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

Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2019 and 2018

Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2019 and 2018

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, 2019 and 2018

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EMPLOYEES' RETIREMENT SYSTEM
The Maryland-National Capital Park and Planning Commission
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Riverdale, Maryland 20737

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Andrea L. Rose
Administrator

September 20, 2019

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, 2019 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.

The 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. The 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 inform that 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, 2018. 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 submit our CAFR for fiscal year 2019 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 2018. 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 ("Maryland State"). Employees who were covered by Maryland State were given the option of remaining with Maryland State 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 Summary Plan Descriptions, which describe 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, 2019, the ERS fund had a return of 7.0% versus its policy benchmark of

6.8%. The ERS fund return was 9.8% for the three-years ended June 30, 2019 and 5.8% for the five-years ended June 30, 2019 versus the policy index which returned 8.5% and 5.3%, 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

For the seventh consecutive year, the ERS considered a reduction in the investment return assumption. Changes in economic and financial conditions caused public plans to continue lowering the investment return assumption. The Board determined decreasing the investment return assumption from 6.90% to 6.85%, effective July 1, 2019, was prudent and consistent with continued trends across the U.S.

The Board had Wilshire Associates initiate an Asset Liability Study with preliminary results presented in March 2019. Following analysis and discussion, at its July 9, 2019 meeting, the Board adopted a revised asset allocation which includes target allocations of 47.5% to equity, 35.5% to fixed income (including a 5% allocation to emerging market debt), and 17% to real assets with a 10-year expected return of 7.49% and expected risk of 10.63% and authorized an investment manager search to identify a best in class provider of emerging market debt. The revised asset allocation will be implemented in FY2020.

In accordance with the ERS' Pension Funding Policy, Cherion was retained to conduct a full-scope actuarial audit of the July 1, 2017 Actuarial Valuation and to review the most recent Experience Study covering July 1, 2011 to June 30, 2015 performed by Boomershine Consulting Group (BCG). Cheiron found the assumptions and methods used in the July 1, 2017 Actuarial Valuation generally sound and reasonable and that they conform to the appropriate Actuarial Standards of Practices (ASOPs). Cheiron made recommendations that certain assumptions be clarified and/or disclosed in future actuarial valuation reports and/or experience studies as detailed in Audit Report of the July 1, 2017 Actuarial Valuation. The actuarial audit is considered a "best practice" and will be conducted every 5-years, unless the ERS engages a new actuary and a full-replication of the prior actuarial valuation is performed.

Following the Commission's adoption of Resolutions 18-21, 18-26 and 18-31, the plan document was amended effective October 1, 2018 1) to modify the spousal death benefits for existing employees and future employees in Plans B and E; and 2) to extend the same provisions for the purchase of credited service to non-represented employees, that are currently offered to represented employees, participating in Plans B and E.

Additional initiatives and accomplishments for fiscal year 2019 included approval of Cheiron for actuarial consulting services for a three-year period ending May 1, 2022; approval of a revised Memorandum of Understanding (MOU) between the ERS and the Commission to facilitate Information Technology support to the ERS effective January 1, 2019; approval of a Amended Fee Schedule for the J.P. Morgan Chase Bank U.S. Active Core Plus Equity Fund which was a reduction in the standard fee effective October 1, 2018; approval of revised investment guidelines for Western Asset's Global Multi-Sector fund which include removal of the benchmark and management to a volatility target of 5-7%; and approval of a Board Self-Assessment to be completed in early fiscal year 2020.

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' operations and activities and that the results of this analysis be reported to the Commission. The ERS' Independent Public Accountants' unmodified 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 operations 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 closely monitors 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 2019 and 2018, the gains net of investment expense, were $62,438,427 and $70,470,948, respectively. Total contributions increased from $32,023,431 in 2018 to $32,333,169 in 2019. The increase can be attributed to an increase in employee contributions attributable to several purchases of service credit. Total deductions increased by 7.2% from $49,898,906 in 2018 to $53,506,003 in 2019. Pension and disability benefits and refunds account for $51,801,905 and the remainder of $1,704,098 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 65). 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, 2018, indicated that the funded ratio of the actuarial value of assets to the actuarial accrued liability for benefits was 94.9%. As of July 1, 2018, the actuarial value of assets was $943,070,635, and the actuarial accrued liability was $993,322,340.

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

Andrea L. Rose
Administrator

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

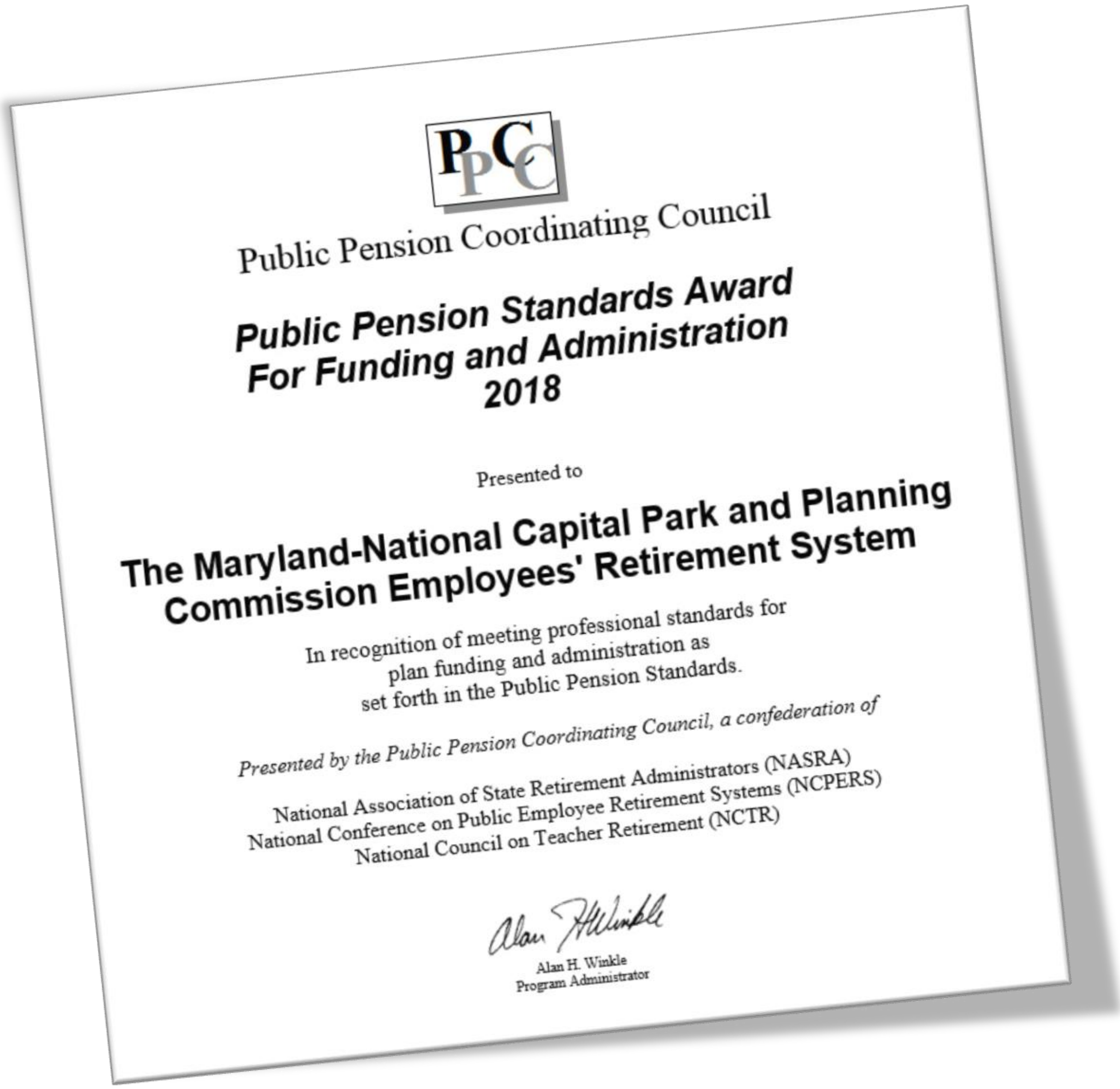
The Maryland-National Capital Park and Planning Commission Employees' Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO



PPCC

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
_2018_

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)

Alan H. Winkle
Program Administrator

BOARD OF TRUSTEES

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 AND REPORTING STRUCTURE

The Maryland-National Capital Park and Planning Commission

The Maryland-National Capital Park and Planning Commission
Employees' Retirement System
Board of Trustees

Andrea L. Rose
Administrator

Heather D. Van Wagner
Senior Administrative Specialist

Ann L. McCosby
Software Manager

Sheila S. Joynes
Accounting Manager

Antonia L. Lanier
Member Relations Manager

Lisa D. Butler
Senior Retirement Benefits Analyst

VACANT
Retirement Benefits Analyst

Christopher Baysmore
Member Relations Assistant

STAFF, CONSULTANTS AND PROFESSIONAL SERVICE PROVIDERS

STAFF

Andrea L. Rose
Administrator

Heather D. Van Wagner
Senior Administrative Specialist

Member Relations

Antonia L. Lanier
Member Relations Manager

Lisa D. Butler
Senior Retirement Benefits Analyst

VACANT
Retirement Benefits Analyst

Christopher Baysmore
Member Relations Assistant

Technical and Accounting Services

Sheila S. Joynes
Accounting Manager

Ann L. McCosby
Software Manager

CONSULTANTS & PROFESSIONAL SERVICE PROVIDERS

Actuary
Cheiron

Auditor
SB & Company, LLC

Banking
The Northern Trust Company Bank of America

Investment Consultant
Wilshire Associates, Inc.

Legal
GROOM Law Group, Chartered
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.

Employees' Retirement System
The Maryland-National Capital Park and Planning Commission
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Riverdale, Maryland 20737
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Hours of Service Monday-Friday 8 a.m. to 5 p.m.

FINANCIAL SECTION

SB & 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 ERS), as of June 30, 2019 and 2018, and for the years then ended, and the related notes to the financial statements, which collectively comprise the ERS' basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the plan's internal control. Accordingly, we express no such opinion. An audit also includes 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 fiduciary net position of the ERS, as of June 30, 2019 and 2018, and the respective changes in fiduciary net position for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

SB & COMPANY, LLC
KNOWLEDGE • QUALITY • CLIENT SERVICE

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Employer 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 audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the ERS' 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 were derived from, and relate 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 audits of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Owings Mills, Maryland
September 20, 2019

SB & Company, LLC

MANAGEMENT'S DISCUSSION AND 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, 2019, 2018 and 2017. 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 $962.0 million and $920.8 million as of June 30, 2019 and 2018, respectively. Of this amount, $962.0 million and $920.8 million may be used to meet the obligations of current and future retirees and beneficiaries. During 2019 and 2018, total fiduciary net position held in trust for pension benefits increased due to investment gains by $41.3 million (4.5%) and $52.6 million (6.1%), respectively.

- The ERS' Net Pension Liability as of June 30, 2019 was $75,398,577. The ratio of the Fiduciary Net Position to the Total Pension Liability was 92.7%.

OVERVIEW OF THE FINANCIAL STATEMENTS

The 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 the following additional supplementary information required by the Governmental Accounting Standards Board: a Schedule of Changes in Net Pension Liability and Related Ratios, a Schedule of Employer Contributions, a Schedule of Money-Weighted Rate of Returns, and Notes to Required Supplementary Information.

The Statements of Fiduciary Net Position present information on all of the ERS' assets and liabilities, with the difference between the two reported as fiduciary 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 present 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.

Financial Analysis of the System (continued)

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, 2019, 2018 and 2017 (in thousands).

	June 30, 2019	June 30, 2018	June 30, 2017
Assets			
Total assets	$ 1,000,954	$ 953,367	$ 908,613
Liabilities			
Total liabilities	38,937	32,616	40,457
Fiduciary net position restricted for pensions	**$ 962,017**	**$ 920,751**	**$ 868,156**

	June 30, 2019	June 30, 2018	June 30, 2017
Changes in fiduciary net position			
Total additions, net	$ 94,772	$ 102,494	$ 138,681
Total deductions, net	53,506	49,899	46,864
Net increase in fiduciary net position	**$ 41,266**	**$ 52,595**	**$ 91,817**

Assets
The largest component of fiduciary net position is the ERS' investments. As of June 30, 2019, 2018 and 2017, investments amounted to approximately $999.9 million, $952.4 million, and $907.8 million, respectively. In 2019, 2018 and 2017, the net increase in fiduciary net position was as a result of the net gain in the fair value of investments Total receivables of $0.9 million, $0.9 million and $0.8 million represent accrued income on investments and receivables of member contributions as of June 30, 2019, 2018 and 2017, respectively.

Liabilities
Liabilities are primarily comprised of amounts payable on securities lending transactions and investments payable. Securities lending liabilities amounted to approximately $37.2 million, $30.6 million, and $38.5 million as of June 30, 2019, 2018 and 2017, respectively. These outstanding balances are offset with cash and investments being held as collateral on securities lending transactions. Investments payable represent purchases not settled by June 30 of each year. Investments payable were approximately $0.4 million, $0.8 million, and $0.6 million as of June 30, 2019, 2018 and 2017, respectively.

Additions
The primary sources of net additions for the ERS include employer and member contributions and investment income. The following table reflects the source and amount of additions during the fiscal years ended June 30, 2019, 2018 and 2017 (in millions):

	June 30, 2019	June 30, 2018	June 30, 2017
Employer contributions	$ 24.8	$ 24.8	$ 20.3
Member contributions	7.5	7.2	6.7
Net investment gain	62.4	70.5	111.7
Net Additions	**$ 94.7**	**$ 102.5**	**$ 138.7**

Contributions

The Actuarially Determined Contributions for Fiscal Year ending June 30, 2019 and June 30, 2018 were revised resulting in reductions of $7,277,150 and $5,399,429, respectively, from the previously calculated Actuarially Determined Contributions. During 2019 and 2018, the employer contributions paid, $24,792,093 (16.4% of covered payroll) and $24,822,301 (17.3% of covered payroll), respectively, to the ERS were more than the actuarially determined contributions. Refer to the Schedule of Employer Contributions (page 42).

During 2019, the actuarially determined employer contribution to the ERS decreased from $19,422,872 to $17,514,943. A decrease in the actuarially determined contribution can be primarily attributed to an actuarial gain on the actuarial liabilities. During 2018, the actuarially determined employer contribution decreased from $20,268,189 to $19,422,872. A decrease in the actuarially determined contribution can be primarily attributed to an actuarial gain on the actuarial liabilities.

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 July 1, 2017 through June 30, 2018, investment performance on the actuarial value of assets was 7.02%. Over the five-year period ending on the valuation date, July 1, 2018, the return on the actuarial value of assets was 8.22%.

Net Investment Income

The net investment gain for the ERS totaled $62.4 in 2019 and $70.5 million in 2018. In 2019, the $62.4 million investment gain was comprised of a net appreciation in fair value of investments of $52.7 million, $13.0 million in dividends and interest, $0.1 million from securities lending, and $3.4 million advisory and management fees. In 2018, the $70.5 million investment gain was comprised of a net appreciation in fair value of investments of $62.5 million, $11.3 million in dividends and interest, $0.1 million from securities lending, and $3.5 million advisory and management fees. In 2017, the $111.7 million investment gain was comprised of a net appreciation in fair value of investments of $104.6 million, $10.3 million in dividends and interest, $0.2 million from securities lending, and $3.7 million advisory and management fees.

Deductions

The deductions from the ERS include the payment of retiree and survivor benefits, participant refunds and administrative expenses. Deductions for 2019, 2018 and 2017 totaled $53.5 million, $49.9 million, and $46.9 million, respectively. Such amounts represent increases of 7.2% and 6.5% over 2018 and 2017 respectively. At the beginning of fiscal year 2019, eligible retirees received a 2.1% cost-of-living adjustment which contributed to the 7.20% increase in deductions from 2018 to 2019**.** At the beginning of fiscal year 2018, eligible retirees received a 1.3% cost-of-living adjustment which contributed to the 6.5% increase in deductions from 2017 to 2018**.** The following table reflects the ERS' deductions by type in 2019, 2018, and 2017 (in thousands):

	2019		2018		2017	
Benefits	$	51,057	$	47,628	$	44,628
Refunds		745		460		561
Administrative expenses		1,704		1,811		1,675
Total Deductions	**$**	**53,506**	**$**	**49,899**	**$**	**46,864**

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

STATEMENTS OF FIDUCIARY NET POSITION

June 30, 2019 and 2018

	2019	2018
INVESTMENTS AT FAIR VALUE (note 3)		
Fixed income securities	$ 212,288,167	$ 227,922,933
International fixed income securities	3,621,479	3,224,978
Venture capital/alternative investments	206,450,020	137,484,220
Corporate stock	359,403,418	370,228,825
International corporate stock	79,337,936	74,080,706
Real estate	66,955,167	81,025,388
Short term investments	35,438,010	28,650,722
Securities lending short term collateral investment pool	36,447,344	29,803,345
Total investments at fair value	999,941,541	952,421,117
CASH	60,414	49,731
RECEIVABLES		
Accounts receivable-member contributions	96,099	66,531
Accrued income on investments	818,120	793,376
Total receivables	914,219	859,907
OTHER ASSETS		
Prepaid expenses	38,009	36,723
Total assets	1,000,954,183	953,367,478
LIABILITIES		
Investments related payable	437,904	789,506
Accrued expenses	636,338	646,924
Refunds payable	677,730	628,977
Payable for securities lending collateral	37,185,329	30,550,782
Total liabilities	38,937,301	32,616,189
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS	**$ 962,016,882**	**$ 920,751,289**

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

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

For the Years Ended June 30, 2019 and 2018

	2019	2018
ADDITIONS		
Contributions (note 2)		
Employer	$ 24,792,093	$ 24,822,301
Employees	7,541,076	7,201,130
Total contributions	32,333,169	32,023,431
Investment income		
Interest	10,728,303	10,694,124
Dividends	2,268,453	641,950
Net appreciation in fair value of investments	52,697,180	62,496,581
Other	8,351	19,856
Less - investment advisory and management fees	(3,386,283)	(3,496,644)
Net gain from investing activities	62,316,004	70,355,867
Securities lending activity (note 3)		
Securities lending income	861,224	625,548
Borrower rebate	(660,129)	(440,023)
Securities lending expenses:		
Less - Management fees	(78,672)	(70,444)
Net income from securities lending	122,423	115,081
Net investment gain	62,438,427	70,470,948
Total additions	94,771,596	102,494,379
DEDUCTIONS		
Benefits and other payments		
Pension benefits	46,583,577	42,964,532
Disability benefits	86,331	86,661
Survivor and death benefits	4,387,373	4,576,486
Refunds of contributions	744,624	460,450
Administrative expenses (note 6)	1,704,098	1,810,777
Total deductions	53,506,003	49,898,906
NET INCREASE IN FIDUCIARY NET POSITION	41,265,593	52,595,473
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	920,751,289	868,155,816
End of year	**$ 962,016,882**	**$ 920,751,289**

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 uses the Interactive Data Corporation by Institutional Bid Evaluation daily; international fixed income securities uses 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 U.S. 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. GASB only requires disclosure of investment management fees which are "readily separable" from investment income. Due to the diversified investments, not all investment expenses are transparently disclosed in the statements. Partnership fees for private equity are drawn from committed capital; therefore, these fees are included within the net asset value and reported in the net appreciation/(depreciation) in fair value of investments.

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 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.

2. Organization and Plan Description (continued)

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, are 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. The ERS provides a $10,000 post-retirement death benefit to beneficiaries of current and future retired members.

Sick Leave Integration. The ERS permits 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, 2018, membership in the ERS was as follows:

	Plan A (General)	Plan A (Police)	Plan B	Plan C	Plan D	Plan E	Total
Inactive Plan Members (or their beneficiaries) Currently Receiving Benefits	293	16	1,042	73	107	1	1,532
Inactive Plan Members Not Entitled	-	-	292	21	2	82	397
Inactive Plan Members Entitled but Not Yet Receiving Benefits	-	-	240	11	1	-	252
Active Plan Members	1	-	1,277	204	3	659	2,144
Total membership	**294**	**16**	**2,851**	**309**	**113**	**742**	**4,325**

As of July 1, 2017, membership in the ERS was as follows:

	Plan A (General)	Plan A (Police)	Plan B	Plan C	Plan D	Plan E	Total
Inactive Plan Members (or their beneficiaries) Currently Receiving Benefits	307	17	967	63	106	1	1,461
Inactive Plan Members Not Entitled	-	-	299	22	2	56	379
Inactive Plan Members Entitled but Not Yet Receiving Benefits	-	-	250	9	1	-	260
Active Plan Members	2	-	1,371	198	5	526	2,102
Total membership	**309**	**17**	**2,887**	**292**	**114**	**583**	**4,202**

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 2019 and 2018 were $32,333,169 and $32,023,431, respectively. In 2019, the Commission contributed $24,792,093 (16.4% of covered payroll). Employees contributed $7,541,076 (5.0% of covered payroll). In 2018, the Commission contributed $24,822,301 (17.3% of covered payroll). Employees contributed $7,201,130 (5.0% of covered payroll). The Actuarially Determined Contributions for Fiscal Year ending June 30, 2019 and June 30, 2018 were revised resulting in reductions of $7,277,150 and $5,399,429, respectively, from the previously calculated Actuarially Determined Contributions. Refer to the Schedule of Employer Contributions (page 42).

The Commission's actuarially determined contributions decreased 9.8% from $19,422,872 in 2018 to $17,514,943 in 2019. A decrease in the actuarially determined contribution can be primarily attributed to an actuarial gain on the actuarial liabilities.

3. Investments

The Board is authorized by the Trust Agreement 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 are 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:

	Target Exposure	Expected Range
U.S. Equities	19.00%	14%-24%
International Equities	19.00%	14%-24%
Low Volatility Equities	8.00%	4%-12%
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%**

The Board approved revisions to the Statement of Investment Policy ("Policy") on March 6, 2018. The Policy was amended to update the long-term assumptions.

3. Investments (continued)

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 U.S. Government and/or its agencies, any single issuer is not expected to exceed 5% of the market 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 managers 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.

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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, inflation indexed bonds, and global infrastructure 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 which represents the price that would be received if sold on the measurement date, were as follows:

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

		Fair Value Measurements Using		
	Fair Value 6/30/2019	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	$ 2,661	$ 2,661		
Short-term investment funds	22,762	22,762		
Debt securities				
Asset backed securities	7,358		$ 7,358	
Commercial mortgage-backed	3,624		3,624	
Corporate bonds	32,578		32,578	
Government agencies	6,357		6,357	
Government bonds	13,258		13,258	
Government mortgage-backed securities	17,610		17,610	
Government-issued commercial mortgage-backed	652		652	
Other fixed income-funds	8,813		8,813	
Index linked government bonds	2,646		2,646	
Provincial Bonds	379		379	
Total debt securities	93,275	0	93,275	-
Equity investments				
Common stock	92,091	92,088	3	
Funds-common stock	0			
Equity exchange traded fund	2	2		
Total equity investments	92,093	92,090	3	-
Securities lending short term collateral investment pool	36,447	36,447		
Total investments by fair value level	$ 247,238	$ 153,960	$ 93,278	$ -

Investments Measured at the net asset value (NAV)
($ in thousands)

	2019	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Short-term investment funds	$ 10,015	None	Monthly	1-6 days
Funds-corporate bonds	34,593	None	Monthly	7-15 days
Other fixed income-funds	88,041	None	Monthly	7-15 days
Funds-common stock	346,649	None	Monthly	7-15 days
Venture capital and partnerships	206,450	None	Monthly, Quarterly	Frequent Changes
Real estate	66,955	None	Monthly	1-15 days
Total investments measured at NAV	752,703			
Total investments	$ 999,941			

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

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

	Fair Value 6/30/2018	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)
Investments by fair value level				
Cash and invested cash	$ 5,613	$ 5,613	$ -	$ -
Short-term investment funds	-	-	-	-
Debt securities				
Asset backed securities	7,011	-	7,011	-
Commercial mortgage-backed	3,285	-	3,285	-
Corporate bonds	29,592	-	29,592	-
Government agencies	9,159	-	9,159	-
Government bonds	15,384	-	15,384	-
Government mortgage-backed securities	16,442	-	16,442	-
Other fixed income-funds	2,886		2,886	
Index linked government bonds	1,955	-	1,955	-
Provincial Bonds	460	-	460	-
Total debt securities	86,174	-	86,174	-
Equity investments				
Common stock	90,741	90,738	3	-
Funds-common stock		-		-
Equity exchange traded fund	-	-	-	-
Total equity investments	90,741	90,738	3	-
Securities lending short term collateral investment pool	29,803	29,803	-	-
Total investments by fair value level	$ 212,331	$ 126,154	$ 86,177	$ -
Securities lending short term collateral investment pool	29,803	29,803	-	
Total investments by fair value level	$ 212,331	$ 126,154	$ 86,177	$ -

Investments Measured at the net asset value (NAV)
($ in thousands)

	2018	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Short-term investment funds	$ 23,037	None	Monthly	1-6 days
Funds-corporate bonds	34,071	None	Monthly	7-15 days
Other fixed income-funds	110,903	None	Monthly	7-15 days
Funds-common stock	353,569	None	Monthly	7-15 days
Venture capital and partnerships	137,484	None	Monthly, Quarterly	Frequent Changes
Real estate	81,026	None	Monthly	1-15 days
Total investments measured at NAV	740,090			
Total investments	$ 952,421			

The pricing services used for fixed income securities (level 2) uses the Interactive Data Corporation by Institutional Bid Evaluation daily; international fixed income securities (level 2) uses the PC Bond Group or IBOXX by Institutional Mid Evaluation daily; corporate stock (level 1) uses the Interactive Data Corporation as of the official close of NASDAQ daily; international corporate stock (level 1) uses Telekurs by the Last Trade daily; venture capital (level 2) uses the Limited Partnership by the Institutional Bid Evaluation or Valuation as Priced for U.S. and international; and, real estate (level 2) uses the Investment Managers by Evaluation as priced.

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.

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

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, 2019 and 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 7.38% and 8.03%, 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' $999.9 million in investments as of June 30, 2019, $36.4 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.

The amount of the ERS' total cash and short-term investments as of June 30, 2019 and 2018 was $35,498,424 and $28,700,453, respectively. Cash deposits that were insured and collateralized in the bank account totaled $60,414 and $49,731 as of June 30, 2019 and 2018, respectively. As of June 30, 2019, and 2018, the ERS held $35,438,010 and $28,650,722, respectively, of short-term investments in its custodial investment accounts.

As of June 30, 2019, the ERS did not hold any short-term investments 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.

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

As of June 30, 2019, 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	$ 7,358,157	7.244718
Commercial mortgage-backed	3,624,327	20.662161
Corporate bonds	67,171,098	8.355191
Government agencies	6,357,128	8.008153
Government bonds	13,257,539	15.262654
Government mortgage-backed securities	17,609,767	23.503655
Government-issued commercial mortgage-backed	652,349	9.232834
Index linked government bonds	2,646,254	11.934511
Provincial bonds	378,694	20.939000
Fixed income mutual funds	96,852,710	N/A
Short-term investment funds	32,776,931	N/A
TOTAL	**$ 248,684,954**	**12.354895**

As of June 30, 2018, 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	$ 7,011,361	5.697226
Commercial mortgage-backed	3,284,884	22.722268
Corporate bonds	63,662,284	8.200564
Government agencies	9,159,171	8.158448
Government bonds	15,383,994	15.04401
Government mortgage-backed securities	16,442,101	23.860071
Index linked government bonds	1,955,337	8.08681
Provincial bonds	459,968	17.540401
Fixed income mutual funds	113,788,769	N/A
Short-term investment funds	23,037,353	N/A
TOTAL	**$ 254,185,222**	**12.633609**

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 $7,358,157 and $7,011,361 in ABS as of June 30, 2019 and 2018, 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

NOTES TO FINANCIAL STATEMENTS

3. Investments (continued)

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, 2019:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	3.38%
Government Agencies	AAA	0.04%
Government Agencies	AA	0.38%
Government Bonds	NR	0.23%
Government Mortgage-Backed Securities	NR	0.03%
Asset-Backed Securities	AAA	0.27%
Asset-Backed Securities	AA	0.02%
Asset-Backed Securities	A	0.09%
Asset-Backed Securities	BBB	0.05%
Asset-Backed Securities	NR	0.30%
Commercial Mortgage-Backed	AAA	0.18%
Commercial Mortgage-Backed	BBB	0.02%
Commercial Mortgage-Backed	NR	0.17%
Corporate Bonds	AAA	0.07%
Corporate Bonds	AA	0.36%
Corporate Bonds	A	1.28%
Corporate Bonds	BBB	1.38%
Corporate Bonds	BB	0.11%
Corporate Bonds	NR	0.05%
Municipal/Provincial Bonds	AA	0.04%
Other Fixed Income	NR	0.88%
Funds-Corporate Bonds	NR	3.46%
Funds-Other Fixed Income	NR	8.80%
Funds- Short Term Investment	NR	3.28%

NR = Not rated

Credit Quality Ratings as of June 30, 2018:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	3.51%
Government Agencies	AA	0.90%
Government Agencies	BBB	0.02%
Government Bonds	NR	0.04%
Government Mortgage Backed Securities	NR	0.04%
Asset Backed Securities	AAA	0.35%
Asset Backed Securities	AA	0.09%
Asset Backed Securities	A	0.01%
Asset Backed Securities	BBB	0.06%
Asset Backed Securities	NR	0.22%
Commercial Mortgage-Backed	AAA	0.15%
Commercial Mortgage-Backed	BBB	0.02%
Commercial Mortgage-Backed	NR	0.18%
Corporate Bonds	AAA	0.08%
Corporate Bonds	AA	0.27%
Corporate Bonds	A	1.22%
Corporate Bonds	BBB	1.48%
Corporate Bonds	BB	0.06%
Provincial Bonds	AA	0.04%
Provincial Bonds	A	0.01%
Other Fixed Income	NR	0.30%
Funds - Corporate Bond	NR	3.58%
Funds - Other Fixed Income	NR	11.64%
Funds - Short Term Investment	NR	2.42%

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, 2019 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	$ 1,127,813
Common stock	British pound sterling	5,633,812
Common stock	Canadian dollar	1,279,764
Common stock	Czech koruna	620,988
Common stock	Euro	22,070,231
Common stock	Hong Kong dollar	3,425,960
Common stock	Indonesian rupiah	108,207
Common stock	Japanese yen	7,061,710
Common stock	Mexican peso	1,025,398
Common stock	New Taiwan dollar	3,659,930
Common stock	Norwegian krone	2,827,106
Common stock	Singapore dollar	1,550,366
Common stock	South Korean won	1,272,153
Common stock	Swiss franc	1,866,212
Total		**$ 53,529,650**

The ERS' exposure to foreign currency risk as of June 30, 2018 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	$ 934,013
Common stock	British pound sterling	6,101,964
Common stock	Canadian dollar	1,462,299
Common stock	Czech koruna	653,792
Common stock	Euro	20,712,331
Common stock	Hong Kong dollar	1,105,682
Common stock	Indonesian rupiah	485,547
Common stock	Japanese yen	5,643,758
Common stock	Mexican peso	1,214,432
Common stock	New Taiwan dollar	4,093,224
Common stock	Norwegian krone	3,297,591
Common stock	Singapore dollar	1,541,760
Common stock	South Korean won	2,303,683
Common stock	Swiss franc	1,442,421
Common stock	Turkish lira	559,768
Total		**$ 51,552,265**

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 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, 2019 and 2018.

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 46 days in 2019 and 120 days in 2018.

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 35 days as of June 30, 2019, and 29 days as of June 30, 2018. 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, 2019:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	$ 16,900,555	$ 17,227,603
Domestic equities	16,830,007	17,115,338
Global equities	2,716,782	2,842,388
Total	**$ 36,447,344**	**$ 37,185,329**

The following table presents the fair values of the underlying securities, and the value of the collateral pledged as of June 30, 2018:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	$ 13,046,677	$ 13,358,054
Domestic equities	16,756,668	17,192,728
Total	**$ 29,803,345**	**$ 30,550,782**

*The securities collateral value is based on the ERS’ pro rata share of the value of the securities collateral maintained at The Northern Trust Company 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, 2019 and June 30, 2018, 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 as of June 30, 2018 and June 30, 2017, the ERS' contracts to purchase and sell by foreign currencies as follows:

Foreign Exchange Contracts Settled as of June 30, 2019:

Currency	Purchases	Realized Gain/(Loss)	Sells	Realized Gain/(Loss)
Brazilian real	$ -	$ -	$ (687,253)	$ 1,272
British pound sterling	117,964	94	(257,829)	(685)
Canadian dollar	28,586	(22)	-	-
Czech koruna	-	-	(22,243)	(68)
Euro	2,499,420	(1,097)	(481,130)	(1,012)
Hong Kong dollar	2,695,490	678	(166,269)	(25)
Indonesian rupiah	-	-	(395,443)	(390)
Japanese yen	1,252,337	1,665	(125,910)	(353)
Mexican peso	-	-	(224,874)	2,066
New Taiwan dollar	44,104	-	(228,662)	128
Norwegian krone	61,245	(281)	(102,102)	(248)
Singapore dollar	36,260	(69)	(87,505)	(226)
South Korean won	-	-	(1,077,946)	(33)
Swiss franc	34,404	119	(36,441)	(125)
Turkish lira	-	-	(467,709)	(1,124)

4. Derivatives Policy Statement (continued)

Foreign Exchange Contracts Settled as of June 30, 2018:

Currency	Purchases	Realized Gain/(Loss)	Sells	Realized Gain/(Loss)
Brazilian real	$ 1,099,127	$ -	$ (3,920)	$ (13)
British pound sterling	-	-	(4,584,921)	(4,452)
Canadian dollar	-	-	(151,947)	(513)
Czech koruna	-	-	(105,937)	(267)
Euro	5,928,421	1,694	(4,302,963)	(16,146)
Hong Kong dollar	158,610	(24)	(2,119,179)	(321)
Indonesian rupiah	-	-	(93,154)	87
Japanese yen	737,460	(3,407)	(797,232)	(3,890)
Mexican peso	-	-	(244,680)	(362)
New Taiwan dollar	1	-	(686,456)	(114)
Norwegian krone	-	-	(517,786)	(1,318)
Singapore dollar	-	-	(240,677)	136
South Korean won	-	-	(332,857)	(79)
Swedish krona	62	-	(1,032,819)	(997)
Swiss franc	3	-	(277,132)	(415)
Turkish lira	-	-	(138,193)	(723)

Foreign Exchange Contracts Pending June 30, 2019:

Currency	Purchases	Unrealized Gain/(Loss)	Sells	Unrealized Gain/(Loss)
Indonesian rupiah	$ -	$ -	$ (9,944)	$ (16)

There were no foreign exchange contracts pending as of June 30, 2019.

5. Net Pension Liability

The measurement date for implementation of GASB 67 is the ERS' fiscal year end, June 30, 2019. 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, 2018, 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, 2019 and 2018 are as follows:

	Total for ERS 2019	Total for ERS 2018
Total Penion Liability	$ 1,037,415,459	$ 1,032,643,266
Plan Fiduciary Net Position	962,016,882	920,751,289
Net Pension Liability	$ 75,398,577	$ 111,891,977
Plan Fiduciary Net Position as a percentage of Total Pension Liability	92.7%	89.2%

NOTES TO FINANCIAL STATEMENTS

5. Net Pension Liability (continued)

Actuarial Assumptions

The total pension liability as of June 30, 2019 was determined by an actuarial valuation, using the following actuarial assumptions, applied to all periods included in the measurement:

COLA: 2.4% compounded annually for benefits accrued until July 1, 2012, 2.0% compounded annually thereafter

Inflation: 2.5%

Salary Increases: 2.5% + variable service based increases

Investment Return: 6.95%, net of investment expense and including inflation

Mortality rates were based on the RP-2000 Mortality Table with male rates set forward 1 year and female rates set forward 2 years with generational adjustments for mortality improvements based on Scale BB. An alternate table was used for the valuation of disabled members.

The actuarial assumptions used in the July 1, 2018 valuation were based on the results of an actuarial experience study in 2017 for the period July 1, 2010 through June 30, 2016. The Board agreed to annually review the investment return assumption.

Actuarial Cost Method

For financial reporting purposes, the July 1, 2018 actuarial valuation was performed using the Entry-Age Normal Actuarial Cost Method.

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.

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, including Low Volatility	5.70%
International Equity- Developed	5.75%
Fixed Income & Bank Loans –U.S.	2.00%
Fixed Income - U.S. High Yield	3.75%
Fixed Income – International	2.40%
Public Real Assets	2.55%
Private Equity	7.60%
Private Real Assets	4.65%
Cash	0.80%
Total Weighted Average Real Return	**4.58%**
Plus Inflation	2.50%
Total Return w/o Adjustment	7.08%
Risk Adjustment	-0.13%
Total Expected Return	6.95%

NOTES TO FINANCIAL STATEMENTS

5. Net Pension Liability (continued)

Discount Rate

The discount rate used to measure the total pension liability was 6.90%. 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 6.90%, 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
	5.90%	6.90%	7.90%
Total Pension Liability	$ 1,165,495,677	$ 1,037,415,459	$ 930,518,794
Plan Net Position	962,016,882	962,016,882	962,016,882
Net Pension Liability	**$ 203,478,795**	**$ 75,398,577**	**$ (31,498,088)**
Ratio of Plan Fiduciary Net Position to Total Pension liability	82.5%	92.7%	103.4%

6. Administrative Expenses

The Board employs 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, 2019 and 2018 was $1,704,098 and $1,810,777, respectively. The administrative expenses are financed by the employer contributions.

The liability for accrued leave as of June 30, 2019 and 2018, was $156,670 and $184,470 respectively, and has been included in accrued expenses in the accompanying financial statements.

Administrative expenses charged to the ERS by the Commission for 2019 were: computer services of $67,750, legal of $64,200, rent of $108,680, postage of $2,961, and copier leasing costs of $6,827. In 2018, the expenses were: computer services of $47,200, legal of $64,200, rent of $108,680, postage of $3,530, and copier leasing costs of $4,471.

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, 2018.

NOTES TO FINANCIAL STATEMENTS

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 (the "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 the two employees covered by the 401(a) Plan for the year ended June 30, 2019 was $205,470 and the total payroll was $850,672. The ERS' contribution to the 401(a) Plan was $17,055 (2.0% of covered payroll) for the year ended June 30, 2019.

The payroll for two employees covered by the 401(a) Plan for the year ended June 30, 2018 was $287,472 and the total payroll was $911,661. The ERS' contribution to the 401(a) Plan was $22,125 (2.4% of covered payroll) for the year ended June 30, 2018.

In addition, employees are eligible to participate in a Section 457 Deferred Compensation Plan "(the "457 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.

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, 3 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

The ERS pays the contributions for Other Post-Employment Benefits (OPEB) in connection with the implementation of the accounting requirements of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, based on requested actuarial amounts from the Commission and plan sponsor. For the years ended June 30, 2019 and 2018, the ERS contributed $22,250 and $15,312, respectively. The total OPEB liability is reported within the Commission's reporting entity and is not allocated to the ERS. 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).

NOTES TO FINANCIAL STATEMENTS

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; natural disasters; and identity theft. The ERS addresses these risks by purchasing workers' compensation (Maryland state mandatory limits) insurance, unemployment insurance, fiduciary liability, theft, business owners, and cyber liability insurance. The ERS did not pay any claims settlements in excess of insurance coverage in 2019 or 2018, nor was any insurance coverage reduced in 2019 or 2018. 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. 85 *Omnibus*. The statement addresses consistency in accounting and financial reporting issues that have been identified during implementation and application of certain GASB Statements. The Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]) We have applied the standards that are applicable.

12. Subsequent Changes

An Asset Liability Study was completed in March 2019 with a new asset allocation approved in July 2019 with inclusion of a dedicated allocation to Emerging Market Debt and reduction to U.S. and Non-U.S. equity allocations. The new asset allocation will be implemented in FY2020.

REQUIRED SUPPLEMENTARY INFORMATION

UNDER GASB 67

Schedule of Changes in Net Pension Liability and Related Ratios[1]
For Years Ended June 30

	Fiscal Year					
	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	$ 17,097,809	$ 18,834,451	$ 20,196,060	$ 18,125,110	$ 19,015,744	$ 16,635,683
Interest	67,607,637	65,346,751	66,311,451	61,280,153	64,188,829	60,003,715
Changes in benefit terms[2]	5,196,837	-	(6,233)	(4,863)	-	-
Difference between expected and actual experience	12,366,940	(51,028,919)	(9,213,536)	(20,701,234)	610,807	-
Changes in assumptions	5,808,280	5,434,643	34,368,804	(13,818,623)	9,147,692	-
Benefit payments, including refunds	(51,801,905)	(48,088,129)	(45,189,395)	(42,718,801)	(40,382,818)	(38,407,073)
Net Change in Total Pension Liability	$ 56,275,598	$ (9,501,203)	$ 66,467,151	$ 2,161,742	$ 52,580,254	$ 38,232,325
Total Pension Liability - Beginning of Year	981,139,861	990,641,064	924,173,913	922,012,171	869,431,917	831,199,592
Total Pension Liability - End of Year	**$ 1,037,415,459**	**$ 981,139,861**	**$ 990,641,064**	**$ 924,173,913**	**$ 922,012,171**	**$ 869,431,917**
Plan Fiduciary Net Position						
Contributions – employer	$ 24,792,093	$ 24,822,301	$ 20,268,189	$ 27,191,305	$ 28,149,976	$ 28,750,323
Contributions – member	7,541,076	7,201,130	6,751,196	6,418,154	6,339,732	5,413,595
Net investment income	62,438,427	70,470,948	111,662,056	(4,851,526)	3,340,520	107,897,795
Benefit payments, including refunds	(51,801,905)	(48,088,129)	(45,189,395)	(42,718,801)	(40,382,818)	(38,407,073)
Admin. expenses	(1,704,098)	(1,810,777)	(1,674,654)	(1,696,334)	(1,587,371)	(1,487,210)
Net Change in Plan Fiduciary Net Position	$ 41,265,593	$ 52,595,473	$ 91,817,392	$ (15,657,202)	$ (4,139,961)	$ 102,167,430
Plan Fiduciary Net Position - Beginning of Year	$ 920,751,289	$ 868,155,816	$ 776,338,424	$ 791,995,626	$ 796,135,587	$ 693,968,157
Plan Fiduciary Net Position - End of Year	**$ 962,016,882**	**$ 920,751,289**	**$ 868,155,816**	**$ 776,338,424**	**$ 791,995,626**	**$ 796,135,587**
Net Pension Liability - Beginning of Year	$ 60,388,572	$ 122,485,248	$ 147,835,489	$ 130,016,545	$ 73,296,330	$ 137,231,435
Net Pension Liability - End of Year	75,398,577	60,388,572	122,485,248	147,835,489	130,016,545	73,296,330
Plan Fiduciary Net Position as a percentage of Total Pension Liability	92.7%	93.8%	87.6%	84.0%	85.9%	92.0%
Covered Payroll[3]	$ 156,412,817	$ 143,534,600	$ 141,670,765	$ 135,041,803	$ 129,134,125	$ 129,911,593
Net Pension Liability as a percentage of Covered Payroll	48.2%	42.1%	86.5%	109.5%	100.7%	56.0%

[1]Data for 2010-2013 is not readily available.

[2]Effective January 1, 2016, Employee contributions for Plan C were changed from 8.5% of Base Pay to 9.0% of Base Pay and for Plan D were changed from 7.5% of Base Pay to 8.0% of Base Pay.

3Covered payroll for FYE 2019 is as of beginning of fiscal year. Covered payroll for years prior to FYE 2019 is as of the valuation date one year prior to the beginning of the fiscal year.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Employer Contributions (unaudited)

Year	Actuarially Determined Employer Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2010	$ 17,614,908	$ 17,614,908	$ -	$ 132,240,949	13.30%
2011	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	22.13%
2015	28,149,976	28,149,976	-	129,134,125	21.80%
2016	27,191,305	27,191,305	-	135,041,803	20.14%
2017	20,268,189	20,268,189	-	141,670,765	14.31%
2018	19,422,872	24,822,301	(5,399,429)	143,534,600	17.29%
2019	17,514,943	24,792,093	(7,277,150)	156,412,817	15.85%

Covered payroll for FYE 2019 is as of beginning of fiscal year. Covered payroll for years prior to FYE 2019 is as of the valuation date one year prior to the beginning of the fiscal year.

Notes to Schedule

Valuation Date	July 1, 2017
Timing	Actuarially determined contribution rates are calculated as of the July 1 preceding the fiscal year in which contributions are made

Key Methods and Assumptions Used to Determine Contribution Rates for FYE 2019:

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, open 15-year period
Asset valuation method	5-year smoothed market
Discount rate	6.95% net of investment expenses
Salary increases	Varies by service from 2.50% to 6.50% per year
Cost-of-living adjustments	2.40% compounded annually for benefits based on credited service accrued up to July 1, 2012 and sick leave accrued until January 1, 2013; 2.00% compounded thereafter
Inflation	2.50% per year
Mortality	Post-Retirement Healthy: RP-2000 Healthy Mortality Table with male rates set forward one year and female rates set forward two years, projected generationally with Scale BB
	Disabled: RP-2000 Disabled Annuitant Table, with male rates set forward one year and female rates set forward two years, projected generationally with Scale BB
	Pre-Retirement: 50% of the RP-2000 Healthy Mortality Table with male rates set forward one year and female rates set forward two years, projected generationally with Scale BB

REQUIRED SUPPLEMENTARY INFORMATION

UNDER GASB 67

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

2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
7.38%	8.03%	14.62%	0.21%	0.70%	15.30%	12.35%	3.01%	21.80%	14.48%

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, 2019. With the exception of 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 2019	Actual 2018
PERSONNEL SERVICES		
Salaries and wages	$ 850,672	$ 911,661
Social Security contributions	63,391	66,305
Retirement contributions	98,464	141,053
Insurance contributions	132,956	157,985
Other employee benefits	41,544	55,251
Unemployment compensation	378	378
TOTAL PERSONNEL SERVICES	1,187,405	1,332,633
Professional and contractual services		
Actuarial	49,415	36,240
Auditing & Tax services	25,642	23,346
Legal	113,130	142,145
Computer services	70,066	50,800
Payroll & Miscellaneous Services	4,361	3,866
Total professional and contractual services	262,614	256,397
Communication costs		
Advertising	-	974
Telephone	-	-
Postage	2,961	3,530
Travel,conference and meetings	9,390	13,859
Total communication costs	12,351	18,363
Other services and charges		
Office space rental	108,680	108,680
Equipment leasing	6,827	4,471
Furniture and equipment	46,047	7,762
Supplies	4,787	5,961
Maintenance	26,215	26,349
Bonding and insurance	43,657	44,815
Dues and subscriptions	2,300	2,275
Other services	3,215	3,071
Total other services and charges	241,728	203,384
Total	$ 1,704,098	$ 1,810,777

SUPPLEMENTARY SCEDULE

Schedule of Investment Expenses
Fiscal Years Ended June 30

	2019	2018
Investment managers		
Fixed income	$ 1,492,021	$ 1,538,960
U.S. Equity	284,130	279,690
International equity	978,415	946,397
Private equity	2,401	46,404
Real assets	132,623	193,454
Total investment managers' fees	2,889,590	3,004,905
Other investment service fees		
Custodian fees	298,154	298,739
Investment consulting fees	198,539	193,000
Security lending fees:		
Borrower rebate	660,129	440,023
Management fees	78,672	70,444
Total other investment service fees	1,235,494	1,002,206
Total	$ 4,125,084	$ 4,007,111

SUPPLEMENTARY SCHEDULE

Schedule of Payments to Consultants
Fiscal Years Ended June 30

Firm Name	Nature of Service	2019	2018
SB & Company, LLC	Auditor	25,642	$ 23,346
Wilshire Associates, Inc.	Investment Consultant	198,539	193,000
Cheiron	Actuary	49,415	36,240
GROOM Law Group	Legal	48,930	77,945
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	67,750	47,200
Total		$ 454,476	$ 441,931

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INVESTMENT SECTION

INVESTMENT MANAGER DIRECTORY

U.S. EQUITY

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

INTERNATIONAL EQUITY

Capital Group
Earnest Partners, L.L.C.

GLOBAL MINIMUM VOLATILITY

BlackRock Institutional Trust Company, N.A.

PRIVATE EQUITY

Wilshire Associates Inc.

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.
White Oak Partners 3, LLC

Bank Loans

Voya Investment Management

PRIVATE REAL ASSETS

Aberdeen Capital
Management, LLC
Grosvenor Capital
Management Principal
Global Investors, LLC

PUBLIC REAL ASSETS

State Street Global Advisors

INVESTMENT CONSULTANT'S REPORT

Wilshire

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: August 19, 2019

Subject: Annual Investment Consultant's Review

Overview

The overall goal of the 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 current asset allocation policy is based on data and calculations resulting from the Actuarial Valuation conducted by the actuary, Boomershine Consulting Group, and a subsequent Asset/Liability study conducted by the investment consultant, Wilshire Associates, presented in March 2016.

Asset Class	Target %	Range %
U.S. Equities	19.0	14-24
International Equities	19.0	14-24
Low Volatility Equities	8.0	4-12
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***

A new Asset/Liability study was completed in March 2019 based upon the November 2018 Actuarial Valuation conducted by the actuary, Cheiron. A new asset allocation policy was subsequently approved in July 2019 with an inclusion of a dedicated allocation to the Emerging Market Debt ("EMD") asset class and offsetting reduction to Global Equity (U.S. and Non-U.S. Equity) allocations. This asset allocation policy will be implemented throughout FY 2020. Private market investments will be evaluated on a continual basis and will fund gradually over time.

Asset Class	Target %	Range %
U.S. Equities	15.0	10-20
International Equities	15.0	10-20
Low Volatility Equities	10.0	5-15
Private Equities	7.5	0-10
Total Equities	***47.5***	***40-55***
U.S. Core Fixed Income	11.5	8.5-14.5
High Yield Fixed Income	7.5	5-10
Bank Loans	4.0	2-6
Emerging Market Debt ("EMD")	5.0	3-7
Global Opportunistic Fixed Income	7.5	5-10
Total Fixed Income	***35.5***	***30-41***
Public Real Assets	2.0	0-10
Private Real Assets	15.0	5-20
Total Real Assets	***17.0***	***12-25***

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 ERS' investment consultant, Wilshire Associates, calculates the investment results provided. 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 collect 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 Wilshire software using a time-weighted rate of return methodology based upon market values. 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.

Major Asset Class Returns for Periods Ending June 30, 2019

	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Equity						
Wilshire 5000 Index	3.99	18.66	9.09	14.03	10.33	14.66
Standard & Poor's 500 Index	4.30	18.54	10.42	14.19	10.71	14.70
MSCI EAFE (N) Index	3.68	14.03	1.08	9.11	2.25	6.90
MSCI ACWI ex-U.S. (N) Index	2.98	13.60	1.29	9.38	2.16	6.54
MSCI Emerging Market (N) Index	0.61	10.59	1.21	10.66	2.49	5.81
Fixed Income						
Bloomberg Barclays Aggregate Bond Index	3.08	6.11	7.87	2.31	2.95	3.90
Merrill Lynch High Yield BB/B Index	2.85	10.37	8.84	7.09	4.87	8.37
S&P LSTA Leverage Loan Index	1.58	6.79	4.22	4.89	3.10	5.75
Bloomberg Barclays Global Aggregate Inde›	3.29	5.57	5.85	1.62	1.20	2.89
Treasury Bills (91 Day)	0.64	1.24	2.32	1.38	0.87	0.49
Real Assets						
Barclays U.S. TIPS Index	2.86	6.15	4.84	2.08	1.76	3.64
Bloomberg Barclays Commodity Index	-1.19	5.06	-6.75	-2.18	-9.15	-3.74
Wilshire Global REIT Index	1.40	14.62	8.63	6.61	4.27	11.32
NCREIF ODCE (EW) Index	0.77	1.80	3.90	6.09	8.45	8.71
U.S. CPI	0.76	1.95	1.65	2.05	1.45	1.73

U.S. Equity

The U.S. stock market was up 4.0% for the second quarter of 2019 and 18.66% for the year. This marks the strongest first half-year for U.S. equities in 24 years. Markets have been quite volatile this year as trade concerns and a possible global economic slowdown continue to sway the markets. Equity prices are also responding to actions and statements by the Federal Reserve, who has softened its monetary policy stance in the past few months.

Talk of what the Federal Open Market Committee will do at their next meeting is likely to dominate headlines during July. After three years of steady increases in the federal funds rate, the Fed appears to be at a pivotal moment. They have left the rate unchanged during 2019 and are forecasting no changes for the second half of the year. The open market, however, is currently far more aggressive on monetary policy and expects two or three 0.25% reductions.

Non-U.S. Equity

Equity markets outside of the U.S. continue to enjoy a strong 2019. Indicators out of Europe are still gloomy as recent data show that the manufacturing sector in Germany has weakened. News out of Japan is also troubling as consumption and capital spending shows little or no growth. Trade negotiations between the U.S. and China, the world's two largest economies, continue with both countries maintaining firm stances before the G20.

Fixed Income

The U.S. Treasury yield curve fell across all maturities during the quarter. The 10-year Treasury yield ended the quarter at 2.00%, down 41 basis points from March. The FOMC left its overnight rate unchanged during the quarter at a range of 2.25% to 2.50%. The committee softened some of their messaging to indicate that they are at least willing to ease should conditions deteriorate.

Portfolio Review

The ERS net of fee investment performance as of June 30, 2019 is detailed in the following table:

Maryland-NCPPC ERS	$000	Comp %	Calendar YTD %	1 Year %	3 Year %	5 Year %	Inception %
Total Fund (9/30/89)	**963,894**	**100.0%**	**10.3**	**7.0**	**9.8**	**5.8**	**7.6**
Policy Index/Blended Benchmark			*11.4*	*6.8*	*8.5*	*5.3*	*7.7*
Domestic Equity Comp (9/30/89)	**166,386**	**17.3%**	**17.7**	**6.7**	**13.3**	**9.3**	**9.4**
Wilshire 5000 Index			*18.7*	*9.1*	*14.0*	*10.3*	*9.7*
International Equity Comp (3/31/95)	**174,485**	**18.1%**	**16.9**	**4.0**	**13.3**	**4.4**	**6.3**
Policy Index			*13.6*	*1.3*	*9.4*	*2.2*	*4.8*
Global Min. Volatility Comp (6/30/17)	**76,659**	**8.0%**	**14.7**	**13.5**	**--**	**--**	**11.0**
MSCI ACWI Min. Volatility Index (N)			*14.4*	*13.0*	*--*	*--*	*10.5*
Private Equity Comp (6/30/13)	**79,926**	**8.3%**	**7.9**	**12.5**	**16.9**	**12.7**	**5.7**
MSCI ACWI Index (N)			*16.2*	*5.7*	*11.6*	*6.2*	*8.0*
Fixed Income Comp (9/30/89)	**269,817**	**28.0%**	**6.6**	**6.7**	**5.2**	**3.9**	**6.2**
Bloomberg Barclays Global Agg. Index			*5.6*	*5.9*	*1.6*	*1.2*	*2.3*
Private Real Asset Comp (9/30/07)	**141,010**	**14.6%**	**2.5**	**6.7**	**7.6**	**7.4**	**2.7**
Policy Index			*4.5*	*6.7*	*7.1*	*6.5*	*1.7*
Public Real Asset Comp (3/31/13)	**33,721**	**3.5%**	**10.5**	**2.2**	**2.8**	**0.4**	**0.9**
Policy Index			*11.1*	*2.9*	*3.2*	*0.6*	*1.0*
Managed Cash	**21,890**	**2.2%**	**--**	**--**	**--**	**--**	**--**

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). Monthly rates of return are calculated by Wilshire software using a time-weighted rate of return methodology based upon market values. Wilshire's calculation procedure is consistent with the recommendations of both the CFA Institute and the Bank Administrative Institute. 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 ERS' total portfolio posted a positive return of +7.0% over the trailing one-year period ending June 30, 2019. During this period, the portfolio exceeded its policy index, which returned +6.8%. Over the past one-year period, all asset classes posted positive returns, which attributed to strong absolute investment performance. Total portfolio returns have been +9.8% and +5.8% over the three year and five year periods, respectively, which are on an average annualized basis. Strong U.S. and Non-U.S. Equity markets combined with a maturing Private Equity portfolio have contributed to absolute returns during these longer-term periods.

Within equity markets, the domestic equity composite posted a +6.7% return compared to that of +9.1% for the Wilshire 5000 Index over the trailing one-year period ending June 30, 2019. Longer-term results over the three- and five-year periods were quite strong, posting a +13.3% and +9.3% return, respectively, during each of those time periods. The international equity portfolio posted strong absolute and relative investment returns over the past year. The portfolio returned +4.0% while the MSCI ACWI ex-U.S. Index, comprised of both developed and emerging market stocks, was up +1.3% over the trailing one-year period in U.S. Dollar terms. The addition of the Global Low Volatility strategy back in mid-2017 has benefited the portfolio as this segment was up 13.5% in absolute terms over the past one-year period. Lastly, private equity investments continue to mature while posting strong returns of +12.5% in this segment of the portfolio over the past year.

The fixed income composite returned +6.7% during the past year, while the domestic investment grade market represented by the Bloomberg Barclays Aggregate Index returned +5.9%. "Non-core" investments within the fixed income portfolio including high yield and global/opportunistic both returned +7.0% with these strategies positively influenced the total fixed income portfolio outperforming the broader investment grade fixed income market. The investment opportunities within the Global Opportunistic segment of the portfolio will continue 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 investments posted positive trailing one-year absolute returns of +6.7% and +2.2%, respectively. The public real assets composite has underlying exposures to real estate securities, commodities, global natural resource/energy stocks and global infrastructure. All the underlying exposures within the Public Real Asset segment of the portfolio are implemented through passively managed index funds. The private real assets composite returned +6.7% for the trailing one-year period. A portion of this portfolio has benefited from the continued bull market within the commercial real estate market since the global financial crisis. The remaining portion of the portfolio provides exposure to various natural resource, energy, and infrastructure related investments, some of which are returning positively while others are still 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 investments 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 do not hesitate to contact me.

Sincerely,

Bradley A. Baker
Vice President

INVESTMENT MANAGER MATRIX
As of June 30, 2019

Manager Name and/or Fund Name	Style	Market Value[1] $(000)	% of Fund
U.S. Equity			
J.P. Morgan Commingled Pension Trust Fund	130/30 Short Extension	$ 17,609	1.8%
Chicago Equity Partners	Small Cap Value	15,661	1.6%
Northern Trust Collective Russell 2000 Growth Index Fund	Small Cap Growth	14,803	1.6%
RhumbLine S&P 500 Pooled Index Trust	Large Core	118,313	12.3%
		$ 166,386	**17.3%**
International Equity			
Capital Group Institutional All Countries Equity Trust	ACWI ex-U.S.	$ 89,136	9.3%
Earnest Partners, L.L.C.	ACWI ex-U.S.	85,349	8.8%
		$ 174,485	**18.1%**
Global Minimum Volatility			
Blackrock MSCI ACWI Minimum Volatility Index	MSCI ACWI Min Volatility	**$ 76,659**	**8.0%**
Private Equity			
Wilshire MNCPPC Employee Retirement System Global, L.P. (I)	Other	$ 52,350	5.4%
Wilshire MNCPPC Employee Retirement System Global, L.P. (II)	Other	27,576	2.9%
		$ 79,926	**8.3%**
Fixed Income			
C.S. McKee, L.P.	Core	$ 53,653	5.6%
Eaton Vance Management	Core	41,059	4.3%
Golub Capital Partners 9, L.P.	Middle Market Direct Lending	17,500	1.8%
Golub Capital Partners 11, L.P.	Middle Market Direct Lending	12,000	1.2%
Loomis Sayles High Yield Full Discretion Trust	High Yield	34,206	3.5%
Neuberger Berman High Yield Bond Fund, LLC	High Yield	34,593	3.6%
Voya Senior Loan Fund	Bank Loans	33,322	3.5%
Western Asset Global Multi-Sector, LLC	Global Multi-Sector	20,515	2.1%
Oaktree Real Estate Debt Fund, L.P.	Real Estate Debt	3,526	0.4%
Oaktree Opportunities Fund VIII, L.P.	Distressed Opportunities	239	0.0%
White Oak Yield Spectrum Fund, L.P.	Middle Market Direct Lending	19,204	2.0%
		$ 269,817	**28.0%**
Private Real Assets			
Principal U.S. Property Account	Real Estate	$ 59,782	6.2%
Aberdeen Energy & Resources Partners II, L.P.	Real Assets	9,372	1.0%
Aberdeen Real Estate Partners II, L.P.	Real Estate	3,646	0.4%
Aberdeen Energy & Resources Partners III, L.P.	Real Assets	16,729	1.7%
Aberdeen Real Estate Partners III, L.P.	Real Estate	12,688	1.3%
GCM Grosvenor Real Asset Investments, L.P.	Real Assets	38,793	4.0%
		$ 141,010	**14.6%**
Public Real Assets			
SSgA Custom Real Asset Non-Lending Strategy	Diversified	**$ 33,721**	**3.5%**
Cash		**$ 21,890**	**2.2%**
TOTAL		**$ 963,894**	**100.0%**

[1] Market values provided by Wilshire Associates are not prepared by, reviewed or approved by any of the ERS' partnerships, general partners or any of their respective affiliates.

LIST OF LARGEST HELD DOMESTIC EQUITIES
As of June 30, 2019

Equity Income Securities	No. of Shares	Fair Value
ICON PLC COM	23,202	$ 3,572,412
AMADEUS IT GROUP EUR0.01	33,409	2,650,296
DIAGEO ORD PLC	55,199	2,377,320
SAFRAN SA EUR0.20	14,964	2,195,733
DNB ASA NOK10	117,797	2,192,620
ADR NOVARTIS AG	23,500	2,145,785
RELX PLC ORD GBP0.1444	79,492	1,926,382
ROCHE HLDGS AG GENUSSCHEINE NPV	6,625	1,866,212
HEINEKEN NV EUR1.60	16,119	1,801,489
SECOM CO NPV	20,800	1,790,414
ADR HDFC BK LTD ADR REPSTG 3 SHS	13,428	1,746,177
TAIWAN SEMICON MAN TWD10	220,000	1,692,880
ADR ICICI BK LTD	126,082	1,587,372
ADR RIO TINTO PLC SPONSORED ADR	25,356	1,580,693
DBS GROUP HLDGS NPV	80,800	1,550,366
DENSO CORP NPV	35,500	1,493,610
ADR BANCO BRADESCO S A SPONSORED /	151,410	1,486,846
EVEREST RE GROUP COM	6,013	1,486,293
CARNIVAL CORP COM PAIRED	29,738	1,384,304
MERCK KGAA NPV	13,083	1,370,105

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

LIST OF LARGEST HELD FIXED INCOME EQUITIES

As of June 30, 2019

Fixed Income Securities	Par	Fair Value
UNITED STATES TREAS INFL INDEXED NTS 0.75% 07-15-2028	2,128,000	2,257,078
UNITED STATES TREAS BDS DTD 00218 3.875%DUE 08-15-2040 REG	1,355,000	1,692,373
US TREAS NTS DTD 03-31-2014 2.25% DUE 03-31-2021 REG	1,589,000	1,601,351
UNITED STATES TREAS BDS DTD 2.75% 11-15-2047	1,223,000	1,276,554
UTD STATES TREAS 1% DUE 08-31-2019	1,219,000	1,216,408
UNITED STATES TREAS BDS 3% DUE 05-15-2047 REG	1,067,000	1,168,573
UNITED STATES TREAS BDS 3.0% DUE 08-15-2048	926,000	1,015,562
UNITED STATES TREAS NTS WI TREASURY NOTE2% DUE 11-15-2026 REG	904,000	910,886
VNDO 2012-6AVE MTG TR SER 2012-6AVE CL A2.9950 144A DUE 11-15-2030	848,000	868,211
FNMA POOL #MA3305 3.5% 03-01-2048 BEO	798,749	821,766
UNITED STATES TREAS NTS DTD 08/31/2014 1.625% DUE 08-31-2019 REG	810,000	809,107
UNITED STATES OF AMER TREAS BOND 3.125% 11-15-2028	703,000	771,076
FED FARM CREDIT 2.89% 05-20-2025	703,000	703,373
FEDERAL HOME LN MTG CORP POOL #G0-8741 3% 01-01-2047 BEO	688,910	697,376
FEDERAL HOME LN MTG CORP POOL #G16043 3.5% 08-01-2030 BEO	606,094	632,278
BANK OF AMERICA CORP 3.004% 12-20-2023	604,000	615,080
UNITED STATES TREAS BDS 00203 5% DUE 05-15-2037 REG	436,000	614,726
FEDERAL HOME LN MTG CORP POOL #G08726 3%10-01-2046 BEO	554,107	561,687
FEDERAL FARM CR BKS CONS SYSTEM WIDE BDS TRANCHE 00354 2.49% DUE 09-13-2023	534,000	533,252
FNMA POOL #BN5402 3.5% DUE 04-01-2049	515,853	528,156

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

SCHEDULE OF BROKERS COMMISSIONS
As of June 30, 2019

Broker	Shares	Commissions	Commission per share
BANK OF AMERICA CORPORATION	1,627	912	56.07%
BANK OF AMERICA MERRILL LYNCH SECUR	10,600	852	8.04%
BNP PARIBAS SECURITIES SERVICES	105,200	535	0.51%
CANTOR CLEARING SERVICES	21,353	384	1.80%
CAPITAL INSTITUTIONAL SERV NEW YORK	7,782	272	3.50%
CITIGROUP GLOBAL MARKETS INC.	174,100	2,342	1.35%
COLLINS STEWART	3,642	127	3.50%
COWEN AND COMPANY, LLC	39,007	975	2.50%
COWEN EXECUTION SERVICES LLC	53,598	1,340	2.50%
DEUTSCHE BANK SECURITIES INC.	5,095	178	3.50%
GOLDMAN SACHS INTERNATIONAL	10,000	71	0.71%
GOLDMAN, SACHS & CO.	3,265	59	1.80%
GOLDMAN, SACHS AND CO.	21,733	492	2.26%
INSTINET, LLC	210,715	3,807	1.81%
INVESTMENT TECHNOLOGY GROUP INC.	949	33	3.50%
INVESTMENT TECHNOLOGY GROUP LTD.	683	393	57.56%
ITG INC.	64,884	1,175	1.81%
J.P. MORGAN SECURITIES LLC	4,150	62	1.50%
J.P. MORGAN SECURITIES PLC	1269	506	39.90%
JEFFERIES HONG KONG LIMITED	9,000	63	0.69%
JEFFERIES LLC	72,281	1,301	1.80%
JOH. BERENBERG,GOSSLER UND CO.KG	1,396	431	30.88%
J.P. MORGAN SECURITIES (ASIA PACIFIC)	31,900	168	0.53%
LIQUIDNET INC	114,708	2,096	1.83%
LOOP CAPITAL MARKETS LLC	1907	67	3.50%
LUMINEX TRADING AND ANALYTICS	2,261	41	1.80%
MACQUARIE BANK LIMITED	17,000	121	0.71%
MERRILL LYNCH PIECE FENNER & SMITH	69,400	484	0.70%
MORGAN STANLEY & CO. LLC	24,925	374	1.50%
MORGAN STANLEY AND CO., LLC	22,600	614	2.72%
PAREL	344	120	34.78%
RBC CAPITAL MARKETS, LLC	117,355	2,112	1.80%
RBC EUROPE LIMITED	39,054	790	2.02%
ROBERT W. BAIRD CO.INCORPORATED	1,537	54	3.50%
SANFORD C. BERNSTEIN LTD	822	414	50.37%
SOCIETE GENERALE LONDON BRANCH	1,194	507	42.48%
UBS SECURITIES LLC	4,040	68	1.68%
VIRTU AMERICAS LLC	5,700	57	1.00%
WELLS FARGO BANK MINNESOTA NA	11,794	262	2.22%
	1,288,870	24,659	

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

BOOMERSHINE CONSULTING GROUP, LLC
ACTUARIAL & RETIREMENT PLAN SOLUTIONS

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

August 9, 2019

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, 2018

To the Members of the Board:

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, 2018 and sets forth the recommended contribution for the Fiscal Year ending June 30, 2020, according to the System's funding policy.

The valuation was performed on the basis of employee census data as of July 1, 2018 and investment fund data as of July 1, 2018, 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; however, we did review for reasonableness and consistency with prior data. 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 assumptions and methods used for funding purposes meet the parameters set by the relevant Actuarial Standards of Practice (ASOPs).** All assumptions were selected by the actuary, and approved by the Board of Trustees.

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

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, 2018 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. The return on the Fair Value of Assets and the Actuarial Value of Assets was more than the assumed 6.95% for the 2018 Fiscal Year, resulting in an investment gain.

An increase in the recommended contribution due to the change in the interest rate assumption and change in the death benefits for Plans B and E was offset mainly due to an adjustment in the valuation programming and partially due to an actuarial gain on the Actuarial Liability resulting in a net decrease in the Recommended Contribution.

A contribution of $19,244,687 is the recommended total to meet the System's funding objectives for the fiscal year 2020. This contribution represents 12.30% of covered payroll.

A breakdown of the contribution payable July 1, 2019 between Park Police and Non-Police employees is shown below:

	7/1/2019 Amount	2018 Payroll	% of Payroll
Non-Police	$ 15,774,562	$ 139,906,333	11.28%
Park Police	3,470,125	16,537,673	20.98%
Total	$ 19,244,687	$ 156,444,006	12.30%

The Net Employer Normal Cost payable at the beginning of the year decreased from $13,736,623 (9.1% of payroll) to $12,873,822 (8.2% of payroll). The amortization of the Unfunded Actuarial Accrued Liability decreased from $9,444,389 to $5,128,690 primarily due to the actuarial gain on the liabilities.

The breakdown of the actuarial (gain)/loss (prior to assumption changes) is as follows:

	7/1/2018 Amount	% of Liability/Assets
NET LIABILITY (GAIN)/LOSS		
Salary Increases More than Expected	$ 1,682,477	0.2%
New Hires	401,175	0.0%
New Terminations and Retirements	961,557	0.1%
COLA Increases Less Than Expected	(1,271,302)	-0.1%
Non-Vested Terminations (Payables)	119,374	0.0%
Other Experience	(48,969,805)	-4.9%
Total Liability (Gain)/Loss	(47,076,524)	-4.8%
Actuarial Asset Value (Gain)/Loss	(619,659)	-0.1%
Net Actuarial (Gain)/Loss	(47,696,183)	

Plan Provisions and Assumption Changes in the Funding Valuation

The interest rate assumption was changed from 6.95% to 6.90% with this actuarial valuation.
This resulted in an increase in the Actuarial Accrued Liability by $5.7 M
The death benefits for Plans B and E were modified which resulted in an increase in the Actuarial Accrued Liability of $4.2 M

Programming Oversight

An adjustment to the programming for the previously used mortality assumption resulted in a decrease in the Actuarial Accrued Liability by $49M.

Plan Assets and Analysis of Financial Experience

A 5-year asset smoothing method is used to develop the Actuarial Value of Assets to determine the funding requirements for the System. Under this method, each year's gain or loss is recognized in five equal portions over five years. The return on the Actuarial Value of Assets was 7.02% during the past year, which is more than the assumed return. Over the five-year period ending on the valuation date, the return on the Actuarial Value of Assets was 8.22%. The total Actuarial Value of Assets as of July 1, 2017 is $899,336,519. The total Fair Value of Assets as of July 1, 2018 is $943,070,635. The return on the Fair Value of Assets was 8.1% during the past year, which is more than the assumed return. Over the 5-year period ending on the valuation date, the return on the Fair Value of Assets was 7.3%.

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 Retirement System Trustees.

Sincerely,

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

Sunita K. Bhatia, EA, ASA, FCA, MAAA
Senior Actuary

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS
(Unaudited)

Ten-year historical trend information about the ERS is presented below. 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.

	(1)	(2)	(3)	(4)	(5)	(6)
Actuarial Valuation Date July 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (2) – (1)	Funded Ratio % (1)/(2)	Covered Payroll	UAAL as a Percentage of Covered Payroll (3) / (5)
2009	$ 541,519,199	$ 726,000,351	$ 184,481,152	74.6	$ 142,590,713	129.40%
2010	609,902,953	763,860,139	153,957,186	79.8	140,407,414	109.70%
2011	659,362,107	761,343,000	101,980,893	86.6	132,490,722	77.00%
2012	660,231,611	802,077,365	141,845,754	82.3	129,911,593	109.20%
2013	690,539,998	831,199,592	140,659,594	83.1	129,134,125	108.90%
2014	766,531,514	879,190,389	112,658,875	87.2	135,041,803	83.40% (1)
2015	830,052,104	887,487,374	57,435,270	93.5	141,670,765	40.50% (1)
2016	856,279,531	949,298,226	93,018,695	90.2	143,534,600	64.80% (1)
2017	899,336,519	991,624,737	92,288,218	90.7	150,820,889	61.20% (1)
2018	943,070,635	993,322,340	50,251,705	94.9	156,444,006	32.10% (1)

[1] This ratio is now reported based on the Net Pension Liability, as defined in GASB 67. The UAAL as a percentage of payroll is no longer required, but is shown here for historical comparison.

Analysis of the dollar amounts of plan net assets, actuarial accrued liability and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net assets 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's funding is becoming stronger or weaker. Generally, the greater the funded ratio 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 funding of the system.

Notes:
Actuarial valuations are completed annually.
The Entry Age Normal actuarial cost method is used for both funding and for financial reporting purposes.
All actuarial assumptions are the same for both funding and accounting/GASB purposes.

SOLVENCY TEST

Valuation Date	Actuarial Accrued Liabilities for: Member Contributions	Vested Terminations, Retirees and Beneficiaries	Active Members (Employer Financed Portion)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Assets (%)		
7/1/2009	$ 57,678,803	$ 362,388,083	$ 305,933,465	$ 541,519,199	100	100	39.7
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
7/1/2016	74,857,685	541,562,389	332,878,152	856,279,531	100	100	72.1
7/1/2017	77,964,472	576,223,626	337,436,639	899,336,519	100	100	72.7
7/1/2018	79,764,769	619,013,482	294,544,089	943,063,291	100	100	82.9

ACTUARY'S CERTIFICATION LETTER
(for Financial Reporting Purposes)

September 17, 2019

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

Dear Members of the Board:

The purpose of this report is to provide accounting and financial disclosure information for The Maryland-National Capital Park and Planning Commission (the Commission) Employees' Retirement System (the System) in accordance with GASB 67 and 68. This information includes:

- Determination of the discount rate as of June 30, 2019
- Projection of the Total Pension Liability from the valuation date to the measurement date,
- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Changes in the Net Pension Liability,
- Schedule of Employer Contributions,
- Disclosure of Deferred Inflows and Outflows, and
- Calculation of the Annual Pension Expense for the System.

In preparing our report, we relied on information (some oral and some written) supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions: changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices, and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice as set out by the Actuarial Standards Board, as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Board of Trustees
M-NCPPC ERS
September 17, 2019

This report was prepared for The Maryland-National Capital Park and Planning Commission Employees' Retirement System for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron

Janet Cranna, FSA, FCA, EA, MAAA
Principal Consulting Actuary

Patrick Nelson, FSA, CERA, EA, MAAA
Associate 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 over an open/rolling 15-year period.

Valuation Date

July 1, 2018

Investment Rate of Return

6.90% compounded annually.

Salary Increases

2.5% per year plus additional merit increases for 2017 and later as follows:

Years of Service	Park Police	Non-Police
0	0.0400	0.0250
5	0.0300	0.0225
10	0.0225	0.0200
15	0.0200	0.0150
20	0.0200	0.0100
25	0.0200	0.0000

Mortality

Healthy Lives

RP-2000 with male rates set forward 1 year and female rates set forward 2 years with generational method applied using scale BB factors.

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

RP-2000 Disabled with male rates set forward 1 year and female rates set forward 2 years with generational method applied using scale BB factors.

Withdrawal Decrements

Sample rates:

Park Police		Non-Police		
Years of Service	Rates	Years of Service	Males	Females
0	11.00%	0	9.00%	11.70%
2	7.00%	5	4.70%	6.20%
4	4.50%	10	2.50%	3.30%
6	2.90%	15	1.30%	1.70%
8	1.80%	20	0.70%	0.90%
10	1.20%	25+	0.00%	0.00%
15+	0.00%			

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

Disability Decrements

Sample rates:

Age	Park Police	Non-Police
25	0.00256	0.000705
30	0.00366	0.001103
35	0.00508	0.001643
40	0.00693	0.002468
45	0.00940	0.003833
50	0.01354	0.006285
55	0.02288	0.007500
60	0.03434	0.015803

Retirement Decrements

Sample rates:

Years of Service	Park Police[1]
5-19	5%
20-29	10%
30+	100%

100% Retirement also assumed at age 65

Age	Non Police[1]
45	2.50%
50	4.00%
55	6.50%
60	10.40%
65	16.80%
70	100%

[1] Age 55 minimum for early retirement.

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

2.4% compounded annually for benefits based on credit service accrued until July 1, 2012, and sick leave accrued until January 1, 2013, 2.0% compounded annually thereafter.

Social Security Wage Base Increase

3.0% compounded annually.

New Entrants

None assumed.

Unused Sick Leave Service Credit

0.36 additional months per year of service.

Section 415 Dollar Limitation and Section 401(a)(17) Compensation Limit Increase

2.5% compounded annually.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Total Number of Members	Annual Salary	Annual Average Pay	Increase/ Decrease in Average Pay
Employees				
7/1/2009	2,078	$ 128,800,404	$ 61,983	-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
7/1/2016	1,876	128,457,729	68,474	2.7
7/1/2017	1,899	134,573,069	70,865	3.5
7/1/2018	1,937	139,906,333	72,228	2.0
Park Police				
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
7/1/2016	197	15,076,871	76,532	4.5
7/1/2017	203	16,247,820	80,039	4.6
7/1/2018	207	16,537,673	79,892	-0.2
Total				
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
7/1/2016	2,073	143,534,600	69,240	2.8
7/1/2017	2,102	150,820,889	71,751	3.6
7/1/2018	2,144	156,444,006	72,968	1.7

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

	Added to rolls		Removed from rolls		Rolls end of year			
As of Date	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowance
July 1, 2018	104	3,860,862	33	769,236	1,532	49,588,355	7.33%	32,368
July 1, 2017	89	3,145,674	24	465,503	1,461	46,199,983	6.62%	31,622
July 1, 2016	87	2,903,320	15	221,758	1,396	43,331,139	5.70%	31,039
July 1, 2015	76	2,516,877	26	549,556	1,324	40,994,405	5.72%	30,963
July 1, 2014	63	1,827,720	26	622,566	1,272	38,775,456	3.68%	30,484
July 1, 2013	75	2,173,664	16	406,440	1,235	37,399,741	5.92%	30,283
July 1, 2012	68	1,963,919	28	483,565	1,176	35,310,586	7.00%	30,026
July 1, 2011	96	3,425,855	27	528,833	1,136	32,999,162	10.02%	28,691
July 1, 2010	102	3,523,036	12	247,267	1,067	29,992,947	11.47%	28,162
July 1, 2009	76	2,378,257	23	311,465	977	26,905,810	11.45%	27,539

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.

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, 2019 as well as detailing the ERS' largest source of revenue capacity - investment income June 30, 2010 through 2015, 2017, 2018 and 2019. Investment loss for the year ended June 30, 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, 2019.

The **Schedule of Average Benefit Payments** provides the summary of statistics relating to the average annuitant's receipt of annuities over the ten-year period ended June 30, 2019.

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION

For Years Ended June 30

(dollars in thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
ADDITIONS										
Employer contributions	$ 24,792	$ 24,822	$ 20,268	$ 27,191	$ 28,150	$ 28,750	$ 23,806	$ 32,182	$ 25,633	$ 17,615
Member contributions	7,541	7,201	6,751	6,418	6,340	5,414	5,355	4,396	4,698	5,136
Investment income gain/(loss)(net of expenses)	62,439	70,471	111,662	(4,851)	3,340	107,898	72,802	14,100	111,044	63,460
Total Additions	94,772	102,494	138,681	28,758	37,830	142,062	101,963	50,678	141,375	86,211
DEDUCTIONS										
Benefit payments	51,057	47,628	44,628	42,258	39,992	38,170	36,263	33,833	32,775	27,567
Refunds	745	460	561	461	391	237	369	317	359	335
Administrative expenses	1,704	1,811	1,675	1,696	1,587	1,487	1,565	1,453	1,366	1,323
Total Deductions	53,506	49,899	46,864	44,415	41,970	39,894	38,197	35,603	34,500	29,225
CHANGE IN FIDUCIARY NET POSITION	**$ 41,266**	**$ 52,595**	**$ 91,817**	**$ (15,657)**	**$ (4,140)**	**$ 102,168**	**$ 63,766**	**$ 15,075**	**$ 106,875**	**$ 56,986**

SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS
From Fiduciary Net Position by Type
For Years Ended June 30
(dollars in thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Type of Benefit										
Retirees	$ 46,584	$ 42,965	$ 40,379	$ 38,268	$ 35,806	$ 34,348	$ 32,618	$ 30,547	$ 29,225	$ 24,289
Survivors	4,387	4,576	4,163	3,895	4,093	3,730	3,555	3,199	3,464	3,192
Disability benefits	86	87	86	95	93	92	90	87	86	86
Total Benefits	$ 51,057	$ 47,628	$ 44,628	$ 42,258	$ 39,992	$ 38,170	$ 36,263	$ 33,833	$ 32,775	$ 27,567
Refund of Contributions	$ 745	$ 460	$ 561	$ 461	$ 391	$ 237	$ 369	$ 317	$ 359	$ 335

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

As of July 1, 2018

	Years of Credited Service --->							
	0-5	**6-10**	**11-15**	**16-20**	**21-25**	**26-30**	**>30**	**Total**
Number of Retirees and Survivors	58	181	176	201	287	345	284	1532
Average monthly benefit	$487	$719	$1,151	$1,693	$2,822	$3,690	$4,746	$2,697
Average final average salary	$46,368	$50,103	$55,012	$59,813	$70,473	$72,596	$78,227	$65,629
Average years of service	3.9	8.1	13.0	18.1	23.1	28.7	33.7	22.0

As of July 1, 2017

	Years of Credited Service --->							
	0-5	**6-10**	**11-15**	**16-20**	**21-25**	**26-30**	**>30**	**Total**
Number of Retirees and Survivors	59	172	164	189	279	325	273	1461
Average monthly benefit	$466	$692	$1,137	$1,650	$2,764	$3,563	$4,683	$2,642
Average final average salary	$42,267	$49,019	$53,555	$58,444	$68,913	$70,056	$76,920	$63,877
Average years of service	4.0	8.1	13.0	18.1	23.1	28.7	33.7	22.0

As of July 1, 2016

	Years of Credited Service --->							
	0-5	**6-10**	**11-15**	**16-20**	**21-25**	**26-30**	**>30**	**Total**
Number of Retirees and Survivors	58	169	157	184	272	323	233	1,396
Average monthly benefit	$ 455	$ 684	$ 1,144	$ 1,633	$ 2,757	$ 3,537	$ 4,722	$ 2,593
Average final average salary	$ 41,468	$ 48,615	$ 53,006	$ 57,328	$ 68,187	$ 68,112	$ 77,203	$ 62,784
Average years of service	3.9	8.1	13.1	18.1	23.1	28.8	33.7	21.8

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	1,324
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	1,272
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	1,235
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	1,176
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 & Survivors	44	129	121	160	223	246	213	1,136
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

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	1,067
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

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