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

Annual Comprehensive Financial Report

For the Fiscal Years Ended June 30, 2022 and 2021

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For the Fiscal Years Ended June 30, 2022 and 2021

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

Annual Comprehensive Financial Report

For the Fiscal Years Ended June 30, 2022 and 2021

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EMPLOYEES' RETIREMENT SYSTEM
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Andrea L. Rose
Administrator

October 6, 2022

The Board of Trustees:

The Maryland-National Capital Park and Planning Commission ("Commission") Employees' Retirement System's ("ERS") Annual Comprehensive Financial Report (ACFR) for the fiscal year ended June 30, 2022 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 ACFR 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' ACFR for the fiscal year ended June 30, 2021. 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 ACFR continues to conform to the Certificate of Achievement program requirements, and we will submit our ACFR for fiscal year 2022 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 2021. 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; 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 to begin benefits. Due to the COVID-19 pandemic some services have been suspended while others have been modified to ensure the health and safety of staff and members. Information can also be accessed via the ERS' website, http://ers.mncppc.org.

Investment Results

For the year ended June 30, 2022, the ERS fund had a return of -1.7% versus its policy benchmark of -9.1%. The ERS fund return was 6.5% for the three-years ended June 30, 2022 and 6.9% for the five-years ended June 30, 2022 versus the policy index which returned 3.9% and 5.1%, respectively. Refer to the Investment Consultant's Report on page 51 for a market overview with investment results by asset class and a portfolio review highlighting the ERS' restructuring activities.

Initiatives & Accomplishments

For the tenth 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 6.75% to 6.70%, effective June 30, 2022, was prudent and consistent with continued trends across the U.S.

The Board selected Grosvenor's Customized Infrastructure Strategies III, L.P. to manage an infrastructure strategy with the primary goals to include diversification, inflation protection and return enhancement; approved a bank loan manager search; and adopted a revised asset allocation as a result of an Asset Liability Study, as recommended by Wilshire Advisors, LLC.

Phase 1, implementation of a new pension system was completed in FY2021. Phase 2, a document imaging solution with viewing, scanning, and storing capabilities of all member records was completed in FY2022. Phase 3, Member Direct, a self-service portal for members to view account information and perform benefit estimate calculations is in progress and expected to rollout in FY2023.

Additional initiatives and accomplishments for fiscal year 2022 included awarding a new Actuarial Consulting Services Agreement to Cheiron, Inc. for three years; approving a Plan Document Restatement dated August 1, 2021 to provide clarification and be in compliance under the Setting Every Community Up for Retirement Enhancement Act; and approving revised actuarial equivalence factors for optional forms of benefit to be effective January 1, 2023.

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 ACFR 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 2022 and 2021, the (loss) and gains net of investment, were ($20,830,306) and $194,757,724, respectively. Total contributions increased from $30,397,604 in 2021 to $33,903,384 in 2022. The increase can be attributed primarily to a loss on the actuarial value of assets; experience that varied from assumptions; an increase in liabilities due to a decrease in the investment return assumptions, and a programming change. Total deductions increased by 7.7% from $60,022,030 in 2021 to $64,641,674 in 2022. Pension and disability benefits and refunds account for $62,244,466 and the remainder of $2,397,208 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, 2021, indicated that the funded ratio of the actuarial value of assets to the actuarial accrued liability for benefits was 92.59%. As of July 1, 2021, the actuarial value of assets was $1,060,873,621 and the actuarial accrued liability was $1,145,821,511.

Acknowledgments

The preparation of this ACFR reflects combined efforts of the ERS' staff. Special recognition is extended to Sheila Joynes for her lead role. This ACFR 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 Annual Comprehensive Financial Report
For the Fiscal Year Ended June 30, 2021

Christopher P. Morrill

Executive Director/CEO

PPCC

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2021

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

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

Alicia C. Stanford
Senior Administrative Specialist

Ann L. McCosby
Software Manager

Sheila S. Joynes
Accounting Manager

Charles M. Curtis, Jr.
Accountant

Antonia L. Lanier
Member Relations Manager

Lisa D. Butler
Senior Retirement Benefits Analyst

Annette E. Silvestri
Senior Retirement Benefits Analyst

Kenya N. Hearn
Retirement Benefit Analyst

Christopher Baysmore
Member Relations Assistant

STAFF, CONSULTANTS AND PROFESSIONAL SERVICE PROVIDERS

STAFF

Andrea L. Rose
Administrator

Alicia C. Stanford
Senior Administrative Specialist

Member Relations

Antonia L. Lanier
Member Relations Manager

Lisa D. Butler
Senior Retirement Benefits Analyst

Annette E. Silvestri
Senior Retirement Benefits Analyst

Kenya N. Hearn
Retirement Benefits Analyst

Christopher Baysmore
Member Relations Assistant

Technical and Accounting Services

Sheila S. Joynes
Accounting Manager

Ann L. McCosby
Software Manager

Charles M. Curtis Jr.
Accountant

CONSULTANTS & PROFESSIONAL SERVICE PROVIDERS

Actuary
Cheiron, Inc.

Auditor
SB & Company, LLC

Banking
The Northern Trust Company
Bank of America

Investment Consultant
Wilshire Advisors, LLC

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
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FINANCIAL SECTION

SB & COMPANY, LLC
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REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

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

Opinion

We have audited the accompanying financial statements of the Maryland-National Capital Park and Planning Commission Employees' Retirement System (ERS), as of June 30, 2022, and 2021, 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.

In our opinion, the financial statements present fairly, in all material respects, the respective statements of fiduciary net position of the ERS, as of June 30, 2022 and 2021, and the respective statements changes in fiduciary net position for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of ERS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about ERS's ability to continue as a going concern for one year after the statement is available to issue, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

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SB & COMPANY, LLC
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- Obtain an understanding of internal controls relevant to the audit 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 ERS's internal controls. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about ERS's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal controls–related matters that we identified during the audit.

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.

Supplementary 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.

Other Information

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
October 6, 2022

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, 2022, 2021, and 2020. 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 $1.06 billion and $1.11 billion as of June 30, 2022 and 2021, respectively. Of this amount, $1.06 billion and $1.11 billion may be used to meet the obligations of current and future retirees and beneficiaries. The total fiduciary net position held in trust for pension benefits in 2022 decreased by $51.6 million (4.7%) due primarily to investment losses and in 2021 increased by $165.1 million (17.5%) due primarily to investment gains.
- The ERS' Net Pension Liability as of June 30, 2022 was $125,238,331. The ratio of the Fiduciary Net Position to the Total Pension Liability was 89.4%.

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

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, 2022, 2021 and 2020 (in thousands).

	June 30, 2022	June 30, 2021	June 30, 2020
Assets			
Current assets	$ 1,090,770	$ 1,150,280	$ 986,921
Other assets	1,241	838	245
Total assets	1,092,011	1,151,118	987,166
Liabilities			
Total liabilities	35,858	43,396	44,577
Fiduciary net position restricted for pensions	**$ 1,056,153**	**$ 1,107,722**	**$ 942,589**

	June 30, 2022	June 30, 2021	June 30, 2020
Changes in fiduciary net position			
Total additions, net	$ 13,073	$ 225,155	$ 37,942
Total deductions, net	64,642	60,022	57,370
Net (decrease) increase in fiduciary net position	**$ (51,569)**	**$ 165,133**	**$ (19,428)**

Assets

The largest component of fiduciary net position is the ERS' investments. As of June 30, 2022, 2021 and 2020, investments amounted to approximately $1.09 billion, $1.15 billion, and $986.0 million, respectively. In 2022 the decrease in fiduciary net position was as a result of the net loss in the fair value of investments. In 2021 the increase in fiduciary net position was as a result of the net gain in the fair value of investments. In 2020 the net decrease in fiduciary net position was as result of a $51.5 million decrease in the net gain from investing activities compared to the prior fiscal year. The portfolio's return was significantly impacted by the COVID-19 pandemic particularly in the first quarter 2020 resulting in a -10.1% return during that quarter. All other quarters during fiscal year 2020 had positive absolute investment returns. Total receivables of $1.1 million, $0.7 million, and $0.8 million represent accrued income on investments and receivables of member contributions as of June 30, 2022, 2021 and 2020, respectively.

Liabilities

Liabilities are primarily comprised of amounts payable on securities lending transactions and investments payable. Securities lending liabilities amounted to approximately $33.0 million, $40.6 million, and $29.9 million as of June 30, 2022, 2021 and 2020, 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, $1.2 million, and $13.2 million as of June 30, 2022, 2021 and 2020, respectively.

Additions

The primary sources of net additions for the ERS include employer and member contributions and investment income. The following table reflects the sources and amounts of additions during the fiscal years ended June 30, 2022, 2021 and 2020 (in millions):

	June 30, 2022	June 30, 2021	June 30, 2020
Employer contributions	$ 26.2	$ 22.3	$ 19.2
Member contributions	7.7	8.1	7.8
Net investment (loss) gain	(20.8)	194.8	10.9
Net Additions	**$ 13.1**	**$ 225.2**	**$ 37.9**

Contributions

During 2022, the actuarially determined employer contribution to the ERS increased from $22,312,947 to $26,174,744. An increase in the actuarially determined contribution can be attributed to; a loss on the actuarial value of assets; experience that varied from assumptions; an increase in liabilities due to a decrease in the investment return assumption; and a programming change.

During 2021, the actuarially determined employer contribution to the ERS increased from $19,244,687 to $22,312,947. An increase in the actuarially determined contribution can be attributed to; a loss on the actuarial value of assets; experience that varied from assumptions; and an increase in liabilities due to a decrease in the investment return assumption.

Effective July 1, 2007, employer contributions are paid based on the prior year's valuation. For the calculation of the required employer contributions, the ERS uses a five-year asset smoothing method to determine the actuarial value of plan assets. During the period July 1, 2020 through June 30, 2021, investment performance on the actuarial value of assets was 9.45%. Over the five-year period ending on the valuation date, June 30, 2021, the return on the actuarial value of assets was 6.95%.

Net Investment Income

The net investment (loss) gain for the ERS totaled ($20.8) million in 2022, $194.8 million in 2021, and $10.9 million in 2020. In 2022, the ($20.8)million investment loss was comprised of a net depreciation in fair value of investments of ($36.3) million, $18.9 million in dividends and interest, $0.1 million from securities lending and $3.5 million advisory and management fees. In 2021, the $194.8 million investment gain was comprised of a net appreciation in fair value of investments of $182.6 million, $15.3 million in dividends and interest, $0.1 million from securities lending and $3.2 million advisory and management fees. In 2020, the $10.9 million investment gain was comprised of a net appreciation in fair value of investments of $0.9 million, $12.9 million in dividends and interest, $0.1 million from securities lending, $0.1 million from other investment income and $3.1 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 2022, 2021 and 2020 totaled $64.4 million, $60.0 million, and $57.4 million, respectively. Such amounts represent increases of 7.7% and 4.6% over 2021 and 2020 respectively. At the beginning of fiscal year 2022, eligible retirees received 1.2% cost-of-living adjustment which contributed to the 7.7% increase in deductions from 2021 to 2022**.** At the beginning of fiscal year 2021, eligible retirees received a 1.8% cost-of-living adjustment which contributed to the 4.6% increase in deductions from 2020 to 2021**.**The following table reflects the ERS' deductions by type in 2022, 2021, and 202 (in thousands):

	2022	2021	2020
Benefits	$ 61,422	$ 57,660	$ 55,068
Refunds	823	378	580
Administrative expenses	2,397	1,984	1,722
Total Deductions	**$ 64,642**	**$ 60,022**	**$ 57,370**

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, 2022 and 2021

	2022	2021
CASH	$ 69,754	$ 60,881
RECEIVABLES		
Accounts receivable-member contributions	40,543	6,684
Accrued income on investments	1,014,975	722,836
Total receivables	1,055,518	729,520
INVESTMENTS AT FAIR VALUE (note 3)		
Fixed income securities	250,108,441	231,300,499
International fixed income securities	8,826,161	7,625,831
Venture capital/alternative investments	303,379,447	277,066,810
Corporate stock	343,961,776	426,549,360
International corporate stock	46,998,050	77,233,352
Real estate	85,744,059	68,440,536
Short-term investments	18,408,941	21,772,477
Securities lending short-term collateral investment pool	32,217,495	39,501,241
Total investments at fair value	1,089,644,370	1,149,490,106
OTHER ASSETS		
Prepaid expenses	45,533	310
Equipment at cost, net of accumulated depreciation/amortization	1,195,922	837,330
of $312,203 and $101,158	1,241,455	837,640
Total assets	1,092,011,097	1,151,118,147
LIABILITIES		
Investments related payable	425,246	1,172,168
Accrued expenses	841,533	750,142
Refunds payable	1,549,109	917,732
Payable for securities lending collateral	33,041,917	40,556,217
Total liabilities	35,857,805	43,396,259
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS	**$ 1,056,153,292**	**$ 1,107,721,888**

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

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

For the Years Ended June 30, 2022 and 2021

	2022	2021
ADDITIONS		
Contributions (note 2)		
Employer	$ 26,174,744	$ 22,312,947
Employees	7,728,640	8,084,657
Total contributions	33,903,384	30,397,604
Investment income		
Interest	15,455,895	12,170,998
Dividends	3,439,922	3,152,182
Net (depreciation) appreciation in fair value of investments	(36,339,066)	182,573,906
Other	15,153	1,621
Less - investment advisory and management fees	(3,487,389)	(3,228,153)
Net (loss) gain from investing	(20,915,485)	194,670,554
activities Securities lending activity (note		
3)Securities lending income	166,344	116,026
Borrower rebate	(44,710)	8,452
Securities lending expenses:		
Less - Management fees	(36,455)	(37,308)
Net income from securities lending	85,179	87,170
Net investment (loss) gain	(20,830,306)	194,757,724
Total additions	13,073,078	225,155,328
DEDUCTIONS		
Benefits and other payments		
Pension benefits	54,965,912	52,051,950
Disability benefits	84,271	83,272
Survivor and death benefits	6,371,191	5,524,510
Refunds of contributions	823,092	378,267
Administrative expenses (note 6)	2,397,208	1,984,031
Total deductions	64,641,674	60,022,030
NET (DECREASE)/INCREASE IN FIDUCIARY NET POSITION	(51,568,596)	165,133,298
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS		
BEGINNING OF YEAR	1,107,721,888	942,588,590
ENDING OF YEAR	**$ 1,056,153,292**	**$ 1,107,721,888**

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

NOTES TO THE 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.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies (continued)

Fair Value (continued)
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.

Capital Assets
Capital assets are stated at cost value at the time received less accumulated depreciation/amortization. Donated capital assets, donated works of art, similar items and capital assets received in a service concession arrangement are reported at acquisition value rather than fair value. Repairs and maintenance are expensed as incurred. Assets with a cost greater than $5,000 are capitalized.

Depreciation/amortization is recorded over the following estimated useful lives using the straight-line method:

Computer software systems	5 to 15 years
Furniture, fixtures, and equipment	3 to 5 years

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 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.

2. Organization and Plan Description (continued)

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.

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.

2. Organization and Plan Description (continued)

Membership by Plan

As of June 30, 2021, 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	250	15	1,276	89	106	5	1,741
[1] Inactive Plan Members Entitled to but Not Yet Receiving Benefits	-	-	484	50	3	183	720
Active Plan Members	-	-	992	203	2	1,033	2,230
Total membership	**250**	**15**	**2,752**	**342**	**111**	**1,221**	**4,691**

[1] As of June 30, 2021, there were 499 terminated non-vested participants due a refund of member contributions.

As of July 1, 2020, 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	263	16	1,220	82	104	2	1,687
[1] Inactive Plan Members Entitled to but Not Yet Receiving Benefits	-	-	498	43	3	136	680
Active Plan Members	-	-	1,068	214	2	941	2,225
Total membership	**263**	**16**	**2,786**	**339**	**109**	**1,079**	**4,592**

[1] As of July 1, 2020, there were 449 terminated non-vested participants due a refund of member contributions.

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 2022 and 2021 were $33,903,384 and $30,397,604, respectively. In 2022, the Commission contributed $26,174,744 (14.7% of covered payroll). Employees contributed $7,728,640 (4.3% of covered payroll). In 2021, the Commission contributed $22,312,947 (12.9% of covered payroll). Employees contributed $8,084,657 (4.7% of covered payroll). Refer to the Schedule of Employer Contributions (page 44).

The Commission's actuarially determined contributions increased 17.31% from $22,312,947 in 2021 to $26,174,744 in 2022. An increase in the actuarially determined contribution can be primarily attributed to; a loss on the actuarial value of assets; experience that varied from assumptions; an increase in liabilities due to a decrease in the investment return assumption; and a programming change.

NOTES TO THE FINANCIAL STATEMENTS

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. Equity	15.00%	10%-20%
International Equity	10.00%	5%-15%
Global Low Volatility Equity	8.50%	5%-12%
Private Equity	8.00%	5%-12%
Total Equity	**41.50%**	**35%-48%**
U.S. Core Fixed Income	11.50%	8%-15%
High Yield Fixed Income	10.00%	7%-13%
Bank Loans	5.00%	2%-8%
Emerging Market Debt	5.00%	2%-8%
Global Opportunistic Fixed Income	10.00%	5%-15%
Total Fixed Income	**41.50%**	**35%-48%**
Public Real Assets	2.00%	0%-5%
Private Real Assets	15.00%	10%-20%
Total Real Assets	**17.00%**	**12%-22%**

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 like 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%).

NOTES TO THE FINANCIAL STATEMENTS

3. Investments (continued)

Private Equity Guidelines (continued)

- 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, emerging markets, 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 fair value of the fixed income composite at any time.
- Duration of each fixed income sub-class should typically remain with +/- 1.5 years of the sub-class benchmark.
- Credit quality for each sub-class is expected to be like 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.

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.

NOTES TO THE FINANCIAL STATEMENTS

3. Investments (continued)

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 6/30/2022	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	$ 173	$ 173	$ -	$ -
Short-term bills and notes	-		-	-
Short-term investment funds	-	-	-	-
Debt securities				
Asset backed securities	4,144	-	4,144	-
Commercial mortgage-backed	5,173	-	5,173	-
Non-government backed c.m.o.s.	262	-	262	-
Corporate bonds	40,585	-	40,585	-
Government agencies	18,602	-	18,602	-
Government bonds	29,968	-	29,968	-
Government mortgage-backed securities	22,203	-	22,203	-
Government-issued commercial mortgage-backed	190	-	190	-
Other fixed income	1,420	-	1,420	-
Total debt securities	122,547	-	122,547	-
Equity investments				
Common stock	42,643	42,640	3	-
Preferred stock	-	-	-	-
Equity exchange traded fund	-	-	-	-
Total equity investments	42,643	42,640	3	-
Securities lending short-term collateral investment pool	32,217	32,217	-	-
Total investments by fair value level	$ 197,580	$ 75,030	$ 122,550	$ -

Investments Measured at the Net Asset Value (NAV)
($ in thousands)

	2022	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Short-term investment funds	$ 18,235	None	Monthly	1-6 days
Funds-corporate bonds	47,076	None	Monthly	7-15 days
Funds-other fixed income	89,312	None	Monthly	7-15 days
Funds-common stock	348,317	None	Monthly	7-15 days
Venture capital and partnerships	303,379	145,627	Monthly, Quarterly	Frequent Changes
Real estate	85,745	500	Monthly	1-15 days
Total investments measured at NAV	892,064			
Total investments	$ 1,089,644			

NOTES TO THE FINANCIAL STATEMENTS

3. Investments (continued)

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

		Fair Value Measurements Using		
	Fair Value 6/30/2021	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	$ 2,861	$ 2,861	$ -	$ -
Short-term bills and notes	818		818	-
Short-term investment funds	-	-	-	-
Debt securities				
Asset backed securities	4,401	-	4,401	-
Commercial mortgage-backed	3,477	-	3,477	-
Non-government backed c.m.o.s.	265	-	265	-
Corporate bonds	43,759	-	43,759	-
Government agencies	4,280	-	4,280	-
Government bonds	29,130	-	29,130	-
Government mortgage-backed securities	19,984	-	19,984	-
Government-issued commercial mortgage-backed	283	-	283	-
Other fixed income	1,289	-	1,289	-
Provincial bonds	-		-	
Total debt securities	107,932	-	107,932	-
Common stock	70,749	70,746	3	-
Preferred stock	268	268	-	-
Equity exchange traded fund	-	-	-	-
Total equity investments	71,017	71,014	3	-
Securities lending short-term collateral investment pool	39,501	39,501	-	-
Total investments by fair value level	$ 222,129	$ 113,376	$ 108,753	$ -

Investments Measured at the Net Asset Value (NAV)
($ in thousands)

	2021	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Short-term investment funds	$ 18,094	None	Monthly	1-6 days
Funds-corporate bonds	43,763	None	Monthly	7-15 days
Funds-other fixed income	87,232	None	Monthly	7-15 days
Funds-common stock	432,765	None	Monthly	7-15 days
Venture capital and partnerships	277,067	112,577	Monthly, Quarterly	Frequent Changes
Real estate	68,440	1,500	Monthly	1-15 days
Total investments measured at NAV	927,361			
Total investments	$ 1,149,490			

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 THE FINANCIAL STATEMENTS

3. Investments (continued)

Investments Measured at the net asset value (NAV) (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, 2022 and 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (1.32%) and 21.85%, 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’ $1.09 billion in investments as of June 30, 2022, $32.2 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, 2022 and 2021 was $18,478,695 and $21,833,358, respectively. Cash deposits that were insured and collateralized in the bank account totaled $69,754 and $60,881 as of June 30, 2022 and 2021, respectively. As of June 30, 2022, and 2021, the ERS held $18,408,941 and $21,772,477, respectively, of short-term investments in its custodial investment accounts.

As of June 30, 2022, 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 THE FINANCIAL STATEMENTS

3. Investments (continued)

As of June 30, 2022, the ERS had the following fixed income investments and short-term investments with the following maturities:

Investment Type	Fair Value	Weighted Average Maturity-Years
Asset backed securities	$ 4,144,362	14.111083
Commercial mortgage-backed	5,173,272	16.124370
Corporate bonds	87,661,340	9.636653
Government agencies	18,601,512	10.276536
Government bonds	29,967,882	9.014343
Government mortgage-backed securities	22,202,720	24.409098
Government-issued commercial mortgage-backed	190,146	7.328000
Non-government backed collateralized morgaged obligations	261,987	20.152484
Fixed income mutual funds	90,731,382	N/A
Short-term investment funds	18,235,449	N/A
TOTAL	**$ 277,170,052**	**12.632269**

As of June 30, 2021, the ERS had the following fixed income investments and short-term investments with the following maturities:

Investment Type	Fair Value	Weighted Average Maturity-Years
Asset backed securities	$ 4,401,287	14.579074
Commercial mortgage-backed	3,476,979	16.486332
Corporate bonds	87,522,075	10.315763
Government agencies	4,280,167	8.469907
Government bonds	29,129,505	8.786643
Government mortgage-backed securities	19,984,262	23.604682
Government-issued commercial mortgage-backed	283,073	8.033769
Index linked government bonds	1,063,728	5.793695
Non-government backed collateralized morgaged obligations	264,679	21.171650
Fixed income mutual funds	88,520,575	N/A
Short-term investment funds	18,093,642	N/A
TOTAL	**$ 257,019,972**	**12.449246**

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 $4,144,362 and $4,401,287, in ABS as of June 30, 2022 and 2021, respectively.

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

NOTES TO THE FINANCIAL STATEMENTS

3. Investments (continued)

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, 2022:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	4.89%
Government Agencies	AA	1.18%
Government Agencies	NR	0.09%
Government Bonds	NR	0.28%
Government Mortgage Backed Securities	A	0.03%
Government Mortgage Backed Securities	AA	0.00%
Government Mortgage Backed Securities	BBB	0.03%
Government Mortgage Backed Securities	NR	0.01%
Asset Backed Securities	A	0.10%
Asset Backed Securities	AAA	0.10%
Asset Backed Securities	BBB	0.06%
Asset Backed Securities	NR	0.12%
Commercial Mortgage-Backed	A	0.01%
Commercial Mortgage-Backed	AA	0.10%
Commercial Mortgage-Backed	AAA	0.10%
Commercial Mortgage-Backed	BB	0.02%
Commercial Mortgage-Backed	BBB	0.01%
Commercial Mortgage-Backed	NR	0.23%
Corporate Bonds	A	1.37%
Corporate Bonds	AA	0.33%
Corporate Bonds	BB	0.23%
Corporate Bonds	BBB	1.66%
Corporate Bonds	NR	0.12%
Funds - Corporate Bond	NR	4.65%
Funds - Other Fixed Income	NR	8.60%
Funds - Short Term Investment	NR	1.72%
Non-Government Backed C.M.O.s	NR	0.02%
Other Fixed Income	NR	0.13%

Credit Quality Ratings as of June 30, 2021:

Credit Quality Distribution for Services		% of Total Portfolio
Agency	AGY	4.26%
Government Agencies	AA	0.32%
Government Bonds	NR	0.16%
Government Mortgage Backed Securities	BBB	0.02%
Government Mortgage Backed Securities	NR	0.02%
Asset Backed Securities	AAA	0.11%
Asset Backed Securities	A	0.09%
Asset Backed Securities	BBB	0.09%
Asset Backed Securities	NR	0.09%
Commercial Mortgage-Backed	AAA	0.15%
Commercial Mortgage-Backed	BBB	0.01%
Commercial Mortgage-Backed	BB	0.02%
Commercial Mortgage-Backed	NR	0.12%
Corporate Bonds	AA	0.29%
Corporate Bonds	A	1.29%
Corporate Bonds	BBB	1.84%
Corporate Bonds	BB	0.25%
Corporate Bonds	B	0.02%
Corporate Bonds	NR	0.12%
Funds - Corporate Bond	NR	3.81%
Funds - Other Fixed Income	NR	7.59%
Funds - Short Term Investment	NR	1.57%
Non-Government Backed C.M.O.s	NR	0.02%
Other Fixed Income	NR	0.11%

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, 2022 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	$ 822,790
Common stock	British pound sterling	4,024,290
Cash	Canadian dollar	173,493
Common stock	Canadian dollar	1,458,500
Common stock	Euro	12,008,051
Common stock	Hong Kong dollar	1,620,765
Common stock	Japanese yen	4,161,211
Common stock	Mexican peso	638,247
Common stock	New Taiwan dollar	2,003,976
Common stock	Norwegian krone	1,749,985
Common stock	Singapore dollar	759,221
Common stock	South Korean won	680,233
Common stock	Swiss franc	828,859
Total		**$ 30,929,621**

The ERS' exposure to foreign currency risk as of June 30, 2021 was as follows:

Investment Type	Currency	Fair Value
Common stock	Brazilian real	$ 1,364,484
Common stock	British pound sterling	6,709,359
Common stock	Canadian dollar	1,680,352
Common stock	Euro	21,302,015
Common stock	Hong Kong dollar	3,649,621
Common stock	Japanese yen	6,464,295
Common stock	Mexican peso	1,048,291
Common stock	New Taiwan dollar	2,872,936
Common stock	Norwegian krone	2,918,306
Common stock	Singapore dollar	1,115,491
Common stock	South Korean won	1,269,028
Common stock	Swiss franc	1,322,782
Total		**$ 51,716,960**

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.

3. Investments (continued)

Cash Received as Securities Lending Collateral

The ERS accounts for securities lending transactions are 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, 2022 and 2021.

Securities are loaned against collateral that may include cash, U.S. government securities, and irrevocable letters of credit, and select government debt securities. 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 126 days in 2022 and 92 days in 2021.

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 24 days as of June 30, 2022, and 30 days as of June 30, 2021. Cash collateral may also be invested separately in “term loans”, in which case the 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, 2022:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	$ 26,784,164	$ 27,436,207
Domestic equities	5,433,331	5,605,710
Total	**$ 32,217,495**	**$ 33,041,917**

3. Investments (continued)

Cash Received as Securities Lending Collateral (continued)

The following table presents the fair values of the underlying securities, and the value of the collateral pledged as of June 30, 2021:

Securities Lent	Fair Value	Cash Collateral Received*
Fixed income securities	$ 26,878,086	$ 27,576,390
Domestic equities	12,623,155	12,979,827
Total	**$ 39,501,241**	**$ 40,556,217**

*The securities collateral value is based on the ERS' pro rata share of the value of the securities collateral

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, 2022, and 2021, 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, 2022 and 2021, the ERS' contracts to purchase and sell by foreign currencies as follows:

NOTES TO THE FINANCIAL STATEMENTS

4. Derivatives Policy Statement (continued)

Foreign Exchange Contracts Settled as of June 30, 2022:

Currency	Purchases	Realized Gain/(Loss)	Sells	Realized Gain/(Loss)
Brazilian real	$ 253,433	$ 773	$ (486,764)	$ 876
British pound sterling	757,082	1,596	(2,833,314)	9,734
Canadian dollar	1,029,536	1,120	(390,585)	706
Euro	2,748,651	(3,381)	(8,213,072)	67,650
Hong Kong dollar	965,404	3	(1,273,669)	(48)
Japanese yen	1,860,943	(2,203)	(2,782,884)	(30,978)
Mexican peso	93,981	418	(433,062)	420
New Taiwan dollar	1,246,004	-	(1,147,578)	(63)
Norwegian krone	231,496	(676)	1,217,293	8,377
Singapore dollar	100,241	(106)	(480,788)	1,613
South Korean won	358,363	-	(430,632)	(39)
Swiss franc	105,337	(171)	(498,680)	2,653

Foreign Exchange Contracts Settled as of June 30, 2021:

Currency	Purchases	Realized Gain/(Loss)	Sells	Realized Gain/(Loss)
Brazilian real	$ 99,001	$ 904	$ (714,012)	$ 3,947
British pound sterling	2,098,364	5,756	(3,183,586)	8,270
Canadian dollar	-	-	(403,617)	(1,155)
Euro	2,051,588	363	(5,681,014)	651
Hong Kong dollar	473,883	(14)	(2,886,636)	(254)
Japanese yen	1,830,700	(1,150)	(1,853,560)	2,575
Mexican peso	-	-	(718,826)	3,086
New Taiwan dollar	1	-	(883,172)	(44)
Norwegian krone	-	-	(822,961)	(3,007)
Singapore dollar	-	-	(311,331)	88
South Korean won	-	-	(390,107)	(133)
Swiss franc	190,419	(1,074)	(587,522)	(534)

There were no foreign exchange contracts pending as of June 30, 2022

Foreign Exchange Contracts Pending as of June 30, 2021

Currency	Purchases	Unrealized Gain/(Loss)	Sells	Unrealized Gain/(Loss)
Japanese yen	$ 51,676	$ (85)	$ -	$ -

5. Net Pension Liability

The measurement date for implementation of GASB 67 is the ERS' fiscal year end, June 30, 2022. 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 June 30, 2021, 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 ERS as of June 30, 2022 and 2021 are as follows:

	Total for ERS 2022	Total for ERS 2021
Total Pension Liability	$ 1,181,391,623	$ 1,127,153,967
Plan Fiduciary Net Position	1,056,153,292	1,107,721,888
Net Pension Liability	$ 125,238,331	$ 19,432,079
Plan Fiduciary Net Position as a percentage of Total Pension Liability	89.4%	98.3%

Actuarial Assumptions

The total pension liability as of June 30, 2022 was determined by an actuarial valuation, using the following actuarial assumptions, applied to all periods included in the measurement:

COLA: 2.25% compounded annually for benefits based on credited service accrued up to July 1, 2012 and sick leave accrued until January 1, 2013; 1.90% compounded thereafter.

Inflation: 2.5%

Salary Increases: Varies by service from 2.60% to 6.30% per year

Investment Return: 6.75%, net of investment expense and including inflation

Mortality rates for:

Actives

Non-Police: Pub-2010 General Employee Mortality Table [*PubG-2010Employee*], projected with generational mortality improvement from 2010 using Scale MP-2020 33% of deaths are assumed to be service related

Park Police: Pub-2010 Public Safety Employee Mortality Table [*PubS-2010 Employee*], projected with generational mortality improvement from 2010 using Scale MP-2020
90% of deaths are assumed to be service related

Healthy Retirees

Non-Police: Pub-2010 General Healthy Retiree Mortality Table [*PubG-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police:
Pub-2010 Public Safety Healthy Retiree Mortality Table [*PubS-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Disabled Retirees

Non-Police: Pub-2010 Non-Safety Disabled Retiree Mortality Table [*PubNS –2010 Disabled Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police: Pub-2010 Safety Disabled Retiree Mortality Table [*PubS-2010 Disabled Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

Beneficiaries

All Plans: Pub-2010 General Healthy Retiree Mortality Table [*PubG-2010 Healthy Retiree*], projected with generational mortality improvement from 2010 using Scale MP-2020

5. Net Pension Liability (continued)

The actuarial assumptions are based upon the actuarial experience study covering the period July 1, 2015 through June 30, 2020. These assumptions were adopted by the Board of Trustees on May 4, 2021.

Prior to each valuation, the Board of Trustees reviews the investment return assumption based on the future market outlook, the current asset allocation, and the Board's risk tolerance.

Actuarial Cost Method

For financial reporting purposes, the June 30, 2021 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 geometric mean real rates of return and risk for each major asset class included in the pension plan's target asset allocation, and the aggregate expected investment return assumption and expected risk, are summarized in the following table:

Asset Class	Target Exposure	Expected Real Return	Expected Risk
U.S Equity	15.00%	3.57%	17.00%
International Equity- (non-U.S.)	10.00%	4.79%	19.10%
Global Low Volatility Equity	8.50%	6.95%	15.10%
Private Equity	8.00%	7.52%	28.00%
U.S. Core Fixed Income	11.50%	1.66%	4.25%
High-Yield Fixed Income	10.00%	3.81%	10.00%
Bank Loans	5.00%	3.57%	6.00%
Emerging Market Debt ("EMD")	5.00%	3.47%	10.00%
Global Opportunistic. Fixed Income	10.00%	4.79%	8.00%
Public Real Assets	2.00%	3.20%	11.45%
Private Real Assets	15.00%	5.28%	11.25%
Total Fund	**100.00%**	**4.90%**	**9.80%**
Inflation Assumption		2.35%	
Total Return without Adjustment		**7.25%**	
Risk Adjustment		-0.50%	
Total Expected Return		**6.75%**	

Discount Rate

The discount rate used to measure the total pension liability was 6.75%. 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.

5. Net Pension Liability (continued)

Therefore, the long-term expected rates of return on pension plan investments were 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 6.75%, 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
	5.75%	6.75%	7.75%
Total Pension Liability	$ 1,328,359,260	$ 1,181,391,623	$ 1,058,862,620
Plan Net Position	1,056,153,292	1,056,153,292	1,056,153,292
Net Pension Liability	**$ 272,205,968**	**$ 125,238,331**	**$ 2,709,328**
Ratio of Plan Fiduciary Net Position to total Pension liability	79.5%	89.4%	99.7%

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, 2022 and 2021 was $2,397,208 and $1,984,031, respectively. The administrative expenses are financed by the employer contributions.

The liability for accrued leave as of June 30, 2022 and 2021, was $208,527 and $173,417 respectively, and has been included in accrued expenses in the accompanying financial statements.

Administrative expenses charged to the ERS by the Commission for 2022 were: computer services of $139,596, legal of $64,200, rent of $113,027, postage of $395, telephone charges of $983, and copier leasing costs of $2,847. In 2021, the expenses were: computer services of $137,533, legal of $64,200, rent of $108,680, postage of $362, telephone charges of $967, and copier leasing costs of $2,847.

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.

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 10% 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 one employee covered by the 401(a) Plan for the year ended June 30, 2022 was $170,538 and the total payroll was $878,462. The ERS' contribution to the 401(a) Plan was $16,974 (1.9% of covered payroll) for the year ended June 30, 2022.

8. Retirement Contributions for ERS Employees (continued)

The payroll for the one employee covered by the 401(a) Plan for the year ended June 30, 2021 was $167,574 and the total payroll was $863,645. The ERS' contribution to the 401(a) Plan was $16,693 (1.9% of covered payroll) for the year ended June 30, 2021.

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 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 ACFR.

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, 2022 and 2021, the ERS contributed $24,458 and $24,723, 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 ACFR. 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/ACFR).

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 2022 or 2021, nor was any insurance coverage reduced in 2022 or 2021. 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.

NOTES TO THE FINANCIAL STATEMENTS

11. Accounting Pronouncements

The Governmental Accounting Standards Board (GASB) issued Statement No. 87, "Leases" to improve accounting and financial reporting for leases by governments. The statement was effective for reporting periods that end June 30, 2022 and was adopted by the ERS. There was no impact to the ERS financial statements.

The Governmental Accounting Standards Board (GASB) issued Statement 92, "Omnibus 2020." The requirements of this Statement to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. The statement was effective for reporting periods that end June 30, 2022 and was adopted by the ERS. There was no impact to the ERS financial statements.

The Governmental Accounting Standards Board (GASB) issued Statement 93, "Replacement of Interbank Offered Rates" to address those and other accounting and financial reporting implications that result from the replacement of an interbank offered rate (IBOR). The statement was effective for reporting periods that end June 30, 2022 and was adopted by the ERS. Since the statement generally requires changes to accounting and reporting related to the replacement of an IBOR, the impact to the ERS' financial statements is minimal.

The Governmental Accounting Standards Board (GASB) issued Statement No. 95, " Postponement of the Effective Dates of Certain Authoritative Guidance" to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic. That objective is accomplished by postponing the effective dates of certain provisions in Statements and Implementation Guides that first became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later. There was no impact to the ERS financial statements.

The Governmental Accounting Standards Board (GASB) issued Statement No. 97, "Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32" to improve the consistency of financial reporting for defined contribution pension plans, defined contribution OPEB plans, and other employee benefit plans, while mitigating the costs associated with reporting those plans. The statement was effective for reporting periods that end June 30, 2022 and was adopted by the ERS. There was no impact to the ERS financial statements.

Management is in the process of evaluating the impacts of GASB Statement No. 96, "Subscription-Based Information Technology Arrangements," and will be implemented in the required reporting period.

12. Subsequent Changes

At its November 2, 2021 meeting, the Board of Trustees approved an update to the assumptions used in calculation of benefits under an optional form of benefit payment and for actuarial deficiency calculations. The assumptions and resulting actuarial equivalence factors for optional terms of benefit payments will be effective January 1, 2023.

At its June 15, 2022 meeting, the Maryland-National Capital Park and Planning Commission approved changes to Plans C and D effective April 1, 2023 as follows:

- The employee contribution in Plan C shall increase to 9.5%.
- Once an officer completes 25 years of service, excluding sick leave, in Plans C and D, the sick leave conversion shall be change from 2,112 to 1,056 hours. The 2,112 hours will continue to be used for conversion of up to 14 months of sick leave to qualify for Normal Retirement.

ERS staff are working on plan amendments and implementation with the software vendor.

REQUIRED SUPPLEMENTARY INFORMATION

UNDER GASB 67

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

	Fiscal Year								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability									
Service Cost	$ 20,944,206	$ 20,074,646	$ 18,144,368	$ 17,097,809	$ 18,834,451	$ 20,196,060	$ 18,125,110	$ 19,015,744	$ 16,635,683
Interest	75,989,168	73,223,067	70,945,812	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	(4,991,226)	8,179,363	540,274	12,366,940	(51,028,919)	(9,213,536)	(20,701,234)	610,807	-
Changes in assumptions	24,539,974	6,301,273	6,015,186	5,808,280	5,434,643	34,368,804	(13,818,623)	9,147,692	-
Benefit payments, including refunds	(62,244,466)	(58,037,999)	(55,647,482)	(51,801,905)	(48,088,129)	(45,189,395)	(42,718,801)	(40,382,818)	(38,407,073)
Net Change in Total Pension Liability	$ 54,237,656	$ 49,740,350	$ 39,998,158	$ 56,275,598	$ (9,501,203)	$ 66,467,151	$ 2,161,742	$ 52,580,254	$ 38,232,325
Total Pension Liability - Beginning of Year	1,127,153,967	1,077,413,617	1,037,415,459	981,139,861	990,641,064	924,173,913	922,012,171	869,431,917	831,199,592
Total Pension Liability - End of Year	**$ 1,181,391,623**	**$ 1,127,153,967**	**$ 1,077,413,617**	**$ 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	$ 26,174,744	$ 22,312,947	$ 19,244,687	$ 24,792,093	$ 24,822,301	$ 20,268,189	$ 27,191,305	$ 28,149,976	$ 28,750,323
Contributions – member	7,728,640	8,084,657	7,796,708	7,541,076	7,201,130	6,751,196	6,418,154	6,339,732	5,413,595
Net investment income	(20,830,306)	194,757,724	10,900,156	62,438,427	70,470,948	111,662,056	(4,851,526)	3,340,520	107,897,795
Benefit payments, including refunds	(62,244,466)	(58,037,999)	(55,647,482)	(51,801,905)	(48,088,129)	(45,189,395)	(42,718,801)	(40,382,818)	(38,407,073)
Admin. expenses	(2,397,208)	(1,984,031)	(1,722,361)	(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	$ (51,568,596)	$ 165,133,298	$ (19,428,292)	$ 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	$ 1,107,721,888	$ 942,588,590	$ 962,016,882	$ 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	**$ 1,056,153,292**	**$ 1,107,721,888**	**$ 942,588,590**	**$ 962,016,882**	**$ 920,751,289**	**$ 868,155,816**	**$ 776,338,424**	**$ 791,995,626**	**$ 796,135,587**
Net Pension Liability - Beginning of Year	$ 19,432,079	$ 134,825,027	$ 75,398,577	$ 60,388,572	$ 122,485,248	$ 147,835,489	$ 130,016,545	$ 73,296,330	$ 137,231,435
Net Pension Liability - End of Year	125,238,331	19,432,079	134,825,027	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	89.4%	98.3%	87.5%	92.7%	93.8%	87.6%	84.0%	85.9%	92.0%
Covered Payroll[3]	$ 178,007,608	$ 172,387,068	$ 160,221,081	$ 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	70.4%	11.3%	84.2%	48.2%	42.1%	86.5%	109.5%	100.7%	56.0%

[1]Data for 2012-2013 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.

[3]Covered payroll for FYE 2019 and later 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
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%
2020	19,244,687	19,244,687	-	160,221,081	12.01%
2021	22,312,947	22,312,947	-	172,387,068	12.94%
2022	26,174,744	26,174,744	-	178,007,608	14.70%

Covered payroll for FYE 2019 and later 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, 2020
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 2022:

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, open 15-year period
Asset valuation method	5-year smoothed fair value
Discount rate	6.80% 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

2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
-1.32%	21.85%	2.29%	7.38%	8.03%	14.62%	0.21%	0.70%	15.30%	12.35%	3.01%

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 payroll for the 10-year period ended June 30, 2022. 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 2022	Actual 2021
PERSONNEL SERVICES		
Salaries and wages	$ 878,462	$ 863,645
Social Security contributions	64,674	62,699
Retirement contributions	103,906	83,115
Insurance contributions	116,550	126,542
Other employee benefits	93,060	60,465
Unemployment compensation	440	420
TOTAL PERSONNEL SERVICES	1,257,092	1,196,886
Professional and contractual services		
Actuarial	65,427	70,460
Auditing & tax services	23,443	28,143
Legal	222,993	134,067
Computer services	215,624	202,617
Payroll & miscellaneous services	15,130	11,134
Total professional and contractual services	542,617	446,421
Communication costs		
Advertising	106	-
Telephone	983	967
Postage	395	362
Travel,conference and meetings	1,950	1,500
Total communication costs	3,434	2,829
Other services and charges		
Office space rental	113,027	108,680
Equipment leasing	2,847	2,847
Equipment	2,318	-
Supplies	5,120	2,260
Maintenance	100,713	118,562
Bonding and insurance	63,803	58,280
Dues and subscriptions	1,685	2,135
Printing and binding	91,434	-
Other services	2,073	3,265
Total other services and charges	383,020	296,029
Amortization	211,045	41,866
Total	$ 2,397,208	$ 1,984,031

SUPPLEMENTARY SCHEDULE

Schedule of Investment Expenses
Fiscal Years Ended June 30

	2022	2021
Investment managers		
Fixed income	$ 1,782,354	$ 1,559,282
U.S. equity	218,118	190,332
International equity	864,727	911,484
Private equity	49,290	2,483
Real assets	81,616	71,787
Total investment managers fees	2,996,105	2,735,368
Other investment service fees		
Custodian fees	277,208	289,658
Investment consulting fees	214,076	203,127
Security lending fees:		
Borrower rebate	44,710	(8,452)
Management fees	36,455	37,308
Total other investment service fees	572,449	521,641
Total	$ 3,568,554	$ 3,257,009

Schedule of Payments to Consultants
Fiscal Years Ended June 30

Firm Name	Nature of Service	2022	2021
SB & Company, LLC	Auditor	$ 23,443	$ 28,143
Wilshire Advisors, LLC	Investment Consultant	214,076	203,127
Cheiron, Inc.	Actuary	65,427	70,460
GROOM Law Group	Legal	158,793	69,867
The Maryland-National Capital Park and Planning Commission Legal Department	Legal	64,200	64,200
The Maryland-National Capital Park and Planning Commission DHRM Department	Computer Services	139,596	137,533
Total		$ 665,535	$ 573,330

INVESTMENT SECTION

INVESTMENT MANAGER DIRECTORY

U.S. EQUITY

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

INTERNATIONAL EQUITY

Capital Group
Earnest Partners, L.L.C.

GLOBAL LOW VOLATILITY EQUITY

BlackRock Institutional Trust Company, N.A.

PRIVATE EQUITY

Wilshire Advisors, LLC

FIXED INCOME

U.S. Core Fixed Income

CSM Advisors, LLC
Eaton Vance

High Yield Fixed Income

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

Global Opportunistic Fixed Income

Golub Capital
Oaktree Capital Management, L.P.
White Oak Global Advisors, LLC
HarbourVest Credit Opp. Fund II

Bank Loans

Voya Investment Management

Emerging Market Debt

Prudential Trust Company

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 Advisors LLC ("Wilshire")

Date: August 24, 2022

Subject: Annual Investment Consultant's Review

Overview

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

The current asset allocation policy is based upon an Asset Liability Valuation ("ALV") study completed by Wilshire in April 2022 based upon the June 2021 Actuarial Valuation conducted by the actuary, Cheiron. A new asset allocation policy was approved and the portfolio was subsequently rebalanced thereafter to the new allocation. The asset allocation policy has been fully implemented as of the end of FY2022. Private market investments will be evaluated on a continual basis and will fund gradually over time.

Asset Class	Target %	Range %
U.S. Equity	15.0	10 - 20
International Equity	10.0	5 - 15
Global Low Volatility Equity	8.5	5 - 12
Private Equity	8.0	5 - 12
Total Equity	***41.5***	***35 - 48***
U.S. Core Fixed Income	11.5	8 - 15
High Yield Fixed Income	10.0	7 - 13
Bank Loans	5.0	2 - 8
Emerging Market Debt ("EMD")	5.0	2 - 8
Global Opportunistic Fixed Income	10.0	5 - 15
Total Fixed Income	***41.5***	***35 - 48***
Public Real Assets	2.0	0 - 5
Private Real Assets	15.0	10 - 20
Total Real Assets	***17.0***	***12 - 22***

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, 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 fair 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.

Market Overview

Major Asset Class Returns for Periods Ending June 30, 2022

	QTR	YTD	1 Year	3 Year	5 Year	10 Year
Equity						
FT Wilshire 5000 Index	-16.77	-20.89	-13.19	10.17	10.83	12.71
Standard & Poor's 500 Index	-16.10	-19.96	-10.62	10.60	11.31	12.96
MSCI EAFE (N) Index	-14.51	-19.57	-17.77	1.07	2.20	5.40
MSCI ACWI ex-U.S. (N) Index	-13.73	-18.42	-19.42	1.35	2.50	4.83
MSCI Emerging Market (N) Index	-11.45	-17.63	-25.29	0.57	2.18	3.06
MSCI ACWI Minimum Volatility (N) Index	-9.27	-12.01	-6.40	2.89	5.72	7.95
Fixed Income						
Bloomberg Aggregate Bond Index	-4.69	-10.35	-10.29	-0.93	0.88	1.54
Merrill Lynch High Yield BB/B Index	-9.49	-13.66	-12.19	0.11	2.11	4.36
S&P LSTA Leverage Loan Index	-4.45	-4.55	-2.79	2.08	2.91	3.74
Bloomberg Global Aggregate Index	-8.26	-13.91	-15.25	-3.22	-0.55	0.11
Treasury Bills (91 Day)	0.10	0.14	0.17	0.63	1.11	0.64
Real Assets						
Bloomberg U.S. TIPS Index	-6.08	-8.92	-5.14	3.04	3.21	1.73
Bloomberg Commodity Index	-5.66	18.44	24.27	14.34	8.39	-0.82
Wilshire Global REIT Index	-18.57	-21.42	-9.48	1.76	4.12	6.44
NCREIF ODCE (EW) Index	4.35	12.12	28.90	12.28	10.07	10.45
U.S. Consumer Price Index ("CPI")	3.06	6.28	9.06	4.98	3.88	2.59

U.S. Equity

The U.S. stock market down -16.8% for the second quarter, the largest quarterly drop since the global COVID shutdown in early 2020. Every sector was in negative territory, with Consumer Discretionary (-26.3%), Information Technology (-21.1%) and Communication Services (-21.0%) representing the worst performing sectors. Large and small-cap performed similarly while growth stocks underperformed value.

Rising inflation, which began in late 2020-early 2021, continues to accelerate this year, reaching levels not seen in four decades. While energy is far and away the leading expenditure category in terms of price increases (up 35% for the 12-months ending May), surging prices can be found in nearly every segment of the overall CPI. The largest component of the index, shelter, is up 5.5% with the next largest segment, food, up 10% during the past year. Finally, transportation costs have accelerated with new and used vehicles up in the double-digits and transportation services up 8%. With such widespread inflationary pressures, the ability for the Federal Reserve to achieve a "soft landing" is quickly dissipating.

Non-U.S. Equity

High inflation has become a global issue with rates in Europe approaching U.S. levels. In Germany, economic growth is slowing on both inflation and falling exports. While economic indicators in the U.K. are still in the expansion range, measures of new orders have fallen while business confidence levels have slumped. In China, new COVID controls were imposed in some areas but have since been lifted – although early economic indicators are not yet registering a strong return of growth.

Fixed Income

The U.S. Treasury yield curve was up across all maturities with the 10-year at 3.02%, up 68 basis points from March. The FOMC increased their overnight rate by 0.50% in May and 0.75% in June; targeting a range of 1.50% to 1.75%. Public statements from the Federal Reserve grew more pessimistic during the quarter as Fed chair Jerome Powell stated after the June meeting that controlling inflation at their 2% target, in exchange for a higher unemployment rate, would be a "successful outcome."

Portfolio Review

The ERS' net of fee investment performance as of June 30, 2022 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)	**1,059,924**	**100.0%**	**-8.2**	**-1.7**	**6.5**	**6.9**	**7.5**
Policy Index/Blended Benchmark			*-12.0*	*-9.1*	*3.9*	*5.1*	*7.3*
U.S. Equity (9/30/89)	**147,047**	**13.9%**	**-20.8**	**-13.6**	**9.8**	**10.1**	**9.4**
FT Wilshire 5000 Index			*-20.9*	*-13.2*	*10.2*	*10.8*	*9.8*
International Equity (3/31/95)	**97,878**	**9.2%**	**-22.1**	**-23.1**	**2.2**	**4.1**	**5.8**
Policy Index			*-18.4*	*-19.4*	*1.4*	*2.5*	*4.4*
Global Low Volatility Eqiuty (6/30/17)	**84,273**	**8.0%**	**-11.9**	**-6.2**	**3.2**	**6.1**	**6.4**
MSCI ACWI Min. Volatility Index (N)			*-12.0*	*-6.4*	*2.9*	*5.7*	*6.0*
Private Equity (6/30/13)	**109,847**	**10.4%**	**0.0**	**28.5**	**23.5**	**20.0**	**11.2**
MSCI ACWI Index (N) +3%			*-19.0*	*-13.2*	*9.4*	*10.2*	*10.6*
Fixed Income (9/30/89)	**393,334**	**37.1%**	**-8.4**	**-7.8**	**2.0**	**3.0**	**5.7**
Bloomberg Barclays Global Agg. Index			*-13.9*	*-15.2*	*-3.2*	*-0.6*	*4.8*
Private Real Asset (9/30/07)	**196,210**	**18.5%**	**12.2**	**27.9**	**10.5**	**8.8**	**4.3**
Policy Index			*8.9*	*14.5*	*10.2*	*9.1*	*3.4*
Public Real Asset (3/31/13)	**21,978**	**2.1%**	**-2.6**	**6.5**	**8.5**	**6.7**	**3.2**
Policy Index			*-3.2*	*5.9*	*8.1*	*6.7*	*3.2*
Cash	**9,357**	**0.8%**	**--**	**--**	**--**	**--**	**--**

The chart above displays the calendar year to date (YTD), one (Fiscal Year to Date (FYTD)), 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 fair 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 negative return of -1.7% over the trailing one-year period ending June 30, 2022. During this period, although posting negative absolute returns, the portfolio outperformed its policy index, which returned -9.1%. Over the past one-year period, most public equity and fixed income segments posted negative absolute returns with private markets and real assets (including public markets) experiencing positive returns. Total portfolio returns have been +6.5% and +6.9% over the three- and five-year periods, respectively, which are on an average annualized basis. Strong U.S. Equity markets combined with maturing Private Market (Equity, Fixed Income and Real Assets) portfolios have contributed to absolute returns during these longer-term periods.

Within equity markets, the U.S. Equity portfolio posted a -13.6% return compared to that of -13.2% for the FT Wilshire 5000 Index over the trailing one-year period ending June 30, 2022. Longer-term results over the three- and five-year periods were quite strong, posting a +9.8% and +10.1% return, respectively, during each of those time periods. The International Equity portfolio posted negative absolute and relative investment returns over the past year. The portfolio returned -23.1% while the MSCI ACWI ex-U.S. Index, comprised of both developed and emerging market stocks, was down -19.4%

over the trailing one-year period in U.S. Dollar terms. The addition of the Global Low Volatility Equity portfolio back in mid-2017 has benefited the portfolio as this segment was down, but only -6.2% in absolute terms over the past one-year period. Lastly, the Private Equity portfolio has continued to mature while posting strong returns of +28.5% in this segment of the portfolio over the past year.

The Fixed Income portfolio returned -7.8% during the past year, while the domestic investment grade market represented by the Bloomberg U.S. Aggregate Index returned -10.4%. "Non-core" investments within the public fixed income portfolio (high yield, bank loans, emerging market debt) all posted negative returns for the one-year period as these strategies negatively impacting the total fixed income. The investment opportunities within the Global Opportunistic segment of the portfolio posted strong absolute returns over the one-year period of +11.3% and 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 +27.9% and +6.5%, 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 has benefited from higher than historic inflation over the past year. 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

Bradley A. Baker

Managing Director

INVESTMENT MANAGER MATRIX
As of June 30, 2022

Manager Name and/or Fund Name	Style	Fair value1	% of Fund
U.S. Equity			
J.P. Morgan Commingled Pension Trust Fund	130/30 Short Extension	$ 14,610,840	1.38%
Northern Trust Collective Russell 2000 Index Fund	Small Cap	28,597,946	2.70%
RhumbLine S&P 500 Pooled Index Trust	Large Core	103,837,818	9.80%
		$ 147,046,604	**13.88%**
International Equity			
Capital Group Institutional All Countries Equity Trust	ACWI ex-U.S.	$ 48,168,640	4.54%
Earnest Partners, L.L.C.	ACWI ex-U.S.	49,709,707	4.69%
		$ 97,878,347	**9.23%**
Global Low Volatility Equity			
Blackrock MSCI ACWI Minimum Volatility Index	MSCI ACWI Minimum Volatility	**$ 84,273,175**	**7.95%**
Private Equity			
Wilshire MNCPPC Employee Retirement System Global, L.P. (I)	Other	$ 53,846,365	5.08%
Wilshire MNCPPC Employee Retirement System Global, L.P. (II)	Other	53,665,357	5.06%
Wilshire MNCPPC Employee Retirement System Global, L.P. (III)	Other	2,335,009	0.22%
		$ 109,846,731	**10.36%**
Fixed Income			
CSM Advisors, LLC	Core	$ 61,427,703	5.80%
Eaton Vance	Core	62,913,222	5.94%
Golub Capital 9	Middle Market Direct Lending	17,500,000	1.65%
Golub Capital 11	Middle Market Direct Lending	17,500,000	1.65%
Loomis Sayles High Yield Full Discretion Trust	High Yield	47,009,601	4.44%
Neuberger Berman High Yield Bond Fund, LLC	High Yield	47,076,046	4.44%
Voya Senior Loan Fund	Bank Loans	42,302,207	3.99%
Oaktree Real Estate Debt Fund, L.P.	Real Estate Debt	44,278	0.00%
Oaktree Opportunities Fund VIII, L.P.	Distressed Opportunities	1	0.00%
White Oak Yield Spectrum Fund, L.P.	Middle Market Direct Lending	18,244,747	1.72%
PGIM Emerging Market Debt Fund	Emerging Market Debt	47,660,726	4.50%
HarbourVest Credit Opp. Fund II	Opportunistic	31,655,632	2.99%
		$ 393,334,163	**37.12%**
Private Real Assets			
Principal U.S. Property Account	Real Estate	$ 83,889,048	7.91%
Aberdeen Energy & Resources Partners II, L.P.	Real Assets	8,614,678	0.81%
Aberdeen Real Estate Partners II, L.P.	Real Estate	1,855,010	0.18%
Aberdeen Energy & Resources Partners III, L.P.	Real Assets	17,419,661	1.64%
Aberdeen Real Estate Partners III, L.P.	Real Estate	14,893,800	1.41%
GCM Grosvenor Real Asset Investments, L.P.	Real Assets	63,905,854	6.03%
GCM Grosvenor Customized Infrastructure Strategies III, L.P.	Real Assets	5,631,649	0.53%
		$ 196,209,700	**18.51%**
Public Real Assets			
SSgA Custom Real Asset Non-Lending Strategy	Diversified	**$ 21,977,986**	**2.07%**
Cash		**$ 9,356,860**	**0.88%**
TOTAL		**$ 1,059,923,566**	**100.00%**

[1] Net of Accrued Income on Investments and Investments Payable

2 Fair values provided by Wilshire Associates and not prepared by, reviewed or approved by any of the ERS' partnerships, general partners and/or any of their respective affiliates.

LIST OF LARGEST HELD DOMESTIC EQUITIES

As of June 30, 2022

Equity Income Securities	No. of Shares	Fair Value
ADR EQUINOR ASA SPONSORED ADR	34,713	$1,206,624
ADR SOCIEDAD QUIMICA Y MINERA DE CHILE SA SPONSORED ADR REPSTG SER B SHS	13,819	1,154,301
TAIWAN SEMICON MAN TWD10	64,000	1,024,568
BARCLAYS PLC ORD GBP0.25	544,187	1,011,952
DIAGEO ORD PLC	23,599	1,011,834
AMADEUS IT GROUP EUR0.01	18,105	1,006,206
MERCK KGAA NPV	5,748	967,489
ADR BAIDU INC SPON ADS EACH REP 8 ORD SHS	6,326	940,866
DENSO CORP NPV	17,700	939,101
ADR RIO TINTO PLC SPONSORED ADR	15,252	930,372
SAFRAN SA EUR0.20	9,304	916,368
ICON PLC COM	4,164	902,339
SHELL PLC ORD EUR0.07	34,577	898,110
NORSK HYDRO ASA NOK1.098	160,285	894,893
CHECK PT SOFTWARE TECHNOLOGIES ORDILS.01	7,305	889,603
BAE SYSTEMS ORD GBP0.025	87,762	884,848
RELX PLC ORD GBP0.1444	32,248	870,487
DNB ASA NOK	47,851	855,092
HEINEKEN NV EUR1.60	9,257	841,963
EUROFINS SCIENTIFI EUR0.01	10,592	831,391

A complete list of assets can be obtained at the office of the ERS.

LIST OF LARGEST HELD FIXED INCOME SECURITIES

As of June 30, 2022

Fixed Income Securities	Par	Fair Value
UNITED STATES OF AMER TREAS NOTES 2.875%DUE 05-15-2032 REG	2,693,000	$2,662,704
UNITED STATES TREAS NTS 1.875% DUE 02-15-2032 REG	2,624,000	2,377,180
UNITED STATES OF AMER TREAS NOTES 30/04/2027 2.75% DUE 04-30-2027 BEO	2,300,000	2,268,914
UNITED STATES TREAS BDS 7 1/4% 15/8/2022USD1000 7.25% DUE 08-15-2022 REG	1,538,000	1,549,011
UNITED STATES TREAS NTS .875% 12-15-2024	1,541,000	1,467,502
FNMA POOL #FS1040 3.5% 06-01-2049 BEO	1,473,332	1,435,094
UNITED STATES TREAS BDS 2.25% DUE 02-15-2042 REG	1,681,000	1,425,435
FEDERAL FARM CR BKS CONS SYSTEMWIDE BDS 4.74% DUE 05-24-2033 REG	1,250,000	1,245,909
UNITED STATES TREAS BDS DTD 00218 3.875%DUE 08-15-2040 REG	1,144,000	1,233,420
FEDERAL HOME LN BKS CONS BD DTD 05/26/2022 4.44% 05-26-2032	1,235,000	1,223,380
UNITED STATES OF AMER TREAS NOTES .75% 08-31-2026	1,219,000	1,109,576
FED FARM CR BKS CONS SYSTEMWIDE BDS DTD 4.37% 05-17-2032	1,103,000	1,095,755
INTL BK FOR RECON & DEV MEDIUM TRANCHE #TR 00702 2.7% DUE 12-28-2037 REG	1,152,000	1,005,042
UNITED STATES TREAS NTS 2.5% 04-30-2024	1,001,000	992,280
UNITED STATES TREAS NTS 2.625% 04-15-2025	986,000	975,293
UNITED STS TREAS 0.375% 12-31-2025	1,054,000	960,581
UNITED STATES OF AMER TREAS NOTES .875% 09-30-2026	1,015,000	926,980
FEDERAL HOME LN BKS 2.9% 02-24-2037	1,020,000	881,987
UNITED STATES OF AMER TREAS NOTES DTD 02/28/2022 1.875% 02-28-2027	926,000	878,977
VNDO 2012-6AVE MTG TR SER 2012-6AVE CL A2.9950 144A DUE 11-15-2030	848,000	846,770

A complete list of assets can be obtained at the office of the ERS.

SCHEDULE OF BROKERS COMMISSIONS

As of June 30, 2022

Broker	Shares	Commissions	Commission per share
BANK OF AMERICA CORPORATION	5,675	$ 795	14.01%
BANK OF AMERICA MERRILL LYNCH SECS	17,200	535	3.11%
BNP PARIBAS SECURITIES SERVICES SA	11,600	297	2.56%
BRASIL PLURAL CCTVM SA	25,500	148	0.58%
CAPITAL INSTITUTIONAL SERV NEW YORK	42,386	1,484	3.50%
CLSA SINGAPORE PTE LTD.	1,800	24	1.31%
CREDIT SUISSE FIRST BOSTON SA CTVM	32,400	183	0.56%
J.P. MORGAN SECURITIES PLC	23,564	329	1.39%
JEFFERIES INTERNATIONAL LTD	48,000	1,533	3.19%
JEFFERIES LLC.	12,800	415	3.25%
JOH. BERENBERG,GOSSLER UND CO.KG	12,659	999	7.89%
JONES TRADING INSTITUTIONAL SERVICE	11,888	416	3.50%
JONESTRADING INSTITUTIONAL SERVICES	3,690	214	5.80%
KEPLER CAPITAL MARKETS	1,234	193	15.62%
LIQUIDNET EUROPE LIMITED	565	109	19.28%
MACQUARIE CAPITAL (EUROPE) LIMITED	60	29	48.58%
MACQUARIE CAPITAL (USA) INC	3,107	44	1.41%
MACQUARIE SECURITIES AUSTRALIA LTD	64,200	697	1.09%
MACQUARIE SECURITIES KOREA LIMITED	370	49	13.13%
MERRILL LYNCH EQUITIES (AUSTRALIA)	26,800	804	3.00%
MERRILL LYNCH INTERNATIONAL LIMITED	1,300	163	12.53%
MERRILL LYNCH PIECE FENNER & SMITH	1,124	31	2.77%
MIRAE ASSET DAEWOO CO., LTD.	4,132	644	15.58%
MORGAN STANLEY AND CO. INTL	1,386	201	14.52%
MORGAN STANLEY AND CO., LLC	237,261	4,578	1.93%
MORGAN STANLEY TAIWAN LIMITED	43,000	887	2.06%
OPPENHEIMER AND CO, INC.	1,416	50	3.50%
PERSHING SECURITIES LIMITED	21,012	620	2.95%
RBC EUROPE LIMITED	781	123	15.72%
REDBURN (USA) LLC	346	12	3.50%
ROBERT W. BAIRD CO.INCORPORATED	1,535	42	2.73%
SANFORD C. BERNSTEIN AND CO., LLC	17,303	606	3.50%
STIFEL NICOLAUS & CO,INCORORATED	230	8	3.50%
SUNTRUST ROBINSON HUMPHREY, INC.	905	32	3.50%
WELLS FARGO BANK, N.A.	2,179	76	3.50%
WILLIAM BLAIR AND COMPANY	366	13	3.50%
	679,774	$ 17,383	

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

ACTUARIAL SECTION

LETTER OF TRANSMITTAL

Board of Trustees
Employees' Retirement System
6611 Kenilworth Avenue, Suite 100
Riverdale, Maryland 20737

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the Maryland-National Capital Park and Planning Commission (the Commission) Employees' Retirement System as of June 30, 2021. The valuation is organized as follows:

The primary purpose of the actuarial valuation and this report is to measure, describe and identify as of the valuation date:

- The financial condition of the System,
- Past and expected trends in the financial progress of the System,
- The employers' contributions for Fiscal Year ending 2023,
- The risks of the System, and
- Information required for accounting statements.

Cheiron prepared the following schedules for inclusion in the Actuarial Section of the Annual Comprehensive Financial Report, based on the June 30, 2021 actuarial valuation.

- Schedule of Funding Progress
- Schedule of Funded Liabilities by Type (formerly referred to as the Solvency Test)
- Summary of Current Actuarial Assumptions and Methods

All results and information shown for years prior to July 1, 2019 were based on the prior actuary's valuation results.

The results of this report rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results will vary accordingly. The actuarial assumptions were adopted by the Board based on the proposed demographic assumptions shown in the Actuarial Experience Study covering the period July 1, 2015 through June 30, 2020. The results of this study were presented to and adopted by the Board of Trustees on May 4, 2021. These assumptions were first implemented for the June 30, 2021 actuarial valuation and the June 30, 2022 GASB reporting requirement.

Actuarial funding is based on the Entry Age Normal Actuarial Cost Method. The actuarially determined contribution consists of the employer normal cost (cost of benefits for the upcoming year) and an amortization of the unfunded actuarial liability. An administrative expense rate of 0.20% of actuarial liabilities is added to the normal cost. The unfunded actuarial liability is amortized as a level dollar over an open 15-year period.

The actuarially determined contribution decreased from 15.18% of payroll for fiscal year ending 2022 to 14.43%

of payroll for fiscal year ending 2023. The actuarially determined contribution for the fiscal year ending June 30, 2023 is $25,682,999. The System's unfunded actuarial liability decreased from $96.2 million as of July 1, 2020 to $84.9 million as of June 30, 2021. During the year there was an investment gain of $25.7 million and a liability gain of $6.8 million. Additionally, there was a liability increase of $25.5 million due to changes in actuarial assumptions as a result of the Actuarial Experience Study covering the period July 1, 2015 through June 30, 2020.

The following table shows a breakdown of the employer contributions for the fiscal year ending 2023 between Park Police and Non-Police members:

Police and Non-Police Contributions			
	Contribution for FYE June 30, 2023	2021 Payroll	Contribution as % of Payroll
Non-Police	$ 21,005,465	$ 159,786,465	13.15%
Park Police	4,677,534	18,221,143	25.67%
Total	**$ 25,682,999**	**$178,007,608**	**14.43%**

The Net Employer Normal Cost payable at the beginning of the year increased from $14,743,524 (8.6% of payroll) to $15,459,401 (8.7% of payroll). The amortization of the Unfunded Actuarial Liability decreased from $9,764,664 to $8,599,613 due to the investment and liability gains.

The following table shows a breakdown of the actuarial (gain)/loss by source:

Sources of (Gain)/Loss		
	(Gain)/Loss	% of Liability
New members entering System	$ 477,635	0.0%
Salary increases for prior year less than expected	(741,943)	-0.1
Salary adjustments for current year less than expected	(2,157,843)	-0.2
Active member decrements	1,323,546	0.1
Inactive mortality	1,779,958	0.2
Retiree COLA less than expected	(7,333,614)	-0.7
Benefit Payments different than expected	266,392	0.0
Miscellaneous changes	(445,406)	0.0
Total	**$ 6,831,275**	**-0.6%**

For the System, the actuarial value has been calculated by taking the fair value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year. The investment gain (loss) is calculated by taking the difference between the expected value of assets, based on an expected return of 6.80% for the year ended June 30, 2021, and the actual value of assets. If the actuarial value of assets is less than 80% or more than 120% of the fair value, an adjustment is made to the actuarial value to bring the value within this corridor.

As of June 30, 2021, the Actuarial Valuation of Assets including the receivable contribution was $1,060,873,621 while the Fair Value of Assets including the receivable contribution was $1,133,896,632. The return on the Fair Value of Assets during the year was 20.74%, which was greater than the assumed investment return. The return on the Actuarial Value of Assets was 9.45%, which was also greater than the assumed rate of return. Over the five-year period ending June 30, 2021, the Fair Value of Assets returned an average of 10.02%.

The purpose of this report is to present the annual actuarial valuation of the Maryland-National Capital Park and

Planning Commission Employees’ Retirement System. This report is for the use of Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. The report does not include calculations related to GASB Statements No. 67 and 68, which are provided in a separate report.

In preparing our report, we relied on information supplied by the Maryland-National Capital Park and Planning Commission Employees’ Retirement System staff. This information includes, but is not limited to, 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 Standards of Practice No. 23.

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

The 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.

This actuarial report was prepared exclusively for the Maryland-National Capital Park and Planning Commission Employees’ Retirement System for the purpose described 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.

Sincerely,
Cheiron

Janet Cranna, FSA, FCA, EA, MAAA	Patrick Nelson, FSA, CERA, EA, MAAA
Principal Consulting Actuary	Consulting Actuary

Attachment

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.

Actuarial Valuation Date[2]	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) – (1)	(4) Funded Ratio % (1)/(2)	(5) Covered Payroll	(6) UAAL as a Percentage of Covered Payroll (3) / (5)
7/1/2012	$ 660,231,611	$ 802,077,365	$ 141,845,754	82.32%	$ 129,911,593	109.19%
7/1/2013	690,539,998	831,199,592	140,659,594	83.08%	129,134,125	108.93%
7/1/2014	766,531,514	879,190,389	112,658,875	87.19%	135,041,803	83.43%
7/1/2015	830,052,104	887,487,374	57,435,270	93.53%	141,670,765	40.54% (1)
7/1/2016	856,279,531	949,298,226	93,018,695	90.20%	143,534,600	64.81% (1)
7/1/2017	899,336,519	991,624,737	92,288,218	90.69%	150,820,889	61.19% (1)
7/1/2018	943,070,635	993,322,340	50,251,705	94.94%	156,444,006	32.12% (1)
7/1/2019	968,142,434	1,043,820,211	75,677,777	92.75%	160,221,081	47.23% (1)
7/1/2020	995,043,914	1,091,238,867	96,194,953	91.18%	172,387,068	55.80% (1)
6/30/2021	1,060,873,621	1,145,821,511	84,947,890	92.59%	178,007,608	47.72% (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.

[2] As of 2021, the charts are as of 6/30

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 ERS' funding status on a going-concern basis. Analysis of this percentage over time indicates whether the ERS' 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 ERS' 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	Member Contributions	Vested Terminations, Retirees and Beneficiaries	Active Members (Employer Financed Portion)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Assets (%)		
	Actuarial Accrued Liabilities for						
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
7/1/2019	81,289,107	669,986,483	292,544,621	968,142,434	100	100	74.1
7/1/2020	86,481,783	697,496,428	307,260,656	995,043,914	100	100	68.7
6/30/2021	91,347,180	737,273,146	317,201,185	1,060,873,621	100	100	73.2

As of 2021, the charts are as of 6/30

August 29, 2022

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, 2022
- 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.

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

<table><tr><td>Janet Cranna, FSA, FCA, EA, MAAA
Principal Consulting Actuary</td><td>Patrick Nelson, FSA, CERA, EA, MAAA
Consulting Actuary</td></tr></table>

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

Actuarial Cost Method

The funding method for the valuation of liabilities used for this valuation is the Entry Age Normal (EAN) method. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate multiplied by payroll equals the total normal cost for each active member. The normal cost contributions (employer and active member) will pay for projected benefits at retirement for each active member.

The actuarial liability is the difference between the present value of future benefits and the present value of future normal costs. The difference between this actuarial liability and the actuarial value of assets is the unfunded actuarial liability (UAL).

The portion of the actuarial liability in excess of System assets, the UAL, is amortized to develop an additional cost that is added to each year's employer normal cost. Under this funding method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

Actuarial Value of Assets

The actuarial value of assets has been calculated by taking the value of assets less 80% of the investment gain/(loss) during the preceding year, less 60% of the investment gain/(loss) during the second preceding year, less 40% of the investment gain/(loss) during the third preceding year, and less 20% of the investment gain/(loss) during the fourth preceding year.

The investment gain (loss) is calculated by taking the difference between the expected fair value of assets and the actual fair value of assets.

If the actuarial value of assets is less than 80% or more than 120% of the fair value, an adjustment is made to the actuarial value to bring the value within this corridor.

Amortization Method

Amortize the unfunded actuarial accrued liability as a level dollar over an open 15-year period.

Valuation Date

June 30, 2021

Investment Rate of Return

6.750% compounded annually, net of investment expenses.

Salary Increases

Wage inflation is assumed to be 2.5%. Sample individual salaries are expected to increase according to the table below which includes wage inflation and merit.

Years of Service	Park Police	Non-Police
0	6.30%	5.40%
5	5.50	5.00
10	5.30	4.50
15	4.50	4.10
20	3.50	3.60
25	3.50	2.85
30+	3.50	2.60

Wage adjustments for FYE 2021, which were paid in FYE 2022, and wage adjustments expected to be paid in FYE 2022, were based on information provided by the Employees' Retirement System.

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS
(continued)

Mortality

Actives

Non-Police: Pub-2010 General Employee Mortality Table [PubG-2010 Employee], projected with generational mortality improvement from 2010 using Scale MP-2020
33% of deaths are assumed to be service related

Park Police: Pub-2010 Public Safety Employee Mortality Table [PubS-2010 Employee], projected with generational mortality improvement from 2010 using Scale MP-2020
90% of deaths are assumed to be service related

Healthy Retirees

Non-Police: Pub-2010 General Healthy Retiree Mortality Table [PubG-2010 Healthy Retiree], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police: Pub-2010 Public Safety Healthy Retiree Mortality Table [PubS- 2010 Healthy Retiree], projected with generational mortality improvement from 2010 using Scale MP-2020

Disabled Retirees

Non-Police: Pub-2010 Non-Safety Disabled Retiree Mortality Table [PubNS – 2010 Disabled Retiree], projected with generational mortality improvement from 2010 using Scale MP-2020

Park Police: Pub-2010 Safety Disabled Retiree Mortality Table [PubS-2010 Disabled Retiree], projected with generational mortality improvement from 2010 using Scale MP-2020

Beneficiaries

All Plans: Pub-2010 General Healthy Retiree Mortality Table [PubG-2010 Healthy Retiree], projected with generational mortality improvement from 2010 using Scale MP-2020

Withdrawal

Sample rates:

Park Police		Non-Police	
Years of Service	**Rates**	**Years of Service**	**Rates**
0	9.00%	0	12.00%
2	5.70%	5	6.00%
4	3.60%	10	3.35%
6	2.50%	15	1.50%
8	1.80%	20	1.00%
10	1.20%	25+	0.00%
12	0.60%		
14+	0.00%		

Disability

Rates are as follows:

Age	Park Police	Non-Police
20-29	0.25%	0.05%
30-34	0.50%	0.05%
35-39	0.75%	0.10%
40-44	0.75%	0.25%
45+	1.00%	0.50%

ACTUARIAL ASSUMPTIONS AND VALUATION METHODS
(continued)

Retirement Rates from Active or Terminated Vested:

Sample rates:

Years of Service	Park Police[1]
5-20	5%
21-24	10%
25-29	15%
30+	100%

[1]100% Retirement also assumed at age 65

Age	Non Police[1] Plan B	Non Police[1] Plan E
45	2.5%	2.5%
50	5.0%	5.0%
55	7.0%	7.0%
60	11.0%	9.0%
65	15.0%	15.0%
70+	100.0%	100.0%

Marriage

75% of male active members and 40% of female active members are assumed to be married. The male spouse is assumed to be three years older than the female.

Expenses

Administrative expenses are added to the normal cost and are assumed to be 0.2% of the actuarial accrued liability. The assumed investment rate of return is deemed to be net of investment expenses

Cost-of-Living Adjustment

2.25% compounded annually for benefits based on credit service accrued until July 1, 2012, and sick leave accrued until January 1, 2013, 1.9% compounded annually thereafter.

Social Security Wage Base Increase

3.0% compounded annually.

Non-Service-Connected Death Benefit Election

All Plan B participants are assumed to elect the annuity payable for life (default) if eligible for the non-service-connected death benefit.

Unused Sick Leave Service Credit

Accrued at a rate of 0.36 additional months per year of service.

Rationale of actuarial assumptions

The actuarial assumptions are based upon the actuarial experience study covering the period July 1, 2015 through June 30, 2020. These assumptions were adopted by the Board of Trustees on May 4, 2021.

Prior to each valuation, the Board of Trustees reviews the investment return assumption based on the future market outlook, the current asset allocation, and the Board's risk tolerance

Changes in Actuarial Assumptions

The mortality, retirement, termination, disability, percent of actives married, cost-of living adjustment and salary increase assumptions have been updated to reflect the changes adopted by the Board of Trustees based on the actuarial experience study covering the period July 1, 2015 through June 30, 2020.

The assumed rate of return was changed from 6.80% to 6.75%.

Additionally, the valuation date was changed from July 1, 2021 to June 30, 2021 due to census data now being provided as of June 30.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Valuation Date	Total Number of Members	Annual Salary	Annual Average Pay	% Increase/ Decrease in Average Pay
Employees				
7/1/2012	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
7/1/2019	1,916	142,853,700	74,558	3.2
7/1/2020	2,009	153,930,444	76,620	2.8
6/30/2021	2,025	159,786,465	78,907	3.0
Park Police				
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
7/1/2019	207	17,367,381	83,900	5.0
7/1/2020	216	18,456,624	85,447	1.8
6/30/2021	205	18,221,143	88,884	4.0
Total				
7/1/2012	2,052	$ 129,911,594	$ 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
7/1/2019	2,123	160,221,081	75,469	3.4
7/1/2020	2,225	172,387,068	77,477	2.7
6/30/2021	2,230	178,007,608	79,824	3.0

As of 2021, the charts are as of 6/30.

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
June 30, 2021	88	$ 3,076,655	33	$ 811,570	1,717	$ 57,685,506	3.35%	$ 33,597
July 1, 2020	84	2,847,544	31	901,782	1,662	55,814,206	4.06%	33,583
July 1, 2019	117	4,322,963	40	993,901	1,609	53,638,651	8.17%	33,337
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

As of 2021, the charts are as of 6/30

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.

As of 2021, the charts are as of 6/30. This means that the COLA adjustments effective 7/1 are not included. It will also affect the % increase in annual allowances and annual allowance values. This will even out in 2022.

The Number at Year End differs from Valuation total for one person now counted as removed because we were notified late of a 2021 death.

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STATISTICAL SECTION

STATISTICAL SECTION NARRATIVE

To assist readers, the Statistical Section of this ACFR 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, 2022 as well as detailing the ERS' largest source of revenue capacity - investment income June 30, 2013 through 2015, and 2017 through 2021. Investment loss for the year ended June 30, 2016 and 2022 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, 2022.

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, 2022.

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SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION
For Years Ended June 30
(dollars in thousands)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
ADDITIONS										
Employer contributions	$ 26,175	$ 22,313	$ 19,245	$ 24,792	$ 24,822	$ 20,268	$ 27,191	$ 28,150	$ 28,750	$ 23,806
Member contributions	7,728	8,084	7,797	7,541	7,201	6,751	6,418	6,340	5,414	5,355
Investment income gain/(loss)(net of expenses)	(20,830)	194,758	10,900	62,439	70,471	111,662	(4,851)	3,340	107,898	72,802
Total Additions	13,073	225,155	37,942	94,772	102,494	138,681	28,758	37,830	142,062	101,963
DEDUCTIONS										
Benefit payments	61,422	57,660	55,068	51,057	47,628	44,628	42,258	39,992	38,170	36,263
Refunds	823	378	580	745	460	561	461	391	237	369
Administrative expenses	2,397	1,984	1,722	1,704	1,811	1,675	1,696	1,587	1,487	1,565
Total Deductions	64,642	60,022	57,370	53,506	49,899	46,864	44,415	41,970	39,894	38,197
CHANGE IN FIDUCIARY NET POSITION	**$ (51,569)**	**$ 165,133**	**$ (19,428)**	**$ 41,266**	**$ 52,595**	**$ 91,817**	**$ (15,657)**	**$ (4,140)**	**$ 102,168**	**$ 63,766**

SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS

From Fiduciary Net Position by Type

For Years Ended June 30

(dollars in thousands)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Type of Benefit										
Retirees	$ 54,966	$ 52,052	$ 49,427	$ 46,584	$ 42,965	$ 40,379	$ 38,268	$ 35,806	$ 34,348	$ 32,618
Survivors	6,371	5,525	5,559	4,387	4,576	4,163	3,895	4,093	3,730	3,555
Disability benefits	85	83	82	86	87	86	95	93	92	90
Total Benefits	$ 61,422	$ 57,660	$ 55,068	$ 51,057	$ 47,628	$ 44,628	$ 42,258	$ 39,992	$ 38,170	$ 36,263
Refund of Contributions	$ 823	$ 378	$ 580	$ 745	$ 460	$ 561	$ 461	$ 391	$ 237	$ 369

SCHEDULE OF AVERAGE BENEFIT PAYMENTS

As of June 30, 2021 — **Years of Credited Service --->**

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	61	195	209	235	303	398	316	1717
Average monthly benefit	$ 522	$ 750	$ 1,190	$ 1,830	$ 2,934	$ 3,824	$ 4,881	$ 2,801
Average final average salary	$ 49,918	$ 51,587	$ 57,397	$ 64,324	$ 72,169	$ 74,899	$ 83,126	$ 68,625
Average years of service	4.6	8.5	13.2	18.2	23.2	29.0	34.0	22.5

As of July 1, 2020 — **Years of Credited Service --->**

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	60	188	201	218	298	373	324	1662
Average monthly benefit	$ 528	$ 745	$ 1,176	$ 1,746	$ 2,886	$ 3,834	$ 4,861	$ 2,800
Average final average salary	$ 49,999	$ 50,670	$ 56,197	$ 61,745	$ 71,161	$ 75,005	$ 81,015	$ 67,638
Average years of service	4.0	8.1	13.0	18.0	23.1	28.8	33.7	22.2

As of July 1, 2019 — **Years of Credited Service --->**

	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	58	188	184	211	296	365	307	1609
Average monthly benefit	$ 526	$ 736	$ 1,163	$ 1,722	$ 2,867	$ 3,766	$ 4,889	$ 2,779
Average final average salary	$ 50,217	$ 50,670	$ 55,597	$ 60,911	$ 70,939	$ 73,696	$ 80,311	$ 66,940
Average years of service	4.0	8.1	13.0	18.0	23.1	28.7	33.7	22.1

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 --->**

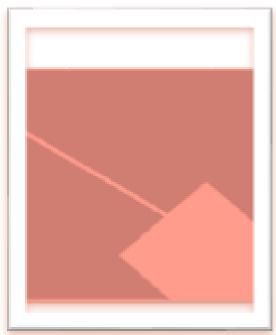
	0-5	6-10	11-15	16-20	21-25	26-30	>30	Total
Number of Retirees and Survivors	54	152	145	173	249	270	229	1,272
Average monthly benefit	$ 452	$ 691	$ 1,082	$ 1,603	$ 2,752	$ 3,441	$ 4,600	$ 2,540
Average final average salary	$ 41,194	$ 47,568	$ 50,122	$ 55,644	$ 67,593	$ 66,475	$ 73,373	$ 60,988
Average 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



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