744,973	(9,543,076)	-58.6%
Net position	<u>\$210,370,946</u>	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$ 19,168,548</u>	10.0%

## 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	
	2017	2016	2015	Dollars	Percent
<b>Additions</b>					
Employer contributions	\$ 3,544,707	\$ 3,391,381	\$ 3,462,037	\$ 153,326	4.5%
Employee contributions	3,300,222	3,184,051	2,771,533	116,171	3.6%
Net investment income (includes security lending activities)	30,500,015	10,477,792	2,549,975	20,022,223	191.1%
Other	595,665	317,217	240,278	278,448	87.8%
Total additions	<u>37,940,609</u>	<u>17,370,441</u>	<u>9,023,823</u>	<u>20,570,168</u>	118.4%
<b>Deductions</b>					
Benefits	18,002,969	17,458,251	17,212,396	544,718	3.1%
Refunds	554,417	740,586	635,908	(186,169)	-25.1%
Employee transfers to Cook County	54,257	133,999	18,370	(79,742)	-59.5%
Administrative expenses	160,418	157,577	143,953	2,841	1.8%
Total deductions	<u>18,772,061</u>	<u>18,490,413</u>	<u>18,010,627</u>	<u>281,648</u>	1.5%
Net increase (decrease)	19,168,548	(1,119,972)	(8,986,804)	20,288,520	1811.5%
<b>Net position</b>					
Beginning of year	191,202,398	192,322,370	201,309,174	(1,119,972)	-0.6%
End of year	<u>\$210,370,946</u>	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$19,168,548</u>	10.0%

## FINANCIAL SECTION

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

---

#### Additions to Net Position

Total additions were \$37,940,609 in 2017, \$17,370,441 in 2016 and \$9,023,823 in 2015.

Employer contributions increased to \$3,544,707 in 2017 from \$3,391,381 in 2016 and were \$3,462,037 in 2015. Employer contributions are statutorily set at 1.30 times employee contributions collected two years prior.

Employee contributions, including permissive service credit purchases, increased to \$3,300,222 in 2017 from \$3,184,051 in 2016 and were \$2,771,533 in 2015. Employees contribute 8.5% of covered wages.

Net investment income totaled \$30,500,015 for 2017 compared to \$10,477,792 for 2016. Comparatively, net investment income totaled \$2,549,975 for 2015. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

#### Deductions to Plan Position

Total deductions were \$18,772,061 in 2017, \$18,490,413 in 2016 and \$18,010,627 in 2015.

Benefits increased to \$18,002,969 in 2017 from \$17,458,251 in 2016 and \$17,212,396 in 2015 primarily due to the 3% annual cost of living increases for annuitants.

Refunds decreased to \$554,417 in 2017 from \$740,586 in 2016 and decreased from \$635,908 in 2015. These changes are due to fluctuations in refund applications.

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

The cost to administer the Plan increased to \$160,418 in 2017 from \$157,577 in 2016. Comparatively, the cost to administer the Plan increased to \$157,577 in 2016 from \$143,953 in 2015.



## 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>2017</u></b>	<b><u>2016</u></b>	<b><u>2015</u></b>
Total pension liability	\$ 430,452,619	\$ 438,859,466	\$ 457,577,963
Plan fiduciary net position	<u>(210,370,946)</u>	<u>(191,202,398)</u>	<u>(192,322,370)</u>
Employer's net pension liability	<u>\$ 220,081,673</u>	<u>\$ 247,657,068</u>	<u>\$ 265,255,593</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>48.87%</u>	<u>43.57%</u>	<u>42.03%</u>

### Postemployment Healthcare Benefits

Under GASB Statement No. 74, *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>2017</u></b>	<b><u>2016</u></b>	<b><u>2015</u></b>
Total OPEB liability	\$ 49,170,148	\$ 50,517,660	N/A*
Plan fiduciary net position	-	-	
Employer's net OPEB liability	\$ 49,170,148	\$ 50,517,660	

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

\* These amounts are unavailable as of December 31, 2015.

## 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>2017</u></b>	<b><u>2016</u></b>	<b><u>2015</u></b>
Unfunded actuarial accrued liability	<u>\$126,639,668</u>	<u>\$131,962,737</u>	<u>\$129,035,098</u>
Funded ratio	<u>61.73%</u>	<u>60.04%</u>	<u>60.02%</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  
70 West Madison Street  
Suite 1925  
Chicago, Illinois 60602

This page is intentionally left blank.



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

December 31, 2017

<u>ASSETS</u>	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Receivables			
Employer contributions less allowance of \$119,262 in 2017	\$ 3,486,512	\$ 3,486,512	\$ -
Employee contributions	3,787	3,787	-
Accrued investment income	198,409	198,409	-
Receivable for securities sold	320,866	320,866	-
EGWP/Medicare Part D subsidy	88,472	-	88,472
Prescription rebates	63,217	-	63,217
Total receivables	<u>4,161,263</u>	<u>4,009,574</u>	<u>151,689</u>
Investments			
U.S. and international equities	112,414,952	112,414,952	-
U.S. Government and government agency obligations	-	-	-
Corporate bonds	-	-	-
Collective international equity fund	14,607,348	14,607,348	-
Commingled fixed income fund	35,051,663	35,051,663	-
Exchange traded funds	4,315,663	4,315,663	-
Hedge fund	21,691,553	21,691,553	-
Real estate funds	13,440,254	13,440,254	-
Short-term investments	5,574,696	5,574,696	-
Total investments	<u>207,096,129</u>	<u>207,096,129</u>	<u>-</u>
Collateral held for securities on loan	5,865,002	5,865,002	-
Total assets	<u>217,122,394</u>	<u>216,970,705</u>	<u>151,689</u>
 <u>LIABILITIES</u>			
Accounts payable	86,570	86,570	-
Healthcare benefits payable	151,689	-	151,689
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	359,334	359,334	-
Payable for securities purchased	288,853	288,853	-
Securities lending collateral	5,865,002	5,865,002	-
Total liabilities	<u>6,751,448</u>	<u>6,599,759</u>	<u>151,689</u>
Net position			
Net position restricted for pensions	210,370,946	210,370,946	-
Net position restricted for postemployment healthcare benefits	-	-	-
Total	<u>\$210,370,946</u>	<u>\$210,370,946</u>	<u>\$ -</u>

*See accompanying notes to combining financial statements.*

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

**December 31, 2016**

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

*See accompanying notes to combining financial statements.*

FINANCIAL SECTION

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

Year Ended December 31, 2017

	<u>Total</u>	<u>Pension</u>	<u>Postemployment Healthcare</u>
Additions			
Employer contributions	\$ 3,544,707	\$ 2,239,632	\$ 1,305,075
Employee contributions			
Salary deductions	3,046,960	3,046,960	-
Refund repayments	160,917	160,917	-
Former and miscellaneous service payments	56,614	56,614	-
Deductions in lieu of disability	35,731	35,731	-
Total employee contributions	<u>3,300,222</u>	<u>3,300,222</u>	<u>-</u>
Investment income			
Net appreciation in fair value of investments	28,746,514	28,746,514	-
Dividends	2,077,606	2,077,606	-
Interest	325,469	325,469	-
	<u>31,149,589</u>	<u>31,149,589</u>	<u>-</u>
Less investment expenses	(674,299)	(674,299)	-
Net investment income	<u>30,475,290</u>	<u>30,475,290</u>	<u>-</u>
Securities lending			
Income	29,075	29,075	-
Expenses	(4,350)	(4,350)	-
Net securities lending income	<u>24,725</u>	<u>24,725</u>	<u>-</u>
Other			
EGWP/Medicare Part D subsidy	350,011	-	350,011
Prescription plan rebates	231,404	-	231,404
Miscellaneous	14,250	14,250	-
Total other additions	<u>595,665</u>	<u>14,250</u>	<u>581,415</u>
Total additions	<u>37,940,609</u>	<u>36,054,119</u>	<u>1,886,490</u>
Deductions			
Benefits			
Annuity			
Employee	13,253,194	13,253,194	-
Spouse and children	2,630,286	2,630,286	-
Disability			
Ordinary	230,363	230,363	-
Duty	2,636	2,636	-
Healthcare less annuitant contributions of \$1,321,187 in 2017	1,886,490	-	1,886,490
Total benefits	<u>18,002,969</u>	<u>16,116,479</u>	<u>1,886,490</u>
Refunds	554,417	554,417	-
Employee transfers to Cook County Employees' and Officers' Annuity and Benefit of Cook County	54,257	54,257	-
Administrative expenses	160,418	160,418	-
Total deductions	<u>18,772,061</u>	<u>16,885,571</u>	<u>1,886,490</u>
Net increase (decrease)	19,168,548	19,168,548	-
Net position			
Beginning of year	191,202,398	191,202,398	-
End of year	<u>\$ 210,370,946</u>	<u>\$ 210,370,946</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, 2016**

	<u><b>Total</b></u>	<u><b>Pension</b></u>	<u><b>Postemployment Healthcare</b></u>
<b>Additions</b>			
Employer contributions	\$ 3,391,381	\$ 1,971,946	\$ 1,419,435
Employee contributions			
Salary deductions	2,980,457	2,980,457	-
Refund repayments	127,639	127,639	-
Former and miscellaneous service payments	2,571	2,571	-
Deductions in lieu of disability	73,384	73,384	-
Total employee contributions	<u>3,184,051</u>	<u>3,184,051</u>	<u>-</u>
Investment income			
Net appreciation			
in fair value of investments	8,074,762	8,074,762	-
Dividends	2,268,706	2,268,706	-
Interest	686,973	686,973	-
	<u>11,030,441</u>	<u>11,030,441</u>	<u>-</u>
Less investment expenses	(622,361)	(622,361)	-
Net investment income	<u>10,408,080</u>	<u>10,408,080</u>	<u>-</u>
Securities lending			
Income	83,244	83,244	-
Expenses	(13,532)	(13,532)	-
Net securities lending income	<u>69,712</u>	<u>69,712</u>	<u>-</u>
Other			
EGWP/Medicare Part D subsidy	130,116	-	130,116
Prescription plan rebates	187,101	-	187,101
Miscellaneous	-	-	-
Total other additions	<u>317,217</u>	<u>-</u>	<u>317,217</u>
Total additions	<u>18,548,328</u>	<u>15,633,789</u>	<u>1,736,652</u>
<b>Deductions</b>			
Benefits			
Annuity			
Employee	12,896,736	12,896,736	-
Spouse and children	2,523,376	2,523,376	-
Disability			
Ordinary	245,271	245,271	-
Duty	56,216	56,216	-
Healthcare less annuitant contributions of \$1,177,887 in 2016	<u>1,736,652</u>	<u>-</u>	<u>1,736,652</u>
Total benefits	<u>17,458,251</u>	<u>15,721,599</u>	<u>1,736,652</u>
Refunds	740,586	740,586	-
Employee transfers to Cook County Employees' and Officers' Annuity and Benefit of Cook County	133,999	133,999	-
Administrative expenses	157,577	157,577	-
Total deductions	<u>18,490,413</u>	<u>16,753,761</u>	<u>1,736,652</u>
Net increase (decrease)	(1,119,972)	(1,119,972)	-
Net position			
Beginning of year	192,322,370	192,322,370	-
End of year	<u>\$191,202,398</u>	<u>\$191,202,398</u>	<u>\$ -</u>

*See accompanying notes to combining financial statements.*



## Notes to Financial Statements

### Note 1: Summary of Significant Accounting Policies

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

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

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

**New Accounting Pronouncement** - The Plan has implemented Governmental Accounting Standards Board (GASB) Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74), which addresses accounting and financial reporting issues related to other postemployment benefit plans. GASB 74 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.

Plan has also implemented GASB Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68 and No. 73* (GASB 82), which 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.

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

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

**Allocated Expenses** - Administrative expenses are initially paid by the County Employees' and Officers' Annuity and Benefit Fund of Cook County (the Cook County Fund). These expenses are allocated between the Cook 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, 2017 and 2016, 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 14, 2018, 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 established for the purpose of providing retirement, death and disability benefits for full-time employees of the Forest Preserve District and the dependents of such employees. The Plan is considered to be a fiduciary fund of Forest Preserve District of Cook County, Illinois and is included in the Forest Preserve District's financial statements.

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

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

Covered employees are required to contribute 8.5% of their salary to the Plan, subject to the salary limitations for Tier 2 participants in Article 5/1-160. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest (3% or 4% depending on when the employee became a participant). The Forest Preserve District's total contribution is the amount of contributions made by the employees to the Plan in the calendar year two years prior to the year for which annual applicable tax is levied, multiplied by 1.30. The source of funds for the Forest Preserve District's contributions has been designated by State Statute as the Forest Preserve District's annual property tax levy. The Forest Preserve District's payroll for employees covered by the Plan for the years ended December 31, 2017 and 2016 was \$35,078,173 and \$34,509,011 respectively.

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

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

## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### Note 2: Plan Description (continued)

At December 31, 2017 and 2016, participants consisted of the following:

	<u>2017</u>	<u>2016</u>
Active Members	548	572
Retired Members	381	378
Beneficiaries	146	152
Inactive Members	<u>1,365</u>	<u>1,296</u>
Total	<u>2,440</u>	<u>2,398</u>

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

##### Net Pension Liability

The components of the employer's net pension liability of the Plan for the years ended December 31, 2017 and 2016 are as follows

	<u>2017</u>	<u>2016</u>
Total pension liability	\$430,452,619	\$438,859,466
Plan fiduciary net position	<u>210,370,946</u>	<u>191,202,398</u>
Employer's net pension liability	<u>\$220,081,673</u>	<u>\$247,657,068</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>48.87%</u>	<u>43.57%</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, 2017 and 2016 using the following actuarial methods and assumptions:

Actuarial valuation dates	December 31, 2017 and 2016
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	2017 - 2.75% per year, compounded annually; 2016 - 3.25% per year, compounded annually
Salary increases	2017 - 1.50% to 7.50%, based on age; 2016 - 3.75% to 8.00%, based on age
Investment Rate of Return	2017 - 7.25% per year, compounded annually; 2016 - 7.50% per year, compounded annually
Retirement age	2017 - Rates of retirement for each age from 50 to 80 based on recent experience of the Plan where all employees are assumed to retire by age 80  2016 - 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	2017 - RP-2014 Blue Collar Mortality Table, base year 2006, Conduent Modified MP-2017 projection scale 2016 - 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, 2017 valuation were based on the results of an actuarial experience study conducted by Conduent, Inc. (formerly Buck Consultants, LLC) dated February 2018. The actuarial assumptions used in the December 31, 2016 valuation 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, 2017 and 2016 were 4.45% and 4.62%, 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 3.16% and 3.71% at December 31, 2017 and 2016, respectively, and the long-term investment rate of return of 7.25% and 7.50% for 2017 and 2016, respectively, were used in the development of the blended discount rates. The municipal bond rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index.

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

The following is an analysis of the net pension liability's sensitivity to changes in the discount rate at December 31, 2017 and 2016. 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, 2017</b>			
	<b>1% Decrease</b>	<b>Current Discount Rate</b>	<b>1% Increase</b>
	3.45%	4.45%	5.45%
Net Pension Liability	<u>\$287,353,111</u>	<u>\$220,081,673</u>	<u>\$166,170,214</u>
<b>December 31, 2016</b>			
	<b>1% Decrease</b>	<b>Current Discount Rate</b>	<b>1% Increase</b>
	3.62%	4.62%	5.62%
Net Pension Liability	<u>\$319,995,043</u>	<u>\$247,657,068</u>	<u>\$190,280,122</u>

## Note 4: Summary of Employer Funding Policies

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

## Note 5: Investments

### Investment Policy

The Board of Trustees is responsible for establishing reasonable and consistent investment objectives, policies and guidelines governing the investment of Plan assets in accordance with the Illinois Compiled Statutes. The Plan is authorized to invest in bonds, notes, certificates of indebtedness, mortgage notes, real estate, stocks, shares, debentures, or other obligations or securities as set forth in the “prudent person” provisions of the state statutes. All of the Plan’s financial instruments are consistent with the permissible investments outlined in the state statutes and any index-linked financial instruments are limited to those indices that replicate the permissible investments outlined in the State Statutes. During the year ended December 31, 2017 and 2016, 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	32.00%	11.17%
International equities	27.00%	9.51%
Fixed income	21.00%	4.77%
Real estate funds	9.00%	9.77%
Hedge funds	10.00%	7.31%
Cash	1.00%	3.98%
Total investments	<u>100.00%</u>	

### Note 5: Investments (continued)

#### Long-term expected rate of return

The long-term expected rate of return on the Plan's investments was determined based on the results of an experience study performed by Conduent, Inc. The results of the experience study were adopted by the Board in April 2018. The investment return assumption was based on the current asset allocation of the Plan. In the experience study, Conduent 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 arithmetic real rates of return for each major asset class included in the Plan's target asset allocation as of December 31, 2017 are listed in the previous table.

#### Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 16.58% and 5.67% for the years ended December 31, 2017 and 2016, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

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

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Plan's investment policy is an average credit quality for each manager's total fixed income portfolio (corporate and U.S. Government holdings) of not less than A- by two out of three credit agencies (Moody's Investor Service, Standard & Poor's and/or Fitch). The following table presents a summarization of the Plan's credit quality ratings of investments at December 31, 2017 and 2016 as valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

<u>Type of Investment</u>	<u>Rating</u>	<u>2017</u>	<u>2016</u>
U.S. Government and government agency obligations	Aa/AA	\$ -	\$ 11,243,062
	Not Rated	<u>-</u>	<u>199,166</u>
		<u>\$ -</u>	<u>\$ 11,442,228</u>
Corporate bonds	A/A	\$ -	\$ 2,046,395
	Baa/BBB	-	3,286,284
	Ba/BB	<u>-</u>	<u>535,601</u>
	<u>\$ -</u>	<u>\$ 5,868,280</u>	
Commingled fixed income fund	Not Rated	<u>\$ 35,051,663</u>	<u>\$ 18,807,947</u>
Short-term investments	Not Rated	<u>\$ 5,574,696</u>	<u>\$ 4,707,634</u>



FINANCIAL SECTION

Notes to Financial Statements (continued)

**Note 5: Investments (continued)**

**Investment Risk (continued)**

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments held for longer periods are subject to increased risk of adverse interest rate changes. The Plan's investment policy for duration for each manager's total fixed income portfolio is within plus or minus 30% of the duration for the fixed income performance benchmark (Bloomberg Barclays US Aggregate Fixed Income, which was 5.98 years at December 31, 2017 and 5.89 years at December 31, 2016). The following table presents a summarization of the Plan's debt investments at December 31, 2017 and 2016 using the segmented time distribution method:

<u>Type of Investment</u>	<u>Maturity</u>	<u>2017</u>	<u>2016</u>
U.S. Government and government agency obligations	< 1 year	\$ -	\$ 1,335
	1 - 5 years	-	2,212,010
	5 - 10 years	-	3,834,266
	Over 10 years	-	5,394,617
		<u>\$ -</u>	<u>\$11,442,228</u>
Corporate bonds	1 - 5 years	\$ -	\$ 1,744,603
	5 - 10 years	-	2,978,752
	Over 10 years	-	1,144,925
		<u>\$ -</u>	<u>\$ 5,868,280</u>
Commingled fixed income fund	5-10 years	<u>\$35,051,663</u>	<u>\$18,807,947</u>
Short-term investments	< 1 year	<u>\$ 5,574,696</u>	<u>\$ 4,707,634</u>

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

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

<u>Type of Investment</u>	<u>Fair Value</u> <u>(USD)</u> <u>2017</u>	<u>Fair Value</u> <u>(USD)</u> <u>2016</u>
U.S. and international equities		
Australian dollar	\$ -	\$ 1,659,083
British pound sterling	9,619,912	9,571,732
Canadian dollar	3,381,223	2,025,413
Danish krone	1,016,739	1,185,771
European euro	12,030,897	8,863,401
Israeli shekel	1,255,544	914,471
Japanese yen	8,982,474	5,992,539
New Zealand dollar	832,118	756,403
Norwegian krone	1,009,225	1,790,782
Singapore dollar	903,704	402,083
Swedish krona	2,220,062	1,197,883
Swiss franc	1,491,797	884,198
U.S. dollar	69,671,257	61,949,831
Total U.S. and international equities	<u>\$112,414,952</u>	<u>\$ 97,193,590</u>

For the years ended December 31, 2017 and 2016, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was \$9,887,995 and \$4,337,995 respectively. These amounts are included in the net appreciation 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 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 in plan assets being reported in both the current year and the previous years.

FINANCIAL SECTION

Notes to Financial Statements (continued)

**Note 6: Fair Value Measurements**

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

Basis of Fair Value Measurement

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

The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Plan has the following recurring fair value measurements as of December 31, 2017 and 2016:

**Fair Value Measurements at 12/31/2017 Using**

	<u>Total</u>	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
U.S. and international equities	\$ 112,414,952	\$ 112,414,952	\$ -	\$ -
Exchange traded funds	4,315,663	4,315,663	-	-
Total investments by fair value level	<u>116,730,615</u>	<u>\$ 116,730,615</u>	<u>-</u>	<u>-</u>
<b>Investments measured at net asset value</b>	90,365,514			
Total investments at fair value	<u><u>\$207,096,129</u></u>			

**Note 6: Fair Value Measurements (continued)**

	<u>Total</u>	<b>Fair Value Measurements at 12/31/2016 Using</b>		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
U.S. and international equities	\$ 97,193,590	\$ 97,193,590	\$ -	\$ -
U.S. Government and government agency obligations	11,442,228	-	11,442,228	-
Corporate bonds	5,868,280	-	5,868,280	-
Exchange traded funds	4,485,230	4,485,230	-	-
Total investments by fair value level	<u>118,989,328</u>	<u>\$ 101,678,820</u>	<u>\$ 17,310,508</u>	<u>\$ -</u>
<b>Investments measured at net asset value</b>	<u>68,882,580</u>			
Total investments at fair value	<u><u>\$187,871,908</u></u>			

**Level 1 Measurements**

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

**Level 2 Measurements**

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



FINANCIAL SECTION

Notes to Financial Statements (continued)

**Note 6: Fair Value Measurements (continued)**

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

	<u>Fair Value</u> <u>12/31/17</u>	<u>Fair Value</u> <u>12/31/16</u>	<u>Unfunded</u> <u>Commitments</u>	<u>Redemption</u> <u>Frequency</u> <u>(If Eligible)</u>	<u>Redemption</u> <u>Notice</u> <u>Period</u>
Investments measured at net asset value					
Collective international equity fund (1)					
Lazard/Wilmington Emerging Markets Sudan Free Portfolio	\$14,607,348	\$12,456,752	-	Daily	N/A
Commingled fixed income fund (2)					
EB DV Non-SL Aggregate Bond Index Fund	35,051,663	18,807,947	-	Daily	N/A
Hedge fund (3)					
Burnham Harbor Fund Ltd.	21,691,553	20,282,707	-	Monthly	95 days
Real estate funds (4)					
JPMCB Strategic Property Fund	7,105,673	6,685,531	-	Quarterly	45 days
PRISA Separate Account	6,334,581	5,942,009	-	Quarterly	90 days
Short-term investment (5)					
BNY Mellon EB Temporary Investment Fund	5,574,696	4,707,634	-	Daily	N/A
Total investments measured at net asset value	<u>\$90,365,514</u>	<u>\$68,882,580</u>			

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

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

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

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

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

## Note 7: 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 102 days for 2017 and 46 days for 2016; 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, 2017 and 2016 of 2 and 10 days, respectively.

As of December 31, 2017 and 2016, the fair value (carrying amount) of loaned securities was \$10,775,607 and \$18,981,757 respectively. As of December 31, 2017 and 2016, the fair value (carrying amount) of cash collateral received by the Plan was \$5,865,002 and \$15,307,189 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, 2017 and 2016, the fair value (carrying amount) of noncash collateral received by the Plan was \$5,178,759 and \$4,147,183 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 2017 and 2016, there were no losses due to default of a borrower or the lending agent.

## FINANCIAL SECTION

### Notes to Financial Statements (continued)

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

A summary of securities loaned at fair value as of December 31, 2017 and 2016 is as follows:

	<u>2017</u>	<u>2016</u>
Securities loaned - cash collateral		
U.S. and international equities	\$2,265,059	\$10,492,107
Exchanged traded funds	3,462,160	4,231,327
Corporate bonds	-	219,850
Total securities loaned - backed by cash collateral	<u>5,727,219</u>	<u>14,943,284</u>
Securities loaned - non-cash collateral		
U.S. and international equities	5,048,388	2,866,394
U.S. Government and government agency obligations	-	1,172,079
Total securities loaned - non-cash collateral	<u>5,048,388</u>	<u>4,038,473</u>
Total	<u><u>\$10,775,607</u></u>	<u><u>\$18,981,757</u></u>

#### Note 8: Employer's Postemployment Healthcare Liability

##### Plan Description

The Plan administers a Postemployment Group Healthcare Benefit Plan (PGHBP), a single-employer defined benefit postemployment healthcare plan. The 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. The PGHBP provides a healthcare benefit to annuitants of the Forest Preserve District of Cook County, Illinois (the employer) who elect to participate in the PGHBP.

**Note 8: Employer's Postemployment Healthcare Liability (continued)****Plan Description (continued)**

At December 31, 2017 and 2016, participants consisted of the following:

	<u>2017</u>	<u>2016</u>
Active members	548	572
Inactive plan members or beneficiaries currently receiving benefit payments	349	361
Inactive plan members entitled to but not yet receiving benefit payments	<u>30</u>	<u>36</u>
Total	<u>927</u>	<u>969</u>

**Benefits Provided** - The PGHBP provides healthcare and vision benefits for annuitants and their dependents.

**Contributions** - The employer funds the PGHBP on a "pay-as-you-go" basis. The employee and spouse annuitants pay approximately 50% and 35% of the annual medical costs, respectively. The remaining costs are borne by the employer.

**Method of Accounting** - The PGHBP's financial statements have been combined with the Plan's financial statements and are presented using the accrual basis of accounting. Healthcare expenses are recognized when incurred and estimable. Health Care Cost Trend Rates

**Employer's Net Postemployment Healthcare Liability**

The components of the employer's net postemployment healthcare liability at December 31, 2017 and 2016, were as follows:

	<u>2017</u>	<u>2016</u>
Total postemployment healthcare liability	\$ 49,170,148	\$ 50,517,660
Plan fiduciary net position	<u>-</u>	<u>-</u>
Employer's net postemployment healthcare liability	<u>49,170,148</u>	<u>50,517,660</u>
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	<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.

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



## FINANCIAL SECTION

### Notes to Financial Statements (continued)

#### Note 8: Employer's Postemployment Healthcare Liability (continued)

The net postemployment healthcare liability was determined by actuarial valuation performed as of December 31, 2017 using the following actuarial methods and assumptions

Actuarial valuation date	December 31, 2017
Actuarial cost method	Entry Age Normal
Actuarial assumptions:	
Inflation	2017 - 2.75% per year; 2016 - 3.25% per year
Salary increases	2017 - 3.50% to 8.00%, based on age; 2016 - 3.75% to 8.00%, based on age
Health care cost trend rates	2017 - 7.25% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare. 5.75% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.  2016 - 7.50% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare. 6.00% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.
Mortality	2017 - RP-2014 Blue Collar Mortality Table, base year 2006, Conduent Modified MP-2017 projection scale 2016 - RP-2000 Blue Collar Mortality Table, base year 2000, fully generational based on Scale BB

The actuarial assumptions used in the December 31, 2017 valuation were based on the results of an actuarial experience study conducted by Conduent, Inc. over the period 2013 through 2016.

#### Discount Rate

The blended discount rate used to measure the total postemployment healthcare liability at December 31, 2017 was 3.16%. 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 3.16% at December 31, 2017, and the long-term investment rate of return of 0% 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.

**Note 8: Employer's Postemployment Healthcare Liability (continued)****Sensitivity of the Net Postemployment Healthcare Liability to Changes in the Discount Rate**

The following is an analysis of the net postemployment healthcare liability's sensitivity to changes in the discount rate at December 31, 2017. The following table presents the net postemployment healthcare liability of the employer using the blended discount rate as well as the employer's net postemployment healthcare liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

	<b>1% Decrease</b>	<b>Current Discount Rate</b>	<b>1% Increase</b>
Net Postemployment Healthcare Liability as of December 31, 2017	2.16%	3.16%	4.16%
	<u>\$57,652,626</u>	<u>\$49,170,148</u>	<u>\$42,430,686</u>

**Sensitivity of the Net Postemployment Healthcare Liability to Changes in the Health Care Cost Trend Rate**

The following is an analysis of the net postemployment healthcare liability's sensitivity to changes in the health care cost trend rate at December 31, 2017. The following table presents the net postemployment healthcare liability of the employer using the health care cost trend rate as well as the employer's net postemployment healthcare liability calculated using a health care cost trend rate 1 percent lower and 1 percent higher than the current health care cost trend rate.

	<b>1% Decrease</b>	<b>Health Care Cost Trend Rate</b>	<b>1% Increase</b>
Net Postemployment Healthcare Liability as of December 31, 2017			
	<u>\$41,718,370</u>	<u>\$49,170,148</u>	<u>\$58,862,959</u>

**Note 9: Related Party Transactions**

The Plan has common Trustees and shares office space with the Cook County Fund. The Plan reimburses the Cook County Fund for shared administrative services provided by the Cook County Fund. During the years ended December 31, 2017 and 2016, the Cook County Fund allocated administrative expenditures of \$109,430 and \$101,167 respectively.

As of December 31, 2017 and 2016, the Plan owes the Cook County Fund \$359,334 and \$463,181 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

## FINANCIAL SECTION

---

### Notes to Financial Statements (continued)

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

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

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

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

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

In May 2017, GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. Statement No. 86 was issued to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources are placed in an irrevocable trust for the sole purpose of extinguishing debt. Statement No. 86 also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. Statement No. 86 is effective for the Plan's fiscal year ending December 31, 2018.

In June 2017, GASB issued Statement No. 87, *Leases*. Statement No. 87 was issued to improve accounting and financial reporting for leases by governments. This Statement increases the usefulness of governmental financial statements by requiring recognition of certain lease assets and liabilities for leases that were previously classified as operating leases. Statement No. 87 establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Statement No. 87 is effective for the Plan's fiscal year ending December 31, 2020.

In June 2017, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. Statement No. 88 was issued to improve the information that is disclosed in notes to government financial statements related to debt. This Statement also clarifies which liabilities governments should include when disclosing information related to debt. Statement No. 88 is effective for the Plan's fiscal year ending December 31, 2019.

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

This page is intentionally left blank.



## Required Supplementary Information - Pension

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

	<u>December 31, 2017</u>
Total pension liability	
Service cost	\$ 10,698,297
Interest	20,384,471
Difference between expected and actual experience	( 1,344,952)
Changes of assumptions	(21,473,767)
Expected benefit payments, including refunds of employee contributions	<u>(16,670,896)</u>
Net change in total pension liability	(8,406,847)
Total pension liability	
Beginning of year	<u>438,859,466</u>
End of year	<u><u>\$430,452,619</u></u>
Plan fiduciary net position	
Contributions - employer	\$ 2,239,632
Contributions - employee	3,300,222
Net investment income	30,500,015
Expected benefit payments, including refunds of employee contributions	(16,670,896)
Administrative expenses	(160,418)
Other	<u>(40,007)</u>
Net change in plan fiduciary net position	19,168,548
Plan fiduciary net position	
Beginning of year	<u>191,202,398</u>
End of year	<u><u>\$210,370,946</u></u>
Employer's net pension liability	<u><u>\$220,081,673</u></u>
Plan fiduciary net position as a percentage of the total pension liability	<u>48.87%</u>
Covered-payroll	<u><u>\$ 35,078,173</u></u>
Employer's net pension liability as a percentage of covered-employee payroll	<u><u>627.40%</u></u>

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

*See Report of Independent Auditors.*

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

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

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

*See Report of Independent Auditors.*

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

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

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

*See Report of Independent Auditors.*

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

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

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

*See Report of Independent Auditors.*

**FINANCIAL SECTION**

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

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

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Actuarially determined contribution	\$10,230,872	\$10,166,661	\$10,921,946	\$ 9,608,247	\$ 8,590,721
Contributions in relation to the actuarially determined contribution	(2,239,632)	(1,971,946)	(1,763,345)	(1,520,316)	(1,403,628)
Contribution deficiency	<u>\$ 7,991,240</u>	<u>\$ 8,194,715</u>	<u>\$ 9,158,601</u>	<u>\$ 8,087,931</u>	<u>\$ 7,187,093</u>
Covered payroll	<u>\$35,078,173</u>	<u>\$34,509,011</u>	<u>\$32,007,657</u>	<u>\$29,811,912</u>	<u>\$29,485,857</u>
Contributions as a percentage of covered employee payroll	<u>6.38%</u>	<u>5.71%</u>	<u>5.51%</u>	<u>5.10%</u>	<u>4.76%</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, 2017

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	2.75% per year, compounded annually
Salary increases	1.50% to 7.50%, based on age
Investment rate of return	7.25% per year, compounded annually
Retirement age	Based on actual past experience, assume all employees retire by age 80 (Tier 1 participants) and 75 (Tier 2 participants).
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Conduent Modified MP-2017 projection scale
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>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Actuarially determined contribution	\$ 7,626,778	\$4,498,036	\$3,329,502	\$2,809,494	\$ 3,329,502
Contributions in relation to the actuarially determined contribution	(2,117,976)	(2,457,405)	(1,333,140)	(1,282,642)	(523,928)
Contribution deficiency	<u>\$ 5,508,802</u>	<u>\$ 2,040,631</u>	<u>\$ 1,996,362</u>	<u>\$ 1,526,852</u>	<u>\$ 2,167,825</u>
Covered employee payroll	<u>\$26,252,071</u>	<u>\$22,678,566</u>	<u>\$24,397,376</u>	<u>\$24,967,115</u>	<u>\$23,474,621</u>
Contributions as a percentage of covered employee payroll	<u>8.07%</u>	<u>10.84%</u>	<u>5.46%</u>	<u>5.14%</u>	<u>2.23%</u>

*See Report of Independent Auditors.*

### Schedule of Investment Returns

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	16.58%	5.67%	1.50%	7.10%

*Note:*

*This schedule is intended to show information for ten years.*

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

*See Report of Independent Auditors.*

# Required Supplementary Information - Postemployment Healthcare

## Schedule of Changes in the Employer's Net Postemployment Healthcare Liability and Related Ratios

	<u>2017</u>
Total postemployment healthcare liability	
Service cost	\$ 2,349,531
Interest	1,937,384
Changes in benefit terms	(1,738,947)
Difference between expected and actual experience	(611,268)
Changes of assumptions	(1,979,137)
Benefit payments	<u>(1,305,075)</u>
Net change in total postemployment healthcare liability	(1,347,512)
Total postemployment healthcare liability	
Beginning of year	50,517,660
End of year	<u><u>\$ 49,170,148</u></u>
Plan fiduciary net position	
Contributions - employer	\$ 1,305,075
Benefit payments - net	<u>(1,305,075)</u>
Net change in plan fiduciary net position	-
Plan fiduciary net position	
Beginning of year	<u>-</u>
End of year	<u><u>\$ -</u></u>
Employer's net postemployment healthcare liability	<u><u>\$49,170,148</u></u>
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	<u>0.00%</u>
Covered-employee payroll	<u><u>\$ 35,078,173</u></u>
Employer's net postemployment healthcare liability as a percentage of covered employee-payroll	<u>140.17%</u>

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

*See Report of Independent Auditors.*

---

Required Supplementary Information - Postemployment Healthcare (continued)

This page is intentionally left blank.

FINANCIAL SECTION

Required Supplementary Information - Postemployment Healthcare (continued)

**Schedule of Employer Contributions and Related Notes - Last Ten Fiscal Years**

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Actuarially determined contribution	\$ 4,681,598	\$ 5,099,567	\$ 4,637,519	\$ 4,641,151	\$ 4,234,545
Contributions in relation to the actuarially determined contribution	<u>(1,305,075)</u>	<u>(1,419,435)</u>	<u>(1,698,692)</u>	<u>(1,616,436)</u>	<u>(1,459,517)</u>
Contribution deficiency	<u>\$3,376,523</u>	<u>\$3,680,132</u>	<u>\$ 2,938,827</u>	<u>\$ 3,024,715</u>	<u>\$ 2,775,028</u>
Covered employee payroll	<u>\$35,078,173</u>	<u>\$34,512,652</u>	<u>\$32,007,657</u>	<u>\$29,811,912</u>	<u>\$29,485,857</u>
Contributions as a percentage of covered employee payroll	<u>3.72%</u>	<u>4.11%</u>	<u>5.31%</u>	<u>5.42%</u>	<u>4.95%</u>

**Notes to Schedule**

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, 2017

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar - Open
Remaining amortization period	30 years
Inflation	2.75% per year
Salary increases	3.50% - 8%, based on age
Health care cost trend rate	7.25% in the first year, decreasing by .25% per year until an ultimate rate of 4.75% is reached for pre-medicare 5.75% in the first year, decreasing by .25% until an ultimate rate of 4.75% is reached for post-medicare.
Retirement Rates	Based on actual past experience, assume all employees retire by age 80 (Tier 1 participants) and 75 (Tier 2 participants)
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Conduent Modified MP-2017 projection scale

**Schedule of Employer Contributions and Related Notes - Last Ten Fiscal Years (continued)**

	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Actuarially determined contribution	\$3,541,064	\$3,830,933	\$3,876,537	\$3,490,173	\$3,785,850
Contributions in relation to the actuarially determined contribution	(991,000)	(798,204)	(1,326,894)	(1,261,052)	(1,499,520)
Contribution deficiency	<u>\$2,550,064</u>	<u>\$3,032,729</u>	<u>\$2,549,643</u>	<u>\$2,229,121</u>	<u>\$2,286,330</u>
Covered employee payroll	<u>\$26,252,071</u>	<u>\$22,678,566</u>	<u>\$24,397,376</u>	<u>\$24,967,115</u>	<u>\$23,474,621</u>
Contributions as a percentage of covered employee payroll	<u>3.77%</u>	<u>3.52%</u>	<u>5.44%</u>	<u>5.05%</u>	<u>6.39%</u>



**FINANCIAL SECTION****Supplementary Information (continued)****Schedules of Administrative Expenses and Professional and Consulting Fees****Years Ended December 31, 2017 and 2016**

	<u>2017</u>	<u>2016</u>
<b>Administrative expenses</b>		
Administrative expenses allocated from County		
Employees' and Officers' Annuity and Benefit		
Fund of Cook County	\$109,430	\$101,167
Bank charges	9,911	9,603
Election expense	2,296	2,919
Membership	435	435
Miscellaneous	-	3,229
Professional and consulting fees	30,346	32,224
Regulatory filing fees	8,000	8,000
Total	<u>\$160,418</u>	<u>\$157,577</u>
<b>Professional and consulting fees</b>		
Actuarial service	\$ 2,300	\$ 2,915
Audit	21,100	25,175
Consulting	2,045	1,302
Legal	3,989	1,939
Lobbyist	912	893
Total	<u>\$ 30,346</u>	<u>\$ 32,224</u>

## Schedules of Investment Expenses

### Years Ended December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
<b>Investment manager expense</b>		
Blackstone Alternative Asset Management	\$213,582	\$196,665
Channing Capital Management	85,300	73,373
J.P. Morgan Asset Management	60,197	57,104
Lazard Asset Management, LLC	110,586	105,689
LM Capital Group, LLC	10,073	27,198
Mellon Capital	7,102	5,239
Prudential Real Estate Investors	49,186	40,969
RhumbLine Advisers	3,178	4,150
William Blair & Company	<u>118,898</u>	<u>98,769</u>
<b>Total investment manager expenses</b>	<u>658,102</u>	<u>609,156</u>
<b>Investment consulting fees</b>		
Callan Associates Inc.	8,997	8,205
<b>Investment custodian fees</b>		
BNY Mellon	<u>7,200</u>	<u>5,000</u>
<b>Total investment expenses</b>	<u><u>\$674,299</u></u>	<u><u>\$622,361</u></u>

FINANCIAL SECTION

Supplementary Information (continued)

**Additions By Source**

<u>Year Ended December 31,</u>	<u>Employer Contributions</u>	<u>Employee Contributions</u>	<u>Net Investment and Net Securities Lending Income (1)</u>	<u>Other (2)</u>	<u>Total Additions</u>
2012	\$3,108,976	\$2,426,776	\$22,209,855	\$212,447	\$27,958,054
2013	\$2,863,145	\$2,687,211	\$30,383,512	\$159,383	\$36,093,251
2014	\$3,136,752	\$2,645,164	\$13,525,606	\$204,853	\$19,512,375
2015	\$3,462,037	\$2,771,533	\$ 2,549,975	\$240,278	\$ 9,023,823
2016	\$3,391,381	\$3,184,051	\$10,477,792	\$317,217	\$17,370,441
2017	\$3,544,707	\$3,300,222	\$30,500,015	\$595,665	\$37,940,609

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

2 - Includes EGWP/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 Fund</u>	<u>Administrative Expenses</u>	<u>Total Deductions</u>
2012	\$14,160,157	\$1,188,639	\$ 205,887	\$111,662	\$15,666,345
2013	\$15,668,207	\$ 958,707	\$(106,012)	\$119,019	\$16,639,921
2014	\$16,664,869	\$ 961,637	\$ 175,370	\$142,067	\$17,943,943
2015	\$17,212,396	\$ 635,908	\$ 18,370	\$143,953	\$18,010,627
2016	\$17,458,251	\$ 740,586	\$ 133,999	\$157,577	\$18,490,413
2017	\$18,002,969	\$ 554,417	\$ 54,257	\$160,418	\$18,772,061

**Schedule of Employer Contributions Receivable**

<u>Contribution Year</u>	<u>December 31, 2017</u>			
	<u>Contributions Receivable</u>	<u>Uncollected Balance</u>	<u>Reserved</u>	<u>Net Contributions Receivable</u>
2016	\$3,438,713	\$ 34,196	\$ 21,992	\$ 12,204
2017	\$3,571,578	3,571,578	97,270	3,474,308
		<u>\$3,605,774</u>	<u>\$119,262</u>	<u>\$3,486,512</u>

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



A grayscale photograph of a forest path. In the foreground, a wooden bench sits on the left side of the path. The path leads into a dense forest of tall trees. The overall scene is peaceful and natural.

# 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 14, 2018

To the Retirement Board and Our Members:

As an institutional investor, the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("the fund") employs a prudent investment strategy to meet its long-term actuarial objective of growing fund 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.

In 2017, the Forest Preserve Fund experienced a strong investment year, outperforming the custom benchmark to return 16.58%, net of investment management fees. During that period, investments earned \$30.5 million for the Forest Preserve Fund and grew plan assets by 10.04% to \$210.4 million by December 31, 2017.

In the absence of a sustainable funding solution to ensure the plan's viability, \$12.8 million in investment earnings were liquidated in 2017 to help fund \$18.0 million in benefit payments for that period.

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.<sup>1</sup>

Sincerely,

A handwritten signature in cursive script that reads "Nickol R. Hackett".

Nickol R. Hackett  
Executive Director and Chief Investment Officer

---

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



---

# Investment Consultant's Commentary

# Callan

Callan LLC  
120 North LaSalle Street  
Suite 2400  
Chicago, IL 60602

Main 312.346.3536  
Fax 312.346.1356

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

June 14, 2018

Board of Trustees  
Forest Preserve District Employees' Annuity and  
Benefit Fund of Cook County  
70 W. Madison Street, Suite 1925  
Chicago, IL 60602

Dear Trustees,

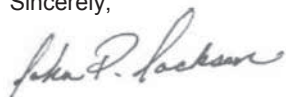
Callan LLC is pleased to present the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("Fund") results for fiscal year ended December 31, 2017. As of year-end, the Fund reported a fair value total of \$207.1 million, an increase of approximately \$19.2 million from December 31, 2016.

The year 2017 offered record low in volatility, more record highs in global stock markets, mixed records in global temperatures, and a record number of natural disasters in the U.S. The VIX Index, a widely used measure of expected stock market volatility, fell more than 20% in 2017, reaching an all-time low in November. Stock markets hit a number of record highs, adding trillions of dollars to global market capitalization. U.S. consumer confidence remained near a 17-year high and unemployment at a 17-year low. At the same time, geopolitical concerns, domestic political drama, and other noteworthy news items littered the headlines, but had little effect on investors' complacency. Risk appetite was robust, fueling returns for traditional and non-traditional assets.

Domestic equity markets as measured by the S&P 500 Index posted their strongest return since 2013 with a +21.8% return for the year. Larger capitalization securities outperformed smaller capitalization securities by a substantial margin. Non-U.S. developed equity market investments were also robust with a +25.03% return as measured by the MSCI EAFE Index. U.S. investors benefited from a weakening dollar that added almost 10% to the annual return. Emerging markets demonstrated continued strength with a +37.28% return for the year. Fixed income markets as represented by Bloomberg Barclays Aggregate Index generated a return of +3.54% for the year. Despite largely positive economic conditions, and three Fed rate hikes, 10-year Treasury yields finished a mere 0.08% higher than where they began the year. Real Estate returns were steady once again in 2017 as the NCREIF Open End Diversified Core Equity Index (ODCE) produced a +6.66% return.

As noted in the Schedule of Investment Results, the Fund generated a total return of 16.58% net-of-fees for the year ended December 31, 2017, which outperformed the 15.63% return of the Fund's target benchmark (the Policy Benchmark). In aggregate, on a net-of-fee basis, the Fund's non-U.S. equity and hedge fund investments exceeded their benchmarks, domestic equity finished in line, and real estate investments trailed its benchmark.

Sincerely,



John P. Jackson, CFA  
Senior Vice President, Callan LLC

# Master Custodian's Certification



Asset Servicing

**Michael J. Beggy**  
Vice President

June 14, 2018

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, 2017 through December 31, 2017.

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

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

Sincerely,

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

Michael J. Beggy  
Relationship Executive

---

# Summary of Investment Policy

## Overview

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

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

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

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

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

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

## INVESTMENT SECTION

---

### Summary of Investment Policy (continued)

#### Investment Objectives

The primary return objectives of the Fund are to:

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

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

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

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

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

## Asset Allocation and Rebalancing Procedures

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

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



## Schedule of Investment Results

For Year Ended December 31, 2017

	<b>Annualized Returns</b>		
	<b><u>1 Year</u></b>	<b><u>3 Years</u></b>	<b><u>5 Years</u></b>
Total Fund	16.58%	7.69%	9.42%
Policy Benchmark *	15.63%	7.82%	8.59%
Domestic Equity	21.04%	11.26%	15.67%
Russell 3000	21.13%	11.09%	15.42%
International Equity	28.14%	8.83%	9.75%
MSCI ACWI ex. U.S.	27.19%	7.83%	6.80%
Fixed Income	3.38%	2.18%	2.03%
BloomBarc Aggregate	3.54%	2.24%	2.10%
Real Estate	5.92%	6.05%	7.94%
NFI-ODCE Value Weight Net	6.66%	9.42%	10.52%
Hedge Funds	7.14%	4.36%	6.27%
Libor-3 Month+4%	5.30%	4.77%	4.56%

\*The Policy Benchmark is as follows:

- As of December 31, 2016: 32.0% Russell 3000 Index, 27.0% MSCI ACWI ex. U.S., 21.0% BloomBarc Aggregate Index, 10.0% Libor-3 Month+4.0%, 9.0% NFI-ODCE Value Weight Net and 1.0% 3-month Treasury Bill.
- As of December 31, 2013: 29% Barclays Aggregate, 23% MSCI ACWI ex. U.S., 21% S&P 500, 9% Russell 2500, 9% Libor-3 Month+4% and 9% NCREIF.
- As of December 31, 2012: 30% Barclays Aggregate, 15% MSCI ACWI ex. U.S., 25% S&P 500, 5% Russell 2000 Value, 7.5% Russell 1000 Value, 7.5% Russell 1000 Growth, 10% BarCap Int. Gov./Cred.

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

## Schedule of Investment Summary and Asset Allocation

For Year Ended December 31,

<b>Asset Class</b>	<b>2017</b>			<b>2016</b>		
	<b>Fair Value</b>	<b>Percent of Total</b>	<b>Target</b>	<b>Fair Value</b>	<b>Percent of Total</b>	<b>Target</b>
Domestic Equity	\$69,671,257	34%	32%	\$ 61,949,831	33%	30%
International Equity	57,351,043	28%	27%	47,700,511	25%	23%
Fixed Income	35,051,663	17%	21%	36,118,455	19%	29%
Real Estate	17,755,917	9%	9%	17,112,770	9%	9%
Hedge Funds-of-Funds	21,691,553	10%	10%	20,282,707	11%	9%
Short Term Investments	5,574,696	3%	1%	4,707,634	3%	0%
Total Investments	<u>\$207,096,129</u>	<u>100%</u>	<u>100%</u>	<u>\$187,871,908</u>	<u>100%</u>	<u>100%</u>

# Schedule of Top Ten Largest Holdings

For Year Ended December 31, 2017

<u>Top 10 Domestic Equity Holdings</u>	<u>Sector</u>	<u>Shares</u>	<u>Fair Value</u>	<u>% of Total</u>
Apple Inc.	Technology	7,756	\$1,312,548	1.9%
Microsoft Corp.	Technology	11,615	993,547	1.4%
Booz Allen Hamilton Holding Corp.	Management Services	23,710	904,062	1.3%
Affiliated Managers Group Inc.	Financial Services	3,725	764,556	1.1%
Hexcel Corp.	Industrial Goods	12,338	763,105	1.1%
Charles River Laboratories	Health Care	6,751	738,897	1.1%
Amazon.com Inc.	Technology	603	705,190	1.0%
Facebook Inc.	Technology	3,591	633,668	0.9%
IIT Inc.	Manufacturer	11,204	597,957	0.9%
PolyOne Corp.	Chemicals	13,675	594,863	0.9%
<b>Total Top 10 Domestic Equity Holdings</b>		<u>94,968</u>	<u>\$ 8,008,393</u>	<u>11.5%</u>
<b>Total Domestic Equity</b>			<u>\$ 69,671,257</u>	<u>100.0%</u>

## INVESTMENT SECTION

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

#### For Year Ended December 31, 2017

<b><u>Top 10 International Equity Holdings</u></b>	<b><u>Sector</u></b>	<b><u>Shares</u></b>	<b><u>Fair Value</u></b>	<b><u>% of Total</u></b>
Prudential PLC (United Kingdom)	Financial Services	75,716	1,951,705	3.4%
Sampo OYJ (Finland)	Insurance	31,839	1,751,038	3.1%
Don Quijote Holdings Co. Ltd. (Japan)	Retail	31,400	1,641,775	2.9%
Daiwa House Industry Co. Ltd. (Japan)	Home Builders	38,100	1,463,459	2.6%
British American Tobacco PLC (UK)	Tobacco	19,619	1,331,757	2.3%
Diageo Plc. (UK)	Distillers and Vintneers	34,154	1,259,000	2.2%
Informa PLC (UK)	Publishing	128,200	1,252,111	2.2%
Vivendi SA (France)	Media	44,487	1,197,676	2.1%
Shire PLC (Ireland)	Pharmaceuticals	22,622	1,193,475	2.1%
Coca-Cola European Partners PL (UK)	Beverages	<u>27,837</u>	1,110,768	1.9%
Wolters Kluwer NV (Netherlands)	Media	19,882	<u>1,038,055</u>	1.8%
<b>Total Top 10 International Equity Holdings</b>		<u>473,856</u>	<u>\$15,190,819</u>	<u>26.5%</u>
<b>Total International Equity</b>			<u><u>\$57,351,043</u></u>	<u><u>100.0%</u></u>

#### For Year Ended December 31, 2017

<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>
Collective Trust Fund	US Fixed Income Funds	<u>245,398</u>	<u>\$35,051,663</u>	<u>100.0%</u>
<b>Total Fixed Income</b>		<u>245,398</u>	<u>35,051,663</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, 2017

<u>Asset Category</u>	<u>Investment Manager Fees</u>	<u>Assets Under Management</u>
<b>U.S and International Equity</b>		
Channing Capital Management	\$ 85,300	\$ 16,241,319
Lazard Asset Management, LLC	110,586	61,693,672
RhumbLine Advisers	3,178	34,355,003
William Blair & Company	118,898	17,812,996
Total U.S and International Equity	<u>317,961</u>	<u>130,102,990</u>
<b>Commingled Fixed Income</b>		
LM Capital Group, LLC	10,073	-
Mellon Capital	7,102	35,051,663
Total Fixed Income	<u>17,174</u>	<u>35,051,663</u>
<b>Real Estate</b>		
J.P. Morgan Asset Management	60,197	7,105,673
Prudential Real Estate Investors	49,186	6,334,581
Total Real Estate	<u>109,383</u>	<u>13,440,254</u>
<b>Exchange Traded Funds</b>		
Russell Implementation Services Inc.	-	4,366,326
Total Real Estate	<u>-</u>	<u>4,366,326</u>
<b>Hedge Funds of Funds</b>		
Blackstone Alternative Asset Management	213,582	21,691,554
	<u>213,582</u>	<u>21,691,554</u>
<b>Short-Term Investments</b>		
BNY Mellon	-	2,443,342
Total	<u>\$658,100</u>	<u>\$207,096,129</u>

## Schedule of Brokerage Commissions

For Year Ended December 31, 2017

<u>Broker Name</u>	<u>Number of Shares</u>	<u>Commissions</u>	<u>Cost per Share</u>
<b>Domestic Equity Commissions</b>			
Loop Capital Markets, LLC*	103,577	\$2,793	\$0.027
Williams Capital Group, LP*	103,910	2,465	0.024
Merrill Lynch Securities	46,056	1,505	0.033
National Financial Services Corp.	36,629	1,063	0.029
Andes Capital Group	38,947	1,048	0.027
Goldman Sachs & Co.	53,209	1,009	0.019
Stiffel Nicolaus	26,174	916	0.035
Cabrera Capital Markets	33,690	795	0.024
Panserra Securities	23,488	690	0.029
Keefe Bruyette and Woods	19,499	682	0.035
Mischler Financial Group Inc.	19,737	563	0.029
Brokers with <\$500 of Commissions	<u>188,273</u>	<u>4,508</u>	<u>0.024</u>
Total Domestic Equity Commissions	<u>693,188</u>	<u>\$18,037</u>	<u>\$0.026</u>

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

(continued)



## INVESTMENT SECTION

### Schedule of Brokerage Commissions (continued)

For Year Ended December 31, 2017

<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>			
Loop Capital Markets, LLC*	209,511	\$3,428	\$0.016
Merrill Lynch Securities	328,245	3,347	0.010
Credit Suisse	81,020	3,173	0.039
Goldman Sachs & Co.	160,203	1,608	0.010
Deutsche Bank Securities, Inc.	31,325	1,468	0.047
Morgan Stanley	174,106	1,461	0.008
RBC Dominion Security Services	90,760	1,248	0.014
Societe Generale	111,343	1,153	0.010
UBS Warburg	219,207	1,142	0.005
J.P. Morgan Securities	49,731	1,061	0.021
Cheevers & Co.	54,947	899	0.016
Instinet Europe Limited	14,681	869	0.059
Investment Technology Group LTD	43,060	746	0.017
Panserra Securities	65,604	722	0.011
Barclays Capital	30,297	594	0.020
Macquarie Bank	41,741	586	0.014
Brokers with <\$500 of Commissions	<u>405,863</u>	<u>6,626</u>	<u>0.016</u>
Total International Equity Commissions	<u>2,111,644</u>	<u>\$30,131</u>	<u>\$0.014</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.*

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

Actuarial Section



## Actuarial Certification – Pension Benefits

June 2018

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, 2017 performed by Conduent HR Consulting, LLC ("Conduent"), formerly Buck Consultants, LLC.

The actuary performs the valuation annually. The last valuation for the Plan was completed for the December 31, 2016 plan year. All Schedules in the report, with the exception of Section 2, were prepared by the actuary. The actuarial valuation is based on audited financial and member data provided by the FPEABF staff and summarized in this report. The benefits considered are those delineated in the Plan, the FPEABF was established on July 1, 1931 and is governed by legislation contained in the Illinois Compiled statutes, particularly Chapter 40, as amended and restated effective December 31, 2017. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Certain historical information with respect to costs, liabilities, assets, accounting disclosure information, etc. has been derived from the prior actuary's reports and information provided by the Plan sponsor. That information is presented for comparison purposes and Conduent has not verified the validity of any of those calculations or data. Conduent 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 2039. We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of payroll (or salary) over a period no longer than 30 years.

The economic and demographic assumptions used in the valuation were adopted by the Board in consultation with Conduent. 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, 2013 through December 31, 2016. This

experience study was performed by Conduent in February, 2018 and resulted in changes in the following assumptions:

- Permanent Withdrawal from Active Status
- Retirement
- Mortality and Future Mortality Improvement
- Rate of Return
- Salary Increase
- Inflation and Payroll Growth
- Percent Married

In selecting economic assumptions, the rate of return of 7.25% (changed from 7.50% in the December 31, 2016 valuation) 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.

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

Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of



## ACTUARIAL SECTION

---

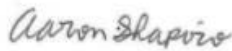
### Actuarial Certification - Pension Benefits (continued)

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.

We have prepared required accounting information for GASB Statement Nos. 67 and 68 for the measurement year ending December 31, 2017, based on valuation dates of December 31, 2016 and December 31, 2017.

Aaron Shapiro is a Fellow of the Society of Actuaries, and Enrolled Actuary, and a 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,



Aaron Shapiro, FSA, EA, MAAA  
Principal, Wealth Consulting  
Conduent



Wendy Ludbrook, FSA, EA, MAAA  
Sr. Consultant, Wealth Consulting

This page is intentionally left blank.

# 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, 2017.

## Purpose

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

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

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

## Membership

**Actives:** As of December 31, 2017, there were 548 employees in active service (including 3 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, 2017</u>	<u>December 31, 2016</u>
Number of active employees	548	572
Average age	45.9	45.2
Average years of service	9.8	9.1
Total annual salary	\$35,078,173	\$34,509,011
Average annual salary	\$ 64,011	\$ 60,330
Total accumulated contributions	\$28,911,383	\$28,775,015
Average accumulated contributions	\$ 52,758	\$ 50,306

The number of active members decreased by 4.2% from the previous valuation date. The average age of the active members increased by 0.7 years, and the average service increased by 0.7 years. The total annual salary increased by 1.7%. The average salary increased by 6.1% from the previous valuation.

**Disabilities:** There were 3 disabled members (included in the active data). There were 6 disabilities in the prior year.

**Retirees and Beneficiaries:** In addition to the active members, there were 381 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, 2017</u>	<u>December 31, 2016</u>
Number of members receiving payments		
Retirees	381	378
Beneficiaries	146	152
Total	527	530
Average Age	72.0	72.0
Annual benefit amounts		
Retirees	\$13,426,824	\$13,112,177
Beneficiaries	\$ 2,681,524	\$ 2,625,741
Total	\$16,108,348	\$15,737,918
Average annual benefit payments	\$ 30,566	\$ 29,694

The number of retired members and beneficiaries decreased by 0.6% from the previous valuation date. The average age of the retired members remained the same. The total annual benefit payments for these members increased by 2.35% from the previous valuation date. Distributions of retired members by age and form of payment are given in Section 4.7 through 4.10 on pages \_\_\_\_\_.

## ACTUARIAL SECTION

### Actuarial Valuation - Pension Benefits (continued)

#### Membership (continued)

**Inactives:** In addition to the active and retired members, there were 1,365 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, 2017</u>	<u>December 31, 2016</u>
Number of inactive members	1,365	1,296
Average age	42.4	42.0

The number of inactive members increased by 5.3% from the previous valuation. The average age of the inactive members increased by 0.4 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 \$210.4 million as of December 31, 2017. This includes an increase of \$19.2 million over the Net Position Available for Benefits of \$191.2 million as of December 31, 2016. During the prior year, the fair value of assets experienced an investment rate of return of 16.6% (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, 2017, the assets available for benefits on an actuarial value basis were \$204.3 million. This includes an increase of \$6.1 million over the actuarial value of assets of \$198.2 million as of December 31, 2016. During 2017, the actuarial value of assets experienced an actuarial rate of return of 9.0% which is based on a five-year averaging of investment returns.

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

## Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial gain of \$6.0 million during the prior year. This net gain is about 2.0% 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 \$3.1 million during the year ending December 31, 2017. This gain decreased the unfunded actuarial accrued liability by \$3.1 million and increased the funded ratio by 0.7%.

There were 491 active members who were also reported active in the December 31, 2016 actuarial valuation. The total salary for this group increased by 6.1%, which was higher than the 4.4% increase we expected for the group.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the Plan liabilities and normal cost can be found in Section 5. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the rate of return on the fair value of assets for the year ending December 31, 2017 was reported to be 16.6%, which was higher than the assumed rate of 7.5%.

The Plan experienced a gain on an actuarial value of assets basis. The rate of return on the actuarial value of Plan assets for the year ending December 31, 2017 was approximately 9.0% compared to the assumption of 7.5%, resulting in an asset gain of \$2.9 million. This gain decreased the unfunded actuarial accrued liability by \$2.9 million and increased the funded ratio by 1.0%. The rate of return on the fair value of assets for the year ending December 31, 2017 was higher than the assumed rate of 7.5%. The actuarial value of the assets recognizes only 20% of the 2017 unexpected change in fair value, delaying the recognition of the remaining 80% over the next four years. Moreover, the actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. The investment gain recognized this year is primarily due to the investment gain in 2017. It should be noted that the Plan's assumed asset return of 7.5% during 2017 is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns. Further, this rate was lowered to 7.25% beginning with the December 31, 2017 valuation.



## 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 2040. 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 2018 has been determined to be \$2.7 million, or 7.56% of pay. This represents a decrease in the employer normal cost rate of 0.10% of pay from last year's employer normal cost rate of 7.66%.

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, 2017 is \$97.9 million. This represents a decrease of \$4.1 million in the unfunded actuarial accrued liability from last year's amount of \$102.0 million. The annual payment required to amortize the unfunded actuarial accrued liability of \$97.9 million, over a period of 30 years, as of December 31, 2017 is \$7.5 million, or 21.51% of pay.

The annual actuarially required employer contribution for 2018 is \$10.2 million, or 29.1% of pay. This represents an decrease of \$0.5 million in the employer contribution amount of \$10.7 million for 2017, or a decrease of 1.9% of pay from last year's employer contribution rate of 31.0%.

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

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

## Funded Status

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

As of December 31, 2017 the funded ratio of the Plan is 67.6%. This represents an increase of 1.6% from last year's funded ratio of 66.0% as of December 31, 2016.

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

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

## Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension Plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan and the Employer under GASB No. 67 can be found in Section 3 beginning on page 100-103.

## Changes in Plan Provisions

There were no changes in benefits or other Plan provisions considered in this actuarial valuation since the last valuation performed as of December 31, 2016.

## Changes in Actuarial Assumptions, Methods, or Procedures

The assumptions used in this valuation were updated from those used in the December 31, 2016 valuation based on recommendations made and approved by the Board as part of an Experience Study covering plan years from January 1, 2013 through December 31, 2016. This experience study was performed by Conduent in February, 2018 and resulted in changes in the following assumptions:

Permanent Withdrawal from Active Status	Retirement
Mortality and Future Mortality Improvement	Inflation and Payroll Growth
Salary Increase	Rate of Return
Married Percentage	

The new assumptions decreased the liability of the plan by \$6.2M as of December 31, 2017.

## ACTUARIAL SECTION

### Actuarial Valuation - Pension Benefits (continued)

#### Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of	
	<u>December 31, 2017</u>	<u>December 31, 2016</u>
<b>Summary of Member Data</b>		
Number of Members Included in the Valuation		
Active Members	548	572
Retirees and Beneficiaries	527	530
Inactive Members	1,365	1,296
Total	<u>2,440</u>	<u>2,398</u>
Annual Payroll		
Average (actual)	\$ 64,011	\$ 60,330
Annual Benefit Payments		
Retirees and Beneficiaries (Average) <sup>1</sup>	\$ 30,566	\$ 29,694
<b>Investment Returns</b>		
Fair Value - Rate of Return (net of investment expenses) <sup>2</sup>	16.6%	5.7%
Actuarial Value - Rate of Return	9.0%	8.6%
<b>Summary of Assets and Liabilities</b>		
Total Actuarial Accrued Liability	\$302,213,539	\$ 300,259,728
Actuarial Value of Assets	<u>\$204,273,172</u>	<u>\$ 198,244,885</u>
Unfunded Actuarial Accrued Liability	<u>\$ 97,940,367</u>	<u>\$ 102,014,843</u>
Funded Ratio	67.59%	66.02%
<b>Employer Actuarial Required Contribution</b>		
Employer Normal Cost	<u>\$ 2,650,893</u>	<u>\$ 2,643,691</u>
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	<u>\$ 7,544,798</u>	<u>\$ 8,035,091</u>
Employer Actuarial Required Contribution	<u>\$ 10,195,691</u>	<u>\$ 10,678,782</u>

<sup>1</sup> The average annual benefit payments for retirees only is \$35,241 as of December 31, 2017 and \$34,688 as of December 31, 2016.

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

**Actuarial Liabilities and Normal Cost**

For the Fiscal Year ending December 31, 2017

<b>Actuarial Liabilities</b>	<b><u>Totals</u></b>
<b>1. Present Value of Projected Benefits</b>	
Active Members	
Retirement Benefits	\$129,566,749
Withdrawal Benefits	9,228,891
Death Benefits	<u>2,040,567</u>
<b>Total</b>	140,836,207
2. Retired Members and Beneficiaries Receiving Benefits	184,465,544
3. Inactive Members with Deferred Benefits	<u>15,407,865</u>
<b>4. Total Present Value of Projected Benefits (1. + 2. + 3.)</b>	340,709,616
5. Present Value of Future Normal Costs	<u>38,496,078</u>
<b>6. Total Actuarial Accrued Liability (4-5.)</b>	<b>\$302,213,538</b>

<b>Normal Cost</b>	<b><u>Totals</u></b>	<b><u>% of Pay</u></b>
<b>1. Active Members</b>		
a. Retirement Benefits	\$4,074,654	11.62%
b. Withdrawal Benefits	1,261,786	3.60%
c. Duty Disability Benefits	0	0.00%
d. Ordinary Disability Benefits	33,972	0.10%
e. Death Benefits	93,687	0.27%
f. Administrative Expenses	168,439	0.48%
<b>2. Total</b>	<u>5,632,538</u>	<u>16.06%</u>
<b>3. Expected Member Contribution</b>	<u><b>2,981,645</b></u>	<u><b>8.50%</b></u>
<b>4. Employer Normal Cost (1. - 2.)</b>	<u><b>\$2,650,893</b></u>	<u><b>7.56%</b></u>



## Actuarial (Gain)/Loss

Development of Actuarial (Gain) / Loss	Amount
1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at December 31, 2016	\$ 300,259,728
b. Normal Cost at December 31, 2016	5,576,957
c. Interest on a. + b. to End of Year	22,937,751
d. Benefit Payments and Refunds, with Interest to End of Year	<u>17,284,753</u>
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	311,489,683
f. Change in Actuarial Accrued Liability at December 31, 2017, due to Change in Actuarial Assumptions	(6,172,740)
g. Change in Actuarial Accrued Liability at December 31, 2017, due to Change in Actuarial Methods	<u>0</u>
h. Expected Actuarial Accrued Liability at December 31, 2017 (e. + f. + g.)	305,316,943
2. Actuarial Accrued Liability at December 31, 2017	<u>302,213,539</u>
<b>3. Liability (Gain) / Loss (2. - 1.h.)</b>	<b>(3,103,404)</b>
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at December 31, 2016	198,244,885
b. Interest on a. to End of Year	14,868,366
c. Contributions Made for December 31, 2017	5,499,847
d. Interest on c. to End of Year	202,516
e. Benefit Payments and Administrative Expenses with Interest to End of Year	17,451,078
f. Change in Actuarial Value of Assets at December 31, 2017 due to Change in Method	<u>0</u>
g. Expected Actuarial Value of Assets at December 31, 2017 (a. + b. + c. + d. - e. - f.)	201,364,536
5. Actuarial Value of Assets as of December 31, 2017	<u>204,273,172</u>
<b>6. Actuarial Asset (Gain) / Loss (4.g. - 5.)</b>	<b>(2,908,636)</b>
<b>7. Actuarial (Gain) / Loss (3. + 6.)</b>	<b>\$ (6,012,040)</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, 2017</u>	As % of <u>Last Year's AAL</u>
1. COLA Experience	\$ 0	0.00%
2. Salary Experience	1,473,961	0.49%
3. Investment Experience	(2,908,636)	-0.97%
4. Retiree Mortality Experience	(4,503,679)	-1.50%
5. Other (turnover, retirement ages, service purchase, etc.)	(73,686)	-0.02%
<b>6. (Gain) or Loss During Year From Experience, (1. + 2. + 3. + 4. + 5.)</b>	<b>(6,012,040)</b>	<b>-2.00%</b>
7. Assumption and Method Changes	(6,172,740)	-2.06%
<b>8. Total (Gain) or Loss During Year (6. + 7.)</b>	<b>\$ (12,184,780)</b>	<b>- 4.06%</b>

## Actuarial Balance Sheet

Financial Resources	<u>December 31, 2017</u>
1. Actuarial Value of Assets	\$ 204,273,172
2. Present Value of Future Contributions	
a. Expected Member Contributions	20,378,318
b. Employer Normal Cost	18,117,760
c. Total	<u>38,496,078</u>
3. Unfunded Actuarial Accrued Liability/(Reserve)	97,940,367
4. Total Assets (1. + 2.c. + 3.)	\$340,709,617

### Benefit Obligations

1. Present Value of Future Benefits	
a. Active Members	140,836,207
b. Retirees and Beneficiaries	184,465,544
c. Inactive Members	<u>15,407,865</u>
d. Total	\$ 340,709,616

### 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>				
2008	\$ 212,373,326	\$ 196,277,679	92.42%	\$ 16,095,647
2009	244,625,664	188,396,534	77.01%	56,229,130
2010	252,877,596	184,077,516	72.79%	68,800,080
2011	261,509,175	178,126,063	68.11%	83,383,112
2012	273,136,730	172,566,956	63.18%	100,569,774
2013	277,560,212	182,554,587	65.77%	95,005,625
2014	285,960,963	189,917,999	66.41%	96,042,964
2015	291,739,068	193,729,042	66.40%	98,010,026
2016	300,259,728	198,244,885	66.02%	102,014,843
2017	302,213,539	204,273,172	67.59%	97,940,367

### Reconciliation of Change in Unfunded Actuarial Liability

<b>Development of Unfunded Actuarial Liability</b>	<b>Amount</b>
1. Unfunded Actuarial Accrued Liability as of December 31, 2016	\$102,014,843
2. Actual Employer Contribution for the Year, Plus Interest	10,493,081
3. Actual Employer Contribution for the Year, Plus Interest	<u>2,322,100</u>
4. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (2. - 3.)	8,170,981
5. Increase/(Decrease) in Unfunded Liability Due to Investment Return Lower/(Higher) Than Assumed	(2,908,636)
6. Increase/(Decrease) in Unfunded Liability Due to Salary Increases Higher/(Lower) Than Assumed	1,473,961
7. Increase/(Decrease) in Unfunded Liability Due to Assumption Changes	(6,172,740)
8. Increase/(Decrease) in Unfunded Liability Due to Other Sources	<u>(4,638,042)</u>
9. Net Increase/(Decrease) in Unfunded Liability for the Year (4. + 5a. + 5b. + 5c. + 5d.)	<u>(4,074,476)</u>
10. Unfunded Actuarial Liability as of December 31, 2017 (1. + 6.)	\$97,940,367

## ACTUARIAL SECTION

### Actuarial Valuation - Pension Benefits (continued)

#### Summary of Fair Value of Assets

Asset Category	Fair Value as of December 31,			
	<u>2017</u>		<u>2016</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
<b>1. Short-Term Investments</b>	\$ 5,574,696	2.62%	\$ 4,707,634	2.32%
<b>2. Investments at Fair Value</b>				
a. U.S. and International Equities	112,414,952	52.79%	97,193,590	47.84%
b. U.S. Government and Government Agency Obligations	0	0.00%	11,442,228	5.63%
c. Corporate Bonds	0	0.00%	5,868,280	2.89%
d. Collective International Equity Fund	14,607,348	6.86%	12,456,752	6.13%
e. Commingled Fixed Income Fund	35,051,663	16.46%	18,807,947	9.26%
f. Exchange Traded Funds	4,315,663	2.03%	4,485,230	2.21%
g. Private Equities	0	0.00%	0	0.00%
h. Hedge Funds	21,691,553	10.19%	20,282,707	9.98%
i. Real Estate	13,440,254	6.31%	12,627,540	6.21%
j. Total	<u>201,521,433</u>	<u>94.63%</u>	<u>183,164,274</u>	<u>90.15%</u>
<b>3. Collateral Held for Securities Lending</b>	<u>5,865,002</u>	<u>2.75%</u>	<u>15,307,189</u>	<u>7.53%</u>
<b>4. Total Assets (1. + 2.i + 3.)</b>	212,961,131	100.00%	203,179,097	100.00%
<b>5. Receivables</b>				
a. Interest and Dividends	198,409		280,241	
b. Investments Sold	320,866		577,903	
c. Other Receivables	<u>3,490,299</u>		<u>3,385,497</u>	
d. Total	4,009,574		4,243,641	
<b>6. Payables</b>				
a. Investments Purchased	288,853		212,347	
b. Securities Lending Collateral	5,865,002		15,307,189	
c. Other Payables	<u>445,904</u>		<u>544,524</u>	
d. Total	6,599,759		16,220,340	
<b>7. Net Assets for Pension Benefits (4. + 5.d. – 6.d.)</b>	<b>\$210,370,946</b>		<b>\$191,202,398</b>	

## Changes in Fair Value of Assets

Transactions	<u>December 31, 2017</u>	<u>December 31, 2016</u>
<i>Additions</i>		
<b>1. Contributions</b>		
a. Contributions from Employers	\$ 2,239,632	\$ 1,971,946
b. Contributions from Plan Members	<u>3,300,222</u>	<u>3,184,051</u>
c. Total	5,539,854	5,155,997
<b>2. Net Investment Income</b>		
a. Interest and Dividends	2,403,075	2,955,679
b. Net Appreciation (Depreciation)	28,746,514	8,074,762
c. Net Securities Lending Income	<u>24,725</u>	<u>69,712</u>
d. Total	31,174,314	11,100,153
e. Less Investment Expense	<u>674,299</u>	<u>622,361</u>
f. Net Investment Income	30,500,015	10,477,792
g. Miscellaneous	14,250	0
h. Employee Transfers	<u>0</u>	<u>0</u>
<b>3. Total Additions</b>	36,054,119	15,633,789
<i>Deductions</i>		
<b>4. Benefits and Expenses</b>		
a. Retirement Benefits	16,116,479	15,721,599
b. Refund of Contributions	554,417	740,586
c. Administrative Expenses	160,418	157,577
d. Employee Transfers	<u>54,257</u>	<u>133,999</u>
<b>5. Total Deductions</b>	<u>16,885,571</u>	<u>16,753,761</u>
<b>6. Net Increase (Decrease)</b>	19,168,548	(1,119,972)
<b>7. Net Position Held in Trust for Pension Benefits</b>		
a. Beginning of Year	<u>191,202,398</u>	<u>192,322,370</u>
b. End of Year	\$ 210,370,946	\$ 191,202,398

**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, 2016	\$ 198,244,885		
2. Unrecognized Return as of December 31, 2016	<u>(7,042,487)</u>		
3. Fair Value of Assets as of December 31, 2016 (1. + 2.)	101,202,398		
4. Contributions			
a. Member (includes purchased service)	3,300,222		
b. Employer	2,239,632		
c. Miscellaneous contributions	<u>-40,007</u>		
d. Total	5,499,847		
5. Distributions			
a. Benefit payments	16,116,479		
b. Refund of contributions	554,417		
c. Administrative expenses	<u>160,418</u>		
d. Total	16,831,314		
6. Expected Return at 7.50% on			
a. Item 1.	14,868,366		
b. Item 2.	(528,187)		
c. Item 4.d.	202,516		
d. Item 5.d.	<u>619,764</u>		
e. Total (a. + b. + c. - d.)	13,922,931		
7. Actual Return on Fair Value for Fiscal Year, Net of Investment Expenses	<u>30,500,015</u>		
8. Return to be Spread for Fiscal Year (7. - 6.e.)*	16,577,084		
9. Total Fair Value of Assets as of December 31, 2017	210,370,946		
10. Return to be Spread			
<b><u>Fiscal Year</u></b>	<b><u>Return to</u></b>	<b><u>Unrecognized</u></b>	<b><u>Unrecognized</u></b>
2017	16,577,084	80%	13,261.667
2016	(3,519,332)	60%	(2,111.599)
2015	(12,123,404)	40%	(4,849,362)
2014	(1,014,662)	20%	(202,932)
2013	17,264,428	0%	<u>0</u>
		Total	<u>6,097,774</u>
11. Actuarial Value of Assets (9. - 10.)			\$ 204,273,172
12. Recognized Rate of Return for the Year on Actuarial Value of Assets			9.01%
13. Rate of Return for the Year on Fair Value of Assets (reported by investment consultant - net of inv. exp.)			16.58%

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

### Schedule of Funding Progress

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

<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, 2008	\$196,277,679	\$212,373,326	\$ 16,095,647	92.42%	\$23,474,621	68.57%
December 31, 2009	188,396,534	244,625,664	56,229,130	77.01%	24,967,115	225.21%
December 31, 2010	184,077,516	252,877,596	68,800,080	72.79%	24,397,376	282.00%
December 31, 2011	178,126,063	261,509,175	83,383,112	68.11%	22,678,566	367.67%
December 31, 2012	172,566,956	273,136,730	100,569,774	63.18%	26,252,071	383.09%
December 31, 2013	182,554,587	277,560,212	95,005,625	65.77%	29,485,857	322.21%
December 31, 2014	189,917,999	285,960,963	96,042,964	66.41%	29,811,912	322.16%
December 31, 2015	193,729,042	291,739,068	98,010,026	66.40%	32,007,657	306.21%
December 31, 2016	198,244,885	300,259,728	102,014,843	66.02%	34,509,011	295.62%
December 31, 2017	204,273,172	302,213,539	97,940,367	67.59%	35,078,173	279.21%

### 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</b>
	<b>Required Contribution (ARC)</b>	<b>Employer Contribution</b>	<b>Contributed</b>
2008	\$ 2,691,753	\$ 523,928	19.46%
2009	2,809,494	1,282,642	45.65%
2010	3,329,502	1,333,140	40.04%
2011	4,498,036	2,457,405	54.63%
2012	7,626,778	2,117,976	27.77%
2013	8,590,721	1,403,628	16.34%
2014	9,608,247	1,523,316	15.85%
2015	10,921,946	1,763,345	16.14%
2016	10,166,661	1,971,946	19.40%
2017	10,230,872	2,239,632	21.89%



## 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, 2017</u></b>	<b><u>December 31, 2016</u></b>
Service Cost	\$ 10,698,297	\$ 11,224,976
Interest	20,384,471	19,482,189
Changes of Benefit Terms	-	-
Difference between Expected and Actual Experience	(1,344,952)	(6,776,942)
Change of Assumptions	(21,473,767)	(26,186,535)
Benefit Payments, including Refund of Member Contributions	<u>(16,670,896)</u>	<u>(16,462,185)</u>
Net Change in Total Pension Liability	(8,406,847)	(18,718,497)
Total Pension Liability - Beginning of Year	438,859,466	457,577,963
Total Expected Pension Liability - End of Year	\$430,452,619	\$438,859,466
<b>Plan Fiduciary Net Position</b>		
Employer Contributions	\$ 2,239,632	\$ 1,971,946
Member Contributions	3,300,222	3,184,051
Net Investment Income	30,500,015	10,477,792
Benefit Payments, including Refund of Member Contributions	(16,670,896)	(16,462,185)
Administrative Expenses	(160,418)	(157,577)
Other	<u>(40,007)</u>	<u>(133,999)</u>
Net Change in Plan Fiduciary Net Position	19,168,548	(1,119,972)
Plan Fiduciary Net Position - Beginning of Year	191,202,398	192,322,370
Expected Plan Fiduciary Net Position - End of Year	\$210,370,946	\$191,202,398

## Net Pension Liability (Asset)

The GASB Statement No. 67 Net Pension Liability

### Net Pension Liability (Asset)

	<u>December 31, 2017</u>	<u>December 31, 2016</u>
Total Pension Liability	\$430,452,619	\$438,859,466
Plan Fiduciary Net Position	210,370,946	191,202,398
Net Pension Liability (Asset)	<u>\$220,081,673</u>	<u>\$247,657,068</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (Asset)	48.87%	43.57%

## 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	3.45%	4.45%	5.45%
Net Pension Liability (Asset)	\$287,353,111	\$220,081,673	\$166,170,214

The discount rate used to measure the total pension liability was 4.45%. The discount rate used to measure the total pension liability at December 31, 2016 was 4.62%. 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 3.16% was used in the development of the blended GASB discount rate after that point. The 3.16% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 30, 2017. Based on the long-term rate of return of 7.25% and the municipal bond rate of 3.16%, the blended GASB discount rate would be 4.45%. 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, 2017</u>	<u>December 31, 2016</u>
Service Cost	\$10,698,297	\$11,224,976
Interest	20,384,471	19,482,189
Difference between Expected and Actual Experience	(3,206,942)	(2,740,822)
Change of Assumptions	(14,789,008)	2,086,818
Member Contributions	(3,300,222)	(3,184,051)
Projected Earnings on Plan Investments	(13,922,932)	(13,997,124)
Difference between Expected and Actual Earnings	(186,868)	3,128,548
Administrative Expense	160,418	157,577
Other	40,007	133,999
Changes of Benefit Terms	-	-
Total Pension Expense	<u>\$(4,122,779)</u>	<u>\$16,292,110</u>

Actuarial Assumptions and Methods:

Valuation date:	<u>December 31, 2017</u>	<u>December 31, 2016</u>
Actuarial cost method:	Entry Age	Entry Age
Asset valuation method:	Market	Market
Total Pension Liability Discount Rate	4.45%	4.62%
Actuarial assumptions:		
- Investment Rate of Return	7.25%	7.50%
- Municipal Bond Rate	3.16%	3.71%
- Projected Salary Increases	7.50%-1.50%	8.00%-3.75%
- Inflation Assumption	2.75%	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 3.16% was used in the development of the blended GASB discount rate after that point. The 3.16% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 29, 2017. Based on the long-term rate of return of 7.25% and the municipal bond rate of 3.16%, the blended GASB discount rate would be 4.45%. 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 Conduent. The results of the experience review were presented to the Board by Conduent at the Board's March 8, 2018 Meeting and adopted at a subsequent meeting. The rate of return assumption was based on the target asset allocation of the fund. In the experience review, Conduent 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. Conduent 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, 2017 are listed in the table below:

	<b>Target Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
US Large Cap	16.00%	10.23%
US Mid Cap	8.00%	12.12%
US Small Cap	8.00%	12.09%
Global Equity ex US	27.00%	9.51%
Aggregate Bonds	21.00%	4.77%
NCREIF	9.00%	9.77%
Hedge Funds	10.00%	7.31%
Cash	1.00%	3.98%
Total	<u>100.00%</u>	

## ACTUARIAL SECTION

---

### Actuarial Valuation - Pension Benefits (continued)

#### Brief Summary of Benefit Provisions

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

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

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

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

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

#### **Retirement Annuity - Amount**

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

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

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

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

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

**Brief Summary of Benefit Provisions (continued)**

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

**Surviving Spouse's Annuity- Death in Service**

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

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

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

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

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

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

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

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



## ACTUARIAL SECTION

---

### Actuarial Valuation - Pension Benefits (continued)

#### Brief Summary of Benefit Provisions (continued)

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

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

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

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

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

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

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

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

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

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

**Brief Summary of Benefit Provisions (continued)**

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

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

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

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

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

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

## ACTUARIAL SECTION

---

### Actuarial Valuation - Pension Benefits (continued)

#### Brief Summary of Benefit Provisions (continued)

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

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

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

## Description of Actuarial Methods and Valuation Procedures

### Actuarial Cost Method

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

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

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

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

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

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

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

## ACTUARIAL SECTION

---

### Actuarial Valuation - Pension Benefits (continued)

#### Description of Actuarial Methods and Valuation Procedures (continued)

##### Asset Valuation Method

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

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

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

##### Valuation Procedures

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

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

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

## Summary of Actuarial Assumptions and Changes in Assumptions

The actuarial assumptions used for the December 31, 2017 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 2013 through 2016. These assumptions were adopted by the Board as of December 31, 2017, based on the recommendation from the actuary.

Mortality Rates. The RP-2014 Blue Collar table with the following adjustments:

Pre-commencement: adjust all rates by 75%

Post-commencement: adjust rates as follows:

Age	Adjustment Factor
Less than 50	No adjustment
50 - 64	150%
65-69	130%
70-79	110%
80 and over	No adjustment

Fully generational mortality improvement projection assumptions are applied to the above table from base year 2006 using the Conduent Modified MP-2017 projection scale. The substantive difference between the Conduent scale and that published by the SOA is that the Conduent scale reaches an ultimate improvement rate of 0.75% versus the SOA's scale which reaches an ultimate improvement rate of 1.0%.

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	.330				.321			
27	.075	.174			.122	.161		
32	.028	.117	.140		.030	.128	.158	
37	.028	.037	.093	.200	.030	.033	.096	.200
42	.028	.037	.034	.070	.030	.033	.034	.056
47	.028	.037	.034	.025	.030	.030	.034	.026



## 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:

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>Less than 30 years of service</u>	<u>30 or more years of service</u>	<u>Less than 30 years of service</u>	<u>30 or more years of service</u>
<50	0.0%	0.0%	0.0%	0.0%
50	2.5%	40.0%	2.0%	38.0%
51	2.5%	40.0%	2.0%	30.0%
52-53	2.5%	35.0%	2.0%	30.0%
54	4.0%	30.0%	3.0%	30.0%
55-56	4.0%	30.0%	4.5%	30.0%
57	6.0%	30.0%	4.5%	30.0%
58	7.0%	30.0%	5.0%	30.0%
59	12.5%	32.0%	10.0%	35.0%
60	15.0%	25.0%	15.0%	35.0%
61	12.5%	18.0%	12.0%	30.0%
62	12.5%	24.0%	12.0%	30.0%
63	12.5%	30.0%	13.0%	30.0%
64	15.0%	22.5%	16.0%	30.0%
65	20.0%	24.0%	22.0%	35.0%
66	20.0%	30.0%	20.0%	30.0%
67-68	20.0%	24.0%	20.0%	30.0%
69	20.0%	24.0%	20.0%	30.0%
70	25.0%	35.0%	24.0%	35.0%
71	28.0%	35.0%	20.0%	24.0%
72	25.0%	35.0%	28.0%	28.0%
73	30.0%	60.0%	24.0%	25.0%
74-75	30.0%	75.0%	25.0%	30.0%
76-77	40.0%	75.0%	40.0%	40.0%
78-79	50.0%	75.0%	50.0%	50.0%
80+	100.0%	100.0%	100.0%	100.0%

**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. 2.75% per year, compounded annually.

Salary Rate (net of inflation):

<u>Age</u>	<u>Rate:</u>
25	4.85%
30	4.25%
35	2.75%
40	1.50%
45+	7.50%

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. 70% of participants were assumed to be married..

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

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

## ACTUARIAL SECTION

---

### Actuarial Valuation - Pension Benefits (continued)

## Glossary of Terms

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

This page is intentionally left blank.

---

# Actuarial Certification - Postemployment Healthcare

## Actuarial Section

Actuarial Certification – Postemployment Healthcare



June 12, 2018

Board of Trustees

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

Chicago, Illinois

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") as of December 31, 2017 performed by Conduent HR Services ("Conduent").

The purpose of this valuation is to determine the Annual Required Contribution ("ARC") in accordance with GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions ("GASB 45") as well as the Net OPEB Liability of the Plan as of the valuation date December 31, 2017 in accordance with GASB Statement No. 74, Accounting and Financial Reporting by Employers for Postemployment Benefit Other Than Pensions ("GASB 74").

GASB 74 replaces GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans ("GASB 43") for fiscal years ending 2017 and later. We have prepared the required accounting information for GASB 74 for the fiscal year ending December 31, 2017.

The December 31, 2016 GASB 74 net OPEB liability is based on a discount rate of 3.71%. All other data, assumptions, and plan provisions used in determining the December 31, 2016 liability are those documented in the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County Retiree Health Insurance Plan actuarial valuation report provided on June 7, 2017.

FPEABF may use this report as a source of information for its financial statements. Use of this report for any other purpose may not be appropriate. This report should not be provided except in its entirety.

Because of the risk of misinterpretation of actuarial results, you should ask Conduent to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statements made without prior review by Conduent.

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

**Actuarial Section**

postemployment benefits that warrant measurement under GASB 45 and GASB 74. 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 and is consistent with the requirements of GASB 74.

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 April 5, 2018 the Retirement Board adopted revised assumptions for use in valuing the Plan. These assumptions were based on an experience analysis performed by Conduent, which reviewed experience for the four-year period ending December 31, 2016. This valuation reflects the adopted changes. 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 in Section 5.

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 45. The assumptions and methods used to determine the Net OPEB Liability of FPEABF as disclosed in this report meet the parameters and requirements pursuant to GASB 74.

The undersigned is a 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. 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. I am available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

CONDUENT, INC



Robert Besenhofer, ASA, MAAA  
Director, Health

# Actuarial Valuation - Postemployment Healthcare

## Overview

The Forest Preserve Employees’ Annuity and Benefit Fund of Cook County (“FPEABF” or “theFund”) offers health benefits to 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, 2017.

## Purpose

This report had been prepared at the request of the Fund for use in financial reporting of FPEABF under GASB 74 and 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 Conduent.

## Membership

### Summary of Membership Data

	<b>Year Ending December 31,</b>	
	<b><u>2017</u></b>	<b><u>2016</u></b>
1. Annuitants Currently Receiving Benefits	273	281
2. Covered Spouses of Annuitants Currently Receiving Benefits	76	80
3. Separated Employees Entitled To Benefits But Not Yet Receiving Them	30	36
4. Active Employees	<u>548</u>	<u>572</u>
5. Total Number of Members	927	969



## Changes in Plan Provisions

The following changes in benefits and other plan provisions in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2016:

- The 2018 subsidy for member health benefits was changed from 52% to 50% for annuitants in the Choice Plan Medicare, the Choice Plan non-Medicare and the Choice Plus Plan Medicare.
- The 2018 subsidy for survivor health benefits was changed from 67% to 65% for annuitants in the Choice Plan Medicare, the Choice Plan non-Medicare and the Choice Plus Plan Medicare.
- The 2018 subsidy for member health benefits was changed from 47% to 45% for annuitants in the Choice Plus Plan non-Medicare.
- The 2018 subsidy for survivor health benefits was changed from 62% to 60% for annuitants in the Choice Plus Plan non-Medicare.

## Changes in Actuarial Assumptions, Methods, or Procedures

The following changes in the actuarial assumptions or valuation procedures in the Retiree Health Insurance actuarial valuation have been made since the last valuation performed as of December 31, 2016:

- The rates of mortality, termination, retirement, and salary increases were changed to reflect the results of the experience review for the four year period ended December 31, 2016 presented to the Retirement Board on April 5, 2018.
- The discount rate decreased from 4.50% to 4.00% based on the 50 basis point decrease in the inflation rate reflected in the experience review.
- In addition, the Board also adopted the following changes to the OPEB only assumptions based on the assumption study. The percentage of active employees who elect medical coverage upon retirement was reduced from 70% to 65%. The percentage of those retirees who elect spouse coverage was reduced from 40% to 35%. The percentage of vested terminated participants who elect medical coverage upon retirement was increased from 30% to 40%.
- The age at which vested terminated employees retire and elect medical coverage was changed to age 61, from an assumption that varied by age.
- The per capita plan costs were updated to reflect the most recent year of claims experience and working premium rates were updated for 2018.
- Future retirees are assumed to elect among the plan choices in the same proportion as employees who retired during the last year. This election percentage was updated to reflect current retiree experience.
- The estimate of the High-Cost Plan Excise Tax was updated to reflect the Tax Cuts and Jobs Act passed in December 2017 which changed the inflation rate measure for purposes of determining the limits for the tax to use chained CPI, as well as the Budget Continuing Resolution which deferred the application of the Cadillac tax from 2020 to 2022.

## ACTUARIAL SECTION

### Actuarial Valuation - Postemployment Healthcare (continued)

#### Changes in the GASB 45 Actuarial Accrued Liability (AAL)

	<u>AAL (\$ millions)</u>	<u>% Change</u>
<b>December 31, 2016 Report</b>	\$44,708,189	
Expected Growth Due to the Passage of Time	2,493,590	5.6%
Demographic Experience	(422,118)	-0.9%
Updated Per Capita Health Plan Experience	(473,787)	-1.0%
Change in Participant Contributions	(1,561,997)	-3.4%
Change in Estimated Excise Tax	558,214	1.2%
Assumption Changes - Retirement/Termination/Mortality	(3,584,923)	-7.9%
Assumption Changes - Salary Scale	(3,235)	0.0%
Assumption Changes - OPEB Specific Assumptions	(1,255,984)	-3.0%
Change in Discount Rate	<u>2,952,791</u>	<u>7.3%</u>
<b>December 31, 2017 Report</b>	<b>\$43,410,740</b>	<b>-2.9%</b>

### Development of Annual Required Contribution (ARC)

Development of Employer Contribution	December 31, 2017 Valuation ARC for Fiscal Year <u>2018</u>	December 31, 2016 Valuation ARC for Fiscal Year <u>2017</u>
1. Annual Payroll	\$35,078,173	\$34,512,652
2. Actuarial Accrued Liability		
a. Active Members	18,936,564	19,875,873
b. Inactive Members with Deferred Benefits	1,819,441	1,349,590
c. Retired Members and Beneficiaries Receiving Benefits	<u>22,654,735</u>	<u>23,482,726</u>
d. Total	43,410,740	44,708,189
3. Actuarial Value of Assets	-	-
4. Unfunded Actuarial Accrued Liability (UAAL)	43,410,740	44,708,189
5. UAAL as a Percent of Annual Payroll	123.8%	129.5%
6. Amortization Payment for UAAL		
a. Amount	2,413,892	2,626,512
b. As a % of pay	6.9%	7.6%
7. Employer Normal Cost		
a. Amount	1,735,736	1,884,473
b. As a % of pay	4.9%	5.5%
8. Interest Cost	135,039	170,613
9. Annual Required Contribution (6. + 7. + 8.)	4,284,667	4,681,598
10. Pay-go Costs for the Year <sup>2</sup>	1,562,642	1,305,075
11. Amortization Period (years)	30	30

<sup>1</sup> The 2018 ARC is included for illustrative purposes only. GASB 75 will replace GASB 45 for the 2018 Fiscal Year and the ARC will no longer be recognized in the financial statements.

<sup>2</sup> Source: Estimated amount for 2018; for 2017 as provided by FPEABF. 2017 Pay-as-you-go costs are net of prescription drug rebates.

## ACTUARIAL SECTION

### Actuarial Valuation - Postemployment Healthcare (continued)

#### Schedule of Funding Progress

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

<b>Actuarial Valuation Date December 31,</b>	<b>Actuarial Value of Assets</b>	<b>Actuarial Accrued Liability</b>	<b>Unfunded Liability</b>	<b>Funded Ratio</b>	<b>Covered Payroll</b>	<b>UAAL as a Percentage of Covered Payroll</b>
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%
2016	-	44,708,189	44,708,189	0.0%	34,512,652	129.5%
2017	-	43,410,740	43,410,740	0.0%	35,078,173	123.8%

#### Schedule of Employer Contributions

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

<b>Fiscal Year Ended December 31,</b>	<b>Annual Required Contribution (ARC)</b>	<b>Employer Contribution<sup>1</sup></b>	<b>Employer Contribution as a Percent of ARC</b>
2007	\$3,729,144	\$1,291,740	34.64%
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	36.63%
2016	5,099,567	1,419,435	27.83%
2017 <sup>1</sup>	4,681,598	1,305,075	27.88%

<sup>1</sup> Source: Total Employer's Contribution for 2017 as provided by FPEABF

#### GASB 45 Net OPEB Obligation (NOO) as of December 31, 2017

1.	NOO as of December 31, 2016 <sup>1</sup>	\$23,632,915
2.	Annual Required Contribution (ARC)	4,681,598
3.	Interest on NOO	945,317
4.	Adjustment to ARC	<u>(1,366,694)</u>
5.	Annual OPEB Cost for 2017 (2. + 3. + 4.)	4,260,221
6.	Total Employer Contribution for 2016 <sup>2</sup>	<u>1,305,075</u>
7.	NOO as of December 31, 2017 (1. + 5. - 6.)	<u>\$26,588,061</u>

<sup>1</sup> Source: FYE 2016 CAFR. This number was not calculated or reviewed by Conduent.

<sup>2</sup> Source: Total Employer's Contribution for 2017 as provided by FPEABF

**GASB 74 Components of the Net OPEB Liability and Schedule of Employer Contributions****The components of the net OPEB liability are as follows:**

Total OPEB liability	\$ 49,170,148
Plan fiduciary net position	0
Net OPEB liability	49,170,148
Plan fiduciary net position as a percentage of the total OPEB liability	0.0%

**Schedule of Employer Contributions**

Actuarially determined contribution	4,681,598
Contributions related to the actuarially determined contribution	<u>1,305,075</u>
Contribution deficiency (excess)	3,376,523
Covered-employee payroll	\$ 35,078,173
Contribution as a percent of payroll	3.7%

**Schedule of Changes in Net OPEB Liability and Related Ratios**

<b>Total OPEB liability</b>	<b>December 31, 2017</b>
Service cost	\$ 2,349,531
Interest	1,937,384
Changes of benefit terms	(1,738,947)
Differences between expected and actual experience	(611,268)
Changes of assumptions or other inputs	(1,979,137)
Net benefit payments	<u>(1,305,075)</u>
Net change in total OPEB liability	(1,347,512)
Total OPEB liability-beginning	50,517,660
Total OPEB liability-ending (a)	\$ 49,170,148
<b>Plan fiduciary net position</b>	
Employer Contributions	\$ 1,305,075
Contributions- active members	0
Net investment income	0
Benefit payments	(1,305,075)
Administrative expenses	0
Other	<u>0</u>
Net change in plan fiduciary net position	0
Plan fiduciary net position-beginning	0
Plan fiduciary net position-ending (b)	0
Client's net OPEB liability-ending (a)-(b)	\$ 49,170,148
Plan fiduciary net position as a percentage of the total OPEB liability	0.00%
Covered-employee payroll	\$ 35,078,173
Net OPEB liability as a percentage of covered-employee payroll	140.17%

ACTUARIAL SECTION

Actuarial Valuation - Postemployment Healthcare (continued)

**GASB 74 Sensitivity of the Net OPEB Liability (Asset)**

**Sensitivity of the net OPEB liability to changes in the discount rate.** The following presents the net OPEB liability as of Dec. 31, 2017, calculated using the discount rate of 3.16%, as well as what the Plan’s net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (2.16%) or 1-percentage-point higher (4.16%) than the current rate:

<b>Sensitivity of the Net OPEB</b>	<b>1% Decrease</b>	<b>Current</b>	<b>1% Increase</b>	
<b><u>Liability to Changes in the Discount Rate</u></b>	<b><u>2.16%</u></b>	<b><u>Discount Rate</u></b>	<b><u>3.16%</u></b>	<b><u>4.16%</u></b>
Net OPEB liability	\$57,652,626	\$49,170,148	\$42,430,686	

**Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates.** The following presents the net OPEB liability as of Dec. 31, 2017, calculated using the healthcare cost trend rates as summarized in this report, as well as what the Plan’s net OPEB liability would be if it were calculated using trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rates:

<b>Sensitivity of the Net OPEB Liability to</b>	<b>1% Decrease</b>	<b>Current</b>	<b>1% Increase</b>
<b><u>Changes in the Healthcare Cost Trend Rate</u></b>	<b><u>Trend Rate</u></b>	<b><u>Trend Rate</u></b>	<b><u>1% Increase</u></b>
Net OPEB liability	\$42,674,345	\$49,170,148	\$60,749,452

## GASB 75 Expense and Schedule of Deferred Inflows and Outflows

### Components of OPEB Expense for the Fiscal Year Ended December 31, 2017

Service cost	\$ 2,349,531
Interest on the total OPEB liability and net cash flow	1,937,384
Projected earnings on OPEB plan investments	0
Current period effect of benefit changes	(1,738,947)
Current period difference between expected and actual experience	(93,609)
Current period effect of changes in assumptions	(303,084)
Current period difference between projected and actual investment earnings	0
Member contributions	0
OPEB plan investment expenses	0
Current period recognition of prior years' deferred outflows of resources	0
Current period recognition of prior years' deferred inflows of resources	0
<b>Total OPEB expense</b>	<b>\$ 2,151,275</b>



**ACTUARIAL SECTION**

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

**GASB 75 Expense and Schedule of Deferred Inflows and Outflows**

Deferred outflows and inflows of resources will be recognized in OPEB expense as follows:

<b>Fiscal Year Ending</b>	<b>2017</b>	<b>2017</b>	
Amount established	\$ (611,268)	\$ (1,979,137)	
Recognition Period	6.53	6.53	
	<b>Differences between expected and actual experience</b>	<b>Change in Assumptions or Other Inputs</b>	<b>Total</b>
<b>Amount recognized in FY</b>			
2017	\$ (93,609)	\$ (303,084)	\$ (396,693)
2018	(93,609)	(303,084)	(396,693)
2019	(93,609)	(303,084)	(396,693)
2020	(93,609)	(303,084)	(396,693)
2021	(93,609)	(303,084)	(396,693)
2022	(93,609)	(303,084)	(396,693)
2023	(49,614)	(160,633)	(210,247)
<b>Deferred Balance at 12/31</b>			
2017	\$ (517,659)	\$ (1,676,053)	\$ (2,193,712)
2018	(424,050)	(1,372,969)	(1,797,019)
2019	(330,441)	(1,069,885)	(1,400,326)
2020	(236,832)	(766,801)	(1,003,633)
2021	(143,223)	(463,717)	(606,940)
2022	(49,614)	(160,633)	(210,247)
2023	-	-	-

## 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 if covered prior to age 26).

### 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)

**Contribution** FPEABF pays the following percentage subsidies of the total premium, including the cost of family coverage:

	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Retiree Annuitant w/o Medicare	50%	45%
Retiree Annuitant with Medicare	50%	50%
Survivor Annuitant w/o Medicare	65%	60%
Survivor Annuitant with Medicare	65%	65%

The following are the annual working rates effective January 1, 2018. These rates represent the estimated cost of self-insured coverage and include administrative expenses.

	<u>Choice HMO</u>	<u>Choice Plus PPO</u>
Single w/o Medicare	\$15,552	\$19,396
Two w/o Medicare	\$31,104	\$38,792
Single w/ Medicare	\$5,760	\$5,520
Two w/ Medicare	\$11,520	\$11,040

## Assumptions and Methods

The actuarial assumptions used for the December 31, 2017 actuarial valuation are summarized below. The mortality rates, termination rates, retirement rates, salary, inflation, participation, and Medicare primary assumptions are based on an experience analysis of FPEABF, over the period 2013 through 2016. These assumptions were adopted by the Board on April 5, 2018. Per capita cost and medical trend rate assumptions are revisited annually.

**Valuation Date** December 31, 2017

**Discount Rate** GASB 45 - 4.00% (changed from 4.50% used for the prior year)  
 GASB 74 - 3.16% at 12/31/2017 (using 12/31/2017 Municipal Bond Index rate)  
 GASB 74 - 3.71% at 12/31/2016 (using 12/31/2016 Municipal Bond Index rate)

Benefit payments are funded on a pay-as-you go basis. The discount rate is the single equivalent rate which results in the same present value as discounting future benefit payments made from assets at the long term expected rate of return and discounting future benefit payments funded on a pay-as-you-go basis on the municipal bond 20-year index rate.

<b>Salary Scale</b>	<b><u>Age</u></b>	<b><u>Total</u></b>	<b><u>Age</u></b>	<b><u>Total</u></b>
	<24	8.00%	35	5.50%
	25	7.60%	36	5.25%
	26	7.20%	37	5.00%
	27	7.20%	38	4.75%
	28	7.20%	39	4.40%
	29	7.00%	40	4.25%
	30	7.00%	41	4.00%
	31	6.50%	42	4.00%
	32	6.25%	43	3.90%
	33	5.75%	44	3.80%
	34	5.75%	45+	3.50%

**Inflation** 2.75%

**ACTUARIAL SECTION**

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

**Assumptions and Methods (continued)**

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

<u>Attained</u> <u>Age</u>	<u>Age at Entrance</u>					
	<u>Males</u>			<u>Females</u>		
	<u>27</u>	<u>32</u>	<u>37</u>	<u>27</u>	<u>32</u>	<u>37</u>
27	.174			.161		
32	.117	.140		.128	.158	
37	.037	.093	.200	.033	.096	.200
42	.037	.034	.070	.033	.034	.056
47	.037	.034	.025	.033	.034	.026

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

<u>Service at retirement</u> <u>Age</u>	<u>&lt; 30 Years</u>		<u>≥30 Years</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	.025	.200	.400	.380
55	.040	.045	.300	.300
60	.150	.150	.250	.350
65	.200	.220	.240	.350
70	.250	.240	.350	.350
75	.300	.250	.750	.300
80	1.000	1.000	1.000	1.000

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

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

**Assumptions and Methods (continued)**

**Mortality Rates** The RP-2014 Blue Collar table with the following adjustments:  
 Pre-commencement: adjust all rates by 75%  
 Post-commencement: adjust rates as follows:

<b>Age</b>	<b>Adjustment Factor</b>
Less than 50	No adjustment
50 - 64	150%
65-69	130%
70-79	110%
80 and over	No adjustment

Fully generational mortality improvement projection assumptions are applied to the above table from base year 2006 using the Conduent Modified MP-2017 projection scale. The substantive difference between the Conduent scale and that published by the SOA is that the Conduent scale reaches an ultimate improvement rate of 0.75% versus the SOA's scale which reaches an ultimate improvement rate of 1.0%.

**Disability Rates** Included in termination and retirement rates.

**Anticipated Plan Participation** 65% of eligible employees are assumed to elect retiree medical benefits.

40% of vested terminated employees are assumed to elect retiree medical benefits upon retirement, and are assumed to retire at age 61.

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

<u><b>% Who Elect</b></u>	<u><b>Choice HMO</b></u>	<u><b>Choice Plus PPO</b></u>
Pre-Medicare	95%	5%
Post-Medicare	77%	23%

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** 35% of future annuitants are assumed to cover a dependent. 35% 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.

**ACTUARIAL SECTION**

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

**Assumptions and Methods (continued)**

**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.

**Per Capita Health Plan Costs** Estimated net annual per capita incurred claim costs per covered adult for fiscal 2018 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	\$18,600	\$22,872
Medicare eligible	\$ 4,608	\$ 4,260

Per capita medical costs were developed using claims and enrollment for the period from January 1, 2016 through December 31, 2017 provided by the Fund. The resulting costs were adjusted for age morbidity.

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



**Assumptions and Methods (continued)**

**Age-Based  
Morbidity**

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

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

## ACTUARIAL SECTION

### Actuarial Valuation - Postemployment Healthcare (continued)

#### Assumptions and Methods (continued)

##### Health Care Cost Trend Rates

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

<u>Year</u>	<u>Pre-Medicare</u>	<u>Post-Medicare</u>
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.

- GASB 45
- GASB 74

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

Entry age normal, level percent of pay. Service costs are attributed through all assumed ages of exit from active service.

##### GASB 45

##### Amortization Method

30 years open, level dollar.

##### Assets

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

##### IBNR

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

##### Retiree Drug Subsidy

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

##### Miscellaneous

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

## Assumptions and Methods (continued)

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

#### Summary of Effects of Selected Provisions

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

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

**Excise Tax on High-Cost Employer Health Plans (aka “Cadillac Tax”)** - Health Care Reform includes various revenue raisers. One of the more complex revenue raisers is the High Cost Plan Excise Tax, also known as the Cadillac Tax. While its stated intent is to tax only high cost plans that provide what might be considered “Cadillac” benefits, as legislated, it is likely to have much broader impact. The tax limits above which the benefits are taxed increase only at Chained CPI (assumed to be 2.48% in this valuation) while we continue to assume that health care costs will increase faster, reflecting real growth in GDP and technology innovations. Given that assumption, any health benefit, no matter how frugal initially, will ultimately be assumed to cost more than the limit resulting in a tax. 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, which in turn is then expected to pass the additional cost along to FPEABF. We assume that the cost of any Cadillac tax will be included in the form of higher premiums, and have estimated the impact by use of a higher “loaded” trend rate assumption for premiums that apply up to the maximum reimbursement amounts. This resulted in an approximate increase of 5.2% to liabilities. On January 22, 2018, the Budget Continuing Resolution was signed. This resolution deferred the application of the Cadillac tax from 2020 to 2022. This delay has been reflected in the measurement of the benefit obligation.

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 Chained CPI plus 1%;
- Limits will increase after 2019 by Chained 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.

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 2017 and the valuation trend from 2017 to 2018) is compared to the statutory “assumed” 55% trend, with trend in excess of 55% applied on the base amount before the additional amount for “early” retirees. However, it appears due to favorable experience in the federal benchmark Blue Cross Blue Shield plan that there will not be any excess trend.

## ACTUARIAL SECTION

---

### Actuarial Valuation - Postemployment Healthcare (continued)

#### Assumptions and Methods (continued)

**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.

#### 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.

## Glossary of Terms

***Actuarially determined contribution***

A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

***Actuarial present value of projected benefit payments***

Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

***Actuarial valuation***

The determination, as of a point in time (the actuarial valuation date), of the service cost, total OPEB liability, and related actuarial present value of projected benefit payments for OPEB performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.

***Actuarial valuation date***

The date as of which an actuarial valuation is performed.

***Ad hoc postemployment benefit changes***

Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.

***Automatic hoc postemployment benefit changes***

Postemployment benefit changes that occur without a requirement for a decision to grant by a responsible authority.

***Covered-employee payroll***

The payroll for employees that are provided with OPEB through the OPEB plan.

***Discount rate***

The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

- a. The actuarial present value of benefit payments projected to be made in future periods in which (1) the amount of the OPEB plan's fiduciary net position is projected (under the requirements of this Statement) to be greater than the benefit payments that are projected to be made in that period and (2) OPEB plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on OPEB plan investments.
- b. The actuarial present value of projected benefit payments not included in (a), calculated using a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale).

## Glossary of Terms

### ***Entry age actuarial cost method***

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the Actuarial accrued liability.

### ***Healthcare cost trend rates***

The rates of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

### ***Inactive employees***

Individuals no longer employed by an employer in the OPEB plan, or the beneficiaries of those individuals. Inactive employees include individuals who have accumulated benefits under the terms of an OPEB plan but are not yet receiving benefit payments and individuals currently receiving benefits.

### ***Measurement period***

The period between the prior and the current measurement dates.

### ***Net OPEB liability***

The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit OPEB plan that is administered through a trust that meets the criteria in paragraph 4 of this Statement. Other postemployment benefits (OPEB) Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.

### ***Projected benefit payments***

All benefits (including refunds of employee contributions) estimated to be payable through the OPEB plan (including amounts to be paid by employers or non-employer contributing entities as the benefits come due) to current active and inactive employees as a result of their past service and their expected future service.

### ***Real rate of return***

The rate of return on an investment after adjustment to eliminate inflation.

### ***Service costs***

The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.

### ***Total OPEB liability***

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service.

This page is intentionally left blank.



# Additional Actuarial Tables

## Schedule of Active Member Valuation Data - Pension Benefits

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Change In Average Pay
12/31/08	442	\$23,474,621	\$53,110	5.3%
12/31/09	461	24,967,115	54,159	2.0%
12/31/10	448	24,397,376	54,458	0.6%
12/31/11	408	22,678,566	55,585	2.1%
12/31/12	467	26,252,071	56,214	1.1%
12/31/13	534	29,485,857	55,217	-1.8%
12/31/14	525	29,811,912	56,785	2.8%
12/31/15	568	32,007,657	56,352	-0.8%
12/31/16	572	34,509,011	60,330	7.1%
12/31/17	548	35,078,173	64,011	6.1%

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

Year Ended	Added to Rolls		Removed from Rolls		End of Year Rolls		Average Annual Benefit	% Increase in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
2008	34	\$ 789,897	35	\$570,647	489	\$10,175,796	\$20,809	2.4%
2009	27	1,124,442	26	454,966	490	10,845,272	22,133	6.4%
2010	30	1,108,528	26	632,898	494	11,320,902	22,917	3.5%
2011	35	1,400,374	31	480,969	498	12,240,307	24,579	7.3%
2012	30	1,051,757	17	259,746	511	13,032,318	25,504	3.8%
2013	48	1,547,583	28	324,780	531	14,255,121	26,846	5.3%
2014	32	1,287,991	28	629,998	535	14,913,114	27,875	3.8%
2015	24	1,007,969	30	656,536	529	15,264,547	28,855	3.5%
2016	21	888,082	20	414,711	530	15,737,918	29,694	2.9%
2017	26	1,094,739	29	724,309	527	16,108,348	30,566	2.9%

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

Year Ended	Added to Rolls		Removed from Rolls		End of Year Rolls		Average Annual Benefit	% Change in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits <sup>1</sup>	Number	Annual Benefits		
2012	18	\$ 91,062	16	\$ 218,153	281	\$1,197,385	\$4,261	-10.2%
2013	24	120,344	14	(277,417)	291	1,595,146	5,482	28.7%
2014	18	87,347	22	88,900	287	1,771,393	6,172	12.6%
2015	8	132,420	17	79,925	278	1,823,888	6,561	6.3%
2016	16	(206,717)	13	67,620	281	1,549,551	5,514	-15.9%
2017	13	(179,554)	21	73,922	273	1,305,075	4,780	-13.3%

1. Includes Liability from changes in benefit levels.

## Solvency Test - Pension Benefits

Year Ended	Accrued Liabilities for				Percent of Accrued Liabilities Covered by Assets		
	(1) Active and Inactive Members Accumulated Contributions	(2) Members Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	(1)	(2)	(3)
2008	\$30,401,379	\$111,439,986	\$70,531,961	\$196,277,679	100%	100%	77%
2009	31,830,611	130,528,419	82,266,634	188,396,534	100%	100%	32%
2010	32,798,650	136,132,530	83,946,416	184,077,516	100%	100%	18%
2011	32,856,582	147,529,997	81,122,596	178,126,063	100%	98%	0%
2012	30,638,516	155,638,787	86,859,427	172,566,956	100%	91%	0%
2013	29,531,719	169,355,865	78,672,628	182,554,587	100%	90%	0%
2014	29,765,059	177,169,877	79,026,027	189,917,999	100%	90%	0%
2015	31,403,346	180,566,467	79,769,255	192,729,042	100%	89%	0%
2016	32,875,566	183,610,860	83,773,302	198,244,885	100%	90%	0%
2017	32,887,656	184,465,544	84,860,339	204,273,172	100%	93%	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)
2012	-	\$25,571,863	\$20,141,897	-	0%	0%	0%
2013	-	26,785,364	20,328,289	-	0%	0%	0%
2014	-	27,165,388	20,046,785	-	0%	0%	0%
2015	-	26,560,776	22,918,014	-	0%	0%	0%
2016	-	23,482,726	21,225,463	-	0%	0%	0%
2017	-	22,654,735	20,756,005	-	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, 2017, with comparative totals for 9 years

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Additions:					
Employer contributions	\$2,239,632	\$ 1,971,946	\$ 1,763,345	\$ 1,520,316	\$ 1,403,628
Employee contributions	3,300,222	3,184,051	2,771,533	2,645,164	2,687,211
Net investment and net securities					
lending income (loss)	30,500,015	10,477,792	2,549,975	13,525,606	30,383,512
Other	14,250	-	11,442	-	691
Total additions	<u>36,054,119</u>	<u>15,633,789</u>	<u>7,096,295</u>	<u>17,691,086</u>	<u>34,475,042</u>
Deductions:					
Benefits					
Retirement	13,253,194	12,896,736	12,820,708	12,464,872	11,719,920
Survivors	2,630,286	2,523,376	2,281,100	2,206,512	2,052,205
Disability	232,999	301,487	183,060	172,196	277,873
Refunds					
Death	18,018	118,565	41,539	75,826	111,783
Separation	313,756	434,654	486,280	644,017	545,613
Other	222,643	187,367	108,089	241,794	301,311
Employee transfers to (from)					
Cook County	54,257	133,999	18,370	175,370	(106,012)
Net administrative and miscellaneous expenses					
	<u>160,418</u>	<u>157,577</u>	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>
Total deductions	<u>16,885,571</u>	<u>16,753,761</u>	<u>16,083,099</u>	<u>16,122,654</u>	<u>15,021,712</u>
Net increase (decrease)	19,168,548	(1,119,972)	(8,986,804)	1,568,432	19,453,330
Net position:					
Beginning of year	\$191,202,398	192,322,370	201,309,174	199,740,742	180,287,412
End of year	<u>\$210,370,946</u>	<u>\$191,202,398</u>	<u>\$192,322,370</u>	<u>\$201,309,174</u>	<u>\$199,740,742</u>



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

## For year ended December 31, 2017, with comparative totals for 9 years (continued)

	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Additions:					
Employer contributions	\$ 2,117,976	\$ 2,441,301	\$ 1,333,140	\$ 1,282,642	\$ 523,928
Employee contributions	2,426,776	2,289,027	2,452,696	2,418,794	2,119,208
Net investment and net securities					
lending income (loss)	22,209,855	2,021,094	20,250,639	24,683,791	(46,414,013)
Other	6,062	2,541	52,736	1,798	18,744
Total additions	<u>26,760,669</u>	<u>6,753,963</u>	<u>24,089,211</u>	<u>28,387,025</u>	<u>(43,752,133)</u>
Deductions:					
Benefits					
Retirement	10,714,092	10,042,232	9,559,956	9,144,321	8,955,164
Survivors	1,901,171	1,815,262	1,615,256	1,552,939	1,368,001
Disability	347,509	420,518	366,484	247,088	227,996
Refunds					
Death	174,789	79,428	19,000	23,360	160,624
Separation	786,951	338,069	182,773	318,195	221,159
Other	226,899	186,817	142,090	131,398	136,617
Employee transfers to (from)					
Cook County	205,887	(328,586)	257,975	118,754	(119,434)
Net administrative and miscellaneous expenses	111,662	103,220	104,765	112,729	138,550
Total deductions	<u>14,468,960</u>	<u>12,656,960</u>	<u>12,248,299</u>	<u>11,648,784</u>	<u>11,088,677</u>
Net increase (decrease)	12,291,709	(5,902,997)	11,840,912	16,738,241	(54,840,810)
Net position:					
Beginning of year	167,995,703	173,898,700	162,057,788	145,319,547	200,160,357
End of year	<u>\$180,287,412</u>	<u>\$167,995,703</u>	<u>\$173,898,700</u>	<u>\$162,057,788</u>	<u>\$145,319,547</u>

# Statement of Changes in Postemployment Healthcare Plan Net Position

For year ended December 31, 2017, with comparative totals for 9 years

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Additions:					
Employer contributions	\$1,305,075	\$1,419,435	\$1,698,692	\$1,616,436	\$1,459,517
Annuitant healthcare benefits contributions*	-	1,177,887	1,134,920	1,193,549	1,190,706
Other	581,415	317,217	228,836	204,853	158,692
Total additions	<u>1,886,490</u>	<u>2,914,539</u>	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>
Deductions:					
Healthcare benefits	<u>1,886,490</u>	<u>2,914,539</u>	<u>3,062,448</u>	<u>3,014,838</u>	<u>2,808,915</u>
Net increase (decrease)	-	-	-	-	-
Net position:					
Beginning of year	-	-	-	-	-
End of year	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

\* Beginning in 2017 the annuitant healthcare contribution is netted against the Healthcare benefits total expense.



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

For year ended December 31, 2017, with comparative totals for 9 years (continued)

	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Additions:					
Employer contributions	\$ 991,000	\$ 814,308	\$1,326,894	\$1,261,052	\$1,499,520
Annuitant healthcare benefits contributions	1,127,026	1,120,842	984,039	1,039,073	1,090,141
Other	206,385	510,168	174,817	218,121	108,720
Total additions	<u>2,324,411</u>	<u>2,445,318</u>	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</u>
Deductions:					
Healthcare benefits	<u>2,324,411</u>	<u>2,445,318</u>	<u>2,485,750</u>	<u>2,518,246</u>	<u>2,698,381</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, 2017

Amount of monthly Pension Benefit		Number of Recipients	Type of Pension Benefit		Option Selected		
			1	2	1	2	3
\$	1 – \$ 500	67	40	27	36	24	7
	501 – 1,000	69	36	33	42	27	0
	1,001 – 1,500	55	30	25	40	15	0
	1,501 – 2,000	53	39	14	32	21	0
	2,001 – 2,500	45	28	17	28	17	0
	2,501 – 3,000	46	37	9	31	15	0
	3,001 – 3,500	49	38	11	28	21	0
	3,501 – 4,000	36	30	6	14	22	0
	4,001 – 4,500	18	16	2	9	9	0
	4,501 – 5,000	25	24	1	7	18	0
	5,001 – 5,500	17	16	1	4	13	0
	5,501 – 6,000	21	21	0	2	19	0
	6,001 – 6,500	10	10	0	4	6	0
	6,501 – 7,000	5	5	0	0	5	0
	7,001 – 7,500	7	7	0	1	6	0
	7,501 – 8,000	1	1	0	0	1	0
	8,001 – 8,500	1	1	0	0	1	0
	8,501 – 9,000	1	1	0	0	1	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	0	0	0	0	0	0
	13,001 – 13,500	1	1	0	0	1	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>527</b>	<b>381</b>	<b>146</b>	<b>278</b>	<b>242</b>	<b>7</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, 2017

Amount of Monthly Pension Benefit		Number of Recipients	Type of Pension Benefit		Option Selected		
			1	2	1	2	3
\$	1 – \$ 500	3	0	3	3	0	0
	501 – 1,000	27	5	22	23	4	0
	1,001 – 1,500	20	4	16	18	2	0
	1,501 – 2,000	28	19	9	15	13	0
	2,001 – 2,500	28	17	11	20	8	0
	2,501 – 3,000	34	25	9	26	8	0
	3,001 – 3,500	33	25	8	21	12	0
	3,501 – 4,000	25	21	4	10	15	0
	4,001 – 4,500	13	11	2	9	4	0
	4,501 – 5,000	17	16	1	6	11	0
	5,001 – 5,500	8	7	1	3	5	0
	5,501 – 6,000	17	17	0	2	15	0
	6,001 – 6,500	8	8	0	4	4	0
	6,501 – 7,000	3	3	0	0	3	0
	7,001 – 7,500	6	6	0	0	6	0
	7,501 – 8,000	1	1	0	0	1	0
	8,001 – 8,500	1	1	0	0	1	0
	8,501 – 9,000	0	0	0	0	0	0
	9,001 – 9,500	0	0	0	0	0	0
	9,501 – 10,000	0	0	0	0	0	0
	10,001 – 10,500	0	0	0	0	0	0
	10,501 – 11,000	0	0	0	0	0	0
	11,001 – 11,500	0	0	0	0	0	0
	11,501 – 12,000	0	0	0	0	0	0
	12,001 – 12,500	0	0	0	0	0	0
	12,501 – 13,000	0	0	0	0	0	0
	13,001 – 13,500	1	1	0	0	1	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>273</b>	<b>187</b>	<b>86</b>	<b>160</b>	<b>113</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>
2008	Average Monthly Pension	\$ 314	\$ 459	\$1,030	\$1,540	\$2,270	\$3,298	\$4,323
	Average Monthly Final Average Salary	N/A	N/A	\$4,917	\$3,224	\$3,109	\$4,926	\$5,877
	Number of New Retirees	3	4	2	3	3	3	1
2009	Average Monthly Pension	\$ 0	\$ 580	\$ 265	\$ 0	\$2,389	\$5,070	\$3,587
	Average Monthly Final Average Salary	\$ 0	N/A	N/A	\$ 0	\$4,015	\$6,662	\$4,789
	Number of New Retirees	0	2	1	0	4	2	2
2010	Average Monthly Pension	\$ 463	\$ 0	\$3,266	\$2,775	\$ 0	\$3,513	\$3,572
	Average Monthly Final Average Salary	\$ 6,589	\$ 0	\$8,104	\$5,544	\$ 0	\$4,774	\$4,478
	Number of New Retirees	3	0	1	5	0	3	7
2011	Average Monthly Pension	\$ 524	\$ 1,121	\$2,214	\$3,913	\$3,192	\$4,870	\$4,653
	Average Monthly Final Average Salary	\$ 5,692	\$10,070	\$6,735	\$8,560	\$5,068	\$6,742	\$5,817
	Number of New Retirees	1	2	7	1	5	2	5
2012	Average Monthly Pension	\$ 0	\$ 0	\$2,765	\$2,269	\$2,321	\$3,298	\$3,930
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$7,434	\$5,636	\$4,079	\$4,557	\$4,941
	Number of New Retirees	0	0	2	2	8	4	5
2013	Average Monthly Pension	\$ 321	\$ 568	\$1,439	\$1,942	\$2,864	\$5,285	\$3,732
	Average Monthly Final Average Salary	\$ 6,012	\$ 2,898	\$5,512	\$3,355	\$4,971	\$6,966	\$4,691
	Number of New Retirees	3	2	6	1	9	1	14
2014	Average Monthly Pension	\$ 1,331	\$ 982	\$1,427	\$1,505	\$2,760	\$3,408	\$3,173
	Average Monthly Final Average Salary	\$15,150	\$ 6,266	\$4,789	\$3,558	\$4,810	\$4,892	\$4,044
	Number of New Retirees	1	4	4	4	3	7	6
2015	Average Monthly Pension	\$ 639	\$ 150	\$1,141	\$ 0	\$2,069	\$2,840	\$3,591
	Average Monthly Final Average Salary	\$ 6,768	\$ 1,491	\$4,313	\$ 0	\$5,402	\$4,669	\$4,500
	Number of New Retirees	2	1	2	0	2	2	5
2016	Average Monthly Pension	\$ 177	\$ 0	\$ 0	\$ 974	\$ 0	\$3,632	\$3,640
	Average Monthly Final Average Salary	\$ 5,805	\$ 0	\$ 0	\$3,397	\$ 0	\$5,049	\$4,671
	Number of New Retirees	2	0	0	1	0	5	4
2017	Average Monthly Pension	\$ 402	\$ 969	\$1,696	\$2,538	\$1,773	\$3,730	\$3,843
	Average Monthly Final Average Salary	\$ 5,788	\$ 7,229	\$5,836	\$7,680	\$4,704	\$5,324	\$4,829
	Number of New Retirees	5	3	2	1	2	7	5

## 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>
2008	Average Monthly Pension	\$ 0	\$ 337	\$ 0	\$1,987	\$2,032	\$3,118	\$4,323
	Average Monthly Final Average Salary	\$ 0	N/A	\$ 0	\$3,339	N/A	\$5,165	\$5,877
	Number of New Retirees	0	1	0	1	2	1	1
2009	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$2,341	\$5,070	\$3,587
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$4,210	\$6,662	\$4,789
	Number of New Retirees	0	0	0	0	3	2	2
2010	Average Monthly Pension	\$ 0	\$ 0	\$3,266	\$3,002	\$ 0	\$3,413	\$3,479
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$8,104	\$5,948	\$ 0	\$4,267	\$4,372
	Number of New Retirees	0	0	1	4	0	1	4
2011	Average Monthly Pension	\$ 0	\$ 0	\$2,066	\$3,913	\$2,998	\$4,239	\$4,361
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$6,073	\$8,560	\$4,857	\$5,299	\$5,352
	Number of New Retirees	0	0	5	1	4	1	3
2012	Average Monthly Pension	\$ 0	\$ 0	\$3,346	\$ 0	\$2,341	\$2,647	\$4,265
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$7,819	\$ 0	\$4,115	\$3,889	\$5,367
	Number of New Retirees	0	0	1	0	7	3	4
2013	Average Monthly Pension	\$ 0	\$ 737	\$1,616	\$1,942	\$2,763	\$5,285	\$3,594
	Average Monthly Final Average Salary	\$ 0	\$4,049	\$5,217	\$3,355	\$4,418	\$6,966	\$4,528
	Number of New Retirees	0	1	2	1	6	1	8
2014	Average Monthly Pension	\$ 0	\$ 0	\$1,675	\$ 0	\$2,314	\$3,643	\$3,167
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$5,856	\$ 0	\$3,915	\$5,155	\$4,076
	Number of New Retirees	0	0	2	0	1	6	4
2015	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$3,473	\$ 0	\$3,181
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$5,365	\$ 0	\$3,995
	Number of New Retirees	0	0	0	0	1	0	3
2016	Average Monthly Pension	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$3,611	\$3,640
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$4,996	\$4,671
	Number of New Retirees	0	0	0	0	0	3	4
2017	Average Monthly Pension	\$ 0	\$ 0	\$2,464	\$ 0	\$ 0	\$4,040	\$3,997
	Average Monthly Final Average Salary	\$ 0	\$ 0	\$8,074	\$ 0	\$ 0	\$5,623	\$5,027
	Number of New Retirees	0	0	1	0	0	4	4

*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 Benefits Combined

<u>Year Ended December 31,</u>	<u>Investment Rate of Return (Net of Fees)</u>
2008	-24.1%
2009	17.9%
2010	13.1%
2011	1.1%
2012	13.8%
2013	17.5%
2014	7.1%
2015	1.5%
2016	5.7%
2017	16.6%

### Schedule of Actuarial Value of Assets vs. Fair Value of Assets - Pension Benefits and Postemployment Healthcare Benefits 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>
2008	\$196,277,679	\$145,319,547	135.1%
2009	188,396,534	162,057,788	116.3%
2010	184,077,516	173,898,700	105.9%
2011	178,126,063	167,995,703	106.0%
2012	172,566,956	180,287,412	95.7%
2013	182,554,587	199,740,742	91.4%
2014	189,917,999	201,309,174	94.3%
2015	193,729,043	192,322,370	100.7%
2016	198,244,885	191,202,398	103.7%
2017	204,273,172	210,370,946	97.1%

### Schedule of Employer Contributions - Pension Benefits and Postemployment Healthcare Benefits 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>
2008	\$ 6,094,316	\$2,198,000	\$2,023,448	33.2%
2009	7,273,214	2,582,587	2,543,694	35.0%
2010	10,653,889	2,754,970	2,660,034	25.0%
2011	11,606,636	3,144,432	3,255,609	28.0%
2012	12,429,935	3,188,505	3,108,976	25.0%
2013	14,045,708	2,975,735	2,863,145	20.4%
2014	13,072,570	3,154,809	3,136,752	24.0%
2015	13,191,203	3,493,374	3,462,037	26.2%
2016	13,547,803	3,438,713	3,391,381	25.0%
2017	13,913,427	3,602,993	3,544,707	25.5%



## STATISTICAL SECTION

### Additional Schedules Required by Employer (continued)

#### Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Beginning Net Position (Fair Value)	\$191,202,398	\$ 192,322,370	\$ 201,309,174	\$ 199,740,742	\$ 180,287,412
Additions:					
Employer contributions	3,544,707	3,391,381	3,462,037	3,136,752	2,863,145
Employee contributions	3,300,222	3,184,051	2,771,533	2,645,164	2,687,211
Annuitant health benefit contributions*	-	1,177,887	1,134,920	1,193,549	1,190,706
Net investment income (loss)	30,500,015	10,477,792	2,549,975	13,525,606	30,383,512
Other	<u>595,665</u>	<u>317,217</u>	<u>240,278</u>	<u>204,853</u>	<u>159,383</u>
Total additions	<u>37,940,609</u>	<u>18,548,328</u>	<u>10,158,743</u>	<u>20,705,924</u>	<u>37,283,957</u>
Deductions:					
Benefits	18,002,969	18,636,138	18,347,316	17,858,418	16,858,913
Refunds	554,417	740,586	635,908	961,637	958,707
Employee transfers to (from)					
Cook County	54,257	133,999	18,370	175,370	(106,012)
Administrative expenses	<u>160,418</u>	<u>157,577</u>	<u>143,953</u>	<u>142,067</u>	<u>119,019</u>
Total deductions	<u>18,772,061</u>	<u>19,668,300</u>	<u>19,145,547</u>	<u>19,137,492</u>	<u>17,830,627</u>
Ending Net Position (Fair Value)	<u>\$210,370,946</u>	<u>\$ 191,202,398</u>	<u>\$ 192,322,370</u>	<u>\$ 201,309,174</u>	<u>\$ 199,740,742</u>
Actuarial Value of Assets	204,273,172	198,244,885	193,729,043	189,917,999	182,554,587
Actuarial Accrued Liabilities (AAL)	330,912,840	330,207,622	322,764,141	315,234,847	306,919,270
Unfunded AAL (UAAL) (Fair Value)	120,541,894	139,005,224	130,441,771	113,925,673	107,178,528
Unfunded AAL (UAAL) (Actuarial Value)	126,639,668	131,962,737	129,035,098	125,316,848	124,364,683
Funded Ratio (Fair Value)	63.6%	57.9%	59.6%	63.9%	65.1%
Funded Ratio (Actuarial Value)	61.7%	60.0%	60.0%	60.2%	59.5%

\* Beginning 2017, the annuitants Healthcare contribution (\$1,321,187 in CY 2017) is netted against Healthcare benefits expense.

**Schedule of Financial Condition - Pension Benefits and Postemployment Healthcare Combined**

	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Beginning Net Position (Fair Value)	\$ 167,995,703	\$ 173,898,700	\$ 162,057,788	\$ 145,319,547	\$ 200,160,357
Additions:					
Employer contributions	3,108,976	3,255,609	2,660,034	2,543,694	2,023,448
Employee contributions	2,426,776	2,289,027	2,452,696	2,418,794	2,119,208
Annuitant health benefit contributions	1,127,026	1,120,842	984,039	1,039,073	1,090,141
Net investment income (loss)	22,209,855	2,021,094	20,250,639	24,683,791	(46,414,013)
Other	212,447	512,709	227,553	219,919	127,464
Total additions	<u>29,085,080</u>	<u>9,199,281</u>	<u>26,574,961</u>	<u>30,905,271</u>	<u>(41,053,752)</u>
Deductions:					
Benefits	15,287,183	14,723,330	14,027,446	13,462,594	13,249,542
Refunds	1,188,639	604,314	343,863	472,953	518,400
Employee transfers to (from)					
Cook County	205,887	(328,586)	257,975	118,754	(119,434)
Administrative expenses	<u>111,662</u>	<u>103,220</u>	<u>104,765</u>	<u>112,729</u>	<u>138,550</u>
Total deductions	<u>16,793,371</u>	<u>15,102,278</u>	<u>14,734,049</u>	<u>14,167,030</u>	<u>13,787,058</u>
Ending Net Position (Fair Value)	<u>\$ 180,287,412</u>	<u>\$ 167,995,703</u>	<u>\$ 173,898,700</u>	<u>\$ 162,057,788</u>	<u>\$ 145,319,547</u>
Actuarial Value of Assets	172,566,956	178,126,063	184,077,516	188,396,534	196,277,679
Actuarial Accrued Liabilities (AAL)	304,451,002	289,321,074	282,391,153	274,032,351	237,927,630
Unfunded AAL (UAAL) (Fair Value)	124,163,590	121,325,371	108,492,453	111,974,563	92,608,083
Unfunded AAL (UAAL) (Actuarial Value)	131,884,046	111,195,011	98,313,637	85,635,817	41,649,951
Funded Ratio (Fair Value)	59.2%	58.1%	61.6%	59.1%	61.1%
Funded Ratio (Actuarial Value)	56.7%	61.6%	65.2%	68.7%	82.5%

STATISTICAL SECTION

Additional Schedules Required by Employer (continued)

**Schedule of Funding Progress - Pension and Postemployment Healthcare Benefits 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>
2008	\$237,927,630	\$196,277,679	\$145,319,547	\$ 41,649,951
2009	274,032,351	188,396,534	162,057,788	85,635,817
2010	282,391,153	184,077,516	173,898,700	98,313,637
2011	289,321,074	178,126,063	167,995,703	111,195,011
2012	304,451,002	172,566,956	180,287,412	131,884,046
2013	306,919,270	182,554,587	199,740,742	124,364,683
2014	315,234,847	189,917,999	201,309,174	125,316,848
2015	322,764,141	193,729,043	192,322,370	129,035,098
2016	330,207,622	198,244,885	191,202,398	131,962,737
2017	330,912,840	204,273,172	210,370,946	126,639,668

**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>
2008	\$212,373,326	\$196,277,679	\$145,319,547	\$ 16,095,647
2009	244,625,664	188,396,534	162,057,788	56,229,130
2010	252,877,596	184,077,516	173,898,700	68,800,080
2011	261,509,175	178,126,063	167,995,703	83,383,112
2012	273,136,730	172,566,956	180,287,412	100,569,774
2013	277,560,212	182,554,587	199,740,742	95,005,625
2014	285,960,963	189,917,999	201,309,174	96,042,964
2015	291,739,068	193,729,043	192,322,370	98,010,025
2016	300,259,728	198,244,885	191,202,398	102,014,843
2017	302,213,539	204,273,172	210,370,946	97,940,367

Additional Schedules Required by Employer (continued)

**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>
\$ 92,608,083	82.5%	61.1%	\$23,474,621	177.4%	394.5%
111,974,563	68.7%	59.1%	24,967,115	343.0%	448.5%
108,492,453	65.2%	61.6%	24,397,376	403.0%	444.7%
121,325,371	61.6%	58.1%	22,678,566	490.3%	535.0%
124,163,590	56.7%	59.2%	26,252,071	502.4%	473.0%
107,178,528	59.5%	65.1%	29,485,857	421.8%	363.5%
113,925,673	60.2%	63.9%	29,811,912	420.4%	382.1%
130,441,771	60.0%	59.6%	32,007,657	403.1%	407.5%
139,005,224	60.0%	57.9%	34,509,011	382.4%	402.8%
120,541,894	61.7%	63.6%	35,078,173	361.0%	343.6%

**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>
\$ 67,053,779	92.4%	68.4%	\$23,474,621	68.6%	285.6%
82,567,876	77.0%	66.2%	24,967,115	225.2%	330.7%
78,978,896	72.8%	68.8%	24,397,376	282.0%	323.7%
93,513,472	68.1%	64.2%	22,678,566	367.7%	412.3%
92,849,318	63.2%	66.0%	26,252,071	383.1%	353.7%
77,819,470	65.8%	72.0%	29,485,857	322.2%	263.9%
84,651,789	66.4%	70.4%	29,811,912	322.2%	284.0%
99,416,698	66.4%	65.9%	32,007,657	306.2%	310.6%
109,057,330	66.0%	63.7%	34,509,011	295.6%	316.0%
91,842,593	67.6%	69.6%	35,078,173	279.2%	261.8%

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>
2008	\$36,004,405	\$ -	\$ -	\$36,004,405
2009	43,142,977	-	-	43,142,977
2010	43,102,510	-	-	43,102,510
2011	40,406,196	-	-	40,406,196
2012	45,713,760	-	-	45,713,760
2013	47,113,653	-	-	47,113,653
2014	47,212,173	-	-	47,212,173
2015	49,478,790	-	-	49,478,790
2016	44,708,189	-	-	44,708,189
2017	43,410,740	-	-	43,410,740

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

<u>Year Ended Dec. 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>Plan Changes</u>	<u>Other Sources (1)</u>	<u>Total Change in Unfunded Liability</u>
2008	1,179,009	13,247,300	3,928,697	-	-	(7,782,032)	10,572,974
2009	(1,015,614)	14,363,849	4,512,235	24,746,310	-	1,379,086	43,985,866
2010	(3,394,112)	9,729,368	7,483,382	-	-	(1,140,818)	12,677,820
2011	(3,690,231)	11,541,394	7,734,557	-	-	(2,704,346)	12,881,374
2012	1,939,324	8,635,210	5,369,563	-	-	4,744,938	20,689,035
2013	(2,208,899)	(17,264,428)	10,855,083	-	-	1,098,881	(7,519,363)
2014	(2,333,548)	(6,069,280)	9,597,999	-	-	(243,006)	952,165
2015	(2,503,098)	(1,528,781)	9,379,058	-	-	(1,628,929)	3,718,250
2016	2,722,397	(2,010,983)	9,799,700	-	-	(7,583,475)	2,927,639
2017	1,473,961	(2,908,636)	10,005,461	(8,134,544)	(1,124,460)	(4,634,851)	(5,323,069)

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

**Schedule of Funding Progress - Postemployment Healthcare (continued)**

<u>Unfunded AAL (UAAL) Fair Value</u>	<u>Funded Ratio Actuarial Value</u>	<u>Funded Ratio Fair Value</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll (Actuarial Value)</u>	<u>UAAL as a Percentage of Covered Payroll (Fair Value)</u>
\$ 36,004,405	0.0%	0.0%	\$23,474,621	153.4%	153.4%
43,142,977	0.0%	0.0%	24,967,115	172.8%	172.8%
43,102,510	0.0%	0.0%	24,397,376	176.7%	176.7%
40,406,196	0.0%	0.0%	22,678,566	178.2%	178.2%
45,713,760	0.0%	0.0%	26,252,071	174.1%	174.1%
47,113,653	0.0%	0.0%	29,485,857	159.8%	159.8%
47,212,173	0.0%	0.0%	29,811,912	158.4%	158.4%
49,478,790	0.0%	0.0%	32,007,658	154.6%	154.6%
44,708,189	0.0%	0.0%	34,512,652	129.5%	129.5%
43,410,740	0.0%	0.0%	35,078,173	123.8%	123.8%

This page is intentionally left blank.







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

70 West Madison Street

Suite 1925

Chicago, Illinois 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.*