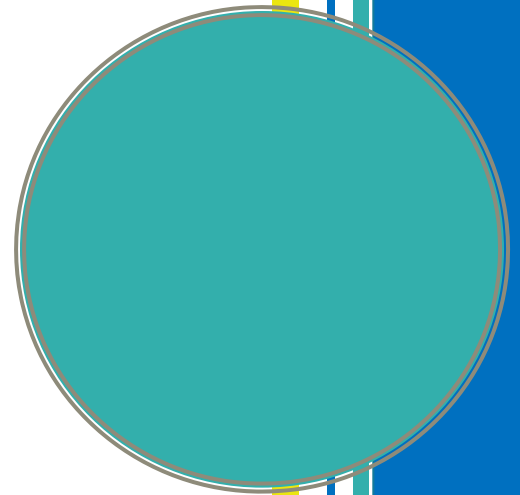




The Employees' Retirement System
A Blended Component Unit of
The Maryland-National Capital Park and Planning Commission

Comprehensive Annual Financial Report

For Fiscal Years Ended June 30, 2016 and June 30, 2015



Comprehensive Annual Financial Report

For Fiscal Years Ended June 30, 2016 and June 30, 2015



Prepared by the Employees' Retirement System
A Blended Component Unit of
The Maryland-National Capital Park and Planning Commission
6611 Kenilworth Avenue, Suite 100
Riverdale, Maryland 20737

MISSION STATEMENT

The Mission of the Maryland-National Capital Park and Planning Commission Employees' Retirement System (ERS) is to prudently manage, protect, diversify, and administer the funds for the sole benefit of the members and beneficiaries to ensure sufficient assets are available to pay the promised benefits.

OUR CORE VALUES

Quality Customer Service

•

Accountability and Transparency

•

Professionalism and Respect

•

Trustworthiness and Stewardship

Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2016 and June 30, 2015

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INTRODUCTORY
Section

LETTER OF TRANSMITTAL



EMPLOYEES' RETIREMENT SYSTEM
The Maryland-National Capital Park and Planning Commission
6611 Kenilworth Avenue, Suite 100
Riverdale, Maryland 20737

(301) 454-1415 - Telephone
(301) 454-1413 - Facsimile
<http://ers.mnccppc.org>

Andrea L. Rose
Administrator

September 30, 2016

The Board of Trustees:

The Maryland-National Capital Park and Planning Commission ("Commission") Employees' Retirement System's (ERS) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2016 is hereby submitted. The responsibility for the accuracy of the data and completeness and fairness of the presentation, including disclosures, rests with the ERS' staff. We believe all data in the report is accurate in all material respects, and is reported in a manner designed to present fairly the financial position and results of the operation of the ERS. All disclosures necessary to enable the reader to gain an understanding of the ERS' financial activities are included.

Management's Discussion and Analysis immediately follows the Report of Independent Public Accountants and provides a narrative introduction with an overview of the basic financial statements. Management's Discussion and Analysis complements this letter of transmittal and is suggested to be read in conjunction with this letter.

This CAFR has been prepared in accordance with the principles of governmental accounting and reporting promulgated by the Governmental Accounting Standards Board (GASB). The accrual basis of accounting has been used to record assets, liabilities, additions and deductions. Revenues are recorded when earned, regardless of the date of collection, and expenses are recorded when incurred, regardless of when payment is made. The independent public accounting firm of SB & Company, LLC was selected to conduct the ERS' audit. I am pleased to advise, the auditors issued an unmodified opinion, the highest possible outcome of the audit process.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting for the ERS' CAFR for the fiscal year ended June 30, 2015. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting and its attainment represents a significant accomplishment. We believe our CAFR continues to conform to the Certificate of Achievement program requirements and we will be submitting our CAFR for the current year to the GFOA.

The Public Pension Coordinating Council (PPCC) recognizes public pension systems that meet the professional standards for public retirement system management and administration as set forth by the PPCC. The ERS was awarded the Public Pension Standards Award for Funding and Administration for 2015. The Award recognizes achievement of high professional standards in the area of plan funding and administration. The PPCC encourages all state and local governments to meet these standards.

Reporting Entity and Plan History

The ERS covers employees of the Commission, a body corporate of the State of Maryland, established by the Maryland General Assembly in 1927. The Commission is the bi-county agency empowered to acquire, develop, and administer a regional system of parks in the defined Metropolitan District, and to prepare and administer a general plan for the physical development of a defined Regional District for Montgomery and Prince George's Counties. The ERS was established as a single employer defined benefit pension plan effective July 1, 1972, in accordance with the Trust Agreement between the Commission and the Board of Trustees ("Board"). Prior to that date, Commission employees were covered under Maryland's State Retirement System. Employees who were covered by the State Retirement System were given the option of remaining with that System or transferring to the ERS' Plan. Revisions to the Social Security tax structure and other fiscal considerations made it prudent to develop a new retirement plan, based on the principle of Social Security excess. Therefore, effective January 1, 1979, the Plan became the Maryland-National Capital Park and Planning Commission Employees' Retirement System, encompassing three defined benefit plans: Plan A, the original plan; Plan B, for non-police, integrated with Social Security; and Plan C, only for Park Police. Commission Park Police are not covered by Social Security.

On July 1, 1990, a collectively bargained Plan D replaced Plan C, which was closed, and all members transferred to the new Park Police Plan D. Effective July 1, 1993, again as a result of collective bargaining with the Park Police union, Plan D was closed to new employees, and Plan C was amended and reopened to provide benefits for Park Police Officers hired after July 1, 1993. Pursuant to a 2002 collective bargaining agreement, Plan D members were given a one-time election to transfer to Plan C on or before October 25, 2002.

Faced with continued fiscal challenges, the Commission approved a new defined benefit plan designated as Plan E for all non-police employees, Commissioners and appointed officials hired on or after January 1, 2013. Therefore, effective December 31, 2012 Plan B was closed to new employees.

Today, the ERS consists of five defined benefit pension plans: Plan A, the original plan; Plan B, for non-police, Plans C and D, for park police; and, Plan E, for non-police and appointed officials hired on or after January 1, 2013.

The administrative operations of the ERS are the responsibility of the Administrator and Staff employed by the Board. The Plan Document establishes all benefit provisions. The Commission reserves the right to amend the provisions of the ERS, consistent with the Trust Agreement, provided that no amendments may adversely affect the benefits that have accrued prior to the effective date of such amendment, except as may be legally required to continue to qualify the ERS under section 401(a) of the Internal Revenue Code, or any successor thereto of similar importance.

Benefits and Services Provided

The ERS provides normal and early retirement benefits, spouse and children survivor benefits, ordinary death benefits, and post-retirement death benefits for members of the ERS. Disability retirement benefits were prospectively removed in August 1982, with income replacement provided to employees through a long-term disability (LTD) insurance program administered by the Commission. Members on LTD receive free credited service until their normal retirement date. Annual cost-of-living adjustments are provided for ERS annuitants. The ERS has a comprehensive membership education program which includes on-site workshops and one-on-one counseling. In accordance with the Uniform Management of Public Employees Retirement Systems Act, the ERS provides Annual Benefit Statements that project benefits at normal retirement; a Popular Annual Financial Report, which contains a summary of key financial and actuarial information; and a Summary Plan Description,

which describes the provisions and benefits of the ERS. The ERS communicates with members via *LifeTimes*, which is published monthly in the Commission's Update newsletter. One-on-one counseling is available to all active members to discuss benefits and retirement options. Employees are encouraged to take advantage of a retirement counseling session, which is provided for all those retiring from the Commission. The session includes a review of retirement benefits, options, and assistance is provided in completing the necessary paperwork in order to begin benefits. Information can also be accessed via the ERS' website, <http://ers.mncppc.org>.

Investment Results

For the year ended June 30, 2016, the ERS fund had a negative return of -0.3% versus its policy benchmark of 1.0%. The ERS fund return was 4.9% for the three-years ended June 30, 2016 and 5.7% for the five-years ended June 30, 2016 versus the policy index which returned 5.5% and 6.1%, respectively. Refer to the Investment Consultant's Report on page 51 for a market overview with investment results by asset class and a portfolio review highlighting the ERS' restructuring activities.

Initiatives & Accomplishments

An Actuarial Assumption Review and Experience Study (the "Study") was completed this year. The Study reviewed the actual experience versus the actuarial assumptions of the ERS' economic and demographic experience over a five-year period ending June 30, 2015. The economic assumptions include inflation, wage growth and salary increases, investment return and retiree cost-of-living adjustments. These assumptions are interconnected and based on long-term expectations. The national trend has been a decrease in each of these assumptions. The demographic assumptions include mortality/life expectancy, observed rates of retirement, withdrawal, termination, disability and death. The Board approved changes to the majority of assumptions which will be reflected in the July 1, 2016 actuarial valuation.

The ERS has a favorable determination letter from the Internal Revenue Service and continues to be considered qualified and entitled to be treated as a governmental plan under Section 414(d) of the Internal Revenue Code.

Additional initiatives and accomplishments for FY2016 include initial approval of a \$90 million custom real assets strategy; approval of a \$45 million private equity commitment; approval of the addition of a 10% global infrastructure allocation to the State Street Global Advisors Custom Real Asset Strategy; and the search and selection of a new auditor. An asset liability analysis was conducted; however, the Board approved maintaining the current asset allocation policy.

Internal Controls

It is the responsibility of management to develop and maintain systems of internal controls, which are designed to provide reasonable, but not absolute, assurances for the safeguarding of assets and the reliability of financial records. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits derived and the valuation of costs and benefits requires estimates and judgments by management. Controls are also put in place to limit the risk of collusion. However, it should be recognized that all internal controls have inherent limitations.

The Trust Agreement requires an annual accounting of the ERS' operation and activities and that the results of this analysis be reported to the Commission. The ERS' Independent Public Accountants' unqualified opinion is the highest possible result of the audit process and their report on the basic financial statements is included in the CAFR on pages 16-17.

Annually, the Board prepares and presents an operating budget setting forth projected expenditures for the operation of the ERS for the Commission's review and approval. The Board also prepares certain projected expenses, including banking, investment consulting and investment manager fees for the Commission's information. The Board monitors closely the fees and expenses from consultants and professional advisors to ensure comparability to other public funds of the ERS' size and complexity. Although there is no formal restriction or budget guideline imposed by parties outside the Board, the Board is sensitive to the limitations imposed on the Commission by the two counties.

The revenues necessary to finance retirement benefits are accumulated through employee and employer contributions, and income on investments. The Board establishes investment objectives and policies, determines appropriate asset allocation strategies, selects investment managers for appointment by the Commission, and evaluates investment performance. The ERS' investments are diversified, recognizing that a prudent policy preserves assets and maximizes earnings with appropriate risk, to provide asset growth consistent with long-term needs. For 2016 and 2015, the (loss) and income, including investment expense, were (\$4,851,526) and \$3,340,520, respectively. Total contributions decreased slightly from \$34,489,708 in 2015 to \$33,609,459 in 2016. The decrease can be attributed primarily to a decrease in the employer contribution. Total deductions increased by 5.8% from \$41,970,189 in 2015 to \$44,415,135 in 2016. Pension benefits and refunds account for \$42,718,801 and the remainder of \$1,696,334 was attributed to administrative expenses (see page 22).

Funding Status

The ultimate test for a retirement system is the level of funding achieved. The better the level of funding, the larger the ratio of assets accumulated to pay liabilities and the greater the level of investment income potential. The Schedule of Funding Progress directly illustrates the financial stability of the ERS and presents a standardized measure of projected plan liabilities (see page 70). This measure allows the reader to assess the funding status of the ERS on a going concern basis, and to assess progress made in accumulating sufficient assets to pay benefits when due. The measure is the actuarial present value of credited projected benefits and independent of the funding method used to determine contributions. An actuarial valuation performed as of July 1, 2015, indicated that the funded ratio of the actuarial value of assets to the actuarial accrued liability for benefits was 93.5%. As of July 1, 2015, the actuarial value of assets was \$830,052,104 and the actuarial accrued liability is \$887,487,374.

Acknowledgments

The preparation of this CAFR reflects combined efforts of the ERS' staff. Special recognition is extended to Sheila Joynes for her lead role. This CAFR is intended to provide complete and reliable information as a basis for making management decisions, determining compliance with legal provisions, and for determining responsible stewardship for the assets contributed by the members of the Commission. I thank the Board, Staff, consultants and service providers who have worked so diligently to assure the successful operation of the ERS.

Respectfully Submitted,



Andrea L. Rose
Administrator



Government Finance Officers Association

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

Presented to

**The Maryland-National Capital Park
and Planning Commission
Employees' Retirement System**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2015

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2015***

Presented to

***The Maryland-National Capital Park and Planning
Commission Employees' Retirement System***

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink, reading 'Alan H. Winkle'. The signature is written in a cursive, flowing style.

Alan H. Winkle
Program Administrator

BOARD OF TRUSTEES

Elizabeth M. Hewlett, Chairman

Prince George's County Commissioner
Term expires: 6/30/2019

Marye Wells-Harley, Vice Chairman

Montgomery County Commissioner
Term expires: 6/30/2017

Khalid Afzal

Montgomery County Open Trustee
Term expires: 6/30/2018

Patricia Colihan Barney, CPA

Executive Director
Ex-Officio

Sheila Morgan-Johnson

Prince George's County Public Member
Term expires: 6/30/2017

Alicia J. Hart

Prince George's County Open Trustee
Term expires: 6/30/2018

Amy Millar

MCGEO Represented Trustee
Term expires: 6/30/2019

Howard Brown

FOP Represented Trustee
Term expires: 6/30/2019

Pamela F. Gogol

Montgomery County Public Member
Term expires: 6/30/2017

Barbara Walsh

Bi-County Open Trustee
Term expires: 6/30/2017

Joseph C. Zimmerman, CPA

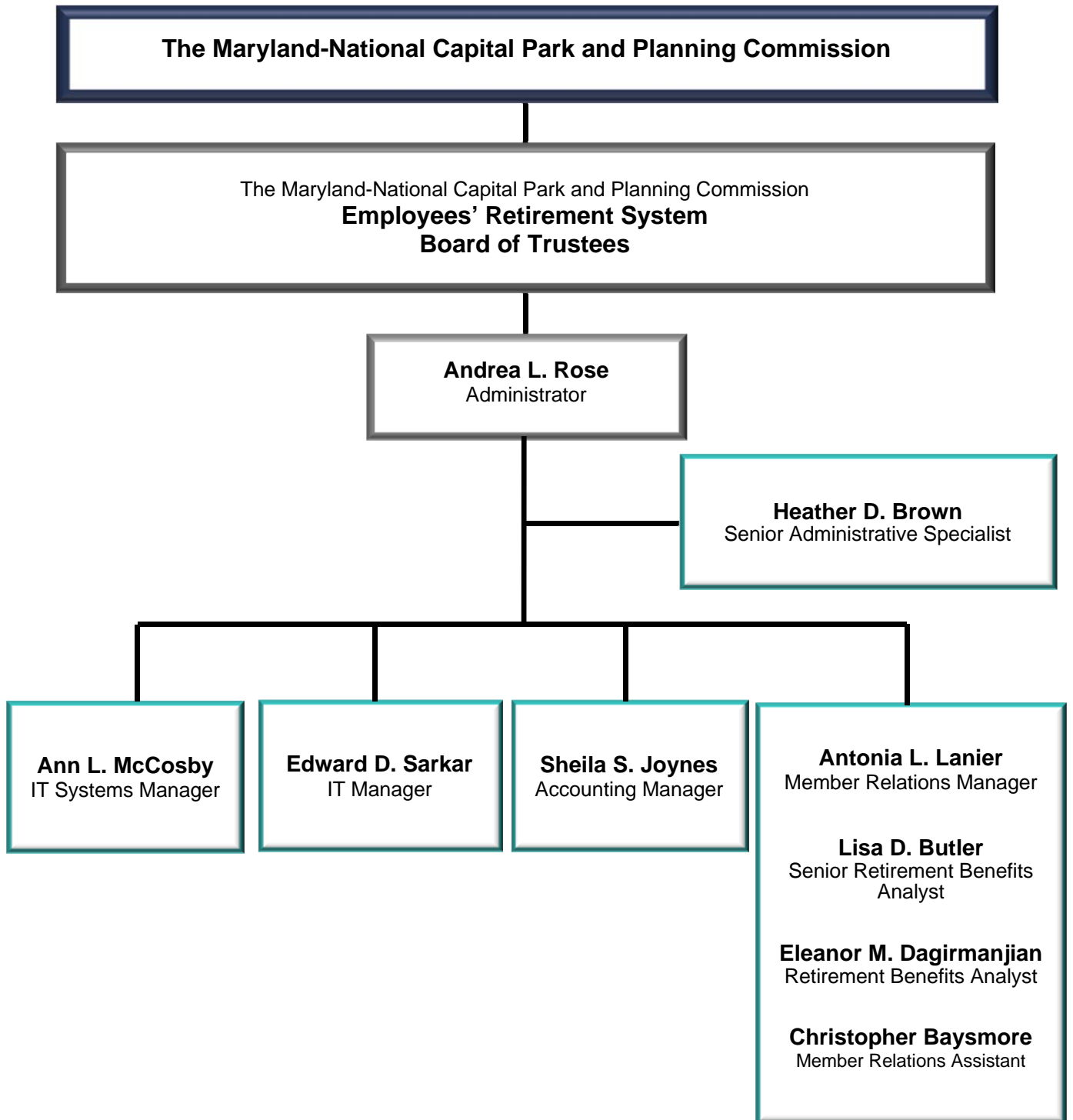
Secretary-Treasurer
Ex-Officio

The Board consists of 11 appointed and elected members as adopted by the Commission on July 24, 2001:

- Two Commissioners, one each from Montgomery and Prince George's counties, appointed by the Commission.
- The Commission's Executive Director, Ex-Officio, concurrent with tenure in office.
- The Commission's Secretary-Treasurer, Ex-Officio, concurrent with tenure in office.
- Three Open Trustees, one each from Montgomery and Prince George's counties and one from the Bi-County office (effective July 2003), as a result of an election conducted by the ERS.
- Two Public Members, one each from Montgomery and Prince George's counties, appointed by the Commission.
- Two Represented Trustees, one each from the Municipal and County Government Employees' Organization (MCGEO) and the Fraternal Order of Police (FOP). The MCGEO Representative is selected by the Chief Executive Officer of MCGEO and the FOP Representative is selected pursuant to an internal election process established by the FOP. Represented trustees continue in office until replaced by their successors.

Trustees serve for three-year terms. Trustees elect a chairman and vice chairman to serve for a two-year term. Generally, the Board meets on the first Tuesday of every month, except for August. Board meetings are open to all employees and members of the public. Members of the Board may be contacted in writing through the ERS. Announcements regarding the Board of Trustees are posted on the ERS' website <http://ers.mncppc.org> and in the Commission's monthly newsletter, *Update*.

ORGANIZATIONAL & REPORTING STRUCTURE



STAFF, CONSULTANTS & PROFESSIONAL SERVICE PROVIDERS

STAFF

Andrea L. Rose

Administrator

Heather D. Brown

Senior Administrative Specialist

Member Relations

Antonia L. Lanier

Member Relations Manager

Lisa D. Butler

Senior Retirement Benefits Analyst

Eleanor M. Dagirmanjian

Retirement Benefits Analyst

Christopher Baysmore

Member Relations Assistant

Technical and Accounting Services

Sheila S. Joynes

Accounting Manager

Ann L. McCosby

IT Systems Manager

Edward D. Sarkar

IT Manager

CONSULTANTS & PROFESSIONAL SERVICE PROVIDERS

Actuary

Boomershine Consulting Group, L.L.C.

Auditor

SB & Company, LLC

Banking

The Northern Trust Company
Bank of America

Investment Consultant

Wilshire Associates, Inc.

Legal

GROOM Law Group
M-NCPPC Legal Department
Robbins Geller Rudman & Dowd, LLP

Note: For the Investment Manager Directory see page 50 and for the Schedule of Broker Commissions see page 60.

Staff and Board members can be contacted at:

Employees' Retirement System
The Maryland-National Capital Park and Planning Commission
6611 Kenilworth Avenue, Suite 100
Riverdale, Maryland 20737
Telephone (301) 454-1415
Fax (301) 454-1413
<http://ers.mncppc.org>

Hours of Service
Monday-Friday
8 a.m. to 5 p.m.



FINANCIAL
Section

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS



S B & COMPANY, LLC
KNOWLEDGE • QUALITY • CLIENT SERVICE

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Trustees

The Maryland National Capital Park and Planning Commission Employees' Retirement System

Report on the Financial Statements

We have audited the accompanying financial statements of The Maryland-National Capital Park and Planning Commission Employees' Retirement System (the System), as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on the 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 entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the System, as of June 30, 2016, and the respective changes in plan net position for the year then ended, in accordance with accounting principles generally accepted in the United States of America.



Other Matters

2015 Financial Statements

The financial statements of the System as of and for the year ended June 30, 2015, were audited by another auditor who expressed an unmodified opinion on those statements on October 16, 2015.

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 Net Pension Liability and Related Ratios, Schedule of Employers' Contributions, Schedule of Money-Weighted Rate of Returns, and Notes to Required Supplementary Information 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 inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedule of administrative expenses, schedule of investment expenses, and schedule of payments to consultants, the introductory section, investment section, actuarial section, and statistical section, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedule of administrative expenses, schedule of investment expenses, and schedule of payments to consultants are 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 basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information as listed in the previous paragraph is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory section, investment section, actuarial section, and statistical section have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Hunt Valley, MD
September 26, 2016

MANAGEMENT'S DISCUSSION & ANALYSIS

This section of the Report provides readers with a narrative overview and analysis of the financial activities of the Maryland-National Capital Park and Planning Commission Employees' Retirement System (ERS) for the fiscal years ended June 30, 2016, 2015 and 2014. We encourage readers to consider the information presented here in conjunction with basic financial statements to enhance their understanding of the ERS' financial performance.

FINANCIAL HIGHLIGHTS

- The ERS' assets exceeded liabilities by \$776.3 million and \$792 million as of June 30, 2016 and 2015, respectively. Of this amount, \$776.3 million and \$792 million may be used to meet the obligations of current and future retirees and beneficiaries. During 2016 total fiduciary net position held in trust for pension benefits decreased by (\$15.7) million (2.0%) due to investment losses and increased benefit payments and 2015 decreased by (\$4.1) million (.5%) also due to investment losses and increased benefit payments.
- The ERS' Net Pension Liability as of June 30, 2016 is \$147,835,489. The ratio of the Fiduciary Net Position to the Total Pension Liability is 84.0%.

OVERVIEW OF THE FINANCIAL STATEMENTS

Management's Discussion & Analysis is intended to serve as an introduction to the ERS' basic financial statements. The basic financial statements contain two components: the ERS' Financial Statements and the Notes to the Financial Statements. In addition to the basic financial statements, this report also contains a Schedule of Changes in Net Pension Liability and Related Ratios, a Schedule of Employer Contributions, and a Schedule of Money-Weighted Rate of Returns which are additional supplementary information required by the Governmental Accounting Standards Board.

The Statements of Fiduciary Net Position presents information on all of the ERS' assets and liabilities, with the difference between the two reported as net position restricted for pensions. Over time, increases or decreases in net position may serve as a useful indicator of whether the ERS' financial position is improving or deteriorating.

The Statements of Changes in Fiduciary Net Position presents information showing how the ERS' net position changed during the fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, additions to and deductions from net position are reported in the statements for some items that will only result in cash flows in future fiscal periods (e.g. unrealized gains or losses on investments).

The Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

The Schedules of Changes in Net Pension Liability and Related Ratios, Employer Contributions and Money-Weighted Rate of Returns present historical trend information about the ERS. This information is intended to improve financial reporting for decision making, accountability and transparency.

MANAGEMENT'S DISCUSSION & ANALYSIS

Financial Analysis of the System

Fiduciary Net Position and Changes in Fiduciary Net Position: The following table reflects the ERS' net position and changes in net position as of and for the years ended June 30, 2016, 2015 and 2014 (in thousands).

	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
Assets			
Total assets	\$ 817,691	\$ 848,205	\$ 846,644
Liabilities			
Total liabilities	41,353	56,209	50,509
Fiduciary net position restricted for pensions	\$ 776,338	\$ 791,996	\$ 796,135
	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
Changes in fiduciary net position			
Total additions, net	\$ 28,758	\$ 37,830	\$ 142,062
Total deductions, net	44,415	41,970	39,894
Net (decrease)/increase in fiduciary net position	\$ (15,657)	\$ (4,140)	\$ 102,168

Assets

The largest component of fiduciary net position is the ERS' investments. As of June 30, 2016, 2015 and 2014, cash and investments amounted to approximately \$817.0 million, \$847.0 million and \$845.3 million, respectively. In 2016 and 2015, the net decrease in fiduciary net position was as result of a net loss in fair value of investments and an increase in benefit payments. In 2014, the increase in fiduciary net position resulted primarily from a net gain from investing activities. Total receivables of \$1.0 million, \$1.2 million and \$1.4 million represent accrued income on investments and receivables of member contributions as of June 30, 2016, 2015 and 2014, respectively.

Liabilities

Liabilities are primarily comprised of amounts payable on securities lending transactions and investments payable. Securities lending liabilities amounted to approximately \$38.9 million, \$34.0 million and \$48.7 million as of June 30, 2016, 2015 and 2014, respectively. These outstanding balances are offset with cash and investments being held as collateral on securities lending transactions. Investments payable represents purchases not settled by June 30 of each year. Investments payable were approximately \$1.4 million, \$21.0 million and \$.8 million as of June 30, 2016, 2015 and 2014, respectively.

Additions

The primary sources of net additions for the ERS include member and employer contributions and investment income. The following table reflects the source and amount of additions during the fiscal years ended June 30, 2016, 2015 and 2014 (in millions):

	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>June 30, 2014</u>
Employer contributions	\$ 27.2	\$ 28.2	\$ 28.8
Member contributions	6.4	6.3	5.4
Net investment (loss)/income	(4.9)	3.3	107.9
Net Additions	\$ 28.7	\$ 37.8	\$ 142.1

MANAGEMENT'S DISCUSSION & ANALYSIS

Financial Analysis of the System (continued)

Contributions

During 2016, the actuarial recommended employer contributions to the ERS decreased from 21.8% (\$28,149,976) to 20.1% (\$27,191,305) of covered payroll. The decrease in employer contributions is due to actuarial asset value gains (from prior deferred gains), demographic gains and assumptions changes. Effective July 1, 2007, employer contributions are paid based on the prior year's valuation. The ERS uses a five-year asset smoothing method to determine the actuarial value of plan assets. During the period of July 1, 2014 through June 30, 2015, investment performance on the actuarial value of assets was 9.61%. Over the five-year period ending on the valuation date, July 1, 2015, the return on the actuarial value of assets was 6.27%.

Net Investment Income

The net investment loss for the ERS totaled (\$4.9) million in 2016, while prior years 2015 and 2014 had investment gains, totaled \$3.3 million, \$107.9 million, respectively. In 2016, the (\$4.9) million investment loss was comprised of a net depreciation in fair value of investments of (\$10.9) million, \$9.3 million in dividends and interest, \$.1 million from securities lending and \$3.3 million advisory and management fees. In 2015, the \$3.3 million investment income was comprised of a net depreciation in fair value of investments of (\$.9) million, \$7.0 million in dividends and interest, \$.1 million from securities lending and \$2.9 million advisory and management fees. In 2014, \$107.9 million in net investment income included \$9.8 million in dividends and interest income, \$.3 million in securities lending activities, and \$2.9 million in investment advisory and management fees. Generally, net investment income has varied during the three-year period due to the changes in the market.

Deductions

The deductions from the ERS include the payment of retiree and survivor benefits, participant refunds and administrative expenses. Deductions for 2016, 2015 and 2014 totaled \$44.4 million, \$42.0 million and \$39.9 million, respectively. Such amounts represent increases of 5.8% and 5.2% over 2015 and 2014, respectively. At the beginning of fiscal year 2016, eligible retirees received a 1.6% cost-of-living adjustment which contributed to the 5.8% increase in deductions from 2015 to 2016. The following table reflects the ERS' deductions by type in 2016, 2015, 2014 (in thousands):

	2016	2015	2014
Benefits	\$ 42,258	\$ 39,992	\$ 38,170
Refunds	461	391	237
Administrative expenses	1,696	1,587	1,487
Total Deductions	\$ 44,415	\$ 41,970	\$ 39,894

Request for Information

This financial report is designed to provide an overview of the ERS. Questions concerning any of the information provided in this report should be addressed to Andrea L. Rose, Administrator, Employees' Retirement System, 6611 Kenilworth Avenue, Suite 100, Riverdale, Maryland 20737.

STATEMENTS OF FIDUCIARY NET POSITION

June 30, 2016 and 2015

	2016	2015
INVESTMENTS AT FAIR VALUE (note 3)		
Fixed income securities	\$ 205,713,476	\$ 182,800,936
International fixed income securities	3,560,907	3,256,666
Venture capital/alternative investments	73,242,760	83,006,017
Corporate stock	323,720,189	358,642,751
International corporate stock	74,839,195	83,123,277
Real estate	67,750,239	62,937,508
Short term investments	29,510,641	40,043,633
Securities lending short term collateral investment pool	38,265,355	33,103,308
Total investments at fair value	<u>816,602,762</u>	<u>846,914,096</u>
 CASH	 <u>22,229</u>	 <u>66,932</u>
 RECEIVABLES		
Accounts receivable-member contributions	297,449	439,060
Accrued income on investments	717,403	769,070
Total receivables	<u>1,014,852</u>	<u>1,208,130</u>
 OTHER ASSETS		
Prepaid expenses	51,800	15,939
Total assets	<u>817,691,643</u>	<u>848,205,097</u>
 LIABILITIES		
Investments related payable	1,397,489	21,040,331
Accrued expenses	576,035	650,948
Refunds payable	509,153	560,549
Payable for securities lending collateral	38,870,542	33,957,643
Total liabilities	<u>41,353,219</u>	<u>56,209,471</u>
 FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS	 <u>\$ 776,338,424</u>	 <u>\$ 791,995,626</u>

The accompanying notes are an integral part of the financial statements.

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

For the Years Ended June 30, 2016 and 2015

	2016	2015
ADDITIONS		
Contributions (note 2)		
Employer	\$ 27,191,305	\$ 28,149,976
Employees	6,418,154	6,339,732
Total contributions	<u>33,609,459</u>	<u>34,489,708</u>
Investment income		
Interest	7,105,900	6,690,714
Dividends	2,144,205	322,090
Net depreciation in fair value of investments	(10,920,581)	(974,633)
Other	34,373	54,740
Less - investment advisory and management fees	<u>(3,344,453)</u>	<u>(2,854,345)</u>
Net (loss)/gain from investing activities	<u>(4,980,556)</u>	<u>3,238,566</u>
Securities lending activity (note 3)		
Securities lending income	204,993	117,312
Borrower rebate	7,480	49,595
Securities lending expenses:		
Less - Management fees	<u>(83,443)</u>	<u>(64,953)</u>
Net income from securities lending	<u>129,030</u>	<u>101,954</u>
Net investment (loss)/gain	<u>(4,851,526)</u>	<u>3,340,520</u>
Total additions	<u>28,757,933</u>	<u>37,830,228</u>
DEDUCTIONS		
Benefits and other payments		
Pension benefits	38,268,318	35,806,482
Disability benefits	94,423	92,936
Survivor and death benefits	3,894,944	4,092,771
Refunds of contributions	461,116	390,629
Administrative expenses (note 6)	<u>1,696,334</u>	<u>1,587,371</u>
Total deductions	<u>44,415,135</u>	<u>41,970,189</u>
NET DECREASE IN FIDUCIARY NET POSITION	<u>(15,657,202)</u>	<u>(4,139,961)</u>
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	791,995,626	796,135,587
End of year	<u>\$ 776,338,424</u>	<u>\$ 791,995,626</u>

The accompanying notes are an integral part of the financial statements.

NOTES TO FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

The Maryland-National Capital Park and Planning Commission Employees' Retirement System ("ERS"), although a legally separate entity, is considered to be a blended component unit of the Maryland-National Capital Park and Planning Commission ("Commission"). Accordingly, the financial statements of the ERS are included as a pension trust fund in the Commission's basic financial statements.

The ERS is a retirement benefit trust organized by the Commission and is a qualified retirement plan pursuant to, and within the meaning of Section 401(a) of the Internal Revenue Code of 1986. The ERS is considered a single "pension plan" for purposes of financial reporting in accordance with accounting principles generally accepted in the United States of America, as no assets are legally restricted to the payment of certain benefits.

Basis of Accounting

The financial statements of the ERS are prepared on the accrual basis of accounting under which expenses are recorded when the liability is incurred; revenues are recorded in the accounting period in which they are earned and become measurable; and investment purchases and sales are recorded as of their trade date. Employee contributions for active members are established by the plan sponsor; set forth in the ERS' plan document; and, recognized when due. Employer contributions are recognized when due pursuant to formal commitments as recommended by the actuary and approved by the plan sponsor. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

Use of Estimates

Management of the ERS has made certain estimates and assumptions relating to the reporting of assets and liabilities, and the disclosure of contingent assets and liabilities, to prepare these financial statements in conformity with accounting principles generally accepted in the United States of America. Actual results could differ from those estimates.

Fair Value

The ERS' investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller, that is, other than in a forced or liquidation sale. The investments in short-term investment funds are reported at cost plus allocated interest, which approximates fair value. The securities lending collateral pool, which is a fund operated by the securities lending agent, also is accounted for at fair value, which represents the net position of the collateral received. U.S. government obligations, corporate and foreign bonds and notes, and common and preferred stocks, are generally valued based on published market prices and quotations from national security exchanges and securities pricing services.

For alternative investments, which include venture capital, private equity and real estate investments where no readily ascertainable fair value exists, management, in consultation with the general partner and investment advisors, has determined the fair values for the individual investments based upon the partnership's most recent available financial information. Securities that are not traded on a national security exchange are valued by the asset manager or third parties based on similar sales.

The pricing services used for fixed income securities are Interactive Data Corporation by Institutional Bid Evaluation daily; international fixed income securities use the PC Bond Group or IBOXX by Institutional Mid Evaluation daily; corporate stock uses the Interactive Data Corporation as of the official close of NASDAQ daily; international corporate stock uses Telekurs by the Last Trade daily; venture capital uses the Limited Partnership by the Institutional Bid Evaluation or Valuation as Priced for US and international; and real estate uses the Investment Managers by Evaluation as priced.

Investment expenses consist of investment managers' fees and those expenses directly related to the ERS' investment operations.

NOTES TO FINANCIAL STATEMENTS

2. Organization and Plan Description

The Board of Trustees ("Board") administers the ERS in accordance with the Trust Agreement between the Commission and the Board and delegates the day-to-day operations to the Administrator. The Board's main responsibility is to administer the ERS for the sole benefit of the members and to pay the promised benefits. The assets of the ERS are invested with the objective of ensuring that sufficient funds will be available for meeting benefit payments. The Board consists of 11 appointed and elected members as follows: two Commissioners (one each from Montgomery and Prince George's counties); three employee trustees (one each from Montgomery and Prince George's counties and one from the Bi-County office); two public members (one each from Montgomery and Prince George's counties); two Represented Trustees (one MCGEO Representative and one Fraternal Order of Police Representative); and the Commission's Executive Director and Secretary-Treasurer, who serve as Ex-Officio.

The ERS consists of five contributory, single employer defined benefit pension plans sponsored by the Commission. Three of the plans, Plan A, B and D are closed to new entrants, and two, Plan C and E are open for park police and general employees, respectively. The following description of the ERS provides general information. Participants should refer to the Plan Document for more complete information.

General Employees. General employees may be members of Plans A, B, or E. Plan A, the original plan effective July 1, 1972, is applicable to all employees who enrolled on a voluntary basis as of December 31, 1978, when membership was closed. Plan B became mandatory for all new full-time career general employees effective January 1, 1979, and ERS staff hired on or after March 1, 1994. Effective January 1, 2009 membership was mandatory for part-time Merit System employees, Commissioners and Appointed Officials of the Commission. Plan B is integrated with Social Security and members vest after five years of credited service, with the exception of Commissioners and Appointed Officials who receive full and immediate vesting. Membership in Plan B closed effective December 31, 2012. Under the terms of Plans A and B, the normal retirement date for participating general employees is the first day of the month coinciding with or immediately following the date on which a participant attains age 60 with at least 5 years of credited service, or upon completion of 30 years of credited service regardless of age. Plan E became mandatory for all full-time and part-time general career employees, ERS Staff, Commissioners and Appointed Officials hired on or after January 1, 2013. Plan E is integrated with Social Security and members fully vest after ten years of credited service with the exception of Commissioners and Appointed Officials who receive full and immediate vesting. Normal retirement in Plan E is age 62 with 10 years of credited service or 30 years of credited service, regardless of age.

Park Police. Park Police may be members of Plans C or D. On July 1, 1990, a collectively bargained Plan D replaced Plan C, which was closed and all members transferred to the new Park Police Plan D. Effective July 1, 1993, again as a result of collective bargaining, Plan D was closed to new employees, and Plan C was amended and reopened to provide benefits for Park Police hired after July 1, 1993. Pursuant to a 2002 collective bargaining agreement, Plan D members were given a one-time election to transfer to Plan C on or before October 25, 2002.

The normal retirement date for Plan D members is the first day of the month coinciding with or immediately following the date on which the participant attains age 55 and has completed 5 years of credited service, or has completed 22 years of credited service, regardless of age. The normal retirement date for Plan C members is the first day of the month coinciding with or immediately following the date on which the participant attains age 55 and has completed 5 years of credited service, or has completed 25 years of credited service, regardless of age.

Benefit Payments. Benefit payments for Plans A, B, C, and D are determined by application of a benefit formula considering the average of an employee's annual base pay during the three consecutive years that produce the highest total earnings prior to retirement, and the number of years of credited service, up to 40 years for

NOTES TO FINANCIAL STATEMENTS

2. Organization and Plan Description (continued)

members of Plan A, 35 years for members of Plan B, 30 years for members of Plan C and 32 years for members of Plan D. Benefit payments in Plan E are determined by application of a benefit formula considering the average of an employee's annual base pay during the five consecutive years that produce the highest total earnings prior to retirement and credited service up to 35 years. Under certain conditions, participants may elect to take early retirement at a reduced benefit level. Joint and survivor options are also available under all the plans.

Disability. Prior to August 1, 1982, disability benefits were available under the plans. Effective August 1, 1982, applications for disability retirement benefits were discontinued. All members who were receiving disability benefits, or who applied for disability benefits prior to August 1, 1982, continue to be covered under the terms of Plans A, B, and C. All applications for disability benefits subsequent to August 1, 1982, are covered under the Commission's Long-Term Disability Insurance Plan, which is not part of the ERS.

Cost-of-Living Adjustment (COLA). On July 1 each year, retirement income for participants retired at least six months is adjusted for changes in the cost-of-living as determined by the Consumer Price Index-All Items Annual Average, Urban Index for Major U. S. Cities (CPI). Plans A, B, C and D provide COLAS at 100% of the change in the CPI up to 3%, plus half of the change in the CPI in excess of 3%, up to a 5% maximum COLA for the portion of a member's benefit attributable to credited service earned prior to July 1, 2012, including earned and unused sick leave prior to January 1, 2013. The portion of a member's benefit attributable to credited service earned after July 1, 2012, including earned and unused sick leave on and after January 1, 2013, will be subject to a maximum COLA of 2.5%. Plan E provides COLAs at 100% of the change in the CPI up to a maximum COLA of 2.5%.

Death Benefit. Effective July 9, 1986, the ERS was amended to provide a \$10,000 post-retirement death benefit to beneficiaries of current and future retired members.

Sick Leave Integration. Effective September 1, 1988, the ERS was amended to permit members to use up to a maximum of 301 days of earned and unused sick leave to meet the length of service requirements for retirement qualification.

Plan Termination. Although the Commission has not expressed any intent to terminate the Plans, it may do so at any time. In the event that the Plans are terminated, beneficiaries receiving benefits at the date of termination shall be entitled to an allocation of the remaining assets based upon the relationship of each individual's actuarial reserve to total actuarial reserves, the balance to be allocated (pro rata) to the remaining members or beneficiaries.

Membership by Plan

As of July 1, 2015, membership in the ERS was as follows:

	<u>Plan A</u> <u>(General)</u>	<u>Plan A</u> <u>(Police)</u>	<u>Plan B</u>	<u>Plan C</u>	<u>Plan D</u>	<u>Plan E</u>	<u>Total</u>
Inactive Plan Members (or their beneficiaries) Currently Receiving Benefits	320	18	833	51	101	1	1,324
Inactive Plan Members Entitled but Not Yet Receiving Benefits	-	-	249	10	1	-	260
Active Plan Members	8	-	1,580	193	10	313	2,104
Total membership	<u>328</u>	<u>18</u>	<u>2,662</u>	<u>254</u>	<u>112</u>	<u>314</u>	<u>3,688</u>

NOTES TO FINANCIAL STATEMENTS

2. Organization and Plan Description (continued)

Contributions

The Commission has agreed to make actuarially determined periodic contributions sufficient to provide the ERS with assets for payment of pension benefits. The rate for the Commission's employee group as a whole is expected to remain level as a percentage of annual covered payroll. The contribution rate is based on current service cost plus amortization of the unfunded actuarial accrued liability.

Employee contributions are established and amended by the Commission and set forth in the ERS' Plan Document. Employees participating in Plan A contribute 7% of their base pay. Park Police participating in Plans C and D contribute 9% and 8%, respectively, of their base pay. Employees participating in Plan B and E contribute 4% of their base pay up to the Social Security covered wage base and 7% and 8%, respectively, thereafter.

The total contributions to the ERS for 2016 and 2015 were \$33,609,459 and \$34,489,708 respectively. In 2016, the Commission contributed \$27,191,305 (20.14% of covered payroll of \$135,041,803). Employees contributed \$6,418,154 (4.8% of covered payroll). In 2015, the Commission contributed \$28,149,976 (21.8% of covered payroll of \$129,134,125). Employees contributed \$6,339,732 (4.9% of covered payroll). The Commission's contributions decreased 3.4% from 2015 to 2016. The decrease can be attributed primarily to actuarial asset value gains (from prior deferred gains), demographic gains and assumption changes.

3. Investments

The Board is authorized by the Trust Agreement dated July 26, 1972 and most recently amended September 16, 2009 to invest and reinvest the Trust Fund, as may be determined by the investment consultant selected by the Commission. The Board is authorized to formulate investment policies, develop investment manager guidelines and objectives, and approve the retention of qualified advisors and investment managers.

Trust Fund assets should be invested to obtain an appropriate long-term total return consistent with prudent risk taking. The Trust Fund shall be diversified across investment classes and among investment managers in order to achieve return as compensation for investment risk. The Board established target allocations for each asset class, as well as ranges of expected exposure as follows:

Asset Class	Target Exposure	Expected Range
U.S. Equities	23.00%	18%-28%
International Equities	23.00%	18%-28%
Private Equities	5.00%	0%-8%
Total Equities	51.00%	46%-56%
U.S. Core Fixed Income	10.00%	7%-13%
High Yield Fixed Income	7.50%	5%-10%
Global Opportunistic Fixed Income	7.50%	5%-10%
Bank Loans	4.00%	2%-6%
Total Fixed Income	29.00%	24%-34%
Public Real Assets	5.00%	0%-15%
Private Real Assets	15.00%	5%-20%
Total Real Assets	20.00%	10%-25%

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

The Board approved revisions to the Statement of Investment Policy ("Policy") on February 3, 2015. The Policy was revised to address the Board's responsibilities in connection with the use of swap agreements by investment managers.

Each investment manager has a set of guidelines, which contain investment objectives, and risk control provisions, which are appropriate for each manager's mission. Investment managers have discretion within the constraints of these guidelines and are subject to regular review by the Board. Investment manager assignments may be implemented with pooled vehicles. In such circumstances, the ERS may not have control with respect to the investment guidelines and objectives as they are written broadly for multiple investors. The Trust Fund has guidelines, which apply broadly to each asset class as follows:

Public Equity Guidelines (U.S. and International)

- Under normal conditions no more than 5% of the value of the U.S. and International composites should be held in cash equivalents at any time.
- The U.S. and International equity composites are expected to remain broadly diversified by economic sector, industry and individual securities at all times.
- The composites should match the asset class benchmark in terms of capitalization and growth characteristics; and be similar to the asset class benchmark in terms of risk.

Private Equity Guidelines

- The portfolio is expected to be diversified by geographic location with the following weightings: North America (approximately 50%), Europe (approximately 30%), and the Asia-Pacific region and other emerging markets (approximately 20%).
- The composite is expected to be diversified by the following investment types: buyouts, venture capital, growth equity, distressed, and special situations (private equity-like investments, such as mezzanine debt, asset-intensive assets or royalty streams and other opportunistic funds).
- Secondary fund investments and direct co-investments are permitted on an opportunistic basis with a combined maximum limit of 20%.
- Investments should be diversified by vintage year.
- No single partnership investment is expected to be more than 20% of the private equity composite. This guideline shall not apply during initial funding.

Fixed Income Guidelines

- The fixed income portfolio is structured to include exposures to the following sub-classes: core fixed income, high yield fixed income, global opportunistic fixed income and bank loans.
- The fixed income composite may have up to 20% of its value in cash equivalents at any time.
- Except for securities issued by the US Government and/or its Agencies, any single issuer is not expected to exceed 5% of the fair value of the fixed income composite at any time.
- Duration of each fixed income sub-class should typically remain with +/- 1.5 years of the sub-class benchmark.
- Credit quality for each sub-class is expected to be similar to that of the designated sub-class benchmark, as measured by a recognized rating agency (Standard & Poor's or Moody's).
- Build America Bonds issued by Montgomery County and Prince George's County are prohibited.
- Flexible global opportunistic fixed income guidelines allow manager to invest globally, seeking to add value through duration management, yield curve positioning, sector/issue selection, country market selection and currency.

Real Assets Guidelines

- The real assets portfolio includes private real assets and public real assets.
- Any un-invested portion of the private real assets allocation should remain invested in public real assets.

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Private Real Assets Guidelines

- Investments will be structured privately in the form of commingled or pooled vehicles such as limited partnerships and diversified among the following investment types: real estate, energy, mining, timber, agriculture, and infrastructure.
- The private real assets portfolio is expected to be diversified by geographic location with a minimum of 50% invested in the United States and no more than 30% invested in emerging markets.
- Investments should also be diversified by vintage year. No single partnership commitment is expected to be more than 20% of the real assets portfolio or more than 20% of the portfolio of a fund-of-funds manager.

Public Real Assets Guidelines

- Investments structured in public real assets include natural resource stocks, real estate securities (including REITs), commodities and inflation indexed bonds that are broadly diversified such that each sub-asset class may contribute to the portfolio's real return and risk profile.

Fair Value Measurements

The fair value of all invested assets, based on the fair value hierarchy, and categorized based upon the lowest level of input that was significant to the fair value measurement, were as follows:

Investments and Derivative Instruments Measured at Fair Value
(\$ in thousands)

	Fair Value 6/30/2016	Fair Value Measurements Using				Undetermined
		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						
Cash and invested cash	\$ 2,092	\$ 2,092	\$ -	\$ -	\$ -	
Short-term investment funds	2,384	2,384	-	-	-	
Debt securities						
Asset backed securities	3,980	-	3,980	-	-	
Commercial mortgage-backed	3,379	-	3,379	-	-	
Corporate bonds	26,825	-	26,825	-	-	
Government agencies	6,567	-	6,567	-	-	
Government bonds	12,633	-	12,633	-	-	
Government mortgage-backed securities	15,175	-	15,175	-	-	
Other fixed income-funds	2,733	-	2,733	-	-	
Index linked government bonds	2,642	-	2,642	-	-	
Provincial Bonds	386	-	386	-	-	
Total debt securities	<u>74,320</u>	<u>-</u>	<u>74,320</u>	<u>-</u>	<u>-</u>	
Equity investments						
Common stock	91,934	91,904	30	-	-	
Funds-common stock	16,515	-	16,515	-	-	
Equity exchange traded fund	3	3	-	-	-	
Total equity investments	<u>108,452</u>	<u>91,907</u>	<u>16,545</u>	<u>-</u>	<u>-</u>	
Securities lending short term collateral investment pool	38,265	38,265	-	-	-	
Total investments by fair value level	<u>\$ 225,513</u>	<u>\$ 134,648</u>	<u>\$ 90,865</u>	<u>\$ -</u>	<u>\$ -</u>	

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Investments Measured at the NAV

(\$ in thousands)

	2016	Unfunded	Redemption Frequency	Redemption Notice
	Fair Value	Commitments	(If Currently Eligible)	Period
Short-term investment funds	\$ 25,035	None	Monthly	1-6 days
Funds-corporate bonds	30,579	None	Monthly	7-15 days
Other fixed income-funds	104,376	None	Monthly	7-15 days
Funds-common stock	290,107	None	Monthly	7-15 days
Venture capital and partnerships	73,243	None	Monthly, Quarterly	Frequent Changes
Real estate	67,750	None	Monthly	1-15 days
Total investments measured at NAV	\$ 591,090			

Investments and Derivative Instruments Measured at Fair Value
(\$ in thousands)

	Fair Value	Fair Value Measurements Using			
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Undetermined
Investments by fair value level	Fair Value 6/30/2015				
Cash and invested cash	\$ 3,067	\$ 3,067	\$ -	\$ -	\$ -
Short-term investment funds	8,336	8,336	-	-	-
Debt securities					
Asset backed securities	4,218	-	4,218	-	-
Commercial mortgage-backed	4,200	-	4,200	-	-
Corporate bonds	24,777	-	24,777	-	-
Government agencies	7,839	-	7,839	-	-
Government bonds	13,018	-	13,018	-	-
Government mortgage-backed securities	14,714	-	14,714	-	-
Gov't-issued commercial mortgage-backed	49	-	49	-	-
Other fixed income-funds	8,798	-	8,798	-	-
Index linked government bonds	3,330	-	3,330	-	-
Provincial bonds	337	-	337	-	-
Total debt securities	<u>81,280</u>	<u>-</u>	<u>81,280</u>	<u>-</u>	<u>-</u>
Equity investments					
Common stock	81,744	81,744	-	-	-
Funds-common stock	18,421	-	18,421	-	-
Equity exchange traded fund	3	3	-	-	-
Total equity investments	<u>100,168</u>	<u>81,747</u>	<u>18,421</u>	<u>-</u>	<u>-</u>
Investments and derivative instruments					
Cash & cash equivalent derivative-options	43	-	42	1	-
Securities lending short term collateral investment pool	33,103	33,103	-	-	-
Total investments by fair value level	<u>\$ 225,997</u>	<u>\$ 126,253</u>	<u>\$ 99,743</u>	<u>\$ 1</u>	<u>\$ -</u>

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Investments Measured at the NAV

(\$ in thousands)

	2015	Unfunded	Redemption Frequency	Redemption Notice
	Fair Value	Commitments	(If Currently Eligible)	Period
Short-term investment funds	\$ 28,597	None	Monthly	1-6 days
Funds-corporate bonds	30,043	None	Monthly	7-15 days
Other fixed income-funds	74,735	None	Monthly	7-15 days
Funds-common stock	341,598	None	Monthly	7-15 days
Venture capital and partnerships	83,006	None	Monthly, Quarterly	Frequent Changes
Real estate	62,938	None	Monthly	1-15 days
Total investments measured at NAV	\$ 620,917			

Level 1 - Unadjusted quoted prices for identical instruments in active markets for identical assets or liabilities. Fair values of stocks are determined by utilizing quoted market prices.

Level 2 - Reflects measurements based on other observable inputs. Quoted prices for similar instruments in active markets; identical or similar instruments in markets that are not active; and models in which all significant inputs are observable.

Level 3 - Valuations are based on methods in which significant inputs are unobservable.

The carrying value of cash equivalents and short-term investments approximates fair value due to the short maturities of these investments.

Money-Weighted Rate of Return

For the years ended June 30, 2016 and 2015, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 0.21% and .70%, respectively for one year. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Investment Risks

The ERS has investments that are subject to various risks. Among these risks are custodial credit risk, interest rate risk, credit risk, and foreign currency risk. Each one of these risks is discussed in more detail below.

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the ERS will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the government, and are held by either a) the counterparty or b) the counterparty's trust department or agent but not in the government's name. The ERS requires that all investments be clearly marked as to ownership and to the extent possible, shall be registered in the name of the ERS.

Of the ERS' \$816.6 million in investments as of June 30, 2016, \$38.3 million were cash collateral reinvestment securities acquired by the custodian, whom is also the lending agent/counterparty. This is consistent with the ERS' securities lending agreement in place with the custodian.

For short term investments, custodial credit risk is the risk that in the event of a bank failure, the government's deposits may not be returned to it.

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

The amount of the ERS' total cash and short term investments as of June 30, 2016 and 2015 were \$29,532,870 and \$40,110,565, respectively. Cash deposits that were insured and collateralized in the bank account totaled \$22,229 and \$66,932 as of June 30, 2016 and 2015, respectively. As of June 30, 2016 and 2015, respectively, the ERS held \$29,510,641 and \$40,043,633 of short term investments in its custodial investment accounts.

As of June 30, 2016, the ERS held \$5,738 of short term investments that were exposed to custodial credit risk.

Each investment manager has duration targets and bands that control interest rate risk; however, the ERS does not have a policy relating to interest rate risk.

As of June 30, 2016, the ERS had the following fixed income investments and short term investments with the following maturities:

Investment Type	Fair Value	Weighted Average Maturity-Years
Asset-backed securities	\$ 3,979,745	5.45209
Commercial mortgage-backed	3,379,044	26.830198
Corporate bonds	57,404,283	9.422818
Government agencies	6,566,595	8.620073
Government bonds	12,632,531	9.174464
Government mortgage-backed securities	15,174,589	22.18421
Index linked government bonds	2,642,178	11.515365
Provincial bonds	386,368	23.939
Fixed income mutual funds	107,109,051	N/A
Short term investment funds	27,418,782	N/A
TOTAL	\$ 236,693,166	12.464861

As of June 30, 2015, the ERS had the following fixed income investments and short term investments with the following maturities:

Investment Type	Fair Value	Weighted Average Maturity-Years
Asset-backed securities	\$ 4,327,799	7.442397
Commercial mortgage-backed	4,089,835	28.183521
Corporate bonds	54,819,205	9.120076
Government agencies	7,838,516	10.742199
Government bonds	13,018,407	10.135437
Government mortgage-backed securities	14,745,485	22.719181
Gov't-issued commercial mortgage-backed	18,091	5.339
Index linked government bonds	3,330,212	9.639879
Provincial bonds	336,924	24.942
Fixed income mutual funds	83,533,128	N/A
Short term investment funds	36,932,802	N/A
TOTAL	\$ 222,990,404	12.166453

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Asset-backed securities (ABS) are bonds or notes backed by loan paper or accounts receivable originated by banks, credit card companies, or other providers of credit. The originator of the loan or accounts receivable paper sells it to a specially created trust, which repackages it as securities. Brokerage firms underwrite the securities and reoffer them to the public. The ERS held \$3,979,745 and \$4,327,799 in ABS as of June 30, 2016 and 2015, respectively.

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit risk of a debt instrument is measured by a nationally recognized statistical rating agency such as Standard & Poor's Services. Individual manager guidelines require investment managers to follow certain controls, documentation and risk management procedures. Managers are required to measure and monitor exposure to counterparty credit risk; however, there is no formal policy relating to a specific investment-related risk. All counterparties must have commercial paper credit ratings of at least A1 or equivalent rating.

Individual investment manager guidelines include limitations on the percentage of securities below investment grade and various types of securities including derivatives. A Derivatives Policy Statement identifies and allows common derivative investments and strategies which are consistent with the Statement of Investment Policy.

Credit Quality Ratings as of June 30, 2016:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	3.55%
Government Agencies	AA	0.80%
Government Bonds	A	0.02%
Government Bonds	BBB	0.03%
Government Bonds	NR	0.09%
Government Mortgage Backed Securities	NR	0.05%
Asset Backed Securities	AAA	0.19%
Asset Backed Securities	AA	0.04%
Asset Backed Securities	A	0.03%
Asset Backed Securities	BBB	0.04%
Asset Backed Securities	NR	0.19%
Commercial Mortgage-Backed	AAA	0.12%
Commercial Mortgage-Backed	A	0.04%
Commercial Mortgage-Backed	NR	0.26%
Corporate Bonds	AAA	0.05%
Corporate Bonds	AA	0.40%
Corporate Bonds	A	1.34%
Corporate Bonds	BBB	1.36%
Corporate Bonds	BB	0.02%
Corporate Bonds	NR	0.12%
Provincial Bonds	AA	0.05%
Other Fixed Income	NR	0.34%
Funds - Corporate Bond	NR	3.75%
Funds - Other Fixed Income	NR	12.78%
Funds - Short Term Investment	NR	3.36%

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Credit Quality Ratings as of June 30, 2015:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	3.57%
Government Agencies	AA	0.93%
Government Bonds	A	0.01%
Government Bonds	BBB	0.03%
Government Mortgage Backed Securities	AA	0.00%
Government Mortgage Backed Securities	NR	0.06%
Gov't-issued Commercial Mortgage-Backed	AA	0.00%
Asset Backed Securities	AAA	0.11%
Asset Backed Securities	AA	0.06%
Asset Backed Securities	A	0.03%
Asset Backed Securities	BBB	0.04%
Asset Backed Securities	NR	0.27%
Commercial Mortgage-Backed	AAA	0.23%
Commercial Mortgage-Backed	BBB	0.06%
Commercial Mortgage-Backed	NR	0.20%
Corporate Bonds	AAA	0.06%
Corporate Bonds	AA	0.47%
Corporate Bonds	A	1.15%
Corporate Bonds	BBB	1.15%
Corporate Bonds	NR	0.10%
Provincial Bonds	AA	0.04%
Other Fixed Income	NR	1.04%
Funds - Corporate Bond	NR	3.55%
Funds - Other Fixed Income	NR	8.82%
Funds - Short Term Investment	NR	4.36%

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

The ERS does not have a policy for foreign currency risk. Foreign currency is intentionally unhedged.

The ERS' exposure to foreign currency risk as of June 30, 2016 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	\$ 949,161
Common stock	British pound sterling	8,126,444
Common stock	Canadian dollar	1,198,788
Common stock	Czech koruna	793,990
Common stock	Euro	13,888,062
Common stock	Hong Kong dollar	935,740
Common stock	Indonesian rupiah	784,125
Common stock	Japanese yen	5,155,895
Common stock	Mexican peso	1,285,859
Common stock	New Taiwan dollar	4,063,726
Common stock	Norwegian krone	2,733,978
Common stock	Singapore dollar	1,264,641
Common stock	South Korean won	2,509,983
Common stock	Swedish krona	1,560,878
Common stock	Swiss franc	2,331,767
Common stock	Turkish lira	1,330,025
Cash	Mexican peso	5,738
Total		\$ 48,918,800

The ERS' exposure to foreign currency risk as of June 30, 2015 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	\$ 1,715,526
Common stock	British pound sterling	8,319,912
Common stock	Czech koruna	942,938
Common stock	Euro	11,655,333
Common stock	Hong Kong dollar	2,610,374
Common stock	Indonesian rupiah	704,720
Common stock	Japanese yen	7,777,837
Common stock	New Taiwan dollar	2,803,944
Common stock	Norwegian krone	4,548,798
Common stock	Singapore dollar	1,659,502
Common stock	South Korean won	3,135,323
Common stock	Swedish krona	1,841,170
Common stock	Swiss franc	2,486,694
Common stock	Turkish lira	2,114,443
Cash	Hong Kong dollar	46,971
Total		\$ 52,363,485

Note: These schedules do not agree with the total international obligations and international equities as listed on the Statements of Fiduciary Net Position due to international obligations valued in U.S. dollars but classified as international.

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

Cash Received as Securities Lending Collateral

The ERS accounts for securities lending transactions in accordance with GASB No. 28 Accounting and Financial Reporting for Securities Lending Transactions, which established standards of accounting and financial reporting for securities lending transactions.

The Board authorized the lending of fixed income securities, which activity is managed by the custodian bank. The Board authorized a securities lending loan cap of 30% effective October 6, 2010 with an increase to 50% effective February 1, 2011. There were no violations of legal or contractual provisions, and no borrower or lending agent default losses known to the securities lending agent as of June 30, 2016 and 2015.

Securities are loaned against collateral that may include cash, U.S. government securities, and irrevocable letters of credit. U.S. government securities are loaned against collateral valued at 102% of the fair value of the securities plus any accrued interest. Non-U.S. government securities are loaned against collateral valued at 105% of the fair value of the securities plus any accrued interest. Non-cash collateral cannot be pledged or sold unless the borrower defaults. Consequently, the non-cash collateral has not been reported as an asset or liability on the Statements of Fiduciary Net Position. All securities loans can be terminated on demand by either the lender or the borrower, although the average term of overall loans were approximately 161 days in 2016 and 180 days in 2015.

Cash open collateral is invested in a short term investment pool, the Northern Trust Collective Securities Lending Core Short Term Investment Fund, which had an interest sensitivity of 30 days as of this statement date. Cash collateral may also be invested separately in "term loans", in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. There are no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited to the ERS' accounts on approximately the fifteenth day of the following month.

The custodial bank's responsibilities include performing appropriate borrower and collateral investment credit analysis, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending. Loss indemnification is provided when securities are not returned due to the insolvency of a borrower and the trustee bank fails to fulfill its contractual responsibilities relating to the lending of those securities to that borrower.

The following table presents the fair values of the underlying securities, and the value of the collateral pledged as of June 30, 2016:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	\$ 11,940,812	\$ 12,152,930
Domestic equities	26,080,240	26,457,216
Global equities	244,303	260,396
Total	\$ 38,265,355	\$ 38,870,542

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

The following table presents the fair values of the underlying securities, and the value of the collateral pledged as of June 30, 2015:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	\$ 12,322,969	\$ 12,577,235
Domestic equities	16,837,814	17,177,238
Global equities	3,942,525	4,203,170
Total	\$ 33,103,308	\$ 33,957,643

*The securities collateral value is based on the ERS' pro rata share of the value of the securities collateral maintained at The Northern Trust Bank on the program wide collateralization levels.

4. Derivatives Policy Statement

A Derivatives Policy Statement identifies and allows common derivative investments and strategies, which are consistent with the Statement of Investment Policy. The guidelines identify transaction-level and portfolio-level risk control procedures and documentation requirements. Managers are required to measure and monitor exposure to counterparty credit risk. All counterparties must have commercial paper credit ratings of at least A1 or equivalent rating. The duration and other risk exposure limits specified in the managers' guidelines are expected to be satisfied on an ongoing basis. Investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures, to replicate the risk/return profile of an asset or asset class, and to tactically change country exposure. Derivative securities such as "plain vanilla" collateralized mortgage obligations (CMOs) and structured notes are allowed. CMOs which are not "plain vanilla" are restricted to 5% of a manager's portfolio. Any use of derivatives not listed above is prohibited without written approval of the Board. As of June 30, 2016 and June 30, 2015 the ERS did not hold any derivatives. Gains and losses are determined based on quoted fair values and recorded in the Statements of Changes in Fiduciary Net Position. The objective of Statement No. 53, "Accounting and Financial Reporting for Derivative Instruments" is to enhance the usefulness and comparability of derivative instrument information reported by state and local governments.

The following uses of derivatives are prohibited:

- **Leverage.** Derivatives shall not be used to magnify exposure to an asset beyond that which would be allowed by the guidelines.
- **Unrelated Speculation.** Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial variable unless such exposures would be allowed by the manager's guidelines if created with non-derivative securities.

Typically, investment advisors enter into foreign exchange contracts to make payment for international investments. Foreign exchange contracts are agreements to exchange the currency of one country for the currency of another country at an agreed-upon price and settlement date. The investment advisor uses these contracts primarily for its international investments to settle pending trades. To reduce the risk of counterparty nonperformance, the investment advisors generally enter into these contracts with institutions meeting high standards of credit worthiness. The realized and unrealized gain/loss on contracts are included in the ERS' net position and represents the fair value of the contracts on June 30, 2016 and June 30, 2015, the ERS' contracts to purchase and sell by foreign currencies were as follows:

NOTES TO FINANCIAL STATEMENTS

4. Derivatives Policy Statement (continued)

Foreign Exchange Contracts Settled as of June 30, 2016:

<u>Currency</u>	<u>Purchases</u>	<u>Realized Gain/(Loss)</u>	<u>Sells</u>	<u>Realized Gain/(Loss)</u>
Brazilian real	\$ -	\$ -	\$ (603,923)	\$ 734
British pound sterling	-	-	(503,602)	(230)
Canadian dollar	1,790,467	973	-	-
Czech koruna	-	-	(36,120)	38
Euro	4,365,035	(2,258)	(1,455,973)	(3,470)
Hong Kong dollar	70,319	(14)	(820,412)	(67)
Indonesian rupiah	-	-	(14,592)	(2)
Japanese yen	-	-	(1,064,870)	(5,084)
Mexican peso	1,192,561	(1,904)	-	-
New Taiwan dollar	1,739,347	(717)	(231,001)	(193)
Norwegian krone	-	-	(905,800)	(4,079)
Singapore dollar	-	-	(47,115)	(22)
South Korean won	-	-	(783,054)	(143)
Swedish krona	-	-	(26,162)	(75)
Swiss franc	-	-	(68,093)	(349)
Turkish lira	159,969	1,821	(795,876)	(6,077)

Foreign Exchange Contracts Settled as of June 30, 2015:

<u>Currency</u>	<u>Purchases</u>	<u>Realized Gain/(Loss)</u>	<u>Sells</u>	<u>Realized Gain/(Loss)</u>
Brazilian real	\$ 1,474,273	\$ (14)	\$ (219,143)	\$ (58)
British pound sterling	1,494,452	1,142	(2,064,728)	387
Czech koruna	-	-	(112,643)	245
Euro	1,818,115	(2,152)	(1,851,940)	7,599
Hong Kong dollar	159,499	(5)	(1,319,396)	(144)
Indonesian rupiah	873,206	-	(92,469)	(18)
Japanese yen	-	-	(705,145)	(1,213)
New Taiwan dollar	2,993,719	-	(90,110)	-
Norwegian krone	530,866	2,137	(390,131)	(1,059)
Singapore dollar	1,654,949	(3,490)	(112,076)	(131)
South Korean won	-	-	(321,648)	53
Swedish krona	-	-	(161,321)	(29)
Swiss franc	5	-	(239,562)	(682)
Turkish lira	-	-	(196,810)	1,419

Foreign Exchange Contracts Pending June 30, 2016:

<u>Currency</u>	<u>Purchases</u>	<u>Unrealized Gain/(Loss)</u>	<u>Sells</u>	<u>Unrealized Gain/(Loss)</u>
British pound sterling	\$ 1,826,609	\$ (5,758)	\$ 1,826,176	\$ 6,190

Foreign Exchange Contracts Pending June 30, 2015:

There were no foreign exchange contracts pending as of June 30, 2015.

NOTES TO FINANCIAL STATEMENTS

5. Net Pension Liability

The measurement date for implementation of GASB 67 is the ERS' fiscal year end, June 30, 2016. Plan assets (Fiduciary Net Position) are measured as of this date. The Total Pension Liability (TPL) as of this date is based on an actuarial valuation as of July 1, 2015, with adjustments made for the one year difference. Adjustments include Service Cost, Interest on Total Pension Liability, and expected benefit payments during the year. Under GASB 67, the Net Pension Liability (NPL) is established as the difference between the Total Pension Liability and the Plan Fiduciary Net Position.

The components of the net pension liability of the System as of June 30, 2016 are as follows:

	Total for ERS
Total Pension Liability	\$ 924,173,913
Plan Fiduciary Net Position	776,338,424
Net Pension Liability	<u>\$ 147,835,489</u>

Plan Fiduciary Net Position as a percentage of Total Pension Liability 84.00%

Actuarial assumptions

The total pension liability as of June 30, 2016 was determined by an actuarial valuation, using the following actuarial assumptions, applied to all periods included in the measurement:

COLA:	2.75% compounded annually for benefits accrued until July 1, 2012, 2.5% compounded annually thereafter
Inflation:	2.75%
Salary Increases:	2.75% + variable service based increases
Investment Return:	7.25%, net of investment expense and including inflation

Mortality rates were based on the RP-2000 Healthy Annuitant Mortality Table for Males or Females, as appropriate, with generational adjustments for mortality improvements based on Scale AA. An alternate table was used for the valuation of disabled members.

The actuarial assumptions used in the July 1, 2015 valuation were based on the results of an actuarial experience study for the period July 1, 2005 through June 30, 2010 with the exception of the inflation, salary and investment return assumptions which were revised since July 1, 2014 valuation. The Board agreed to annually review these economic assumptions and consider incremental adjustments. The next assumption review is scheduled for 2016.

Actuarial Cost Method

For financial reporting purposes, the July 1, 2015 actuarial valuation was performed using the Entry-Age Normal Actuarial Cost Method. The Total Pension Liability (TPL) as of this date is based on an actuarial valuation as of July 1, 2015, with adjustments rolled forward for the fiscal year-end as of June 30, 2016. Adjustments include Service Cost, Interest on Total Pension Liability, and expected benefit payments during the year.

Assumed Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each asset class, based on inputs from a survey of investment professionals. These allocations are combined to produce a long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. This is then modified through a Monte-Carlo simulation process, by which returns are simulated over a 30-year period, and a risk adjustment is applied to the baseline expected return. This method accounts for not only expected returns, but adjusts for volatility of returns by asset class as well as correlations between the different classes.

NOTES TO FINANCIAL STATEMENTS

5. Net Pension Liability (continued)

Best estimates of long-term real rates of return for each major asset class included in the pension plan's target asset allocation and the final investment return assumption, are summarized in the following table:

Asset Class	Long-Term Expected Real Return - Portfolio
Domestic Equity	5.80%
International Equity- Developed	5.90%
International Equity- Emerging	6.70%
Fixed Income & Bank Loans –U.S.	2.10%
Fixed Income – U.S. High Yield	4.00%
Fixed Income – International	2.50%
Public Real Assets	2.40%
Private Real Assets	4.10%
Private Equity	7.80%
Cash	0.80%
Total Weighted Average Real Return	4.68%
Plus Inflation	2.75%
Total Return w/o Adjustment	7.43%
Risk Adjustment	-0.18%
Total Expected Return	7.25%

Discount Rate

The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that Commission contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate.

Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members.

Therefore, the long-term expected rates of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability of the Commission, calculated using the discount rate of 7.25%, as well as what the Commission's net pension liability would be if it were calculated using a discount rate that is 1.00% lower and 1.00% higher than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
	6.25%	7.25%	8.25%
Total Pension Liability	\$ 1,044,159,076	\$ 924,173,913	\$ 817,265,033
Plan Net Position	776,338,424	776,338,424	776,338,424
Net Pension Liability	<u>\$ 267,820,652</u>	<u>\$ 147,835,489</u>	<u>\$ 40,926,609</u>
Ratio of Plan Fiduciary Net Position to Total Pension liability	74.40%	84.00%	95.00%

NOTES TO FINANCIAL STATEMENTS

6. Administrative Expenses

The Board employs an internal staff to perform all accounting and administrative services. Administrative expenses are primarily comprised of salaries and related costs, professional fees, and office expenses. In accordance with a Trust Agreement and Memorandum of Understanding between the ERS and the Commission, the administrative expenses are determined by the ERS and paid from the ERS' Trust Fund within the limits of the budget approved by the Commission. The cost of such services for the years ended June 30, 2016 and 2015 was \$1,696,334 and \$1,587,371, respectively. The administrative expenses are financed by the employer contributions.

The liability for accrued leave as of June 30, 2016 and 2015, was \$169,850 and \$157,453 respectively, and has been included in accrued expenses in the accompanying financial statements.

Administrative expenses charged to the ERS by the Commission for 2016 were: computer services of \$47,200, legal of \$64,200, rent of \$96,015, postage of \$4,079, and copier leasing costs of \$4,375. In 2015 the expenses were: computer services of \$47,200, legal of \$64,200, rent of \$86,317, postage of \$5,754, and copier leasing costs \$4,142.

7. Federal Income Taxes

The ERS obtained its latest determination letter on November 20, 2014, in which the Internal Revenue Service (IRS) stated that the ERS, as amended, is in compliance with the applicable requirements of the Internal Revenue Code and the related trust is tax exempt.

In Announcement 2015-19, the IRS announced elimination of the staggered 5-year determination letter remedial amendment cycles for individually designed plans effective January 1, 2017.

8. Retirement Contributions for ERS Employees

Effective March 1, 1994, new employees of the ERS are required to participate in the ERS. Those employees remaining in the Board established 401(a) Defined Contribution Plan ("401(a) Plan") receive an ERS contribution at the rate of 8% of base pay, and the employee contribution is at the rate of 6% of base pay.

Upon termination of employment, the amount accumulated in the 401(a) Plan shall be made available to the employee or designee, in accordance with the policies and procedures of the 401(a) Plan and in compliance with IRS regulations. The payroll for two employees covered by the 401(a) Plan for the year ended June 30, 2016 was \$270,486 and the total payroll was \$844,619. The ERS' contribution to the 401(a) Plan was \$21,694 (2.6% of covered payroll) for the year ended June 30, 2016.

The payroll for two employees covered by the 401(a) Plan for the year ended June 30, 2015 was \$261,752 and the total payroll was \$773,367. The ERS' contribution to the 401(a) Plan was \$20,035 (2.6% of covered payroll) for the year ended June 30, 2015.

The payroll for the two employees covered by the 401(a) Plan for the year ended June 30, 2014, was \$250,029 and the total payroll was \$740,519. The ERS' contribution to the 401(a) Plan was \$19,915 (2.7% of covered payroll) for the year ended June 30, 2014.

In addition, employees are eligible to participate in a Section 457 Deferred Compensation Plan. Participation is voluntary, and the ERS does not contribute to the 457 Plan. Upon termination of employment, the amount accumulated in the 457 Plan shall be made available to the employee or designee, in accordance with the policies and procedures of the 457 Plan and in compliance with IRS regulations. ERS employees electing to participate, do so in the Commission's Section 457 deferred compensation plan. The contributions made to this plan are held in trust for the exclusive benefit of participants and their beneficiaries.

NOTES TO FINANCIAL STATEMENTS

9. Other Post-employment Benefits (OPEB)

Plan Description

In addition to the pension benefits provided for the ERS, the Commission provides post-retirement health care benefits under a cost sharing plan, in accordance with Commission approval, to all full-time and part-time career employees of the ERS who have been insured under any Commission-sponsored group medical plan during the three years immediately preceding the date of retirement or ability to prove similar coverage in another plan immediately prior to retirement. These benefits are administered through a separate trust of the Commission. Currently 2 ERS retirees are participating in the Commission's medical plans. The ERS contributes 80% of the amount of medical, dental, prescription and vision insurance rates for retirees. For ERS active employees, the ERS contributes 82.5% of the amount of all medical and dental insurance rates, except for the lowest cost medical plan and the prescription plan. The cost share for the lowest cost medical plan and the prescription plan remains at 85% paid by the ERS. The ERS contributes 80% of the low vision option. Detailed information of the plan may be accessed via the Commission's CAFR.

Funding Policy

In fiscal year 2008, the Commission and plan sponsor of the ERS began phasing in over an eight year period actuarially based funding of Other Post-Employment Benefits (OPEB) in connection with the implementation of the accounting requirements of GASB Statement No. 45 "Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions". The ERS pays the contributions based on requested actuarial funding amounts from the Commission. For the years ended June 30, 2016 and 2015, the ERS contributed \$11,934 and \$11,934, respectively. The OPEB is documented as a part of the Commission's CAFR. Questions concerning the OPEB information may be addressed to the Department of Finance, Office of the Secretary-Treasurer, The Maryland-National Capital Park and Planning Commission, 6611 Kenilworth Avenue, Suite 204, Riverdale, Maryland 20737 or via the Commission's website, <http://www.mncppc.org> (See Budget/CAFR).

10. Risk Management

The ERS is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The ERS addresses these risks by purchasing workers' compensation (Maryland state mandatory limits) insurance, unemployment insurance, fiduciary liability, theft, and business owners insurance. The ERS did not pay any claims settlements in excess of insurance coverage in 2016 or 2015 nor was any insurance coverage reduced in 2016 or 2015. The ERS' employees have various options in their selection of health insurance benefits that are offered through the Commission's self-insurance program. The Commission self-insures the following medical plans: a health maintenance organization (HMO), an exclusive provider organization (EPO), a point of service (POS) as well as the prescription drug plan. All other group health insurance plans are fully insured including a dental plan and a vision plan with three coverage options.

11. Accounting Pronouncements

The GASB recently issued Statement No. 72 "Fair Value Measurement and Application". The statement addresses accounting and financial reporting related to fair value measurements of assets and liabilities. Guidance is provided around valuation techniques to measure fair value and extensive disclosures will be required around the hierarchy of inputs to valuation techniques used to measure fair value as established by the statement. Since the statement generally requires investments to be measured at fair value, the impact to the ERS' financial statements is minimal.

The investment-related notes to the combining financial statements have been changed to comply with this new standard.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB 67¹

Schedule of Changes in Net Pension Liability and Related Ratios For Years Ended June 30

	Fiscal Year		
	2016	2015	2014
Total Pension Liability			
Service Cost	\$ 18,125,110	\$ 19,015,744	\$ 16,635,683
Interest	61,280,153	64,188,829	60,003,715
Changes in benefit terms ²	(4,863)	-	-
Difference between expected and actual experien	(20,701,234)	610,807	-
Changes in assumptions	(13,818,623)	9,147,692	-
Benefit payments, including refunds	(42,718,801)	(40,382,818)	(38,407,073)
Net Change in Total Pension Liability	2,161,742	52,580,254	38,232,325
Total Pension Liability - Beginning of Year	922,012,171	869,431,917	831,199,592
Total Pension Liability - End of Year	<u>\$ 924,173,913</u>	<u>\$ 922,012,171</u>	<u>\$ 869,431,917</u>
Plan Fiduciary Net Position			
Contributions – employer	\$ 27,191,305	\$ 28,149,976	\$ 28,750,323
Contributions – member	6,418,154	6,339,732	5,413,595
Net investment income	(4,851,526)	3,340,520	107,897,795
Benefit payments, including refunds	(42,718,801)	(40,382,818)	(38,407,073)
Admin. expenses	(1,696,334)	(1,587,371)	(1,487,210)
Net Change in Plan Fiduciary Net Position	(15,657,202)	(4,139,961)	102,167,430
Plan Fiduciary Net Position - Beginning of Year	791,995,626	796,135,587	693,968,157
Plan Fiduciary Net Position - End of Year	<u>\$ 776,338,424</u>	<u>\$ 791,995,626</u>	<u>\$ 796,135,587</u>
Net Pension Liability - Beginning of Year	130,016,545	73,296,330	137,231,435
Net Pension Liability - End of Year	147,835,489	130,016,545	73,296,330
Plan Fiduciary Net Position as a percentage of Total Pension Liability	84%	86%	92%
Covered Employee Payroll	135,041,803	129,134,125	129,911,593
Net Pension Liability as a percentage of Covered Payroll	110%	101%	56%

¹Data for 2007-2013 not readily available.

²Effective March 1, 2015, Employee contributions for Plan C were changed from 8% of Base Pay to 8.5% of Base Pay and for Plan D were changed from 7% of Base Pay to 7.5% of Base Pay.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB 67

Schedule of Employer Contributions For Years Ended June 30

Year	Actuarially Determined Employer Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2007	\$ 9,824,590	\$ 9,824,590	\$ -	\$109,579,279	9.00%
2008	10,561,434	10,561,434	-	109,579,279	9.60%
2009 ¹	13,983,669	14,933,506	(949,837)	122,825,271	12.20%
2010	17,614,908	17,614,908	-	132,240,949	13.30%
2011 ²	35,206,700	25,633,000	9,573,700	142,590,713	18.00%
2012	32,182,287	32,182,287	-	140,407,414	22.90%
2013	23,806,058	23,806,058	-	132,490,722	18.00%
2014	28,750,323	28,750,323	-	129,911,593	22.10%
2015	28,149,976	28,149,976	-	129,134,125	21.80%
2016	27,191,305	27,191,305	-	135,041,803	20.10%

¹ An additional amount of \$949,837 for a retirement incentive program offered by the Commission made the overall Employer Contribution for 2009 equal to \$14,933,506.

² The Commission made a contribution of \$25,633,000. As a result, the unfunded actuarial accrued liability will increase by \$9,573,700 and will be amortized over 15 years as part of future annual required contributions.

The information presented in the Required Supplementary Schedule was determined as part of the actuarial valuation at the date indicated. Additional information as of the most recent actuarial valuation follows:

Actuarial Valuation Date	Actuarial Cost Method	Remaining Amortization Period	Amortization Method (A)	Asset Valuation Method (B)	Investment Rate of Return	Projected Salary Increases	Post-Retirement Benefit Increase (C)
7/1/2015	Entry age Normal	15(A)	Open	5 year smoothing	7.25%	2.75% plus variable	2.75% (prior to 7/1/12/2.5% after 7/1/12)

- The ERS changed the methodology for amortization of the unfunded actuarial accrued liability. Effective July 1, 2013, the new methodology used a fresh start approach and amortizes the unfunded actuarial accrued liability as of July 1, 2013 in equal payments over a closed 15 year period (ending June 30, 2028), and any remaining unfunded amount, as determined each year, over an open 15-year period.
- A 5-year asset smoothing method is used as the actuarial value of assets to determine the funding requirements for the ERS.
- Cost-of-living adjustments (COLA) for the Plans are based on 100% of the change in the CPI up to 3%, plus half of the change in the CPI in excess of 3%, up to 5% maximum COLA. Effective July 1, 2012 the portion of a person's retirement benefits attributable to credited service for periods on or after July 1, 2012 and earned unused sick leave beginning on or after January 1, 2013 are subject to a 2.5% maximum COLA.

A full assumption review was conducted in 2016, and will result in changes in assumptions and methods as of July 1, 2016.

REQUIRED SUPPLEMENTARY INFORMATION UNDER GASB 67

Schedule of Money-Weighted Rate of Returns¹ For Years Ended June 30

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Annual money-weighted rate of return, net of investment expense	0.21%	0.70%	15.30%	12.35%	3.01%	21.80%	14.48%

¹Data for 2007-2009 not readily available.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The **Schedule of Changes in Net Pension Liability and Related Ratios** shows the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service and the liability of the Commission to plan members for benefits provided by the plan.

The **Schedule of Employer Contributions** highlights the historical actuarially determined contribution less the actual Commission contribution and reflects the actual contributions as a percentage of covered-employee payroll for the 10-year period ended June 30, 2016. With the exception of 2009 and 2011, the Commission has consistently contributed 100% of the actuarially determined employer contribution.

The **Schedule of Money-Weighted Rate of Returns** expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

SUPPLEMENTARY SCHEDULE

Schedule of Administrative Expenses Fiscal Years Ended June 30

	Actual 2016	Actual 2015
PERSONNEL SERVICES		
Salaries and wages	\$ 844,619	\$ 773,367
Social Security contributions	60,098	56,828
Retirement contributions	100,696	102,067
Insurance contributions	131,660	123,872
Other employee benefits	31,508	35,318
Unemployment compensation	420	1,134
TOTAL PERSONNEL SERVICES	1,169,001	1,092,586
Professional and contractual services		
Actuarial	71,160	42,360
Auditing & Tax services	31,523	26,461
Legal	173,192	178,308
Computer services	49,346	47,200
Payroll Services	3,424	3,595
Total professional and contractual services	328,645	297,924
Communication costs		
Advertising	239	-
Printing	465	-
Telephone	1,249	2,251
Postage	4,079	5,754
Travel, conference and meetings	10,924	11,774
Total communication costs	16,956	19,779
Other services and charges		
Office space rental	96,015	86,317
Equipment leasing	4,375	4,142
Furniture and equipment	7,509	7,187
Supplies	4,685	4,488
Maintenance	25,450	26,120
Bonding and insurance	37,590	35,928
Dues and subscriptions	2,520	2,455
Other services	3,588	3,442
Total othe service and charges	181,732	170,079
Depreciation	-	7,003
Total	\$ 1,696,334	\$ 1,587,371

SUPPLEMENTARY SCHEDULE

Schedule of Investment Expenses Fiscal Years Ended June 30

	2016	2015
Investment managers		
Fixed income	\$ 1,300,865	\$ 635,606
U.S. Equity	295,953	276,229
International equity	1,034,521	1,185,952
Private equity	47	30
Real assets	238,335	273,257
Total investment managers' fees	<u>2,869,721</u>	<u>2,371,074</u>
Other investment service fees		
Custodian fees	277,832	286,571
Investment consulting fees	196,900	196,700
Security lending fees:		
Borrower rebate	(7,480)	(49,595)
Management fees	83,443	64,953
Total other investment service fees	<u>550,695</u>	<u>498,629</u>
Total	<u><u>\$ 3,420,416</u></u>	<u><u>\$ 2,869,703</u></u>

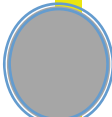
SUPPLEMENTARY SCHEDULE

Schedule of Payments to Consultants Fiscal Years Ended June 30

Firm Name	Nature of Service	2016	2015
CliftonLarsonAllen, LLP	Auditor	\$ 21,033	\$ 26,461
SB & Company, LLC	Auditor	10,490	-
Wilshire Associates, Inc.	Investment Consultant	196,900	196,700
Boomershine Consulting Group, LLC	Actuary	71,160	42,360
GROOM Law Group	Legal	108,992	114,108
The Maryland-National Capital Park and Planning Commission Legal Department	Legal	64,200	64,200
The Maryland-National Capital Park and Planning Commission Finance Department	Computer Services	47,200	47,200
Total		\$ 519,975	\$ 491,029



INVESTMENT
Section



INVESTMENT MANAGER DIRECTORY

U.S. EQUITIES

Chicago Equity Partners
BlackRock Institutional Trust Company, N.A.
J.P. Morgan Investment Management
The Northern Trust Company
RhumbLine Advisors, L.P.

INTERNATIONAL EQUITIES

Capital Group
Earnest Partners, L.L.C.

FIXED INCOME

Core Fixed Income

C.S. McKee, L.P.
Eaton Vance Management

High Yield Fixed Income

Loomis Sayles & Company, L.P.
Neuberger Berman Fixed Income, LLC

Opportunistic Fixed Income

Golub Capital
Western Asset Management Company
Oaktree Capital Management, L.P.

Bank Loans

Voya Investment Management

PRIVATE REAL ASSETS

Aberdeen Capital Management, LLC
Principal Global Investors, LLC

PUBLIC REAL ASSETS

State Street Global Advisors

PRIVATE EQUITY

Wilshire Associates Inc.

INVESTMENT CONSULTANT'S REPORT



To: Andrea Rose, Administrator
The Maryland-National Capital Park and Planning Commission
Employees' Retirement System Board of Trustees

From: Bradley A. Baker, Vice President
Wilshire Associates ("Wilshire")

Date: September 2, 2016

Subject: Annual Investment Consultant's Review

Overview

The overall goal of Maryland-National Capital Park and Planning Commission Employees' Retirement System ("ERS") is to provide benefits, as anticipated under the ERS governing plan document, to its participants and their beneficiaries through a carefully planned and executed investment program. Through this program, the ERS seeks to produce a return on investment commensurate with levels of liquidity and investment risk that are prudent and reasonable given the financial status of the ERS and the prevailing capital market conditions. While the ERS recognizes the importance of the preservation of capital, it also recognizes the critical importance of a reasonable investment return in meeting the long-term financial requirements of the ERS. It adheres to the theory of capital market pricing that maintains that varying degrees of investment risk should be rewarded with varying levels of compensating return. Consequently, prudent risk-taking is both necessary and justifiable.

The asset allocation policy is based on data and calculations resulting from the Actuarial Valuation conducted by the actuary, Boomershine Consulting Group, and the subsequent Asset/Liability study conducted by the investment consultant, Wilshire Associates, presented March 6, 2012.

The asset allocation policy was amended in fourth quarter 2013 following the approval of the Bank Loans allocation and offsetting reduction to U.S. Core Fixed Income allocation. This asset allocation policy has been implemented as of first quarter of 2014, with the exception of the private investments which will fund gradually over time.

Asset Class	Target %	Range %
U.S. Equities	23.0	18-28
International Equities	23.0	18-28
Private Equities	5.0	0-8
Total Equities	51.0	46-56
U.S. Core Fixed Income	10.0	7-13
High Yield Fixed Income	7.5	5-10
Bank Loans	4.0	2-6
Global Opportunistic Fixed Income	7.5	5-10
Total Fixed Income	29.0	24-34
Public Real Assets	5.0	0-15
Private Real Assets	15.0	5-20
Total Real Assets	20.0	10-25

Outline of Investment Policies

The policies and procedures of the investment program guide its implementation and outline the specific responsibilities of the ERS.

Therefore, it is the policy of the ERS to:

1. Base the investment of the assets of the ERS on a financial plan that will consider:
 - a. The financial condition of the ERS
 - b. The expected long-term capital market outlook
 - c. The ERS' risk tolerance
 - d. Future changes of active and retired participants
 - e. Projected inflation and the rate of salary increases
 - f. Cash flow requirements
 - g. Targeted funding level as a percentage of the actuarial funding target.

In developing its financial plan, the Board has relied on the ERS' investment consultant, as one of the ERS' expert fiduciaries, to advise the Board as to the long-term capital market outlook and the Board's options available to meet its investment objectives in light of that investment outlook. The investment consultant has advised the Board as to the potential impact on the funding level of alternative investment policies in terms of risk and return based on various levels of asset diversification and the current and projected liability structure of the ERS. Based on this advice, the Board has adopted an overall investment performance goal commensurate with the level of risk necessary to reach those goals.

2. Based on the financial plan and the advice of the investment consultant, the Board shall determine the specific allocation of the investments among the various asset classes considered prudent given the ERS' liability structure. The long-term asset allocation shall be expressed in terms of a target and ranges for each asset class to provide sufficient flexibility to take advantage of short-term market opportunities as they may occur. Asset allocation shall be sufficiently diversified to maintain a prudent level of risk, as determined by the Board, based on the investment consultant's expert opinion and projections that utilize reasonable, generally accepted capital market assumptions to ensure the current asset mix has a high probability of achieving the long-term goals of the retirement program.
3. In accordance with the asset allocation guidelines so adopted, the ERS' investment consultant shall advise and recommend to the Board external investment managers with demonstrated experience and expertise whose investment styles collectively will implement the planned asset allocation. Based on these recommendations, the Board will select the investment advisors that it deems most capable of carrying out the ERS' investment objectives. Upon the advice of the investment consultant, the Board will set guidelines for these managers and regularly review their investment performance against stated objectives.
4. It is the responsibility of the Board to administer the investments of the ERS at the lowest reasonable cost, taking into account the need to ensure quality. These costs include, but are not limited to, management and custodial fees, consulting fees, transaction costs, and other administrative costs chargeable to the ERS.

The Board of the ERS has general supervision of the investment and reinvestment of the funds of the ERS (the "Funds"). The specific investment-related duties of the Board and, by delegation, of its investment consultant and advisors, include but are not limited to:

1. Selection and appointment of investment consultant and management professionals to assist the Board to carry out its duties;
2. Establishment and implementation of investment policy with the advice and assistance of the Board's investment consultant and investment advisors;
3. Review and general supervision of the activities of the Board's investment consultant and investment advisors with regard to the ERS' assets.

Investment Results

The investment results provided are calculated by the ERS' investment consultant, Wilshire Associates. The returns are accurate and representative of the actual performance of the Plan. The following describes the performance measurement process that is used to arrive at the investment results:

Performance measurement reporting begins with the monthly collection of data from three sources:

- Banks – Wilshire obtains transaction and asset information from trustee banks electronically. These transactions and security holdings are then loaded into client files on Wilshire's performance measurement system. Wilshire also tracks the availability and timeliness of statements sent by trustee banks. In addition, Wilshire has a dedicated team of data analysts responsible for maintaining statement receipts and portfolio data feeds, and loading asset portfolios into the performance system.
- Investment Managers – Wilshire receives investment manager returns and detailed account statement information to use in the return reconciliation process.
- External Data Vendors and Wilshire Data Sources – Wilshire's centralized security data division collects extensive security level data from external data vendors, while the index department collects returns and portfolios on over 800 benchmarks. Wilshire's manager research department collects manager returns and portfolios for the construction of universes. This data is also loaded into the performance system.

Monthly rates of return are calculated by running each transaction file with time-weighted return software written by Wilshire. Wilshire's calculation procedure is consistent with the recommendations of both the CFA Institute and the Bank Administrative Institute.

Tolerance ranges have been established for each asset class for return variance with the manager. When returns fall outside this tolerance range, Wilshire will review individual holdings, prices, accruals, cash flows and fees to determine where the discrepancies lie. If an error has been made, Wilshire will work with appropriate parties to correct the error. If the difference is due to structural differences in the way the sources perform their calculations, Wilshire will include an explanation in the reconciliation. Reconciliation work is documented and can be provided to the client for its records.

Market Overview

Major Asset Class Returns for Periods Ending June 30, 2016

	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Equity						
Wilshire 5000 Index	2.8	4.0	3.0	11.3	11.6	7.5
Standard & Poor's 500 Index	2.5	3.8	4.0	11.7	12.1	7.4
MSCI EAFE (N) Index	-1.5	-4.4	-10.2	2.1	1.7	1.6
MSCI ACWI ex-U.S. (N) Index	-0.6	-1.0	-10.2	1.2	0.1	1.9
MSCI Emerging Market (N) Index	0.7	6.4	-12.1	-1.6	-3.8	3.5
Fixed Income						
Barclays Aggregate Bond Index	2.2	5.3	6.0	4.1	3.8	5.1
Merrill Lynch High Yield BB/B Index	4.6	7.9	2.1	4.6	5.9	7.1
S&P LSTA Leverage Loan Index	2.8	5.4	0.7	2.2	3.5	
Barclays Global Aggregate Index	2.9	9.0	8.9	2.8	1.8	4.4
Treasury Bills (91 Day)	0.1	0.2	0.2	0.1	0.1	1.0
Real Assets						
Barclays U.S. TIPs Index	1.7	6.2	4.4	2.3	2.6	4.8
Bloomberg Commodity Index	12.8	13.3	-13.3	-10.6	-10.8	-5.6
Wilshire Global RET Index	4.3	10.2	17.4	11.7	10.6	6.2
NCREIF ODCE (N) Index	1.9	3.9	10.8	12.0	11.7	5.2
U.S. CPI	1.2	1.9	1.0	1.1	1.3	1.7

US Equity Market

The U.S. stock market was up for the second quarter of 2016 by 2.8%. Price swings during the quarter were not nearly as extreme as what investors experienced during the first quarter, except for the last week of trading. The market was up in both April and May and rebounded from the U.K.-driven sell-off to post three strong days to end the quarter. The Federal Open Market Committee decided in June to maintain the current Fed Funds rate although they cut their forecast for economic growth in the U.S., the second downward revision this year.

Large capitalization stocks underperformed smaller shares during the quarter while growth stocks trailed value. Sector performance was mostly positive with Energy, Telecom Services and Utilities leading with returns of 11.7%, 7.7% and 7.4, respectively.

The big news during the quarter, and perhaps since the Global Financial Crisis (GFC), was the 'Brexit' vote with the United Kingdom deciding to withdraw from the European Union. The initial reaction from the markets was not surprising; equity prices fell while bond prices rose. However, investors are quickly learning how to manage a post-Brexit world due, in part, to the fact that the entirety of the fallout will not be known for possibly years.

Non-U.S. Equity

The financial news cycle in the second quarter was dominated by the Brexit vote, overshadowing striking downturns in Asia/Pacific regional markets. The economic slowdown in China, combined with a generally weaker forecast of corporate earnings throughout the region, put investors in a selling mood overall. Despite the Brexit turmoil, however, European stocks managed modest gains. Emerging market stocks presented a mixed picture with Asian shares underperforming other world region equities.

Fixed Income

U.S. Treasury securities extended their rally in the second quarter thanks to broad investor uncertainty, initially over the outcome of the Brexit vote, then over the details and timetable of the withdrawal of the U.K. from the European Union. Most of the rally unsurprisingly occurred as the Brexit referendum results were followed by broad flight-to-safety purchases in the two trading days after the vote. The bellwether 10-year U.S. Treasury yield fell from 1.78% as of March 31 to 1.49% as of June 30. Credit yields tightened somewhat over the quarter as well, as investors continued to seek incremental yield wherever they could find it.

Portfolio Review

The ERS net of fee investment performance as of June 30, 2016 is detailed in the following table:

Maryland-NCPPC ERS	\$'000	Comp %	Calendar				
			YTD %	1 Year %	3 Years %	5 Years %	Inception %
Total Fund (9/30/89)	777,340	100.0%	3.8	-0.3	4.9	5.7	7.4
<i>Policy Index/Blended Benchmark</i>			4.1	1.0	5.5	6.1	7.7
Domestic Equity Comp (9/30/89)	183,343	23.6%	2.8	1.1	10.0	10.4	9.1
<i>Wilshire 5000 Index</i>			4.0	3.0	11.3	11.6	9.3
International Equity Comp (3/31/95)	165,392	21.3%	-1.4	-11.2	0.6	0.6	5.3
<i>Policy Index</i>			-1.0	-10.2	1.2	0.3	4.1
Private Equity Comp (6/30/13)	28,956	3.7%	11.4	13.0	2.5	--	2.5
<i>Wilshire 5000 Index</i>			4.0	3.0	11.3	--	11.3
Fixed Income Comp (9/30/89)	232,235	29.9%	5.9	3.2	3.8	4.9	6.6
<i>Barclays Aggregate Bond Index</i>			5.3	6.0	4.1	3.8	6.4
Private Real Asset Comp (9/30/07)	89,771	11.6%	1.7	5.7	7.3	8.1	1.0
<i>Policy Index</i>			4.4	6.1	6.1	6.4	-0.2
Public Real Asset Comp (3/31/13)	76,530	9.8%	12.5	3.4	1.5	--	-0.7
<i>Policy Index</i>			12.6	3.5	1.6	--	-0.6
Managed Cash	1,113	0.1%	--	--	--	--	--

The chart above displays the calendar year to date (YTD), one, three, five and inception-to-date returns for the total fund and each of the underlying composites (Periods greater than one year represent annualized figures). The chart shows the relevant broad market benchmark for the asset classes. As applicable, it also shows the policy index which is a blend of benchmarks used currently and historically; and in some cases represents a weighted benchmark consisting of multiple indexes.

The Maryland-NCPPC ERS' total portfolio posted a negative return of -0.3% over the trailing one-year period ending June 30, 2016. During this period, the portfolio trailed its policy index which returned +1.0%. Over the past one-year period, all asset classes except for International Equity positively contributed to absolute performance. Despite a slight decline of -0.3% over the one year period, total portfolio results over longer term periods have continued to be positive and represent substantial gains. Total portfolio returns have been +4.9% and +5.7% over the three year and five year periods, respectively, which are on an average annualized basis. Strong domestic equity markets combined with a continued recovery in the private real estate market have contributed to absolute returns during these longer term periods.

Within equity markets, the domestic equity composite posted a +1.1% return compared to that of +3.0% for the Wilshire 5000 Index over the trailing one year period ending June 30, 2016. Longer term results over the three- and five-year periods were very strong, posting a +10.0% and +10.4% return, respectively, during each of those time periods. Within international equity markets, the appreciation of the U.S. Dollar was the leading story as investors were greatly impacted by holding international stocks in U.S. Dollars. The MSCI ACWI ex-U.S.

Index, comprised of both developed and emerging market stocks, was down -10.2% over the trailing one-year period in U.S. Dollar terms, while declining only -9.2% in local currency terms. Despite negative absolute returns of -11.2% for the international equity portfolio during this time period, the portfolio has posted a +5.3% return since inception. Lastly, private equity investments continue to mature and be funded with strong returns of +13.0% in this segment of the portfolio over the past year.

The fixed income composite returned +3.2% during the past year, while the domestic investment grade market represented by the Barclays Aggregate Index returned +6.0%. “Non-core” investment within the fixed income portfolio including high yield and global/opportunistic strategies negatively impacted the total fixed income portfolio relative to the broader investment grade fixed income market. Additional investment opportunities within the Global Opportunistic segment of the portfolio will continued to be evaluated and considered as legacy investments continue to mature and provide a return of capital.

Within the real asset segment of the portfolio, both Private and Public investment posted positive trailing one-year absolute returns of +5.7% and +3.4%, respectively. The public real assets composite has underlying exposures to Treasury Inflation Protected Securities (TIPS), real estate securities, commodities, and global natural resource and energy stocks. An exposure to globally listed infrastructure was evaluated and subsequently approved to be added to this segment which will be implemented during the latter half of 2016. All of the underlying exposures within the Public Real Asset segment of the portfolio is implemented through passively managed index funds. The private real assets composite returned +5.7% for the trailing one-year period. A portion of this portfolio has benefited from the continued recovery of the commercial real estate market since the global financial crisis. The remaining portion of the portfolio provides exposure to various natural resource and energy related investments, many of which are early in their lifecycles and results are not fully meaningful at this stage.

The ERS Board continued its efforts in maintaining best practices with its investment monitoring, focused on competitive fees and ongoing education. Current portfolio investment are reviewed and monitored on ongoing basis, while due diligence on potential investments opportunities are conducted on a regular basis.

If you have any questions or need any further information regarding the Plan or investment results, please don't hesitate to contact me.

Sincerely,

Bradley A. Baker

A handwritten signature in black ink that reads "Bradley A. Baker". The signature is written in a cursive, flowing style.

Vice President

INVESTMENT MANAGER MATRIX

As of June 30, 2016

Manager Name and/or Fund Name	Style	Market Value \$(000)	% of Fund
U.S. Equities			
Blackrock Equity Index Fund	Large Core	\$ 64,540	8.3%
J.P. Morgan Commingled Pension Trust Fund	130/30 Short Extension	21,475	2.8%
Chicago Equity Partners	Small Cap Value	17,056	2.2%
Northern Trust Collective Russell 2000 Growth Index Fund	Small Cap Growth	16,515	2.1%
RhumbLine S&P 500 Pooled Index Trust	Large Core	63,757	8.2%
		\$ 183,343	23.6%
International Equities			
Capital Group Institutional All Countries Equity Trust	ACWI ex-U.S.	\$ 83,072	10.7%
Earnest Partners, L.L.C.	ACWI ex-U.S.	82,320	10.6%
		\$ 165,392	21.3%
Private Equity			
Wilshire MNCPPC Employee Retirement System Global, L.P.	Other	\$ 28,956	3.7%
Fixed Income			
C.S. McKee, L.P.	Core	\$ 37,628	4.8%
Eaton Vance Management	Core	37,724	4.9%
Golub Capital	Middle Market Direct Lending	17,500	2.3%
Loomis Sayles High Yield Full Discretion Trust	High Yield	30,518	3.9%
Neuberger Berman High Yield Bond Fund, LLC	High Yield	30,579	3.9%
Voya Senior Loan Fund	Bank Loans	33,698	4.3%
Western Asset Global Multi-Sector, LLC	Global Multi-Sector	40,162	5.2%
Oaktree Real Estate Debt Fund, L.P.	Real Estate Debt	2,510	0.3%
Oaktree Opportunities Fund VIII, L.P.	Distressed Opportunities	1,910	0.3%
Other ²		6	0.0%
		\$ 232,235	29.9%
Private Real Assets			
Principal U.S. Property Account	Real Estate	\$ 58,720	7.6%
Aberdeen Energy & Resources Partners II, L.P.	Real Assets	11,099	1.4%
Aberdeen Real Estate Partners II, L.P.	Real Estate	6,935	0.9%
Aberdeen Energy & Resources Partners III, L.P.	Real Assets	9,208	1.2%
Aberdeen Real Estate Partners III, L.P.	Real Estate	3,809	0.5%
		\$ 89,771	11.6%
Public Real Assets			
SSgA Custom Real Asset Non-Lending Strategy	Diversified	\$ 76,530	9.8%
Cash		\$ 1,113	0.1%
TOTAL		\$ 777,340 ¹	100%

¹ Net of Accrued Income on Investments and Investments Payable

² Adelfia and Century Securities Only

LIST OF LARGEST HELD DOMESTIC EQUITIES

As of June 30, 2016

Equity Income Securities	No. of Shares	Fair Value
ADR ARM HLDGS PLC SPONSORED ADR	74,257	\$ 3,379,436
ICON PLC COM	42,524	2,977,105
SHIRE PLC ORD GBP0.05	46,784	2,902,521
AMADEUS IT GROUP EURO.01	58,814	2,566,206
CORE LABORATORIES NV NLG0.03	19,982	2,475,570
ROCHE HLDGS AG GENUSSSCHEINE NPV	8,870	2,331,767
SECOM CO NPV	29,700	2,186,608
CARNIVAL CORP COM PAIRED	48,289	2,134,374
ADR NOVARTIS AG	25,386	2,094,599
DENSO CORP NPV	59,800	2,085,043
DIAGEO ORD PLC	73,901	2,061,271
DNB ASA NOK10	157,775	1,873,212
ADR HDFC BK LTD ADR REPSTG 3 SHS	25,010	1,659,414
ADR TEVA PHARMACEUTICAL INDS	32,289	1,621,876
GETINGE AB SER'B'NPV	76,577	1,560,878
HON HAI PRECISION TWD10	582,000	1,488,422
PRYSMIAN SPA EURO.10	68,061	1,485,027
EVEREST RE GROUP COM	8,003	1,461,908
STATOIL ASA	82,622	1,430,187
SODEXHO EUR4	12,977	1,394,969

A complete list of assets can be obtained at the office of the Employees' Retirement System.

LIST OF LARGEST HELD FIXED INCOME

As of June 30, 2016

Fixed Income Securities	Par	Fair Value
CF WESTN ASST GBL MULTI-SECTOR LLC FD	2,488,889	\$ 40,160,714
CF VOYA LOAN COMMON TRUST FUND CLASS 1	3,134,206	33,697,928
CF NEUBERGER BERMAN HI YIELD BD LLC FD	744,541	30,579,003
CF LOOMIS HIGH YIELD FULL DISCRETION NHIT A FUND	1,644,274	30,517,734
US TREAS INFL INDEXED BONDS 2.375 DUE 01-15-2025 BEO	1,220,000	1,848,683
UNITED STATES TREAS NTS DTD 00306 2.625% DUE 08-15-2020 REG	1,605,000	1,715,845
UNITED STATES TREAS NTS UNITED STATES TREAS NTS 3.5% DUE 02-15-2018 REG	1,500,000	1,570,430
UNITED STATES TREAS NTS DTD 658 1.375% DUE 08-31-2020 REG	1,176,000	1,197,544
UNITED STATES TREAS BDS 3.625 DUE 02-15-2044 TBOND	800,000	1,031,500
UNITED STATES TREAS NTS DTD 12/31/2014 1.625% DUE 12-31-2019 REG	954,000	980,347
UNITED STATES TREAS BDS DTD 00218 3.875% DUE 08-15-2040 REG	725,000	962,240
FNMA STEP UP 01-29-2019/10-29-2016 DTD 1/29/2016	952,000	951,914
FEDERAL FARM CR BKS 3.17% 07-21-2025	835,000	835,868
FNMA DTD 06/05/2006 6.21 06-05-2036/06-05-2017	735,000	769,810
UTD STATES TREAS 1.625% DUE 05-15-2026	728,000	736,901
FHLMC STEP UP 04-29-2021/10-29-2016 TRANCHE # TR 00384	727,000	727,065
UNITED STATES TREAS NTS DTD 05/15/2013 1.75% DUE 05-15-2023 REG	540,000	557,065
UNITED STATES TREAS NTS DTD 08/15/2013 2.5% DUE 08-15-2023 REG	505,000	547,077
UTD STATES TREAS 2% DUE 05-31-2021	499,000	522,547
GEORGE WASH UNIV 1.827 DUE 09-15-2017	496,000	499,648

A complete list of assets can be obtained at the office of the Employees' Retirement System.

SCHEDULE OF BROKER COMMISSIONS

As of June 30, 2016

Broker	Shares	Commissions	Commission per share
BARCLAYS CAPITAL	3,505	\$615	17.55%
BARCLAYS CAPITAL INC	1,200	42	3.50%
BERNSTEIN, SANFORD C. & CO	1,100	44	4.00%
BLOOMBERG TRADEBOOK LLC	16,094	1,954	12.14%
CANTOR FITZGERALD AND CO.	1,737	61	3.50%
CAPITAL INSTITUTIONAL SERV NEW YORK	4,141	145	3.50%
CITIGROUP GLOBAL MARKETS INC.	24,060	812	3.37%
COLLINS STEWART	5,945	350	5.88%
CONVERGEX EXECUTION SOLUTION	12,645	711	5.62%
CONVERGEX LLC	6,318	3,583	56.71%
DEUTSCHE BANK SECURITIES INC	2,880	396	13.73%
DEUTSCHE BANK SECURITIES INC.	3,644	191	5.23%
DEUTSCHE BANK SECURITITES	22,508	837	3.72%
GOLDMAN SACHS INTERNATIONAL	661	32	4.83%
GOLDMAN, SACHS AND CO.	1,314	22	1.69%
INSTINET	6,200	1,158	18.67%
INVESTMENT TECHNOLOGY GROUP INC	760,889	29,707	3.90%
INVESTMENT TECHNOLOGY GROUP INC.	2,900	102	3.50%
J.P. MORGAN CLEARING CORP.	226,616	1,628	0.72%
J.P. MORGAN SECURITIES LLC 57079	107,200	1,860	1.74%
JEFFERIES LLC.	518,755	4,655	0.90%
JOH. BERENBERG,GOSSLER UND CO.KG	78,788	1,552	1.97%
JONES TRADING INSTITUTIONAL SERVICE	305	397	130.08%
KEPLER CAPITAL MARKETS	2,100	216	10.28%
LIQUIDNET CANADA INC.	527	7	1.34%
LIQUIDNET INC	4,585	334	7.29%
LOOP CAPITAL MARKETS	800	24	3.00%
MERRILL LYNCH INTERNATIONAL LIMITED	291,146	2,309	0.79%
MORGAN STANLEY & CO INC. NEW YORK	1,790	27	1.50%
PERSHING LLC	19,549	748	3.83%
RAYMOND JAMES AND ASSOCIATES	12,300	431	3.50%
RBC DAIN RAUSCHER	59,533	8,213	13.80%
RBC EUROPE LIMITED	64,628	179	0.28%
ROBERT W. BAIRD CO.INCORPORATED	5,500	193	3.50%
SOCIETE GENERALE	20,349	139	0.68%
SOCIETE GENERALE LONDON BRANCH	2,659	46	1.72%
STATE STREET BK & TRST CO,N.A NW YK	300	6	2.00%
STIFEL NICOLAUS & CO, INCORORATED	8,555	513	6.00%
SUNTRUST ROBINSON HUMPHREY, INC.	7,533	264	3.50%
UBS WARBURG LLC	2,050	429	20.95%
WEDBUSH MORGAN SECURITIES	2,660	114	4.27%
WEEDEN AND & CO	3,100	82	2.65%
WILLIAM BLAIR AND COMPANY	300	11	3.50%
WILLIAMS CAPITAL GROUP L.P.,THE	2,536	66	2.61%
	<u>2,321,905</u>	<u>\$65,205</u>	

The above table is a condensed version of brokers' commissions. A complete list can be obtained at the office of the Employees' Retirement System.



ACTUARIAL
Section

ACTUARY'S CERTIFICATION LETTER



THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

October 30, 2015

Board of Trustees
The Maryland-National Capital Park and Planning Commission
Employees' Retirement System
6611 Kenilworth Avenue, Suite 100
Riverdale, MD 20737

**Re: *The M-NCPPC Employees' Retirement System
Annual Review and Actuarial Valuation as of July 1, 2015***

Dear Board Members:

This report presents the results of the Annual Review and Actuarial Valuation of The Maryland-National Capital Park and Planning Commission Employees' Retirement System (System) prepared as of July 1, 2015 and sets forth the recommended contribution for the Fiscal Year ending June 30, 2017, according to the System's funding policy.

The valuation was performed on the basis of employee census data as of July 1, 2015 and investment fund data as of July 1, 2015, submitted by the Retirement System staff to Boomershine Consulting Group (BCG). BCG did not audit the employee data and financial information used in this valuation. On the basis of our review of this data, we believe that the information is sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Beginning with the July 1, 2012 Valuation, the System retained BCG to perform annual valuations.

The report was prepared in accordance with generally accepted actuarial principles and practices. In the opinion of the System and its actuaries, the actuarial assumptions used in our calculations are individually reasonable and reasonable in the aggregate as related to Plan experience and expectations, and represent the best estimate of anticipated Plan experience.

The schedules prepared by BCG, and included in the System's Comprehensive Annual Financial Report, are the following:

- Summary of Actuarial Assumptions and Methods
- Schedule of Employer Contributions (required supplementary information)
- Schedule of Funding Progress
- Solvency Test (sent separately)

The amounts in these schedules are based on BCG's results for the valuation dates since and including July 1, 2011 (with revision to AON Hewitt's amounts) and later, and AON Hewitt's results for the valuation dates July 1, 2007 through July 1, 2010. The amounts for the earlier valuation dates are from the actuarial valuation reports of the System's prior actuary.

The amounts in the Schedule of Employer Contributions are based on BCG's valuation results for years since and including fiscal year 2013; AON Hewitt's valuation results for the fiscal years ending June 30, 2009 through June 30, 2012 with modifications by BCG for 2013. The amounts for earlier years are from the actuarial valuation reports of the System's prior actuary. The amounts in the Schedule of Funding Progress are based on BCG's results for the July 1, 2012 through July 1, 2015 valuations; AON Hewitt's results for the valuation dates July 1, 2007 through July 1, 2011, with modifications by BCG for 2011. The amounts for the earlier valuation dates are from the actuarial valuation reports of the System's prior actuary.

FUNDING RECOMMENDATION AND CHANGE IN PLAN COSTS

There was a decrease in the Recommended Contribution as a Percentage of Payroll. Although the return on the Market Value of Assets was less than the assumed, return on the Actuarial Value of Assets was greater than the expected 7.30% for the 2015 Fiscal Year due to recognition of prior investment gains, resulting in an investment gain on the Actuarial Value of Assets. Changing the contribution for the Cost of Living Adjustment for benefits accrued prior to July 1, 2012 and sick leave prior to January 1, 2013 (COLA) from 3% to 2.75% resulted in a decrease in the liabilities.

A contribution of \$20,268,189 is the recommended total to meet the System's funding objectives for the 2016-17 fiscal year. This contribution represents 14.31% of covered payroll.

A breakdown of the contribution payable July 1, 2016 between Park Police and Non-Police employees is shown below:

	7/1/2016 Amount	2015 Payroll	% of Payroll
Non-Police	\$16,488,609	\$126,806,443	13.00%
Park Police	<u>3,779,580</u>	<u>14,864,322</u>	25.43%
Total	\$20,268,189	\$141,670,765	14.31%

The Net Employer Normal Cost payable at the beginning of the year decreased from \$13,023,696 (9.6% of payroll) to \$11,740,964 (8.3% of payroll). The amortization of the Unfunded Actuarial Accrued Liability decreased from \$12,317,687 to \$7,157,114 primarily due to the actuarial gains outlined below.

The breakdown of the actuarial gain is as follows:

	7/1/2015 Amount	% of Liability/Assets
NET LIABILITY (GAIN)/LOSS		
Salary Increases More than Expected	5,865,608	0.7%
New Hires	613,165	0.1%
New Terminations and Retirements	(5,330,014)	(0.6)%
COLA Increases Less Than Expected	(7,777,717)	(0.9)%
Other Experience	(13,092,764)	(1.5)%
Total Liability (Gain)/Loss	(19,721,722)	(2.2)%
ACTUARIAL ASSET VALUE (GAIN)/LOSS	(16,685,617)	(2.0)%
NET ACTUARIAL (GAIN)/LOSS	(36,407,339)	

Plan Provisions and Assumption Changes in the Funding Valuation

- 1) The investment assumption was changed from 7.3% to 7.25% with a corresponding decrease in the salary scale assumption by 0.05%. The COLA assumption for pre-2012 benefits was also changed to 2.75%. These economic assumptions adopted by the Board were changed to align expectations with current and expected future economic conditions.
- 2) Employee contributions in Plan C were changed from 8.0% to 8.5% and for Plan D were changed from 7.0% to 7.5% of Base Pay.

A separate report for accounting purposes, in compliance with GASB Statement 67, is now issued annually for the System.

Plan Assets

A 5-year asset smoothing method is used as the Actuarial Value of Assets to determine the funding requirements for the System. The return on the Actuarial Value of Assets was 9.6% during the past year, which is greater than the assumed return. Over the five year period ending on the valuation date, the return on the Actuarial Value of Assets was 6.3%. The total Actuarial Value of Assets as of July 1, 2015 is \$830,052,104.

The total Market Value of Assets as of July 1, 2015 is \$819,186,931. The return on the Market Value of Assets was 0.4% during the past year, which is less than the assumed return. Over the 5-year period ending on the valuation date, the return on the Market Value of Assets was 9.9%, which is higher than the return assumption.

The Actuaries whose signatures appear below meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. Please call if you have any questions with regard to the matters enumerated in this report.

BCG's relationship with the Plan and the Plan Sponsor is strictly professional. There are no aspects of the relationship that may impair or appear to impair the objectivity of BCG's work.

We appreciate the opportunity to present the results of this valuation to the Pension Trustees.

Sincerely,



David S. Boomershine, EA, FCA, MAAA, MCPA
President and Senior Actuary



Gregory M. Stump, FSA, EA, MAAA, FCA
Chief Actuary and Vice President



Sunita K. Bhatia, EA, ASA, ACA, MAAA
Actuary

ACTUARY'S CERTIFICATION LETTER

September 9, 2016

Board of Trustees
The Maryland-National Capital Park and Planning Commission
Employees' Retirement System
6611 Kenilworth Avenue, Suite 100
Riverdale, MD 20737

**Re: *The M-NCPPC Employees' Retirement System FY2016 GASB 67-68 Disclosure Information
(For Financial Reporting Purposes)***

Dear Board Members:

This report presents the Governmental Accounting Standards Board (GASB) information based on the Annual Review and Actuarial Valuation of The Maryland-National Capital Park and Planning Commission Employees' Retirement System (System) prepared as of July 1, 2015.

This report was prepared on the basis of employee census data as of July 1, 2015 and investment fund data as of June 30, 2016, submitted by the System. BCG did not audit the employee data and financial information used in the valuation. On the basis of our review of this data, we believe that the information is sufficiently complete and reliable and that it is appropriate for the purposes intended.

This report was prepared in accordance with generally accepted actuarial principles and practices. In the opinion of the System and its actuaries, the actuarial assumptions used are reasonably related to Plan experience and expectations, and represent the best estimate of anticipated Plan experience.

The schedules prepared by BCG and included in the System's Comprehensive Annual Financial Report are the following:

- Long Term Expected Rate of Return
- Development of Net Pension Liability
- Changes in Net Pension Liability
- Sensitivity of the Net Pension Liability to Changes in the Discount Rate
- Schedule of Employer Contributions (required supplementary information)

The Total Pension Liability under GASB 67, as of June 30, 2016 is \$924,173,913, compared to the Plan Fiduciary Net Position of \$776,338,424, resulting in a (GASB) funding ratio of 84.0%, and a Net Pension Liability of \$147,835,489. The ratio represents a 1.9% decrease from one year ago.

The undersigned are members of the American Academy of Actuaries, and are qualified to render the actuarial opinions presented in this report.

Respectfully Submitted,

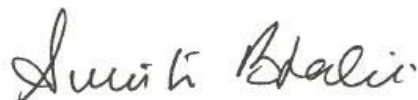
BOOMERSHINE CONSULTING GROUP, L.L.C.



Gregory M. Stump, FSA, EA, MAAA, FCA
Chief Actuary



David S. Boomershine, EA, MAAA, FCA, MSPA
Senior Actuary



Sunita K. Bhatia, ASA, EA, MAAA, ACA
Senior Consulting Actuary

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method divides the cost of funding benefits into two parts: the normal cost and the actuarial accrued liability.

Asset Valuation

Assets are valued using a five-year asset smoothing method. Under this method, the difference between expected asset return and actual asset return is recognized 20% per year over a five-year period. The asset value includes a receivable for any contributions made with respect to the prior actuarial valuation by the time this valuation was prepared.

Amortization Method

Amortize the unfunded actuarial accrued liability as of July 1, 2013 on a closed 15 year period (13 years remaining) and amortize the remaining unfunded actuarial accrued liability each year over an open 15 year period.

Valuation Date

July 1, 2015

Investment Rate of Return

7.25% compounded annually.

Salary Increases

2.75% per year plus additional merit increases for 2015 and later as follows:

Years of Service	Park Police	Non-Police
0	.0425	.0275
5	.0335	.025
10	.0225	.0225
15	.0125	.0175
20	.000	.0125
25	.000	.000

Mortality

Healthy Lives

RP-2000 Projected to 2010 and Generational Method applied using Scale AA factors after 2010.

For Park Police, 90% of deaths assumed to be service related; for Non-Police 33% of deaths are assumed to be service-related.

Disabled Lives

Sample rates:

Age	Rate
45	.0538
50	.0558
55	.0582
60	.0626
65	.0691
70	.0769

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

Termination of Employment

Sample rates:

Years of Service	Park Police	Non-Police
0	.070	.110
5	.030	.050
10	.025	.030
15	.000	.025
20	.000	.015
25	.000	.010
30	.000	.005
35	.000	.000

Disability

Sample rates:

Age	Park Police	Non-Police
25	.00256	.00094
30	.00366	.00147
35	.00508	.00219
40	.00693	.00329
45	.00940	.00511
50	.01354	.00838
55	.02288	.01000
60	.03434	.02107

Retirement Age

Sample rates:

Years of Service	Park Police %
5	10
10	10
15	10
20	15 ¹
25	25
30	100

Years of Service	Non Police %
15 – 19	5
20 – 23	10
24 – 25	15
26 – 29	10

¹ Police participants who are under age 55 with 20 to 24 years of service are assumed to retire at a rate of 15% per year except for at 22 years of service they are assumed to retire at a rate of 25%.

² Non-police participants who have reached their normal retirement age are assumed to retire at a rate of 10% per year. 100% retirement is assumed at age 70.

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

Marriage	90% of male participants and 50% of female participants are assumed to be married with wives assumed to be three years younger and husbands three years older than participant.
Expenses	The assumed interest rate is deemed to be net of investment expenses. Other administrative expenses are added to the normal cost and are assumed to be 0.2% of the actuarial accrued liability.
Post-Retirement Cost-of-Living Adjustment	2.75% compounded annually for benefits accrued until July 1, 2012, and sick leave accrued until January 1, 2013, 2.5% compounded annually thereafter.
Social Security Wage Base Increase	4.0% compounded annually.
New Entrants	None assumed.
Unused Sick Leave Service Credit	0.25 additional months per year of service.
Section 415 Dollar Limitation and Section 401(a)(17) Compensation Limit Increase	2.75% compounded annually.

SCHEDULE OF FUNDING PROGRESS

Ten-year historical trend information about the ERS is presented herewith as required supplementary information. This information is intended to help users assess the ERS' funding status on a going-concern basis, assess progress made in accumulating assets to pay benefits when due and make comparisons with other public employee retirement systems.

Actuarial Valuation Date July 1	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) – (1)	(4) Funded Ratio % (1)/(2)	(5) Covered Payroll	(6) UAAL as a Percentage of Covered Payroll (3) / (5)
2006	\$552,432,436	\$544,748,263	(\$7,684,173)	101.4	\$109,579,279	(7.0)%
2007	600,285,246	615,588,955	15,303,709	97.5	122,825,271	12.5%
2008	633,699,751	662,224,634	28,524,883	95.7	132,240,949	21.6%
2009	541,519,199	726,000,351	184,481,152	74.6	142,590,713	129.4%
2010	609,902,953	763,860,139	153,957,186	79.8	140,407,414	109.7%
2011	659,362,107	761,343,000	101,980,893	86.6	132,490,722	77.0%
2012	660,231,611	802,077,365	141,845,754	82.3	129,911,593	109.2%
2013	690,539,998	831,199,592	140,659,594	83.1	129,134,125	108.9%
2014	766,531,514	879,190,389	112,658,875	87.2	135,041,803	83.4% ⁽¹⁾
2015	830,052,104	887,487,374	57,435,270	93.5	141,670,765	40.5% ⁽¹⁾

⁽¹⁾ This ratio is now reported based on the Net Pension Liability, as defined in GASB 67. Refer to page 38 for the Net Pension Liability. The UAAL as a percentage of payroll is no longer required.

Analysis of the dollar amounts of plan net position, actuarial accrued liability and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net position as a percentage of the actuarial accrued liability provides one indication of the system's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker.

Generally, the greater this percentage is the stronger the system. Trends in the unfunded actuarial accrued liability (or excess of) and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and enables analysis of the system's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage is the stronger the system.

Notes:

- The frequency of the actuarial valuation/review is annual.
- The Entry Age Normal actuarial cost method is used for both funding and for financial reporting purposes.
- The actuarial assumptions are the same for both funding and accounting/GASB purposes.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation	Total Number of Members	Annual Salary	Annual Average Pay	% Increase/(Decrease) in Average Pay
General Employees				
7/1/2006	1,819	\$ 98,545,203	\$ 54,175	3.2
7/1/2007	1,874	110,019,634	58,708	8.4
7/1/2008	1,904	118,338,594	62,153	5.9
7/1/2009	2,078	128,800,404	61,987	(0.3)
7/1/2010	2,009	126,594,778	63,014	1.7
7/1/2011	1,898	119,358,603	62,887	(0.2)
7/1/2012	1,866	116,927,658	62,662	(0.4)
7/1/2013	1,874	115,936,747	61,866	(1.3)
7/1/2014	1,879	121,352,682	64,584	4.4
7/1/2015	1,901	126,806,443	66,705	3.3
Park Police				
7/1/2006	176	\$ 11,034,076	\$ 62,694	8.2
7/1/2007	190	12,805,637	67,398	7.5
7/1/2008	197	13,902,355	70,570	4.7
7/1/2009	194	13,790,309	71,084	0.7
7/1/2010	194	13,812,636	71,199	0.2
7/1/2011	187	13,132,119	70,225	(1.4)
7/1/2012	186	12,983,936	69,806	(0.6)
7/1/2013	190	13,197,378	69,460	(0.5)
7/1/2014	191	13,689,120	71,671	3.2
7/1/2015	203	14,864,322	73,223	2.2
Total				
7/1/2006	1,995	\$ 109,579,279	\$ 54,927	3.6
7/1/2007	2,064	122,825,271	59,508	8.3
7/1/2008	2,101	132,240,949	62,942	5.8
7/1/2009	2,272	142,590,713	62,760	(0.3)
7/1/2010	2,203	140,407,414	63,735	1.6
7/1/2011	2,085	132,490,722	63,545	(0.3)
7/1/2012	2,052	129,911,593	63,310	(0.4)
7/1/2013	2,064	129,134,125	62,565	(1.2)
7/1/2014	2,070	135,041,802	65,238	4.3
7/1/2015	2,104	141,670,765	67,334	3.3

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ROLLS

As of date	Added to rolls		Removed from rolls		Rolls end of year		% Increase in annual allowances	Average annual allowance
	No.	Annual allowances	No.	Annual allowances	No.	Annual allowances		
7/1/2015	76	\$ 2,516,877	26	\$ 549,556	1,324	\$ 40,994,405	5.72%	\$ 30,963
7/1/2014	63	\$ 1,827,720	26	\$ 622,566	1,272	\$ 38,775,456	3.68%	\$ 30,484
7/1/2013	75	\$ 2,173,664	16	\$ 406,440	1,235	\$ 37,399,741	5.92%	\$ 30,283
7/1/2012	68	\$ 1,963,919	28	\$ 483,565	1,176	\$ 35,310,586	7.00%	\$ 30,026
7/1/2011	96	\$ 3,425,855	27	\$ 528,833	1,136	\$ 32,999,162	10.02%	\$ 28,691
7/1/2010	102	\$ 3,523,036	12	\$ 247,267	1,067	\$ 29,992,947	11.47%	\$ 28,162
7/1/2009	76	\$ 2,378,257	23	\$ 311,465	977	\$ 26,905,810	11.45%	\$ 27,539
7/1/2008	NA	NA	NA	NA	924	\$ 24,141,406	NA	\$ 26,184 ¹

Additions to the rolls include new retirees and the beneficiaries of an active or retired member's death.

Deletions from the rolls include deaths of retirees, deaths of the surviving beneficiaries, surviving children who have reached the age of 18 or 23 if a full-time student, and the expiration of 10-year certain benefits.

The information in this table is presented for the last seven years only. Prior to 2008 the information was not maintained in this format and is not available for comparative purposes.

¹ The average annual allowance results for 7/1/2008 uses an end of the year count of 922, because there are two zero balance deceased benefits in pending status, with no current or future benefits attached.

SOLVENCY TEST

Actuarial Accrued Liabilities for

Valuation Date	Member Contributions	Vested Terminations, Retirees and Beneficiaries	Active Members (Employer Financed Portion)	Actuarial Value of Assets	% Portion of Accrued Liabilities Covered by Reported Assets		
7/1/2006	\$47,011,118	\$268,335,133	\$229,402,012	\$552,432,436	100	100	137.5
7/1/2007	52,039,017	296,186,895	267,363,043	600,285,246	100	100	94.3
7/1/2008	53,665,183	327,978,867	280,580,584	633,699,751	100	100	89.8
7/1/2009	57,678,803	362,388,083	305,933,465	541,519,199	100	100	39.7 ¹
7/1/2010	58,059,065	408,689,438	297,111,636	609,902,953	100	100	48.2
7/1/2011	57,659,169	461,475,412	242,208,419	659,362,107	100	100	57.9
7/1/2012	61,843,880	466,927,776	273,305,709	660,231,611	100	100	48.1
7/1/2013	64,747,601	501,072,738	265,379,253	690,539,998	100	100	47.0
7/1/2014	68,872,476	516,903,400	293,414,513	766,531,514	100	100	61.6
7/1/2015	72,702,687	531,683,180	283,101,507	830,052,104	100	100	79.7

¹Note: There was a large drop in assets from 07/01/2008 to 07/01/2009 while liabilities continued to grow. Because the solvency test first fully funds member contributions and the inactive (Vested Terminations, Retirees and Beneficiaries), the active percentage has decreased by a larger percentage because the full asset loss is reflected in this percentage.

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STATISTICAL
Section



STATISTICAL SECTION NARRATIVE

To assist readers, the Statistical Section of this CAFR presents information to add historical perspective, context, and detail to the Financial Statements, Notes to Financial Statements, and Required Supplementary Information presented in the preceding sections. To provide historical perspective, assess the ERS' overall financial condition, and a sense of trend, the exhibits in this Section are presented in multiple-year formats.

The **Schedule of Changes in Fiduciary Net Position** shows the historical combined effects of the additions and deductions of fiduciary net position over the 10-year period ended June 30, 2016 as well as detailing the ERS' largest source of revenue capacity - investment income June 30, 2007, June 30, 2010 through 2015. Investment loss for the years ended June 30, 2008, 2009 and 2016 assists in providing a context on how the ERS' financial position has changed over time.

The **Schedule of Benefit and Refund Deductions From Fiduciary Net Position By Type** provides the general information of payment trends of annuity data by benefit type and refund of contributions for the 10-year period ended June 30, 2016.

The **Schedule of Average Benefit Payments** provides the summary of statistics relating to the average annuitant's receipt of annuities over the eight-year period ended June 30, 2016.

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

For Years Ended June 30
(dollars in thousands)

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
ADDITIONS										
Employer contributions	\$ 27,191	\$ 28,150	\$ 28,750	\$ 23,806	\$ 32,182	\$ 25,633	\$ 17,615	\$ 14,933	\$ 10,561	\$ 9,825
Member contributions	6,418	6,340	5,414	5,355	4,396	4,698	5,136	4,893	4,522	4,402
Investment income (loss)(net of expenses)	<u>(4,851)</u>	<u>3,340</u>	<u>107,898</u>	<u>72,802</u>	<u>14,100</u>	<u>111,044</u>	<u>63,460</u>	<u>(119,445)</u>	<u>(55,310)</u>	<u>90,748</u>
Total additions	<u>28,758</u>	<u>37,830</u>	<u>142,062</u>	<u>101,963</u>	<u>50,678</u>	<u>141,375</u>	<u>86,211</u>	<u>(99,619)</u>	<u>(40,227)</u>	<u>104,975</u>
DEDUCTIONS										
Benefit payments	42,258	39,992	38,170	36,263	33,833	32,775	27,567	25,671	23,636	21,319
Refunds	461	391	237	369	317	359	335	249	382	489
Administrative expenses	<u>1,696</u>	<u>1,587</u>	<u>1,487</u>	<u>1,565</u>	<u>1,453</u>	<u>1,366</u>	<u>1,323</u>	<u>1,359</u>	<u>1,250</u>	<u>1,182</u>
Total deductions	<u>44,415</u>	<u>41,970</u>	<u>39,894</u>	<u>38,197</u>	<u>35,603</u>	<u>34,500</u>	<u>29,225</u>	<u>27,279</u>	<u>25,268</u>	<u>22,990</u>
CHANGE IN FIDUCIARY NET POSITION	<u>\$ (15,657)</u>	<u>\$ (4,140)</u>	<u>\$ 102,168</u>	<u>\$ 63,766</u>	<u>\$ 15,075</u>	<u>\$ 106,875</u>	<u>\$ 56,986</u>	<u>\$ (126,898)</u>	<u>\$ (65,495)</u>	<u>\$ 81,985</u>

SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS

From Fiduciary Net Position by Type
For Years Ended June 30
(dollars in thousands)

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Type of Benefit										
Retirees	\$ 38,268	\$ 35,806	\$ 34,348	\$ 32,618	\$ 30,547	\$ 29,225	\$ 24,289	\$ 22,515	\$ 20,505	\$ 18,640
Survivors	3,895	4,093	3,730	3,555	3,199	3,464	3,192	3,072	3,050	2,600
Disability benefits	<u>95</u>	<u>93</u>	<u>92</u>	<u>90</u>	<u>87</u>	<u>86</u>	<u>86</u>	<u>83</u>	<u>81</u>	<u>79</u>
Total benefits	<u>\$ 42,258</u>	<u>\$ 39,992</u>	<u>\$ 38,170</u>	<u>\$ 36,263</u>	<u>\$ 33,833</u>	<u>\$ 32,775</u>	<u>\$ 27,567</u>	<u>\$ 25,670</u>	<u>\$ 23,636</u>	<u>\$ 21,319</u>
Refund of contributions	\$ 461	\$ 391	\$ 237	\$ 369	\$ 317	\$ 359	\$ 335	\$ 249	\$ 382	\$ 489

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

As of July 1, 2015

YEARS OF CREDITED SERVICE --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	58	161	147	192	260	303	203	1324
Average monthly benefit	\$467	\$703	\$1,166	\$1,733	\$2,772	\$3,578	\$4,761	\$2,580
Average final average salary	\$42,664	\$48,314	\$53,111	\$58,300	\$67,077	\$67,205	\$76,338	\$62,064
Average years of service	3.9	8.1	13.0	18.2	23.1	28.6	33.4	21.4

As of July 1, 2014

YEARS OF CREDITED SERVICE --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	54	152	145	173	249	270	229	1272
Average monthly benefit	\$452	\$691	\$1,082	\$1,603	\$2,752	\$3,441	\$4,600	\$2,540
Average final average salary	\$41,194	\$47,568	\$50,122	\$55,644	\$67,593	\$66,475	\$73,373	\$60,988
Average years of service	3.9	8.1	12.9	18.1	23.1	28.7	33.6	21.7

As of July 1, 2013

YEARS OF CREDITED SERVICE --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	49	146	137	176	243	261	223	1235
Average monthly benefit	\$446	\$698	\$1,064	\$1,605	\$2,687	\$3,441	\$4,545	\$2,524
Average final average salary	\$40,190	\$45,897	\$48,727	\$55,496	\$66,417	\$65,815	\$72,293	\$60,095
Average years of service	3.8	8.2	12.9	18.1	23.1	28.7	33.6	21.8

As of July 1, 2012

Years of Credited Service --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	45	137	129	166	231	250	218	1176
Average monthly benefit	\$464	\$701	\$1,035	\$1,615	\$2,612	\$3,405	\$4,450	\$2,508
Average final average salary	\$38,126	\$45,665	\$46,972	\$54,389	\$64,336	\$65,415	\$71,397	\$59,131
Average years of service	3.6	8.2	13.0	18.1	23.1	28.7	33.6	21.9

As of July 1, 2011

Years of Credited Service --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	44	129	121	160	223	246	213	1136
Average monthly benefit	\$667	\$655	\$994	\$1,604	\$2,489	\$3,293	\$4,218	\$2,431
Average final average salary	\$36,863	\$43,873	\$44,960	\$53,170	\$62,126	\$63,845	\$69,781	\$57,576
Average years of service	3.5	8.1	13.0	18.1	23.1	28.7	33.5	22.0

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

As of July 1, 2010

Years of Credited Service --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees & Survivors	42	123	115	155	199	233	200	1067
Average monthly benefit	\$390	\$635	\$950	\$1,567	\$2,429	\$3,191	\$4,137	\$2,347
Average final average salary	\$31,968	\$42,356	\$44,112	\$51,773	\$58,916	\$61,395	\$67,461	\$55,213
Average years of service	3.6	8.1	13.0	18.1	23.1	28.6	33.5	21.9

As of July 1, 2009

Years of Credited Service --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees & Survivors	43	110	111	151	185	203	174	977
Average monthly benefit	\$408	\$645	\$944	\$1,550	\$2,423	\$3,137	\$4,191	\$2,294
Average final average salary	\$32,038	\$41,515	\$42,935	\$49,951	\$56,984	\$57,880	\$65,423	\$52,791
Average years of service	3.6	8.1	12.9	18.1	23.1	28.6	33.4	21.6

As of July 1, 2008

Years of Credited Service --->

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees & Survivors	40	107	116	138	170	191	162	924
Average monthly benefit	\$102	\$627	\$927	\$1,406	\$2,285	\$3,020	\$4,114	\$2,184
Average final average salary	\$30,442	\$40,181	\$41,689	\$45,753	\$54,026	\$56,042	\$65,097	\$50,560
Average years of service	3.6	8.2	12.9	18.1	23.1	28.7	33.4	21.5

¹Data for 2006-2007 not readily available.



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