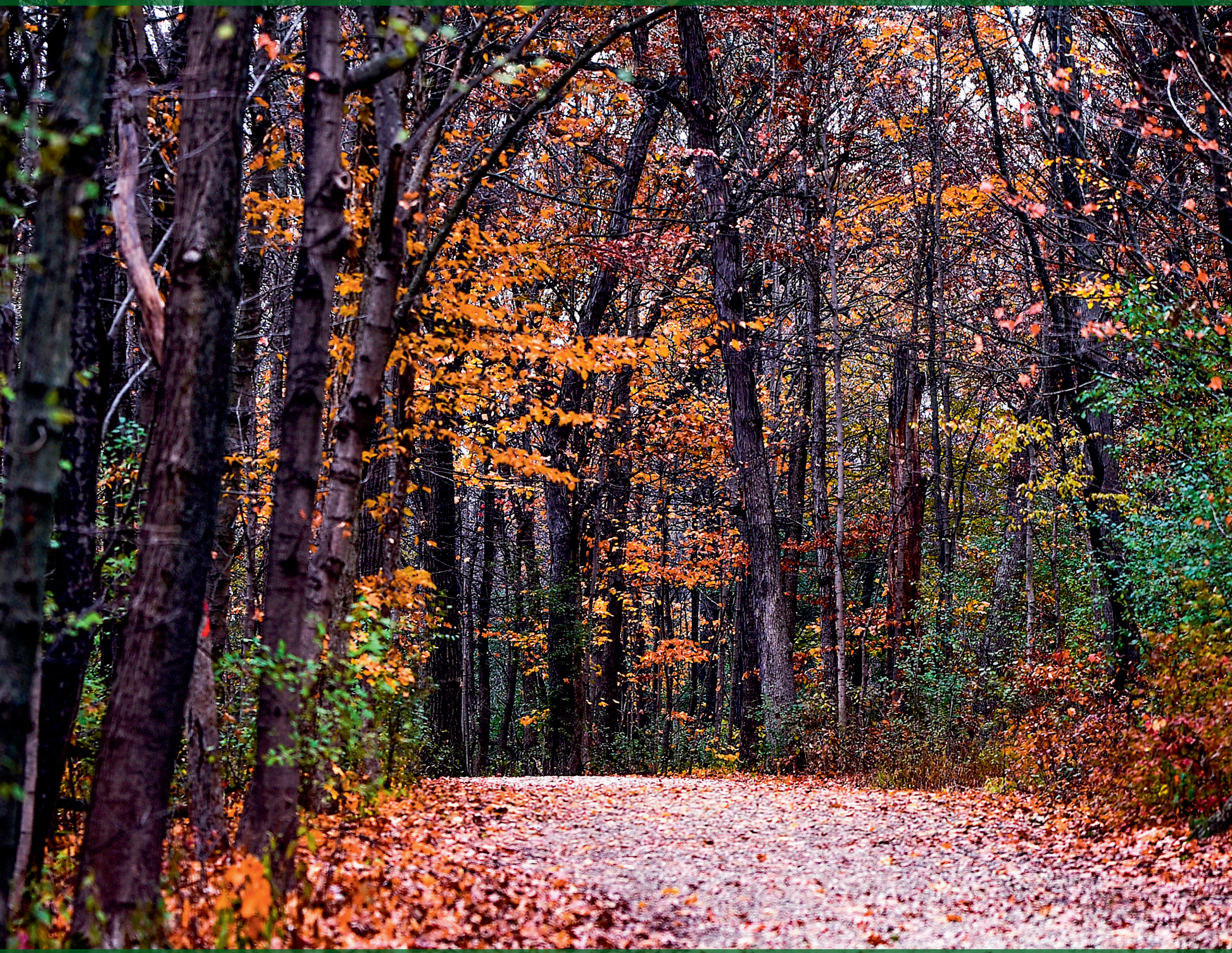
Forest Preserve District Employees' Annuity and Benefit Fund of Cook County

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



COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Years Ended December 31, 2019 and 2018

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, 2019 and 2018

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

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Table of Contents

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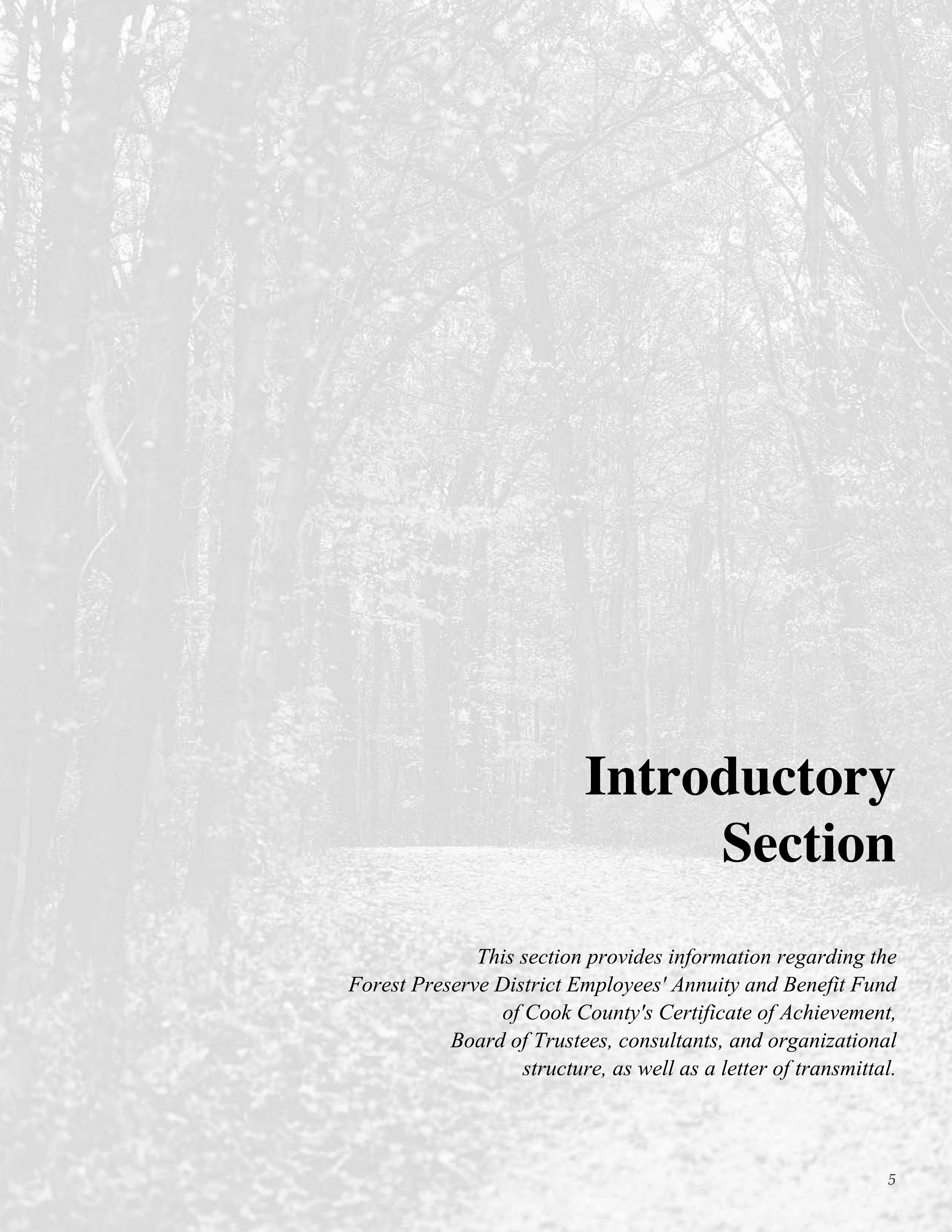

Introductory Section

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

Certificate of Achievement

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Forest Preserve District

Employees' Annuity and Benefit Fund

of Cook County, Illinois

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2018

Christopher P. Morrill

Executive Director/CEO

Principal Officials

Retirement Board

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President
Ex Officio Cook County Comptroller

Patrick J. McFadden
Vice-President
Elected Cook County Annuitant

Diahann Goode
Secretary
Elected Cook County Employee

John Blair
Elected Cook County Employee

Joseph Nevius
Elected Forest Preserve District Annuitant

Stephen Hughes
Elected Forest Preserve District Employee

Kevin Ochalla
Elected Cook County Employee

Bill Kouruklis
Ex Officio Cook County Treasurer (Designee)

James M. O'Rourke
Elected Cook County Annuitant

Professional Consultants

Legal Counsel
Burke Burns & Pinelli, Ltd.

Auditor
Legacy Professionals, LLP

Investment Consultant
Callan Associates, Inc.

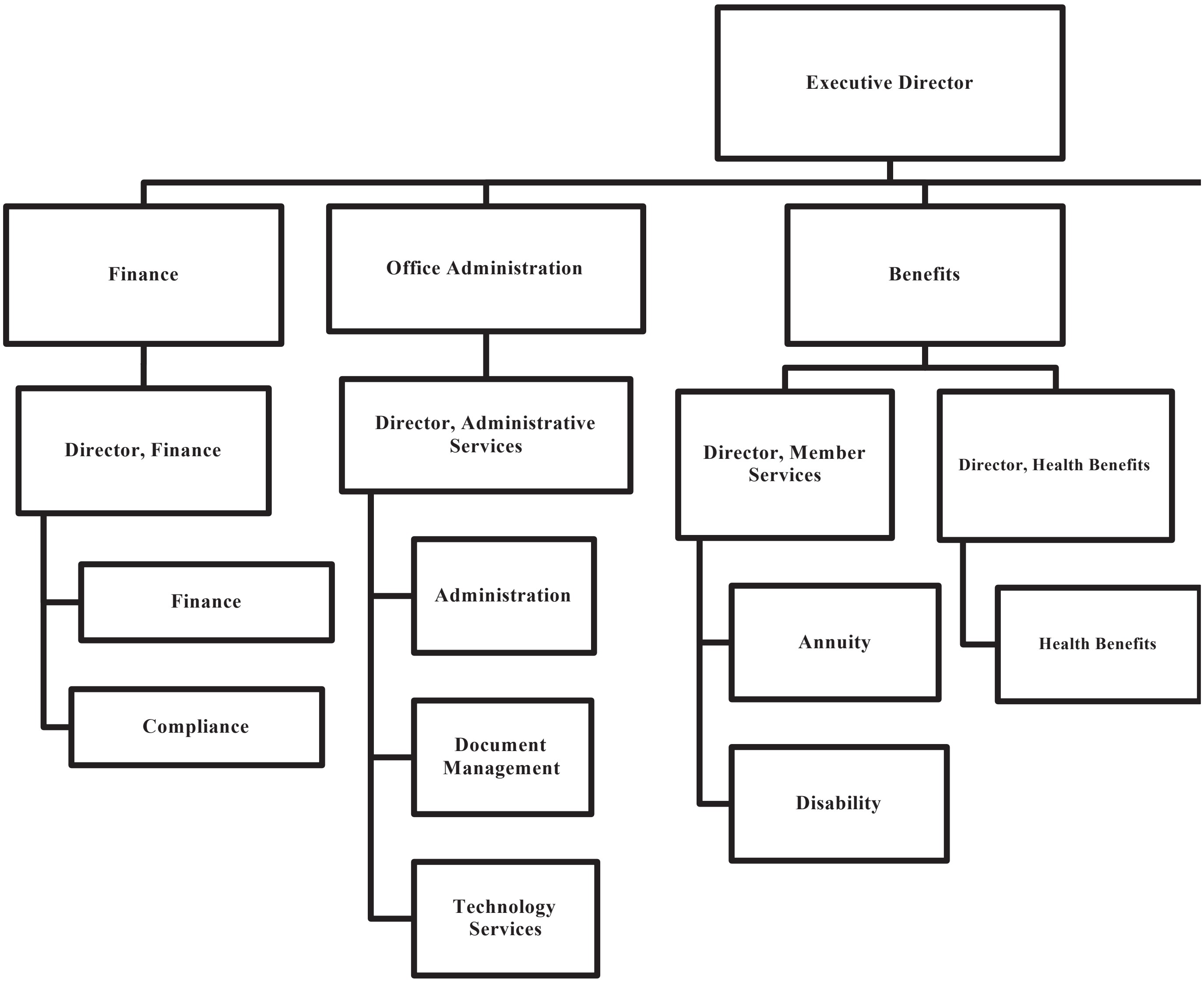
Consulting Actuary
Cavanaugh Macdonald Consulting, LLC

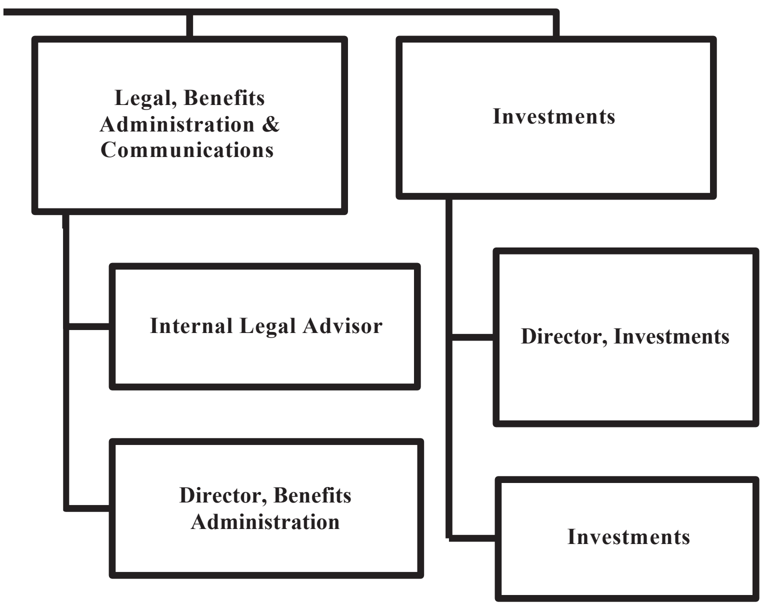
Master Custodian
BNY Mellon

Custodian
Cook County Treasurer

Investment Managers are listed on page 79.
Brokers used by Investment Managers are listed on page 80.

Organizational Chart




Legal, Benefits Administration & Communications
Internal Legal Advisor
Director, Benefits Administration
Investments
Director, Investments
Investments

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Letter of Transmittal

June 19, 2020

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
70 W Madison St, Suite 1925
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, 2019. The financial statements and their content are the responsibility of the Fund's management.

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 as of December 31, 2019. Readers should review this report in conjunction with the Management's Discussion and Analysis (MD&A) found in the Financial Section of this report.

Fund Profile

Established in 1931 by an act of the Illinois General Assembly, the Fund is a defined benefit public pension fund that is governed by the Illinois Pension Code 40 ILCS 5/1-101 et seq. The Fund administers annuity, disability, death, and health benefits to employees and their beneficiaries of the Forest Preserve District of Cook County, Illinois (the Forest Preserve District). 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, 2019, the Fund consisted of 546 active employees, 390 retiree annuitants, 142 survivor annuitants, and 1,465 inactive members.

The Fund is governed by a nine-member Retirement Board ("Board"). The Retirement Board of the County Employees' and Officers' Annuity and Benefit Fund of Cook County (CEABF) is ex officio the Retirement Board for the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County. The nine Trustees are elected or appointed as follows: three are elected by the employees of Cook County; one is elected by employees of the Forest Preserve District, two are elected by the annuitants of Cook County; one is elected by the annuitants of 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 has common trustees to administer the annuity and benefits of Cook County and Forest Preserve District employees in accordance with Illinois Compiled Statutes (ILCS) Chapter 40, Articles 1, 9, 10, and 20.

Letter of Transmittal (continued)

Summary of Financial Experience

The following table illustrates the changes in the Fund's net position between December 31, 2019 and December 31, 2018 (numbers in millions):

Change in Net Position	2019	2018	$ Change	% Change
Total additions	$ 41.8	$ (0.3)	$ 42.1	16109.3%
Total deductions	$ 20.5	$ 19.7	$ 0.8	4.0%
Change in net position from prior year	$ 21.3	$ (20.0)	$ 41.3	206.6%

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

Funding

The Fund engages an independent actuary, Cavanaugh Macdonald Consulting, LLC, to perform an actuarial valuation on an annual basis pursuant to the provisions of the Illinois Pension Code.

As of December 31, 2019, the Fund's combined actuarial accrued liability for pension and retiree benefits was $343.4 million, and the actuarial value of assets was $203.5 million, resulting in an unfunded actuarial accrued liability of $139.9 million. The funded ratio (ratio of assets to liabilities) for pension benefits and retiree health benefits combined was 59.25%, a slight decrease from prior year's funded ratio of 60.26%.

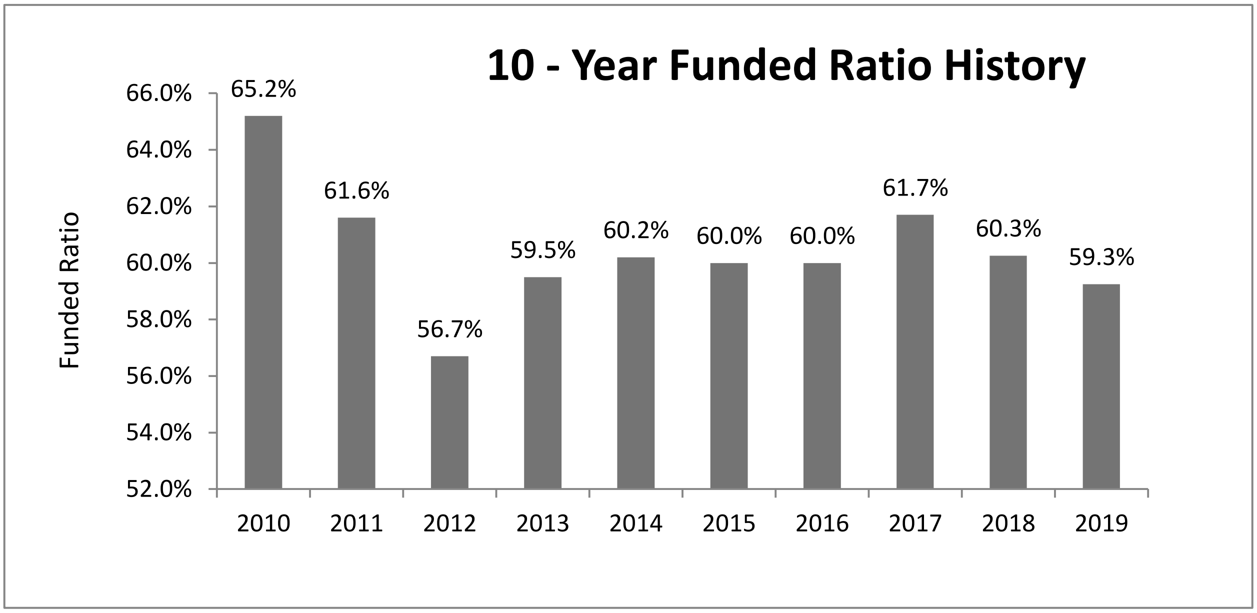
The Fund's actuarial accrued liability for pension benefits only was $319.7 million and the actuarial value of assets was $203.5 million, resulting in an unfunded liability of $116.2 million and a funded ratio of 63.65%. The Fund's actuarial accrued liability for retiree health benefits was $23.7 million. As there are no dedicated assets for retiree health benefits, the actuarial value of assets was $0 for retiree health benefits, resulting in an unfunded liability for retiree health benefits of $23.7 million.

Employees contribute 8.5% of pensionable earnings to the Fund. Contributions from the employer, as required by the Illinois Pension Code, are determined by a multiplier of active employee contributions. Specifically, the Forest Preserve 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.

This multiplier, in the opinion of the Fund's actuary, is an inadequate funding mechanism to address the long-term financial requirements of the Fund. Since 1973, the statutory tax multiple used to determine the employer contribution has remained static at 1.30. According to the Fund's 2019 actuarial valuation, an actuarially-determined tax multiplier of 4.07 would be needed to generate the actuarially required 2020 employer contribution. Thus, the current fixed multiplier is an inadequate mechanism to provide long-term sustainability. The Fund's most recent actuarial valuation projects that the Fund's assets will be depleted by 2042. On a projected basis, the Fund faces a critical funding shortfall without legislative action to establish an actuarially-based funding policy.

The Fund has been submitting legislation to the General Assembly on an annual basis since 2010 which proposes an actuarially-based funding policy in lieu of a fixed multiplier. The Fund continues to work with its actuary, legislation liaison, fiduciary counsel and the employer to address the funding shortfall and identify permanent long-term solutions that can be enacted as statutory requirements within the Illinois Pension Code.

The following chart depicts historical funding ratios for the 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 Board works to maintain a diversified asset allocation designed to exceed the Fund's 7.25% actuarial rate of return within acceptable risk parameters. The Fund's Investment Policy, which provides additional strategies and safeguards for the Fund's investment objectives, can be found at CookCountyPension.com.

At year-end, the total invested assets of the Fund were valued at $207.4 million compared with $186.6 million at the end of 2018, an increase of approximately $20.8 million. While 2018 was an unusual year where virtually all asset classes posted negative returns, 2019 was equally rare with all major asset classes delivering above-average returns. The Fund's investment portfolio's net rate of return for the year ended December 31, 2019 was 18.60%, which was more favorable than several other broad market indices. In aggregate, allocations to non-U.S. equity, real estate and hedge fund exposures exceeded their respective benchmarks, while domestic equity and fixed income trailed their benchmarks despite posting strong absolute returns. The Board continues to work to maintain a diversified asset allocation within acceptable risk parameters.

Additional information regarding performance and investment professionals who provide services to the Fund can be found in the Investment Section of this report.

Letter of Transmittal (continued)

2019 Initiatives

The 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's staff continually reviews its strategic and operating imperatives to maintain and improve quality member service.

Benefits

The Fund maintains its commitment to delivering high-touch customer service with an increasing volume of benefit requests that included the processing of over 1,020 retirement applications in the past year for both the Fund and CEABF. The Employer implemented a new payroll module in 2018, and the Fund worked in coordination with the employer to ensure a smooth transition and seamless service to members retiring and requesting other related benefit services.

Member engagement remains a primary focus and the Fund continues to seek new ways to enhance communication with members, including frequent website updates, two newsletters to active members and annuitants and two separate issues of a health benefits digest newsletter to members enrolled in the retiree health benefits plan in 2019. The Fund has been drafting and will soon be issuing a communications survey to members in an upcoming pension newsletter to retired members.

In August of 2018, the Fund implemented a change in procedure by which the physician appointed by the Board to review disability applicants, as required by the Illinois Pension Code, was completed. The Board engaged a national health care company that provides occupational health services to perform these evaluations. The company offers multiple locations available to members, including 16 Chicagoland locations, with extended hours, including some weekend hours, to accommodate member needs. In 2019, the first full year of engaged services with this new provider, over 13 evaluations were performed on disability applicants, providing an expedited and convenient process to members.

Effective January 1, 2019, the Fund implemented a mandated Medicare enrollment for all Health Plan members eligible for Medicare at age 65 or at retirement if older than age 65. Health Plan members ineligible for premium free Medicare Part A are required to buy Medicare Part A and Part B in order to maintain coverage in the Fund's Health Plan. These members receive a reduced premium rate to offset the cost of Medicare Part A premiums. The Fund and members benefit from this change as Medicare becomes the primary payor on all claims.

During 2019, the Fund expanded mandated Medicare enrollment to include additional members under age 65 who qualify for Medicare due to disability.

In 2019, the Fund again completed an Out-of-State member information verification project. In June of 2019, the Fund sent verification letters to all of the out-of-state and out-of-country annuitant members (totaling approximately 2,700 for both CEABF and the Fund). The verification letters were sent to these annuitant members in order to verify various information necessary for benefit continuation, including current address, signatures, and status of legal guardian or agent under a Power of Attorney. For annuitants residing in Illinois, the Fund utilizes and works with the Illinois Department of Public Health's data to verify members' accurate status.

Investment

In 2019, the Fund's independent investment consultant continued to focus on generating return and income to satisfy liquidity and guarantee benefit payments. Major initiatives put in place during 2018 such as utilizing a short duration fixed income manager, and increasing allocations to domestic and international equity passive investments gave the Fund additional options to address needs in 2019.

Additionally, in 2019 the Fund liquidated a REIT mandate and used the proceeds for liquidity and benefit payments. This REIT mandate was considered non-strategic to the portfolio and eventually identified as a source of cash.

In addition, Fund staff, working with its investment consultant, performed a comprehensive investment manager fee review. The Fund's investment consultant reviewed all of the fee terms with listed investment managers and recommended a number of agreements for renegotiation. These renegotiations resulted in annual savings of approximately $1 million in fees paid to investment managers prospectively for both Cook County and Forest Preserve Funds.

Legislation

The following Public Acts were enacted in calendar year 2019:

Public Act 101-0011 Provisions

- Created 5-9/179.4 to allow active participants to establish service credit and earnings credit for periods of furlough and/or salary reduction occurring between December 1, 2017 and November 30, 2018.
- The act requires the participant to apply in writing before December 31, 2019, not receive any remuneration from the county and pay to the Fund on an after-tax basis the employee contributions and the employer's normal cost (based on the December 31, 2018 actuarial valuation) plus compound interest based on the actuarially assumed rate.
- The participant must make the above payment while they are active participants and within 12 months after their application date.

Public Act 101-0473 Provisions

- Amended 5-1/113.6 to require funds' investment policy include a statement that material, relevant, and decision-useful sustainability factors (as provided under the Illinois Sustainable Investing Act) are considered by the board, within the bounds of financial and fiduciary prudence, in evaluating investment decisions.
- The Act creates 5/1-113.7 requires that every pension fund adopt a written investment policy and file a copy of that policy with the Department of Insurance within 30 days after its adoption whenever a board changes its policy.

Public Act 101-0546 Provisions

- Created 765 ILCS 1026/15-1505 to require funds to report to the Illinois Treasurer all property presumed abandoned by providing the name of the owner and any beneficiaries, the last known address, the Social Security number or taxpayer ID number, and the dollar amount.
- The funds shall not have to pay the presumed abandoned account balance to the IL Treasurer, only reporting the information is required.

Accounting System and 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.

Letter of Transmittal (continued)

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 that the valuation of the cost and benefits requires estimates and judgments by management. Management and the external 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, 2019. A copy of their report is contained in the Financial Section of this report.

Administration

The fiscal year ending on December 31, 2019 was my first full year as the Executive Director of the Fund. Many initiatives directed at improving member service, efficiency of operations and most importantly, collaboration with interested stakeholders in securing long-term actuarial based funding are underway. I am pleased and honored to serve in this very important position and appreciate all the efforts of the Board and Fund staff to deliver outstanding service to a diverse, hard-working, and diligent group of members providing vital support to the operations of the Forest Preserve.

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, 2018. This was the tenth 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.

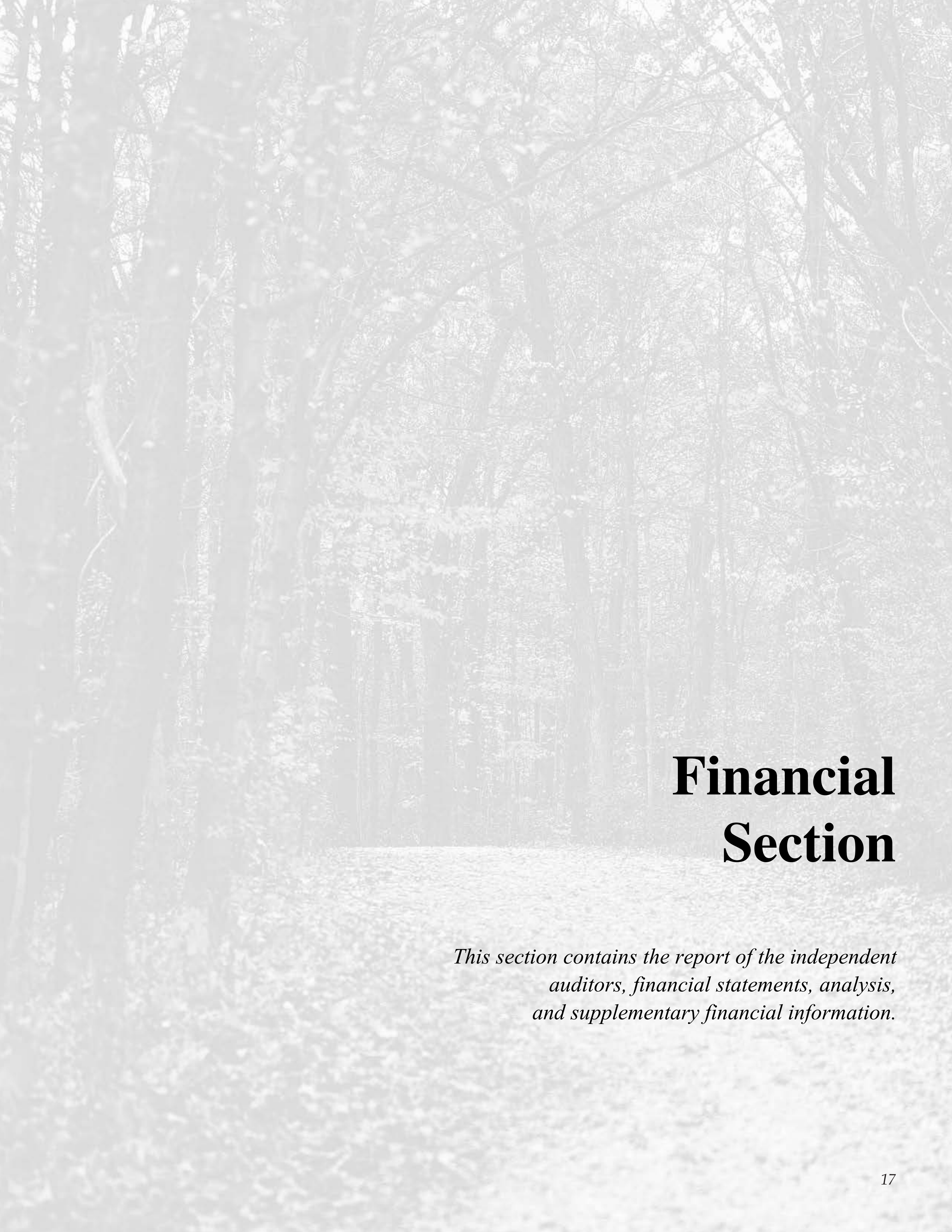
Acknowledgments

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,

Regina Tuczak

Regina Tuczak, Executive Director



Financial Section

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

Report of Independent Auditors

LEGACY
PROFESSIONALS LLP
CERTIFIED PUBLIC ACCOUNTANTS

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, 2019 and 2018, and the related combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the net position of Forest Preserve District Employees' Annuity and Benefit Fund of Cook County as of December 31, 2019 and 2018, and the changes in net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, 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 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 are presented for purposes of additional analysis and are 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.

Other Matters (continued)

Previously Audited Information

We also have previously audited the basic financial statements for the years ended December 31, 2017, 2016, 2015, and 2014 (which are not presented herein), and we expressed unmodified opinions on those financial statements. In our opinion, the Additions by Source and Deductions by Type are 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 12, 2020

Management's Discussion and Analysis (Unaudited)

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

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, 2019 and 2018. 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 provide 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, 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 $21,289,278 or 11.2% from $190,398,076 at December 31, 2018 to $211,687,354 at December 31, 2019. Comparatively, net position decreased by $19,972,870 or 9.5% from $210,370,946 at December 31, 2017 to $190,398,076 at December 31, 2018. 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 18.60% for 2019, (4.31%) for 2018 and 16.58% for 2017.

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 Increase/(Decrease) in	
	2019	2018	2017	Dollars	Percent
Total assets	$ 214,126,736	$ 193,723,543	$ 217,178,394	$ 20,403,193	10.5%
Total liabilities	2,439,382	3,325,467	6,807,448	(886,085)	-26.6%
Net position	$ 211,687,354	$ 190,398,076	$ 210,370,946	$ 21,289,278	11.2%

Changes in 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,

	2019	2018	2017	Current Year Increase/(Decrease) in Dollars	Current Year Increase/(Decrease) in Percent
Additions:					
Employer contributions	$ 4,299,140	$ 4,087,391	$ 3,544,707	$ 211,749	5.2%
Employee contributions	3,020,322	3,127,980	3,300,222	(107,658)	-3.4%
Net investment income/(loss) (includes security lending activities)	33,653,650	(8,422,851)	30,500,015	42,076,501	499.6%
Other	814,335	946,166	598,522	(131,831)	-13.9%
Total additions	41,787,447	(261,314)	37,943,466	42,048,761	16091.3%
Deductions:					
Benefits	19,251,286	18,286,045	18,002,969	965,241	5.3%
Refunds	840,125	1,083,510	554,417	(243,385)	-22.5%
Employee transfers to the Cook County Fund	252,406	182,512	54,257	69,894	38.3%
Administrative expenses	154,352	159,489	163,275	(5,137)	-3.2%
Total deductions	20,498,169	19,711,556	18,774,918	786,613	4.0%
Net increase (decrease)	21,289,278	(19,972,870)	19,168,548	41,262,148	206.6%
Net position:					
Beginning of year	190,398,076	210,370,946	191,202,398	(19,972,870)	-9.5%
End of year	$ 211,687,354	$ 190,398,076	$ 210,370,946	$ 21,289,278	11.2%

Additions to Net Position

Total additions were $41,787,447 in 2019, ($261,314) in 2018 and $37,943,466 in 2017.

Employer contributions increased to $4,299,140 in 2019 from $4,087,391 in 2018 and were $3,544,707 in 2017. Employer contributions are statutorily set at 1.30 times employee contributions collected two years prior.

Employee contributions, including permissive service credit purchases, decreased to $3,020,322 in 2019 from $3,127,980 in 2018 and were $3,300,222 in 2017. Employees contribute 8.5% of covered wages.

Net investment income totaled $33,653,650 for 2019 compared to net investment loss of ($8,422,851) for 2018. Comparatively, net investment income totaled $30,500,015 for 2017. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

Deductions to Net Position

Total deductions were $20,498,169 in 2019, $19,711,556 in 2018 and $18,774,918 in 2017.

Benefits increased to $19,251,286 in 2019 from $18,286,045 in 2018 and $18,002,969 in 2017 primarily due to the 3% annual cost of living increases for annuitants.

Refunds decreased to $840,125 in 2019 from $1,083,510 in 2018 and from $554,417 in 2017. 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 slightly decreased to $154,352 in 2019 from $159,489 in 2018. Comparatively, the cost to administer the Plan decreased to $159,489 in 2018 from $163,275 in 2017.

Actuarial Information

Pension Benefits

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

Funding for Pension Benefits
For the Years Ended December 31,

	2019	2018	2017
Total pension liability	$ 496,379,240	$ 415,400,193	$ 430,452,619
Plan fiduciary net position	(211,687,354)	(190,398,076)	(210,370,946)
Employer's net pension liability	$ 284,691,886	$ 225,002,117	$ 220,081,673
Plan fiduciary net position as a percentage of the total pension liability	42.65%	45.83%	48.87%

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:

Funding for Postemployment Healthcare Benefits
For the Years Ended December 31,

	2019	2018	2017
Total OPEB liability	$ 43,728,394	$ 35,850,239	$ 49,170,148
Plan fiduciary net position	-	-	-
Employer's net OPEB liability	$ 43,728,394	$ 35,850,239	$ 49,170,148

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

Actuarial Information (continued)

Combined

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

Funding for Combined Pension and Postemployment Healthcare Benefits For the Years Ended December 31,

	2019	2018	2017
Unfunded actuarial accrued liability	$ 139,936,050	$ 133,789,965	$ 126,639,668
Funded ratio	59.25%	60.26%	61.73%

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 District Employees' Annuity
and Benefit Fund of Cook County
Attention: Executive Director
70 West Madison Street
Suite 1925
Chicago, Illinois 60602

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

December 31, 2019

	Total	Pension	Postemployment Healthcare
ASSETS			
RECEIVABLES			
Employer contributions less allowance of $46,797 in 2019	$ 4,243,493	$ 4,243,493	$ -
Employee contributions	6,988	6,988	-
Accrued investment income	323,110	323,110	-
Receivable for securities sold	130,420	130,420	-
EGWP/Medicare Part D subsidy & other	641,927	252,768	389,159
Prescription rebates	23,974	-	23,974
Imprest balance receivable	62,000	-	62,000
Total receivables	5,431,912	4,956,779	475,133
INVESTMENTS			
U.S. and international equities	95,130,833	95,130,833	-
U.S. Government and government agency obligations	3,936,356	3,936,356	-
Corporate bonds	6,274,414	6,274,414	-
Collective international equity fund	28,983,483	28,983,483	-
Commingled fixed income fund	31,419,589	31,419,589	-
Exchange traded funds	-	-	-
Hedge fund	23,712,574	23,712,574	-
Real estate funds	14,336,540	14,336,540	-
Short-term investment	3,630,699	3,630,699	-
Total investments	207,424,488	207,424,488	-
Collateral held for securities on loan	1,270,336	1,270,336	-
Total assets	214,126,736	213,651,603	475,133
LIABILITIES			
Accounts payable	120,668	120,668	-
Healthcare and other benefits payable	475,133	-	475,133
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	382,786	382,786	-
Payable for securities purchased	190,459	190,459	-
Securities lending collateral	1,270,336	1,270,336	-
Total liabilities	2,439,382	1,964,249	475,133
Net position			
Net position restricted for pensions	211,687,354	211,687,354	-
Net position restricted for postemployment healthcare benefits	-	-	-
Total	$ 211,687,354	$ 211,687,354	$ -

See accompanying notes to financial statements.

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

December 31, 2018

	Total	Pension	Postemployment Healthcare
ASSETS			
RECEIVABLES			
Employer contributions less allowance of $111,748 in 2018	$ 4,027,518	$ 4,027,518	$ -
Employee contributions	3,780	3,780	-
Accrued investment income	330,951	330,951	-
Receivable for securities sold	272,015	272,015	-
EGWP/Medicare Part D subsidy & other	480,851	157,804	323,047
Prescription rebates	28,071	28,071	-
Imprest balance receivable	62,000	-	62,000
Total receivables	5,205,186	4,820,139	385,047
INVESTMENTS			
U.S. and international equities	83,356,704	83,356,704	-
U.S. Government and government agency obligations	5,477,851	5,477,851	-
Corporate bonds	3,352,396	3,352,396	-
Collective international equity fund	24,019,014	24,019,014	-
Commingled fixed income fund	28,910,652	28,910,652	-
Exchange traded funds	907,930	907,930	-
Hedge fund	22,287,105	22,287,105	-
Real estate funds	14,157,365	14,157,365	-
Short-term investment	4,140,867	4,140,867	-
Total investments	186,609,884	186,609,884	-
Collateral held for securities on loan	1,908,473	1,908,473	-
Total assets	193,723,543	193,338,496	385,047
LIABILITIES			
Accounts payable	52,419	52,419	-
Healthcare and other benefits payable	385,047	-	385,047
Due to County Employees' and Officers' Annuity and Benefit Fund of Cook County	381,010	381,010	-
Payable for securities purchased	598,518	598,518	-
Securities lending collateral	1,908,473	1,908,473	-
Total liabilities	3,325,467	2,940,420	385,047
Net position			
Net position restricted for pensions	190,398,076	190,398,076	-
Net position restricted for postemployment healthcare benefits	-	-	-
Total	$ 190,398,076	$ 190,398,076	$ -

See accompanying notes to financial statements.

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

Year Ended December 31, 2019

	Total	Pension	Postemployment Healthcare
ADDITIONS			
Employer contributions	$ 4,299,140	$ 4,299,140	$ -
Allocation to postemployment healthcare	-	(953,678)	953,678
Total employer contributions	4,299,140	3,345,462	953,678
Employee contributions			
Salary deductions	2,957,194	2,957,194	-
Refund repayments	28,556	28,556	-
Former and miscellaneous service payments	5,389	5,389	-
Deductions in lieu of disability	29,183	29,183	-
Total employee contributions	3,020,322	3,020,322	-
Investment income			
Net appreciation (depreciation) in fair value of investments	31,431,188	31,431,188	-
Dividends	2,502,370	2,502,370	-
Interest	274,605	274,605	-
	34,208,163	34,208,163	-
Less investment expenses	(573,804)	(573,804)	-
Net investment income (loss)	33,634,359	33,634,359	-
Securities lending			
Income	24,098	24,098	-
Expenses	(4,807)	(4,807)	-
Net securities lending income	19,291	19,291	-
Other			
EGWP/Medicare Part D subsidy	720,628	-	720,628
Prescription plan rebates	93,707	-	93,707
Total other additions	814,335	-	814,335
Total additions	41,787,447	40,019,434	1,768,013
DEDUCTIONS			
Benefits			
Annuity			
Employee	14,436,019	14,436,019	-
Spouse and children	2,878,661	2,878,661	-
Disability			
Ordinary	161,954	161,954	-
Duty	6,639	6,639	-
Healthcare less annuitant contributions of $1,450,878 in 2019	1,768,013	-	1,768,013
Total benefits	19,251,286	17,483,273	1,768,013
Refunds	840,125	840,125	-
Employee transfers to County Employees' and Officers' Annuity and Benefit Fund of Cook County	252,406	252,406	-
Administrative expenses	154,352	154,352	-
Total deductions	20,498,169	18,730,156	1,768,013
Net increase (decrease)	21,289,278	21,289,278	-
Net position			
Beginning of year	190,398,076	190,398,076	-
End of year	$ 211,687,354	$ 211,687,354	$ -

See accompanying notes to financial statements.

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

Year Ended December 31, 2018

	Total	Pension	Postemployment Healthcare
ADDITIONS			
Employer contributions	$ 4,087,391	$ 4,087,391	$ -
Allocation to postemployment healthcare	-	(606,110)	606,110
Total employer contributions	4,087,391	3,481,281	606,110
Employee contributions			
Salary deductions	2,944,223	2,944,223	-
Refund repayments	153,890	153,890	-
Former and miscellaneous service payments	9,759	9,759	-
Deductions in lieu of disability	20,108	20,108	-
Total employee contributions	3,127,980	3,127,980	-
Investment income			
Net appreciation (depreciation) in fair value of investments	(10,507,657)	(10,507,657)	-
Dividends	2,352,977	2,352,977	-
Interest	361,539	361,539	-
	(7,793,141)	(7,793,141)	-
Less investment expenses	(650,342)	(650,342)	-
Net investment income (loss)	(8,443,483)	(8,443,483)	-
Securities lending			
Income	24,346	24,346	-
Expenses	(3,714)	(3,714)	-
Net securities lending income	20,632	20,632	-
Other			
EGWP/Medicare Part D subsidy	847,647	-	847,647
Prescription plan rebates	98,519	-	98,519
Total other additions	946,166	-	946,166
Total additions	(261,314)	(1,813,590)	1,552,276
DEDUCTIONS			
Benefits			
Annuity			
Employee	13,844,830	13,844,830	-
Spouse and children	2,761,444	2,761,444	-
Disability			
Ordinary	123,514	123,514	-
Duty	3,981	3,981	-
Healthcare less annuitant contributions of $1,398,987 in 2018	1,552,276	-	1,552,276
Total benefits	18,286,045	16,733,769	1,552,276
Refunds	1,083,510	1,083,510	-
Employee transfers to County Employees' and Officers' Annuity and Benefit Fund of Cook County	182,512	182,512	-
Administrative expenses	159,489	159,489	-
Total deductions	19,711,556	18,159,280	1,552,276
Net increase (decrease)	(19,972,870)	(19,972,870)	-
Net position			
Beginning of year	210,370,946	210,370,946	-
End of year	$ 190,398,076	$ 190,398,076	$ -

See accompanying notes to financial statements.

Notes to Financial Statements

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

NOTES TO FINANCIAL STATEMENTS

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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.

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, 2019 and 2018, 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.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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

Subsequent Events - Subsequent events have been evaluated through June 12, 2020, 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.

NOTE 2. PLAN DESCRIPTION (CONTINUED)

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, 2019 and 2018 was $35,056,459 and $34,071,319 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.

At December 31, 2019 and 2018, participants consisted of the following:

	2019	2018
Active members	546	536
Retired members	390	387
Beneficiaries	142	144
Inactive members	1,465	1,410
Total	2,543	2,477

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, 2019 and 2018 are as follows:

Total pension liability	$ 496,379,240	$ 415,400,193
Plan fiduciary net position	211,687,354	190,398,076
Employer's net pension liability	$ 284,691,886	$ 225,002,117
Plan fiduciary net position as a percentage of the total pension liability	42.65%	45.83%

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.

The net pension liability was determined by actuarial valuations performed as of December 31, 2019 and 2018 using the following actuarial methods and assumptions:

Actuarial valuation dates	December 31, 2019	December 31, 2018
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level Dollar - Open	Level Dollar - Open
Remaining amortization period	30 years	30 years
Asset valuation method	Five Year Smoothed Average Market	Five Year Smoothed Average Market
Actuarial assumptions:		
Inflation	2.75% per year, compounded annually;	2.75% per year, compounded annually;
Salary increases	3.50% to 8.00%, based on age;	3.50% to 8.00%, based on age;
Investment rate of return	7.25% per year, compounded annually;	7.25% per year, compounded annually;
Retirement age	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	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
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006. Buck Modified MP-2017 projection scale.	RP-2014 Blue Collar Mortality Table, base year 2006. Buck Modified MP-2017 projection scale.
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	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

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Net Pension Liability (continued)

The actuarial assumptions used in the December 31, 2019 and 2018 valuations were based on the results of an actuarial experience study conducted by Conduent, Inc. (formerly Buck Consultants, LLC) dated February 2018. The Fund engaged Cavanaugh Macdonald Consulting to prepare the December 31, 2019 and 2018 valuations.

Discount Rate

The discount rate used to measure the total pension liability at December 31, 2019 and 2018 was 3.77% and 4.91% respectively. The projection of cash flows used to determine the discount rate assumed that 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. A municipal bond rate of 2.75% and 4.13% at December 31, 2019 and 2018, respectively, and the long term investment rate of return of 7.25% at December 31, 2019 and 2018 were used in the development of the blended discount rate after that point. The municipal bond rates are based on the S&P Municipal Bond 20 Year High Grade Rate Index. Based on the long-term rate of return of 7.25% and municipal bond rate of 2.75% at December 31, 2019 and 4.13% at December 31, 2018, the blended discount rate would be 3.77% at December 31, 2019 and 4.91% at December 31, 2018.

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, 2019 and 2018. 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:

	1% Decrease 2.77%	Current Discount Rate 3.77%	1% Increase 4.77%
Net Pension Liability - December 31, 2019	$ 363,829,445	$ 284,691,886	$ 221,161,509

	1% Decrease 3.91%	Current Discount Rate 4.91%	1% Increase 5.91%
Net Pension Liability - December 31, 2018	$ 286,005,393	$ 225,002,117	$ 175,465,785

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 employer contributions to be remitted to the Plan are equal to the total contributions made by the employees to the Plan in the calendar year two years prior, 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, 2019 and 2018, there were no significant 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:

Asset Class	Target Allocation %	Long-term Expected Real Rate of Return
Domestic equities	32.00%	5.45%
International equities	27.00%	5.65%
Fixed income	21.00%	1.75%
Real estate funds	9.00%	4.25%
Hedge funds	10.00%	3.25%
Cash equivalents	1.00%	0.60%
Total investments	100.00%	

NOTE 5. INVESTMENTS (CONTINUED)

Long-Term Expected Real Rate of Return

The long-term expected real rates of return are the nominal expected returns for various asset classes net of the long-term inflation assumption of 2.25%. The nominal expected return is expressed as the annualized growth rate over 30 years (i.e., geometric or compounded return). A building block methodology is employed to develop long-term return expectations. Building block includes a long-term estimate of the short-term real rate, inflation, term premium, credit premium, equity risk premium among others. Current economic conditions (inflation, yields, valuation) serve as a starting point for development; however, over a 30-year horizon, risk premiums are largely influenced by long-term history. The 30-year geometric long-term expected real rate of return for each major asset class included with the Plan's target asset allocation as of December 31, 2019 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 18.60% and (4.31%) for the years ended December 31, 2019 and 2018, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

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, 2019 and 2018 as valued by Moody's Investors Service, Standard & Poor's and/or Fitch:

Type of Investment	Rating	2019	2018
U.S. Government and government agency obligations	Aaa	$ 3,936,356	$ 5,477,851
Corporate bonds	Aa	$ -	$ 360,313
	A	6,274,414	2,759,717
	Baa	-	232,366
		$ 6,274,414	$ 3,352,396
Commingled fixed income fund	Not Rated	$ 31,419,589	$ 28,910,652
Short-term investment	Not Rated	$ 3,630,699	$ 4,140,867

NOTE 5. INVESTMENTS (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 with longer maturities are subject to increased risk of adverse interest rate changes. In an effort to mitigate this risk, the Plan's investment policy states that the duration for each manager's total fixed income portfolio shall not exceed 30% of the duration of its respective fixed income performance benchmark (*Bloomberg Barclays US Aggregate Fixed Income Index, Bloomberg Barclays US 1-3 Year Government/Credit Index,* which was 5.87 years at December 31, 2019 and 5.87 years at December 31, 2018). The following table presents a summarization of the Plan's debt investments at December 31, 2019 and 2018 using the segmented time distribution method:

Type of Investment	Maturity	2019	2018
U.S. Government and government agency obligations	< 1 year	$ -	$ 3,550,082
	1 - 5 years	3,936,356	1,927,769
		$ 3,936,356	$ 5,477,851
Corporate bonds	1 - 5 years	$ 6,274,414	$ 3,352,396
Commingled fixed income fund	5-10 years	$ 31,419,589	$ 28,910,652
Short-term investment	< 1 year	$ 3,630,699	$ 4,140,867

NOTE 5. INVESTMENTS (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 exposure to foreign currency risk at December 31, 2019 and 2018 is as follows:

Type of Investment	(USD) 2019	(USD) 2018
U.S. and international equities		
British pound sterling	$ 4,842,928	$ 5,106,861
Canadian dollar	3,304,348	2,772,307
Danish krone	1,101,809	766,110
European euro	7,589,663	5,706,269
Hong Kong Dollar	1,172,748	797,997
Israeli shekel	570,524	342,047
Japanese yen	3,569,327	2,882,240
New Zealand dollar	-	361,097
Norwegian krone	735,069	386,528
Singapore dollar	721,749	557,923
Swedish krona	721,151	1,211,736
Swiss franc	2,399,281	964,774
U.S. dollar	68,402,236	61,500,815
Total U.S. and international equities	$ 95,130,833	$ 83,356,704

For the years ended December 31, 2019 and 2018, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was $7,225,473 and $17,527,925 respectively. These amounts are included in the net appreciation (depreciation) in fair value of investments as reported on the combining statements of changes in pension plan fiduciary net position and postemployment healthcare plan net position. The calculation of realized gains and losses is independent of the calculation of net appreciation 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.

Derivatives

A derivative instrument is an instrument or contract whose value is derived from that of other financial instruments such as stocks, bonds, and commodities, interest rates or a market index. The Plan's investments in derivative instruments are immaterial to the financial statements. The Plan also holds interests in collective funds, hedge funds, and private equity funds, which may engage in derivative transactions.

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, 2019 and 2018:

		Fair Value Measurements at 12/31/2019 Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	$ 95,130,833	$ 95,130,833	$ -	$ -
U.S. Government and government agency obligations	3,936,356	-	3,936,356	-
Corporate bonds	6,274,414	-	6,274,414	
Exchange traded funds	-	-	-	-
Total investments by fair value level	105,341,603	$ 95,130,833	$ 10,210,770	$ -
Investments measured at net asset value	102,082,885			
Total investments at fair value	$ 207,424,488			

NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)

		Fair Value Measurements at 12/31/2018 Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level				
U.S. and international equities	$ 83,356,704	$ 83,356,704	$ -	$ -
U.S. Government and government agency obligations	5,477,851	-	5,477,851	-
Corporate bonds	3,352,396	-	3,352,396	
Exchange traded funds	907,930	907,930	-	-
Total investments by fair value level	93,094,881	$ 84,264,634	$ 8,830,247	$ -
Investments measured at net asset value	93,515,003			
Total investments at fair value	$ 186,609,884			

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.

NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)

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

	Fair Value		Unfunded	Redemption Frequency	Redemption Notice
	12/31/2019	12/31/2018	Commitments	(If Eligible)	Period
Investments measured at net asset value:					
Collective international equity funds (1)					
Lazard/Wilmington Emerging Markets Sudan Free Portfolio	$ 8,704,422	$ 7,369,714	-	Daily	N/A
State Street Global Advisory MCSI ACWI EX	20,279,061	16,649,300		Daily	N/A
Commingled fixed income fund (2)					
EB DV Non-SL Aggregate Bond Index Fund	31,419,589	28,910,652	-	Daily	N/A
Hedge fund (3)					
Burnham Harbor Fund Ltd.	23,712,574	22,287,105	-	Monthly	95 days
Real estate funds (4)					
JPMCB Strategic Property Fund	7,425,335	7,380,780	-	Quarterly	45 days
PRISA Separate Account	6,911,205	6,776,585	-	Quarterly	90 days
Short-term investment (5)					
BNY Mellon EB Temporary Investment Fund	3,630,699	4,140,867	-	Daily	N/A
Total investments measured at net asset value	$ 102,082,885	$ 93,515,003			

(1) Collective international equity funds - The funds' investment objectives are to achieve long-term capital appreciation by investing primarily in equity and equity-related securities of issuers that are located, or do significant business, in international and emerging market countries. The fair values of the investments in the funds have been determined using the NAV per share of the investment. As of December 31, 2018, the State Street Global Advisory MCSI ACWI EX fund had a bi-monthly redemption frequency.

(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.

NOTE 6. FAIR VALUE MEASUREMENTS (CONTINUED)

(4) Real estate funds - These 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 investment - 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 175 days for 2019 and 96 days for 2018; 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, 2019 and 2018 of 2 and 1 days, respectively.

As of December 31, 2019 and 2018, the fair value (carrying amount) of loaned securities was $6,548,746 and $6,293,648 respectively. As of December 31, 2019 and 2018, the fair value (carrying amount) of cash collateral received by the Plan was $1,270,336 and $1,908,473 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, 2019 and 2018, the fair value (carrying amount) of noncash collateral received by the Plan was $5,448,925 and $4,574,747 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.

NOTE 7. SECURITIES LENDING (CONTINUED)

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.

A summary of securities loaned at fair value as of December 31, 2019 and 2018 is as follows:

	2019	2018
Securities loaned - backed by cash collateral		
U.S. and international equities	$ 1,211,095	$ 1,210,993
Exchanged traded funds	-	602,013
Total securities loaned - backed by cash collateral	1,211,095	1,813,006
Securities loaned - backed by non-cash collateral		
U.S. and international equities	5,337,651	4,480,642
Total	$ 6,548,746	$ 6,293,648

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, 2019 and 2018, participants consisted of the following:

	2019	2018
Active members	546	536
Inactive plan members or beneficiaries currently receiving benefit payments	353	356
Inactive plan members entitled to but not yet receiving benefit payments	37	33
Total	936	925

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

Contributions - The PGHBP is funded on a "pay-as-you-go" basis. The employee and spouse annuitants pay between 52% - 66% and 42% - 56% of the annual medical costs, respectively, depending upon Medicare eligibility and coverage type. The remaining costs are funded by an allocation from the Plan.

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.

Employer's Net Postemployment Healthcare Liability

The components of the employer's net postemployment healthcare liability at December 31, 2019 and 2018 were as follows:

	2019	2018
Total postemployment healthcare liability	$ 43,728,394	$ 35,850,239
Plan fiduciary net position	-	-
Employer's net postemployment healthcare liability	$ 43,728,394	$ 35,850,239
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	0.00%	0.00%

Contributions for postemployment healthcare benefits are made on a "pay-as-you-go" basis. There are no dedicated assets for healthcare benefits 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.

NOTE 8. EMPLOYER'S POSTEMPLOYMENT HEALTHCARE LIABILITY (CONTINUED)

Employer's Net Postemployment Healthcare Liability (continued)

The net postemployment healthcare liability was determined by actuarial valuations performed as of December 31, 2019 and 2018 using the following actuarial methods and assumptions:

Actuarial valuation date	December 31, 2019	December 31, 2018
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level Dollar - Open	Level Dollar - Open
Remaining amortization period	30 years	30 years
Actuarial assumptions:		
Inflation	2.75% per year	2.75% per year
Salary increases	3.50% to 8.00%, based on age	3.50% to 8.00%, based on age
Health care cost trend rates	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	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
Mortality	RP-2014 Blue Collar Mortality Table, base year 2006, Buck (Formerly Conduent) Modified MP-2017 projection scale	RP-2014 Blue Collar Mortality Table, base year 2006, Buck (Formerly Conduent) Modified MP-2017 projection scale

The actuarial assumptions used in the December 31, 2019 and 2018 valuations were based on the results of an actuarial experience study conducted by Buck (Formerly 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, 2019 and 2018 was 2.75% and 4.13% 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 2.75% and 4.13% at December 31, 2019 and 2018, respectively, 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, 2019 and 2018. 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:

	1% Decrease 1.75%	Current Discount Rate 2.75%	1% Increase 3.75%
Net postemployment healthcare liability as of December 31, 2019	$ 51,674,647	$ 43,728,394	$ 37,457,537

	1% Decrease 3.13%	Current Discount Rate 4.13%	1% Increase 5.13%
Net postemployment healthcare liability as of December 31, 2018	$ 41,863,281	$ 35,850,239	$ 31,047,940

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, 2019 and 2018. 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:

	1% Decrease	Health Care Cost Trend Rate	1% Increase
Net postemployment healthcare liability as of December 31, 2019	$ 36,746,281	$ 43,728,394	$ 52,923,026

	1% Decrease	Health Care Cost Trend Rate	1% Increase
Net postemployment healthcare liability as of December 31, 2018	$ 30,416,653	$ 35,850,239	$ 42,881,818

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, 2019 and 2018, the Cook County Fund allocated administrative expenditures of $100,658 and $99,627 respectively.

As of December 31, 2019 and 2018, the Plan owes the Cook County Fund $382,786 and $381,010 respectively. These amounts include plan transfers of Plan members transferring from one plan to another.

NOTE 10. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE

In May 2020, the Governmental Accounting Standards Board (GASB) issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance.* This Statement No. 95 primary objective is to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic, and extends the effective dates of certain accounting and financial reporting periods beginning after June 15, 2018. The Plan's effective dates have been updated for each applicable pronouncement according to Statement No. 95.

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, 2020.

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, 2020.

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, 2022.

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, 2020.

NOTE 10. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE (CONTINUED)

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. Statement No. 89 was issued to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for the Plan's fiscal year ending December 31, 2021.

In August 2018, GASB issued Statement No. 90, *Major Equity Interests - An Amendment of GASB Statements No. 14 and No. 61*. Statement No. 90 was issued to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. Statement No. 90 is effective for the Plan's fiscal year ending December 31, 2020.

In May 2019, GASB issued Statement No. 91, *Conduit Debt Obligations.* Statement No. 91 was issued to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. Statement No. 91 is effective for the Plan's fiscal year ending December 31, 2022.

In January 2020, GASB issued Statement No. 92, *Omnibus 2020*. Statement No. 92 was issued to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Statement No. 92 is effective for the Plan's fiscal year ending December 31, 2022.

In March 2020, GASB issued Statement No. 93, *Replacement of Interbank Offered Rates.* Statement No. 93 was issued to address the result of global reference rate reform, when London Interbank Offered Rate (LIBOR) is expected to cease to exist in its current form at the end of 2021, and other accounting and financial reporting implications that result from the replacement of an interbank offered rate (IBOR). Statement No. 93 is effective for the Plan's fiscal year ending December 31, 2022.

In March 2020, GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements.* This Statement No. 94 was issued to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs). Statement No. 94 is effective for the Plan's fiscal year ending December 31, 2023.

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

NOTE 11. SUBSEQUENT EVENTS

The Cook County Fund has been named as a defendant in a class action litigation, entitled *Lori G. Levin, et. al., v. The Retirement Board of the County Employees' and Officers' Annuity and Benefit Fund of Cook County*, in which the plaintiff seeks, on behalf of herself and similarly situated annuitants, the ability to purchase health insurance administered by the Cook County Fund, despite her ineligibility under the Board's policy. On June 7, 2019, the Appellate Court reversed the order of the Circuit Court of Cook County affirming the Board's decision denying Ms. Levin's participation in the health insurance program administered by the Cook County Fund. The Cook County Fund successfully filed a petition for leave to appeal the decision to the Illinois Supreme Court. On May 21, 2020, the Illinois Supreme Court entered a *Per Curiam* Opinion stating that one Justice had recused himself and that it was not able to obtain the constitutionally required concurrence of at least four justices necessary to enter a decision. Accordingly, the appeal was dismissed. Because the *Per Curiam* Opinion was only recently entered, the Cook County Fund has not yet determined what, if any, further legal action it intends to take but it is probable that the decision could have a financial impact on the Cook County Fund, although the financial impact is not reasonably estimable at this time.

These financial statements do not include any adjustments related to the impact of COVID-19 (Coronavirus) on the Plan's net position. As a direct result of the Coronavirus pandemic, market volatility has increased and impacted returns while global economic activity has significantly slowed down with no certainty of when conditions may return to normal. The Plan anticipates that there may be an impact on the Plan's investments, contributions, member benefit applications, and retiree healthcare expenses. The extent of the impact is currently being monitored and evaluated by the Plan.

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Required Supplementary Information - Pension

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

	2019	2018
Total pension liability		
Service cost	$ 7,981,035	$ 9,426,212
Interest	20,343,569	19,182,488
Difference between expected and actual experience	(420,786)	608,525
Changes of assumptions	71,398,627	(26,452,372)
Expected benefit payments, including refunds of employee contributions	(18,323,398)	(17,817,279)
Net change in total pension liability	80,979,047	(15,052,426)
Total pension liability		
Beginning of year	415,400,193	430,452,619
End of year	$ 496,379,240	$ 415,400,193
Plan fiduciary net position		
Contributions - employer	$ 3,345,462	$ 3,481,281
Contributions - employee	3,020,322	3,127,980
Net investment income (loss)	33,653,650	(8,422,851)
Expected benefit payments, including refunds of employee contributions	(18,323,398)	(17,817,279)
Administrative expenses	(154,352)	(159,489)
Other	(252,406)	(182,512)
Net change in plan fiduciary net position	21,289,278	(19,972,870)
Plan fiduciary net position		
Beginning of year	190,398,076	210,370,946
End of year	$ 211,687,354	$ 190,398,076
Employer's net pension liability	$ 284,691,886	$ 225,002,117
Plan fiduciary net position as a percentage of the total pension liability	42.65%	45.83%
Covered payroll	$ 35,056,459	$ 34,071,319
Employer's net pension liability as a percentage of covered payroll	812.10%	660.39%

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.

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

	2017	2016
Total pension liability		
Service cost	$ 10,698,297	$ 11,224,976
Interest	20,384,471	19,482,189
Difference between expected and actual experience	(1,344,952)	(6,776,942)
Changes of assumptions	(21,473,767)	(26,186,535)
Expected benefit payments, including refunds of employee contributions	(16,670,896)	(16,462,185)
Net change in total pension liability	(8,406,847)	(18,718,497)
Total pension liability		
Beginning of year	438,859,466	457,577,963
End of year	$ 430,452,619	$ 438,859,466
Plan fiduciary net position		
Contributions - employer	$ 2,242,489	$ 1,971,946
Contributions - employee	3,300,222	3,184,051
Net investment income (loss)	30,500,015	10,477,792
Expected benefit payments, including refunds of employee contributions	(16,670,896)	(16,462,185)
Administrative expenses	(163,275)	(157,577)
Other	(40,007)	(133,999)
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
End of year	$ 210,370,946	$ 191,202,398
Employer's net pension liability	$ 220,081,673	$ 247,657,068
Plan fiduciary net position as a percentage of the total pension liability	48.87%	43.57%
Covered payroll	$ 35,078,173	$ 34,509,011
Employer's net pension liability as a percentage of covered payroll	627.40%	717.66%

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.

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

	2015	2014
Total pension liability		
Service cost	$ 9,656,955	$ 9,575,195
Interest	19,471,424	18,880,782
Difference between expected and actual experience	(270,033)	-
Changes of assumptions	28,495,220	-
Expected benefit payments, including refunds of employee contributions	(15,920,776)	(15,805,217)
Net change in total pension liability	41,432,790	12,650,760
Total pension liability		
Beginning of year	416,145,173	403,494,413
End of year	$ 457,577,963	$ 416,145,173
Plan fiduciary net position		
Contributions - employer	$ 1,763,345	$ 1,520,316
Contributions - employee	2,771,533	2,645,164
Net investment income (loss)	2,549,975	13,525,606
Expected benefit payments, including refunds of employee contributions	(15,920,776)	(15,805,217)
Administrative expenses	(143,953)	(142,067)
Other	(6,928)	(175,370)
Net change in plan fiduciary net position	(8,986,804)	1,568,432
Plan fiduciary net position		
Beginning of year	201,309,174	199,740,742
End of year	$ 192,322,370	$ 201,309,174
Employer's net pension liability	$ 265,255,593	$ 214,835,999
Plan fiduciary net position as a percentage of the total pension liability	42.03%	48.37%
Covered payroll	$ 32,007,657	$ 29,811,912
Employer's net pension liability as a percentage of covered payroll	828.73%	720.64%

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.

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2019	2018	2017	2016	2015
Actuarially determined contribution	$ 10,195,691	$ 10,678,782	$ 10,230,872	$ 10,166,661	$ 10,921,946
Contributions in relation to the actuarially determined contribution	(3,345,462)	(3,481,281)	(2,242,489)	(1,971,946)	(1,763,345)
Contribution deficiency	$ 6,850,229	$ 7,197,501	$ 7,988,383	$ 8,194,715	$ 9,158,601
Covered payroll	$ 35,056,459	$ 34,071,319	$ 35,078,173	$ 34,509,011	$ 32,007,657
Contributions as a percentage of covered payroll	9.54%	10.22%	6.39%	5.71%	5.51%

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, 2019

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	3.50% to 8.00%, 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, Buck 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.

See Report of Independent Auditors.

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2014	2013	2012	2011	2010
Actuarially determined contribution	$ 9,608,247	$ 8,590,721	$ 7,626,778	$ 4,498,036	$ 3,329,502
Contributions in relation to the actuarially determined contribution	(1,520,316)	(1,403,628)	(2,117,976)	(2,457,405)	(1,333,140)
Contribution deficiency	$ 8,087,931	$ 7,187,093	$ 5,508,802	$ 2,040,631	$ 1,996,362
Covered payroll	$ 29,811,912	$ 29,485,857	$ 26,252,071	$ 22,678,566	$ 24,397,376
Contributions as a percentage of covered payroll	5.10%	4.76%	8.07%	10.84%	5.46%

See Report of Independent Auditors.

Schedule of Investment Returns

	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	18.60%	-4.31%	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

	2019	2018	2017
Total postemployment healthcare liability			
Service cost	$ 1,331,088	$ 2,197,459	$ 2,349,531
Interest	1,516,095	1,613,714	1,937,384
Changes in benefit terms	(2,350,490)	(7,184,763)	(1,738,947)
Difference between expected and actual experience	(320,932)	(2,029,921)	(611,268)
Changes of assumptions	8,656,072	(7,310,288)	(1,979,137)
Benefit payments	(953,678)	(606,110)	(1,305,075)
Net change in total postemployment healthcare liability	7,878,155	(13,319,909)	(1,347,512)
Total postemployment healthcare liability			
Beginning of year	35,850,239	49,170,148	50,517,660
End of year	$ 43,728,394	$ 35,850,239	$ 49,170,148
Plan fiduciary net position			
Contributions - employer	$ 953,678	$ 606,110	$ 1,305,075
Benefit payments - net	(953,678)	(606,110)	(1,305,075)
Net change in plan fiduciary net position	-	-	-
Plan fiduciary net position			
Beginning of year	-	-	-
End of year	$ -	$ -	$ -
Employer's net postemployment healthcare liability	$ 43,728,394	$ 35,850,239	$ 49,170,148
Plan fiduciary net position as a percentage of the total postemployment healthcare liability	0.00%	0.00%	0.00%
Covered payroll	$ 35,058,531	$ 34,071,319	$ 35,078,173
Employer's net postemployment healthcare liability as a percentage of covered payroll	124.73%	105.22%	140.17%

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.

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2019	2018	2017	2016	2015
Actuarially determined contribution	$ 4,004,996	$ 3,353,628	$ 4,681,598	$ 5,099,567	$ 4,637,519
Contributions in relation to the actuarially determined contribution	(953,678)	(606,110)	(1,305,075)	(1,419,435)	(1,698,692)
Contribution deficiency	$ 3,051,318	$ 2,747,518	$ 3,376,523	$ 3,680,132	$ 2,938,827
Covered payroll	$ 35,058,531	$ 34,071,319	$ 35,078,173	$ 34,512,652	$ 32,007,657
Contributions as a percentage of covered payroll	2.72%	1.78%	3.72%	4.11%	5.31%

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, 2019
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% to 8.00%, 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, Buck Modified MP-2017 projection scale

See Report of Independent Auditors.

Schedule of Employer Contributions and Related Notes

Last Ten Fiscal Years

	2014	2013	2012	2011	2010
Actuarially determined contribution	$ 4,641,151	$ 4,234,545	$ 3,541,064	$ 3,830,933	$ 3,876,537
Contributions in relation to the actuarially determined contribution	(1,616,436)	(1,459,517)	(991,000)	(798,204)	(1,326,894)
Contribution deficiency	$ 3,024,715	$ 2,775,028	$ 2,550,064	$ 3,032,729	$ 2,549,643
Covered payroll	$ 29,811,912	$ 29,485,857	$ 26,252,071	$ 22,678,566	$ 24,397,376
Contributions as a percentage of covered payroll	5.42%	4.95%	3.77%	3.52%	5.44%

See Report of Independent Auditors.

Supplementary Information

Schedules of Administrative Expenses and Professional and Consulting Fees

Years Ended December 31, 2019 and 2018

	2019	2018
Administrative expenses		
Administrative expenses allocated from County Employees' and Officers' Annuity and Benefit Fund of Cook County	$ 100,658	$ 99,627
Affordable care insurance fee	887	857
Bank charges	10,129	10,156
Membership	1,710	1,435
Professional and consulting fees	32,968	39,414
Regulatory filing fees	8,000	8,000
Total	$ 154,352	$ 159,489
Professional and consulting fees		
Actuarial service	$ 2,065	$ 3,104
Audit	22,850	27,930
Consulting	4,450	2,736
Legal	2,670	4,712
Lobbyist	933	932
Total	$ 32,968	$ 39,414

Schedules of Investment Expenses

Years Ended December 31, 2019 and 2018

	2019	2018
Investment manager expense		
Blackstone Alternative Asset Management	$ 233,927	$ 223,907
Channing Capital Management	41,631	68,194
Garcia Hamilton & Associates, L.P.	5,648	11,251
J.P. Morgan Asset Management	63,332	58,004
Lazard Asset Management, LLC	75,192	98,891
Mellon Capital	7,645	7,360
Prudential Real Estate Investors	54,881	52,615
RhumbLine Advisers	4,642	3,426
State Street Global Advisors	9,320	2,213
William Blair & Company	59,751	106,791
Total investment manager expenses	555,969	632,652
Investment consulting fees		
Callan LLC	8,835	8,689
Investment custodian fees		
BNY Mellon	9,000	9,001
Total investment expenses	$ 573,804	$ 650,342

Additions by Source

Year Ended December 31,	Employer Contributions	Employee Contributions	Net Investment and Net Securities Lending Income (1)	Other (2)	Total Additions
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	$ 598,522	$ 37,943,466
2018	$ 4,087,391	$ 3,127,980	$ (8,422,851)	$ 946,166	$ (261,314)
2019	$ 4,299,140	$ 3,020,322	$ 33,653,650	$ 814,335	$ 41,787,447

Deductions by Type

Year Ended December 31,	Benefits	Refunds	Employee Transfers to (from) Cook County Fund	Administrative Expenses	Total Deductions
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	$ 163,275	$ 18,774,918
2018	$ 18,286,045	$ 1,083,510	$ 182,512	$ 159,489	$ 19,711,556
2019	$ 19,251,286	$ 840,125	$ 252,406	$ 154,352	$ 20,498,169

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.

Schedule of Employer Contributions Receivable

December 31, 2019

Contribution Year	Contributions Receivable	Uncollected Balance	Reserved	Net Contributions Receivable
2018	$ -	$ -	$ -	$ -
2019	$ 4,290,290	4,290,290	46,797	4,243,493
		$ 4,290,290	$ 46,797	$ 4,243,493

Note:

Employer contributions are funded primarily through property taxes levied by the Forest Preserve District of Cook County, Illinois.

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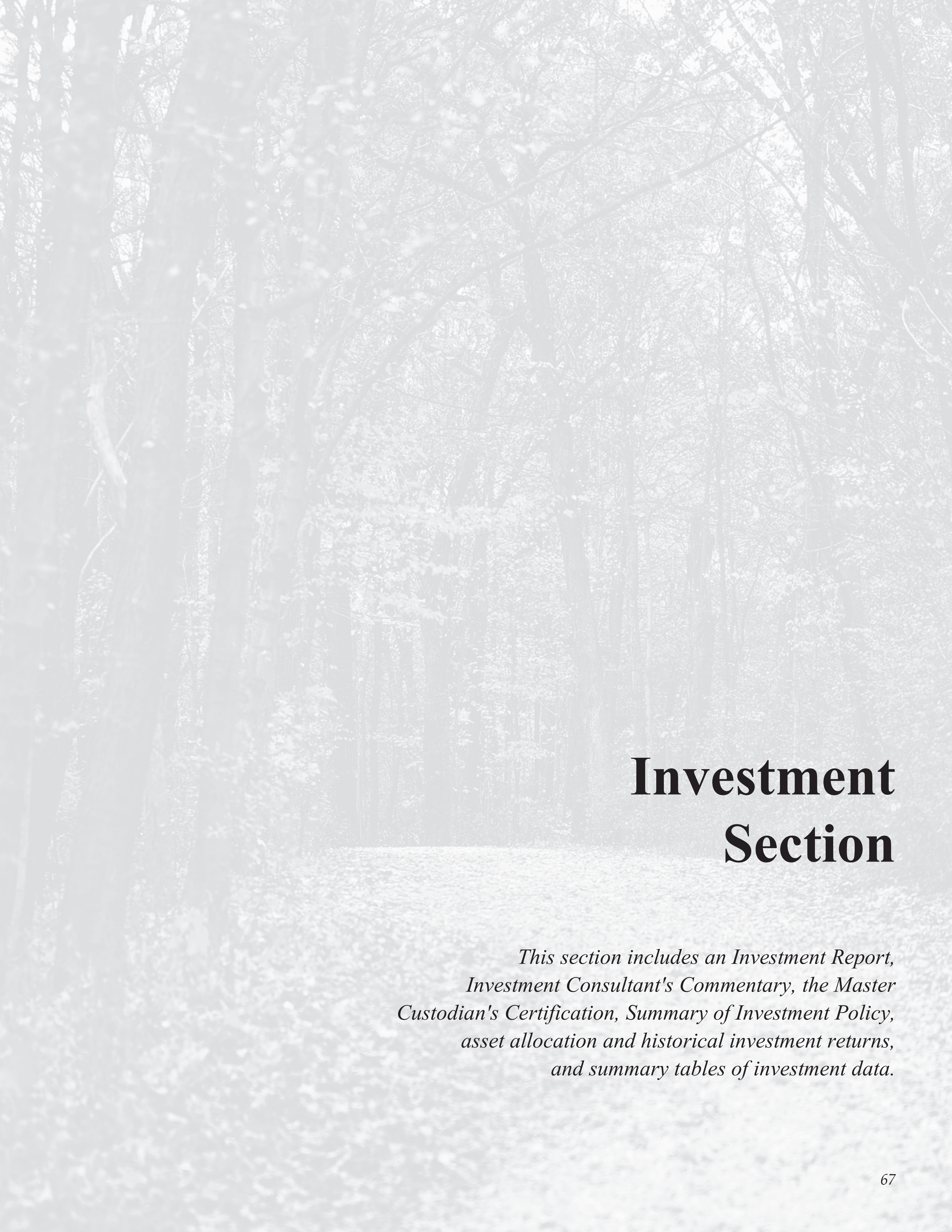


Investment Section

This section includes an Investment Report, Investment Consultant's Commentary, the Master Custodian's Certification, Summary of Investment Policy, asset allocation and historical investment returns, and summary tables of investment data.

Investment Report

June 19, 2020

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 LLC, the Retirement Board oversees the investment strategy through ongoing study of the portfolio structure, return assumptions, and projected funding needs to support member benefits.

In 2019, the Fund experienced a strong investment year, returning 18.60% and exceeding its custom benchmark, net of investment management fees. During that period, investments gained $33.6 million for the Fund and increased investment assets from $186.6 million at the end of 2018 to $207.4 million at December 31, 2019. Financial market performance in 2019 was quite rare with all major asset classes delivering returns above their long-term historical averages. Notably, all of the Fund's asset classes delivered absolute positive returns for the full year return. In particular, allocations to non-U.S. equity, hedge funds and real estate outperformed their respective benchmarks.

In the absence of a sustainable funding solution to ensure the Fund's viability, $12.6 million in investment earnings were liquidated in 2019 to help fund $19.3 million in benefit payments for that period.

The Consultant's Commentary; Master Custodian's certification letter; Summary of the Fund's Investment Policy; and selected investment schedules follow for your review.

Sincerely,

Regina Tuczak

Regina Tuczak
Executive Director

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

Investment Consultant's Commentary

Callan

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

Main 312.346.3536
Fax 312.346.1356

www.callan.com

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") investment results for fiscal year ended December 31, 2019. As of year-end, the Fund reported a fair value of approximately $207 million, an increase of approximately $21 million since December 31, 2018. This increase in value included approximately $12.6 million in net withdrawals.

While 2018 was an unusual year where virtually all asset classes posted negative returns, 2019 was equally rare with all major asset classes delivering above-average returns. U.S. equity markets rebounded tremendously in 2019 as investors were emboldened when the U.S. and China made progress toward a phase one trade deal, which was ultimately signed in December. The U.S. economy closed the year with the unemployment rate at a 50-year low of 3.5%. GDP was steady at 2.1%. Inflation remained at a very low level as the Fed's preferred inflation gauge, the Core PCE Deflator, rose only 1.4% in the fourth quarter.

Equity markets reached record highs and even fixed income investors were rewarded with nearly double-digit returns, an amazing feat, given the sector's paltry yields. December capped a 129-month bull market for the S&P 500 Index, the longest ever, and a cumulative return of nearly 500% since the low point of the Great Financial Crisis on March 9, 2009. Going into year-end, perceived progress in U.S./China trade negotiations, some degree of closure around Brexit, and expectations for the Fed to remain on hold for the foreseeable future overshadowed various areas of concern. The S&P 500 Index brought home a banner year for 2019 with a whopping 31.5% return, the best calendar year return since 2013 and capping a decade of strong performance. Smaller capitalization securities also performed strongly, but trailed larger capitalization securities as the Russell 2000 Index was up 25.5% for the year.

Non-U.S. developed markets trailed the U.S. but were still up sharply in 2019 (MSCI ACWI ex-USA IMI +21.6%). Virtually all countries posted positive returns for both periods, though results were varied. Emerging markets outperformed developed markets in the fourth quarter but trailed for the full year.

Fixed income markets posted strong returns in 2019 fueled both by falling interest rates and strong investor demand, especially for higher-yielding sectors. The Bloomberg Barclays US Aggregate Bond Index rose 8.7%, the best calendar year return since 2002, with the lowest-quality credit tier of the Index up 16.4%.

Real estate investments in 2019 had a stable, though, not a stellar, year. Transaction volumes for the four major property types were only modestly up from 2018. Although volumes did not quite reach levels some had hoped for, there was still plenty of liquidity. A standard real estate fund index (NCREIF ODCE) return for 2019 was 4.39%, which was down approximately 3.00% from 2018.

Total Fund Fiscal Year End Performance (net of fees)

The Fund generated a total return of 18.60% net of manager fees for the year ended December 31, 2019, which exceeded the 18.47% return of the Fund's Total Fund Benchmark (Policy Benchmark). In addition, the Fund ranked in the top third of its peer universe of funds. In aggregate, the Fund's allocations to non-U.S. equity, real estate and hedge fund exposures exceeded their respective benchmarks, while domestic equity and fixed income trailed their benchmarks despite posting strong absolute returns.

For the trailing three years, the Fund generated a 9.78% annualized return which finished ahead of the 9.49% Policy Benchmark return. On a gross of fee basis, the Fund ranked in the 22nd percentile (1% being the highest, 100% being the lowest) of a comparable gross of fee peer group. In the last five years, the Fund posted a 7.55% annualized return versus the 7.31% return of the Policy Benchmark. In addition, relative to its peer universe, the Fund ranked in the 22nd percentile.

Asset Class Fiscal Year End Performance (net of fees)

The U.S. equity composite portfolio posted a return of 30.28% for the year ended December 31, 2019, trailing the Domestic Equity Benchmark, the Russell 3000 Index, return of 31.02%. While posting a strong absolute return of 27.84% return, small/mid capitalization strategies underperformed their larger cap counterparts. For the three-year period, the domestic portfolio generated an annualized 14.05% return, yet trailed the 14.57% return of the benchmark. For the last five years, domestic equities added 11.04% per annum, yet trailed the strong benchmark return of 11.22%.

The non-U.S. equity composite portfolio posted a return of 22.38% for the one year period ending December 31, 2019, outperforming the benchmark ACWI ex US Index return of 21.51%. The actively managed portion of the portfolio was successful in 2019 with a 22.67% return, outperforming the benchmark by 1.16%.

The fixed income composite portfolio posted a return of 8.00% for the one year period ending December 31, 2019, underperforming the 8.72% return of the Bloomberg Barclays US Aggregate index. The underperformance was attributable to the shorter duration strategy which returned 4.02%, which was in line with its benchmark.

The real estate composite portfolio posted a 6.89% return versus the 4.39% return of the NFI-ODCE Index. Outperformance was driven by Industrial as well as non-core allocation to storage.

The hedge fund portfolio posted a 5.90% return that trailed that of the Libor +4% target, but exceeded the HFRI Fund of Funds Index return of 4.81% for 2019.

Investment Manager Changes

There were no manager changes in 2019.

All performance returns for the Fund presented in this report have been calculated by Callan LLC using a time-weighted rate of return calculation for accounts with daily pricing and a modified BAI calculation for accounts without daily pricing.

Sincerely,

John P. Jackson

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

Master Custodian's Certification

BNY MELLON

Asset Servicing

Michael J. Beggy
Vice President

June 12, 2020

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, 2019 through December 31, 2019.

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

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

Sincerely,

Michael J. Beggy

Michael J. Beggy
Relationship Executive

Summary of Investment Policy

Summary of Investment Policy *(Compiled by Callan LLC, Investment Consultant to the Fund)*

Investment Authority

The Forest Preserve District Employees' Annuity and Benefit Fund of Cook County (Fund) is a statutorily created public defined benefit plan. The Fund was established on July 31, 1931 and is governed by the Illinois Pension Code [40 ILCS 5] (Code). The Fund was designed to provide retirement, death and disability benefits for Cook County employees and their surviving spouses, children and certain other dependents.

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 of Cook County 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. 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.

Roles and Responsibilities

The Board is the sole fiduciary and responsible for the oversight of all aspects of the Fund's operations, including benefits administration and the investment of the assets. As a fiduciary, the Board will discharge its duties in the sole interest of the participants and beneficiaries of the Fund.

Investment Committee

The Board has established an Investment Committee (IC), which is a committee of the whole. The IC reviews and makes recommendations of investment related policies to the Board for approval. The IC works with Investment Staff, and investment consultant(s) to implement all Board approved investment policies, evaluate investment performance and comply with the IPS.

Investment Staff

The Executive Director (ED) and Chief Investment Officer (CIO) are responsible for the implementation of investment strategy approved by the Board and for the coordination of all investment activities on behalf of the Fund. The Investment Staff is responsible for the implementation of the investment program and making recommendations to the Board and Investment Committee as appropriate.

Investment Consultant

The Board may hire investment consultant(s) to assist the Board, its Committees and Staff in developing and implementing a prudent process for establishing, monitoring and evaluating the Fund's investment policy.

Investment Managers

Manage assets in accordance with the guidelines and objectives and consistent with each investment manager's stated investment philosophy and style.

Objectives

The primary return objectives of the Fund are to:

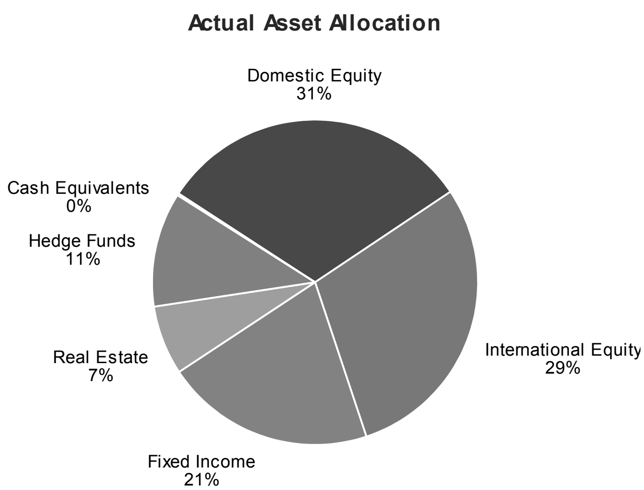
- Ensure that the current and future obligations of the Fund are met when due
- Ensure the assets of the Fund are invested with the care, skill, and diligence that a prudent person acting in a like capacity would undertake
- Ensure the assets of the Fund are invested in a manner that minimizes and controls the costs incurred in administering and managing the assets
- Diversify the investment of the assets to minimize the risk of large losses
- Attain the actuarial assumed annual rate of return over a long-term time horizon
- Exceed an asset policy weighted composite benchmark (Policy Target) over a market cycle of 5 to 10 years

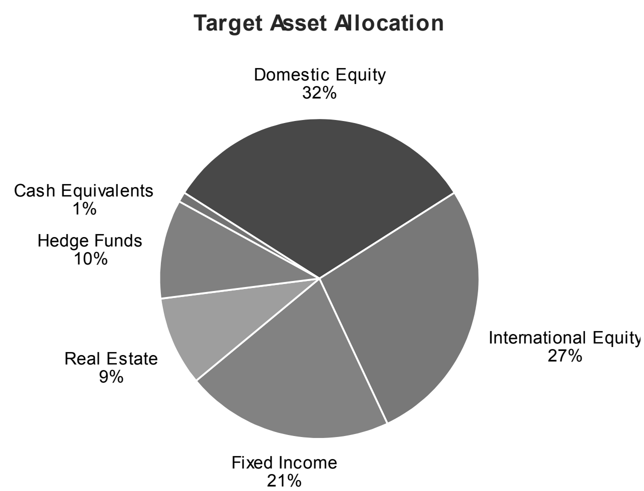
In establishing the asset allocation policy, the Board takes into consideration the actuarial rate of return, the nature of the Fund's liabilities, the cash flow needs, the return and risk expectations for the capital markets, as well as any applicable legislation and statutes governing the Fund. The asset policy reflects the Board's return objectives at a prudent level of risk.

Summary of Investment Policy (continued)

2019 Asset Allocation

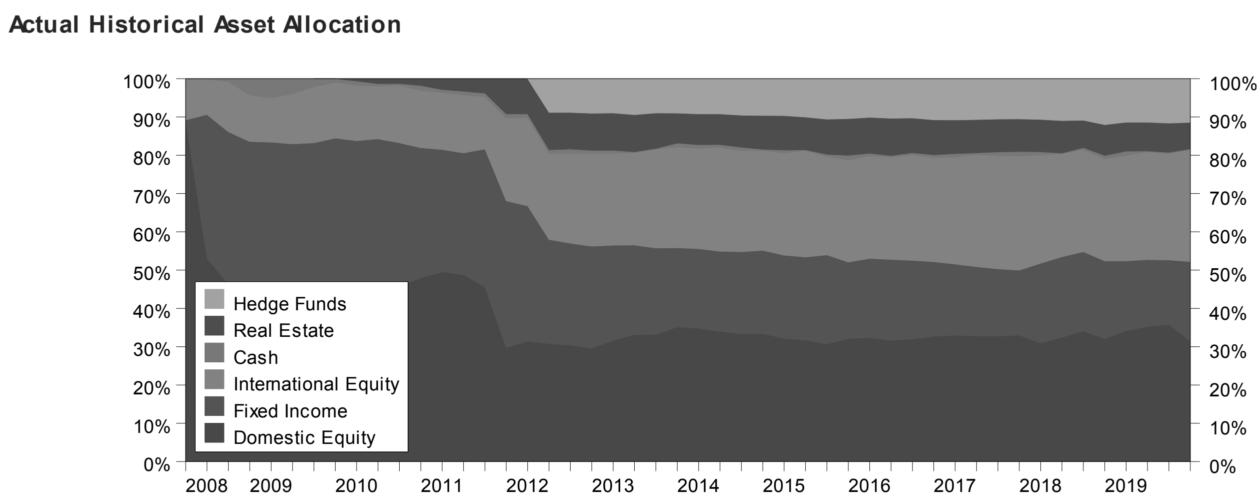
As of December 31, 2019, compared to the target allocation, the Fund was allocated within its target ranges. An overweight to International Equity and Hedge Funds was offset by its underweight to Real Estate and Domestic Equity. The Fund's asset allocation at the end of 2019 is shown below.





Historical Allocation by Asset Class

The chart below illustrates the historical asset allocation of the Fund.



Historical Investment Returns (Net of Fees)

Below is a detailed analysis of the Fund's net of fee investment performance on a calendar year basis. Calculations were prepared utilizing a time-weighted rate of return methodology.

Asset Class	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net of Fee Returns									
Domestic Equity	**30.28%**	**-5.93%**	**21.04%**	**11.82%**	**1.76%**	**11.45%**	**34.92%**	**16.46%**	**-0.05%**
Domestic Equity Benchmark (2)	31.02%	-5.24%	21.13%	13.03%	0.13%	11.73%	33.72%	16.38%	1.07%
International Equity	**22.38%**	**-11.50%**	**28.14%**	**1.16%**	**-0.57%**	**-0.10%**	**23.66%**	**23.76%**	**-9.39%**
International Equity Benchmark (3)	21.51%	-14.20%	27.19%	4.50%	-5.66%	-3.87%	15.29%	16.83%	-13.71%
Fixed Income	**8.00%**	**-0.11%**	**3.38%**	**2.43%**	**0.75%**	**5.87%**	**-2.11%**	**4.42%**	**6.86%**
Fixed Income Benchmark (4)	8.72%	0.01%	3.54%	2.65%	0.55%	5.97%	-2.02%	4.13%	7.33%
Real Estate	**6.89%**	**6.28%**	**5.92%**	**8.66%**	**3.64%**	**15.30%**	**6.53%**	**14.96%**	**14.08%**
NFI-ODCE Value Weight Net	4.39%	7.36%	6.66%	7.79%	3.95%	11.46%	12.90%	9.79%	14.96%
Hedge Funds	**5.90%**	**3.00%**	**7.14%**	**2.49%**	**3.51%**	**7.95%**	**10.44%**	**-**	**-**
LIBOR + 4%	6.35%	6.35%	5.26%	4.75%	4.30%	4.23%	4.28%	4.47%	4.33%
HFRI Fund of Funds	4.90%	-1.52%	7.74%	-0.79%	0.52%	4.34%	8.83%	2.98%	-3.11%
Cash Equivalents	**2.74%**	**2.96%**	**1.26%**	**0.50%**	**0.03%**	**-0.18%**	**0.13%**	**0.16%**	**0.14%**
3-Month Treasury Bill	2.28%	1.87%	0.86%	0.33%	0.05%	0.03%	0.07%	0.11%	0.10%
Total Fund	**18.60%**	**-4.31%**	**16.58%**	**5.67%**	**1.37%**	**6.99%**	**17.40%**	**13.77%**	**1.08%**
Total Fund Benchmark (1)	18.47%	-4.17%	15.63%	7.65%	0.68%	5.74%	13.94%	11.64%	1.51%

1. *Total Fund Benchmark is as follows:*

   As of 12/31/2016 to present: 32.0% Russell 3000 Index, 27.0% MSCI ACWI ex-US Index, 21.0% Bloomberg Barclays Aggregate Index, 9.0% NFI-ODCE Value Weight Net, 10.0% (3 Month Libor+ 4.0%), and 1.0% 3-Month Treasury Bill.

   12/31/2013 - 12/31/2016: 21.0% S&P 500 Index, 9.0% Russell 2500 Index, 23.0% MSCI ACWI ex-US Index, 29.0% Bloomberg Barclays Aggregate Index, 9.0% NFI-ODCE Value Weight Net, 9.0% (3 Month Libor+ 4.0%).

   12/31/2011 - 12/31/2012: 25.0% S&P 500 Index, 7.5% Russell 1000 Growth Index, 7.5% Russell 1000 Value Index, 5.0% Russell 2000 Value Index, 15.0% MSCI ACWI ex-US Index, 30.0% Bloomberg Barclays Aggregate Index, 10.0% Bloomberg Barclays Intermediate Gov/Cred Index.

2. *Domestic Equity Benchmark: Russell 3000 since 6/30/16; custom blend previously.*

3. *International Equity Benchmark: MSCI ACWI ex US Index.*

4. *Fixed Income Benchmark: Bloomberg Barclays Aggregate since 12/31/12; custom blend previously.*

Schedule of Investment Results

	For the Year Ended December 31, 2019	Annualized Returns	
		3 Years	5 Years
Total Fund	18.60%	9.78%	7.22%
Policy Benchmark *	18.47%	9.49%	7.31%
Domestic Equity	30.28%	14.05%	11.04%
Russell 3000	31.02%	14.57%	11.22%
International Equity	22.38%	11.54%	6.90%
MSCI ACWI ex. U.S.	21.51%	9.87%	5.51%
Fixed Income	8.00%	3.71%	2.85%
BloomBarc Aggregate	8.72%	4.03%	3.05%
Real Estate	6.89%	6.36%	6.27%
NFI-ODCE Value Weight Net	4.39%	6.13%	7.98%
Hedge Funds	5.90%	5.33%	4.39%
Libor-3 Month+4%	6.35%	5.99%	4.40%

*The Policy Benchmark is as follows:

As of December 31, 2019, 2018, 2017, 2016: 32.0% Russell 3000 Index, 27.0% MSCI ACWI ex-US Index, 21.0% Bloomberg Barclays Aggregate Index, 9.0% NFI-ODCE Value Weight Net, 10.0% (3 Month Libor+ 4.0%), and 1.0% 3-Month Treasury Bill.

As of December 31, 2015: 21.0% S&P 500 Index, 9.0% Russell 2500 Growth Index, 23.0% MSCI ACWI ex-U.S. Index, 29.0% Bloomberg Barclays Aggregate Index, 9.0% NFI-ODCE Value Weight Net, 9% (3 Month Libor+ 4.0%).

Note: Investment results are calculated and presented using standard performance evaluation methods in a manner consistent with the investment industry in general and public pension funds in particular. Rates of return were determined using a modified time-weighted return calculation.
Returns are calculated net of investment manager fees.

Schedule of Investment Summary and Asset Allocation

Asset Class	For Year Ended December 31, 2019 Fair Value	Percent of Total	Target	For Year Ended December 31, 2018 Fair Value	Percent of Total	Target
Domestic Equity	$ 68,402,236	33%	32%	$ 61,500,814	33%	32%
International Equity	55,712,080	27%	27%	45,874,904	25%	27%
Fixed Income	41,630,359	20%	21%	37,740,899	20%	21%
Real Estate	14,336,540	7%	9%	15,065,295	8%	9%
Hedge Funds of Funds	23,712,574	11%	10%	22,287,105	12%	10%
Short-term investments	3,630,699	2%	1%	4,140,867	2%	1%
Total Investments	$ 207,424,488	100%	100%	$ 186,609,884	100%	100%

Schedule of Top Ten Largest Holdings (Excludes Commingled Funds)

For year ended December 31, 2019

Top 10 Domestic Equity Holdings	Sector	Shares		Fair Value	% of Total
Apple Inc.	Technology	7,530	$	2,211,185	3.2%
Microsoft Corp.	Technology	13,747		2,167,902	3.2%
Amazon.com Inc.	Consumer Discretionary	749		1,384,032	2.0%
Aon PLC	Financial Services	4,950		1,031,036	1.5%
Alphabet Inc.	Communication	1,081		1,446,596	2.1%
Accenture	Technology	4,530		953,882	1.4%
Medtronic PLC	Pharmaceuticals	8,310		942,770	1.4%
Facebook Inc.	Communication	4,326		887,912	1.3%
Berkshire Hathaway Inc	Financial Services	3,581		811,097	1.2%
JP Morgan Chase & Co.	Financial Services	5,638		785,937	1.1%
Total Top 10 Domestic Equity Holdings		54,442	$	12,622,347	18.5%
Total Domestic Equity			$	68,402,236	100.0%

Top 10 International Equity Holdings	Sector	Shares		Fair Value	% of Total
CAE Inc. (Canada)	Industrials	41,970	$	1,112,727	2.0%
Sanofi (France)	Healthcare	10,801		1,086,564	2.0%
Vivendi (France)	Media	36,138		1,047,386	1.9%
Informa PLC (United Kingdom)	Media	86,231		978,990	1.8%
Novartis (Switzerland)	Healthcare	8,618		817,880	1.5%
National Bank of Canada (Canada)	Financial Services	14,340		797,091	1.4%
Abb LTD (Switzerland)	Electronics	32,428		782,612	1.4%
Diageo Plc. (United Kingdom)	Food and Beverages	17,948		760,971	1.4%
AIA Group LTD (Hong Kong)	Insurance	70,400		739,074	1.3%
Toromont Industries LTD (Canada)	Industrials	13,560		738,153	1.3%
Total Top 10 International Equity Holdings		332,434	$	8,861,447	15.9%
Total International Equity			$	55,712,080	100.0%

Top 10 Fixed Income Holdings	Sector	Par		Fair Value	% of Total
U.S Treasury Note 2.000 % 10/31/2022	US Government	2,430,000	$	2,456,681	5.9%
U.S Treasury Note Var Rt 04/30/2021	US Government	825,000		824,546	2.0%
U.S Treasury Note 2.000 % 11/15/2021	US Government	650,000		655,129	1.6%
Bank of New York Mellon Var Rt 10/30/23	Banking and Finance	495,000		503,633	1.2%
JP Morgan Chase & Co Var Rt 10/24/23	Banking and Finance	495,000		503,420	1.2%
Goldman Sachs Group Inc Var Rt 11/29/23	Banking and Finance	485,000		502,363	1.2%
Bank of America Corp Var Rt 03/05/24	Banking and Finance	500,000		502,350	1.2%
John Deere Capital Crop Var Rt 06/07/23	Banking and Finance	500,000		502,125	1.2%
Citi Group Inc Var Rt 05/17/24	Banking and Finance	495,000		501,569	1.2%
Wells Fargo & Co Var Rt 01/24/23	Banking and Finance	495,000		501,460	1.2%
Total Top 10 Fixed Income Holdings		7,370,000	$	7,453,276	17.9%
Total Fixed Income			$	41,630,359	100.0%

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

Schedule of Investment Manager Fees and Assets Under Managment

For year ended December 31, 2019

Asset Category	Investment Manager Fees	Assets Under Management
U.S. and International Equity		
Channing Capital Management	$ 41,631	$ 8,519,187
Lazard Asset Management, LLC	75,192	40,488,581
RhumbLine Advisers	4,642	48,127,668
State Street Global Advisors	9,320	20,279,061
William Blair & Company	59,751	8,580,658
Total U.S and International Equity	$ 190,536	$ 125,995,155
Fixed Income		
Garcia Hamilton & Associates, L.P.	$ 5,648	$ 11,768,916
Mellon Capital (Commingled)	7,645	31,419,589
Total Fixed Income	$ 13,293	$ 43,188,505
Real Estate		
J.P. Morgan Asset Management	$ 63,332	$ 7,425,335
Prudential Real Estate Investors	54,881	6,911,205
Total Real Estate	$ 118,213	$ 14,336,540
Hedge Funds of Funds		
Blackstone Alternative Asset Management	$ 233,927	$ 23,712,574
Total Hedge Funds	$ 233,927	$ 23,712,574
Short-Term Investments		
BNY Mellon *	$ -	$ 191,714
Total	$ 555,969	$ 207,424,488

*Investments are held in commingled funds and/or publicly traded funds, and related investment returns are net of fees.

Schedule of Brokerage Commissions

For Year Ended December 31, 2019

Broker Name	Number of Shares	Commissions	Cost per Share
Domestic Equity Commissions			
Liquidnet Inc.	159,641	$ 1,758	$ 0.011
Loop Capital Markets, LLC *	53,511	1,336	0.025
Williams Capital Group LP *	62,295	1,249	0.020
Baird, Robert W & Co Inc.	39,931	1,061	0.027
JP Morgan Securities Inc.	35,510	739	0.021
Cabrera Capital Markets*	36,078	723	0.020
UBS Securities, LLC	17,817	455	0.026
Keybanc Capital Markets, Inc.	18,071	450	0.025
Goldman Sachs & Co.	13,336	445	0.033
Raymond James & Associates, Inc.	15,924	434	0.027
Stiffel Nicolaus	14,747	380	0.026
Jefferies, LLC	15,114	347	0.023
Brokers with <$400 of Commissions	174,932	4,052	0.023
Total Domestic Equity Commissions	**656,907**	**$ 13,429**	**$ 0.020**

Broker Name	Number of Shares	Commissions	Cost per Share
International Equity Commissions			
Credit Suisse	172,677	$ 3,363	$ 0.019
Morgan Stanley & Co.	116,095	2,332	0.020
Merrill Lynch International	186,150	1,906	0.010
Loop Capital Markets, LLC *	123,138	1,269	0.010
J.P. Morgan Securities	117,142	1,026	0.009
Societe Generale	494,209	996	0.002
Barclays Capital	44,163	762	0.017
Penserra Securities*	150,625	751	0.005
UBS Securities, LLC	64,058	684	0.011
RBC Dominion Security Services	30,340	421	0.014
Investment Technology Group LTD	72,470	400	0.006
Brokers with <$400 of Commissions	233,816	3,349	0.014
Total International Equity Commissions	**1,804,883**	**$ 17,259**	**$ 0.010**

*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.

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, and principal provisions, and a glossary of terms are also included.

Actuarial Certification – Pension Benefits

June 4, 2020

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

RE: December 31, 2019 Actuarial Valuation

Ladies and Gentlemen:

In accordance with your request, we have completed an actuarial valuation of the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") as of December 31, 2019. The major findings of the valuation are contained in this report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the FPEABF's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information provided in prior years. The valuation results depend on the integrity of this information. The benefits considered are those delineated in the Fund. 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, 2019. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

Cavanaugh Macdonald performs the actuarial valuation annually. All exhibits, except Summary of Fair Value of Assets and Changes in Fair Value of Assets were prepared by the actuary.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: experience differing from that anticipated by the economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the FPEABF's funded status); and changes in fund provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

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 2040. We recommend that a funding policy be legislated that is sufficient to pay the Normal Costs of active Fund members, Fund 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 and first reflected in the December 31, 2017 valuation. The Board's recent practice is to review the experience of the FPEABF at least once every four years to determine if any changes to the valuation assumptions are warranted. The assumptions used in the valuation meet the parameters set by the Actuarial Standards of Practice and 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. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in beginning on page 111.

Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the Fund based on the Board's funding policy report and all supporting schedules to meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 67 and No. 68. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

We have prepared required accounting information for GASB Statement Nos. 67 and 68 for the measurement year ending December 31, 2019, based on valuation dates of December 31, 2018 and December 31, 2019.

The actuary prepared, or assisted in preparing, the following supporting information for the actuarial valuation:

- Comparative Summary of Key Actuarial Valuation Results
- Actuarial Liabilities and Normal Cost
- Actuarial Contributions
- Calculation of Actuarial (Gain)/Loss
- Analysis of Experience
- Actuarial Balance Sheet
- History of UAAL and Funded Ratio
- Solvency Test
- Reconciliation of Change in Unfunded Actuarial Liability
- Determination of Actuarial Value of Assets
- GASB 67 Schedule of Changes in Net Pension Liability
- GASB 67 Net Pension Liability (Asset)
- GASB 67 Sensitivity of Net Pension Liability
- GASB 67 and 68 Actuarial Assumptions and Methods
- Membership Data
- Summary of Benefit Provisions
- Description of Actuarial Methods and Valuation Procedures
  - Actuarial Cost Method
  - Asset Valuation Method
  - Valuation Procedures
- Summary of Actuarial Assumptions

The actuaries who worked on this assignment are pension actuaries. CMC's advice is not intended to be a substitute for qualified legal or accounting counsel.

Actuarial Certification – Pension Benefits (continued)

This is to certify that Larry Langer and Wendy Ludbrook are members of the American Academy of Actuaries, have experience in performing valuations for public retirement funds, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement fund and on actuarial assumptions that are internally consistent and reasonable based on the actual experience of the Fund and future expectations. However, the Board of Trustees has the final decision regarding the selection of the assumptions and adopted them as indicated in the Summary of Actuarial Assumptions.

Respectfully submitted,

Wendy Ludbrook

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

Wendy T. Ludbrook, FSA, EA, FCA, MAAA
Senior Actuary

Ryan Gundersen
Senior Consultant

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Actuarial Valuation – Pension Benefits

Overview

The Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund") provides pension and ancillary benefit payments to the active, retired and separated employees of the Forest Preserve District. A Retirement Board comprised of retiree, employee, and appointed representatives is responsible for administering the Fund and providing oversight of the investment policy. This report presents the results of the actuarial valuation of the Fund benefits as of the valuation date of December 31, 2019.

Purpose

An actuarial valuation is performed on the Fund annually as of the end of the fiscal year. The primary purposes of performing the valuation are:

- to estimate the liabilities for the future benefits expected to be provided by the Fund;
- to determine the actuarial contribution rate, based on the Fund's funding policy;
- to measure and disclose various asset and liability measures;
- to monitor any deviation between actual Fund experience and experience predicted by the actuarial assumptions so that recommendations for assumption changes can be made when appropriate;
- to analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

Membership

Actives: As of December 31, 2019, there were 546 employees in active service (including 2 on disability) covered under the provisions of the Fund. 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.

	December 31, 2019	December 31, 2018
Number of active employees	546	536
Average age	45.7	45.5
Average years of service	9.4	9.4
Total Annual Payroll for Year Ended	$ 35,056,459	$ 34,071,319
Average annual salary	64,206	63,566
Total accumulated contributions	$ 30,216,920	$ 28,919,366
Average accumulated contributions	55,342	53,954

The number of active members increased by 1.9% from the previous valuation date. The average age of the active members increased by 0.2 years, and the average service remained the same. The total annual salary increased by 2.9%. The average salary increased by 1.0% from the previous valuation.

Disabilities: There were 2 disabled members (included in the active data). There were 2 disabilities in the prior year.

Membership (continued)

Retirees and Beneficiaries: In addition to the active members, there were 390 retired members and 142 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.

	December 31, 2019	December 31, 2018
Number of members receiving payments		
Retirees	390	387
Beneficiaries	142	144
Total	532	531
Average age	72.3	72.0
Annual benefit amounts		
Retirees	$ 14,769,833	$ 14,226,132
Beneficiaries	2,905,257	2,833,179
Total	$ 17,675,090	$ 17,059,311
Average annual benefit payments	$ 33,224	$ 32,127

The number of retired members and beneficiaries increased by 0.2% from the previous valuation date. The average age of the retired members increased by 0.3 years. The total annual benefit payments for these members increased by 3.6% from the previous valuation date.

Inactives: In addition to the active and retired members, there were 1,465 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.

	December 31, 2019	December 31, 2018
Number of inactive members	1,465	1,410
Average age	43.5	43.1

The number of inactive members increased by 3.9% 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.

Fund Assets

The Fund's assets are held in trust and invested for the exclusive benefit of Fund members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with Fund provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Fund has a Net Position Available for Benefits of $211.7 million as of December 31, 2019. This includes an increase of $21.3 million from the Net Position Available for Benefits of $190.4 million as of December 31, 2018. During the prior year, the fair value of assets experienced an investment rate of return of 18.6% (net of investment expenses), as reported by the investment consultant.

In order to reduce the volatility investment gains and losses can have on the Fund'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, 2019, the assets available for benefits on an actuarial value basis were $203.5 million. This includes an increase of $0.6 million over the actuarial value of assets of $202.9 million as of December 31, 2018. During 2019, the actuarial value of assets experienced an actuarial rate of return of 6.6% which is based on a five-year averaging of investment returns.

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown beginning on page 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 Fund experienced a total net actuarial gain of $0.3 million during the prior year. This net gain is about 0.1% of the Fund'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 Fund's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Fund experienced a demographic gain of $1.6 million during the year ending December 31, 2019. This gain decreased the unfunded actuarial accrued liability by $1.6 million and increased the funded ratio by 0.3%.

There were 460 active members who were also reported active in the December 31, 2018 actuarial valuation. The total pensionable salary for this group increased by 3.1%, which was lower than the 4.3% increase that was expected.

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 Fund liabilities and normal cost can be found beginning on page 111. 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.

Actuarial Experience (continued)

On the asset side, the rate of return on the fair value of assets for the year ending December 31, 2019 was reported to be 18.6%, which was higher than the assumed rate of 7.25%.

The Fund experienced a loss on an actuarial value of assets basis. The rate of return on the actuarial value of Fund assets for the year ending December 31, 2019 was approximately 6.6% compared to the assumption of 7.25%, resulting in an asset loss of $1.3 million. This loss increased the unfunded actuarial accrued liability by $1.3 million and decreased the funded ratio by 0.4%.

The rate of return on the fair value of assets for the year ending December 31, 2019 was higher than the assumed rate of 7.25%. The actuarial value of the assets recognizes only 20% of the 2019 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 loss recognized this year is primarily due to the investment loss in 2018. It should be noted that the Fund’s assumed asset return of 7.25% during 2019 is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown on page 95.

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 Fund members, Fund 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 based on 30 years 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 Fund. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2020 has been determined to be $1.8 million, or 4.82% of pay. This represents a decrease in the employer normal cost rate of 0.23% of pay from last year’s employer normal cost rate of 5.05%.

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 Fund 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, 2019 is $116.2 million. This represents an increase of $6.1 million in the unfunded actuarial accrued liability from last year’s amount of $110.1 million. The annual payment required to amortize the unfunded actuarial accrued liability of $116.2 million, over a period of 30 years, as of December 31, 2019 is $9.3 million, or 25.2% of pay.

Actuarial Contributions (continued)

The annual actuarially required employer contribution for fiscal year ending December 31, 2021 is $11.0 million, or 30.0% of pay. This represents an increase of $0.5 million in the employer contribution amount of $10.5 million for fiscal year ending December 31, 2020, or a decrease of 0.4% of pay from last year's employer contribution rate of 30.4%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown beginning on page 93.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Fund 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 Fund 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 Fund that is ahead in funding, and a ratio of less than 100% represents a Fund that is behind in funding on the valuation date.

As of December 31, 2019 the funded ratio of the Fund is 63.65%. This represents a decrease of 1.17% from last year's funded ratio of 64.82% as of December 31, 2018.

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 Fund 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 97.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension Funds and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Fund and the Employer under GASB No. 67 and 68 can be found beginning on page 102.

Changes in Fund Provisions

There were no changes in benefits or other Fund provisions considered in this actuarial valuation since the last valuation performed as of December 31, 2018.

Changes in Actuarial Assumptions, Methods, or Procedures

None. The assumptions used in this valuation were developed as part of an Experience Study covering plan years from January 1, 2013 through December 31, 2016 and first used in the December 31, 2017 actuarial valuation. A description of these assumptions can be found beginning on page 111.

All results presented in this report for years prior to December 31, 2018 were performed by the prior actuary(s).

Comparative Summary of Key Actuarial Valuation Results

Principal Valuation Results

Actuarial Valuation as of	**December 31, 2019**	**December 31, 2018**
Summary of Member Data		
Number of Members Included in the Valuation:		
Active Members	546	536
Retirees and Beneficiaries	532	531
Inactive Members	1,465	1,410
Total	2,543	2,477
Annual Payroll		
Average	$ 64,206	$ 63,566
Annual Benefit Payments		
Retirees and Beneficiaries (Average) [1]	$ 33,224	$ 32,127
Investment Returns		
Fair Value Rate of Return (net of investment expenses)[2]	18.60%	-4.30%
Actuarial Value Rate of Return	6.59%	5.12%
Summary of Assets and Liabilities		
Total Actuarial Accrued Liability	$ 319,710,584	$ 313,013,137
Actuarial Value of Assets	203,486,292	202,894,946
Unfunded Actuarial Accrued Liability	$ 116,224,292	$ 110,118,191
Funded Ratio	63.65%	64.82%

Fiscal Year Ending	**December 31, 2021**	**December 31, 2020**
Employer Actuarial Required Contribution		
Employer Normal Cost	$ 1,774,358	$ 1,746,738
Amortization of Unfunded Actuarial Accrued Liability (Surplus)	9,272,171	8,785,037
Employer Actuarial Required Contribution	$ 11,046,529	$ 10,531,775

[1]The average annual benefit payments for retirees only is $37,871 as of December 31, 2019 and $36,760 as of December 31, 2018

[2]Rate of return Provided by the CCPF.

Actuarial Liabilities and Normal Cost

Actuarial Liabilities	Tier 1	Tier 2	Total	December 31, 2018 Total
1. Present Value of Projected Benefits				
a. Retirement Benefits	$ 110,510,388	$ 13,331,321	$ 123,841,709	$ 122,320,509
b. Withdrawal Benefits	3,177,727	5,519,916	8,697,643	8,325,196
c. Death Benefits	1,635,173	447,345	2,082,518	2,047,969
Total	**$ 115,323,288**	**$ 19,298,582**	**$ 134,621,870**	**$ 132,693,674**
2. Retired Members and Beneficiaries Receiving Benefits	200,024,745	-	200,024,745	195,126,716
3. Inactive Members with Deferred Benefits	18,572,126	1,446,470	20,018,596	20,191,895
4. Total Present Value of Projected Benefits (1.+ 2.+ 3.)	**$ 333,920,159**	**$ 20,745,052**	**$ 354,665,211**	**$ 348,012,285**
5. Present Value of Future Normal Costs	23,467,811	11,486,816	34,954,627	34,999,148
6. Total Actuarial Accrued Liability	**$ 310,452,348**	**$ 9,258,236**	**$ 319,710,584**	**$ 313,013,137**

Normal Cost as of December 31, 2019	Tier 1		Tier 2		Total		December 31, 2018 Total	
Projected Capped Payroll for Fiscal Year 2020	**$ 20,394,660**		**$ 16,435,588**		**$ 36,830,248**		**$ 34,593,712**	
1. Total Normal Cost	**Amount**	**% of Pay**	**Amount**	**% of Pay**	**Amount**	**% of Pay**	**Amount**	**% of Pay**
a. Retirement Benefits	$ 2,904,079	14.24%	$ 1,112,654	6.77%	$ 4,016,733	10.91%	$ 3,882,122	11.22%
b. Withdrawal Benefits	203,710	1.00%	343,856	2.09%	547,566	1.49%	494,472	1.43%
c. Duty Disability Benefits	-	0.00%	-	0.00%	-	0.00%	-	0.00%
d. Ordinary Disability Benefits	75,631	0.37%	-	0.00%	75,631	0.21%	39,735	0.11%
e. Death Benefits	66,510	0.33%	36,419	0.22%	102,929	0.28%	98,179	0.28%
f. Administrative Expenses	89,746	0.44%	72,324	0.44%	162,070	0.44%	172,696	0.50%
Total	**$ 3,339,676**	**16.38%**	**$ 1,565,253**	**9.52%**	**$ 4,904,929**	**13.32%**	**$ 4,687,204**	**13.55%**
2. Expected Member Contributions	**$ 1,733,546**	**8.50%**	**$ 1,397,025**	**8.50%**	**$ 3,130,571**	**8.50%**	**$ 2,940,466**	**8.50%**
3. Employer Normal Cost (1.- 2.)	**$ 1,606,130**	**7.88%**	**$ 168,228**	**1.02%**	**$ 1,774,358**	**4.82%**	**$ 1,746,738**	**5.05%**

Actuarial Valuation – Pension Benefits (continued)

Actuarial Contributions*

Valuation Date	December 31, 2019	December 31, 2018
1. Projected Payroll for Year Beginning	$ 36,830,248	$ 34,593,712
2. Total Actuarial Accrued Liability		
a. Active Members		
i. Retirement Benefits	$ 94,118,613	$ 92,380,452
ii. Withdrawal Benefits	4,206,036	4,007,132
iii. Death Benefits	1,342,594	1,306,942
iv. Total	$ 99,667,243	$ 97,694,526
b. Retired Members and Beneficiaries Receiving Benefits	$ 200,024,745	$ 195,126,716
c. Inactive Members with Deferred Benefits	20,018,596	20,191,895
d. Total (2a. + 2b. + 2c.)	$ 319,710,584	$ 313,013,137
3. Actuarial Value of Assets	203,486,292	202,894,946
4. Unfunded Actuarial Accrued Liability (UAAL) (2d. - 3.)	$ 116,224,292	$ 110,118,191
5. Funded Ratio (3. / 2d.)	63.65%	64.82%
6. UAAL as a Percent of Annual Payroll (4. / 1.)	315.57%	318.32%

Development of Employer Contribution*	Fiscal Year Ending December 31, 2021	Fiscal Year Ending December 31, 2020
7. Amortization Payment for UAAL (30 year amortization)		
a. Amount	$ 9,272,171	$ 8,785,037
b. As a % of pay (7a. / 1.)	25.18%	25.39%
8. Employer Normal Cost		
a. Amount	$ 1,774,358	$ 1,746,738
b. As a % of pay (8a. / 1.)	4.82%	5.05%
9. Employer Actuarial Required Contribution		
a. Amount (8a. + 7a.)	$ 11,046,529	$ 10,531,775
b. As a % of pay (9a. / 1.)	30.00%	30.44%

* Amount needed to fund the FPEABF in an actuarially responsible manner. These amounts have not been adjusted to account for the difference in Valuation Date and Fiscal Year End.

Calculation of Actuarial (Gain)/Loss

Development of Actuarial (Gain) / Loss		Amount
1. Expected Actuarial Accrued Liability		
a. Actuarial Accrued Liability at December 31, 2018	$	313,013,137
b. Normal Cost at December 31, 2018		4,514,508
c. Interest on a. + b. to End of Year		23,020,754
d. Benefit Payments and Refunds, with Interest to End of Year		19,237,395
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	$	321,311,004
f. Change in Actuarial Accrued Liability at December 31, 2019 due to:		
i. Change in Actuarial Assumptions		-
ii. Change in Actuarial Methods		-
g. Expected Actuarial Accrued Liability at December 31, 2019 (e. + f.i. + f.ii.)	$	321,311,004
2. Actuarial Accrued Liability at December 31, 2019		319,710,584
3. Liability (Gain) / Loss (2. – 1.g.)	**$**	**(1,600,420)**
4. Expected Actuarial Value of Assets		
a. Actuarial Value of Assets at December 31, 2018	$	202,894,946
b. Interest on a. to End of Year		14,709,884
c. Contributions Paid During 2019		6,365,784
d. Interest on c. to End of Year		226,722
e. Benefit Payments and Administrative Expenses, with Interest to End of Year		19,397,244
f. Change in Actuarial Value of Assets at December 31, 2019 due to:		
i. Change in Asset Method		-
g. Expected Actuarial Value of Assets at December 31, 2019 (a.+b.+c.+d.–e.–f.i.)	$	204,800,092
5. Actuarial Value of Assets as of December 31, 2019		203,486,292
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	**$**	**1,313,800**
7. Actuarial (Gain) / Loss (3. + 6.)	**$**	**(286,620)**

Analysis of Experience

Type of (Gain) or Loss	Year Ending December 31, 2019	As a % of Last Year's AAL
1. (Gain) or Loss During the Year from Experience:		
a. Salary	$ (1,647,459)	-0.53%
b. Investment	1,313,800	0.42%
c. Retiree Mortality	(122,701)	-0.04%
d. Other (turnover, retirement ages, service purchase, etc.)	169,740	0.05%
e. Total Experience (Gain) or Loss (a. + b. + c. + d.)	$ (286,620)	-0.09%
2. Assumption and Method Changes	-	0.00%
3. Total (Gain) or Loss During Year (1.e. + 2.)	$ (286,620)	-0.09%

Actuarial Balance Sheet

Financial Resources	December 31, 2019
1. Actuarial Value of Assets	$ 203,486,292
2. Present Value of Future Contributions	
a. Expected Member Contributions	22,309,790
b. Employer Normal Cost	12,644,837
c. Total	$ 34,954,627
3. Unfunded Actuarial Accrued Liability/(Reserve)	$ 116,224,292
4. Total Assets [1. + 2.c. + 3.]	$ 354,665,211

Benefit Obligations	December 31, 2019
1. Present Value of Future Benefits	
a. Active Members	$ 134,621,870
b. Retirees and Beneficiaries	200,024,745
c. Inactive Members	20,018,596
d. Total	$ 354,665,211

History UAAL and Funded Ratio

Valuation Date	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
December 31, 2010	$ 252,877,596	$ 184,077,516	72.79%	$ 68,800,080
December 31, 2011	261,509,175	178,126,063	68.11%	83,383,112
December 31, 2012	273,136,730	172,566,956	63.18%	100,569,774
December 31, 2013	277,560,212	182,554,587	65.77%	95,005,625
December 31, 2014	285,960,963	189,917,999	66.41%	96,042,964
December 31, 2015	291,739,068	193,729,042	66.40%	98,010,026
December 31, 2016	300,259,728	198,244,885	66.02%	102,014,843
December 31, 2017	302,213,539	204,273,172	67.59%	97,940,367
December 31, 2018	313,013,137	202,894,946	64.82%	110,118,191
December 31, 2019	319,710,584	203,486,292	63.65%	116,224,292

Reconciliation of Change in Unfunded Actuarial Liability

Development of Unfunded Actuarial Liability	Amount
1. Unfunded Actuarial Accrued Liability as of December 31, 2018	$ 110,118,191
2. Employer Normal Cost December 31, 2018	1,746,738
3. Interest on 1. and 2.	8,110,207
4. Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period January 1, 2019 to December 31, 2019	$ 9,856,945
5. Actual Employer Contribution for the Year	3,345,462
6. Interest on 5.	119,151
7. Increase in Unfunded Liability Due to Employer Contribution Plus Interest Being Less Than Normal Cost Plus Interest on Unfunded Liability (4. - (5.+6.))	$ 6,392,332
8. Increase/(Decrease) in Unfunded Liability Due to:	
a. Investment Return Lower/(Higher) Than Assumed	1,313,800
b. Salary Increases Higher/(Lower) Than Assumed	(1,647,459)
c. Assumption changes	-
d. Other Sources	47,428
9. Net Increase/(Decrease) in Unfunded Liability for the Year (7. + 8a. + 8b. + 8c. + 8d.)	6,106,101
10. Unfunded Actuarial Accrued Liability as of December 31, 2019 (1. + 9.)	$ 116,224,292

Summary of Fair Value of Assets

Asset Category	Fair Value as of December 31, 2019 Amount	%	Fair Value as of December 31, 2018 Amount	%
1. Short-Term Investments	$ 3,630,699	1.7%	$ 4,140,867	2.2%
2. Investments at Fair Value				
a. U.S. and International Equities	$ 95,130,833	45.6%	$ 83,356,704	44.2%
b. U.S. Government and Government Agency Obligations	3,936,356	1.9%	5,477,851	2.9%
c. Corporate Bonds	6,274,414	3.0%	3,352,396	1.8%
d. Collective International Equity Fund	28,983,483	13.9%	24,019,014	12.7%
e. Commingled Fixed Income Fund	31,419,589	15.1%	28,910,652	15.3%
f. Exchange Traded Funds	-	0.0%	907,930	0.5%
g. Hedge Funds	23,712,574	11.4%	22,287,105	11.8%
h. Real Estate	14,336,540	6.9%	14,157,365	7.5%
i. Total	$ 203,793,789	97.7%	$ 182,469,017	96.8%
3. Collateral Held for Securities Lending	$ 1,270,336	0.6%	$ 1,908,473	1.0%
4. Total Assets (1. + 2.i + 3.)	$ 208,694,824	100.0%	$ 188,518,357	100.0%
5. Receivables				
a. Interest and Dividends	$ 323,110		$ 330,951	
b. Investments Sold	130,420		272,015	
c. Other Receivables	4,503,249		4,217,173	
d. Total	$ 4,956,779		$ 4,820,139	
6. Payables				
a. Investments Purchased	$ 190,459		$ 598,518	
b. Securities Lending Collateral	1,270,336		1,908,473	
c. Other Payables	503,454		433,429	
d. Total	$ 1,964,249		$ 2,940,420	
7. Net Position for Pension Benefits [4. + 5.d – 6.d.]	**$ 211,687,354**		**$ 190,398,076**	

Changes in Fair Value of Assets

Transactions	December 31, 2019	December 31, 2018
Additions		
1. Contributions		
a. Contributions from Employers	$ 3,345,462	$ 3,481,281
b. Contributions from Plan Members	3,020,322	3,127,980
c. Total	$ 6,365,784	$ 6,609,261
2. Net Investment Income		
a. Interest and Dividends	$ 2,776,975	$ 2,714,516
b. Net Appreciation (Depreciation)	31,431,188	(10,507,657)
c. Net Securities Lending Income	19,291	20,632
d. Total	$ 34,227,454	$ (7,772,509)
e. Less Investment Expense	573,804	650,342
f. Net Investment Income (Loss)	$ 33,653,650	$ (8,422,851)
3. Total Additions (1c. + 2f.)	$ 40,019,434	$ (1,813,590)
Deductions		
4. Benefits and Expenses		
a. Retirement Benefits	$ 17,483,273	$ 16,733,769
b. Refund of Contributions	840,125	1,083,510
c. Administrative Expenses	154,352	159,489
d. Employee Transfers	252,406	182,512
5. Total Deductions	$ 18,730,156	$ 18,159,280
6. Net Increase (Decrease) (3. - 5.)	$ 21,289,278	$ (19,972,870)
Net Position Held in Trust for Pension Benefits		
a. Beginning of Year	$ 190,398,076	$ 210,370,946
b. End of Year	$ 211,687,354	$ 190,398,076

Actuarial Valuation – Pension Benefits (continued)

Determination of Actuarial Value of Assets

Development of Actuarial Value of Assets		Amount
1. Actuarial Value of Assets as of December 31, 2018	$	202,894,946
2. Unrecognized Return as of December 31, 2018		(12,496,870)
3. Fair Value of Assets as of December 31, 2018 (1. + 2.)	$	190,398,076
4. Contributions		
a. Member (includes purchased service)	$	3,020,322
b. Employer		3,345,462
c. Miscellaneous contributions		(252,406)
d. Total	$	6,113,378
5. Distributions		
a. Benefit payments	$	17,483,273
b. Refund of contributions		840,125
c. Administrative expenses		154,352
d. Total	$	18,477,750
6. Expected Return at 7.25% on		
a. Item 1.	$	14,709,884
b. Item 2.		(906,023)
c. Item 4.d.		217,733
d. Item 5.d.		658,099
e. Total (a. + b. + c. - d.)	$	13,363,495
7. Actual Return on Fair Value for Fiscal Year, net of Investment Expenses	$	33,653,650
8. Return to be Spread for Fiscal year (7. - 6e.)*	$	20,290,155
9. Total Fair Value of Assets as of December 31, 2019	$	211,687,354
10. Return to be Spread		

Fiscal Year		Return to be Spread	Unrecognized Percent		Unrecognized Return
2019	$	20,290,155	80.00%	$	16,232,124
2018		(23,263,383)	60.00%		(13,958,030)
2017		16,577,084	40.00%		6,630,834
2016		(3,519,332)	20.00%		(703,866)
2015		(12,123,404)	0.00%		-
				$	8,201,062

11. Actuarial Value of Assets (9. - 10.)	$	203,486,292
12. Recognized rate of return for the Year on Actuarial Value of Assets		6.6%
13. Rate of Return for the Year on Market Value of Assets (reported by Cook County - net of inv. expenses)		18.6%

* Annual Return to be Spread calculation is based on assumed 7.25% investment return which includes an assumption that all expenses and revenues are paid mid-year on average.

Schedule of Funding Progress

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

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (Actuarial Value)	Funded Ratio (Actuarial Value)	Covered Payroll	UAAL as a Percentage of Covered Payroll (Fair Value)
	(a)	(b)	(b-a)	(a/b)	(c)	(b-a)/(c)
2010	$ 184,077,516	$ 252,877,596	$ 68,800,080	72.79%	$ 24,397,376	282.00%
2011	178,126,063	261,509,175	83,383,112	68.11%	22,678,566	367.67%
2012	172,566,956	273,136,730	100,569,774	63.18%	26,252,071	383.09%
2013	182,554,587	277,560,212	95,005,625	65.77%	29,485,857	322.21%
2014	189,917,999	285,960,963	96,042,964	66.41%	29,811,912	322.16%
2015	193,729,042	291,739,068	98,010,026	66.40%	32,007,657	306.21%
2016	198,244,885	300,259,728	102,014,843	66.02%	34,509,011	295.62%
2017	204,273,172	302,213,539	97,940,367	67.59%	35,078,173	279.21%
2018	202,894,946	313,013,137	110,118,191	64.82%	34,071,319	323.20%
2019	203,486,292	319,710,584	116,224,292	63.65%	35,056,459	331.53%

Schedule of Employer Contributions

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

Fiscal year Ended December 31,	Actuarially Determined Contribution (ADC)	Employer Contribution	Percentage Contributed
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	2,242,489	21.92%
2018	10,678,782	3,481,281	32.60%
2019	10,195,691	3,345,462	32.81%

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

Actuarial Valuation – Pension Benefits (continued)

GASB 67 Schedule of Changes in Net Pension Liability

	2019	2018	2017	2016	2015
Total Pension Liability					
Service Cost	$ 7,981,035	$ 9,426,212	$ 10,698,297	$ 11,224,976	$ 9,656,955
Interest	20,343,569	19,182,488	20,384,471	19,482,189	19,471,424
Benefit changes	-	-	-	-	-
Difference between expected and actual experience	(420,786)	608,525	(1,344,952)	(6,776,942)	(270,033)
Changes of assumptions	71,398,627	(26,452,372)	(21,473,767)	(26,186,535)	28,495,220
Benefit payments, including refund of contributions	(18,323,398)	(17,817,279)	(16,670,896)	(16,462,185)	(15,920,776)
Net change in Total Pension Liability	$ 80,979,047	$ (15,052,426)	$ (8,406,847)	$ (18,718,497)	$ 41,432,790
Total Pension Liability - beginning	415,400,193	430,452,619	438,859,466	457,577,963	416,145,173
Total Pension Liability - ending (a)	496,379,240	415,400,193	430,452,619	438,859,466	457,577,963
Plan Fiduciary Net Position					
Contributions – employer	3,345,462	3,481,281	2,242,489	1,971,946	1,763,345
Contributions – member	3,020,322	3,127,980	3,300,222	3,184,051	2,771,533
Net investment income	33,653,650	(8,422,851)	30,500,015	10,477,792	2,549,975
Benefit payments, including refund of contributions	(18,323,398)	(17,817,279)	(16,670,896)	(16,462,185)	(15,920,776)
Administrative expense	(154,352)	(159,489)	(163,275)	(157,577)	(143,953)
Other	(252,406)	(182,512)	(40,007)	(133,999)	(6,928)
Net change in Plan Fiduciary Net Position	21,289,278	(19,972,870)	19,168,548	(1,119,972)	(8,986,804)
Plan Fiduciary Net Position – beginning	190,398,076	210,370,946	191,202,398	192,322,370	201,309,174
Plan Fiduciary Net Position - ending (b)	211,687,354	190,398,076	210,370,946	191,202,398	192,322,370
Net Pension Liability - ending (a) - (b)	284,691,886	225,002,117	220,081,673	247,657,068	265,255,593

GASB 67 Net Pension Liability (Asset)

	2019	2018	2017	2016	2015
Total Pension Liability	$ 496,379,240	$ 415,400,193	$ 430,452,619	$ 438,859,466	$ 457,577,963
Plan Fiduciary Net Position	211,687,354	190,398,076	210,370,946	191,202,398	192,322,370
Net Pension Liability	$ 284,691,886	$ 225,002,117	$ 220,081,673	$ 247,657,068	$ 265,255,593
Ratio of Plan Fiduciary Net Position to Total Pension Liability	42.65%	45.83%	48.87%	43.57%	42.03%
Covered-employee payroll	$ 35,056,459	$ 34,071,319	$ 35,078,173	$ 34,509,011	$ 32,007,657
Net Pension Liability as a percentage of covered-employee payroll	812.10%	660.39%	627.40%	717.66%	828.73%

GASB 67 Sensitivity of Net Pension Liability

	1% Decrease (2.77%)	Current Discount Rate (3.77%)	1% Increase (4.77%)
Total Pension Liability	$575,516,799	$496,379,240	$432,848,863
Fiduciary Net Position	211,687,354	211,687,354	211,687,354
Net Pension Liability	$363,829,445	$284,691,886	$221,161,509

The discount rate used to measure the total pension liability was 3.77%. The discount rate used to measure the total pension liability at December 31, 2018 was 4.91%. 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 Fund's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current fund members. A municipal bond rate of 2.75% was used in the development of the blended GASB discount rate after that point. The 2.75% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2019. The rate used for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System). Based on the long-term rate of return of 7.25% and the municipal bond rate of 2.75%, the blended GASB discount rate would be 3.77%. Please see the supporting exhibits for additional detail.

Actuarial Valuation – Pension Benefits (continued)

GASB 67 and 68 Actuarial Assumptions and Methods

Actuarial Assumptions and Methods:

Measurement Date:	**December 31, 2019**	**December 31, 2018**
Valuation Date (VD):	December 31, 2018	December 31, 2017
Membership Data:		
Retirees	387	381
Beneficiaries	144	146
Inactive Vested Members	1,410	1,365
Active Employees	536	548
Total	2,477	2,440
Single Equivalent Interest Rate (SEIR):		
Long-Term Expected Rate of Return	7.25%	7.25%
Municipal Bond Index Rate at Measurement Date	2.75%	4.13%
Fiscal Year in which Fiduciary Net Position is Projected to be Depleted	2040	2037
Single Equivalent Interest Rate at Measurement Date	3.77%	4.91%
Actuarial Assumptions:		
- Projected Salary Increases	3.50%-8.00%	3.50%-8.00%
- Inflation Assumption	2.75%	2.75%

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 Fund's fiduciary net position is projected to be insufficient to make all projected future benefit payments of current fund members. A municipal bond rate of 2.75% was used in the development of the blended GASB discount rate after that point. The 2.75% rate is based on the 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate (Municipal Bond Index Rate). The rate used for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System). Based on the long-term rate of return of 7.25% and the municipal bond rate of 2.75%, the blended GASB discount rate would be 3.77%. See the preceding exhibits for more detail.

GASB 67 and 68 Actuarial Assumptions and Methods (continued)

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. The results of the experience review were presented to the Board at the Board's March 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, best estimate ranges of expected future real rates of return (net of inflation) for the portfolio were developed, based on the expected returns of each major asset class and their weights in the portfolio. 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 was then used. 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, 2019 are listed in the table below:

Asset Category	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equities	32.00%	5.45%
International Equity	27.00%	5.65%
Fixed Income	21.00%	1.75%
Real Estate Funds	9.00%	4.25%
Hedge Funds	10.00%	3.25%
Short-term Investment	1.00%	0.60%
Total	100.00%	

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. Except that when the employee retires after age 60, the full amount of contributions by the Employer are used.

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.

Summary of Benefit Provisions (continued)

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.

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. 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.

Summary of Benefit Provisions (continued)

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, he 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.

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 8.5% of salary normally contributed by the employee for pension purposes is contributed on their behalf during the period of approved disability.

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 8.5% of salary normally contributed by the employee for pension purposes is contributed on their behalf during the period of approved disability.

Summary of Benefit Provisions (continued)

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.

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.

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

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

Refund of Remaining Amounts. In the event that the total amount accumulated to the account of an 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(s) of the employee, 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.

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 Fund benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the Fund 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 Fund 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 Fund.

The Normal Cost for the Fund 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 Fund 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.

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 Exhibit 415 for governmental Funds.

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

Summary of Actuarial Assumptions

The actuarial assumptions used for the December 31, 2019 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 Buck Modified MP-2017 projection scale. The substantive difference between the Buck scale and that published by the SOA is that the Buck scale reaches an ultimate improvement rate of 0.75% versus the SOA's scale which reaches an ultimate improvement rate of1.0%.

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

	Age at Entry							
	Male				Female			
Attained Age	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	.033	.034	.026

Summary of Actuarial Assumptions (continued)

Retirement Rates. For persons who became participants prior to January 1, 2011, rates of retirement for each age from 50 to 80 based on the recent experience of the Fund. The following are samples of the rates of retirement used:

	Male		**Female**	
Age	**Less than 30 years of service**	**30 or more years of service**	**Less than 30 years of service**	**30 or more years of service**
<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 (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:

	Rates of Retirement	
Age	**Males**	**Females**
62	.400	.350
64	.225	.150
67	.400	.350
70	.450	.200
75	1.000	1.000

Interest Rate. 7.25% per year, compounded annually.

Inflation Rate. 2.75% per year, compounded annually.

Salary Rate (net of inflation):

Age	Rate
20	5.25%
25	4.85%
30	4.25%
35	2.75%
40	1.50%
45+	0.75%

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. For inactives with 10 or more years of service, benefits were estimated based on service and pay and valued as deferred to 55 annuities.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension Fund for a group of Fund members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Determined Contribution	Disclosure measure of annual pension cost.
GASB 67	Governmental Accounting Standards Board Statement Number 67
Maturity Ratio	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 Fund. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the Fund as a whole.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment status.

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Actuarial Certification – Postemployment Healthcare

June 4, 2020

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

Ladies and Gentlemen:

Presented in this report is information to assist the Forest Preserve District Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund" or "the Plan") in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statements No. 74 and 75 for the December 31, 2019 Measurement Date. The calculations in this report have been made on a basis that is consistent with our understanding of this accounting standard (GASB 74 and 75). Please note that the discount rate used to determine the Total OPEB Liability (TOL) changed from 4.13% at the Prior Measurement Date to 2.75% at the current Measurement Date.

The information is based on an actuarial valuation performed by Cavanaugh Macdonald (CMC) as of December 31, 2019, with plan asset information provided by FPEABF for its fiscal year ended December 31, 2019. CMC performs the actuarial valuation annually.

The valuation was based upon data, furnished by FPEABF staff, concerning active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete our results may be different and our calculations may need to be revised. Please see the actuarial valuation for additional details on the funding requirements for FPEABF including actuarial assumptions and methods and the funding policy.

To the best of our knowledge, the information contained in this report is complete and accurate. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of FPEABF, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of FPEABF. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 74 and 75.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 74 and 75 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

The actuary prepared, or assisted in preparing, the following supporting information for the actuarial valuation:

- Changes in the GASB 74/75 Total OPEB Liability (TOL)
- GASB 74 Components of the Net OPEB Liability
- GASB 74 Schedule of Employer Contributions
- GASB 74 Schedule of Changes in Net OPEB Liability
- GASB 74 Schedule of Net OPEB Liability
- GASB 74 Sensitivity of Net OPEB Liability
- Membership Data
- Solvency Test
- Summary of Substantive Plan Provisions
- Summary of Assumptions and Methods
- Description of Actuarial Methods

Just before these results were published, on May 21, 2020, the Levin case was decided in the plaintiff's favor. As of the date of the report, Cook County Pension Fund (CCPF) is not yet able to reasonably ascertain which individuals might be granted benefits, nor do they know what those benefits might be. Consequently, we cannot provide any reasonable range of the impact of this court decision at this time and the cost impact of the Levin case is not included in the results of this valuation report.

We, Larry F. Langer, ASA, Wendy T. Ludbrook, FSA, and Bradley R. Wild, ASA are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

Respectfully submitted,

Larry Langer, ASA, EA, FCA, MAAA Principal and Consulting Actuary	Wendy T. Ludbrook, FSA, EA, FCA, MAAA Senior Actuary
Bradley R. Wild, ASA, FCA, MAAA Senior Actuary	Ryan Gundersen Senior Consultant

Actuarial Valuation – Postemployment Healthcare

Overview

The Forest Preserve Employees' Annuity and Benefit Fund of Cook County ("FPEABF" or "the Fund" or "the Plan") 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 Fund benefits as of the valuation date of December 31, 2019.

Purpose

This report had been prepared at the request of the Fund for use in financial reporting of FPEABF under GASB 74 and GASB 75. 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 Cavanaugh Macdonald.

Membership

Summary of Membership Data	Year Ended December 31, 2019	2018
Annuitants Currently Receiving Benefits	271	273
Covered Spouses of Annuitants Currently Receiving Benefits	82	83
Separated Employees Entitled To Benefits But Not Yet Receiving Them	37	33
Active Employees	546	536
Total Number of Members	936	925

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, 2018:

- The 2020 subsidy for member health benefits was changed from 41% to 38% for annuitants in the Choice Plan Medicare, and from 38% to 34% for annuitants in the Choice Plus Plan Medicare.
- The 2020 subsidy for survivor health benefits was changed from 54% to 48% for survivors in the Choice Plan Medicare, and from 51% to 44% for survivors in the Choice Plus Plan Medicare.
- The 2020 subsidy for survivor health benefits was changed from 61% to 58% for survivors in the Choice Plan non-Medicare, and from 56% to 53% for survivors 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, 2018:

- The per capita plan costs were updated to reflect the most recent year of claims experience, drug rebates and Employer Group Waiver Plan (EGWP) subsidies. Additionally, working premium rates were updated for 2020.
- The assumption pertaining to health care cost trend rates was reset to begin in fiscal year 2020.
- The discount rate used to measure the Total OPEB Liability was changed from 4.13% as of the December 31, 2018 valuation to 2.75% as of the December 31, 2019 valuation, based on the Municipal Bond 20-year Index Rate as of December 31, 2019. The 2.75% rate is based on the S&P Municipal Bond 20 Year High Grade Rate Index as of December 31, 2019. The rate used for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System).

Changes in the GASB 74/75 Total OPEB Liability (TOL)

	TOL	% Change
December 31, 2018	**$ 35,850,239**	
Expected Growth Due to Passage of Time	1,893,505	5.3%
Demographic Experience	811,764	2.3%
Updated Per Capita Health Plan Experience	(1,132,696)	-3.2%
Change in Participant Contributions	(2,350,490)	-6.6%
Change in Trend Assumption	352,931	1.0%
Change in Discount Rate	8,303,141	23.2%
Total Change in TOL	**$ 7,878,155**	**22.0%**
December 31, 2019	**$ 43,728,394**	**22.0%**

GASB 74 Components of the Net OPEB Liability

Valuation Date (VD):		December 31, 2019
Prior Measurement Date:		December 31, 2018
Measurement Date (MD):		December 31, 2019
Membership Data:		
Retirees and Beneficiaries		271
Inactive Members Eligible for Allowances		37
Active Employees		546
Total		854
Single Equivalent Interest Rate (SEIR):		
Long-Term Expected Rate of Return		7.25%
Municipal Bond Index Rate at Prior Measurement Date		4.13%
Municipal Bond Index Rate at Measurement Date		2.75%
Year in which Fiduciary Net Position is Projected to be Depleted		2019
Single Equivalent Interest Rate at Prior Measurement Date		4.13%
Single Equivalent Interest Rate at Measurement Date		2.75%
Net OPEB Liability:		
Total OPEB Liability (TOL)	$	43,728,394
Fiduciary Net Position (FNP)		-
Net OPEB Liability (NOL = TOL – FNP)	$	43,728,394
FNP as a percentage of TOL		0.00%

Fiscal Year Ended December 31, 2019

Total OPEB Liability	$	43,728,394
Fiduciary Net Position		-
Net OPEB Liability	$	43,728,394
Ratio of Fiduciary Net Position to Total OPEB Liability		0.00%

Actuarial Valuation – Postemployment Healthcare (continued)

GASB 74 Schedule of Employer Contributions

	2019	2018	2017
Actuarially determined employer contribution	$ 4,004,996	$ 3,353,628	$ 4,681,598
Actual employer contributions	953,678	606,110	1,305,075
Annual contribution deficiency (excess)	$ 3,051,318	$ 2,747,518	$ 3,376,523
Covered employee payroll	$ 35,058,531	$ 34,071,319	$ 35,078,173
Actual contributions as a percentage of covered payroll	2.72%	1.78%	3.72%

GASB 74 Schedule of Changes in Net OPEB Liability

	2019	2018	2017
Total OPEB Liability			
Service Cost	$ 1,331,088	$ 2,197,459	$ 2,349,531
Interest	1,516,095	1,613,714	1,937,384
Benefit changes	(2,350,490)	(7,184,763)	(1,738,947)
Difference between expected			
and actual experience	(320,932)	(2,029,921)	(611,268)
Changes of assumptions	8,656,072	(7,310,288)	(1,979,137)
Benefit payments	(953,678)	(606,110)	(1,305,075)
Net change in Total OPEB Liability	$ 7,878,155	$ (13,319,909)	$ (1,347,512)
Total OPEB Liability - beginning	$ 35,850,239	$ 49,170,148	$ 50,517,660
Total OPEB Liability - ending (a)	$ 43,728,394	$ 35,850,239	$ 49,170,148
Plan Fiduciary Net Position			
Employer Contributions	$ 953,678	$ 606,110	$ 1,305,075
Net investment income	-	-	-
Net Benefit payments	(953,678)	(606,110)	(1,305,075)
Administrative expense	-	-	-
Other	-	-	-
Net change in Plan Fiduciary Net Position	$ -	$ -	$ -
Plan Fiduciary Net Position – beginning	$ -	$ -	$ -
Plan Fiduciary Net Position - ending (b)	$ -	$ -	$ -
Net OPEB Liability - ending (a) - (b)	$ 43,728,394	$ 35,850,239	$ 49,170,148

GASB 74 Schedule of the Net OPEB Liability

	2019	2018	2017
Total OPEB Liability	$ 43,728,394	$ 35,850,239	$ 49,170,148
Plan Fiduciary Net Position	-	-	-
Net OPEB Liability	$ 43,728,394	$ 35,850,239	$ 49,170,148
Ratio of Plan Fiduciary Net Position to Total OPEB Liability	0.00%	0.00%	0.00%
Covered employee payroll	$ 35,058,531	$ 34,071,319	$ 35,078,173
Net OPEB Liability as a percentage of covered employee payroll	124.73%	105.22%	140.17%

GASB 74 Sensitivity of the Net OPEB Liability

Sensitivity of the Net OPEB Liability to changes in the discount rate. The following presents the Net OPEB Liability as of December 31, 2019, calculated using the discount rate of 2.75%, 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 (1.75%) or 1-percentage-point higher (3.75%) than the current rate:

	1% Decrease (1.75%)	Current Discount Rate (2.75%)	1% Increase (3.75%)
Total OPEB Liability	$ 51,674,647	$ 43,728,394	$ 37,457,537
Fiduciary Net Position	-	-	-
Net OPEB Liability	$ 51,674,647	$ 43,728,394	$ 37,457,537

Sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rates. The following presents the Net OPEB Liability as of December 31, 2019, 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:

	1% Decrease	Current Trend Rate	1% Increase
Total OPEB Liability	$ 36,746,281	$ 43,728,394	$ 52,923,026
Fiduciary Net Position	-	-	-
Net OPEB Liability	$ 36,746,281	$ 43,728,394	$ 52,923,026

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. In some cases employees that retire with less than 10 years of service with Forest Preserve may be eligible for Health Benefits due to reciprocity or if they are Tier 1 and qualify for Money Purchase annuity benefits.

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).

Effective January 1, 2019, all future plan participants who are ineligible for free Medicare Part A must purchase Medicare Part A and Part B in order to receive coverage under the FPEABF health plan. FPEABF will provide a reduced monthly premium for annuitants and spouses who are ineligible for premium free Medicare Part A.

Medical Plan.

Non-Medicare retirees can choose from:
- United Healthcare Choice PPO
- United Healthcare Choice Plus PPO

Medicare eligible retirees can choose from:
- United Healthcare Choice PPO
- United Healthcare Choice Plus PPO

When Medicare is primary, the medical benefits coordinate by reducing the plan allowed charge amount by Medicare's payment, and then subsequently applying any applicable plan copays, coinsurances or deductibles to the remainder. A retail and mail pharmacy benefit through CVS/Caremark is included with the election of any medical plan. For Medicare primary participants, prescriptions are provided via an Employer Group Waiver Plan, with the same copays as the commercial prescription plan.

Summary of Substantive Plan Provisions (continued)

Contributions.

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

	Participant		Fund	
	Choice PPO	**Choice Plus PPO**	**Choice PPO**	**Choice Plus PPO**
Retiree Annuitant w/o Medicare	52%	57%	48%	43%
Retiree Annuitant with Medicare	62%	66%	38%	34%
Survivor Annuitant w/o Medicare	42%	47%	58%	53%
Survivor Annuitant with Medicare	52%	56%	48%	44%

The following are the annual working rates effective January 1, 2020. These rates represent an estimated cost of self-insured coverage and include administrative expenses.

	Choice PPO	Choice Plus PPO
Single w/o Medicare	$16,015	$21,516
Two w/o Medicare	$32,031	$43,032
Single with Medicare	$4,645	$4,236
Two with Medicare	$9,290	$8,473

Summary of Assumptions and Methods

The actuarial assumptions used for the December 31, 2019 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, 2019

Measurement Date. December 31, 2019

Discount Rate. 2.75% at December 31, 2019 (Municipal Bond Index Rate)
4.13% at December 31, 2018 (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.

Summary of 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:

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 Buck Modified MP-2017 projection scale. The substantive difference between the Buck scale and that published by the SOA is that the Buck 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:

Age at Entry

	Male				Female			
Attained Age	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	.033	.034	.026

Summary of Assumptions and Methods (continued)

Retirement Rates. For persons who became participants prior to January 1, 2011, rates of retirement for each age from 50 to 80 based on the recent experience of the Fund. The following are samples of the rates of retirement used:

	Male		Female	
Age	Less than 30 years of service	30 or more years of service	Less than 30 years of service	30 or more years of service
<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 Assumptions and Methods (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:

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

Inflation Rate. 2.75% per year, compounded annually.

Salary Rate (net of inflation):

Age	Rate
20	5.25%
25	4.85%
30	4.25%
35	2.75%
40	1.50%
45+	0.75%

Disability Rates. Included in termination and retirement rates.

Anticipated Plan Participation.

65% of eligible employees are assumed to elect retiree medical benefits. Of those who elect retiree medical benefits, 94% are assumed to be eligible for free Medicare Part A. For those assumed to be ineligible for free Medicare Part A, a reduced premium will be provided by FPEABF.

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:

% Who Elect	Choice PPO	Choice Plus PPO
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.

Summary of Assumptions and Methods (continued)

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.

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 100% of retirees and spouses who retired before January 1, 2019 and who are not yet age 65, when they attain that age. However, 5% of this group is assumed to be ineligible for free Medicare Part A and a reduced premium will be provided by FPEABF. 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 year 2020 at age 65, reflecting administrative expenses, drug rebates and EGWP subsidies.

	Choice PPO	Choice Plus PPO
Not Medicare Eligible	$18,548	$27,008
Medicare Eligible	$4,375	$3,853

Per capita medical costs were developed using claims, enrollment, drug rebates and EGWP subsidies for the period from January 1, 2019 through December 31, 2019 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.

Summary of 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:

Age	Male	Female
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

Health Care Cost Trend Rates.

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

Year	Pre-Medicare	Post-Medicare
2020	7.25%	5.75%
2021	7.00%	5.50%
2022	6.75%	5.25%
2023	6.50%	5.00%
2024	6.25%	4.75%
2025	6.00%	4.75%
2026	5.75%	4.75%
2027	5.50%	4.75%
2028	5.25%	4.75%
2029	5.00%	4.75%
2030+	4.75%	4.75%

Summary of Assumptions and Methods (continued)

Census Data.

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

Actuarial Cost Method.

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

Amortization Method.

30 years open, level dollar.

Assets.

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

Retiree Drug Subsidy and Employer Group Waiver Plan.

FPEABF will no longer be receiving the Retiree Drug Subsidy due to their switch to an EGWP plan effective January 1, 2017. Per capita claims costs for fiscal year 2020 include approximately 24% savings due to drug rebates and EGWP subsidies

IBNR.

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

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.

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 be 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. Per capita claims costs for fiscal year 2020 include approximately 24% savings due to drug rebates and EGWP subsidies.

Summary of Assumptions and Methods (continued)

Affordable Care Act. The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions such as the future implementation of the excise tax on high-value health insurance plans (if applicable), mandated benefits and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by amounts employers and retirees can afford (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, plan changes, government-mandated benefits, and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the Plan's liability will be required.

Benefits Not Valued. Just before these results were published, on May 21, 2020, the Levin case was decided in the plaintiff's favor. As of the date of the report, CCPF is not yet able to reasonably ascertain which individuals might be granted benefits, nor do they know what those benefits might be. Consequently, we cannot provide any reasonable range of the impact of this court decision at this time and the cost impact of the Levin case is not included in the results of this valuation report.

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.

Glossary of Terms (continued)

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).

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.

Measurement period

The period between the prior and the current measurement dates.

Glossary of Terms (continued)

Net OPEB liability

The liability of employers and non-employer contributing entities to employees for benefits provided through a defined benefit OPEB plan that meets the criteria in paragraph 4 of GASB Statement Nos. 74 and 75. Other postemployment benefits (OPEB) (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 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.

Additional Actuarial Tables

Schedule of Active Member Valuation Data - Pension Benefits

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
12/31/2010	448	$ 24,397,376	$ 54,458	0.6%
12/31/2011	408	22,678,566	55,585	2.1%
12/31/2012	467	26,252,071	56,214	1.1%
12/31/2013	534	29,485,857	55,217	-1.8%
12/31/2014	525	29,811,912	56,785	2.8%
12/31/2015	568	32,007,657	56,352	-0.8%
12/31/2016	572	34,509,011	60,330	7.1%
12/31/2017	548	35,078,173	64,011	6.1%
12/31/2018	536	34,071,319	63,566	-0.7%
12/31/2019	546	35,056,459	64,206	1.0%

Schedule of Retirees and Beneficiaries Added To and Removed From Rolls - Pension Benefits

Year Ended	Added-To-Rolls Number	Added-To-Rolls Annual Benefits	Removed-From-Rolls Number	Removed-From-Rolls Annual Benefits	Rolls-End-of-Year Number	Rolls-End-of-Year Annual Benefits	Average Annual Benefit	% Increase in Average Annual Benefit
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%
2018	31	1,628,543	27	677,580	531	17,059,311	32,127	5.1%
2019	27	1,202,929	26	587,149	532	17,675,090	33,224	3.4%

Schedule of Retirees and Beneficiaries Added To and Removed From Rolls - Postemployment Healthcare

Year Ended	Added-To-Rolls Number	Added-To-Rolls Annual Benefits	Removed-From-Rolls Number	Removed-From-Rolls Annual Benefits*	Rolls-End-of-Year Number	Rolls-End-of-Year Annual Benefits	Average Annual Benefit	% Increase in Average Annual Benefit
2010	16	$ 140,545	23	$ 118,007	275	$ 1,501,711	$ 5,461	4.1%
2011	22	169,227	18	346,462	279	1,324,476	4,747	-13.1%
2012	18	91,062	16	218,153	281	1,197,385	4,261	-10.2%
2013	24	120,344	14	(277,417)	291	1,595,146	5,482	28.7%
2014	18	87,347	22	88,900	287	1,771,393	6,172	12.6%
2015	8	132,420	17	79,925	278	1,823,888	6,561	6.3%
2016	16	(206,717) **	13	67,620	281	1,549,551	5,514	-15.9%
2017	13	(179,554) **	21	73,922	273	1,305,075	4,780	-13.3%
2018	12	(661,677) **	12	37,288	273	606,110	2,220	-53.56%
2019	12	395,705	14	48,137	271	953,678	3,519	58.50%

** Includes Liability from changes in benefit levels.*

*** Employer contribution decreased, resulting in reduction of employer paid benefits from the level in prior years.*

Solvency Test - Pension Benefits

	Accrued Liabilities For						
Fiscal Year	(1) Active and Inactive Member Accumulated Contributions	(2) Member Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	Percent of Accrued Liabilities Covered By Assets (1)	(2)	(3)
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%
2018	33,549,681	195,126,716	84,336,740	202,894,946	100%	87%	0%
2019	34,895,654	200,024,745	84,790,185	203,486,292	100%	84%	0%

Solvency Test - Postemployment Heathcare

	Accrued Liabilities For						
Fiscal Year	(1) Active and Inactive Member Accumulated Contributions	(2) Member Currently Receiving Benefits	(3) Active and Inactive Member Employer Portion	Actuarial Value of Assets	Percent of Accrued Liabilities Covered By Assets (1)	(2)	(3)
2010	$ -	$ 22,131,960	$ 20,970,550	$ -	0%	0%	0%
2011	-	21,172,862	19,233,334	-	0%	0%	0%
2012	-	25,571,863	20,141,897	-	0%	0%	0%
2013	-	26,785,364	20,328,289	-	0%	0%	0%
2014	-	27,165,388	20,046,785	-	0%	0%	0%
2015	-	26,560,776	22,918,014	-	0%	0%	0%
2016	-	23,482,726	21,225,463	-	0%	0%	0%
2017	-	22,654,735	20,756,005	-	0%	0%	0%
2018	-	19,477,243	16,372,996	-	0%	0%	0%
2019	-	23,020,257	20,708,137	-	0%	0%	0%

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 and Postemployment Healthcare provide details on the specific sources and uses of funds.

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

Schedules of Average Benefit Payments - Pension and Postemployment Healthcare provide details on years of credited service, average monthly pension, average monthly final average salary, and number of new retirees, including those with postemployment healthcare.

Additional schedules Required by Employer provide details on historical financial, investment and actuarial performance.

Statement of Changes in Pension Plan Fiduciary Net Position

For year ended December 31, 2019, with comparative totals for 9 years

	2019	2018	2017	2016	2015
Additions:					
Employer contributions	$ 3,345,462	$ 3,481,281	$ 2,239,632	$ 1,971,946	$ 1,763,345
Employee contributions	3,020,322	3,127,980	3,300,222	3,184,051	2,771,533
Net investment and net securities lending income (loss)	33,653,650	(8,422,851)	30,500,015	10,477,792	2,549,975
Other	-	-	14,250	-	11,442
Total additions	40,019,434	(1,813,590)	36,054,119	15,633,789	7,096,295
Deductions:					
Benefits					
Retirement	14,436,019	13,844,830	13,253,194	12,896,736	12,820,708
Survivors	2,878,661	2,761,444	2,630,286	2,523,376	2,281,100
Disability	168,593	127,495	232,999	301,487	183,060
Refunds					
Death	14,500	348,881	18,018	118,565	41,539
Separation	588,197	493,684	313,756	434,654	486,280
Other	237,428	240,945	222,643	187,367	108,089
Employee transfers to (from) Cook County	252,406	182,512	54,257	133,999	18,370
Net administrative and miscellaneous expenses	154,352	159,489	160,418	157,577	143,953
Total deductions	18,730,156	18,159,280	16,885,571	16,753,761	16,083,099
Net increase (decrease)	21,289,278	(19,972,870)	19,168,548	(1,119,972)	(8,986,804)
Net Position:					
Beginning of period	190,398,076	210,370,946	191,202,398	192,322,370	201,309,174
End of period	$ 211,687,354	$ 190,398,076	$ 210,370,946	$ 191,202,398	$ 192,322,370

For year ended December 31, 2019, with comparative totals for 9 years (continued)

	2014	2013	2012	2011	2010
Additions:					
Employer contributions	$ 1,520,316	$ 1,403,628	$ 2,117,976	$ 2,441,301	$ 1,333,140
Employee contributions	2,645,164	2,687,211	2,426,776	2,289,027	2,452,696
Net investment and net securities lending income (loss)	13,525,606	30,383,512	22,209,855	2,021,094	20,250,639
Other	-	691	6,062	2,541	52,736
Total additions	17,691,086	34,475,042	26,760,669	6,753,963	24,089,211
Deductions:					
Benefits					
Retirement	12,464,872	11,719,920	10,714,092	10,042,232	9,559,956
Survivors	2,206,512	2,052,205	1,901,171	1,815,262	1,615,256
Disability	172,196	277,873	347,509	420,518	366,484
Refunds					
Death	75,826	111,783	174,789	79,428	19,000
Separation	644,017	545,613	786,951	338,069	182,773
Other	241,794	301,311	226,899	186,817	142,090
Employee transfers to (from) Cook County	175,370	(106,012)	205,887	(328,586)	257,975
Net administrative and miscellaneous expenses	142,067	119,019	111,662	103,220	104,765
Total deductions	16,122,654	15,021,712	14,468,960	12,656,960	12,248,299
Net increase (decrease)	1,568,432	19,453,330	12,291,709	(5,902,997)	11,840,912
Net Position:					
Beginning of period	199,740,742	180,287,412	167,995,703	173,898,700	162,057,788
End of period	$ 201,309,174	$ 199,740,742	$ 180,287,412	$ 167,995,703	$ 173,898,700

Statement of Changes in Postemployment Healthcare Plan Net Position

For year ended December 31, 2019, with comparative totals for 9 years

	2019	2018	2017	2016	2015
Additions:					
Employer contributions	$ 953,678	$ 606,110	$ 1,305,075	$ 1,419,435	$ 1,698,692
Annuitant healthcare benefits contributions*	-	-	-	1,177,887	1,134,920
Other	814,335	946,166	581,415	317,217	228,836
Total additions	1,768,013	1,552,276	1,886,490	2,914,539	3,062,448
Deductions:					
Healthcare Benefits	1,768,013	1,552,276	1,886,490	2,914,539	3,062,448
Net increase (decrease)	-	-	-	-	-
Net Position:					
Beginning of period	-	-	-	-	-
End of period	$ -	$ -	$ -	$ -	$ -

* Beginning 2017, the annuitants Healthcare contribution is netted against Healthcare benefits expense.

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

For year ended December 31, 2019, with comparative totals for 9 years

	2014	2013	2012	2011	2010
Additions:					
Employer contributions	$ 1,616,436	$ 1,459,517	$ 991,000	$ 814,308	$ 1,326,894
Annuitant healthcare benefits contributions*	1,193,549	1,190,706	1,127,026	1,120,842	984,039
Other	204,853	158,692	206,385	510,168	174,817
Total additions	3,014,838	2,808,915	2,324,411	2,445,318	2,485,750
Deductions:					
Healthcare Benefits	3,014,838	2,808,915	2,324,411	2,445,318	2,485,750
Net increase (decrease)	-	-	-	-	-
Net Position:					
Beginning of period	-	-	-	-	-
End of period	$ -	$ -	$ -	$ -	$ -

Schedule of Retired Members by Benefit Type - Pension Benefits

As of December 31, 2019

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit 1	Type of Pension Benefit 2	Benefit Payment Form 1	Benefit Payment Form 2	Benefit Payment Form 3
$ 1 – 500	58	35	23	30	23	5
501 – 1,000	65	36	29	39	26	0
1,001 – 1,500	57	31	26	41	16	0
1,501 – 2,000	47	36	11	28	19	0
2,001 – 2,500	43	28	15	27	16	0
2,501 – 3,000	41	29	12	24	17	0
3,001 – 3,500	53	40	13	33	20	0
3,501 – 4,000	36	29	7	17	19	0
4,001 – 4,500	31	27	4	15	16	0
4,501 – 5,000	19	18	1	5	14	0
5,001 – 5,500	19	19	0	7	12	0
5,501 – 6,000	19	18	1	4	15	0
6,001 – 6,500	18	18	0	2	16	0
6,501 – 7,000	11	11	0	5	6	0
7,001 – 7,500	5	5	0	1	4	0
7,501 – 8,000	6	6	0	0	6	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	1	1	0	0	1	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	0	0	0	0	0	0
13,501 – 14,000	0	0	0	0	0	0
14,001 – 14,500	1	1	0	0	1	0
14,501 – 15,000	0	0	0	0	0	0
Over $15,000	0	0	0	0	0	0
Totals	**532**	**390**	**142**	**278**	**249**	**5**

Type of Pension Benefit

1. Regular Retirement
2. Survivor Payment

Form of Benefit

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

Schedule of Retired Members by Benefit Type - Postemployment Healthcare

As of December 31, 2019

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension 1	Type of Pension 2	Benefit Payment Form 1	Benefit Payment Form 2	Benefit Payment Form 3
$ 1 – 500	3	0	3	3	0	3
501 – 1,000	19	3	16	16	3	19
1,001 – 1,500	22	6	16	20	2	22
1,501 – 2,000	20	13	7	12	8	20
2,001 – 2,500	28	19	9	19	9	28
2,501 – 3,000	29	18	11	20	9	29
3,001 – 3,500	32	22	10	23	9	32
3,501 – 4,000	25	22	3	13	12	25
4,001 – 4,500	20	16	4	13	7	20
4,501 – 5,000	12	11	1	5	7	12
5,001 – 5,500	14	14	0	6	8	14
5,501 – 6,000	10	9	1	4	6	10
6,001 – 6,500	15	15	0	2	13	15
6,501 – 7,000	9	9	0	5	4	9
7,001 – 7,500	3	3	0	0	3	3
7,501 – 8,000	6	6	0	0	6	6
8,001 – 8,500	1	1	0	0	1	1
8,501 – 9,000	1	1	0	0	1	1
9,001 – 9,500	1	1	0	0	1	1
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	0	0	0	0	0	0
13,501 – 14,000	0	0	0	0	0	0
14,001 – 14,500	1	1	0	0	1	1
14,501 – 15,000	0	0	0	0	0	0
Over $15,000	0	0	0	0	0	0
Totals	**271**	**190**	**81**	**161**	**110**	**271**

Type of Pension Benefit

1. *Regular Retirement*
2. *Survivor Payment*

Form of Benefit

1. *Whole Life Annuity*
2. *Joint and Contingent Annuity*
3. *Temporary Annuity*

Schedule of Average Benefit Payments - Pension Benefits

		Years of Credited Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30+
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	$924	$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
2018	Average Monthly Pension	$449	$1,417	$1,062	$0	$2,968	$4,555	$4,562
	Average Monthly Final Average Salary	$7,589	$10,124	$4,330	$0	$5,464	$6,331	$5,868
	Number of New Retirees	2	1	5	0	3	8	7
2019	Average Monthly Pension	$490	$999	$1,227	$2,465	$2,835	$4,386	$3,589
	Average Monthly Final Average Salary	$8,159	$7,579	$5,703	$5,881	$4,638	$6,129	$4,507
	Number of New Retirees	1	3	5	1	1	2	5

Schedule of Average Benefit Payments - Postemployment Healthcare

		Years of Credited Service						
		0-4	5-9	10-14	15-19	20-24	25-29	30+
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
2018	Average Monthly Pension	$0	$0	$918	$0	$3,670	$5,077	$4,787
	Average Monthly Final Average Salary	$0	$0	$3,616	$0	$5,450	$7,165	$6,124
	Number of New Retirees	0	0	1	0	2	4	4
2019	Average Monthly Pension	$0	$1,580	$1,627	$2,024	$2,835	$4,386	$3,731
	Average Monthly Final Average Salary	$0	$9,782	$5,087	$4,142	$4,638	$6,129	$4,664
	Number of New Retirees	0	1	2	1	1	2	4

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Additional Schedules Required by Employer

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

Year Ended December 31,	Investment Rate of Return (Net of Fees)
2010	13.1%
2011	1.1%
2012	13.8%
2013	17.5%
2014	7.1%
2015	1.5%
2016	5.7%
2017	16.6%
2018	-4.3%
2019	18.6%

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

Year Ended December 31,	Actuarial Value of Assets	Fair Value of Assets	Actuarial Value as a Percentage of Fair Value
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%
2018	202,894,946	190,398,076	106.6%
2019	203,486,292	211,687,354	96.1%

Schedule of Employer Contributions -
Pension And Postemployment Healthcare Benefits Combined

Year Ended December 31,	Actuarially Required Contribution (ARC)	Tax Levy Requested	Actual Employer Contribution	Percentage of ARC Contributed
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	14,822,154	3,438,713	3,391,381	22.9%
2017	13,547,803	3,602,993	3,544,707	26.2%
2018	13,913,427	4,139,266	4,087,391	29.4%
2019	13,169,170	4,290,290	4,299,140	32.6%

Additional Schedules Required by Employer (continued)

Schedule of Financial Condition - Pension and Postemployment Healthcare Benefits Combined

For year ended December 31, 2019, with comparative totals for 9 years

	2019	2018	2017	2016	2015
Beginning Net Position (Fair Value)	$ 190,398,076	$ 210,370,946	$ 191,202,398	$ 192,322,370	$ 201,309,174
Additions:					
Employer contributions	4,299,140	4,087,391	3,544,707	3,391,381	3,462,037
Employee contributions	3,020,322	3,127,980	3,300,222	3,184,051	2,771,533
Annuitant Health Benefit Contributions	- *	- *	- *	1,177,887	1,134,920
Net investment income (loss)	33,653,650	(8,422,851)	30,500,015	10,477,792	2,549,975
Other	814,335	946,166	595,665	317,217	240,278
Total additions	41,787,447	(261,314)	37,940,609	18,548,328	10,158,743
Deductions:					
Benefits	19,251,286	18,286,045	18,002,969	18,636,138	18,347,316
Refunds	840,125	1,083,510	554,417	740,586	635,908
Employee transfers to (from) Cook County	252,406	182,512	54,257	133,999	18,370
Administrative Expenses	154,352	159,489	160,418	157,577	143,953
Total deductions	20,498,169	19,711,556	18,772,061	19,668,300	19,145,547
Ending Net Position (Fair Value)	$ 211,687,354	$ 190,398,076	$ 210,370,946	$ 191,202,398	$ 192,322,370
Actuarial Value of Assets	203,486,292	202,894,946	204,273,172	198,244,885	193,729,043
Actuarial Accrued Liabilities (AAL)	343,422,342	336,684,911	330,912,840	330,207,622	322,764,141
Unfunded AAL (UAAL) (Fair Value)	131,734,988	146,286,835	120,541,894	139,005,224	130,441,771
Unfunded AAL (UAAL) (Actuarial Value)	139,936,050	133,789,965	126,639,668	131,962,737	129,035,098
Funded Ratio (Fair Value)	61.6%	56.6%	63.6%	57.9%	59.6%
Funded Ratio (Actuarial Value)	59.3%	60.3%	61.7%	60.0%	60.0%

* Beginning 2017, the annuitants Healthcare contribution is netted against Healthcare benefits expense.

Schedule of Financial Condition - Pension and Postemployment Healthcare Benefits Combined

For year ended December 31, 2019, with comparative totals for 9 years

	2014	2013	2012	2011	2010
Beginning Net Position (Fair Value)	$ 199,740,742	$ 180,287,412	$ 167,995,703	$ 173,898,700	$ 162,057,788
Additions:					
Employer contributions	3,136,752	2,863,145	3,108,976	3,255,609	2,660,034
Employee contributions	2,645,164	2,687,211	2,426,776	2,289,027	2,452,696
Annuitant Health Benefit Contributions	1,193,549	1,190,706	1,127,026	1,120,842	984,039
Net investment income (loss)	13,525,606	30,383,512	22,209,855	2,021,094	20,250,639
Other	204,853	159,383	212,447	512,709	227,553
Total additions	20,705,924	37,283,957	29,085,080	9,199,281	26,574,961
Deductions:					
Benefits	17,858,418	16,858,913	15,287,183	14,723,330	14,027,446
Refunds	961,637	958,707	1,188,639	604,314	343,863
Employee transfers to (from) Cook County	175,370	(106,012)	205,887	(328,586)	257,975
Administrative Expenses	142,067	119,019	111,662	103,220	104,765
Total deductions	19,137,492	17,830,627	16,793,371	15,102,278	14,734,049
Ending Net Position (Fair Value)	$ 201,309,174	$ 199,740,742	$ 180,287,412	$ 167,995,703	$ 173,898,700
Actuarial Value of Assets	189,917,999	182,554,587	172,566,956	178,126,063	184,077,516
Actuarial Accrued Liabilities (AAL)	315,234,847	306,919,270	304,451,002	289,321,074	282,391,153
Unfunded AAL (UAAL) (Fair Value)	113,925,673	107,178,528	124,163,590	121,325,371	108,492,453
Unfunded AAL (UAAL) (Actuarial Value)	125,316,848	124,364,683	131,884,046	111,195,011	98,313,637
Funded Ratio (Fair Value)	63.9%	65.1%	59.2%	58.1%	61.6%
Funded Ratio (Actuarial Value)	60.2%	59.5%	56.7%	61.6%	65.2%

Additional Schedules Required by Employer (continued)

Schedule of Funding Progress - Pension and Postemployment Healthcare Benefits Combined

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)*	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
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
2018	336,684,911	202,894,946	190,398,076	133,789,965
2019	343,422,342	203,486,292	211,687,354	139,936,050

Schedule of Funding Progress - Pension Benefits

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)*	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
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
2018	313,013,137	202,894,946	190,398,076	110,118,191
2019	319,710,584	203,486,292	211,687,354	116,224,292

**These amounts are determined using the assumed discount rate for the actuarial funding calculations. These discount rates differ from the GASB accounting rates assumptions utilized in the AAL detailed in the OPEB tables on pages 156 and 157.*

Schedule of Funding Progress - Pension and Postemployment Healthcare Benefits Combined (continued)

Unfunded AAL (UAAL) (Fair Value)	Funded Ratio (Actuarial Value)	Funded Ratio (Fair Value)	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$ 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%
146,286,835	60.3%	56.6%	34,071,319	392.7%	429.4%
131,734,988	59.3%	61.6%	35,056,459	399.2%	375.8%

Schedule of Funding Progress - Pension Benefits (continued)

Unfunded AAL (UAAL) (Fair Value)	Funded Ratio (Actuarial Value)	Funded Ratio (Fair Value)	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$ 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%
122,615,061	64.8%	60.8%	34,071,319	323.2%	359.9%
108,023,230	63.6%	66.2%	35,056,459	331.5%	308.1%

Additional Schedules Required by Employer (continued)

Schedule of Funding Progress - Postemployment Healthcare

Year Ended December 31,	Actuarial Accrued Liabilities (AAL)	Actuarial Value of Assets	Fair Value of Net Position	Unfunded AAL (UAAL) (Actuarial Value)
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
2018	35,850,239	-	-	35,850,239
2019	43,728,394	-	-	43,728,394

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

Year Ended December 31,	Salary Increase Higher / (Lower) than Assumed	Investment Returns (Higher) / Lower than Assumed	Employer Contributions Higher / (Lower) than Normal Cost Plus Interest	Legislative Amendments
2010	$ (3,394,112)	$ 9,729,368	$ 7,483,382	$ -
2011	(3,690,231)	11,541,394	7,734,557	-
2012	1,939,324	8,635,210	5,369,563	-
2013	(2,208,899)	(17,264,428)	10,855,083	-
2014	(2,333,548)	(6,069,280)	9,597,999	-
2015	(2,503,098)	(1,528,781)	9,379,058	-
2016	2,722,397	(2,010,983)	9,799,700	-
2017	1,473,961	(2,908,636)	10,005,461	-
2018	(2,525,529)	4,226,650	8,609,423	-
2019	(1,647,459)	1,313,800	7,772,328	-

Schedule of Funding Progress - Postemployment Healthcare (continued)

Unfunded AAL (UAAL) (Fair Value)	Funded Ratio (Actuarial Value)	Funded Ratio (Fair Value)	Covered Payroll	UAAL as a Percentage of Covered Payroll (Actuarial Value)	UAAL as a Percentage of Covered Payroll (Fair Value)
$ 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%
35,850,239	0.0%	0.0%	34,071,319	105.2%	105.2%
43,728,394	0.0%	0.0%	35,058,531	124.7%	124.7%

Schedule of Components of Change in Unfunded AAL - Pension Benefits and Postemployment Healthcare Combined (continued)

Changes in Actuarial Assumptions	Plan Changes	Other Sources (1)	Total Change in Unfunded AAL
$ -	$ -	$ (1,140,818)	$ 12,677,820
-	-	(2,704,346)	12,881,374
-	-	4,744,938	20,689,035
-	-	1,098,881	(7,519,363)
-	-	(243,006)	952,165
-	-	(1,628,929)	3,718,250
-	-	(7,583,475)	2,927,639
(8,134,544)	(1,124,460)	(4,634,851)	(5,323,069)
(921,732)	(3,271,394)	1,032,879	7,150,297
224,927	(1,496,622)	(20,889)	6,146,085

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

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