



NHRS

New Hampshire Retirement System
A Fiduciary Component Unit Of The State Of New Hampshire

Annual Comprehensive Financial Report
For The Fiscal Year Ended
June 30, 2022



**AUDITED ANNUAL COMPREHENSIVE
FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED
JUNE 30, 2022**

A Fiduciary Component Unit of the State of New Hampshire

Prepared by
New Hampshire Retirement System
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NEW HAMPSHIRE RETIREMENT SYSTEM

INTRODUCTORY SECTION

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LETTER FROM
THE CHAIR



New Hampshire Retirement System
54 Regional Drive, Concord, NH 03301
Phone: (603) 410-3500 - Fax: (603) 410-3501
Website: www.nhrs.org - Email: info@nhrs.org



Timothy S. Lesko
Chair
Board of Trustees

December 15, 2022

To the Members and Beneficiaries of the New Hampshire Retirement System:

On behalf of the Board of Trustees of the New Hampshire Retirement System (NHRS, the retirement system), I am pleased to present NHRS' Annual Comprehensive Financial Report (ACFR) for the fiscal year ended June 30, 2022. This report describes the financial condition of both the Pension Plan and the Other Post Employment Benefit (OPEB) Plan. The report also describes various changes that occurred during Fiscal Year 2022.

The Board has a fiduciary responsibility to ensure that the interests of members and beneficiaries are properly safeguarded. This responsibility is embodied in the law and in the New Hampshire Constitution (Part I, Article 36-a), which protects trust fund assets for the exclusive purpose of providing benefits, requires Trustees to set actuarially sound employer contribution rates, and requires employers to annually pay those rates in full.

NHRS pursues a long-term investment strategy designed to meet its funding requirements. The goals of this approach are to reduce risk and mitigate volatility, while meeting or exceeding the assumed rate of investment return of 6.75%. The Board sets the assumed rate of return; approves an investment policy, including asset allocation; and selects an investment consultant to advise the Independent Investment Committee (IIC). The IIC works closely with the consultant and staff to review and change, as appropriate, strategies, external asset managers, and selection of specific investments.

NHRS realized a negative 6.1% (-6.1%) return on investments in the fiscal year ended June 30, 2022. It is important to note that these investment returns are for a single year and need to be considered within the context of the portfolio's performance over time as compared to the assumed rate of return. The three-year, five-year, 10-year, and 25-year returns for the periods ended June 30, 2022, were 7.1%, 7.2%, 8.5%, and 6.9%, respectively. All returns are net of fees.

Factors such as Russia's invasion of Ukraine, the ongoing disruption of global supply chains due to COVID, and inflationary pressures not seen in decades, resulted in heightened investor uncertainty and significantly increased market volatility throughout the year.

In addition to the information on investments contained in this report, more detailed information on NHRS-specific investment activities, and the current economic and market climate is provided in the Comprehensive Annual Investment Report ("CAIR") for Fiscal Year 2022, issued separately by the IIC and available on the NHRS website (www.nhrs.org).

At the close of the fiscal year, the retirement system's net position held in trust was \$10.75 billion.

At June 30, 2022, the funded ratio of the Pension Plan stood at 65.6% and the OPEB Plan at 8.0%, versus 64.2% and 7.2% in the previous year, respectively. Funding status is measured by comparing the actuarial value of assets to the cost of accrued benefits owed now and in the future. The OPEB plan provides a post-employment medical subsidy benefit to qualified Group I and Group II members. Because the OPEB plan is closed to new members and, as required by statute, is essentially funded on a pay-as-you-go basis, it does not, for the most part, have substantial assets set aside for future funding.

Since 2007, a number of important legislative and policy changes have been made to improve NHRS operations and address its unfunded actuarial accrued liability (UAAL). This liability was created by short-sighted public policy decisions made nearly 30 years ago and exacerbated by global economic dips in 2001-02 and 2008-09 and the adoption of more conservative actuarial assumptions over the past decade. While we can't know for certain what economic and policy challenges lie ahead, there is a solid foundation in place and meaningful progress has been made to ensure the long-term viability of NHRS.

Through a number of recent and ongoing initiatives, NHRS has continued to strengthen its operations, efficiency, and stakeholder outreach. Over the past year, these efforts include leveraging technology for more efficient recruitment efforts, adding additional member and employer education programming, and continuing to enhance our cyber-security efforts. We are at the two-thirds mark of a five-year upgrade of our 20-year-old pension administration system, which will create operational efficiencies and provide additional security features.

Our mission is straightforward, “To provide secure retirement benefits and superior service.” The Board and staff are committed to continuously improving internal operational processes and controls, delivering timely and professional service, and implementing legislative changes in support of the sustainability and stability of NHRS and for the benefit of all members and beneficiaries.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Lesko". The signature is fluid and cursive, with a large initial "T" and a distinct "L" and "S" for "Lesko".

Timothy S. Lesko
Chair, Board of Trustees

BOARD OF TRUSTEES

BOARD OF TRUSTEES



Timothy S. Lesko
Chair, Public Member
January 2018 to November 2022



Scott Christensen
Public Member
March 2020 to August 2022



Maureen Kelliher
Public Member
June 2014 to July 2022



Robert E. Maloney
Public Member
July 2018 to July 2021



Donald M. Roy, Jr.
Employer Member
July 2011 to July 2022



Ken Merrifield
Employer Member
March 2021 to July 2022



Scott M. Myers
Employer Member
January 2018 to September 2022



Germano Martin
Employee Member
August 2021 to July 2024



Sue Hannan
Teacher Member
July 2018 to July 2021



Andrew Martineau
Firefighter Member
December 2020 to July 2024



William Hart
Police Officer Member
August 2016 to July 2018



Monica Mezzapelli
State Treasurer
March 2022 ex officio



Christopher C. Coates
Employer Member
September 2018 to July 2019

as of 6/30/22

**INDEPENDENT
INVESTMENT
COMMITTEE**

INDEPENDENT MEMBERS



Scott Hammond
November 2021–August 2022



Christine Clinton
January 2018–Present



Daniel LaPlante
August 2018–Present

TRUSTEE MEMBERS



Maureen Kelliher, Chair
June 2014–Present



Timothy S. Lesko
January 2018–Present

ACTIVE NHRS MEMBER



Michael McMahon
February 2020–Present

See page 65 for a list of investment management, service, and brokerage commissions paid.

**CERTIFICATE OF
ACHIEVEMENT**



Government Finance Officers Association

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

Presented to

New Hampshire Retirement System

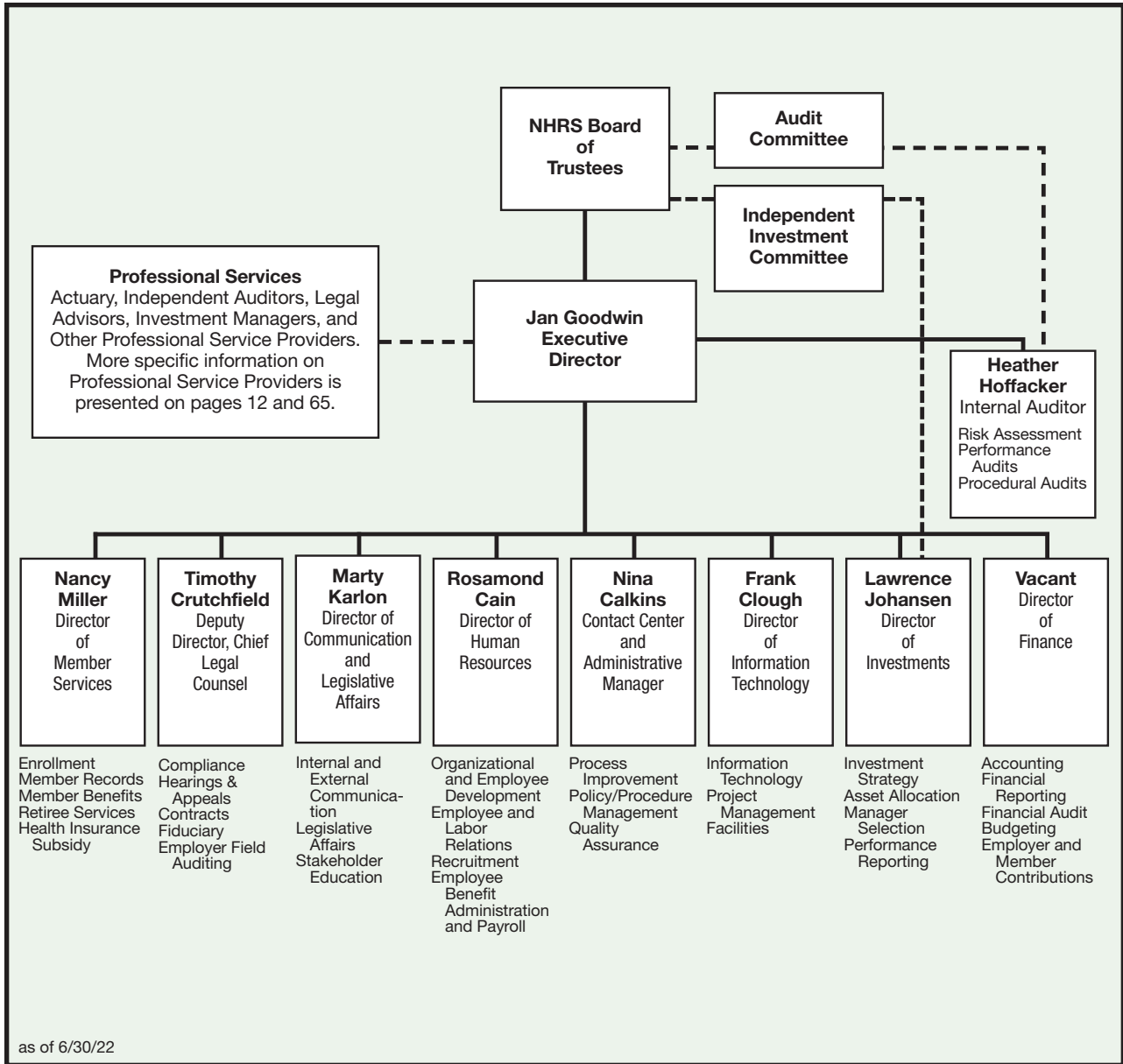
For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morill

Executive Director/CEO

ADMINISTRATIVE ORGANIZATION



PROFESSIONAL MANAGERS, ADVISORS AND SERVICE PROVIDERS

DOMESTIC EQUITY MANAGERS

AB
Blackrock Institutional Trust
Company, N.A.
Boston Trust Walden
Segall, Bryant and Hamill
Thompson, Siegel & Walmsley LLC
Wellington Management Company,
LLP

NON-U.S. EQUITY MANAGERS

Aristotle Capital Management
Artisan Partners
Causeway Capital Management
Lazard Asset Management LLC
Neuberger Berman
Segall, Bryant and Hamill
Walter Scott & Partners Limited
Wellington Trust Company, N.A.

FIXED INCOME MANAGERS

Blackrock Institutional Trust
Company, N.A.
Brandywine Global Investment
Management, LLC
Fidelity Institutional Asset
Management Trust Company
Income Research &
Management
Loomis Sayles &
Company, L.P.
Manulife Asset Management

PRIVATE DEBT & EQUITY MANAGERS

Actis
Alcentra
Apollo Global Management
Arcmont Asset Management
Atalaya Capital Management
Avenue Capital Group
BlackRock Private Equity Partners
Carlyle Group
CarVal Investors
CCMP Capital
Clearlake Capital Partners
Coller Capital
Comvest Partners
Crescent Capital Group
Edgewater Growth Capital Partners
Gramercy
HarbourVest Partners
Industry Ventures
Ironwood Capital
Kayne Anderson Capital Advisors
Lexington Capital Partners
MatlinPatterson Global Advisers
Monroe Capital
NGP Energy Capital Management
Pine Brook Capital Partners
RFE Investment Partners
Riverstone Holdings
Siguler Guff & Co.
SL Capital Partners
Tennenbaum Capital Partners
Thoma Bravo
Top Tier Capital Partners
Warburg Pincus

REAL ESTATE MANAGERS

The Townsend Group
an Aon company

TRANSITION MANAGERS

Abel/Noser, LLC
BlackRock Institutional Trust
Company, N.A.
Pavillion Global Markets
Russell Implementation Services
State Street Bank and Trust
Company

INDEPENDENT AUDITORS

Plante Moran

INVESTMENT ADVISOR

Callan LLC

ACTUARIAL CONSULTANT

Gabriel, Roeder, Smith & Company

LEGAL ADVISORS

Foster Garvey PC
Groom Law Group
Peter T. Foley, Esquire
Sulloway & Hollis PLLC
McLane Middleton, P.A.

CUSTODIANS

BNY Mellon
(Master Custodian)
Citizens Bank-NH
(In-state Custodian)

CORPORATE GOVERNANCE SERVICES

Institutional Shareholder Services,
Inc.

TRADING COST ADVISOR

Abel/Noser, LLC



New Hampshire Retirement System
54 Regional Drive, Concord, NH 03301
Phone: (603) 410-3500 - Fax: (603) 410-3501
Website: www.nhrs.org - Email: info@nhrs.org



Jan Goodwin
Executive Director

December 15, 2022

Dear Chair and Members of the Board of Trustees:

We are pleased to submit the Annual Comprehensive Financial Report (ACFR) of the New Hampshire Retirement System (NHRS) for the fiscal year ended June 30, 2022. This comprehensive report is designed to comply with the provisions of the Revised Statutes Annotated (RSA) 100-A :15, VI of the State of New Hampshire.

The management at NHRS is responsible for the complete and fair presentation of financial information and the accompanying disclosures in this report. This report fairly presents the combined assessment of the investment results and the financial condition of the Pension Plan and the Other Postemployment Benefit Plan (OPEB).

The Pension Plan was established in 1967 to consolidate and replace four separate pension plan systems: the New Hampshire Teachers' Retirement System, the New Hampshire State Employees Retirement System, the New Hampshire Policemen's Retirement System, and the New Hampshire Permanent Firemen's Retirement System. The Pension Plan provides

service retirement, disability retirement, early and vested retirement, and survivor benefits for all full-time state employees, public school teachers and administrators, permanent police officers, and permanent firefighters. Full-time employees of political subdivisions (such as county, municipal or school district employees) are also eligible to become members if the local governing body elects participation. At the close of the fiscal year, there were 48,687 active members and 42,415 retirees or beneficiaries.

The Pension Plan is a qualified governmental plan within the meaning of section 414(d) of the United States Internal Revenue Code and has a separately appointed governing body. Based on financial reporting guidelines, the Pension Plan is deemed to be a single pension plan. In addition, NHRS administers an OPEB Plan which provides medical benefits for qualified Group I and Group II members.

BUDGET CONTROLS AND NHRS ADMINISTRATION

The administrative budget for fiscal year 2022 was proposed by management, approved by the Board of Trustees, submitted under the budget preparation guidelines of the State of New Hampshire, and passed into law by the New Hampshire Legislature. For financial reporting purposes, NHRS is considered a fiduciary component unit of the State of New Hampshire.

NHRS is administered by a 13-member Board of Trustees, which includes the State Treasurer as an ex officio member, one employee member, one teacher member, one firefighter member, one police officer member, four public nonmembers, and four employer representatives. The Board of Trustees sets the investment policy, formulates administrative policies, and authorizes benefit payments to members and their beneficiaries. The NHRS Independent Investment Committee (IIC) is responsible for investing in accordance with policies established by the Board; selecting investment managers, agents, and custodial banks; reviewing performance; and making recommendations to the Board regarding investment consultants, asset allocation, and other investment policy matters. Administrative functions are directed by the Executive Director and are carried out by the administrative staff.

ACCOUNTING SYSTEM AND INTERNAL CONTROL

The ACFR has been prepared in conformity with U.S. generally accepted accounting principles (GAAP). The financial statements are prepared on the accrual basis of accounting. Contributions are recognized as revenue in the period when they become due pursuant to statutory requirements. Investment income is recognized as it is earned. Benefits, refunds, and investment expenses are recognized when they become due and payable. Net appreciation (depreciation) in the fair value of investments is recorded as an increase (decrease) to investment income based on the valuation of investments as of the date of the financial statements. Trade commissions and related transaction costs are netted against the fair value of investments. Capital assets are recognized in the financial statements in accordance with the NHRS established capital asset policy.

The management at NHRS is responsible for maintaining a system of internal controls which is designed to provide reasonable assurance that the assets are adequately safeguarded and the financial reports and financial statements are fairly stated. There is not an expectation from management that the internal controls will prevent or detect all errors and fraud.

A control system, no matter how well designed and operated, can provide reasonable, not absolute, assurance that the objectives of the control system are met. The concept of reasonable assurance recognizes that: (1) The cost of a control should not exceed the benefits likely to be derived; and (2) The evaluation of costs and benefits requires estimates and judgments by management. Management believes its internal control structure meets these objectives.

FINANCIAL PERFORMANCE

For the fiscal year ended June 30, 2022, plan net position decreased \$820.3 million to \$10,753.4 million compared to a \$2,439.6 million net position increase for the prior year. Like all investors, NHRS has dealt with a volatile and challenging investment landscape in recent years that has been exacerbated this year by supply chain issues and the invasion of Ukraine, which impacted food and energy prices. A detailed discussion of investment performance, the sources of additions and deductions, and results of operations is covered in Management's Discussion and Analysis beginning on page 21.

FUNDING STATUS

To ensure that current and future retirement benefits are safeguarded and available to members at retirement, NHRS evaluates the actuarial value of the Plans' assets compared to the actuarial value of the Plans' liabilities as an indication of the extent to which the Plans are funded each year. This measure is called the plan funded ratio. Significant legislation was enacted in the 2008 and 2011 legislative sessions aimed at improving the funded ratios of the Plans.

The Pension Plan funded ratio at June 30, 2022, based on the June 30, 2022 financial schedules prepared by our actuary was 65.6%. The comparable funded ratio at June 30, 2021, based on the June 30, 2021 financial schedules prepared by our actuary was 64.2%. The funded ratio of the OPEB Plan at June 30, 2022, based on the June 30, 2022 financial schedules prepared by our actuary, was 8.0%. The comparable funded ratio at June 30, 2021, based on the June 30, 2021 financial schedules prepared by our actuary was 7.2%. The ratio of Plan net position to the Plan liability under GAAP is separately determined for both the Pension and OPEB Plans and is discussed in the financial statements. A comprehensive analysis of funding progress for the Plans is provided in the Required Supplementary Information beginning on page 50.

NHRS adopted an actuarial funding policy in FY 2014 which defines the actuarial method and assumptions used to determine the employer contribution rates necessary to fund the plan. The policy was amended in September 2018 to reflect statutory adoption of layered amortization for future asset gains or losses. For more details on NHRS' actuarial funding policy, go to www.nhrs.org/about-nhrs/policies.

NET PENSION LIABILITY

The total pension liability is the accrued liability for benefits owed now and in the future based on the Entry Age Normal actuarial funding method. The fiduciary net position is based on the fair value of assets at year end. The net pension liability is the total pension liability, less the amount of the Pension Plan's fiduciary net position. These disclosures are accounting measurements, not actuarial measurements of the funded status of the plan and are not used to develop employer contribution rates.

INVESTMENTS

RSA 100-A:15 grants the New Hampshire Retirement System Board of Trustees the authority to adopt the investment policy for NHRS. Effective January 1, 2009, the Independent Investment Committee (IIC) was established by statute granting it authority to invest and reinvest NHRS funds in accordance with the investment policy adopted by the Board of Trustees. Prior to January 1, 2009, the Board of Trustees had the authority to invest and reinvest NHRS funds.

The IIC consists of not more than five voting members, three of whom are not members of the Board of Trustees and up to two of whom are members of the Board of Trustees appointed by the chairperson of the Board of Trustees. The Trustees and IIC members are fiduciaries and discharge their duties solely in the interest of the Plans' participants and beneficiaries. In the management of the Plan's assets, the Board of Trustees and the IIC members must exercise the care, skill, and caution under the circumstances then prevailing that a prudent person acting in a like capacity would use in the conduct of an activity of like character and purpose.

The annualized total fund investment returns for the one-year, three-year, five-year, ten-year, and twenty-five year periods ended June 30, 2022, were -6.1%, 7.1%, 7.2%, 8.5% and 6.9%, respectively. The current assumed rate of return is 6.75%. A discussion about comparative annualized returns and related benchmark indices for fiscal years 2022 and 2021 is presented in the Management's Discussion and Analysis beginning on page 21.

For the thirteen years ending June 30, 2022, a period during which the IIC made the investment decisions, total fund performance was primarily in the first or second top quartile.

The outperformance of 60 basis points relative to the median of the Callan Public Fund Sponsor – Large Universe for the thirteen years ending June 30, 2022, represents approximately \$325 million in additional investment income for the pension trust.

MAJOR INITIATIVES

NHRS faces many issues common to other public employee retirement plans. As part of its proactive response to these challenges, the retirement system strives to create a culture of constant improvement. Some of the significant efforts during fiscal year 2022 were:

- Continued design and testing related to a multi-year upgrade to core pension administration system, which remains on schedule to go live in late 2023.
- Maintained and expanded various cyber-security enhancements designed to protect the security of our system and member/retiree personal information; stopped accepting email attachments sent to the general information mailbox.
- Implemented statutory changes enacted in 2022 related to member benefits that required significant pension database modifications.
- Published updated Statutory Interpretive Memoranda relating to participation, earnable compensation, and related benefit issues.
- Successfully met the recruiting and personnel challenges resulting from retirements and turnover; leveraged technology for more efficient recruitment efforts; expanded management development program.
- Issued the June 30, 2021, GASB 68 and 75 reports with unmodified (clean) opinions.
- Enhanced member and employer education efforts by adding presentations specifically focused on filing a retirement application and submitting final compensation information for recently retired members.
- Earned a Certificate of Achievement for Excellence in Financial Reporting for the June 30, 2021 Annual Comprehensive Annual Financial Report (ACFR).

INDEPENDENT AUDIT

RSA 100-A:15 VI. (a) requires the Audit Committee of the Board of Trustees to engage the services of a qualified independent auditor to perform an annual audit each fiscal year. For fiscal year 2022, the Audit Committee designated Plante Moran to conduct the annual audit. The independent auditors' report, audited financial statements, required supplementary information, and supporting schedules are included in the Financial Section of this report.

ACTUARIAL REVIEW AND VALUATION

An actuarial review, commonly called an experience study, of the mortality, service, withdrawals, and compensation experience of members is required by statute at least once during each five-year period. The last actuarial review was performed during fiscal year 2020 by NHRS' current actuary, Gabriel, Roeder, Smith and Company, and was based on the information available as of June 30, 2019. An actuarial valuation of the assets and liabilities is required by statute at least once during each two-year period. The June 30, 2019, actuarial valuation was used to determine employer contribution rates for fiscal years 2022 and 2023. The June 30, 2021, actuarial valuation was used to determine employer contribution rates for fiscal years 2024 and 2025. The actuarial certification and supporting statistics are included in the Actuarial and Statistical Sections of this report.

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The NHRS Annual Comprehensive Financial Report for the fiscal year ended June 30, 2021, was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA). The Certificate of Achievement is the highest form of recognition in the area of state and local

governmental accounting and financial reporting, and attaining it represents a significant accomplishment by a government and its management. We are gratified that NHRS has received this award for 31 of the past 32 years. A copy of the fiscal year 2021 award is presented on page 10.

ACKNOWLEDGMENTS

The compilation of this report reflects the combined efforts of the NHRS administrative staff under the direction of the Board of Trustees. It is intended to provide extensive and reliable information as a basis for making management decisions, determining compliance with legal provisions, and for determining responsible stewardship for the investment and accounting for assets of plan participants. We would like to take this opportunity to express our gratitude to the Board of Trustees for its guidance and support and to the administrative staff for their dedication and commitment to the mission, vision and values of the New Hampshire Retirement System – “To provide secure retirement benefits and superior service.” We would also like to note our appreciation for the professional and diligent work of the Independent Investment Committee whose efforts have consistently generated superior returns in accordance with the Board’s investment policy.

Respectfully submitted,



Jan Goodwin
Executive Director

NEW HAMPSHIRE RETIREMENT SYSTEM

FINANCIAL SECTION

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INDEPENDENT AUDITORS' REPORT



Plante & Moran, PLLC

Suite 1250
1111 Superior Ave.
Cleveland, OH 44114
Tel: 216.523.1010
Fax: 216.523.1025
plantemoran.com

To the Board of Trustees
New Hampshire Retirement System

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

OPINION

We have audited the financial statements of the New Hampshire Retirement System (the "System"), a fiduciary component unit of the State of New Hampshire, as of and for the year ended June 30, 2022 and the related notes to the financial statements, which collectively comprise the System's basic financial statements, as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the fiduciary net position of the New Hampshire Retirement System as of June 30, 2022 and the changes in its fiduciary net position for the year 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) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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 the System 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 opinion.

RESPONSIBILITIES OF MANAGEMENT FOR THE FINANCIAL STATEMENTS

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 control 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 the System's ability to continue as a going concern for 12 months beyond the financial statement date, 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 opinion. 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 and *Government Auditing Standards* 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 control. 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 and Government Auditing Standards, 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.
- Obtain an understanding of internal control 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 the System's internal control. 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 the System'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 control-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 and other required supplementary information, as identified in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which 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 supplemental 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 audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

SUPPLEMENTARY INFORMATION

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The supporting schedules, as identified in the table of contents, are presented for the purpose of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit 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 supporting schedules are fairly stated in all material respects in relation to the basic financial statements as a whole.

OTHER INFORMATION

Management is responsible for the other information included in the Annual Comprehensive Financial Report. The other information comprises the introductory, investment, actuarial, and statistical sections but does not include the basic financial statements and our auditor's report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements or whether the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

REPORT ON SUMMARIZED COMPARATIVE INFORMATION

We have previously audited the System's June 30, 2021 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated December 13, 2021. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2021 is consistent, in all material respects, with the audited financial statements from which it has been derived.

OTHER REPORTING REQUIRED BY GOVERNMENT AUDITING STANDARDS

In accordance with *Government Auditing Standards*, we have also issued our report dated December 15, 2022 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

Plante & Morse, PLLC

December 15, 2022

MANAGEMENT'S DISCUSSION AND ANALYSIS — REQUIRED SUPPLEMENTARY INFORMATION

This section presents management's discussion and analysis of the New Hampshire Retirement System's (NHRS) financial performance during the fiscal year ended June 30, 2022 and is presented as a narrative overview and analysis in conjunction with the Letter of Transmittal included in the Introductory Section of the System's Annual Comprehensive Financial Report. The report presents the combined assessment of the financial performance of the Pension Plan and the OPEB Plan.

The discussion and analysis is intended to serve as an introduction to the basic financial statements. These statements include the Combining Statements of Fiduciary Net Position and Changes in Fiduciary Net Position, and the related Notes to the Financial Statements for the fiscal year ended June 30, 2022 with summarized comparative information for fiscal year 2021. In addition, Required Supplementary Information is provided for the Pension and OPEB plan. The excess of assets over liabilities is reported as "Net Position Restricted for Pension and Other Post Employment Benefits (OPEB)."

FINANCIAL HIGHLIGHTS

Net position decreased by \$820.3 million (-7.1%) from the prior year's net position reflecting a decline in investments due to a variety of factors contributing to systemic risk, including the aftermath of the COVID-19 pandemic, which contributed to supply chain inefficiencies, a significant dislocation between supply/demand dynamics, and the potential for weaker economic fundamentals. In addition, the invasion of Ukraine exacerbated several risk factors impacting food prices, energy prices, and contributed further to supply chain dislocations. Net investment loss during fiscal year 2022 was \$693.0 million, a \$3,321.4 million (-126.4%) decrease over the prior fiscal year. The net investment loss for fiscal year 2022 reflects a time-weighted return for the total fund during the year of -6.1% compared to a time-weighted investment return of 29.4% for the fiscal year ended June 30, 2021.

The total contributions received during the fiscal year were \$865.1 million. For fiscal year 2021, total contributions received were \$744.2 million.

Employer contributions for fiscal year 2022 increased 22.4%, to \$621.1 million, compared with employer contributions in fiscal year 2021 of \$507.3 million. The increase in employer contributions in fiscal year 2022 was primarily due to an increase in the employer contribution rates as determined in the actuarial valuation report dated as of June 30, 2019.

Member contributions were \$244.0 million in fiscal year 2022, an increase of 3.0% over fiscal year 2021 member contributions of \$236.9 million. The increase in member contributions is primarily due to an increase in earnable compensation rates for contributing members.

Benefits paid during fiscal year 2022 were \$957.8 million, an increase of 6.0% over benefits paid in fiscal year 2021 of \$903.7 million. The increase in benefits paid in fiscal year 2022 is primarily due to an increase in the number of retirees and increased average benefit levels for those new retirees.

FINANCIAL ANALYSIS

The following schedules report the Condensed Comparative Net Position Information and the Condensed Comparative Changes in Net Position Information for the NHRS for the fiscal years ended June 30, 2022 and June 30, 2021.

Condensed Comparative Fiduciary Net Position — Combined Plans

(Dollar Values Expressed in Millions)

	As of June 30, 2022	As of June 30, 2021	Amount Increase (Decrease)	Percentage Increase (Decrease)
Cash	\$ 264.6	\$ 297.4	\$ (32.8)	(11.0%)
Receivables	119.3	102.4	16.9	16.5%
Investments	10,390.6	11,206.3	(815.7)	(7.3%)
Other Assets	9.5	4.5	5.0	111.1%
Total Assets	\$10,784.0	\$11,610.6	\$ (826.6)	(7.1%)
Other Liabilities	30.7	36.9	(6.2)	(16.8%)
Total Liabilities	\$ 30.7	\$ 36.9	\$ (6.2)	(16.8%)
Net Position Restricted for:				
Pensions	\$10,708.4	\$11,523.9	\$ (815.5)	(7.1%)
Post Employment Benefits Other Than Pensions	45.0	49.8	(4.8)	(9.6%)
Total Restricted Net Position	\$10,753.4	\$11,573.7	\$ (820.3)	(7.1%)

Total assets decreased by \$826.6 million (7.1%) in fiscal year 2022. Cash on hand at fiscal year end was \$264.6 million (11.0%) lower than at fiscal year end 2021 reflecting higher draw downs of liquidity reserves necessary to meet operating obligations. Receivables increased by \$16.9 million (16.5%) compared to the prior fiscal year primarily due to an increase

in the contributions due from employers and plan members as well an increase in pending sales of securities at fiscal year end. Investment values decreased by \$815.7 million (7.3%) in fiscal year 2022. The decrease in investments is attributable to a variety of factors contributing to systemic risk, including the aftermath of the COVID-19 pandemic, which contributed to supply chain inefficiencies, a significant dislocation between supply/demand dynamics, and the potential for weaker economic fundamentals. In addition, the invasion of Ukraine exacerbated several risk factors impacting food prices, energy prices, and contributed further to supply chain dislocations. Other assets increased by \$5.0 million for fiscal year 2022 primarily due to the addition of a Right to Use Asset – Lease per GASB 87 implementation guidelines. Total liabilities decreased by \$6.2 million (16.8%) at the end of fiscal year 2022 primarily due to a decrease in pending purchases of securities at fiscal year end.

Condensed Comparative Changes in Fiduciary Net Position – Combined Plans

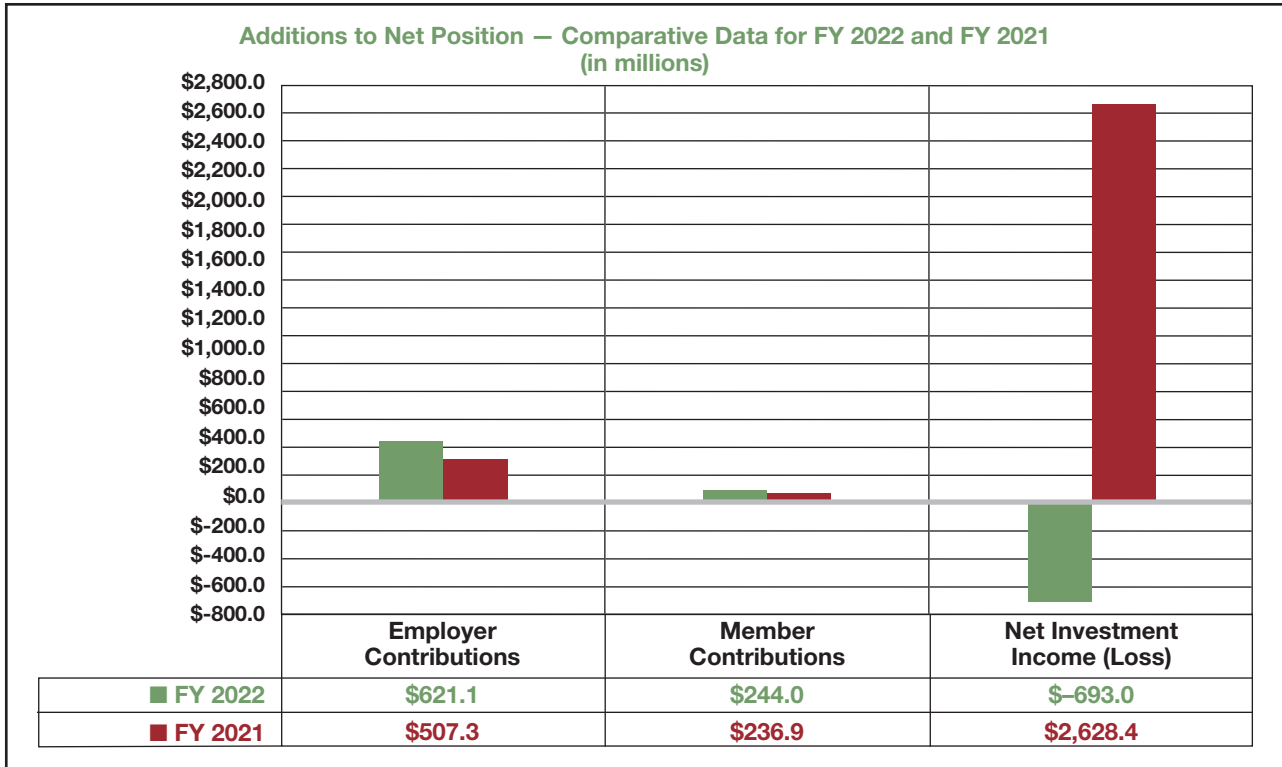
(Dollar Values Expressed in Millions)

	Year Ended June 30, 2022	Year Ended June 30, 2021	Amount Increase (Decrease)	Percentage Increase (Decrease)
ADDITIONS:				
Employer Contributions	\$ 621.1	\$ 507.3	\$ 113.8	22.4%
Member Contributions	244.0	236.9	7.1	3.0%
Net Investment Income (Loss)	(693.0)	2,628.4	(3,321.4)	(126.4%)
Total Additions to Fiduciary Net Position	\$ 172.1	\$ 3,372.6	\$(3,200.5)	(94.9%)
DEDUCTIONS:				
Benefits Paid	\$ 957.8	\$ 903.7	\$ 54.1	6.0%
Refunds of Contributions	23.7	19.9	3.8	19.1%
Administrative Expense	9.8	8.6	1.2	14.0%
Other Deductions	1.1	0.8	0.3	37.5%
Total Deductions from Fiduciary Net Position	\$ 992.4	\$ 933.0	\$ 59.4	6.4%
Total Changes in Fiduciary Net Position	\$ (820.3)	\$ 2,439.6	\$(3,259.9)	(133.6%)

ADDITIONS TO NET POSITION

For fiscal year 2022, the combined total of employer and member increased by \$120.9 million or 16.2%. Employer contributions increased from \$507.3 million in fiscal year 2021 to \$621.1 million or 22.4% in fiscal year 2022. The increase in employer contributions is primarily due to an increase in the employer contribution rates as determined in the actuarial valuation report dated as of June 30, 2019. Member contributions for fiscal year 2022 were \$244.0 million, an increase of \$7.1 million or 3.0% from fiscal year 2021.

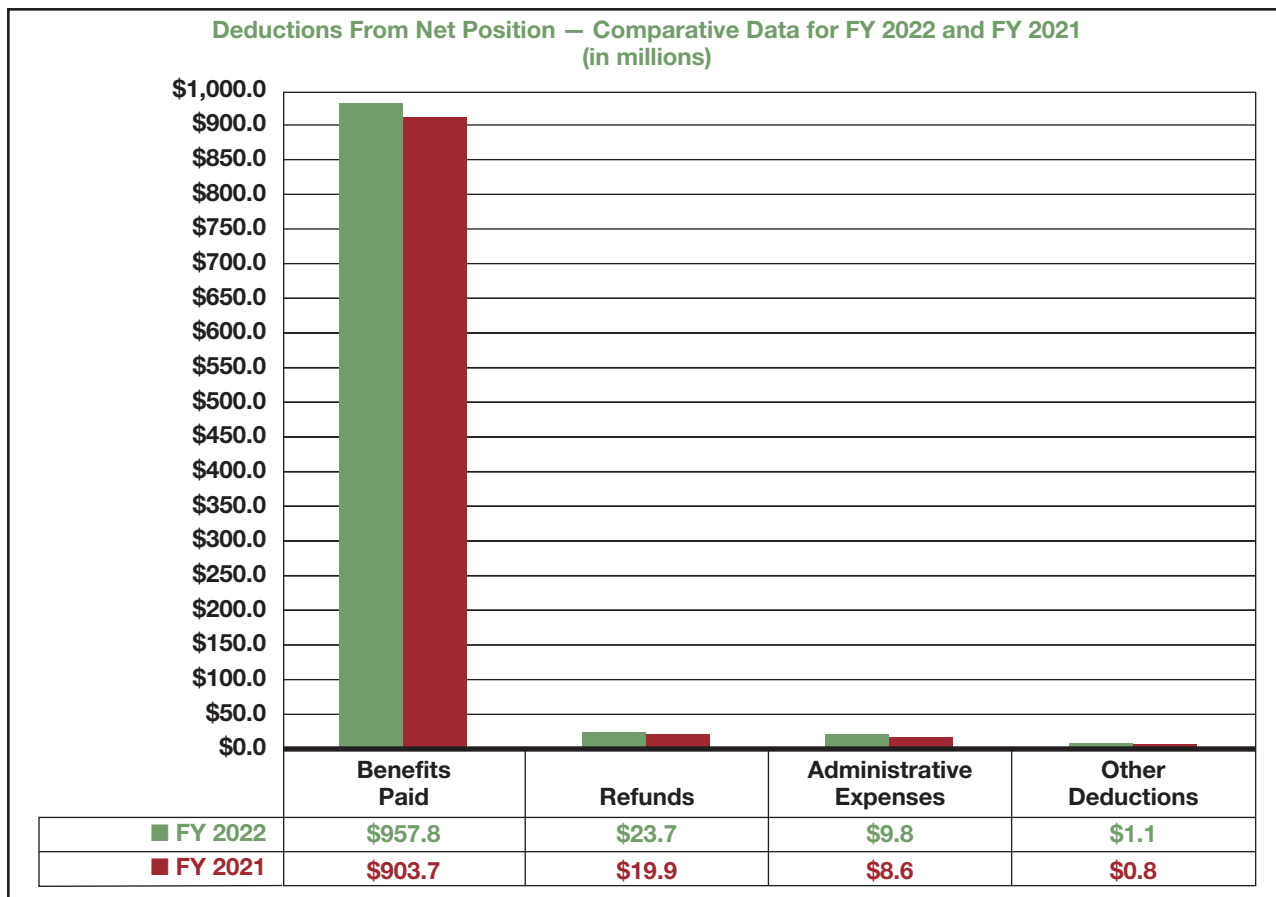
Over the long term, the Plan's investment portfolio has been a source for additions to fiduciary net position. However, in fiscal year 2022 there was a net investment loss of \$693.0 million compared with a net investment income gain in fiscal year 2021 of \$2,628.4 million. The net change from year-to-year was \$(3,321.4) million or (126.4%), a decrease from fiscal year 2021. The decrease in investment income is due to a variety of factors contributing to systemic risk, including the aftermath of the COVID-19 pandemic, which contributed to supply chain inefficiencies, a significant dislocation between supply/demand dynamics, and the potential for weaker economic fundamentals. In addition, the invasion of Ukraine exacerbated several risk factors impacting food prices, energy prices, and contributed further to supply chain dislocations.



DEDUCTIONS FROM NET POSITION

Total benefits paid in fiscal year 2022 were \$957.8 million, an increase of \$54.1 million or 6.0% over the fiscal year 2021 level of \$903.7 million. Pension benefits paid in fiscal year 2022 were \$914.0 million, an increase of \$55.8 million or 6.5% compared with the pension benefits paid in fiscal year 2021 of \$858.2 million. The increase in pension benefits paid in fiscal year 2022 is due to an increase in the number retirees and increased average benefit levels for those new retirees. OPEB benefits paid in fiscal year 2022 were \$43.8 million, which was slightly lower than the benefits paid in 2021. Future OPEB benefit payments are expected to remain flat or decrease over time as there is a very small population of active members who can still qualify for this benefit. Refunds of contributions were \$23.7 million, an increase of \$3.8 million or 19.1% over the 2021 level of \$19.9 million. This reflects an increase in the number and dollar value of refund requests from terminated members in 2022.

Administrative expenses increased by \$1.2 million or 14.0% in fiscal year 2022 to a level of \$9.8 million compared with 8.6 million in 2021. Administrative expenses increased primarily due to an increase in staff and software implementation costs that were necessary to assist the system with completion of a multi-year pension administration system upgrade project.



PLAN FUNDING STATUS

Funded ratios are a useful measurement that can be used in conjunction with many other factors to assess the financial soundness of a pension or OPEB plan. The Pension Plan’s funded ratio is calculated by dividing the plan fiduciary net position of assets available to pay pension benefits by the total pension liability. The OPEB Plan’s funded ratio is calculated by dividing the plan fiduciary net position of assets at year end by its total OPEB liability at year end. The liabilities that were used to determine the plans net position as a percentage of the liabilities for both the Pension and OPEB plan were determined using the entry age normal actuarial cost method for both fiscal year 2022 and 2021. The assumptions used to calculate the liabilities in fiscal year 2022 remain the same as those in place for the fiscal year 2021 calculation.

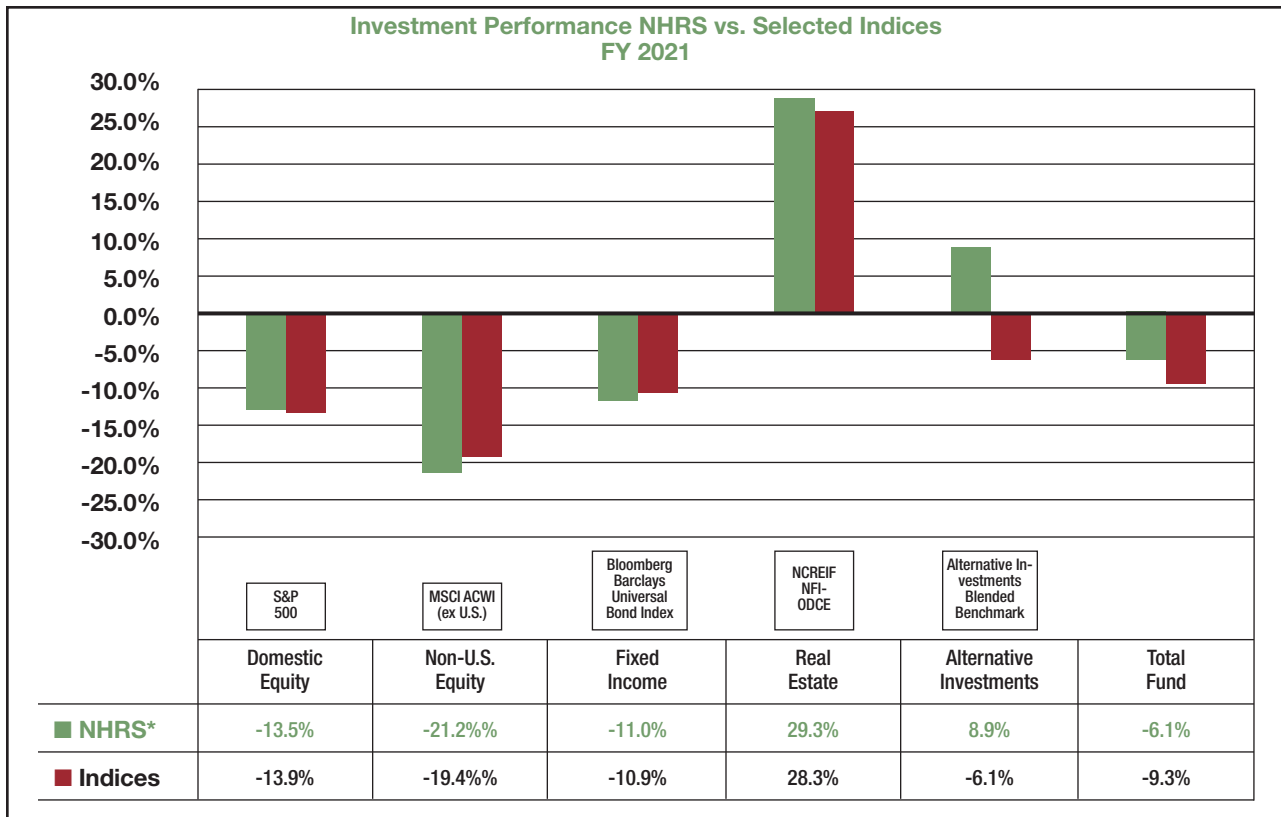
The total pension liability under GAAP at June 30, 2022, was \$16,444.5 million. The fiduciary net position available to pay pension benefits at June 30, 2022 was \$10,708.4 million, resulting in a net pension liability of \$5,736.1 million and a plan net position as a percentage of the liabilities of 65.1%. As of June 30, 2021, the total pension liability was \$15,955.8 million. The fiduciary net position available to pay pension benefits at June 30, 2021 was \$11,523.9 million, resulting in a net pension liability of \$4,431.9 million and a plan net position as a percentage of the liabilities of 72.2%.

The total OPEB liability under GAAP at June 30, 2022, was \$422.9 million. The fiduciary net position to pay postemployment medical benefits at June 30, 2022 was \$45.0 million resulting in a net OPEB liability of \$377.9 million and a total plan net position as a percentage of the total OPEB liability of 10.6% at June 30, 2022. As of June 30, 2021, the total OPEB liability was \$450.3 million. The fiduciary net position available to pay OPEB benefits at June 30, 2021 was \$49.8 million resulting in a net OPEB liability of \$400.5 million and a total plan net position as a percentage of the total OPEB liability of 11.1%.

INVESTMENT PERFORMANCE

NHRS recognizes that it operates in a dynamic economic environment. The challenges of investing the Plans’ funds strategically to achieve the actuarial rate of return while controlling risk are greater than ever. As such, NHRS has allocated assets to a broad range of asset classes.

Equity (45%), fixed income investments (19%), and cash equivalents (2%) comprise approximately 66% of invested assets at June 30, 2022. The remaining 34% of assets are invested in real estate (13%) and alternative investments (21%), which



**Performance returns are calculated on a net-of-fees time-weighted rate of return basis.

include private equity, private debt and absolute return strategies. These illiquid assets are expected to earn enhanced returns and manage risk through further diversification.

Investment performance results are measured by the relationship of the Plans’ portfolio returns for equity and fixed income investments against widely-accepted market indices. For the fiscal year ended June 30, 2022, the Plans’ total fund time-weighted rate of return was -6.1% compared to 29.4% for the fiscal year ended June 30, 2021. The difference in year-over-year performance was due to a variety of factors contributing to systemic risk, including the aftermath of the COVID-19 pandemic, which contributed to supply chain inefficiencies, a significant dislocation between supply/demand dynamics, and the potential for weaker economic fundamentals. In addition, the invasion of Ukraine exacerbated several risk factors impacting food prices, energy prices, and contributed further to supply chain dislocations.

The total NHRS fund time-weighted rate of return of -6.1% for fiscal year 2022 outperformed the total fund custom index (a blended composition of major market indices in proportion to the NHRS’ asset allocation), which returned -9.3%, 320 by basis points. Domestic Equity generated a return of -13.5%, outperforming the Russell 3000 Index return of -13.9% by 40 basis points. The non-U .S. equity portfolio returned -21.2% during fiscal year 2022, underperforming the MSCI All Country World (ex U.S.) index return of -19.4% by 180 basis points. Fixed income returned -11.0% and underperformed the Bloomberg Capital Universal Bond Index benchmark return of -10.9% by 10 basis points. The real estate portfolio gained 29.3% and outperformed the NCREIF NFI-ODCE (Net of fee) Index return of 28.3% by 100 basis points. The alternative investment class provided an 8.9% return and outperformed the blended benchmark return of -6.1% by 1,500 basis points. The benchmark for this asset class is 66.7% S&P 500 Index +3% and 33.3% S&P LSTA Leverage Loan 100 Index

CONTACTING NHRS

The Annual Comprehensive Financial Report is designed to provide a general overview of NHRS investment results and financial condition of the Pension and OPEB Plan for the year ended June 30, 2022. Detailed information regarding NHRS’ investments as of June 30, 2022 can be found in the Annual Comprehensive Investment Report which is published by the Independent Investment Committee of the NHRS. Please contact the NHRS office at 603.410.3500 for additional financial information or for questions related to this report, or the Annual Comprehensive Investment Report. Additional information can also be obtained from the NHRS website at www.nhrs.org.

BASIC FINANCIAL STATEMENTS

COMBINING STATEMENTS OF FIDUCIARY NET POSITION PENSION AND OTHER POSTEMPLOYMENT MEDICAL PLANS (OPEB) AS OF JUNE 30, 2022 (with summarized financial information as of June 30, 2021)

(in thousands)

	PENSION PLAN 2022	OPEB PLAN 2022	TOTAL 2022	TOTAL 2021
ASSETS:				
Cash and Cash Equivalents	\$ 263,632	\$ 1,008	\$ 264,640	\$ 297,424
Receivables:				
Due from Employers	58,061	4,347	62,408	50,533
Due from Plan Members	23,361	—	23,361	22,261
Due from Brokers for Securities Sold	11,018	42	11,060	10,744
Interest and Dividends	13,552	52	13,604	11,626
Other	8,823	34	8,857	7,233
Total Receivables	\$ 114,815	\$ 4,475	\$ 119,290	102,397
INVESTMENTS AT FAIR VALUE				
Equity Investments:				
Domestic	4,065,290	15,549	4,080,839	3,954,959
International	667,904	2,555	670,459	1,710,688
Fixed Income Investments:				
Domestic	1,884,565	7,208	1,891,773	2,096,026
International	102,688	393	103,081	98,762
Real Estate	1,426,321	5,455	1,431,776	1,129,863
Alternative Investments	2,204,291	8,431	2,212,722	2,215,988
TOTAL INVESTMENTS	\$10,351,059	\$39,591	\$10,390,650	11,206,286
Other Assets	9,483	35	9,518	9,198
TOTAL ASSETS	\$10,738,989	\$45,109	\$10,784,098	\$11,615,305
LIABILITIES:				
Management Fees and Other Payables	14,387	55	14,442	16,034
Due to Brokers for Securities Purchased	16,245	62	16,307	25,597
TOTAL LIABILITIES	\$ 30,632	\$ 117	\$ 30,749	\$ 41,631
NET POSITION – RESTRICTED FOR PENSION AND OTHER POST EMPLOYMENT BENEFITS (OPEB)				
Pensions	10,708,357	—	10,708,357	11,523,879
Employment Benefits Other than Pensions	—	44,992	44,992	49,975
TOTAL RESTRICTED NET POSITION	\$10,708,357	\$44,992	\$10,753,349	\$11,573,854

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

**COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
PENSION AND OTHER POSTEMPLOYMENT MEDICAL PLANS (OPEB)
FOR THE YEAR ENDED JUNE 30, 2022
(with summarized financial information for the year ended June 30, 2021)**

(in thousands)

	PENSION PLAN 2022	OPEB PLAN 2022	TOTAL 2022	TOTAL 2021
ADDITIONS:				
Contributions (NOTE 6):				
Employer — Normal	\$ 579,083	\$42,064	\$ 621,147	\$ 507,093
Employer — Other	(55)	—	(55)	239
Total Employer Contributions	\$ 579,028	\$42,064	\$ 621,092	\$ 507,332
Plan Member	243,982	—	243,982	236,879
Total Contributions	\$ 823,010	\$42,064	\$ 865,074	\$ 744,211
Investment Income (Loss)				
From Investment Activities:				
Net Increase/(Decrease) in Fair Value of Investments				
	(860,033)	(3,544)	(863,577)	2,496,167
Interest	38,526	160	38,686	41,295
Dividends	87,810	364	88,174	72,917
Real Estate Income	35,128	146	35,274	24,444
Alternative Investment Income (Loss)	64,335	267	64,602	47,249
Total Income (Loss) from Investment Activities	\$ (634,234)	\$ (2,607)	\$ (636,841)	\$ 2,682,072
Less: Investment Expenses:				
Investment Management Fees	53,457	201	53,658	51,221
Custodial Fees	704	3	707	661
Investment Advisor Fees	647	3	650	700
Investment Professional Fees	408	2	410	438
Investment Administrative Expense	727	4	731	688
Total Investment Activity Expenses	\$ 55,943	\$ 213	\$ 56,156	\$ 53,708
Total Net Income (Loss) from Investment Income	\$ (690,177)	\$ (2,820)	\$ (692,997)	\$ 2,628,364
TOTAL ADDITIONS	\$ 132,833	\$39,244	\$ 172,077	\$ 3,372,575
DEDUCTIONS:				
Benefits Paid	913,994	43,809	957,803	903,710
Refunds of Contributions	23,727	—	23,727	19,884
Administrative Expense	9,523	234	9,757	8,589
Professional Fees	517	2	519	548
Other	594	2	596	245
TOTAL DEDUCTIONS	\$ 948,355	\$44,047	\$ 992,402	\$ 932,976
CHANGE IN NET POSITION	\$ (815,522)	\$ (4,803)	\$ (820,325)	\$ 2,439,599
NET POSITION RESTRICTED FOR PENSION BENEFITS AND OTHER POSTEMPLOYMENT BENEFITS (OPEB)				
Net Position — Beginning	\$ 11,523,879	\$49,795	\$ 11,573,674	\$ 9,134,075
Net Position — Ending	\$ 10,708,357	\$44,992	\$ 10,753,349	\$ 11,573,674

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

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NOTE 1 — NEW HAMPSHIRE RETIREMENT SYSTEM

The New Hampshire Retirement System (NHRS) is a public employee retirement system that administers one cost-sharing multiple-employer defined benefit pension plan (Pension Plan) and one separate cost-sharing multiple-employer postemployment medical subsidy healthcare plan (OPEB Plan). Collectively the Pension Plan and the postemployment medical subsidy healthcare plan are hereafter referred to as the Plans.

NHRS is administered by a 13-member Board of Trustees that includes one employee member, one teacher member, one firefighter member, one police officer member, four employer representatives, four public members, and the State Treasurer. Trustees are fiduciaries bound by law to act solely in the interest of the participants and beneficiaries of the pension plan.

All trustees — with the exception of the State Treasurer, who serves as an ex officio member — are nominated by the governor for three-year terms and must be confirmed by a vote of the Executive Council. The Executive Council of the State of New Hampshire has the authority and responsibility, together with the Governor, over the administration of the affairs of the State as defined in the New Hampshire Constitution, the New Hampshire statutes, and the advisory opinions of the New Hampshire Supreme Court and the Attorney General. Any newly appointed or reappointed trustee must have familiarity with or experience in finance or business management.

The New Hampshire State Employees' Association, the New Hampshire Education Association, the New Hampshire Police Association, and the New Hampshire State Permanent Firemen's Association each submit a list of five active members of the retirement system from which the governor chooses a nominee to represent each of the four member groups.

The New Hampshire Municipal Association, the New Hampshire School Boards Association, and the New Hampshire Association of Counties each put forth a name to the governor for nomination as an employer trustee. The Governor also identifies and nominates one person to represent management of state employees.

The governor identifies and nominates the public member trustees, all of whom must be qualified persons with investment and/or financial experience who are not members of the retirement system. The public trustees must also have substantial experience in the field of institutional investment or finance such as educational background, business experience, and/or professional licensure and designations.

The governor is responsible to designate one of the public trustees to serve as chair of the board.

Although the assets of the Plans are commingled for investment purposes, each plan's assets may be used only for the payment of benefits to the members of that plan, in accordance with the plan's individual terms. Accordingly, the results of each plan are presented separately in the accompanying financial statements. Investment income or losses are allocated to the Pension and OPEB plans based on fund balances. Administrative costs are allocated based on estimated staff time.

The administrative office of NHRS, which functions as a self-sustaining governmental entity, operates under a budget which is proposed by management, approved by the Board of Trustees, submitted under the budget preparation guidelines of the State of New Hampshire (State), and passed into law by the New Hampshire Legislature. NHRS participates as an employer in the Plans and its employees are members of the Plans.

In accordance with Governmental Accounting Standards Board (GASB) Statement No. 84, as amended, the New Hampshire Retirement System is a fiduciary component unit of the State. This determination was made on the basis of the State's financial burden on behalf of NHRS. A copy of the State of New Hampshire's ACFR may be viewed at www.das.nh.gov/accounting/.

PENSION PLAN

The Pension Plan was established in 1967 by RSA 100-A:2 and is qualified as a tax-exempt organization under Sections 401(a) and 501(a) of the Internal Revenue Code. The Pension Plan is a contributory, defined benefit plan providing service, disability, death and vested retirement benefits to members and their beneficiaries. Substantially all full-time state employees, public school teachers and administrators, permanent firefighters and permanent police officers within the State are eligible and required to participate in the Pension Plan. Full-time employees of political subdivisions, including counties, municipalities and school districts, are also eligible to participate as a group if the governing body of the political subdivision has elected participation.

The type and number of employers contributing to the Pension Plan during the years ended June 30, 2022 and 2021 are presented below.

For GASB 67 disclosure purposes all State entities contributing to the pension plan are considered one employer.

EMPLOYERS CONTRIBUTING	2022	2021
State Government	1	1
City Governments	13	13
Town Governments and Related Entities	239	238
County Governments and Related Entities	12	12
School Districts and School Administrative Units	196	197
Total Employers	461	461
MEMBERSHIP DATA	2022	2021
Inactive plan members (or their beneficiaries) currently receiving benefits	42,415	40,974
Inactive members entitled to but not yet receiving benefit payments	2,990	2,730
Active plan members	48,687	48,582
Inactive members not vested	16,717	14,946
Total Membership	110,809	107,232

The Pension Plan is divided into two membership groups. State and local employees and teachers belong to Group I. Police officers and firefighters belong to Group II. All assets are held in a single trust and are available to pay retirement benefits to all members. Benefits available to each membership group are summarized below.

Group I Members at age 60 qualify for a normal service retirement allowance based on years of creditable service and average final salary for the highest three years. Members commencing service on or after July 1, 2011 qualify for a normal service retirement allowance at age 65 based on years of creditable service and average final compensation for the highest five years. Members hired prior to July 1, 2011 with a non-vested status as of January 1, 2012 qualify for a normal service retirement allowance at age 60 based on years of creditable service and average final compensation for the highest five years. The yearly pension amount is 1/60 or 1.667% of average final compensation (AFC), multiplied by years of creditable service. AFC is defined as the average of the three or five highest salary years, and for benefit calculation purposes only, the final year's compensation cannot exceed by more than 150% the higher of the previous year's compensation or the compensation for the highest year used in the calculation of AFC (not including the final year's compensation). At age 65, the yearly pension amount is recalculated at 1/66 or 1.515% of AFC multiplied by years of creditable service. Members in service with 10 or more years of creditable service who are between age 50 and 60 or members in service with at least 20 years of creditable service, whose age plus service is equal to or greater than 70, are entitled to a retirement allowance with the appropriate graduated reduction based on years of creditable service. Members commencing service on or after July 1, 2011 at age 60 with 30 years of creditable service are entitled to a retirement allowance with the appropriate graduated reduction based on years of creditable service.

All Group II Members are eligible for service retirement at age 60. Members who are at least age 45 with at least 20 years of creditable service, can receive a retirement allowance at a rate of 2.5% of AFC for each year of creditable service and were vested prior to January 1, 2012, not to exceed 40 years. Members not vested prior to January 1, 2012 but hired prior to July 1, 2011, may retire between the ages of 46–49 with 21–24 years of creditable service, based on how many years of service they had prior to January 1, 2012. The rate of the retirement allowance is between 2.4% and 2.1% of AFC for each year of creditable service. Members commencing service on or after July 1, 2011 can receive a retirement allowance at age 52.5 with 25 years of service or age 60. The benefit shall be equal to 2% of AFC times creditable service up to 42.5 years. However, a member who commenced service on or after July 1, 2011 shall not receive a retirement allowance until attaining the age of 52.5, but may receive a reduced allowance after age 50 if the member has at least 25 years of creditable service where the allowance shall be reduced, for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age by ¼ of 1% or age 60.

Members of both groups may qualify for vested deferred allowances, disability allowances and death benefit allowances subject to meeting various eligibility requirements. Benefits are based on AFC or earnable compensation and/or service.

Members are required to contribute a percentage of gross earnings to the Pension Plan as more fully described in Note 6. The percentage rates, established by state statute, are dependent upon member group classification. The deductions are made from member wages and are remitted by the employer to the Pension Plan on a monthly basis. If a member leaves employment prior to retirement or vesting, accumulated member contributions plus earned interest are refunded to the withdrawing member or to the designated beneficiary in the case of death. However, accumulated contributions plus interest of a non-vested, non-contributing member may remain in the Pension Plan and continue to earn interest. The interest credited to the inactive member's accumulated contributions will be 2 percentage points less than the assumed rate of return or the actual rate of return, whichever is less as reported in the preceding fiscal year's annual comprehensive financial report, but will not be less than zero.

Employers make monthly contributions to the Pension Plan based on rates determined by periodic actuarial valuations as more fully described in Note 6.

OTHER POSTEMPLOYMENT BENEFIT PLAN (OPEB)

Pursuant to RSA 100-A:52, RSA 100-A:52-a and RSA 100-A:52-b, the NHRS administers a cost-sharing multiple employer defined benefit postemployment medical subsidy healthcare plan designated in statute by membership type. The four membership groups are Group II Police Officer and Firefighters, Group I Teachers, Group I Political Subdivision Employees and Group I State Employees. Collectively, they are referred to as the OPEB Plan.

The OPEB Plan provides a medical insurance subsidy to qualified retired members. The medical subsidy is a payment made by NHRS to the former employer or their insurance administrator toward the cost of health insurance for a qualified retiree, his/her qualified spouse, and his/her certifiably dependent children with a disability who are living in the household and being cared for by the retiree. Under specific conditions, the qualified beneficiaries of members who die while in service may also be eligible for the medical subsidy. The eligibility requirements for receiving OPEB Plan benefits differ for Group I and Group II members.

The following Group I members and their qualified spouses are eligible for coverage under the postemployment medical plan if they are receiving health coverage under the group plan offered by their former employer:

- Employee and teacher members of political subdivisions who were eligible to retire as of July 1, 2008 and who actually retired on or before July 1, 2009, on Service, Early Service, Vested Deferred or Ordinary Disability retirement after completing at least 20 years of creditable service and who subsequently attain age 60 or after completing at least 30 years of creditable service and who subsequently attain age 55.
- Employee and teacher members of political subdivisions who retired on Accidental Disability Retirement on or before July 1, 2004.
- Employee members of the State who retired on or before July 1, 2004, on Service, Ordinary Disability or Vested Deferred Retirement become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Surviving spouses of deceased employee and teacher members of political subdivisions who die while in service, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Surviving spouses and children of employee and teacher members of political subdivisions and employee members of the State who die as the natural and proximate result of injuries suffered while in the performance of duty. Eligibility for the medical subsidy ceases when the dependent child attains age 18 or age 23, if attending school on a full-time basis, or upon the spouse's remarriage.
- Vested terminated employee members of the State (and spouses) who completed at least 20 years of creditable service and as of July 1, 2004 received an allowance and who subsequently attain age 60.
- Employee members of the State (and spouses) who retired on or before July 1, 2004 after completing at least 20 years of creditable service and who subsequently attained age 60; or after completing at least 30 years of creditable service and who subsequently attained age 55.
- Surviving spouses of deceased employee members of the State who died while in service on or before July 1, 2004, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.

The following Group II members are eligible for the postemployment medical plan:

- Group II police officer members (or beneficiaries) who are active or retired as of June 30, 2000.
- Group II firefighter members (or beneficiaries) who are active or retired as of June 30, 2000.
- Persons who prior to July 1, 1988, had completed at least 20 years of Group II service and were eligible as of July 1, 1993 for a vested deferred retirement benefit.
- Group II members retired as of July 1, 1991 with a split benefit under RSA 100-A:19-c who had at least 10 years of Group II service.
- Group II members as of June 30, 2005 who subsequently became disabled while in the performance of duty at any time in the future.
- Surviving spouses of deceased Group II members who retired prior to April 1, 1987 and who are not receiving a monthly allowance.

The OPEB plan is closed to new entrants.

The OPEB Plan is funded by allocating to the 401(h) subtrust the lesser of:

- a.) 25% of all employer contributions made in accordance with RSA 100-A:16; or

b.) the percentage of employer contributions determined by the actuary to be the minimum rate necessary to maintain the benefits provided under RSA 100-A:53, RSA 100-A:53-b, RSA 100-A:53-c and RSA 100-A:53-d.

For fiscal year 2022, the minimum rates determined by the actuary to maintain benefits were the lesser of the two options and were used to determine the employer contributions due to the 401(h) subtrust.

The State Legislature has the authority to establish, amend and discontinue the contribution requirements of the OPEB Plan.

The type and number of employers contributing to the OPEB plan during the years ended June 30, 2022 and June 30, 2021 are presented below.

For GASB 74 disclosure purposes all State entities contributing to the pension plan are considered one employer.

EMPLOYERS CONTRIBUTING	2022	2021
State Government	1	1
City Governments	13	13
Town Governments and Related Entities	239	238
County Governments and Related Entities	12	12
School Districts and School Administrative Units	196	197
Total Employers	461	461

Membership of the OPEB plan consisted of the following eligible retirees receiving benefits as of June 30, 2022 and 2021.

MEMBERSHIP DATA	2022	2021
Inactive plan members or beneficiaries currently receiving benefit payments	9,133	9,354
Inactive plan members entitled to but not yet receiving benefit payments	2,955	2,997
Active plan members	545	708
Total Membership	12,633	13,059

The maximum monthly subsidy amounts paid during fiscal year 2022 and 2021 were as follows:

For qualified retirees not eligible for Medicare the amounts were \$375.56 for a single-person plan and \$751.12 for a two-person plan. For those qualified retirees eligible for Medicare, the amounts were \$236.84 for a single-person plan and \$473.68 for a two-person plan. There have been no increases in the monthly maximum subsidy amounts payable since July 1, 2007.

Benefit provisions of the OPEB Plan can be amended only by legislative action taken by the New Hampshire State Legislature pursuant to the authority granted them under the New Hampshire State Constitution. The Legislature may cease providing the medical subsidy benefits under the OPEB Plan, for any reason, at any time.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

BASIS OF ACCOUNTING

The System's financial statements are prepared using the economic resources measurement focus and accrual basis of accounting. Both plan member and employer contributions are recognized in the period in which the contributions are legally due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

The financial statements include prior-year summarized comparative financial information in total but not on a combining plan basis. Such summarized information is not intended to constitute sufficient detail to establish a presentation in accordance with GAAP and, accordingly, should be read in conjunction with the System's financial statements for the year ended June 30, 2021, from which the summarized information was derived.

PRIOR YEAR RECLASSIFICATIONS

Certain 2021 information has been reclassified to conform to the 2022 presentation. These reclassifications had no impact to the Net Position Restricted for Pensions and Other Post Employment Benefits.

INVESTMENTS

Investments are reported at fair value.

Investments in both domestic and non-U.S. marketable securities traded on a national or international exchange are valued at quoted market prices. Domestic and non-U.S. securities not traded on a national or international exchange are based upon quoted prices for comparable instruments with similar yields and risk in active and inactive markets. NHRS

uses a trade-date accounting basis for both domestic and non-U.S. securities and values are expressed in U.S. dollars. Investments in non-registered commingled funds are valued at net asset value (NAV) as a practical expedient to estimate fair value.

Real estate includes investments in commingled funds which are reported at net asset value (NAV). The NAVs for real estate investments recorded in this report were obtained from statements provided by the general partners of commingled funds. Real estate commingled funds are selected by the System's discretionary real estate manager.

Alternative investments include investments in private equity, private debt and absolute return strategies which are reported at net asset value (NAV). The NAVs for alternative investments recorded in this report were obtained from statements provided by the investment managers.

Cash and cash equivalents are valued at cost, which approximates fair value. Cash and cash equivalents primarily represent investments in the pooled short-term investment fund managed by NHRS' master custodian. This fund invests mainly in high-grade money market instruments with maturities averaging less than three months. The fund provides daily liquidity.

The Plans hold no investments, either directly or indirectly, nor participates in any loans or leases, nor other party-in-interest transactions with any NHRS officials, New Hampshire State Government officials, or parties related to these officials.

MONEY WEIGHTED RATE OF RETURN

The annual money-weighted rate of return at June 30, 2022 was (5.8%) and 29.7% for June 30, 2021. The return shows the investment performance net of fees and is adjusted for the timing of cash flows and the changing amounts actually invested.

USE OF ESTIMATES

Management of the System has made a number of estimates and assumptions relating to the reporting of assets and liabilities and in the disclosure of contingencies to prepare these financial statements in conformity with U.S. generally accepted accounting principles (GAAP). The System's most significant estimates relate to assumptions made about future events as part of the annual actuarial valuation process, and the valuation of alternative investments. Due to the inherent nature of these estimates, actual results could differ from those estimates.

LEASES

NHRS recognizes lease contracts or equivalents that have a term exceeding one year and the cumulative future payments on the contract exceed \$25,000 that meet the definition, other than short-term lease. NHRS recognizes a lease liability and an intangible right-to-use lease asset in the combining statements of fiduciary net position.

At the commencement of a lease, NHRS initially measures the lease liability at the present value of payments expected to be made during the lease term. Subsequently, the lease liability is reduced by the principal portion of lease payments made. The lease asset is initially measured as the initial amount of the lease liability, adjusted for lease payments made at or before the lease commencement date, plus certain initial direct costs. Subsequently, the lease asset is amortized on a straight-line basis over its useful life.

Key estimates and judgments related to leases include how NHRS determines (1) the discount rate it uses to discount the expected lease payments to present value, (2) lease term, and (3) lease payments. NHRS uses the interest rate charged by the lessor as the discount rate. When the interest rate charged by the lessor is not provided, NHRS generally uses its estimated incremental borrowing rate as the discount rate for leases. The lease term includes the noncancellable period of the lease. Lease payments included in the measurement of the lease liability are composed of fixed payments and purchase option price that NHRS is reasonably certain to exercise.

NHRS monitors changes in circumstances that would require a remeasurement of its lease and will remeasure the lease asset and liability if certain changes occur that are expected to significantly affect the amount of the lease liability. Short-term lease payments are expensed when incurred.

ADOPTION OF NEW ACCOUNTING PRONOUNCEMENTS

During the current year, the System adopted GASB Statement No. 87, Leases. NHRS evaluated contracts that were formerly accounted for as operating leases to determine whether they meet the definition of a lease as defined in GASB Statement No. 87. The contract to lease office space met the definition of a lease. As a result, the combining statements of fiduciary net position now include a liability for the present value of payments expected to be made and right-to-use assets. Lease activity is further described in Note 8. The financial statements for the year ended June 30, 2021 have been restated in order to adopt GASB Statement No. 87.

NOTE 3 – INVESTMENTS AND DEPOSITS

RSA 100-A:15, I, provides separate and specific authorities to the Board of Trustees and the Independent Investment Committee for the management of the funds of the Plans and charges them with exercising the judgment and care under the circumstances then prevailing, which persons of prudence, discretion and intelligence, acting in a like capacity and familiar with such matters, would use in the conduct of a pension plan of like character and with like aims of the Plans.

To aid in the prudent investment of the Plans' assets, NHRS has adopted an Investment Manual which includes an investment policy. Primary components of the investment policy include the delineation of roles and responsibilities of the Board of Trustees, Independent Investment Committee, staff, and service providers; investment objectives; asset allocation policy; and asset class performance measurement and monitoring policy. This policy may be modified by the Board of Trustees as deemed necessary. In addition, the Investment Manual includes asset class guidelines which provide parameters for investment management.

Professional investment managers are bound by policy and contract to a standard of care that establishes a fiduciary relationship, to the extent permitted by law, requiring the manager to act prudently and solely in the best interest of the Plans and beneficiaries. Investment guidelines provide portfolio-level standards for separate account management including permissible investment types; security concentration thresholds; investment restrictions; and benchmarks for performance measurement and monitoring. NHRS utilizes a custodial bank compliance system to monitor the marketable investment portfolios against their respective guidelines.

The System's asset allocation as of June 30, 2022 and 2021, as recommended by the Independent Investment Committee and adopted by the Board of Trustees, is as follows:

ASSET ALLOCATION	2022		2021	
	Target	Range	Target	Range
Asset Class:				
Large Cap Equities	22.5%		22.5%	
Small/Mid Cap Equities	7.5%		7.5%	
Total Domestic Equity	30.0%	20–40%	30.0%	20–40%
Int'l Equities (Unhedged)	13.0%		13.0%	
Emerging Int'l Equities	7.0%		7.0%	
Total International Equity	20.0%	15–25%	20.0%	15–25%
Core Bonds	4.5%		4.5%	
Short Duration	2.5%		2.5%	
Global Multi-Sector Fixed Income	11.0%		11.0%	
Absolute Return Fixed Income	7.0%		7.0%	
Total Fixed Income	25.0%	20–30%	25.0%	20–30%
Private Equity	10.0%		10.0%	
Private Debt	5.0%		5.0%	
Total Alternative Investments	15.0%	5–25%	15.0%	5–25%
Real Estate	10.0%		10.0%	
Total Real Estate	10.0%	5–20%	10.0%	5–20%
TOTAL	100.0%		100.0%	

CUSTODIAL CREDIT RISK – DEPOSITS

Custodial credit risk for deposits is the risk that in an event of a bank failure, deposits may not be recovered. NHRS does not have a deposit policy to manage custodial credit risk on deposits.

At June 30, 2022 and 2021, NHRS held deposits of \$23.7 million and \$8.7 million, respectively, in the local custodian bank. These deposits are fully insured or collateralized and are used to support the daily working capital needs of NHRS.

CUSTODIAL CREDIT RISK – INVESTMENTS

Investment securities are exposed to custodial credit risk if the investment securities are uninsured, are not registered in the name of the Plans, and are held by either:

- a. The counterparty to a transaction or
- b. The counterparty's trust department or agent but not in the Plans' name.

All of the System's securities are held by the System's bank in the System's name.

CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss attributable to the magnitude of the Plans' investments in a single issuer. NHRS policy is expressed through individual separate account manager guidelines which limit investments in a single issuer to 10%, or less, of the portfolio value in order to control the overall risk of loss on a total portfolio level. This threshold is set as an upper limit, and in actual practice, managers generally do not reach this limit. Certain securities may be excluded from this limitation due to the nature of the investments (such as U.S. government securities, government-sponsored enterprise obligations, and supranational debt). NHRS fixed income managers have consistently adhered to the established guidelines for issuer concentration. The fixed income commingled fund managers have established investment guidelines regarding concentration of credit risk. The total portfolio is broadly-diversified across equities, fixed income, cash equivalent securities, real estate and alternative investments. Due to this diversification, the concentration of credit risk in a single issuer is below 5% at the total portfolio level.

INTEREST RATE RISK — FIXED INCOME INVESTMENTS

Interest rate risk is the effect on the fair value of fixed income investments from changes in interest rates. Duration measures a debt investment's change in fair value arising from a change in interest rates.

Interest rate risk is illustrated below using the effective duration or option-adjusted methodology. This methodology is widely-used in the management of fixed income portfolios to quantify the risk associated with interest rate changes. The effective duration methodology takes into account the most likely timing and magnitude of variable cash flows, such as callable options, prepayments and other factors, and scales the risk of price changes on bonds depending upon the degree of change in rates and the slope of the yield curve.

The NHRS policy on duration is expressed through individual portfolio guidelines with each investment manager in lieu of a broad, plan-level policy. Duration guidelines have been established with each fixed income manager in order to manage interest rate risk within the separate account portfolios. The fixed income commingled fund managers also have established investment guidelines regarding duration. These provisions specify that the duration of each individual fixed income portfolio will be managed within a specified percentage or number of years relative to its benchmark index. NHRS fixed income managers follow the established guidelines for duration. If there is an occasional exception, the manager prudently remedies the guideline breach.

The following effective duration tables quantify the interest rate risk of the Plans' fixed income assets at June 30, 2022 and 2021:

EFFECTIVE DURATION — FIXED INCOME INVESTMENTS (dollars in thousands)
AT JUNE 30, 2022

Investment Type	Fair Value June 30, 2022	Percentage of Fixed Income Investments	Effective Duration in Years	Weighted Average Effective Duration in Years
Collateralized/Asset Backed Obligations	\$ 218,168	10.9%	2.9	0.3
Corporate Bonds	470,969	23.6	6.3	1.5
Government and Agency Bonds	512,675	25.7	6.6	1.7
Commingled Fund	197,714	9.9	4.1	0.4
Commingled Fund	349,094	17.5	5.4	0.9
Commingled Fund	246,234	12.4	1.3	0.2
Totals	\$1,994,854	100.0%		5.0

**EFFECTIVE DURATION – FIXED INCOME INVESTMENTS
AT JUNE 30, 2021**

(dollars in thousands)

Investment Type	Fair Value June 30, 2021	Percentage of Fixed Income Investments	Effective Duration in Years	Weighted Average Effective Duration in Years
Collateralized/Asset Backed Obligations	\$ 243,843	11.1%	3.5	0.4
Corporate Bonds	574,226	26.2	7.9	2.1
Government and Agency Bonds	509,853	23.2	5.7	1.3
Commingled Fund	220,193	10.0	3.5	0.4
Commingled Fund	386,434	17.6	6.5	1.1
Commingled Fund	260,239	11.9	1.2	0.1
Totals	\$2,194,788	100.0%		5.4

CREDIT RISK – FIXED INCOME SECURITIES

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

NHRS controls credit risk on debt securities by establishing requirements for average credit quality at the separate account portfolio level and through credit quality standards for individual securities. The NHRS policy on credit quality is expressed through individual portfolio guidelines with each investment manager in lieu of a broad, plan-level policy. The investment guidelines are customized to the individual manager's strategy. NHRS fixed income managers follow established guidelines for credit quality. If there is an occasional exception, the manager prudently remedies the guideline breach. NHRS applies standards with regard to securities rated by nationally recognized statistical rating organizations ("NRSRO") and uses the lowest agency ratings for evaluating the credit quality of a specific security. The fixed income commingled fund managers have established investment guidelines regarding credit risk.

The following schedules illustrate the Plans' fixed income investments as of June 30, 2022 and 2021, including the distribution of those investments by Standard & Poor's quality credit ratings:

CREDIT QUALITY RISK – FIXED INCOME SECURITIES AT JUNE 30, 2022

(in thousands)

Investment Type	Fair Value June 30, 2022	Quality Ratings ¹				
		AAA	AA	A	BBB or Lower	Unrated
Collateralized/Asset Backed Obligations	\$218,168	\$133,905	\$13,047	\$ 20,240	\$ 24,624	\$26,352
Corporate Bonds	470,969	6,856	24,897	148,280	282,506	8,430
Government and Agency Bonds ²	128,228	9,477	22,063	11,256	50,917	34,515
Commingled Fund ³	349,094	—	—	—	349,094	—
Commingled Fund ³	246,234	—	—	246,234	—	—
Commingled Fund ³	197,714	—	—	197,714	—	—
Totals	\$1,610,407	\$150,238	\$60,007	\$623,724	\$707,141	\$69,298
Percent of Total Fair Value		9.33%	3.73%	38.73%	43.91%	4.30%

¹Ratings were derived primarily from Standard & Pours (S&P). In instances where S&P did not rate a security, the Moody's rating was used.

²Government and Agency Bonds exclude U.S. government securities and securities explicitly guaranteed by the U.S. government (\$384,447) because these securities are not considered to have credit risk.

³Average credit quality ratings for the commingled funds was provided by Blackrock SIO, Fidelity and Manulife respectively.

CREDIT QUALITY RISK — FIXED INCOME SECURITIES AT JUNE 30, 2021

(in thousands)

Investment Type	Quality Ratings ¹					
	Fair Value June 30, 2021	AAA	AA	A	BBB or Lower	Unrated
Collateralized/Asset Backed Obligations	\$ 243,843	\$152,550	\$ 6,004	\$ 17,387	\$ 28,728	\$39,174
Corporate Bonds	574,226	4,675	26,024	135,751	397,849	9,927
Government and Agency Bonds ²	125,942	5,775	21,275	20,619	71,732	6,541
Commingled Fund ³	260,239	—	—	—	260,239	—
Commingled Fund ³	386,434	—	—	—	386,434	—
Commingled Fund ³	220,193	—	—	—	220,193	—
Totals	\$1,810,877	\$163,000	\$53,303	\$173,757	\$1,365,175	\$55,642
Percent of Total Fair Value		9.00%	2.94%	9.60%	75.39%	3.07%

¹Ratings were derived primarily from Standard & Poors (S&P). In instances where S&P did not rate a security, the Moody's rating was used.

²Government and Agency Bonds exclude U.S. government securities and securities explicitly guaranteed by the U.S. government (\$383,911) because these securities are not considered to have credit risk.

³Average credit quality ratings for the commingled funds was provided by Blackrock SIO, Fidelity and Manulife respectively.

FOREIGN CURRENCY RISK — INVESTMENTS:

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment.

NHRS manages its foreign currency risk primarily through its strategic asset allocation policy. As of June 30, 2022, investments in non-U.S. equity securities have a target asset allocation of 20% of total investments with a target range of 15–25%. As of June 30, 2022, non-U.S. fixed income securities represent 1% of the total investments as a result of the managers' security selection process. Non-U.S. investments are permitted in the alternative investment asset class, which includes private equity, private debt and absolute return strategy investments. The target allocation for alternative investments is 15% and the NHRS investment policy does not set limits for foreign investments in this asset class. The target allocation for real estate investments is 10%, and up to 35% of the Plans' real estate allocation may be invested in non-U.S. investments.

In addition, foreign currency risk is mitigated through the investment guidelines. NHRS manages its foreign exposure by requiring that separate account managers diversify their non-U.S. portfolios by country, sector and issuer to limit both foreign currency risk and security risk. Managers of commingled funds have discretion over their respective investment guidelines which must be consistent with strategies approved by the NHRS. In certain instances, where permitted in the investment guidelines, investment managers may also use foreign currency forward contracts to hedge against foreign currency risk.

The Plans' exposure to foreign currency risk at June 30, 2022 and 2021 is presented on the following schedules:

FOREIGN CURRENCY RISK — NON-U.S. INVESTMENTS (in thousands)
AS OF JUNE 30, 2022

Currency	Equity*	Fixed Income	Real Estate & Alternative Investments	Cash and Cash Equivalents**	Totals
Australian Dollar	\$ 8,696	\$ 10,694	\$ —	\$ 4	\$ 19,394
Brazilian Real	3,171	13,267	—	3	16,441
Canadian Dollar	76,092	—	23,100	51,252	150,444
Colombian Peso	—	7,177	—	53	7,230
Danish Krone	19,410	—	—	—	19,410
Euro	385,158	15,135	60,133	(657)	459,769
Hong Kong Dollar	28,972	—	—	—	28,972
Israeli Shekel	3,723	—	—	—	3,723
Japanese Yen	93,324	—	7,335	431,650	532,309
Malaysian Ringgit	—	6,625	—	—	6,625
Mexican Peso	2,086	23,071	—	—	25,157
New Taiwan Dollar	3,122	—	—	—	3,122
Polish Zloty	—	2,930	—	—	2,930
Pound Sterling	166,044	(428)	985	116,352	282,953
Singapore Dollar	3,775	—	—	—	3,775
South African Rand	—	9,026	—	16	9,042
South Korean Won	14,146	15,157	—	208	29,511
Swedish Krona	9,288	—	—	—	9,288
Swiss Franc	82,058	—	—	(51)	82,007
Total investments subject to foreign currency risk	\$ 899,065	\$ 102,654	\$ 91,553	\$ 598,830	\$1,692,102

*NHRS also invests in commingled funds where foreign currency risk information is not available. As a result, totals for equity shown on this schedule will not match the total non-U.S. equity shown on the Combining Statements of Fiduciary Net Position.

**Amounts in cash and cash equivalents reflects actual foreign cash held by managers and does not reflect other items shown in cash and cash equivalents on the Statement of Changes in Net Position.

FOREIGN CURRENCY RISK — NON-U.S. INVESTMENTS (in thousands)
AS OF JUNE 30, 2021

Currency	Equity*	Fixed Income	Real Estate & Alternative Investments	Cash and Cash Equivalents**	Totals
Australian Dollar	\$ 10,063	\$ 12,463	\$ —	\$ 4	\$ 22,530
Brazilian Real	1,558	9,373	—	—	10,931
Canadian Dollar	59,802	—	18,683	—	78,485
Colombian Peso	—	9,575	—	—	9,575
Danish Krone	31,630	—	—	—	31,630
Euro	461,338	509	97,026	122,408	681,281
Hong Kong Dollar	54,452	—	—	—	54,452
Indian Rupee	—	662	—	—	662
Indonesian Rupiah	1,829	9,555	—	—	11,384
Israeli Shekel	3,191	—	—	—	3,191
Japanese Yen	136,673	—	15,240	508,996	660,909
Malaysian Ringgit	—	10,135	—	—	10,135
Mexican Peso	3,509	26,209	—	—	29,718
New Taiwan Dollar	7,367	—	—	—	7,367
Polish Zloty	—	3,907	—	—	3,907
Pound Sterling	148,935	—	1,243	28	150,206
Russian Ruble (New)	—	1,382	—	—	1,382
Singapore Dollar	3,925	—	—	—	3,925
South African Rand	—	13,844	—	19	13,863
South Korean Won	37,772	—	—	—	37,772
Swedish Krona	9,718	—	—	—	9,718
Swiss Franc	126,715	1,149,029	—	—	1,275,744
Total investments subject to foreign currency risk	\$1,098,477	\$1,246,643	\$132,192	\$ 631,455	\$3,108,767

*NHRS also invests in commingled funds where foreign currency risk information is not available. As a result, totals for equity shown on this schedule will not match the total non-U.S. equity shown on the Combining Statements of Fiduciary Net Position.

**Amounts in cash and cash equivalents reflects actual foreign cash held by managers and does not reflect other items shown in cash and cash equivalents on the Statement of Changes in Net Position.

DERIVATIVES

Derivative instruments are contracts whose values are based on the valuation of an underlying asset, reference rate or index. Derivatives include futures, options, forward contracts and forward foreign currency exchanges. NHRS managers may enter into certain derivative instruments primarily to enhance the efficiency and reduce the volatility of the portfolio. There were no investments in options within the separate account portfolios. The NHRS investment policy and certain investment manager guidelines allow for the use of derivative instruments. The use of futures, options, or forward contracts is not permitted for any speculative hedging or leveraging of the portfolios and is prohibited in separate account mandates. Managers of commingled funds have discretion over their respective investment guidelines which may allow for the use of derivative instruments.

Investments in asset-backed and mortgage-backed securities are reported at fair value. Although not generally considered to be derivatives, asset-backed and mortgage-backed securities receive cash flows from interest and principal payments on the underlying assets and mortgages. As a result, they are exposed to prepayment risk. As of June 30, 2022 and 2021, the Plans' combined investment in asset-backed and mortgage-backed securities held in separate account portfolios totaled \$229.1 million and \$816.9 million, respectively.

The Plans could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. To mitigate this risk, investment managers conduct assessments of their counterparties and utilize exchanges which have trading standards.

NHRS managers may use futures, options, and foreign currency exchange contracts in order to manage currency risk or initiate transactions in non-U.S. investments. NHRS may be positively or negatively impacted by foreign currency risk due to fluctuations in the value of different currencies. NHRS may also be positively or negatively impacted by interest rate risk due to changes in interest rates. The Plans could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. To mitigate this risk, investment managers conduct assessments of their counterparties and utilize exchanges which have trading standards. The fair value of open foreign currency exchange contracts including unrealized appreciation or depreciation is recorded on the Statements of Fiduciary Net Position as Due from Brokers for Securities Sold and as Due to Brokers for Securities Purchased. Expiration dates are less than one year.

Details of the System's outstanding derivatives at June 30, 2022 and June 30, 2021 are shown below:

Derivative Type	Notional Amounts		Fair Value	
	2022	2021	2022	2021
Futures				
Fixed Income	\$42,134,802	\$ 8,784,908	\$40,641,804	\$ 9,002,000
Equity	\$ 4,236,914	\$ 3,811,185	\$ 4,168,450	\$ 3,859,740
TOTAL	\$46,371,716	\$12,596,093	\$44,810,254	\$12,861,740

Foreign currency exchange contracts open June 30, 2022 and 2021 are shown below and on the following page:

OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS AT JUNE 30, 2022

(in thousands)

	Local Currency Amount	Effective Date	Maturity Date	Original Foreign Exchange Rate	Unrealized Appreci- ation (USD)	Unrealized (Depre- ciation) (USD)
Foreign currency exchange contracts purchased:						
CHILEAN PESO	3,930,000	2/25/22	7/11/22	819.610000 CLP/USD	—	(606.07)
CHILEAN PESO	11,490,000	4/18/22	7/11/22	828.850000 CLP/USD	—	(1,615.67)
CHILEAN PESO	3,670,000	4/4/22	7/11/22	790.350000 CLP/USD	—	(731.75)
COLOMBIAN PESO	2,100,000	5/11/22	7/28/22	4,123.009963 COP/USD	—	(6.89)
EURO	285	6/30/22	7/1/22	0.953712 EUR/USD	—	(0.88)
EURO	0	6/30/22	7/1/22	0.955711 EUR/USD	—	—
EURO	57,440	4/21/22	7/26/22	0.917861 EUR/USD	—	(2,442.85)
HUNGARIAN FORINT	2,950,000	5/11/22	8/23/22	365.272500 HUF/USD	—	(366.51)
JAPANESE YEN	6,632,000	6/16/22	9/26/22	131.243000 JPY/USD	—	(1,424.50)
MEXICAN PESO	13,500	6/15/22	8/24/22	20.852100 MXN/USD	15.52	—
POLISH ZLOTY	55,000	4/22/22	7/27/22	4.353500 PLN/USD	—	(439.95)
POLISH ZLOTY	31,520	4/11/22	7/27/22	4.312500 PLN/USD	—	(320.97)

**OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2022**
CONTINUED
(in thousands)

	Local Currency Amount	Effective Date	Maturity Date	Original Foreign Exchange Rate	Unrealized Appreci- ation (USD)	Unrealized (Depre- ciation) (USD)
Foreign currency exchange contracts purchased: — <i>CONTINUED</i>						
SOUTH KOREAN WON	690,000	6/16/22	7/28/22	1,286.750000 KRW/USD	—	(4.48)
SWEDISH KRONA	116,300	4/5/22	7/7/22	9.394600 SEK/USD	—	(1,029.14)
SWEDISH KRONA	116,300	6/29/22	10/7/22	10.171100 SEK/USD	—	(37.50)
THAILAND BAHT	85,200	5/6/22	8/10/22	34.281000 THB/USD	—	(71.58)
Foreign currency exchange contracts sold:						
AUSTRALIAN DOLLAR	15,030	5/10/22	9/7/22	0.694180 USD/AUD	92.58	—
BRAZIL REAL	5,380	4/13/22	7/18/22	4.819000 USD/BRL	92.04	—
BRAZIL REAL	12,570	5/9/22	7/18/22	5.245500 USD/BRL	2.97	—
BRAZIL REAL	11,070	5/10/22	7/18/22	5.235800 USD/BRL	6.53	—
BRAZIL REAL	11,610	6/13/22	7/18/22	5.151429 USD/BRL	43.16	—
BRAZIL REAL	10,980	6/14/22	7/18/22	5.170450 USD/BRL	32.98	—
CHILEAN PESO	1,970,000	6/23/22	7/11/22	903.345000 USD/CLP	81.01	—
CHILEAN PESO	1,760,000	6/24/22	7/11/22	912.600000 USD/CLP	52.61	—
COLOMBIAN PESO	31,300,000	4/26/22	7/28/22	4,005.400000 USD/COP	325.58	—
PAYABLE IN EURO CURRENCY UNIT	10,070	4/27/22	7/26/22	1.060795 USD/EUR	139.31	—
EURO	4,810	4/28/22	7/26/22	1.054685 USD/EUR	37.15	—
EURO	630	4/29/22	7/26/22	1.062352 USD/EUR	9.70	—
EURO	8,560	5/12/22	7/26/22	1.041760 USD/EUR	—	(44.52)
EURO	652	6/29/22	7/1/22	1.045081 USD/EUR	—	(0.24)
EURO	140	6/29/22	7/1/22	0.956553 USD/EUR	—	(0.00)
EURO	163	6/30/22	7/5/22	1.048300 USD/EUR	0.45	—
JAPANESE YEN	30,806	6/29/22	7/1/22	136.764000 USD/JPY	—	(1.51)
JAPANESE YEN	1,794	6/29/22	7/1/22	136.656520 USD/JPY	—	(0.08)
JAPANESE YEN	1,715	6/29/22	7/1/22	136.907000 USD/JPY	—	(0.10)
JAPANESE YEN	4,866	6/29/22	7/1/22	136.968000 USD/JPY	—	(0.29)
JAPANESE YEN	1,507	6/29/22	7/1/22	136.656520 USD/JPY	—	(0.07)
JAPANESE YEN	2,365	6/30/22	7/5/22	135.690000 USD/JPY	0.02	—
MALAYSIAN RINGGIT	27,700	6/10/22	9/21/22	4.418500 USD/MYR	—	(12.26)
MEXICAN PESO	426,800	5/18/22	8/24/22	20.362800 USD/MXN	1.17	—
MEXICAN PESO	180	6/29/22	7/1/22	20.145500 USD/MXN	0.01	—
POLISH ZLOTY	43,160	5/13/22	7/27/22	4.554630 USD/PLN	—	(92.55)
POUND STERLING	25	6/29/22	7/1/22	1.213590 USD/GBP	—	(0.02)
POUND STERLING	647	6/30/22	7/5/22	1.217289 USD/GBP	1.83	—
POUND STERLING	3	6/30/22	7/5/22	1.217410 USD/GBP	0.01	—
POUND STERLING	32	6/30/22	7/5/22	1.209920 USD/GBP	—	(0.14)
SOUTH AFRICAN RAND	150,400	5/11/22	8/17/22	16.234500 USD/ZAR	125.10	—
SOUTH KOREAN WON	13,840,000	4/26/22	7/28/22	1,255.652000 USD/KRW	356.16	—
SOUTH KOREAN WON	5,930,000	6/9/22	9/13/22	1,260.180000 USD/KRW	127.94	—
SOUTH KOREAN WON	4,071	6/30/22	7/1/22	1,301.123963 USD/KRW	—	(0.01)
SWEDISH KRONA	116,300	6/29/22	7/7/22	10.212500 USD/SEK	37.70	—
SWISS FRANC	464	6/30/22	7/5/22	0.953826 USD/CHF	1.76	—
Totals					\$1,583.29	(9,250.53)

**OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2021**

(in thousands)

	Local Currency Amount	Effective Date	Maturity Date	Original Foreign Exchange Rate	Unrealized Appreci- ation (USD)	Unrealized (Depre- ciation) (USD)
Foreign currency exchange contracts purchased:						
Brazil Real	21,790	4/8/21	7/14/21	5.614600 BRL / USD	456	—
Canadian Dollar	49	6/29/21	7/2/21	1.239980 CAD / USD	—	—
Canadian Dollar	114	6/30/21	7/2/21	1.239790 CAD / USD	—	—
Chilean Peso	2,810,000	4/13/21	7/23/21	707.420000 CLP / USD	—	(115)

**OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2021**
CONTINUED
(in thousands)

	Local Currency Amount	Effective Date	Maturity Date	Original Foreign Exchange Rate	Unrealized Appreci- ation (USD)	Unrealized (Depre- ciation) (USD)
Foreign currency exchange contracts purchased: — <i>CONTINUED</i>						
Chilean Peso	2,610,000	4/23/21	8/6/21	714.210000 CLP / USD	—	(73)
Chilean Peso	3,930,000	5/6/21	9/3/21	699.565000 CLP / USD	—	(229)
Chilean Peso	3,670,000	6/3/21	10/1/21	720.764000 CLP / USD	—	(64)
Chilean Peso	6,070,000	6/11/21	10/8/21	723.730000 CLP / USD	—	(73)
Colombian Peso	5,795,000	4/15/21	7/29/21	3,622.950000 COP / USD	—	(50)
Euro	114	6/29/21	7/1/21	0.840492 EUR / USD	—	—
Euro	22	6/30/21	7/2/21	0.843953 EUR / USD	—	—
Euro	10,720	6/15/21	7/26/21	1.213217 EUR / USD	—	(287)
Euro	11,270	4/9/21	7/26/21	1.192180 EUR / USD	—	(64)
Euro	7,750	5/18/21	7/26/21	1.224030 EUR / USD	—	(291)
Hungarian Forint	1,450,000	4/22/21	7/30/21	301.920000 HUF / USD	95	—
Hungarian Forint	1,500,000	5/4/21	8/10/21	299.825000 HUF / USD	62	—
Indonesian Rupiah	1,169,814	6/30/21	7/1/21	14,520.250000 IDR / USD	—	—
Japanese Yen	6,460	6/29/21	7/1/21	110.560000 JPY / USD	—	—
Japanese Yen	5,281	6/30/21	7/2/21	111.011000 JPY / USD	—	—
New Zealand Dollar	7,500	4/15/21	7/19/21	0.715495 NZD / USD	—	(126)
Polish Zlotty	31,520	4/7/21	7/13/21	3.848500 PLN / USD	90	—
Polish Zlotty	40,370	4/9/21	7/20/21	3.809200 PLN / USD	7	—
Polish Zlotty	13,970	4/20/21	7/27/21	3.773825 PLN / USD	—	(32)
Pound Sterling	346	6/29/21	7/1/21	1.384323 GBP / USD	—	(1)
Pound Sterling	122	6/30/21	7/2/21	1.380880 GBP / USD	—	—
Pound Sterling	389	6/30/21	7/2/21	1.380952 GBP / USD	—	—
Pound Sterling	10,570	6/2/21	8/19/21	1.417635 GBP / USD	—	(380)
Russian Ruble	338,000	5/6/21	8/12/21	75.175000 RUB / USD	105	—
Russian Ruble	408,000	5/14/21	8/26/21	74.830000 RUB / USD	91	—
South Korean Won	5,170,000	4/12/21	7/16/21	1,124.200000 KRW / USD	—	(24)
South Korean Won	5,410,000	4/22/21	7/29/21	1,117.920000 KRW / USD	—	(52)
South Korean Won	6,500,000	6/3/21	9/13/21	1,114.140000 KRW / USD	—	(83)
Thailand Baht	24,500	5/11/21	7/13/21	31.080000 THB / USD	—	(23)
Thailand Baht	31,100	4/30/21	8/6/21	31.240000 THB / USD	—	(25)
Thailand Baht	29,600	5/5/21	8/13/21	31.235000 THB / USD	—	(24)
Foreign currency exchange contracts sold:						
Australian Dollar	460	6/16/21	8/25/21	0.770930 USD / AUD	9	—
Australian Dollar	15,780	5/18/21	8/25/21	0.778690 USD / AUD	438	—
Euro	26	6/29/21	7/1/21	1.189500 USD / EUR	—	—
Euro	872	6/29/21	7/1/21	1.189470 USD / EUR	3	—
Euro	22	6/29/21	7/1/21	1.190080 USD / EUR	—	—
Euro	3,500	6/17/21	7/26/21	1.191770 USD / EUR	19	—
Euro	7,870	6/18/21	7/26/21	1.188790 USD / EUR	18	—
Euro	80	6/30/21	7/2/21	1.186300 USD / EUR	—	—
Euro	373	6/30/21	7/2/21	1.185226 USD / EUR	—	—
Euro	33	6/30/21	7/2/21	1.185000 USD / EUR	—	—
Indonesian Rupiah	66,600,000	5/18/21	7/28/21	14,442.510000 USD / IDR	44	—
Indonesian Rupiah	66,600,000	5/18/21	7/28/21	14,442.510000 USD / IDR	44	—
Japanese Yen	7,755	6/29/21	7/1/21	110.670560 USD / JPY	—	—
Japanese Yen	600	6/29/21	7/1/21	110.670560 USD / JPY	—	—
Japanese Yen	4,977	6/30/21	7/2/21	111.109000 USD / JPY	—	—
Japanese Yen	14,304	6/30/21	7/2/21	110.688000 USD / JPY	—	—
Mexican Peso	24,800	5/3/21	8/13/21	20.495800 USD / MXN	—	(29)
New Zealand Dollar	4,130	6/3/21	7/19/21	0.713393 USD / NZD	61	—
New Zealand Dollar	3,370	6/4/21	7/19/21	0.718300 USD / NZD	66	—
Pound Sterling	23	6/29/21	7/1/21	1.385000 USD / GBP	—	—
Pound Sterling	113	6/30/21	7/2/21	1.383370 USD / GBP	—	—
South African Rand	10,100	5/17/21	8/17/21	14.285300 USD / ZAR	—	—
South African Rand	178,900	5/6/21	8/17/21	14.433900 USD / ZAR	—	(63)
South Korean Won	5,170,000	6/21/21	7/16/21	1,135.020000 USD / KRW	—	(20)

**OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2021**
CONTINUED

(in thousands)

	Local Currency Amount	Effective Date	Maturity Date	Original Foreign Exchange Rate	Unrealized Appreci- ation (USD)	Unrealized (Depre- ciation) (USD)
Foreign currency exchange contracts sold: — <i>CONTINUED</i>						
South Korean Won	360,000	6/21/21	7/29/21	1,135.020000 USD / KRW	—	(2)
South Korean Won	5,050,000	6/22/21	7/29/21	1,135.243000 USD / KRW	—	(20)
South Korean Won	6,500,000	6/23/21	9/13/21	1,135.135000 USD / KRW	—	(24)
Swedish Krona	464	6/30/21	7/2/21	8.557360 USD / SEK	—	—
Swedish Krona	3,920	6/29/21	7/1/21	8.528470 USD / SEK	1	—
Swiss Franc	194	6/30/21	7/2/21	0.925578 USD / CHF	—	—
Swiss Franc	28	6/30/21	7/2/21	0.925450 USD / CHF	—	—
Swiss Franc	189	6/29/21	7/2/21	0.921267 USD / CHF	1	—
Totals					\$1,610	\$(2,174)

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS

In accordance with GASB 72, except for investments measured using Net Asset Value (NAV) as a practical expedient to estimate fair value, the System categorizes the fair value measurements of its investments within the fair value hierarchy established by U.S. GAAP. The fair value hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) in active markets for identical assets or liabilities that the fund has the ability to access at the measurement date. Most of the System's directly held marketable equity securities would be examples of Level 1 investments.
- Level 2 – Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active. Because they must often be priced on the basis of transactions involving similar but not identical securities or do not trade with sufficient frequency, certain directly held fixed income securities are categorized in Level 2.
- Level 3 – Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments and derivative financial instruments. The System had no level 3 investments as of June 30, 2022 and 2021.

Investments are reported at fair value and categorized within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3).

- Level 1 – Unadjusted quoted prices for identical instruments in active markets.
- Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 – Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the NAV as a practical expedient are not classified in the fair value hierarchy. At June 30, 2022 and 2021 the System had no plans or intentions to sell investments at amounts different from NAV.

The categorization of investments within the hierarchy is based on the pricing transparency of the investment and should not be perceived as the particular investment's risk.

Following is a summary of investments as of June 30, 2022 and 2021.

Investments at Fair Value	June 30, 2022					Unfunded Commitments
	Total	Fair Value Measurements Using			Net Asset Value (NAV)	
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)		
Fixed Income:						
U.S Government Obligations (1)	381,072	337,563	43,509	—	—	—
Domestic Fixed Income (2)	717,659	—	717,659	—	—	—
Commingled Funds (3)	793,042	—	—	—	793,042	—
International Fixed Income (4)	103,081	—	103,081	—	—	—
Equity:						
Domestic Equity Securities	3,419,542	3,415,566	3,976	—	—	—
Commingled Funds (5)	425,506	—	—	—	425,506	—
International Equity Securities	906,250	906,250	—	—	—	—
Real Estate:						
Real Estate Funds (6)	1,431,776	—	—	—	1,431,776	173,009
Alternative Investments:						
Private Equity (7)	1,660,092	—	—	—	1,660,092	1,400,225
Private Debt (8)	552,630	—	—	—	552,630	405,793
Total Investments	\$10,390,650	\$4,659,379	\$868,225	—	\$4,863,046	\$1,979,027

The System has \$243.3M of investments reported at amortized cost in accordance with GASB Statement No. 79. These investments are not subject to any limitations or restrictions on withdrawals.

(1) Fiscal 2022 rates range from 0.125% to 5.490%, and maturities from 2022 to 2051.

(2) Fiscal 2022 rates range from 0.00% to 9.375%, and maturities from 2022 to 2122.

(3) This represents investments in three commingled fixed income funds that invest globally in both developed and emerging markets with investments consisting primarily of corporate bonds (investment grade and high yield), sovereign bonds and securitized bonds. These funds may also invest in convertible bonds and currencies. The redemption frequency for these investments range from daily to monthly with one to 30 business days' prior written notice.

(4) Fiscal 2022 rates range from 0.00% to 10.00%, and maturities from 2022 to 2053.

(5) This represents investments in three commingled equity fund that invests primarily in common stock of companies located outside the U.S., including emerging markets. These investments have daily liquidity and require up to 10 business days' notice for redemption.

(6) This represents investments in 64 real estate vehicles consisting of 17 strategic open-end funds and 52 tactical non-core investments. Redemption from the open-end funds can be requested on a quarterly basis with 45-90 days' notice periods. The tactical non-core investments are not redeemable. NHRS has no direct property investments as of June 30, 2022.

(7) This represents 52 investments in private partnerships focused primarily on the following strategies: buyouts, growth equity, secondaries, and energy. These private partnerships typically have 10 to 15 year life cycles during which limited partners are unable to redeem their positions, but instead, receive distributions as the partnerships liquidate their underlying assets.

(8) This represents 24 investments in private partnerships focused primarily on the following strategies: direct lending, mezzanine and distressed debt. These private partnerships typically have 6 to 10 year life cycles during which limited partners are unable to redeem their positions, but instead, receive distributions from coupon payments and/or as the partnerships liquidate their underlying asset.

June 30, 2021

Fair Value Measurements Using (in thousands)						
Investments at Fair Value	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value (NAV)	Unfunded Commitments
Fixed Income:						
U.S Government Obligations (1)	388,029	327,309	60,720	—	—	—
Domestic Fixed Income (2)	841,129	—	841,129	—	—	—
Commingled Funds (3)	866,867	—	—	—	866,867	—
International Fixed Income (4)	98,763	—	98,763	—	—	—
Equity:						
Domestic Equity Securities	3,954,960	3,949,226	5,734	—	—	—
Commingled Funds (5)	589,378	—	—	—	589,378	—
International Equity Securities	1,121,309	1,121,309	—	—	—	—
Real Estate:						
Real Estate Funds (6)	1,129,863	—	—	—	1,129,863	261,723
Alternative Investments:						
Private Equity (7)	1,643,888	—	—	—	1,643,888	731,325
Private Debt (8)	572,100	—	—	—	572,100	357,701
Total Investments	\$11,206,286	\$5,397,844	\$1,006,346	\$—	\$4,802,096	\$1,325,749

The System has \$287.4M of investments reported at amortized cost in accordance with GASB Statement No. 79. These investments are not subject to any limitations or restrictions on withdrawals.

- (1) Fiscal 2021 rates range from 0.125% to 5.490%, and maturities from 2022 to 2050.
- (2) Fiscal 2021 rates range from 0.00% to 8.375%, and maturities from 2022 to 2069.
- (3) This represents investments in three commingled fixed income funds that invest globally in both developed and emerging markets with investments consisting primarily of corporate bonds (investment grade and high yield), sovereign bonds and securitized bonds. These funds may also invest in convertible bonds and currencies. The redemption frequency for these investments range from daily to monthly with one to 30 business days' prior written notice.
- (4) Fiscal 2021 rates range from 3.00% to 10.000%, and maturities from 2021 to 2048.
- (5) This represents investments in three commingled equity funds that invest primarily in common stock of companies located outside the U.S., including emerging markets. These investments have daily liquidity and require up to 10 business days' notice for redemption.
- (6) This represents investments in 65 real estate vehicles consisting of 12 strategic open-end funds and 53 tactical non-core investments. Redemption from the open-end funds can be requested on a quarterly basis with 45-90 days' notice periods. The tactical non-core investments are not redeemable. NHRS has no direct property investments as of June 30, 2021.

Actuarial Cost Method	Entry age normal
Price Inflation	2.0%
Wage Inflation	2.75% (2.25% for Teachers)
Salary Increases	5.4% average, including inflation for both years
Investment Rate of Return	6.75%, net of investment expenses, including inflation for both years
Retirement Age	Experience-based table of rates that is specific to the type of eligibility condition updated per each experience study completed.
Mortality	Pub-2010 Healthy Retiree Mortality Tables with credibility adjustments for each group (Police and Fire combined) and projected fully generational mortality improvements using Scale MP-2019

- (7) This represents 41 investments in private partnerships focused primarily on the following strategies: buyouts, growth equity, secondaries and energy. These private partnerships typically have 10 to 15 year life cycles during which limited partners are unable to redeem their positions, but instead, receive distributions as the partnerships liquidate their underlying assets.
- (8) This represents 28 investments in private partnerships focused primarily on the following strategies: direct lending, mezzanine and distressed debt. These private partnerships typically have 6 to 10 year life cycles during which limited partners are unable to redeem their positions, but instead, receive distributions from coupon payments and/or as the partnerships liquidate their underlying asset.

NOTE 5 – NET LIABILITY OF EMPLOYERS – PENSION AND OPEB PLANS

PENSION

The net pension liability of employers as of June 30 is shown below:

SCHEDULE OF NET PENSION LIABILITY OF EMPLOYERS

(\$ in thousands)

Fiscal Year Ended	(a) Total Pension Liability	(b) Plan Net Position	(c) Net Pension Liability (a-b)	(d) Plan Net Position as a % of Total Pension Liability (b/a)
6/30/2022	\$16,444,488	\$10,708,357	\$5,736,131	65.1%
6/30/2021	\$15,955,798	\$11,523,879	\$4,431,919	72.2%

ACTUARIAL ASSUMPTIONS

The total pension liability as of June 30, 2022 is based on an actuarial valuation performed as of June 30, 2021 rolled forward to June 30, 2022, utilizing procedures incorporating the actuarial assumptions.

A single discount rate of 6.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 6.75%, which is not reported net of the inflation assumption used to obtain the weighted returns shown on page 46. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made under the current statute RSA 100-A:16 and that plan member contributions will be made under RSA 100-A:16. Based on these assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following table provides the sensitivity of the net pension liability to changes in the discount rate. In particular, the table presents the plan’s net pension liability, if it were calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the single discount rate:

SENSITIVITY OF THE NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

(\$ in thousands)

Fiscal Year Ended	1% Decrease to 5.75%	Current Single Rate Assumption of 6.75%	1% Increase to 7.75%
6/30/2022	\$7,696,442	\$5,736,131	\$4,106,315
6/30/2021	\$6,338,152	\$4,431,919	\$2,841,810

The June 30, 2021 actuarial valuation rolled forward to June 30, 2022 used the following actuarial assumptions:

Actuarial Cost Method	Entry age normal
Price Inflation	2.0%
Wage Inflation	2.75% (2.25% for Teachers)
Salary Increases	5.4% average, including inflation during both years
Investment Rate of Return	6.75% net of investment expenses, including inflation for both years
Retirement Age	Experience-based table of rates that is specific to the type of eligibility condition updated per each experience study completed.
Mortality	Pub-2010 Healthy Retiree Mortality Tables with credibility adjustments for each group (Police and Fire combined) and projected fully generational mortality improvements using Scale MP-2019
Health Care Trend Rates	N/A — Benefits are fixed stipends
Aging Factors	N/A — Benefits are fixed stipends

The actuarial assumptions used in the June 30, 2021 valuation to calculate the total pension liability as of June 30, 2022 were based on the results of an actuarial experience study for the period from July 1, 2015 to June 30, 2019.

OPEB

The net OPEB liability of employers as of June 30, 2022 and 2021 is shown below:

SCHEDULE OF NET OPEB LIABILITY OF EMPLOYERS				(\$ in thousands)
Fiscal Year Ended	(a) Total OPEB Liability	(b) Plan Net Position	(c) Net OPEB Liability (a-b)	(d) Plan Net Position as a % of Total Pension Liability (b/a)
6/30/22	\$422,880	\$44,992	\$377,888	10.6%
6/30/21	\$450,252	\$49,975	\$400,457	11.1%

ACTUARIAL ASSUMPTIONS

The total OPEB liability as of June 30, 2022 is based on an actuarial valuation performed as of June 30, 2021 rolled forward to June 30, 2022, utilizing procedures incorporating the actuarial assumptions.

A single discount rate of 6.75% was used to measure the total OPEB liability. This single discount rate was based on the expected rate of return on OPEB plan investments of 6.75%, which is not reported net of the inflation assumption used to obtain the weighted returns shown on pg. 46. The projections of cash flows used to determine this single discount rate assumed that employer contributions will be made under the current statutes RSA 100-A:16 and 100-A:53. Based on this assumption, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all period of projected benefit payments to determine the total OPEB liability.

The following table provides the sensitivity of the net OPEB liability to changes in the discount rate. In particular, the table presents the plan's net OPEB liability, if it were calculated using a single discount rate that is one-percentage point lower or one-percentage point higher than the single discount rate.

SENSITIVITY OF THE NET OPEB LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

(\$ in thousands)			
Fiscal Year Ended	1% Decrease to 5.75%	Current Single Rate Assumption of 6.75%	1% Increase to 7.75%
6/30/22	\$410,261	\$377,888	\$349,693
6/30/21	\$435,328	\$400,457	\$370,117

The actuarial assumptions used in the June 30, 2021 valuation to calculate the total OPEB liability as of June 30, 2022 were based on the results of an actuarial experience study for the period from July 1, 2015 to June 30, 2019.

GASB 74 requires the sensitivity of the net OPEB liability to the healthcare cost trend assumption. Since the medical subsidy benefits are a fixed stipend, there is no sensitivity to change in the healthcare cost trend assumption.

The asset allocation is recommended by the Independent Investment Committee and approved by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided. The following table displays the approved asset allocation for 2022 and the geometric rates of return for each asset class:

LONG-TERM EXPECTED RATE OF RETURN

Asset Class	Target Allocation	30-Year Return
Public Equity	50.0%	
US Equity	30.0%	7.60%
Non-US Equity	20.0%	7.90%
Private Market Equity	20.0%	
Real Estate Equity	10.0%	6.60%
Private Equity	10.0%	8.85%
Private Debt	5.0%	
Private Debt	5.0%	7.25%
Fixed Income	25.0%	
Core US Fixed Income	25.0%	3.60%
Inflation		2.25%
Total Fund	100.0%	

NOTE 6—CONTRIBUTIONS

PENSION PLAN

As a condition of participation, members are required to contribute a set percentage of their salary to the Pension Plan. The percentage rates, as outlined below, are set by statute under RSA 100-A:16 and depend on the member’s group affiliation.

RSA 100-A:16 outlines the employer contributions made to the Pension Plan. Employer contributions to the Pension Plan since fiscal year 2007 have been determined on an actuarial basis using the entry age normal cost method.

The annual covered payroll for the year ended June 30, 2022 is \$3,077.6 million and the annual covered payroll for the fiscal year ended June 30, 2021 was \$2,973.0 million.

The following tables show the percentages of gross payroll contributed by the State, other contributing employers, and members to the pension plan and the OPEB plan.

TOTAL CONTRIBUTION RATES — PENSION PLAN

Member Category	Member Normal Share	(FY 2022)			Member Normal Share	(FY 2021)		
		State	Employer Normal Share Local	Total		State	Employer Normal Share Local	Total
Employees								
State	7.00%	13.75%		13.75%	7.00%	10.88%	—	10.88%
Local	7.00%		13.75%	13.75%	7.00%	—	10.88%	10.88%
Teachers	7.00%		19.48%	19.48%	7.00%	—	15.99%	15.99%
Police Officers								
State	11.55%	30.67%		30.67%	11.55%	24.77%	—	24.77%
Local	11.55%		30.67%	30.67%	11.55%	—	24.77%	24.77%
Firefighters								
State	11.80%	29.78%		29.78%	11.80%	26.43%	—	26.43%
Local	11.80%		29.78%	29.78%	11.80%	—	26.43%	26.43%

OPEB PLAN

In accordance with RSA 100-A:53, RSA 100-A:53-b, RSA 100-A:53-c and RSA 100-A:53-d, benefits are provided by a 401(h) subtrust of the Pension Plan.

The OPEB Plan is funded by allocating to the 401(h) subtrust the lesser of:

- a.) 25% of all employer contributions made in accordance with RSA 100-A:16; or
- b.) the percentage of employer contributions determined by the actuary to be the minimum rate necessary to maintain the benefits provided under RSA 100-A:53, RSA 100-A:53-b, RSA 100-A:53-c and RSA 100-A:53-d.

For fiscal year 2022 and 2021, the minimum rates determined by the actuary to maintain benefits were the lesser of the two options and were used to determine the employer contributions due to the 401(h) subtrust.

The State Legislature has the authority to establish, amend and discontinue the contribution requirements of the OPEB Plan. Administrative costs are allocated to the OPEB Plan based on estimated staff time.

TOTAL CONTRIBUTION RATES — OPEB PLAN

Member Category	Member Normal Share	(FY 2022)			Member Normal Share	(FY 2021)		
		State	Employer Normal Share Local	Total		State	Employer Normal Share Local	Total
Employees								
State		0.78%		0.78%	—	1.05%	—	1.05%
Local			0.31%	0.31%	—	—	0.29%	0.29%
Teachers			1.54%	1.54%	—	—	1.81%	1.81%
Police Officers								
State		3.21%		3.21%	—	3.66%	—	3.66%
Local			3.21%	3.21%	—	—	3.66%	3.66%
Firefighters								
State		3.21%		3.21%	—	3.66%	—	3.66%
Local			3.21%	3.21%	—	—	3.66%	3.66%

The following tables show the amounts contributed by participating employers and members and these contributions expressed as a percentage of the respective covered payrolls.

TOTAL AMOUNTS CONTRIBUTED – PENSION AND OPEB PLAN

(in thousands)

Member Category	Member Normal Share**	(FY 2022) Employer Normal Share			Member Normal Share**	(FY 2021) Employer Normal Share		
		Pension Plan*	OPEB Plan*	Total Contributions		Pension Plan*	OPEB Plan*	Total Contributions
Employees	\$ 96,780	\$185,846	\$6,993	\$289,619	\$ 93,492	\$142,882	\$ 8,360	\$244,734
Teachers	87,833	240,248	18,905	346,986	85,294	192,458	21,782	299,534
Police Officers	41,165	107,281	11,237	159,683	40,005	83,897	12,399	136,301
Firefighters	18,204	45,708	4,929	68,841	18,088	39,802	5,514	63,404
Total Contributed	\$243,982	\$579,083	\$42,064	\$865,129	\$236,879	\$459,039	\$48,055	\$743,973

*Includes contributions made by both State and local employers

**Includes voluntary member contributions of \$3.2 million in FY 2022 and \$3.9 million in FY 2021.

Amounts shown on the table above exclude contributions classified as “employer other,” which are not actuarially determined contributions.

TOTAL AMOUNTS CONTRIBUTED EXPRESSED AS A PERCENTAGE OF COVERED PAYROLL FOR PENSION AND OPEB PLANS

Member Category	Member Normal Share**	(FY 2022) Employer Normal Share			Member Normal Share**	(FY 2021) Employer Normal Share		
		Pension Plan*	OPEB Plan*	Total Contributions		Pension Plan*	OPEB Plan*	Total Contributions
Employees	7.08%	13.59%	0.51%	21.18%	7.19%	10.98%	0.64%	18.81%
Teachers	7.16%	19.95%	1.54%	28.29%	7.12%	16.06%	1.82%	25.00%
Police Officers	12.23%	31.88%	3.34%	47.45%	12.22%	25.63%	3.79%	41.64%
Firefighters	12.38%	31.09%	3.35%	46.82%	12.35%	27.18%	3.76%	43.29%
Total Contributed	7.93%	18.82%	1.37%	28.11%	7.97%	15.44%	1.62%	25.02%

*Includes contributions made by both State and local employers

**Includes voluntary member contributions of \$3.2 million in FY 2022 and \$3.9 million in FY 2021.

Amounts shown on the table above exclude contributions classified as “employer other,” which are not actuarially determined contributions.

As a matter of practice, actual contribution rates are determined by the previous valuation. Using the forecast rates delays implementation of the rates proposed by the actuary until the beginning of the subsequent biennium, allowing employers to budget for changes in employer rates. The employer normal contribution rates for fiscal year 2022 was based on the June 30, 2019 actuarial valuation.

NOTE 7 – ADMINISTRATIVE EXPENSES

Certain expenses related to the administration of the Plans are budgeted and approved by the Board of Trustees, and were subject to appropriation biennially by the State Legislature. Total administrative expenses of \$9.8 million and \$8.6 million for June 30, 2022 and 2021, respectively, are included in the accompanying Combining Statements of Changes in Fiduciary Net Position.

Administrative expenses consist primarily of salaries and benefits for 77 full-time employees, the costs associated with operating and maintaining computer systems, and other administrative costs.

NOTE 8 – LEASES

NHRS is a lessee for a noncancelable lease of office space with lease terms through March 2036. There are no residual value guarantees included in the measurement of NHRS’s lease liability nor recognized as an expense for the year ended June 30, 2022. NHRS does not have any commitments that were incurred at the commencement of the lease. No termination penalties were incurred during the fiscal year.

Lease asset activity of NHRS was as follows:

Leased Asset Class (Leasee)	Balance June 30, 2021	Additions	Deletions	Balance June 30, 2022
Right-to-use assets				
Building	\$ 4,669,962	\$ —	\$ —	\$ 4,669,962
Less accumulated amortization				
Building	—	(316,608)	—	(316,608)
Net right-to-use	\$ 4,669,962	\$ (316,608)	\$ —	\$ 4,353,354

The Entity recognized \$316,608 in amortization expense included in the Plan expenses on the Combining Statements of Changes in Fiduciary Net Position Pension and Other Postemployment Medical Plans.

The future principal and interest lease payments as of June 30, 2022, were as follows:

Year Ending June 30	Principal	Interest	Total
2023	\$ 256,942	\$ 56,746	\$ 313,688
2024	260,354	53,554	313,688
2025	263,812	49,876	313,688
2026	276,288	46,362	322,650
2027	307,052	42,486	349,538
2028–2036	3,051,940	185,763	3,237,703
	\$ 4,416,388	\$ 434,567	\$ 4,850,955

NHRS evaluated the right-to-use assets for impairment and determined there was no impairment for the year ended June 30, 2022.

NOTE 9 – CONTINGENT MATTERS

The System may have legal matters or claims that arise from time to time through the normal course of business. However, in the opinion of management and legal counsel, such matters are not expected to have an adverse effect on NHRS financial status.

NOTE 10 – PENSION RESERVES

In accordance with RSA 100-A:16, all assets are credited between two funds in accordance with the purpose that they are held (in thousands):

Member Annuity Savings Fund — The member annuity savings fund is an accumulation of contributions deducted from the compensation of members. This fund is used to pay the accumulated member contributions in the event that a member withdraws from active service or upon death in service. Upon retirement, these contributions are transferred to the state annuity accumulation fund. The balance in this fund at June 30, 2022 is \$3,296,797.

State Annuity Accumulation Fund — The state annuity accumulation fund is the fund that pays all System benefits other than those payable from the member annuity savings fund. This fund is the accumulation of employer contributions and any amounts transferred from the member annuity savings fund. The balance in this fund at June 30, 2022 is \$7,411,560.

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

(\$ in thousands)

Fiscal Year Ended	June 30, 2022	June 30, 2021	June 30, 2020	June 30, 2019
Total Pension Liability				
Service Cost	\$ 321,589	\$ 319,296	\$ 310,678	\$ 275,380
Interest on the Total Pension Liability	1,056,222	1,026,953	994,537	970,599
Benefit Changes	10,793	—	69,355	—
Difference Between Expected and Actual Experience of the Total Pension Liability	37,807	(5,872)	198,104	(111,250)
Assumption Changes	—	—	778,434	—
Benefit Payments	(913,994)	(858,210)	(816,708)	(780,907)
Refunds	(23,727)	(19,884)	(23,312)	(23,464)
Net Changes in Total Pension Liability	488,690	462,283	1,511,088	330,358
Total Pension Liability — Beginning	15,955,798	15,493,515	13,982,427	13,652,069
Total Pension Liability — Ending	\$ 16,444,488	\$15,955,798	\$15,493,515	\$13,982,427
Plan Fiduciary Net Position				
Contributions — Employer	\$ 579,028	\$ 459,277	\$ 445,021	\$ 434,407
Contributions — Member	243,981	236,879	229,725	223,995
Pension Plan Net Investment Income	(690,177)	2,617,661	101,039	488,270
Benefit Payments	(913,994)	(858,210)	(816,708)	(780,907)
Refunds	(23,727)	(19,884)	23,312	(23,464)
Pension Plan Administrative Expense	(9,523)	(8,417)	(8,281)	(7,436)
Other Custodial, Professional and Non-Investment Expenses	(1,110)	(791)	(893)	(959)
Net Change in Plan Fiduciary Net Position	(815,522)	2,426,515	(73,409)	333,906
Plan Fiduciary Net Position — Beginning	11,523,879	9,097,364	9,170,773	8,836,867
Plan Fiduciary Net Position — Ending	\$ 10,708,357	\$11,523,879	\$ 9,097,364	\$ 9,170,773
Net Pension Liability	\$ 5,736,131	\$ 4,431,919	\$ 6,396,151	\$ 4,811,654
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	65.1%	72.2%	58.7%	65.6%
Covered Payroll	\$ 3,077,584	\$2,972,969	\$ 2,894,708	\$ 2,825,006
Net Pension Liability as a Percentage of Covered Payroll	186.4%	149.1%	221.0%	170.3%

Schedule is intended to show information for 10 years. GASB 67 was adopted in 2014, and additional years will be added as they become available.

June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
\$ 269,751	\$ 262,626	\$ 266,379	\$ 243,965	\$ 245,828
936,988	906,201	875,247	847,646	815,214
—	—	—	—	—
39,112	(19,047)	18,404	106,715)	—
—	—	815,023	—	—
(741,753)	(706,304)	(670,360)	(631,312)	(599,476)
(24,010)	(23,408)	(24,233)	(26,345)	(26,120)
480,088	420,068	1,280,460	327,239	435,446
13,171,981	12,751,913	11,471,453	11,144,214	10,708,768
\$13,652,069	\$13,171,981	\$12,751,913	\$11,471,453	\$11,144,214
\$ 422,659	\$ 366,653	\$ 357,482	\$ 332,294	\$ 328,444
217,572	213,061	207,949	204,063	199,033
717,090	978,594	61,878	249,806	1,092,586
(741,753)	(706,304)	(670,360)	(631,312)	(599,476)
(24,010)	(23,408)	(24,233)	(26,345)	(26,120)
(7,767)	(7,671)	(7,061)	(7,582)	(7,377)
(912)	(1,255)	(1,263)	(1,626)	(1,446)
582,879	819,670	(75,608)	119,298	985,644
8,253,988	7,434,318	7,509,926	7,390,628	6,404,984
\$ 8,836,867	\$8,253,988	\$ 7,434,318	\$ 7,509,926	\$ 7,390,628
\$ 4,815,202	\$4,917,993	\$ 5,317,595	\$ 3,961,527	\$ 3,753,586
64.7%	62.7%	58.3%	65.5%	66.3%
\$ 2,752,235	\$2,667,612	\$ 2,601,404	\$ 2,575,031	\$ 2,507,899
175.0%	184.4%	204.4%	153.8%	149.7%

SCHEDULE OF EMPLOYER CONTRIBUTIONS — PENSION PLAN

(\$ in thousands)

Fiscal Year Ended	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
6/30/2022	\$579,083	\$579,083	—	\$3,077,584	18.8%
6/30/2021	\$459,277	\$459,277	—	\$2,972,969	15.5%
6/30/2020	\$444,717	\$444,717	—	\$2,894,708	15.4%
6/30/2019	\$434,407	\$434,407	—	\$2,825,006	15.4%
6/30/2018	\$422,659	\$422,659	—	\$2,752,235	15.4%
6/30/2017	\$366,653	\$366,653	—	\$2,667,612	13.7%
6/30/2016	\$357,482	\$357,482	—	\$2,601,404	13.7%
6/30/2015	\$332,294	\$332,294	—	\$2,575,031	12.9%
6/30/2014	\$328,444	\$328,444	—	\$2,507,899	13.1%
6/30/2013	\$249,836	\$249,836	—	\$2,501,742	10.0%

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET OPEB LIABILITY AND RELATED RATIOS

(\$ in thousands)

Fiscal Year Ended	June 30 2022	June 30 2021	June 30 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
Total OPEB Liability							
Service Cost	\$ 591	\$ 731	\$ 740	\$ 857	\$ 984	\$ 1,099	\$ 1,218
Interest on the Total OPEB Liability	28,933	30,512	32,785	34,197	34,247	35,235	36,542
Benefit Changes	—	—	—	—	—	—	—
Difference between expected and actual experience of the Total OPEB Liability	(13,087)	(9,912)	(10,219)	(7,156)	12,667	—	(4,538)
Assumption Changes	—	—	22,676	—	—	—	—
Benefit Payments	(43,809)	(45,499)	(46,816)	(47,798)	(49,251)	(50,560)	(51,805)
Refunds	—	—	—	—	—	—	—
Net Changes in Total OPEB Liability	(27,372)	(24,168)	(884)	(19,900)	(1,353)	(14,226)	(18,583)
Total OPEB Liability — Beginning	450,252	474,420	475,254	495,154	496,507	510,733	529,316
Total OPEB Liability — Ending	\$ 422,880	\$ 450,252	\$474,420	\$475,254	\$495,154	\$496,507	\$510,733
Plan Fiduciary Net Position							
Contributions — Employer	\$ 42,064	\$ 48,055	\$ 46,460	\$ 45,509	\$ 44,194	\$59,197	\$58,174
Contributions — Member	—	—	—	—	—	—	—
OPEB Plan Net Investment Income	(2,820)	10,703	397	1,981	3,129	4,046	149
Benefit Payments	(43,809)	(45,499)	(46,816)	(47,798)	(49,251)	(50,560)	(51,805)
Refunds	—	—	—	—	—	—	—
OPEB Plan Administrative Expense	(234)	(172)	(169)	(152)	(33)	(32)	(17)
Other custodial, professional and non-investment expenses	(4)	(3)	(3)	(6)	(4)	(5)	(3)
Net Change in Plan Fiduciary Net Position	(4,803)	13,084	(131)	(466)	(1,965)	12,646	6,498
Plan Fiduciary Net Position — Beginning	49,795	36,711	36,842	37,308	39,273	26,627	20,129
Plan Fiduciary Net Position — Ending	\$ 44,992	\$ 49,795	\$ 36,711	\$ 36,842	\$ 37,308	\$39,273	\$26,627
Net OPEB Liability	\$ 377,888	\$ 400,457	\$437,709	\$438,411	\$457,846	\$457,234	\$484,106
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	10.64%	11.06%	7.8%	7.8%	7.5%	7.9%	5.2%
Covered Payroll*	\$3,077,584	\$ 2,972,969	\$2,894,708	\$2,825,006	\$2,752,235	\$2,667,612	\$2,601,404
Net OPEB Liability as a Percentage of Covered Payroll	12.28%	13.47%	15.1%	15.5%	16.7%	17.1%	18.6%

Schedule is intended to show information for 10 years. GASB 74 was adopted in 2017, and additional years will be added as they become available.

*Employers calculate and remit contributions to the OPEB plan based on the covered payroll of the pension plan, even though not all employees in the covered payroll presented are provided with OPEB through the OPEB plan.

SCHEDULE OF EMPLOYER CONTRIBUTIONS — OPEB PLAN

(\$ in thousands)

Fiscal Year Ended	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
6/30/22	\$42,064	\$42,064	—	\$3,077,584	1.4%
6/30/21	\$48,055	\$48,055	—	\$2,972,969	1.6%
6/30/20	\$46,460	\$46,460	—	\$2,894,708	1.6%
6/30/19	\$45,509	\$45,509	—	\$2,825,006	1.6%
6/30/18	\$44,194	\$44,194	—	\$2,752,235	1.6%
6/30/17	\$59,197	\$59,197	—	\$2,667,612	2.2%
6/30/16	\$58,174	\$58,174	—	\$2,601,404	2.2%
6/30/15	\$48,915	\$48,915	—	\$2,575,031	1.9%
6/30/14	\$48,881	\$48,881	—	\$2,507,899	1.9%
6/30/13	\$49,712	\$49,712	—	\$2,501,742	2.0%
6/30/12	\$48,964	\$48,964	—	\$2,487,757	2.0%

SCHEDULE OF INVESTMENT RETURNS

Fiscal Year Ended	Annual Money Weighted Rate of Return — Net of Investment Expenses
6/30/2022	(5.8)%
6/30/2021	29.7%
6/30/2020	1.2%
6/30/2019	5.7%
6/30/2018	8.9%
6/30/2017	13.4%
6/30/2016	0.9%
6/30/2015	3.4%

Schedule is intended to show information for 10 years. Additional years will be added as they become available.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION — LAST TEN FISCAL YEARS

ACTUARIAL ASSUMPTIONS AND METHODS USED IN DETERMINING CONTRIBUTION RATES

Actuarially determined contribution rates are calculated by the system’s actuary and certified by the Board of Trustees biennially. Contribution rates for FY 2022 were determined by the System’s actuary based on the June 30, 2019 actuarial valuation. During FY 2020, an experience study was conducted covering the period from July 1, 2015 through June 30, 2019, which was then used to update the actuarial assumptions used in the June 30, 2019 actuarial valuation. Significant actuarial assumptions and methods used to determine the FY 2022 contribution rates for both the Pension and OPEB plan are described below:

PENSION PLAN

- **Actuarial Cost Method** Entry Age Normal
- **Amortization Method** Level percentage of payroll, closed
- **Remaining Amortization** Multiple periods of 18–20 years beginning July 1, 2019 (30 years beginning July 1, 2009)
- **Asset Valuation Method** Five-year smoothed market, 20% corridor
- **Payroll Growth** 2.75% per year (2.25% for Teachers)
- **Price Inflation** 2.0%
- **Salary Increase** 5.4% average, including price inflation
- **Investment Rate of Return** 6.75%, net of pension plan investment expenses, including inflation
- **Mortality** Pub-2010 Healthy Retiree Mortality Tables with credibility adjustments for each member classification (Police and Fire combined) and projected fully generational mortality improvements using Scale MP-2019.

OPEB PLAN

- **Actuarial Cost Method** Entry Age Normal
- **Amortization Method** Level percentage of payroll, closed
- **Asset Valuation Method** Five-year smoothed market, 20% corridor
- **Payroll Growth** 2.75% per year (2.25% for Teachers)
- **Price Inflation** 2.0%
- **Salary Increase** 5.4% average, including price inflation
- **Investment Rate of Return** 6.75% per year, net of OPEB plan investment expense, including inflation for determining solvency contributions
- **Funding Discount Rate** 2.75% per year
- **Mortality** Pub-2010 Healthy Retiree Mortality Tables with credibility adjustments for each member classification (Police and Fire combined) and projected fully generational mortality improvements using Scale MP-2019.

CHANGES OF BENEFIT TERMS**2022:**

Ch 203 laws of 2022 (HB1535), grants a one-time payment of \$500 to members who retired on or before July 1, 2017, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than \$30,000 on June 30, 2022. The one-time payment will be made during state fiscal year 2023 from the General Fund.

2020:

Ch 340 laws of 2019 (HB 616), grants a one-time, 1.5% COLA on the first \$50,000 of an annual pension benefit to members who retired on or before July 1, 2014, or any beneficiaries of such member who is receiving a survivorship pension benefit. The COLA will take effect on the retired member's first anniversary date of retirement occurring after July 1, 2020. The adjustment shall become a permanent addition to the member's base retirement allowance. The impact of this change resulted in a \$69.4 million increase in the total pension liability.

CHANGES OF ASSUMPTIONS

An actuarial review, commonly called an experience study, of the mortality, service, withdrawals, and compensation experience of members is required by statute at least once during each five-year period.

2019:

Assumption changes adopted as a result of the 2016–2019 experience study are:

During 2020, the NHRS Board of Trustees modified its actuarial funding policy to better align its actuarial reviews with its biennial valuation cycle, changing the schedule for experience studies to one every four years. The most recent actuarial review was performed during fiscal year 2020 and was based on the information for the four year period ending June 30, 2019. Assumption changes adopted as a result of the 2019 experience study are:

- Reduced the assumed rate of investment return from 7.25% to 6.75%
- Reduced wage inflation from 3.25% to 2.75% (2.25% for teachers)
- Reduced price inflation from 2.5% to 2.0%
- Updated demographic assumptions, including merit and longevity salary increases, disability rates, retirement rates, and mortality tables (specifically the new public pension plan mortality tables).
- Increased the medical subsidy margin for teachers from 0.20% to 0.50%

The full experience study results can be viewed at www.nhrs.org/.

2016:

Assumption changes adopted as a result of the 2015 experience study are:

Economic Assumptions:

- The assumed investment rate of return was reduced from 7.75% to 7.25%
- The wage inflation rate was reduced from 3.75% to 3.25%
- The price inflation assumption was reduced from 3.00% to 2.50%

Demographic Assumptions were changed in the following categories:

- Rates of Disability
- Rates of Retirement
- Rates of Withdrawal
- Mortality

**INVESTMENT ACTIVITY FEES AND
OTHER INVESTMENT RELATED EXPENSES**

(in thousands)

	YEAR ENDED JUNE 30	
	2022	2021
INVESTMENT ACTIVITY FEES:		
Equity Investments:		
Domestic	\$ 10,726	\$ 9,701
Non-U.S.	10,810	10,153
Fixed Income Investments	6,380	6,118
Alternative Investments*	13,021	13,457
Real Estate	12,721	11,793
Custodial Fees	707	661
Investment Advisor Fees	650	700
Investment Professional Fees	410	438
Investment Staff Administrative Expense	731	688
TOTAL INVESTMENT ACTIVITY FEES	\$ 56,156	\$ 53,709

*The custodian records all transactions on a net of fee basis.

INTEREST INCOME

(in thousands)

	YEAR ENDED JUNE 30	
	2022	2021
Fixed Income Investments	\$ 38,194	\$ 41,111
Cash and Cash Equivalents	492	185
TOTAL INTEREST INCOME	\$ 38,686	\$ 41,296

DIVIDEND INCOME

(in thousands)

	YEAR ENDED JUNE 30	
	2022	2021
Equity Investments:		
Domestic	\$ 50,324	\$ 45,064
Non-U.S.	37,850	27,853
TOTAL DIVIDEND INCOME	\$ 88,174	\$ 72,917

CONTRIBUTIONS	(in thousands)	
	YEAR ENDED JUNE 30	
	2022	2021
CONTRIBUTIONS – PENSION PLAN		
EMPLOYER CONTRIBUTIONS:		
Employees	\$ 185,798	\$ 143,009
Teachers	240,234	192,530
Police Officers	107,286	83,934
Firefighters	45,710	39,805
TOTAL EMPLOYER CONTRIBUTIONS	\$ 579,028	\$ 459,278
PLAN MEMBER CONTRIBUTIONS:		
Employees	\$ 96,780	\$ 93,492
Teachers	87,832	85,294
Police Officers	41,165	40,005
Firefighters	18,205	18,088
TOTAL PLAN MEMBER CONTRIBUTIONS	\$ 243,982	\$ 236,879
TOTAL CONTRIBUTIONS – PENSION PLAN	\$ 823,010	\$ 696,157
CONTRIBUTIONS – OPEB PLAN		
EMPLOYER NORMAL:		
OPEB Contributions	\$ 42,064	\$ 48,054
TOTAL CONTRIBUTIONS – OPEB PLAN	\$ 42,064	\$ 48,054
TOTAL CONTRIBUTIONS	\$ 865,074	\$ 744,211

BENEFITS	(in thousands)	
	YEAR ENDED JUNE 30	
	2022	2021
PENSION BENEFITS AND ADDITIONAL ALLOWANCES:		
Employees	\$ 307,115	\$ 287,578
Teachers	353,325	334,931
Police Officers	173,943	161,315
Firefighters	79,611	74,387
TOTAL PENSION BENEFITS AND ADDITIONAL ALLOWANCES	\$ 913,994	\$ 858,211
POSTEMPLOYMENT MEDICAL BENEFITS:		
Group II Police and Fire	\$ 16,569	\$ 16,665
Group I Teachers	18,037	18,645
Group I Political Subdivision Employees	4,272	4,496
Group I State Employees	4,931	5,693
TOTAL POSTEMPLOYMENT MEDICAL BENEFITS	\$ 43,809	\$ 45,499
TOTAL BENEFITS	\$ 957,803	\$ 903,710

REFUNDS OF CONTRIBUTIONS	(in thousands)	
	YEAR ENDED JUNE 30	
	2022	2021
Employees	\$ 12,689	\$ 11,365
Teachers	4,625	4,359
Police Officers	5,605	3,374
Firefighters	808	786
TOTAL REFUNDS OF CONTRIBUTIONS	\$ 23,727	\$ 19,884

**ADMINISTRATIVE EXPENSE FOR THE YEARS ENDED
JUNE 30, 2021 AND 2020**

(in thousands)

	2022 EXPENSE	2022 BUDGET*	OVER (UNDER) BUDGET	2021 EXPENSE	2021 BUDGET*	OVER (UNDER) BUDGET
Salaries and Wages	\$ 5,033	\$ 4,666	\$ 367	\$ 4,249	\$ 4,249	\$ —
Fringe Benefits	2,562	2,780	(218)	2,276	2,246	30
Supplies, Utilities and Postage	253	253	—	261	242	19
Organizational Dues	18	21	(3)	16	15	1
Equipment	6	5	1	7	7	—
Travel—Staff	5	5	—	8	12	(4)
Board Expenses	9	9	—	14	14	—
Employee Training	36	46	(10)	28	28	—
State Services	26	26	—	19	19	—
Office Rents and Expenses	190	508	(318)	500	500	—
Computer Support and System Development	1,166	1,746	(580)	810	2,485	(1,675)
Consulting	454	215	239	262	145	117
Workers Compensation	—	—	—	—	—	—
Unemployment Compensation	—	—	—	1	1	—
TOTAL	\$ 9,758	\$10,280	\$ (522)	\$ 8,451	\$ 9,963	\$(1,513)

*The New Hampshire biennial budget is composed of the initial operating budget and supplemented by additional appropriations. These appropriations are generated by Governor and Council action, annual session laws, and existing statutes which require appropriations under certain circumstances. The budget therefore is a flexible budget. It is a biennial budget which consists of balances brought forward plus current year appropriations, less balances carried forward into the following fiscal year. The balances carried forward into the following fiscal year are composed of encumbrances and non-lapsing appropriations.

PROFESSIONAL FEES

(in thousands)

	YEAR ENDED JUNE 30	
	2022	2021
Legal Fees	\$ 98	\$ 121
Actuarial Fees	161	168
Audit Fees	260	260
TOTAL PROFESSIONAL FEES	\$ 519	\$ 549

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NEW HAMPSHIRE RETIREMENT SYSTEM

INVESTMENT SECTION

[CLICK HERE TO RETURN TO TABLE OF CONTENTS](#)

**INVESTMENT
CONSULTANT'S
LETTER**


Callan LLC
1 Deforest Avenue
Suite 101
Summit, NJ 07901

Main 908.522.3880
Fax 908.277.1503

www.callan.com

October 31, 2022

Board of Trustees
Investment Committee
Executive Director
The New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301-8507

Dear NHRS Fiduciaries:

Callan LLC (Callan) is pleased to provide an overview of the New Hampshire Retirement System (NHRS) investment program for the fiscal year ended June 30, 2022. The capital markets experienced heightened levels of volatility over fiscal year 2022 due to a variety of factors contributing to systemic risk, including the aftermath of the COVID-19 pandemic, which contributed to supply chain inefficiencies, a significant dislocation between supply/demand dynamics, and the potential for weaker economic fundamentals. In addition, the invasion of Ukraine exacerbated several risk factors impacting food prices, energy prices, and contributed further to supply chain dislocations. Historic levels of inflation prompted aggressive central bank intervention via monetary policy in an effort to contain inflationary pressures. These hawkish monetary measures resulted in interest rate increases and the potential for additional tightening cycles over the short-term. Volatility persisted in this environment with broad global stock and bond indices falling, though commodities and other alternatives asset classes fared relatively better. Heightened inflation levels spurred the Fed to raise the Federal Funds rate by 150 bps over the fiscal year. The 75 bps increase that was implemented in May of 2022 represented the Fed's largest hike since 1994. Despite the negative momentum experienced in the capital markets, the overall portfolio (the "Fund") benefited from its strategic asset allocation, particularly within alternative assets. From a structural standpoint, overall, the active managers represented in the domestic equity portfolio (small/mid-capitalization managers) also helped protect the Fund in a challenging market environment.

NHRS follows an investment strategy designed to meet its funding requirements over the long-term. Assets are allocated efficiently to ensure that beneficiaries will receive the benefits they were promised. The Fund is managed on a total return basis, while recognizing the importance of capital preservation and prudent risk management. Additionally, the Fund is administered in accordance with sound fiduciary standards and industry best practices. The Fund's strategic asset allocation and related objectives, parameters and specific delegation of responsibilities are explicitly defined in the Investment Policy Statement. The Independent Investment Committee (IIC) manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes decisions regarding the retention or termination of asset managers. The investment manual includes all investment policies and asset class guidelines and may be obtained from the NHRS website at www.nhrs.org. The following pages report on the performance and attributes of the investment program for fiscal year 2022.

MARKET REVIEW FOR THE YEAR ENDED JUNE 30, 2022

The market volatility experienced over the fiscal year reflected fluctuations in risk sentiment amid an array of systemic risk factors, including inflation, the implications of the war between Russia and Ukraine, as well as other tensions around the world, and the potential for weaker economic fundamentals going forward. Risk assets, particularly in the U.S., rallied over the second quarter of the fiscal year following a relatively flat first quarter.

Conversely, the third and fourth quarters of the fiscal year were marked by negative geopolitical events and broadly negative market returns. U.S. GDP fell 1.6% and 0.9% over the third and fourth quarters of the fiscal year, respectively, following GDP readings of 2.3% and 6.9% over the first and second quarters of the fiscal year. The primary culprits of third and fourth quarter GDP results were seen as inflation and the Fed's weapon of choice to fight it: tightening monetary policy. Price gains have been broad-based and global in nature and have been amplified by the invasion of Ukraine. Food and energy prices have risen sharply, and supply chain issues continued to impact the flow of goods around the world, adding further pressure to prices in some sectors. U.S. equities outperformed developed non-U.S. equities over the fiscal year. The S&P 500 Index fell by 10.6% over the fiscal year while the MSCI EAFE Index fell 17.8%. Emerging markets equities, as measured by the MSCI Emerging Markets Index, returned -25.3%, underperforming both U.S. and non-U.S. developed markets equities. Fixed income markets were also challenged, as concerns over future inflation drove the 10-year U.S. Treasury yield to its highest intra-quarter level since 2011 in June (3.49%), while the Bloomberg U.S. Aggregate

Callan

Bond Index returned -10.3% over the fiscal year. It is uncommon for stocks and bonds to go down at the same time. This has only happened over two annual periods over the last 100 years.

NHRS INVESTMENT PORTFOLIO REVIEW

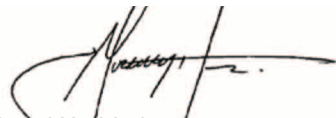
For the fiscal year ended June 30, 2022, the NHRS Total Fund returned -6.1%, net of investment management fees (or “net”), and outperformed the Total Fund Benchmark return of -9.3%. The Fund posted a return of -5.6%, gross of investment management fees (or “gross”), ranking in the 34th percentile relative to peers in Callan’s Large Defined Benefit Public Fund Universe, which consisted of 111 constituents as of June 30, 2022. The Fund’s success over the fiscal year was primarily attributable to strong relative performance from the alternative assets (private equity and private debt) and real estate components of the portfolio. An underweight to international equities and fixed income, coupled with strong performance from most of the active managers in the Fund’s small- and mid-cap composites also contributed to results. These investments helped protect value relative to the Total Fund Benchmark in a difficult environment in the global capital markets. For the trailing three year period, the Fund returned 7.1% (net), ranking in the 35th percentile of its peers (peer group rankings are measured gross of investment management fees). For the trailing five year period, the Fund returned 7.2% (net), ranking near the top third of the peer group (36th percentile). For the trailing ten year period, the Fund returned 8.5% (net), ranking in the 18th percentile of its peers, and for the trailing twenty-five year period, the Fund returned 6.9% (net), exceeding the current assumed rate of return of 6.75% and ranking in the 39th percentile of its peers.

During fiscal year 2022, the IIC engaged in the following activities pertaining to strategic and implementation matters impacting the Fund:

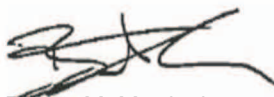
- **Asset Allocation:** Reevaluated the Fund’s strategic asset allocation, with an emphasis on understanding the impact of increasing exposure to alternatives given liquidity concerns;
- **Manager Structure:** Reevaluated the Fund’s manager structure of the marketable assets portfolio to review the implications of maintaining a strategic tilt within small/mid-capitalization stocks relative to the Russell 3000 Index;
- **Manager Search Activity:** Conducted a search for an international small cap equity mandate and hired Wellington’s International Small Cap Research strategy;
- **Alternative Assets Portfolio Pacing and Implementation:** Continued to implement the approved allocations within the Alternative Assets portfolio; and
- **Alternative Assets Benchmark Evaluation:** Updated the alternatives investment benchmark after careful analysis and evaluation. In this process, the alternatives benchmark was updated to reflect the following: 66.7% Russell 3000 Index + 2%, lagged 1 quarter, and 33.3% (50% S&P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%, lagged 1 quarter, as of 7/1/2022.

Callan LLC provides NHRS with strategic planning, implementation, performance monitoring services, and on-going research and education on a variety of relevant topics for institutional investors. The investment performance analysis produced by Callan has been developed using performance evaluation methodologies that are consistent with industry best practices. The performance results presented in this letter are calculated using a time-weighted returns and are reported both net of investment management fees, as well as gross of fees.

Sincerely,



Angel Haddad
Senior Vice President



Britton M. Murdoch
Vice President

**INVESTMENT
REPORTS**

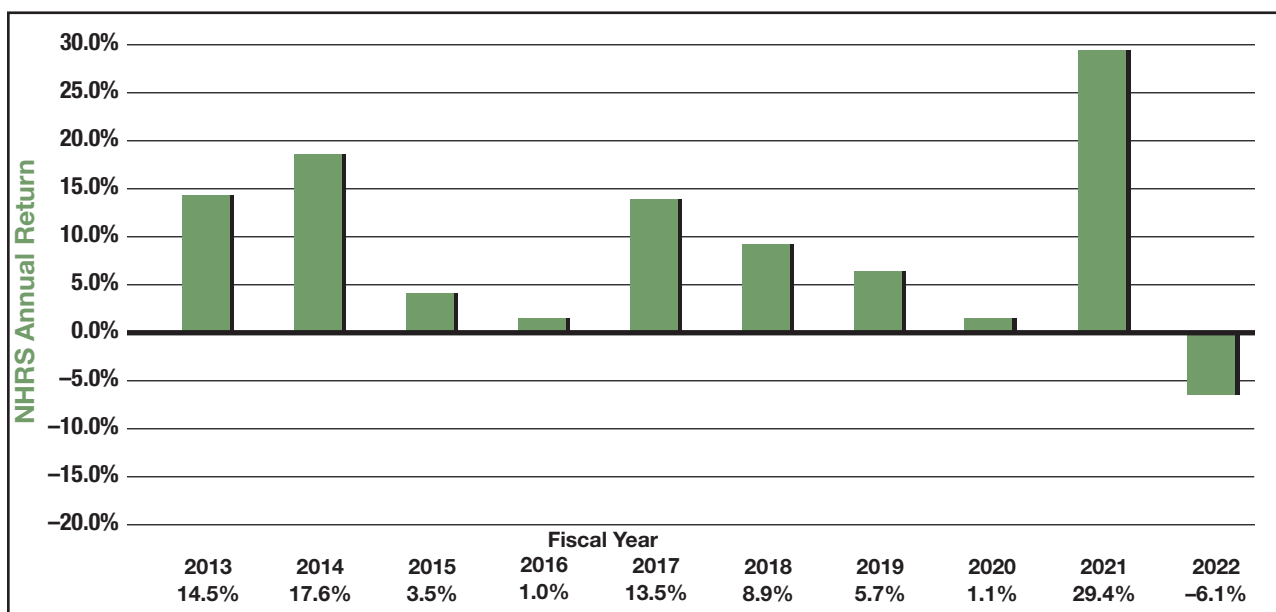
ANNUALIZED INVESTMENT RETURNS—ACTUAL VERSUS INDICES

	Current Year 2022	3 Year	Annualized 5 Year	10 Year
Total NHRS Fund	-6.1%	7.1%	7.2%	8.5%
Total Fund Custom Index*	-9.3	5.7	6.5	8.2
Domestic Equity	-13.5	8.5	9.2	11.7
Total Domestic Equity Blended Benchmark*	-13.9	9.2	10.5	12.7
Non-U.S. Equity	-21.2	0.0	1.9	4.5
Total Non-U.S. Equity Blended Benchmark*	-19.4	1.4	2.5	4.8
Fixed Income	-11.0	0.1	1.4	2.4
Total Fixed Income Blended Benchmark*	-10.9	-0.9	0.9	1.8
Real Estate	29.3	15.8	12.9	13.0
Total Real Estate Blended Benchmark*	28.3	11.7	9.6	10.1
Alternative Investments	8.9	15.1	12.6	10.3
Total Alternative Investments Benchmark*	-6.1	9.9	9.8	12.8
Cash Equivalents	0.2	0.7	1.1	0.7
90 Day T-Bills	0.2	0.6	1.1	0.6

Performance returns are calculated on a net-of-fees time-weighted rate of return basis.

*In a dynamic market, strategies and objectives evolve over time. Consequently, these benchmarks are blended due to historical investment strategy decisions. Detailed descriptions of the benchmarks above are available by contacting NHRS.

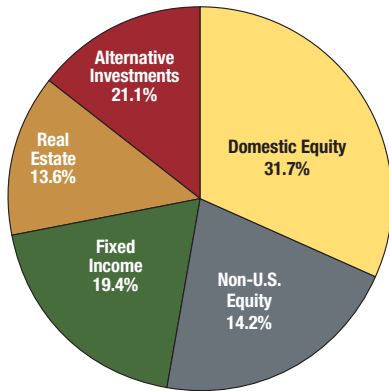
Ten Year History of Time-Weighted Total NHRS Fund Annual Returns



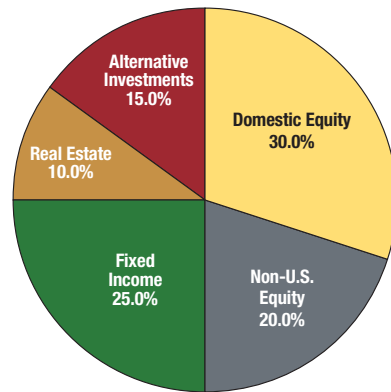
ACTUAL ASSET ALLOCATION VERSUS TARGET ASSET ALLOCATION

	Actual %	As of June 30, 2022	
		Target %	Target Range %
Domestic Equity	31.7%	30.0%	20 – 40
Non-U.S. Equity	14.2%	20.0	15 – 25
Fixed Income	19.4%	25.0	20 – 30
Real Estate	13.6%	10.0	5 – 20
Alternative Investments	21.1%	15.0	5 – 25
TOTAL FUND	100.0%	100.0%	

Actual Asset Allocation as of June 30, 2022



Target Asset Allocation as of June 30, 2022



TEN LARGEST STOCK HOLDINGS BY FAIR VALUE*

(in thousands)

	Shares	Stock	June 30, 2022 Fair Value
1	501,414	Microsoft Corp	\$128,778
2	879,480	Apple Inc.	120,243
3	576,015	Amazon.com Inc.	61,179
4	22,874	Alphabet Inc. – CL C	50,036
5	20,467	Alphabet Inc. – CL A	44,603
6	211,276	Johnson & Johnson	37,504
7	47,950	Tesla Inc.	32,290
8	103,376	Berkshire Hathaway Inc.	28,224
9	88,147	Mastercard Inc.	27,807
10	53,755	UnitedHealth Group Inc.	27,610

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE*

(in thousands)

	Par**	Security	June 30, 2022 Fair Value
1	53,689,000	U.S. Treasury Note – 0.625%, 2026	\$48,689
2	42,430,000	U.S. Treasury Note – Var Rate, 2024	42,397
3	28,875,000	U.S. Treasury Note – Var Rate, 2023	28,922
4	28,197,000	U.S. Treasury Note – 0.375%, 2026	25,639
5	29,935,000	U.S. Treasury Bond – 1.125%, 2040	20,681
6	15,954,000	U.S. Treasury Note – 0.375%, 2024	15,230
7	14,507,000	U.S. Treasury Bond – 3.000%, 2048	13,707
8	16,085,000	U.S. Treasury Bond – 2.250%, 2052	13,237
9	17,070,000	U.S. Treasury Bond – 1.125%, 2040	11,882
10	17,030,000,000	Korea Treasury Bond – 2.000%, 2031	11,430

**A complete listing of separate account portfolio holdings is available by contacting the NHRS offices. NHRS also invests in various commingled investment vehicles, for which the underlying investments are custodied outside of The Bank of NY Mellon (Master Custodian for NHRS), as reported on the Summary of Investments schedule.

**Par value is denoted in local currency.

SCHEDULE OF INVESTMENT MANAGEMENT AND SERVICE FEES

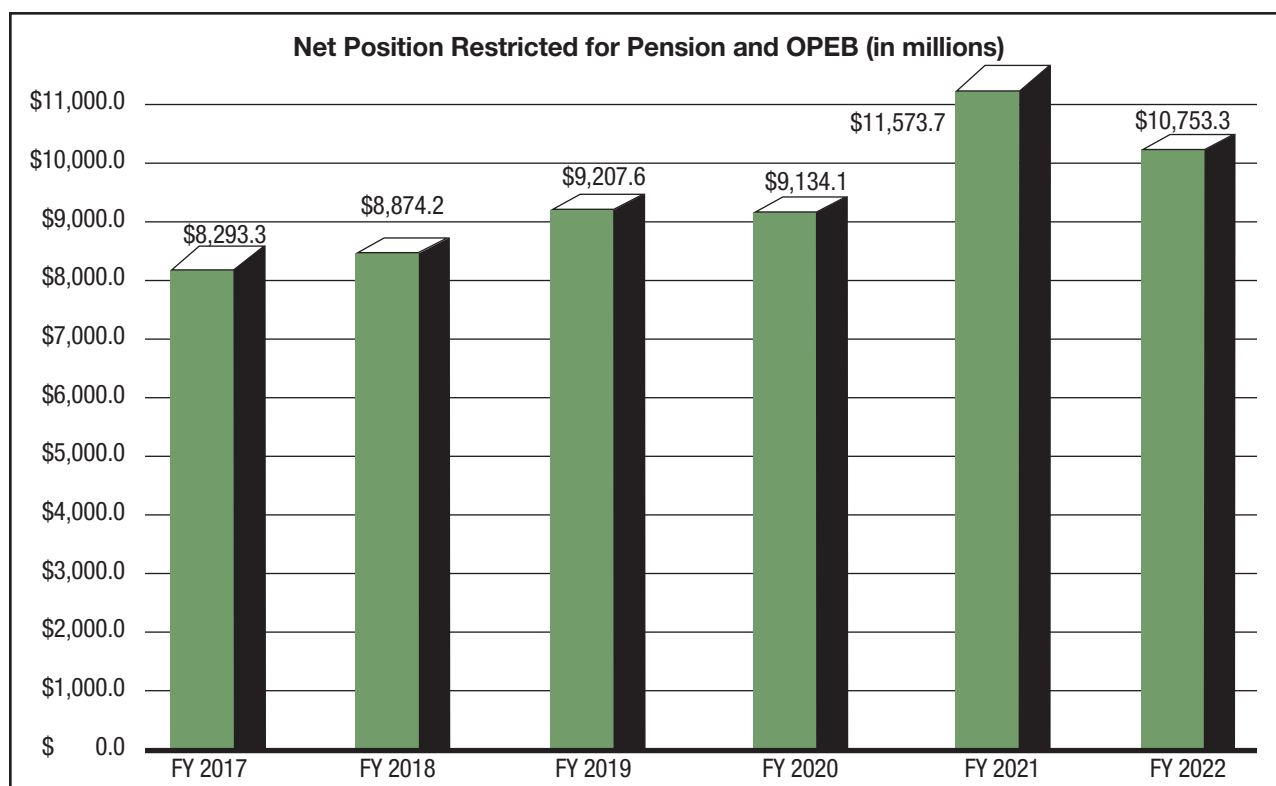
	YEAR ENDED JUNE 30, 2022		
	Assets Under Management (in thousands)	Fees (in thousands)	Average Basis Points
INVESTMENT MANAGEMENT FEES			
Equity Portfolios:			
Domestic	\$ 3,333,078	\$ 10,726	32
Non-U.S.	1,491,582	10,810	72
Fixed Income Portfolios	2,042,616	6,380	31
Alternative Investments*	2,212,722	13,021	59
Real Estate	1,431,776	12,721	89
Cash and Cash Equivalents	139,327	—	—
TOTAL INVESTMENT MANAGEMENT FEES	\$10,651,101	\$ 53,658	50
INVESTMENT SERVICE FEES			
Custodial Fees	\$10,651,101	\$ 707	1
Investment Advisor Fees — External	10,651,101	650	1
Investment Professional Fees	10,651,101	410	1
Investment Administrative Expenses — Internal	10,651,101	731	1
TOTAL INVESTMENT MANAGEMENT AND SERVICE FEES	\$10,651,101	\$ 56,156	53

*The custodian records all transactions on a net of fee basis.

SCHEDULE OF BROKERAGE COMMISSIONS PAID

Brokerage Firm	YEAR ENDED JUNE 30, 2022		
	Number of Shares Traded (in thousands)	Total Commissions (in thousands)	Commissions Per Share
Merrill Lynch & Company Inc.	7,548	\$ 116	0.02
J.P. Morgan	4,890	103	0.02
Morgan Stanley & Company Inc.	4,417	92	0.02
Credit Suisse	5,747	92	0.02
Jefferies & Company, Inc.	6,638	78	0.01
Goldman Sachs & Company	4,414	76	0.02
UBS Securities/Warburg	4,326	65	0.02
Barclay's Capital Inc.	2,850	51	0.02
Liquidnet	3,426	50	0.01
Pershing Securities LTD	3,070	47	0.02
Instinet, Inc.	2,847	45	0.02
Citigroup Global Markets Inc.	3,038	45	0.01
RBC Capital	2,620	33	0.01
Exane	1,387	28	0.02
Bernstein Sanford C & CO, New York	5,042	32	0.01
BTIG LLC	1,266	28	0.02
Wells Fargo Securities LLC	1,459	28	0.02
Cowen and Company LLC	1,774	26	0.01
HSBC Securities	1,600	23	0.01
All Others (108 not listed separately)	26,637	422	0.02
TOTAL BROKERAGE COMMISSIONS PAID	94,996	\$ 1,480	0.02

Commission detail is not included in the schedule above for the commingled funds in which NHRS invests.



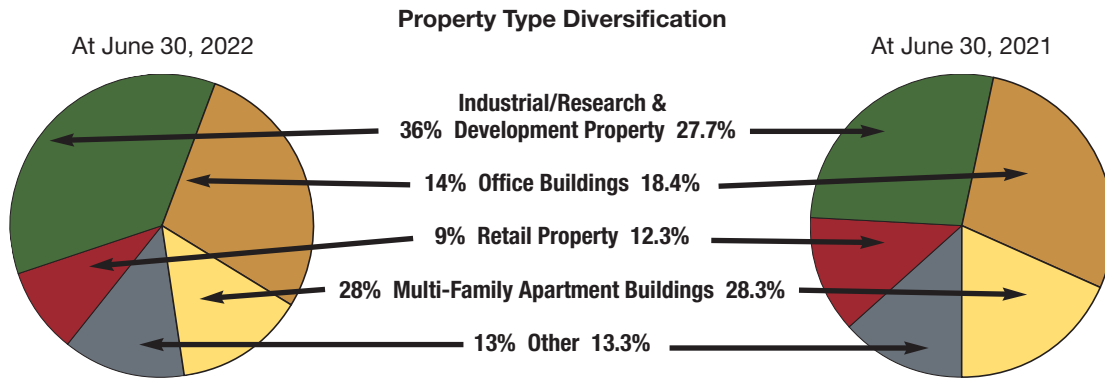
SUMMARY OF INVESTMENTS

TYPE OF INVESTMENT	June 30, 2022	
	Fair Value (in millions)	Percent of Total Fair Value
FIXED INCOME		
Collateralized/Asset Backed Securities	\$ 219.3	2.1%
Corporate Bonds	469.9	4.5%
Government and Agency Bonds	512.7	4.9%
Blackrock Strategic Income Opportunities	246.2	2.4%
Fidelity	349.1	3.4%
Manulife	197.7	1.9%
TOTAL FIXED INCOME	\$ 1,994.9	19.1%
EQUITY		
Consumer Cyclical	\$ 481.5	4.6%
Consumer Non-Cyclical	1,012.5	9.7%
Energy	188.4	1.8%
Financial Services	763.3	7.3%
Diversified	4.8	0.0%
Industrial Materials	530.4	5.1%
Technology	711.8	6.9%
Basic Materials	167.8	1.6%
Communications	338.0	3.3%
Utilities	119.1	1.1%
Ishares Russell 2000 ETF	8.2	0.1%
Neuberger Berman Emerging Markets Equity Fund	164.3	1.6%
Wellington ISCRE	107.9	1.0%
Wellington Emerging Markets Local Equity Fund	153.3	1.5%
TOTAL EQUITY	\$ 4,751.3	45.7%
OTHER INVESTMENTS		
Alternative Investments	\$ 2,212.7	21.3%
Real Estate	1,431.8	13.8%
TOTAL INVESTMENTS	\$ 10,390.7	100.0%

REAL ESTATE INVESTMENTS BY TYPE

(in thousands)

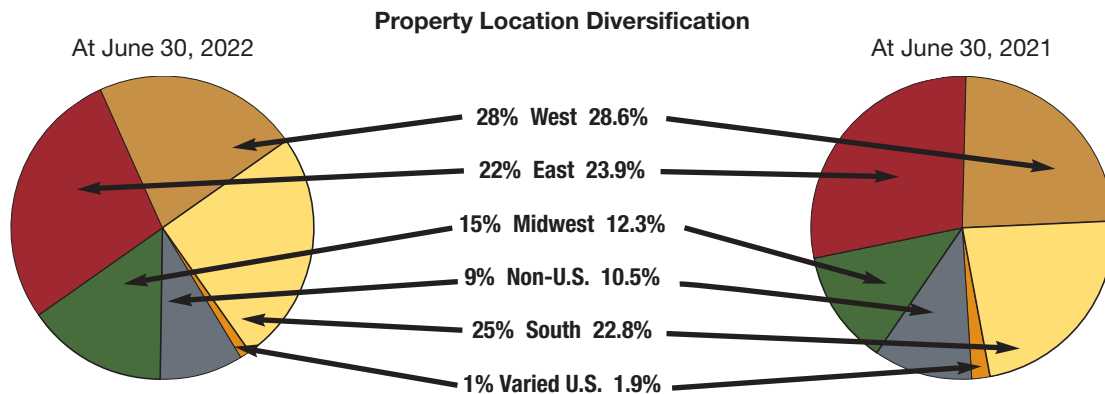
	JUNE 30	
	2022	2021
Office Buildings	\$ 200,449	\$ 207,947
Multi-Family Apartment Buildings	400,897	319,835
Retail Property	128,860	139,009
Industrial/Research & Development Property	515,439	313,054
Other	186,131	150,311
TOTAL REAL ESTATE INVESTMENTS BY TYPE	\$1,431,776	\$1,130,156



REAL ESTATE INVESTMENTS BY LOCATION

(in thousands)

	JUNE 30	
	2022	2021
West	\$ 400,897	\$ 323,225
East	314,991	270,108
South	357,944	257,676
Midwest	214,766	139,009
Varied U.S.	14,318	21,473
Non-U.S.	128,860	118,667
TOTAL REAL ESTATE INVESTMENTS BY LOCATION	\$1,431,776	\$1,130,156



ALTERNATIVE INVESTMENTS	(in thousands)	
	2022	JUNE 30 2021
Growth Equity	\$ 444,461	\$ 425,952
Buyouts	740,855	783,864
Secondaries	333,659	315,600
Mezzanine	5,227	5,285
Distressed	185,086	195,300
Direct Lending Strategies	325,088	363,246
Energy	141,116	118,471
Multisector	22,680	8,270
Specialty Finance	14,550	—
TOTAL ALTERNATIVE INVESTMENTS	\$2,212,722	\$2,215,988

NET APPRECIATION (DEPRECIATION) IN FAIR VALUE OF INVESTMENTS	(in thousands)	
	2022	YEAR ENDED JUNE 30 2021
Equity Investments:		
Domestic	\$ (522,094)	\$1,133,238
Non-U.S.	(485,542)	524,973
Fixed Income Investments	(285,185)	88,692
Temporary Investments	77	(4)
Real Estate	293,564	139,227
Growth Equity	46,796	157,484
Buyouts	2,981	267,263
Secondaries	27,955	131,936
Mezzanine	349	(354)
Distressed	12,035	19,989
Direct Lending	8,423	15,282
Energy	36,032	17,670
Multisector	(248)	770
Specialty Finance	1,280	—
TOTAL NET APPRECIATION (DEPRECIATION) IN FAIR VALUE OF INVESTMENTS	\$ (863,577)	\$2,496,167

ALTERNATIVE INVESTMENT INCOME (LOSS) (in thousands)

	YEAR ENDED JUNE 30	
	2022	2021
Distressed	\$ 5,684	\$ 4,725
Secondaries	1,853	575
Direct Lending	22,045	29,415
Energy	17,002	2,492
Mezzanine	49	853
Buyouts	2,597	6,902
Growth Equity	15,614	2,429
Multisector	(191)	(143)
Specialty Finance	(51)	—
TOTAL ALTERNATIVE INVESTMENT INCOME*	\$ 64,602	\$ 47,249

*Other alternative investment types not listed above had no income (loss) for either of the years reported.

REAL ESTATE INVESTMENTS INCOME AND EXPENSES (in thousands)

	NET INCOME	
	YEAR ENDED JUNE 30	
	2022	2021
Office Buildings	\$ 4,697	\$ 2,788
Multi-Family Apartment Buildings	7,224	4,288
Retail Property	3,139	1,864
Industrial/Research & Development Property	7,070	4,196
Hotels	128	76
Other	3,267	1,939
TOTAL	\$ 25,525	\$ 15,151

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NEW HAMPSHIRE RETIREMENT SYSTEM

ACTUARIAL SECTION

[CLICK HERE TO RETURN TO TABLE OF CONTENTS](#)

ACTUARIAL CERTIFICATION



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November 7, 2022

Board of Trustees
New Hampshire Retirement System
54 Regional Drive
Concord, New Hampshire 03301-8509

Attention: Ms. Jan Goodwin, Executive Director

Dear Board Members:

This report was prepared at the request of the Board and is intended for use by the New Hampshire Retirement System (“NHRS”) and those designated or approved by the Board. This report may be provided to parties other than the NHRS only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report. This report should not be relied on for any purpose other than the purposes described below:

The purposes of this report are:

- To provide information in connection with Governmental Accounting Standards Board (GASB) Statement No. 67 “Financial Reporting for Pension Plans” as of June 30, 2022.
- To provide information in connection with Governmental Accounting Standards Board (GASB) Statement No. 74 “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans” as of June 30, 2022.
- To provide supporting schedules for the Annual Comprehensive Financial Report for the System’s use in the Actuarial Section, the Statistical Section, Notes to the Financial Statements, and Required Supplementary Information.

The report was based upon information, furnished by New Hampshire Retirement System staff, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries as of June 30, 2022. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the data provided by NHRS.

We prepared the following supporting schedules for the Annual Comprehensive Financial Report of the NHRS for use in the Actuarial Section, the Statistical Section, Notes to the Financial Statements and Required Supplementary Information:

- Summary of Actuarial Assumptions and Methods
 - Percent Retiring Within Next Year
 - Probabilities of Becoming Disabled Within Next Year
 - Percent Separating Within Next Year
 - Individual Employee Pay Increases
- Retirees and Beneficiaries Age Distribution
- Active Members by Valuation Division
- Active Members Age and Service Distribution
- Historical Membership Data – Active and Retired
- Summary of Membership Data by Category
- Schedule of Average Benefit Payment Amounts

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723

- Schedule of Retired and Vested Members by Type of Benefit
- Solvency Test
- Schedule of Employer Contributions – Pension and OPEB
- Schedule of Changes in the Employers' Net Pension Liability, Net OPEB Liability and Related Ratios
- Sensitivity of Net Pension Liability and Net OPEB Liability to the Single Discount Rate Assumption

The schedules include information regarding pension plan funding under the New Hampshire Statute RSA 100-A:16. The basic financial objective of the New Hampshire Retirement System (NHRS) is to establish and receive pension contributions which:

- When expressed in terms of percents of active member payroll will remain approximately level from generation to generation; and
- When combined with present assets and future investment return will be sufficient to meet the financial obligations of NHRS to present and future retirees and beneficiaries.

The financial objective for medical subsidy benefits under RSA 100-A:53, 53-b, 53-c and 53-d is to contribute the lesser of 25 percent of the total employer contribution or the minimum amount necessary to maintain the benefit. RSA 100-A:16 requires biennial actuarial valuations on June 30 of odd years. The Board has adopted an Actuarial Funding Policy which requires annual actuarial valuations. The financial objectives are addressed within the statutory biennial actuarial valuation. The valuation process develops pension contribution rates that are sufficient to fund the plan's current pension cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund pension unfunded actuarial accrued liabilities as a level percent of active member payroll over a closed 30-year period beginning with the fiscal year ending June 30, 2010.

Legislation was enacted in 2018 which requires the unfunded liability as of June 30, 2017 to be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

The actuarial calculations for funding purposes as of June 30, 2022 in this report are based on the assumptions adopted by the Board pursuant to the June 30, 2019 experience study and the census information as of June 30, 2022. The actuarial accrued liability as of June 30, 2022 differs from the total pension (OPEB) liability as of June 30, 2022 under GASB Statement Nos. 67 and 74 because the total pension (OPEB) liability is based on a roll-forward of the June 30, 2021 actuarial valuation under the System's accounting procedures.

For funding purposes, assets are valued on a market related basis that recognizes each year's difference between actual and assumed investment return over a closed five-year period. For GASB Statement Nos. 67 and 74 purposes, assets are reported and used on a market basis.

The actuarial valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The actuarial assumptions are established by the Board after consulting with the actuary under New Hampshire Statute RSA 100-A:14 IX. The assumptions and methods used in this report are reasonable and appropriate for funding purposes and conform to the Actuarial Standards of Practice. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial. The actuarial funding method is the Individual Entry Age Actuarial Cost Method, in compliance with NHRS State Statutes. The actuarial assumptions and the methods comply with the requirements of Statement Nos. 67 and 74 of the Governmental Accounting Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. Actuarial methods and assumptions were adopted by the Board pursuant to the June 30, 2019 Experience Study.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.



We certify that the information contained in this June 30, 2022 accounting report of the NHRS is accurate and fairly presents the actuarial position of the New Hampshire Retirement System as of June 30, 2022 under the current actuarial assumptions. For funding purposes, all calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes RSA 100- A:16, 100-A:53, 100-A:53-b, 100-A:53-c, and 100-A:53-d.

Future actuarial measurements may differ significantly from the current measurements presented in this report 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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The actuaries submitting this report are independent of the plan sponsor, are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

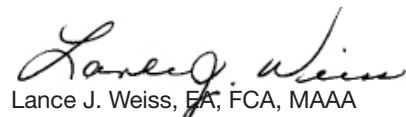
Respectfully submitted,
Gabriel, Roeder, Smith & Company



Heidi G. Barry, ASA, FCA, MAAA



Jeffrey T. Tebeau, FSA, EA, FCA, MAAA



Lance J. Weiss, EA, FCA, MAAA



SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION METHODS

PENSION

Actuarial Cost Methods — Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an Individual Entry-Age Actuarial Cost Method having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gain/(losses), as they occur, reduce (increase) the unfunded actuarial accrued liability.

Financing of Unfunded Actuarial Accrued Liabilities — Unfunded Actuarial Accrued Liabilities are amortized by level (principal & interest combined) percent-of-payroll contributions from the contribution effective date. The unfunded liability as of June 30, 2017 shall be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

OPEB

- (i) Liabilities are determined under the entry-age actuarial cost method.
- (ii) Contribution rates to the 401(h) sub-trust are determined as the lesser of 25% of the employers' contributions or the actuarial required contribution rate that keeps the medical subsidy sub-trust solvent (the "solvency rate").

Actuarial Value of Assets — The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than fair value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than fair value. The funding value of assets is unbiased with respect to fair value. At any time it may be either greater or less than fair value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to fair value. Funding value was limited to a 20% corridor around the fair value.

The actuarial value of assets allocated to the pension and medical subsidy plan is based on the fair value of those plans. The actuarial value of assets was then further allocated to each fund (either pension or medical subsidy) based on the fair value of those funds.

For purposes of determining the medical subsidy solvency rate, the fair value of assets was used for all group funds due to the short time horizon before these closed group funds are expected to become pay-as-you-go.

Development of Amortization Payment — The employer contribution rates determined by the 2019 valuation are for the 2022-2023 biennium. The Unfunded Actuarial Accrued Liability (UAAL) was determined using the Actuarial Value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level percent of pay required to fully amortize the UAAL over multiple periods beginning on July 1, 2021. This UAAL payment reflects any payments expected to be made and interest to be accrued between the valuation date and the date contributions determined by the June 30, 2019 Funding report are scheduled to begin. It was assumed that the entire pension contribution as determined by the June 30, 2017 valuation effective from July 1, 2019 to June 30, 2021 would be contributed to the net pension assets. The unfunded liability as of June 30, 2017 shall be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuation is 6.75% per year, compounded annually (net after investment expenses). The investment return rate assumed in the medical subsidy valuations is 2.75% per year, compounded annually (net after investment expenses) for purposes of computing accrued liabilities and other disclosures required by GASB Statement No. 74. However, for determining the solvency contribution rate for the medical subsidy account, the investment return rate assumption was 6.75% on the fair value of assets.

The wage inflation rate assumed in this valuation was 2.75% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

The price inflation assumption is 2.0% per year.

The assumed real rate of return over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 6.75% investment return rate translates to an assumed real rate of return over wage inflation of 4.00%. The assumed real rate of return over price inflation would be higher — on the order of 4.75%, with a 2.0% price inflation assumption.

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate — 2.75% per year. For Teachers, the active member population is assumed to decline by 0.50% per year. For purposes of financing the unfunded liabilities, total payroll for Teachers is assumed to grow at the wage inflation rate minus 0.50% which is 2.75% per year.

Pay increase assumptions for individual active members are shown for sample ages on pages 75–79. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.25% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces.

TECHNICAL ASSUMPTIONS

Administrative & Investment Expenses	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's administrative expenses. Assumed administrative expenses are added to the Normal Cost, and were 0.35% of payroll in the June 30, 2022 interim valuation.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
COLA	None assumed.
Decrement Operation	Disability and turnover decrements do not operate during normal retirement eligibility for Group I and Group II members. They do operate for early retirement for Group I members.
Decrement Timing	Normal and early retirement decrements for the Teachers group are assumed to occur at the beginning of the year. All other decrements were assumed to occur mid-year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll, and the actual payroll payable at the time contributions are made.
Liability Adjustments	Normal, early, and vesting retirement liabilities are increased by 8.5%, 5.5%, 11.0%, and 12.0% for Employees, Teachers, Police, and Fire respectively to account for end of career pay increases. Members hired after July 1, 2011 or who have non-vested status as of January 1, 2012 are assumed to have no adjustment for end of career payments.
Marriage Assumption	Group I: 55% of males and 55% of females are assumed to be married for purposes of death-in-service benefits. Group II: 65% of males and 65% of females are assumed to be married for purposes of death-in-service and death after retirement benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Normal Form of Benefit	This valuation assumes that members will elect the normal form of payment. Alternate forms of payment are available and are actuarially adjusted based on the valuation interest and mortality. Group I: The assumed normal form of benefit is a straight life benefit. Group II: The assumed normal form of benefit is straight life for single members and joint and 50% survivor for married members.
Pay Increase Timing	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
New Entrant Profile	For purposes of projecting the normal cost to the beginning of the rate setting biennium, the new entrant profile is based on actual members with 3–8 years of service on the valuation date.
Service Credit Accruals	It is assumed that members accrue one year of service credit per year.
Data Adjustments	New active member pays were annualized.
Medical Subsidy	The solvency rates for the medical subsidy benefits were determined to provide an estimated margin of 20% of the benefits (50% for Teachers) by the end of the first year of the biennium and thereafter. The margin is intended to mitigate the risk of insolvency due to adverse experience.

GROUP I—EMPLOYEES

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, death, disability, and normal retirement are as follows:

Age	Years of Service	Annual Rate of					
		Withdrawal and Vesting		Death*		Disability**	
		Men	Women	Men	Women	Men	Women
	0	27.00%	27.00%				
	1	21.00	21.00				
	2	15.00	15.00				
	3	12.00	12.00				
	4	10.00	10.00				
25	5+	8.26	8.26	.08%	.01%	.011%	.011%
30		6.84	6.84	.05	.02	.014	.014
35		5.74	5.74	.07	.03	.018	.018
40		4.97	4.97	.08	.04	.038	.038
45		4.39	4.39	.10	.06	.072	.072
50		3.81	3.81	.14	.08	.015	.150
55		3.48	3.48	.21	.13	.281	.281
60		3.23	3.23	—	—	—	—

Age	Annual Rate of Normal Retirement			
	For Members Hired Prior to July 1, 2011		For Members Hired On or After July 1, 2011	
	Men	Women	Men	Women
60	10.80%	10.80%	—	—
61	10.10	10.50	—	—
62	15.50	13.90	—	—
63	16.10	13.60	—	—
64	13.50	14.30	—	—
65	17.10	19.20	45.00%	44.00%
66	24.80	24.00	45.00	44.00
67	23.10	23.70	23.00	22.00
68	19.80	20.20	21.00	18.00
69	18.80	20.10	20.00	19.00
70	100.00	100.00	100.00	100.00

*98% are assumed to be ordinary death and 2% are assumed to be accidental death.
 **50% are assumed to be ordinary disability and 50% are assumed to be accidental disability.

SALARY INCREASES: Representative values of the assumed rates of future salary increases are as follows:

Service Index	Merit & Seniority	Base	Annual Rate of Salary Increases
1	12.00%	2.75%	14.75%
2	6.00	2.75	8.75
3	3.00	2.75	5.75
4	2.75	2.75	5.50
5	2.50	2.75	5.25
6	2.25	2.75	5.00
7	2.00	2.75	4.75
8	1.75	2.75	4.50
9	1.50	2.75	4.25
10	1.25	2.75	4.00
11	1.00	2.75	3.75
12-25	0.75	2.75	3.50

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.07%	.03%	60	.65%	.45%
40	.09	.05	65	.93	.65
45	.11	.07	70	1.44	1.04
50	.28	.23	75	2.44	1.86
55	.42	.33	80	4.40	3.42

GROUP I—TEACHERS

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, death, disability, and normal retirement are as follows:

Age	Years of Service	Annual Rate of					
		Withdrawal and Vesting		Death*		Disability**	
		Men	Women	Men	Women	Men	Women
	0	25.00%	25.00%				
	1	15.00	15.00				
	2	12.00	12.00				
	3	10.00	10.00				
	4	8.00	8.00				
25	5+	7.70	7.70	.02%	.01%	.00%	.00%
30		6.00	6.00	.03	.02	.01	.00
35		4.60	4.60	.04	.03	.01	.01
40		3.70	3.70	.05	.04	.01	.01
45		2.80	2.80	.07	.05	.02	.02
50		2.40	2.40	.10	.07	.05	.05
55		2.30	2.30	.17	.11	.09	.09
60		2.30	2.30	—	—	—	—

*98% are assumed to be ordinary death and 2% are assumed to be accidental death.

**50% are assumed to be ordinary disability and 50% are assumed to be accidental disability.

Age	Annual Rate of Normal Retirement			
	For Members Hired Prior to July 1, 2011		For Members Hired On or After July 1, 2011	
	Men	Women	Men	Women
60	16.00%	13.00%	—	—
61	16.00	14.00	—	—
62	20.00	18.00	—	—
63	16.00	19.00	—	—
64	20.00	19.00	—	—
65	24.50	28.00	58.00%	56.00%
66	32.00	35.00	58.00	56.00
67	28.00	32.00	25.00	27.00
68	28.00	28.00	25.00	27.00
69	28.00	30.00	25.00	27.00
70	100.00	100.00	100.00	100.00

SALARY INCREASES: Representative values of the assumed rates of future salary increases are as follows:

Service Index	Merit & Seniority	Base	Annual Rate of Salary Increases
1	8.00%	2.75%	10.75%
2	8.00	2.75	10.75
3	4.00	2.75	6.75
4	3.50	2.75	6.25
5	3.25	2.75	6.00
6	3.00	2.75	5.75
7	2.75	2.75	5.50
8	2.50	2.75	5.25
9	2.25	2.75	5.00
10	2.00	2.75	4.75
11	1.75	2.75	4.50
12	1.50	2.75	4.50
13	1.25	2.75	4.00
14–25	1.00	2.75	3.75

DEATHS AFTER RETIREMENT:

MORTALITY RATE			MORTALITY RATE		
AGE	MEN	WOMEN	AGE	MEN	WOMEN
35	.04%	.03%	60	.38%	.32%
40	.05	.04	65	.61	.45
45	.07	.05	70	1.02	.73
50	.11	.08	75	1.88	1.39
55	.22	.21	80	3.58	2.77

GROUP II – POLICE OFFICERS

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal, vesting, death, disability, and retirement are as follows:

Age	Years of Service	Annual Rate of					
		Withdrawal and Vesting		Death*		Disability**	
		Men	Women	Men	Women	Men	Women
	0	25.00%	25.00%				
	1	16.00	16.00				
	2	10.50	10.50				
	3	7.00	7.00				
	4	5.50	5.50				
25	5+	6.58	6.58	.04%	.03%	.01%	.01%
30		4.97	4.97	.06	.04	.01	.01
35		3.84	3.84	.07	.05	.03	.03
40		2.99	2.99	.07	.06	.06	.06
45		2.39	2.39	.08	.07	.11	.11
50		2.03	2.03	.11	.09	.18	.18
55		1.88	1.88	.17	.13	.27	.27
60		1.88	1.88	—	—	—	—

SALARY INCREASES: Representative values of the assumed rates of future salary increases are as follows:

Service Index	Merit & Seniority	Base	Annual Rate of Salary Increases
1	25.00%	2.75%	27.75%
2	19.00	2.75	21.75
3	6.00	2.75	8.75
4	4.50	2.75	7.25
5	3.50	2.75	6.25
6	2.75	2.75	5.50
7	2.25	2.75	5.00
8	1.80	2.75	4.55
9-25	1.80	2.75	4.25

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.06%	.05%	60	.51%	.47%
40	.08	.06	65	.85	.74
45	.12	.09	70	1.41	1.19
50	.17	.14	75	2.46	2.06
55	.29	.27	80	4.47	3.67

NORMAL RETIREMENT

For Members Hired Prior to July 1, 2011 Who Have Vested Status as of January 1, 2012

For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012

Retirement Ages	% of Active Members Retiring Within Next Year	Age 46 with 21 years	Age 47 with 22 years	Age 48 with 23 years	Age 49 with 24 years	Age 50 with 25 years
45	21%					
46	21%	27%				
47	21%	27%	31%			
48	21%	25%	31%	34%		
49	21%	25%	31%	34%	38%	
50	21%	25%	27%	34%	38%	40%
51	21%	21%	27%	31%	38%	40%
52	21%	21%	21%	31%	33%	40%
53	21%	21%	21%	21%	33%	38%
54	21%	21%	21%	21%	21%	38%
55	21%	21%	21%	21%	21%	21%
56	21%	21%	21%	21%	21%	21%
57	21%	21%	21%	21%	21%	21%
58	21%	21%	21%	21%	21%	21%
59	21%	21%	21%	21%	21%	21%
60	21%	21%	21%	21%	21%	21%
61	21%	21%	21%	21%	21%	21%
62	21%	21%	21%	21%	21%	21%
63	21%	21%	21%	21%	21%	21%
64	21%	21%	21%	21%	21%	21%
65	21%	21%	21%	21%	21%	21%
66	21%	21%	21%	21%	21%	21%
67	21%	21%	21%	21%	21%	21%
68	21%	21%	21%	21%	21%	21%
69	21%	21%	21%	21%	21%	21%
70	100%	100%	100%	100%	100%	100%

GROUP II – FIREFIGHTERS

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, death, disability, and retirement are as follows:

Age	Years of Service	Annual Rate of					
		Withdrawal and Vesting		Death*		Disability**	
		Men	Women	Men	Women	Men	Women
	0	7.25%	7.25%				
	1	5.00	5.00				
	2	2.50	2.50				
	3	2.00	2.00				
	4	1.50	1.50				
25	5+	1.15	1.15	.04%	.03%	.04%	.04%
30		1.15	1.15	.06	.04	.05	.05
35		1.15	1.15	.07	.05	.06	.06
40		1.15	1.15	.07	.06	.09	.09
45		1.15	1.15	.08	.07	.13	.13
50		1.15	1.15	.11	.09	.18	.18
55		1.15	1.15	.17	.13	.28	.28
60		1.15	1.15	—	—	—	—

SALARY INCREASES: Representative values of the assumed rates of future salary increases are as follows:

Service Index	Merit & Seniority	Base	Annual Rate of Salary Increases
1	25.00%	2.75%	27.75%
2	15.00	2.75	17.75
3	7.00	2.75	9.75
4	5.00	2.75	7.75
5	3.75	2.75	6.50
6	2.50	2.75	5.25
7	2.00	2.75	4.75
8	1.50	2.75	4.25
9-25	1.00	2.75	3.75

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.06%	.05%	60	.51%	.47%
40	.08	.06	65	.85	.74
45	.12	.09	70	1.41	1.19
50	.17	.14	75	2.46	2.06
55	.29	.27	80	4.47	3.67

NORMAL RETIREMENT

For Members Hired Prior to July 1, 2011 Who Have Vested Status as of January 1, 2012

For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012

Retirement Ages	% of Active Members Retiring Within Next Year	Age 46 with 21 years	Age 47 with 22 years	Age 48 with 23 years	Age 49 with 24 years	Age 50 with 25 years
45	11%					
46	11%	15%				
47	11%	15%	18%			
48	11%	15%	18%	22%		
49	1%	15%	18%	22%	26%	
50	16%	15%	18%	21%	26%	30%
51	16%	16%	18%	21%	26%	30%
52	16%	16%	16%	21%	21%	30%
53	16%	16%	16%	17%	21%	22%
54	16%	16%	16%	17%	16%	22%
55	19%	19%	19%	19%	19%	19%
56	19%	19%	19%	19%	19%	19%
57	19%	19%	19%	19%	19%	19%
58	19%	19%	19%	19%	19%	19%
59	19%	19%	19%	19%	19%	19%
60	23%	23%	23%	23%	23%	23%
61	23%	23%	23%	23%	23%	23%
62	23%	23%	23%	23%	23%	23%
63	23%	23%	23%	23%	23%	23%
64	23%	23%	23%	23%	23%	23%
65	28%	28%	28%	28%	28%	28%
66	28%	28%	28%	28%	28%	28%
67	28%	28%	28%	28%	28%	28%
68	28%	28%	28%	28%	28%	28%
69	28%	28%	28%	28%	28%	28%
70	100%	100%	100%	100%	100%	100%

HISTORICAL MEMBERSHIP DATA — ACTIVE AND RETIRED

The following 4 tables summarize the actuarial valuation data for the period from 2013 through 2022. Valuations are prepared biennially on all odd numbered years. Interim valuations are prepared in even numbered years.

EMPLOYEES (aggregate compensation and annual allowance dollars in thousands)

ACTIVE MEMBERSHIP DATA

FISCAL YEAR	NUMBER OF ACTIVES*	AGGREGATE COMPENSATION	AVERAGE COMPENSATION	% INCREASE IN AVERAGE COMPENSATION
2022	24,644	\$1,367,483	\$ 55,489	4.70%
2021	24,558	1,300,926	52,974	2.25%
2020	24,602	1,274,597	51,810	2.60%
2019	24,654	1,244,930	50,496	2.70%
2018	24,511	1,205,121	49,167	2.03%
2017	24,478	1,179,518	48,187	3.97%
2016	24,520	1,136,451	46,348	(0.14%)
2015	24,298	1,127,766	46,414	4.66%
2014	25,545	1,088,508	44,347	1.94%
2013	24,809	1,079,245	43,502	(0.03%)

*Excludes temporary inactive members.

RETIRED MEMBERSHIP DATA

FISCAL YEAR	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS END OF YEAR		% INCREASE IN ANNUAL ALLOWANCES
	NO.**	ANNUAL* ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES	
2022	1,420	\$27,960	715	\$ 8,699	20,751	\$311,377	6.59%
2021	1,240	\$23,179	628	7,217	20,046	292,113	5.78%
2020	1,208	20,619	598	7,641	19,434	276,154	4.93%
2019	1,271	21,869	640	7,801	18,824	263,177	5.65%
2018	1,133	19,288	513	6,556	18,193	249,109	5.39%
2017	1,950	22,224	519	8,977	17,573	236,377	5.94%
2016	1,134	19,332	475	4,636	16,142	223,130	7.05%
2015	1,504	21,357	1,335	10,968	15,483	208,434	5.25%
2014	1,094	15,784	492	5,431	15,314	198,045	5.52%
2013	1,110	16,335	539	6,699	14,712	187,692	5.41%

*Includes additional COLA allowances. The benefit amounts shown are the monthly benefits as of the valuation date annualized and are not the actual benefits paid during the fiscal year.

**Includes beneficiaries in receipt but excludes deferred vested terminations.

TEACHERS

(aggregate compensation and annual allowance dollars in thousands)

ACTIVE MEMBERSHIP DATA

FISCAL YEAR	NUMBER OF ACTIVES*	AGGREGATE COMPENSATION	AVERAGE COMPENSATION	% INCREASE IN AVERAGE COMPENSATION
2022	18,217	\$1,226,570	\$ 67,331	1.90%
2021	18,131	1,198,236	66,088	2.00%
2020	17,917	1,160,884	64,792	1.16%
2019	17,730	1,135,607	64,050	1.86%
2018	17,883	1,117,581	62,494	2.56%
2017	17,617	1,073,447	60,932	1.69%
2016	17,784	1,065,621	59,920	1.15%
2015	17,732	1,050,447	59,240	3.06%
2014	17,986	1,033,867	57,482	(0.04%)
2013	18,084	1,039,934	57,506	0.75%

*Excludes temporary inactive members.

RETIRED MEMBERSHIP DATA

FISCAL YEAR	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS END OF YEAR		% INCREASE IN ANNUAL ALLOWANCES
	NO.**	ANNUAL* ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES	
2022	815	\$24,908	346	\$7,540	15,154	\$331,167	5.20%
2021	754	20,941	267	6,110	14,685	333,799	4.65%
2020	718	19,654	260	6,213	14,198	318,968	4.40%
2019	774	20,617	257	6,371	13,740	305,527	4.89%
2018	766	20,526	239	6,075	13,223	291,281	5.22%
2017	1,523	21,713	237	8,847	12,696	276,830	4.87%
2016	760	19,954	209	5,325	11,410	263,964	5.87%
2015	840	21,653	946	6,891	10,859	249,335	6.25%
2014	744	17,222	186	4,802	10,965	234,663	5.59%
2013	698	15,844	247	5,860	10,407	222,243	4.70%

*Includes additional COLA allowances. The benefit amounts shown are the monthly benefits as of the valuation date annualized and are not the actual benefits paid during the fiscal year.

**Includes beneficiaries in receipt but excludes deferred vested terminations.

POLICE OFFICERS (aggregate compensation and annual allowance dollars in thousands)

ACTIVE MEMBERSHIP DATA

FISCAL YEAR	NUMBER OF ACTIVES*	AGGREGATE COMPENSATION	AVERAGE COMPENSATION	% INCREASE IN AVERAGE COMPENSATION
2022	4,103	\$ 336,500	\$ 82,013	4.80%
2021	4,184	327,342	78,237	3.09%
2020	4,256	322,994	75,891	2.22%
2019	4,216	313,016	74,245	3.11%
2018	4,221	302,767	71,729	2.32%
2017	4,151	291,004	70,105	3.42%
2016	4,139	280,577	67,789	1.22%
2015	4,174	279,555	66,975	3.15%
2014	4,166	270,497	64,930	1.91%
2013	4,187	266,775	63,715	0.20%
2012	4,118	261,865	63,590	1.20%
2011	4,130	259,509	62,835	2.86%

*Excludes temporary inactive members.

RETIRED MEMBERSHIP DATA

FISCAL YEAR	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS END OF YEAR		% INCREASE IN ANNUAL ALLOWANCES
	NO.**	ANNUAL* ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES	
2022	332	\$16,013	115	\$3,094	4,644	\$181,995	7.64%
2021	287	13,480	87	2,311	4,427	169,076	7.07%
2020	209	8,967	64	1,720	4,227	157,907	4.81%
2019	230	9,739	71	1,595	4,082	150,660	5.71%
2018	201	7,967	64	1,390	3,923	142,516	4.85%
2017	233	7,985	76	1,745	3,786	135,930	4.81%
2016	239	10,027	67	1,339	3,629	129,690	7.18%
2015	282	7,303	107	1,675	3,457	121,002	4.88%
2014	178	6,420	59	1,304	3,282	115,374	4.64%
2013	247	8,189	65	1,464	3,163	110,258	6.50%
2012	171	6,977	70	1,008	2,981	103,533	6.12%
2011	237	10,370	59	1,133	2,880	97,564	10.46%

*Includes additional COLA allowances. The benefit amounts shown are the monthly benefits as of the valuation date annualized and are not the actual benefits paid during the fiscal year.

**Includes beneficiaries in receipt but excludes deferred vested terminations.

FIREFIGHTERS (aggregate compensation and annual allowance dollars in thousands)

ACTIVE MEMBERSHIP DATA

FISCAL YEAR	NUMBER OF ACTIVES*	AGGREGATE COMPENSATION	AVERAGE COMPENSATION	% INCREASE IN AVERAGE COMPENSATION
2022	1,723	\$ 147,032	\$ 85,335	(0.40%)
2021	1,709	146,464	85,702	7.2%
2020	1,704	136,234	79,949	2.66%
2019	1,688	131,453	77,875	0.51%
2018	1,667	128,883	77,314	2.54%
2017	1,640	123,643	75,392	3.23%
2016	1,626	118,754	73,034	0.15%
2015	1,608	117,263	72,925	2.07%
2014	1,610	115,027	71,445	(0.78%)
2013	1,608	115,788	72,007	2.39%
2012	1,599	112,456	70,329	4.36%
2011	1,603	108,028	67,391	1.75%

*Excludes temporary inactive members.

RETIRED MEMBERSHIP DATA

FISCAL YEAR	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS END OF YEAR		% INCREASE IN ANNUAL ALLOWANCES
	NO.**	ANNUAL* ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES (IN DOLLARS)	NO.	ANNUAL ALLOWANCES	
2022	95	\$6,091	45	\$1,327	1,866	\$82,758	6.11%
2021	117	6,882	54	1,402	1,816	77,994	7.56%
2020	87	4,289	40	1,048	1,753	72,514	4.68%
2019	80	3,992	47	1,244	1,706	69,273	4.13%
2018	68	3,266	34	717	1,673	66,525	3.98%
2017	88	3,697	44	1,213	1,639	63,976	4.04%
2016	75	4,177	31	936	1,595	61,492	5.56%
2015	105	4,546	47	882	1,551	58,251	6.71%
2014	89	2,774	43	1,139	1,493	54,587	3.09%
2013	98	3,497	27	715	1,447	52,952	5.55%
2012	79	3,105	39	495	1,376	50,170	5.49%
2011	111	5,051	29	696	1,336	47,560	10.08%

*Includes additional COLA allowances. The benefit amounts shown are the monthly benefits as of the valuation date annualized and are not the actual benefits paid during the fiscal year.

**Includes beneficiaries in receipt but excludes deferred vested terminations.

TOTAL OF ALL GROUPS

(dollars in thousands)

Fiscal Year	Projected Liabilities For				Net Position Held For Benefits	Percentage of Accrued Liabilities Covered By Net Position Held for Benefits		
	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)*	(1)		(2)	(3)	
2022	\$3,036,430	\$9,678,163	\$3,828,894	\$10,849,694	100.00%	81.00%	0.00%	
2021	\$3,087,943	\$9,151,819	\$3,751,453	\$10,268,313	100.00%	78.00%	0.00%	
2020	\$3,119,450	\$8,739,587	\$3,628,978	\$9,447,838	100.00%	72.00%	0.00%	
2019	\$3,019,358	\$7,945,717	\$3,110,269	\$9,121,933	100.00%	77.00%	0.00%	
2018	\$2,927,793	\$7,667,448	\$3,107,908	\$8,710,939	100.00%	75.00%	0.00%	
2017	\$2,915,811	\$7,315,440	\$2,997,199	\$8,165,685	100.00%	72.00%	0.00%	
2016	\$2,978,817	\$6,964,227	\$2,789,821	\$7,636,066	100.00%	67.00%	0.00%	
2015	\$2,886,196	\$3,210,280	\$1,820,582	\$4,862,256	100.00%	82.00%	0.00%	

EMPLOYEES

(dollars in thousands)

Fiscal Year	Projected Liabilities For				Net Position Held For Benefits	Percentage of Accrued Liabilities Covered By Net Position Held for Benefits		
	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)*	(1)		(2)	(3)	
2022	\$1,170,730	\$3,071,698	\$1,300,176	\$3,645,813	100.00%	81.00%	0.00%	
2021	\$1,187,629	\$2,892,159	\$1,246,883	\$3,449,619	100.00%	78.00%	0.00%	
2020	\$1,194,410	\$2,766,799	\$1,202,228	\$3,173,612	100.00%	72.00%	0.00%	
2019	\$1,160,917	\$2,468,647	\$982,771	\$3,063,967	100.00%	77.00%	0.00%	
2018	\$1,128,180	\$2,391,404	\$974,131	\$2,922,358	100.00%	75.00%	0.00%	
2017	\$1,133,071	\$2,272,436	\$934,564	\$2,734,558	100.00%	70.00%	0.00%	
2016	\$1,152,928	\$2,139,549	\$857,347	\$2,538,563	100.00%	65.00%	0.00%	
2015	\$1,107,866	\$1,916,257	\$840,426	\$2,403,294	100.00%	68.00%	0.00%	

TEACHERS

(dollars in thousands)

Fiscal Year	Projected Liabilities For				Net Position Held For Benefits	Percentage of Accrued Liabilities Covered By Net Position Held for Benefits		
	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)*	(1)		(2)	(3)	
2022	\$1,210,287	\$3,552,414	\$1,585,896	\$3,976,505	100.00%	78.00%	0.00%	
2021	\$1,220,158	\$3,429,767	\$1,632,995	\$3,752,083	100.00%	74.80%	0.00%	
2020	\$1,225,030	\$3,310,020	\$1,470,570	\$3,450,798	100.00%	67.00%	0.00%	
2019	\$1,181,186	\$3,059,089	\$1,264,212	\$3,326,088	100.00%	70.00%	0.00%	
2018	\$1,142,455	\$2,956,675	\$1,268,903	\$3,176,932	100.00%	69.00%	0.00%	
2017	\$1,132,876	\$2,819,228	\$1,211,560	\$2,979,005	100.00%	70.00%	0.00%	
2016	\$1,171,831	\$2,692,037	\$1,156,821	\$2,799,863	100.00%	60.00%	0.00%	
2015	\$1,127,439	\$2,323,302	\$988,870	\$2,682,083	100.00%	67.00%	0.00%	

*Liabilities for active members are based on service as of the valuation date and projected compensation at the member's expected retirement date. Also includes terminated vested members.

NOTE: Based on a 7.25% interest rate for fiscal years 2015 to 2019 and 6.75% after that.

POLICE OFFICERS

(dollars in thousands)

Fiscal Year	Projected Liabilities For			Net Position Held For Benefits	Percentage of Accrued Liabilities Covered By Net Position Held for Benefits		
	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)*		(1)	(2)	(3)
2022	\$ 424,441	\$2,129,277	\$633,839	\$ 2,171,111	100.00%	82.00%	0.00%
2021	\$ 445,546	\$1,958,854	\$649,018	\$ 2,062,170	100.00%	83.00%	0.00%
2020	\$ 458,081	\$1,874,135	\$658,558	\$ 1,900,199	100.00%	78.00%	0.00%
2019	\$ 441,940	\$1,672,002	\$593,433	\$ 1,838,868	100.00%	84.00%	0.00%
2018	\$ 428,859	\$1,596,512	\$591,281	\$ 1,758,301	100.00%	83.00%	0.00%
2017	\$ 426,606	\$1,526,761	\$570,755	\$ 1,650,908	100.00%	80.00%	0.00%
2016	\$ 430,490	\$1,460,840	\$535,225	\$ 1,546,665	100.00%	76.00%	0.00%
2015	\$ 429,115	\$1,266,591	\$463,902	\$ 1,477,517	100.00%	83.00%	0.00%

FIREFIGHTERS

(dollars in thousands)

Fiscal Year	Projected Liabilities For			Net Position Held For Benefits	Percentage of Accrued Liabilities Covered By Net Position Held for Benefits		
	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)*		(1)	(2)	(3)
2022	\$ 231,331	\$924,774	\$308,983	\$ 1,056,265	100.00%	89.00%	0.00%
2021	\$ 234,610	\$871,038	\$322,557	\$ 1,004,441	100.00%	88.00%	0.00%
2020	\$ 241,928	\$815,632	\$297,624	\$ 923,229	100.00%	84.00%	0.00%
2019	\$ 235,315	\$745,979	\$269,853	\$ 883,010	100.00%	88.00%	0.00%
2018	\$ 228,299	\$722,857	\$273,593	\$ 853,348	100.00%	86.00%	0.00%
2017	\$ 223,258	\$697,015	\$260,320	\$ 801,214	100.00%	83.00%	0.00%
2016	\$ 223,568	\$671,801	\$240,428	\$ 750,975	100.00%	79.00%	0.00%
2015	\$ 221,776	\$592,362	\$210,708	\$ 718,867	100.00%	84.00%	0.00%

*Liabilities for active members are based on service as of the valuation date and projected compensation at the member's expected retirement date. Also includes terminated vested members.

NOTE: Based on a 7.25% interest rate for fiscal years 2015 to 2019 and 6.75% after that.

ANALYSIS OF PAST FINANCIAL EXPERIENCE

This presentation shows the experience of actual financial results relative to expected results. It is an analysis which focuses on actuarial gains and losses over the most recent five actuarial valuations and reconciles the difference in the actuarial normal contribution rates from the expected to actual values.

RECONCILIATION OF EMPLOYER NORMAL RATE*

EMPLOYEES

YEAR ENDED	June 30 2021	June 30 2019	June 30 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009
					State Employees	Political Subdivision Employees		
Projected Normal Rate*	13.75%	10.88%	11.08%	10.34%	10.51%	10.44%	10.71%	9.09%
Decremental Experience	—	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—	—
Method Change	—	(0.46)	—	—	—	—	—	—
Effect of Legislation	—	—	—	—	—	—	(1.95)	(0.15)
Asset (Gains)/Losses	(0.48)	(0.01)	(0.20)	(0.44)	0.52	0.52	0.31	1.18
Current New Entrants	—	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—	—
Assumption Changes	—	3.23	—	1.18	—	—	1.01	—
Other (Gains)/Losses	—	0.11	—	—	(0.17)	(0.10)	0.36	0.59
ACTUAL NORMAL RATE	13.27%	13.75%	10.88%	11.08%	10.86%	10.86%	10.44%	10.71%

TEACHERS

YEAR ENDED	June 30 2021	June 30 2019	June 30 2017	June 30 2015	June 30 2013	June 30 2011	June 30 2009
Projected Normal Rate*	19.48%	15.99%	15.70%	12.09%	11.96%	11.51%	9.38%
Decremental Experience	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—
Method Change	—	(0.40)	—	—	—	—	—
Effect of Legislation	—	—	—	—	—	(2.27)	—
Asset (Gains)/Losses	(0.97)	0.03	(0.09)	(0.30)	0.61	0.39	1.55
Current New Entrants	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—
Assumption Changes	—	3.67	0.38	3.91	—	2.05	—
Other (Gains)/Losses	—	0.19	—	—	0.15	0.28	0.58
ACTUAL NORMAL RATE	18.51%	19.48%	15.99%	15.70%	12.72%	11.96%	11.51%

*Based on forecast valuations.

This presentation shows the experience of actual financial results relative to expected results. It is an analysis which focuses on actuarial gains and losses over the most recent five actuarial valuations and reconciles the difference in the actuarial normal contribution rates from the expected to actual values.

RECONCILIATION OF EMPLOYER NORMAL RATE*

POLICE OFFICERS

YEAR ENDED	June 30 2021	June 30 2019	June 30 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009
					State Employees	Political Subdivision Employees		
Projected Normal Rate*	30.67%	24.77%	25.33%	20.88%	21.45%	21.35%	22.92%	17.34%
Decremental Experience	—	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—	—
Method Change	—	(0.53)	—	—	—	—	—	—
Effect of Legislation	—	—	—	—	—	—	(7.15)	—
Asset (Gains)/Losses	(1.99)	(0.75)	(0.56)	(1.57)	1.31	1.31	0.85	2.89
Current New Entrants	—	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—	—
Assumption Changes	—	6.86	—	6.02	—	—	4.00	—
Other Asset (Gains)/Losses	—	0.32	—	—	(0.22)	(0.12)	0.73	2.69
ACTUAL NORMAL RATE	26.86%	30.67%	24.77%	25.33%	22.54%	22.54%	21.35%	22.92%

FIREFIGHTERS

YEAR ENDED	June 30 2021	June 30 2019	June 30 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009
					State Employees	Political Subdivision Employees		
Projected Normal Rate*	29.78%	26.43%	27.79%	23.38%	23.90%	23.79%	28.25%	22.52%
Decremental Experience	—	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—	—
Method Change	—	(0.65)	—	—	—	—	—	—
Effect of Legislation	—	—	—	—	—	—	(8.58)	—
Asset (Gains)/Losses	(2.03)	(1.49)	(1.36)	(1.39)	1.46	1.46	0.99	3.24%
Current New Entrants	—	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—	—
Assumption Changes	—	5.15	—	5.80	—	—	3.39	—
Other Asset (Gains)/Losses	—	0.34	—	—	(0.04)	0.07	(0.26)	2.49%
ACTUAL NORMAL RATE	27.75%	29.78%	26.43%	27.79%	25.32%	25.32%	23.79%	28.25%

*Based on forecast valuations.

The Schedules of Funding Progress below reflect the funding status of the Pension and OPEB plans based on the valuation or funding policy basis for the last 10 years. Separate schedules are included in the Required Supplementary Information of the Financial Section disclosing the 10-year schedule of actuarially determined and actual contributions paid.

SCHEDULE OF FUNDING PROGRESS – PENSION PLAN

(\$ in thousands)

Fiscal Year Ended	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UALL) (b-a)	Actuarial Value of Assets Percentage of AAL (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-c)/c)
6/30/22	\$ 10,849,694	\$ 16,543,487	\$ 5,693,793	65.6%	\$ 3,077,584	185.0%
6/30/21	\$ 10,268,313	\$ 15,991,215	\$ 5,722,902	64.2%	\$ 2,972,969	192.5%
6/30/20	\$ 9,477,838	\$ 15,488,015	\$ 6,040,177	61.0%	\$ 2,894,708	208.7%
6/30/19	\$ 9,121,933	\$ 14,075,344	\$ 4,953,411	64.8%	\$ 2,825,006	175.3%
6/30/18	\$ 8,710,939	\$ 13,703,149	\$ 4,992,209	63.6%	\$ 2,752,235	181.4%
6/30/17	\$ 8,165,684	\$ 13,208,449	\$ 5,042,765	61.8%	\$ 2,667,612	189.0%
6/30/16	\$ 7,636,066	\$ 12,732,866	\$ 5,096,799	60.0%	\$ 2,601,404	195.9%
6/30/15	\$ 7,280,761	\$ 12,303,636	\$ 5,022,875	59.2%	\$ 2,575,031	174.1%
6/30/14	\$ 6,700,553	\$ 11,045,174	\$ 4,344,620	60.7%	\$ 2,507,899	173.2%
6/30/13	\$ 6,070,681	\$ 10,708,768	\$ 4,638,087	56.7%	\$ 2,501,742	185.4%
6/30/12	\$ 5,817,882	\$ 10,361,600	\$ 4,543,718	56.1%	\$ 2,487,757	182.6%
6/30/11	\$ 5,740,516	\$ 9,998,251	\$ 4,257,735	57.4%	\$ 2,517,779	169.1%

SCHEDULE OF FUNDING PROGRESS – OPEB PLAN

(\$ in thousands)

Fiscal Year Ended	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UALL) (b-a)	Actuarial Value of Assets Percentage of AAL (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll ((b-c)/c)
6/30/22	\$ 45,586	\$ 567,229	\$ 521,643	8.0%	\$ 3,077,584	16.9%
6/30/21	\$ 44,369	\$ 614,194	\$ 569,824	7.2%	\$ 2,972,969	19.2%
6/30/20	\$ 38,125	\$ 656,648	\$ 618,522	5.8%	\$ 2,894,708	21.4%
6/30/19	\$ 36,646	\$ 657,597	\$ 620,951	5.6%	\$ 2,825,006	22.0%
6/30/18	\$ 36,777	\$ 689,577	\$ 652,800	5.3%	\$ 2,752,235	23.7%
6/30/17	\$ 38,853	\$ 696,548	\$ 657,695	5.6%	\$ 2,667,612	24.7%
6/30/16	\$ 27,350	\$ 730,132	\$ 702,782	3.7%	\$ 2,601,404	27.0%
6/30/15	\$ 19,515	\$ 761,342	\$ 741,827	2.6%	\$ 2,575,031	28.8%
6/30/14	\$ 21,245	\$ 714,103	\$ 692,858	3.0%	\$ 2,507,899	27.6%
6/30/13	\$ 21,823	\$ 731,872	\$ 710,049	3.0%	\$ 2,501,742	28.4%
6/30/12	\$ 24,317	\$ 752,759	\$ 728,442	3.2%	\$ 2,487,757	29.3%
6/30/11	\$ 33,220	\$ 777,573	\$ 744,353	4.3%	\$ 2,517,779	29.6%

MEMBERSHIP COMPOSITION – PENSION PLAN

	JUNE 30	
	2022	2021
ACTIVE CONTRIBUTING MEMBERS:		
Employees	24,644	24,558
Teachers	18,217	18,131
Police Officers	4,103	4,184
Firefighters	1,723	1,709
TOTAL ACTIVE CONTRIBUTING MEMBERS*	48,687	48,582
*Excludes inactives		
RETIRED MEMBERS:		
Employees	20,751	20,046
Teachers	15,154	14,685
Police Officers	4,644	4,427
Firefighters	1,866	1,816
TOTAL RETIRED MEMBERS	42,415	40,974
TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:		
Employees	1,530	1,415
Teachers	1,263	1,145
Police Officers	160	143
Firefighters	37	27
TOTAL TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:	2,990	2,730
INACTIVE MEMBERS:		
Non-Vested Inactive Members	16,717	14,946
TOTAL TERMINATED AND INACTIVE MEMBERS	16,717	14,946

MEMBERSHIP COMPOSITION – OPEB PLAN

	JUNE 30	
	2022	2021
ACTIVE CONTRIBUTING MEMBERS:		
OPEB Plan	545	708
TOTAL ACTIVE CONTRIBUTING MEMBERS	545	708
RETIRED MEMBERS:		
OPEB Plan	9,133	9,375
TOTAL RETIRED MEMBERS	9,133	9,375
TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:		
OPEB Plan	2,955	2,976
TOTAL TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:	2,955	2,976
INACTIVE MEMBERS:		
Non-Vested Inactive Members	—	—
TOTAL TERMINATED AND INACTIVE MEMBERS	2,955	2,976

SUMMARY OF PRINCIPAL PLAN PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

1 – GENERAL

Legal Plan Name	New Hampshire Retirement System.
Plan Type	Cost-sharing multiple-employer defined benefit pension plan and Cost-sharing multiple-employer defined benefit OPEB plan.
Effective Date	July 1, 1967.
Membership	Prospectively, any employee or teacher becomes a Group I member as a condition of employment. Any employee appointed to an unclassified position with no fixed term on or after July 1, 2011 will also become a member of the retirement system as a condition of employment. Membership is optional for elected officials, officials appointed for fixed terms, unclassified state employees with no fixed term prior to July 1, 2011 or employees of the general court.
Average Final Compensation (AFC)	Average annual earnable compensation during highest 3 years of creditable service. For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 — Average annual earnable compensation during the highest 5 years of creditable service.
NOTE:	A more detailed description of the plan provisions is available from the System’s administrative office or by visiting www.nhrs.org .

2 – BENEFITS

GROUP I MEMBERS (EMPLOYEES AND TEACHERS)

Service Retirement

Eligibility	Age 60 years (age 65 for members commencing service on or after July 1, 2011).
Amount of Benefit	A member’s annuity equal to the actuarial equivalent of the member’s accumulated contributions plus a state annuity. Prior to the member’s attainment of age 65, the state annuity, together with the member annuity, shall be equal to 1/60 of AFC multiplied by years of service. (1/66 of AFC times creditable service for members commencing service on or after July 1, 2011.) After attainment of age 65, the state annuity, together with the member annuity, shall be equal to 1/66 of AFC multiplied by years of service.

Reduced Service Retirement

Eligibility	Age plus service of at least 70, provided the member has at least 20 years of service or age 50 with at least 10 years of service (age 60 with 30 years of creditable service for members commencing service on or after July 1, 2011).
Amount of Benefit	Service retirement benefit is reduced by the following percents for each month that benefits commence prior to age 60.

Years of Service at Retirement	Monthly Percent Reduction
35 or more	1/8 of 1%
30–35	1/4 of 1%
25–30	1/3 of 1%
20–25	5/12 of 1%
less than 20	5/9 of 1%

For members commencing service on or after July 1, 2011, normal retirement benefit is reduced 1/4 or 1% for each month prior to age 65.

Ordinary Disability Retirement

Eligibility	10 years of service and permanent disability.
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Amount of Benefit Service retirement benefit if normal retirement age. Under age 60 a member annuity plus a state annuity which together equals 1.5% of AFC multiplied by the number of years of creditable service at the time of disability; provided that the benefit shall not be less than 25% of AFC.

Accidental Disability Retirement

Eligibility Permanently disabled due to accident occurring while in the performance of duty.

Amount of Benefit Service retirement benefit if age 60, otherwise a member annuity plus a state annuity which together equals 50% of AFC; provided that the benefit shall not be less than 50% of AFC.

Ordinary Death Benefit

Eligibility Death, other than accidental death.

Amount of Benefit

- (a) If 10 years of service or if eligible for service retirement and,
 - (i) if survived by a spouse, 50% of the service retirement benefit payable until death or remarriage;
 - (ii) if no surviving spouse or member designated a beneficiary other than a spouse, a lump sum equal to the greater of \$3,600 or the member's annual compensation.
- (b) If less than 10 years of service and if not eligible for service retirement, a lump sum equal to the greater of \$3,600 or the member's annual compensation.

Accidental Death Benefit

Eligibility Accidental death occurring while in the performance of duty.

Amount of Benefit Benefit equal to 50% of AFC.

Vested Deferred Retirement

Eligibility 10 years of service, if no withdrawal of contributions.

Amount of Benefit Payable at age 60, a member annuity plus a state annuity which together equals the service retirement benefit that would be payable after age 60. The benefit changes at age 65 as for service retirement. At any time after attainment of age 50 (age 60 for members hired on or after July 1, 2011), a member may have his benefit commence early, however, the benefit will be reduced for early commencement using the same early retirement reduction factors as described under reduced service retirement.

Return of Members' Contributions

- (a) Upon termination of service other than for retirement or death, and if vested deferred retirement benefit has not been elected, the member's accumulated contributions are returned to him.
- (b) Upon accidental death or upon other death for which no surviving spouse's benefit is payable, the member's accumulated contributions will be paid to the member's beneficiary or estate.
- (c) Upon death prior to age 60 of a member on deferred vested retirement, the member's accumulated contributions will be paid to the member's beneficiary or estate.
- (d) Upon death of a retired member (or the survivor of a retired member, if an optional benefit was elected), the excess of his accumulated contributions at retirement over the benefits received by the retired member (and, in the case of election of an optional benefit, the benefits received by the survivor) will be paid to the beneficiary or estate of the member.

Special Provisions Applicable to Certain Members Transferred from the Employees' Retirement System of the State of New Hampshire

Certain employee members transferred to the New Hampshire Retirement System effective January 1, 1976 have elected to have their benefits calculated on the basis of the provisions of the Predecessor System.

GROUP II MEMBERS (POLICE OFFICERS AND FIREFIGHTERS)

Service Retirement

Eligibility Age 45 and 20 years of creditable service or age 60 (age 52.5 with 25 years of creditable service or age 60 for members commencing service on or after July 1, 2011).

Amount of Benefit A member annuity that is the actuarial equivalent of the member's accumulated contributions plus a state annuity.

The state annuity, together with the member annuity, shall be equal to 2-1/2% of AFC times creditable service up to 40 years (2% of AFC times creditable service up to 42.5 years for members commencing service on or after July 1, 2011). However, a member who commenced service on or after July 1, 2011 shall not receive a service retirement allowance until attaining the age of 52.5.

Members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 shall be subject to the following transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012 according to the following table:

Creditable Service on January 1, 2012	Minimum Years of Service	Minimum Age Attained	Annuity Multiplier
(1) Less than 4 years	24 Years	Age 49	2.1%
(2) At least 4 years but less than 6 years	23 Years	Age 48	2.2%
(3) At least 6 years but less than 8 years	22 Years	Age 47	2.3%
(4) At least 8 years but less than 10 years	21 Years	Age 46	2.4%

Effective July 1, 1992, if a member retires on a full service retirement, the minimum annual benefit (prior to reduction for optional form of payment) is \$10,000.

Reduced Service Retirement

Eligibility Members commencing service on or after July 1, 2011 after attaining age 52.5 with at least 25 years of creditable service.

Amount of Benefit The allowance shall be reduced for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age, by 1/4 of 1%.

Ordinary Disability Retirement

Eligibility 10 years service and permanent disability.

Amount of Benefit A member annuity plus a state annuity which together equals the service retirement benefit; provided that the benefit shall not be less than 25% of the member's annual compensation.

Accidental Disability Retirement

Eligibility Permanent disability occurring while in the performance of duty.

Amount of Benefit Members hired prior to July 1, 2011 who have vested status as of January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 26-2/3 years of service, the member will

receive a supplemental disability benefit equal to 2-1/2% of AFC times years of creditable service in excess of 26-2/3 years but not in excess of 40 years. Members commencing service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years. Members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. The calculation of the supplemental allowance shall be as provided in the transition provisions with the number of years for the supplement adjusted proportionally.

Ordinary Death Benefit

Eligibility	Death other than accidental death.
Amount of Benefit	<p>(a) If 10 years service or if eligible for service retirement and,</p> <ul style="list-style-type: none"> (i) if survived by a spouse, 50% of the service retirement benefit payable until death or remarriage. (ii) if no surviving spouse or member designated a beneficiary other than a spouse, a lump sum equal to the greater of \$3,600 or member's annual compensation. <p>(b) If less than 10 years service and not eligible for service retirement, a lump sum equal to the greater of \$3,600 or the member's annual compensation.</p>

Accidental Death Benefit

Eligibility	Accidental death occurring while in the performance of duty.
Amount of Benefit	50% of the annual rate of compensation payable first to spouse until death or remarriage, then to children under age 18 or if no spouse or children, to dependent parent.

Death after Retirement

Retirement Prior to April 1, 1987

Lump sum of \$3,600 unless accidental disability retirement, then surviving spouse receives 50% of the retired member's disability benefits payable until death or remarriage.

Retirement on or after April 1, 1987

Benefit payable to surviving spouse until death or remarriage equal to 50% of the member's service, ordinary disability or accidental disability retirement allowance if member was married on the date of retirement plus a lump sum. The lump sum shall be equal to:

If retired prior to July 1, 1988:	\$ 3,600
If retired on or after July 1, 1988:	
If Group II member as of June 30, 1988	\$10,000
If becomes a Group II member after June 30, 1988 and prior to July 1, 1993	\$ 3,600

Special Death Benefit – Old Firefighter's System

Continuance of duty-connected disability benefits to spouse of deceased retired member payable until death or remarriage.

Vested Deferred Retirement

Eligibility	10 years of service, if no withdrawal of contributions.
Amount of Benefit	A benefit determined as for service retirement payable when the member would be age 45 with 20 years of service or age 60 if earlier.

Return of Members' Contributions

- (a) Upon termination of service other than for retirement or death, and if vested deferred retirement has not been elected, the member's accumulated contributions are returned to the member.
- (b) Upon accidental death or upon other death for which no surviving spouse's benefit is payable, the member's accumulated contributions will be paid to the member's beneficiary or estate.
- (c) Upon death of a member on vested deferred retirement prior to the time benefits commence, the member's accumulated contributions will be paid to the member's beneficiary or estate.
- (d) Upon death of the survivor of a member retired on accidental disability and their spouse in receipt of the accidental disability survivor benefit, the excess of the member's accumulated contributions at retirement over the benefits received by the member and the spouse will be paid to the beneficiary or estate.
- (e) Upon death of a retired member (or the survivor of a retired member, if an optional benefit was elected), the excess of accumulated contributions at retirement over the benefits received by the retired member (and, in the case of election of an optional benefit, the benefits received by the survivor) will be paid to the beneficiary or estate of the member.

3—CONTRIBUTIONS

GROUP I MEMBERS (EMPLOYEES AND TEACHERS)

By Members	7.0% of earnable compensation. Interest on member contributions shall be 2 percentage points less than either the most recent Board of Trustees approved assumed rate of return determined under RSA 100-A:16, II(g) or the actual rate of return, whichever is lower.
By Local Employer	
For Employee Members	100% of the normal contribution rate for their employees, plus accrued liability contributions, if any.
For Teacher Members	100% of the normal contribution rate for their employees, plus accrued liability contributions, if any.
By the State	
For Employee Members	100% of the normal contribution rate for its employees, plus accrued liability contributions, if any.
For Teacher Members	100% of the normal contribution rate for teachers employed by local employers, plus accrued liability contributions, if any.

GROUP II MEMBERS (POLICE OFFICERS AND FIREFIGHTERS)

By Members	
Firefighters	11.80% of earnable compensation.
Police Officers	11.55% of earnable compensation.
By Local Employer	100% of the normal contribution rate for their employees, plus accrued liability contributions, if any.
By the State	100% of both the normal and accrued liability contributions, if any.

OPEB PLAN PROVISIONS

Medical subsidy benefits provided under the OPEB plan are as follows:

	Monthly Amounts	
	Pre-65	Post-65
Single	\$375.56	\$236.84
Couple	\$751.12	\$473.68

The amounts above will not increase.

The following Group I members and their qualified spouses are eligible for coverage under the postemployment medical plan if they are receiving health coverage under the group plan offered by their former employer:

- Employee and teacher members of political subdivisions who were eligible to retire as of July 1, 2008 and who actually retired on or before July 1, 2009, on Service, Early Service, Vested Deferred or Ordinary Disability retirement after completing at least 20 years of creditable service and who subsequently attain age 60 or after completing at least 30 years of creditable service and who subsequently attain age 55.
- Employee and teacher members of political subdivisions who retired on Accidental Disability Retirement on or before July 1, 2004.
- Employee members of the State who retired on or before July 1, 2004, on Service, Ordinary Disability or Vested Deferred Retirement become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Surviving spouses of deceased employee and teacher members of political subdivisions who die while in service, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Surviving spouses and children of employee and teacher members of political subdivisions and employee members of the State who die as the natural and proximate result of injuries suffered while in the performance of duty. Eligibility for the medical subsidy ceases when the dependent child attains age 18 or age 23, if attending school on a full-time basis, or upon the spouse's remarriage.
- Vested terminated employee members of the State (and spouses) who completed at least 20 years of creditable service and as of July 1, 2004 received an allowance and who subsequently attain age 60.
- Employee members of the State (and spouses) who retired on or before July 1, 2004 after completing at least 20 years of creditable service and who subsequently attained age 60; or after completing at least 30 years of creditable service and who subsequently attained age 55.
- Surviving spouses of deceased employee members of the State who died while in service on or before July 1, 2004, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.

The following Group II members are eligible for the postemployment medical plan:

- Group II police officer members (or beneficiaries) who are active or retired as of June 30, 2000.
- Group II firefighter members (or beneficiaries) who are active or retired as of June 30, 2000.
- Persons who prior to July 1, 1988, had completed at least 20 years of Group II service and were eligible as of July 1, 1993 for a vested deferred retirement benefit.
- Group II members retired as of July 1, 1991 with a split benefit under RSA 100-A:19-c who had at least 10 years of Group II service.
- Group II members as of June 30, 2005 who subsequently became disabled while in the performance of duty at any time in the future.
- Surviving spouses of deceased Group II members who retired prior to April 1, 1987 and who are not receiving a monthly allowance.

NEW HAMPSHIRE RETIREMENT SYSTEM

STATISTICAL SECTION

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**STATISTICAL
SECTION
SUMMARY**

The schedules that follow in this Statistical Section contain statistical and historical data that is considered useful in assessing the economic condition of the Pension and OPEB plan and for evaluating financial and demographic trends over longer periods of time. Included in this section are the following schedules:

- Schedules of Changes in Net Position for both plans for the past ten years
- Schedules of Benefit and Refund Deductions for both plans over the past ten years
- Schedules of Retired Members by Type of Benefit for both plans
- Schedules of Average Benefit Payment Amounts for both plans
- Schedules of the Principal Participating Employers for both plans
- A Listing of Participating Employers

The NHRS has prepared the data presented for the Changes in Net Position schedules, Benefit and Refund Deduction schedules, the Principal Participating Employers schedules, and the Listing of Participating Employers. The schedules of Retired Members by Type of Benefit and the Schedules of Average Benefit Payments Amounts were prepared by the NHRS's actuary.

The investment climate over the past decade has been volatile. Investment returns for fiscal year 2022 (-6.1%), fiscal year 2021 (29.4%), fiscal year 2020 (1.1%), fiscal year 2019 (5.7%), fiscal year 2018 (8.9%), and fiscal year 2017 (13.5%) have offset the losses experienced during the economic crisis and recession of fiscal years 2008–2009. Investment returns were positive overall for the decade and net investment income was able to achieve results above the assumed investment return assumption for that period. In absolute dollars, employer contributions to the pension plan have risen 132% over the decade, member contributions to the pension plan were 24% higher than a decade ago. Pension benefits rose 59% over the decade. OPEB contributions have decreased 15% and benefits paid have decreased 21% over the decade.

The number of NHRS retirees continues to grow along with the average annual pension benefits paid out. The active membership rolls have remained fairly static throughout the decade and have increased slightly in fiscal year 2022. The number of participating employers remains stable.

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SCHEDULE OF CHANGES IN NET POSITION

CHANGES IN NET POSITION – PENSION PLAN LAST TEN FISCAL YEARS

	FY 2022	FY 2021	FY 2020	FY 2019
Additions:				
Employer Contributions	\$ 579,028	\$ 459,278	\$ 445,021	\$ 434,407
Member Contributions	243,982	236,879	229,726	223,995
Net Investment Income (Loss)	(690,177)	2,617,660	101,039	488,272
Other	—	—	—	—
Total Additions to Net Position	\$ 132,833	\$ 3,313,817	\$ 775,786	\$ 1,146,674
Deductions:				
Pension Benefits	\$ 913,994	\$ 858,211	\$ 816,708	\$ 780,907
Refunds of Contributions	23,727	19,884	23,312	23,464
Administrative Expense	9,523	8,417	8,282	7,436
Professional Fees	517	546	656	686
Other	594	244	237	275
Total Deductions from Net Position	\$ 948,355	\$ 887,302	\$ 849,195	\$ 812,768
Change in Net Position	\$ (815,522)	\$ 2,426,515	\$ (73,409)	\$ 333,906

CHANGES IN NET POSITION OPEB PLAN – LAST TEN FISCAL YEARS

	FY 2022	FY 2021	FY 2020	FY 2019
Additions:				
Employer Contributions	\$ 42,064	\$ 48,054	\$ 46,460	\$ 45,509
Net Investment Income (Loss)	(2,820)	10,704	396	1,979
Total Additions to Net Position	\$ 39,244	\$ 58,758	\$ 46,856	\$ 47,488
Deductions:				
Benefits Paid	\$ 43,809	\$ 45,499	\$ 46,816	\$ 47,798
Administrative Expense	234	172	169	152
Professional Fees	2	2	2	2
Other	2	1	1	1
Total Deductions from Net Position	\$ 44,047	\$ 45,674	\$ 46,988	\$ 47,953
Change in Net Position	\$ (4,803)	\$ 13,084	\$ (132)	\$ (465)

(in thousands)					
FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013
\$ 422,659	\$ 366,653	\$ 357,482	\$ 332,294	\$ 328,444	\$ 249,835
217,572	213,061	207,949	204,063	199,033	196,489
717,089	978,246	61,878	249,806	1,092,585	813,671
—	—	—	—	—	111
\$ 1,357,320	\$ 1,557,960	\$ 627,309	\$ 786,163	\$ 1,620,062	\$ 1,260,106
\$ 741,753	\$ 706,304	\$ 670,360	\$ 631,312	\$ 599,476	\$ 573,469
24,010	23,408	24,233	26,345	26,120	23,191
7,767	7,671	7,061	7,582	7,377	6,999
687	644	950	1,318	1,080	972
224	263	313	308	366	818
\$ 774,441	\$ 738,290	\$ 702,917	\$ 666,865	\$ 634,419	\$ 605,449
\$ 582,879	\$ 819,670	\$ (75,608)	\$ 119,298	\$ 985,643	\$ 654,657

(in thousands)					
FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013
\$ 44,194	\$ 59,197	\$ 58,174	\$ 48,915	\$ 48,881	\$ 49,712
3,129	4,045	148	1,119	5,381	4,490
\$ 47,323	\$ 63,242	\$ 58,322	\$ 50,034	\$ 54,262	\$ 54,202
\$ 49,251	\$ 50,560	\$ 51,805	\$ 53,297	\$ 53,811	\$ 55,146
33	32	17	34	36	1,028
3	4	2	5	5	5
1	—	1	2	1	4
\$ 49,288	\$ 50,596	\$ 51,825	\$ 53,338	\$ 53,853	\$ 56,183
\$ (1,965)	\$ 12,646	\$ 6,497	\$ (3,304)	\$ 409	\$ (1,981)

SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS BY TYPE

BENEFIT AND REFUND DEDUCTIONS BY TYPE – PENSION PLAN LAST TEN FISCAL YEARS

	FY 2022	FY 2021	FY 2020	FY 2019
Type of Benefit				
Age and Service Benefits:				
Service Retirement	\$ 593,274	\$ 551,328	\$ 518,060	\$ 491,781
Early Retirement	183,310	178,987	176,605	171,766
Survivors	44,094	40,745	38,083	43,832
Vested Deferred	40,811	36,949	34,261	31,554
Other	15,369	14,709	14,234	13,432
Death in Service Benefit	2,413	2,254	3,190	3,495
Disability Benefits				
Duty Related	22,252	21,153	20,615	22,594
Non Duty Related	9,750	9,533	9,322	10,027
Survivors	2,721	2,558	2,338	2,426
Total Benefits	\$ 913,994	\$ 828,210	\$ 816,708	\$ 780,907
Type of Refund				
Separation	\$ 18,950	\$ 14,995	\$ 18,393	\$ 18,768
Death	4,777	4,889	4,912	4,696
Total Refunds	\$ 23,727	\$ 19,884	\$ 23,312	\$ 23,464

BENEFIT AND REFUND DEDUCTIONS BY TYPE – OPEB PLAN LAST TEN FISCAL YEARS

	FY 2022	FY 2021	FY 2020	FY 2019
OPEB PLAN				
Type of Benefit				
Medical Subsidy Payments	\$ 43,809	\$ 45,449	\$ 46,816	\$ 47,798
Total Benefits	\$ 43,809	\$ 45,499	\$ 46,816	\$ 47,798

(in thousands)

FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013
\$ 452,862	\$ 425,306	\$ 398,056	\$ 368,298	\$ 344,810	\$ 325,542
168,717	166,373	162,987	159,342	156,539	154,821
41,693	39,420	36,989	34,572	32,444	30,738
29,321	27,581	25,937	24,161	22,463	20,730
12,624	12,066	11,201	10,421	9,585	8,800
2,396	2,314	2,608	2,430	1,744	1,719
22,216	21,843	21,599	21,152	20,837	20,674
9,772	9,410	9,200	9,047	9,080	8,787
2,152	1,991	1,783	1,889	1,974	1,658
\$ 741,753	\$ 706,304	\$ 670,360	\$ 631,312	\$ 599,476	\$ 573,469
\$ 18,504	\$ 19,032	\$ 18,856	\$ 20,121	\$ 21,429	\$ 18,133
5,507	4,376	5,377	6,224	4,691	5,058
\$ 24,011	\$ 23,408	\$ 24,233	\$ 26,345	\$ 26,120	\$ 23,191

(in thousands)

FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013
\$ 49,251	\$ 50,560	\$ 51,805	\$ 53,298	\$ 53,145	\$ 55,145
\$ 49,251	\$ 50,560	\$ 51,805	\$ 53,298	\$ 53,145	\$ 55,145

SCHEDULE OF RETIRED AND VESTED MEMBERS BY TYPE OF BENEFIT

SCHEDULE OF RETIRED AND VESTED MEMBERS BY TYPE OF BENEFITS AS OF JUNE 30, 2022 PENSION PLAN

Amount of Monthly Benefit	Number of Retirees	Type of Retirement*						
		1	2	3	4	5	6	7
EMPLOYEES								
1-500	5,207	4,296	43	2	14	—	592	260
501-1,000	6,211	4,686	258	90	13	2	502	660
1,001-1,500	3,953	3,049	101	216	17	3	250	317
1,501-2,000	2,394	1,949	32	105	5	4	146	153
2,001-2,500	1,538	1,312	13	40	—	2	99	72
2,501-3,000	1,018	909	6	11	2	1	57	32
3,001-3,500	682	628	—	10	3	—	26	15
3,501-4,000	492	463	2	1	—	—	18	8
Over 4,000	786	737	2	2	4	—	28	13
Totals	22,281	18,029	457	477	58	12	1,718	1,530
TEACHERS								
\$1-500	1,430	1,264	1	—	—	—	104	61
501-1,000	2,436	1,752	31	—	4	—	166	483
1,001-1,500	2,414	1,847	77	3	8	—	129	350
1,501-2,000	2,386	2,003	32	3	11	—	143	194
2,001-2,500	2,324	2,108	16	12	1	1	112	76
2,501-3,000	1,831	1,696	8	5	1	—	73	48
3,001-3,500	1,537	1,436	3	2	—	—	70	26
3,501-4,000	992	935	—	—	2	—	38	17
Over 4,000	1,065	1,028	—	—	1	—	28	8
Totals	16,417	14,069	168	25	28	1	863	1,263
POLICE OFFICERS								
\$1-500	273	197	1	—	—	—	44	31
501-1,000	366	208	9	1	2	—	141	7
1,001-1,500	478	222	24	3	2	1	186	40
1,501-2,000	380	215	19	26	2	—	87	31
2,001-2,500	432	293	12	54	1	1	48	23
2,501-3,000	467	326	6	86	—	—	37	12
3,001-3,500	450	373	1	44	1	3	22	6
3,501-4,000	388	329	3	42	2	—	9	3
Over 4,000	1,570	1,461	2	78	3	2	17	7
Totals	4,804	3,622	77	334	13	7	591	160
FIREFIGHTERS								
\$1-500	59	31	—	—	—	2	21	5
501-1,000	96	43	2	—	—	—	49	2
1,001-1,500	165	62	8	2	1	3	78	11
1,501-2,000	167	69	4	7	—	1	80	6
2,001-2,500	157	94	8	11	1	2	35	6
2,501-3,000	171	126	3	22	—	1	17	2
3,001-3,500	178	149	—	19	—	2	5	3
3,501-4,000	157	140	—	13	—	1	2	1
Over 4,000	753	717	—	23	2	—	10	1
Totals	1,430	1,430	25	97	4	12	297	37

* Type of Retirement: 1—Service and early retirement. 2—Ordinary disability retirement. 3—Accidental disability retirement. 4—Ordinary death in active service. 5—Accidental death in active service. 6—Beneficiaries of deceased members who retired on a service or disability allowance. 7—Vested member with future benefit.

Option Selected #										
No Option	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Other*
3,216	87	381	145	784	31	11	13	—	—	260
3,508	77	484	146	946	364	20	6	—	—	660
2,072	58	399	100	715	278	11	3	—	—	317
1,214	25	256	101	451	181	8	5	—	—	153
716	11	196	69	331	135	3	5	—	—	72
429	17	149	51	235	102	2	1	—	—	32
287	6	121	44	143	65	1	—	—	—	15
196	5	89	33	111	46	2	2	—	—	8
324	8	138	63	148	88	3	1	—	—	13
11,962	294	2,213	752	3,864	1,569	61	36	—	—	1,530
727	19	117	42	352	104	2	6	—	—	61
1,236	31	165	42	382	90	6	1	—	—	483
1,140	35	213	58	466	139	6	7	—	—	350
1,106	38	195	63	561	214	4	11	—	—	194
1,041	34	235	85	597	241	7	10	—	—	76
775	39	159	62	515	225	4	4	—	—	48
677	17	152	62	438	154	5	6	—	—	26
425	14	129	34	252	120	—	1	—	—	17
510	10	144	42	229	122	—	—	—	—	8
7,637	237	1,509	490	3,790	1,409	34	46	—	—	1,263
172	1	10	16	19	23	—	—	—	—	31
278	5	12	9	20	32	1	2	—	—	7
331	7	20	21	20	39	—	—	—	—	40
230	10	11	20	16	62	—	—	—	—	31
218	16	15	55	14	89	—	2	—	—	23
201	18	18	74	18	125	1	—	—	—	12
174	12	10	100	9	138	—	1	—	—	6
138	8	6	80	10	143	—	—	—	—	3
461	21	26	418	22	612	3	—	—	—	7
2,203	99	128	793	148	1,263	5	5	—	—	160
47	—	1	—	2	4	—	—	—	—	5
88	—	2	—	1	3	—	—	—	—	2
127	4	5	6	7	4	1	—	—	—	11
130	4	4	7	8	8	—	—	—	—	6
87	7	6	15	7	28	1	—	—	—	6
67	7	3	34	9	49	—	—	—	—	2
55	7	5	40	3	65	—	—	—	—	3
52	3	3	27	3	68	—	—	—	—	1
223	14	3	195	7	309	—	1	—	—	1
876	46	32	324	47	538	2	1	—	—	37

Option Selected: No option—Straight life. Option 1—Cash refund. Option 2—100% Joint & Survivorship. Option 3—50% Joint & Survivorship. Option 4—100% Pop-Up. Option 5—50% Pop-Up. Option 6—Other % Joint & Survivorship. Option 7—Other % Pop-Up. Option 8—Fixed amount to Beneficiaries. Option 9—Widow’s benefit (accidental disability) 50%

* Elections for vested members with future benefits are made at commencement of benefits.

SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFITS AS OF JUNE 30, 2022
OPEB PLAN

Amount of Monthly Benefit	Number of Retirees	One Person		Two Person	
		Pre 65	Post 65	Pre 65	Post 65
TOTAL – OPEB PLAN					
\$1-500	7,847	491	7,169	28	159
501-1,000	1,273	41	321	601	310
1,001-1,500	9	—	2	4	3
1,501-2,000	4	—	—	4	—
Over \$2,000	—	—	—	—	—
Total	9,133	532	7,492	637	472

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SCHEDULES OF AVERAGE BENEFIT PAYMENT AMOUNTS

SCHEDULE OF AVERAGE BENEFIT PAYMENT AMOUNTS PENSION PLAN – EMPLOYEES

2022 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$341	\$488	\$660	\$989	\$1,303	\$1,800	\$2,658	\$1,250
Average annual benefit	\$4,087	\$5,851	\$7,919	\$11,864	\$15,641	\$21,598	\$31,899	\$15,005
Average final compensation	\$50,124	\$45,963	\$44,061	\$50,335	\$54,509	\$62,419	\$70,521	\$53,965
Number of retired members	1,375*	1,846	4,938	3,556	3,556	2,161	3,610	20,751**

*Includes 382 members who did not have service reported.

**Includes 5,565 members who did not have FAS reported.

2021 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$336	\$480	\$651	\$976	\$1,272	\$1,755	\$2,589	\$1,214
Average annual benefit	\$4,036	\$5,756	\$7,809	\$11,709	\$15,261	\$21,055	\$31,072	\$14,572
Average final compensation	\$48,466	\$45,170	\$43,170	\$49,797	\$53,333	\$60,751	\$69,208	\$52,897
Number of retired members	1,352*	1,830	4,733	3,415	3,211	2,084	3,421	20,046**

*Includes 370 members who did not have service reported.

**Includes 5,745 members who did not have FAS reported.

2020 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$333	\$473	\$638	\$958	\$1,248	\$1,717	\$2,534	\$1,184
Average annual benefit	\$3,998	\$5,675	\$7,651	\$11,482	\$14,973	\$20,608	\$30,408	\$14,210
Average final compensation	\$47,221	\$44,300	\$43,143	\$49,404	\$52,773	\$60,083	\$68,462	\$52,218
Number of retired members	1,336*	1,821	4,628	3,245	3,106	2,003	3,287	19,434**

*Includes 361 members who did not have service reported.

**Includes 5,944 members who did not have FAS reported.

2019 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$329	\$465	\$631	\$946	\$1,231	\$1,698	\$2,506	\$1,165
Average annual benefit	\$3,948	\$5,577	\$7,571	\$11,350	\$14,768	\$20,380	\$30,076	\$13,981
Average final compensation	\$46,039	\$43,399	\$42,728	\$48,931	\$51,957	\$59,277	\$67,912	\$51,524
Number of retired members	1,311*	1,796	4,505	3,133	3,002	1,930	3,147	18,824**

*Includes 336 members who did not have service reported.

**Includes 6,128 members who did not have FAS reported.

2018 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$318	\$460	\$625	\$933	\$1,216	\$1,667	\$2,474	\$1,141
Average annual benefit	\$3,818	\$5,520	\$7,496	\$11,200	\$14,588	\$20,000	\$29,685	\$13,693
Average final average salary	\$44,843	\$43,280	\$42,387	\$48,307	\$51,342	\$58,159	\$67,251	\$50,683
Number of retired members	1,296*	1,810	4,393	2,957	2,900	1,835	3,002	18,193**

*Includes 332 members who did not have service reported.

**Includes 6,341 members who did not have FAS reported.

2017 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$313	\$453	\$618	\$919	\$1,197	\$1,636	\$2,443	\$1,121
Average annual benefit	\$3,758	\$5,442	\$7,415	\$11,030	\$14,364	\$19,637	\$29,321	\$13,451
Average final average salary	\$43,797	\$42,845	\$41,884	\$47,851	\$50,369	\$56,958	\$66,591	\$50,123
Number of retired members	1,264*	1,779	4,275	2,833	2,793	1,740	2,889	17,573**

*Includes 310 members who did not have service reported.

**Includes 6,504 members who did not have FAS reported.

2016 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$310	\$460	\$634	\$957	\$1,253	\$1,757	\$2,575	\$1,152
Average annual benefit	\$3,724	\$5,516	\$7,613	\$11,481	\$15,038	\$21,084	\$30,898	\$13,823
Average final average salary	\$42,832	\$42,359	\$41,637	\$47,544	\$49,410	\$52,267	\$65,846	\$49,468
Number of retired members	1,260*	1,706	4,007	2,573	2,520	1,514	2,562	16,142**

*Includes 292 members who did not have service reported.

**Includes 5,892 members who did not have FAS reported.

2015 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$299	\$451	\$622	\$941	\$1,234	\$1,718	\$2,519	\$1,122
Average annual benefit	\$3,592	\$5,409	\$7,466	\$11,288	\$14,811	\$20,622	\$30,227	\$13,462
Average final average salary	\$44,554	\$43,186	\$41,904	\$47,573	\$49,030	\$55,589	\$64,928	\$49,559
Number of retired members	1,227*	1,638	3,881	2,457	2,448	1,419	2,413	15,483**

*Includes 273 members who did not have service reported.

**Includes 6,453 members who did not have FAS reported.

2014 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$326	\$418	\$591	\$878	\$1,158	\$1,568	\$2,319	\$1,078
Average annual benefit	\$3,911	\$5,019	\$7,088	\$10,532	\$13,902	\$18,812	\$27,833	\$12,932
Average final average salary	\$35,623	\$41,017	\$41,061	\$46,293	\$48,678	\$55,009	\$64,041	\$48,488
Number of retired members	992*	1,497	3,835	2,426	2,546	1,475	2,543	15,314**

*Includes 192 members who did not have service reported.

**Includes 7,334 members who did not have FAS reported.

2013 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$324	\$409	\$584	\$863	\$1,150	\$1,558	\$2,303	\$1,063
Average annual benefit	\$3,883	\$4,906	\$7,013	\$10,359	\$13,801	\$18,691	\$27,633	\$12,758
Average final average salary	\$35,604	\$39,229	\$40,738	\$45,238	\$47,897	\$54,324	\$63,541	\$47,906
Number of retired members	968*	1,444	3,705	2,345	2,434	1,394	2,422	14,712**

* Includes 172 members who did not have service reported.

** Includes 7,506 members who did not have FAS reported.

2012 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$343	\$400	\$576	\$854	\$1,142	\$1,535	\$2,274	\$1,049
Average annual benefit	\$4,114	\$4,804	\$6,911	\$10,243	\$13,706	\$18,421	\$27,284	\$12,591
Average final average salary	\$34,356	\$38,505	\$39,797	\$44,567	\$46,998	\$52,948	\$62,444	\$47,037
Number of retired members	992*	1,389	3,511	2,261	2,340	1,323	2,325	14,141**

* Includes 194 members who did not have service reported.

** Includes 7,748 members who did not have FAS reported.

**SCHEDULE OF AVERAGE BENEFIT PAYMENT AMOUNTS
PENSION PLAN – TEACHERS**

2022 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$522	\$587	\$777	\$1,222	\$1,611	\$2,026	\$2,960	\$1,931
Average annual benefit	\$6,268	\$7,043	\$9,321	\$14,661	\$19,336	\$24,310	\$35,523	\$23,173
Average final compensation	\$56,057	\$58,987	\$53,231	\$62,992	\$68,220	\$72,016	\$76,725	\$68,654
Number of retired members	341*	394	1,818	2,015	2,985	2,464	5,107	15,154**

* Includes 167 members who did not have service reported.

** Includes 4,453 members who did not have FAS reported.

2021 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$520	\$579	\$767	\$1,200	\$1,573	\$1,985	\$2,896	\$1,894
Average annual benefit	\$6,235	\$6,945	\$9,198	\$14,404	\$18,878	\$23,820	\$34,757	\$22,731
Average final compensation	\$54,232	\$58,365	\$52,741	\$62,347	\$67,154	\$71,132	\$75,968	\$67,874
Number of retired members	327*	387	1,775	1,932	2,860	2,415	4,989	14,685**

* Includes 158 members who did not have service reported.

** Includes 4,532 members who did not have FAS reported.

2020 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$521	\$575	\$754	\$1,183	\$1,546	\$1,964	\$2,857	\$1,872
Average annual benefit	\$6,256	\$6,897	\$9,046	\$14,191	\$18,553	\$23,573	\$34,286	\$22,466
Average final compensation	\$53,539	\$58,164	\$52,193	\$61,708	\$66,165	\$70,452	\$75,239	\$67,196
Number of retired members	317*	380	1,704	1,843	2,749	2,356	4,849	14,198**

* Includes 153 members who did not have service reported.

** Includes 4,610 members who did not have FAS reported.

2019 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$511	\$573	\$748	\$1,166	\$1,529	\$1,948	\$2,829	\$1,853
Average annual benefit	\$6,131	\$6,878	\$8,974	\$13,995	\$18,350	\$23,382	\$33,948	\$22,236
Average final compensation	\$53,185	\$58,121	\$51,835	\$61,061	\$65,406	\$69,802	\$74,587	\$66,591
Number of retired members	312*	377	1,657	1,751	2,661	2,291	4,691	13,740**

* Includes 147 members who did not have service reported.

** Includes 4,689 members who did not have FAS reported.

2018 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$504	\$574	\$742	\$1,154	\$1,513	\$1,940	\$2,796	\$1,836
Average annual benefit	\$6,050	\$6,882	\$8,906	\$13,850	\$18,160	\$23,278	\$33,551	\$22,025
Average final average salary	\$51,800	\$57,933	\$51,273	\$60,591	\$64,454	\$69,267	\$73,802	\$65,890
Number of retired members	298*	366	1,611	1,660	2,542	2,227	4,519	13,223**

* Includes 139 members who did not have service reported.

** Includes 4,747 members who did not have FAS reported.

2017 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$504	\$573	\$733	\$1,140	\$1,502	\$1,927	\$2,765	\$1,817
Average annual benefit	\$6,051	\$6,870	\$8,799	\$13,679	\$18,018	\$23,127	\$33,176	\$21,804
Average final average salary	\$52,263	\$57,449	\$50,750	\$59,866	\$63,691	\$68,520	\$72,099	\$65,211
Number of retired members	292*	360	1,556	1,557	2,437	2,165	4,329	12,696**

* Includes 135 members who did not have service reported.

** Includes 4,808 members who did not have FAS reported.

2016 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$499	\$586	\$755	\$1,193	\$1,626	\$2,097	\$2,905	\$1,928
Average annual benefit	\$5,986	\$7,029	\$9,065	\$14,316	\$19,508	\$25,166	\$34,860	\$23,134
Average final average salary	\$51,934	\$56,982	\$49,999	\$59,017	\$62,964	\$67,641	\$72,517	\$64,533
Number of retired members	278*	333	1,422	1,375	2,161	1,897	\$3,944	\$11,410**

* Includes 125 members who did not have service reported.

** Includes 4,080 members who did not have FAS reported.

2015 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$485	\$570	\$743	\$1,172	\$1,603	\$2,072	\$2,883	\$1,913
Average annual benefit	\$5,825	\$6,840	\$8,919	\$14,059	\$19,239	\$24,868	\$34,595	\$22,961
Average final average salary	\$52,242	\$56,107	\$49,238	\$58,293	\$62,540	\$67,126	\$71,943	\$64,076
Number of retired members	259*	307	1,346	1,280	2,079	1,808	3,780	10,859**

* Includes 108 members who did not have service reported.

** Includes 4,203 members who did not have FAS reported.

2014 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$457	\$531	\$702	\$1,081	\$1,459	\$1,872	\$2,702	\$1,783
Average annual benefit	\$5,480	\$6,367	\$8,419	\$12,976	\$17,506	\$22,467	\$32,419	\$21,401
Average final average salary	\$51,979	\$56,039	\$48,107	\$57,182	\$61,625	\$66,117	\$71,311	\$63,299
Number of retired members	239*	289	1,342	1,241	2,126	1,889	3,839	10,965**

* Includes 100 members who did not have service reported.

** Includes 4,974 members who did not have FAS reported.

2013 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$433	\$526	\$691	\$1,051	\$1,454	\$1,862	\$2,686	\$1,780
Average annual benefit	\$5,200	\$6,315	\$8,295	\$12,615	\$17,451	\$22,347	\$32,229	\$21,355
Average final average salary	\$51,604	\$55,373	\$47,276	\$55,688	\$60,708	\$64,999	\$70,712	\$62,669
Number of retired members	214*	255	1,260	1,155	2,045	1,795	3,683	10,407**

* Includes 86 members who did not have service reported.

** Includes 5,020 members who did not have FAS reported.

2012 Service	Years Credited Service						30 or more yrs.	Total
	0–4. yrs.	5–9 yrs.	10–14 yrs.	15–19 yrs.	20–24 yrs.	25–29 yrs.		
Average monthly benefit	\$434	\$491	\$684	\$1,039	\$1,447	\$1,856	\$2,673	\$1,777
Average annual benefit	\$5,203	\$5,892	\$8,214	\$12,473	\$17,363	\$22,272	\$32,080	\$21,320
Average final average salary	\$51,428	\$53,206	\$46,917	\$54,779	\$59,762	\$64,214	\$70,113	\$62,128
Number of retired members	207*	236	1,190	1,100	1,951	1,703	3,569	9,956**

* Includes 88 members who did not have service reported.

** Includes 5,098 members who did not have FAS reported.

**SCHEDULE OF AVERAGE BENEFIT PAYMENT AMOUNTS
PENSION PLAN – POLICE OFFICERS**

2022 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,032	\$1,422	\$1,657	\$2,502	\$3,433	\$4,985	\$6,500	\$3,266
Average annual benefit	\$12,389	\$17,066	\$19,886	\$30,027	\$41,200	\$59,819	\$77,998	\$39,189
Average final compensation	\$57,453	\$58,218	\$58,181	\$71,964	\$88,234	\$101,183	\$111,153	\$85,049
Number of retired members	507*	216	489	450	1,887	790	305	4,644**

* Includes 355 members who did not have service reported.

** Includes 1,819 members who did not have FAS reported.

2021 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,025	\$1,422	\$1,630	\$2,422	\$3,341	\$4,857	\$6,490	\$3,183
Average annual benefit	\$12,299	\$17,062	\$19,559	\$29,063	\$40,094	\$58,281	\$77,878	\$38,192
Average final compensation	\$57,310	\$57,326	\$56,875	\$70,223	\$85,858	\$98,567	\$109,567	\$82,952
Number of retired members	483*	213	484	422	1,788	749	288	4,427**

* Includes 337 members who did not have service reported.

** Includes 1,816 members who did not have FAS reported.

2020 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,006	\$1,412	\$1,622	\$2,373	\$3,259	\$4,773	\$6,369	\$3,113
Average annual benefit	\$12,070	\$16,949	\$19,451	\$28,475	\$39,111	\$57,277	\$76,430	\$37,357
Average final compensation	\$54,972	\$57,300	\$56,107	\$69,655	\$84,335	\$97,751	\$109,507	\$81,762
Number of retired members	462*	205	466	410	1,696	717	271	4,227**

* Includes 320 members who did not have service reported.

** Includes 1,803 members who did not have FAS reported.

2019 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$988	\$1,428	\$1,626	\$2,327	\$3,215	\$4,715	\$6,287	\$3,076
Average annual benefit	\$11,856	\$17,134	\$19,510	\$27,928	\$38,585	\$56,579	\$75,445	\$36,908
Average final compensation	\$53,911	\$57,433	\$55,574	\$68,749	\$82,921	\$97,193	\$108,491	\$80,632
Number of retired members	441*	206	458	388	1,626	703	260	4,082**

* Includes 298 members who did not have service reported.

** Includes 1,794 members who did not have FAS reported.

2018 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$975	\$1,394	\$1,625	\$2,276	\$3,175	\$4,664	\$6,186	\$3,027
Average annual benefit	\$11,697	\$16,728	\$19,503	\$27,317	\$38,095	\$55,973	\$74,231	\$36,328
Average final average salary	\$53,160	\$57,073	\$55,252	\$67,465	\$81,875	\$96,419	\$108,214	\$79,703
Number of retired members	423*	205	444	369	1,564	675	243	3,923**

* Includes 274 members who did not have service reported.

** Includes 1,791 members who did not have FAS reported.

2017 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$979	\$1,368	\$1,623	\$2,230	\$3,135	\$4,611	\$6,184	\$2,992
Average annual benefit	\$11,744	\$16,412	\$19,473	\$26,759	\$37,625	\$55,333	\$74,205	\$35,903
Average final average salary	\$52,922	\$56,688	\$55,024	\$66,556	\$81,206	\$95,886	\$108,399	\$79,145
Number of retired members	404*	206	437	354	1,499	653	233	3,786**

* Includes 263 members who did not have service reported.

** Includes 1,801 members who did not have FAS reported.

2016 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$966	\$1,424	\$6,619	\$2,253	\$3,089	\$4,554	\$6,144	\$2,978
Average annual benefit	\$11,828	\$17,092	\$19,428	\$27,032	\$37,065	\$54,651	\$73,724	\$35,737
Average final average salary	\$52,067	\$56,071	\$54,163	\$65,196	\$80,290	\$95,097	\$107,758	\$78,292
Number of retired members	384*	188	418	326	1,458	633	222	3,629**

* Includes 245 members who did not have service reported.

** Includes 1,771 members who did not have FAS reported.

2015 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$929	\$1,380	\$1,607	\$2,256	\$3,032	\$4,501	\$5,999	\$2,917
Average annual benefit	\$11,149	\$16,561	\$19,287	\$27,067	\$36,380	\$54,010	\$71,987	\$35,002
Average final average salary	\$53,397	\$57,211	\$53,878	\$64,646	\$78,872	\$94,266	\$107,053	\$77,621
Number of retired members	362*	188	396	314	1,395	599	203	3,457**

* Includes 222 members who did not have service reported.

** Includes 1,785 members who did not have FAS reported.

2014 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,003	\$1,380	\$1,519	\$2,111	\$2,964	\$4,362	\$5,623	\$2,929
Average annual benefit	\$12,039	\$16,555	\$18,226	\$25,335	\$35,571	\$52,347	\$67,472	\$35,154
Average final average salary	\$42,303	\$51,636	\$49,456	\$60,358	\$76,729	\$90,857	\$99,377	\$77,381
Number of retired members	286*	160	355	270	1,383	601	227	3,282**

* Includes 190 members who did not have service reported.

** Includes 1,816 members who did not have FAS reported.

2013 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$989	\$1,402	\$1,525	\$2,096	\$2,937	\$4,304	\$5,557	\$2,905
Average annual benefit	\$11,867	\$16,827	\$18,305	\$25,149	\$35,240	\$51,642	\$66,680	\$34,859
Average final average salary	\$43,717	\$51,752	\$49,166	\$60,656	\$76,404	\$90,096	\$98,639	\$77,294
Number of retired members	273*	159	336	271	1,319	584	221	3,163**

* Includes 177 members who did not have service reported.

** Includes 1,825 members who did not have FAS reported.

2012 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$986	\$1,414	\$1,520	\$2,101	\$2,936	\$4,235	\$5,469	\$2,894
Average annual benefit	\$11,835	\$16,968	\$18,238	\$25,218	\$35,230	\$50,824	\$65,631	\$34,731
Average final average salary	\$43,717	\$51,792	\$48,430	\$59,074	\$75,343	\$89,117	\$98,085	\$76,294
Number of retired members	238*	151	325	255	1,255	547	210	2,981**

* Includes 145 members who did not have service reported.

** Includes 1,766 members who did not have FAS reported.

**SCHEDULE OF AVERAGE BENEFIT PAYMENT AMOUNTS
PENSION PLAN – FIREFIGHTERS**

2022 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,228	\$1,386	\$1,812	\$2,483	\$3,099	\$4,570	\$6,947	\$3,696
Average annual benefit	\$14,736	\$16,627	\$21,739	\$29,794	\$37,184	\$54,841	\$83,360	\$44,350
Average final compensation	\$59,856	\$64,768	\$64,721	\$78,801	\$85,127	\$96,443	\$111,314	\$91,878
Number of retired members	168*	38	108	150	677	448	277	1,866**

* Includes 147 members who did not have service reported.

** Includes 868 members who did not have FAS reported.

2021 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,215	\$1,322	\$1,789	\$2,431	\$3,006	\$4,472	\$6,735	\$3,579
Average annual benefit	\$14,581	\$15,858	\$21,471	\$29,166	\$36,077	\$53,663	\$80,821	\$42,948
Average final compensation	\$61,203	\$64,515	\$63,840	\$77,559	\$82,876	\$94,393	\$108,631	\$89,823
Number of retired members	167*	36	108	146	663	433	263	1,816**

* Includes 147 members who did not have service reported.

** Includes 883 members who did not have FAS reported.

2020 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,177	\$1,311	\$1,810	\$2,363	\$2,290	\$4,372	\$6,449	\$3,447
Average annual benefit	\$14,121	\$15,731	\$21,718	\$28,355	\$35,040	\$52,461	\$77,385	\$41,365
Average final compensation	\$61,360	\$65,855	\$63,385	\$77,517	\$81,246	\$94,282	\$105,160	\$88,316
Number of retired members	162*	36	101	146	640	433	235	1,753**

* Includes 141 members who did not have service reported.

** Includes 893 members who did not have FAS reported.

2019 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,158	\$1,323	\$1,797	\$2,268	\$2,886	\$4,321	\$6,369	\$3,384
Average annual benefit	\$13,896	\$15,880	\$21,566	\$27,218	\$34,626	\$51,853	\$76,427	\$40,606
Average final compensation	\$59,820	\$59,140	\$62,631	\$73,625	\$80,335	\$93,449	\$104,172	\$87,185
Number of retired members	163*	33	101	137	629	421	222	1,706**

* Includes 144 members who did not have service reported.

** Includes 903 members who did not have FAS reported.

2018 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,157	\$1,364	\$1,841	\$2,226	\$2,836	\$4,221	\$6,203	\$3,314
Average annual benefit	\$13,884	\$16,363	\$22,089	\$26,713	\$34,027	\$50,652	\$74,438	\$39,764
Average final average salary	\$56,847	\$57,722	\$62,269	\$71,690	\$79,817	\$92,171	\$102,765	\$86,094
Number of retired members	158*	31	99	132	624	418	211	1,673**

* Includes 139 members who did not have service reported.

** Includes 920 members who did not have FAS reported.

2017 Service	Years Credited Service							Total
	0-4 yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.	30 or more yrs.	
Average monthly benefit	\$1,154	\$1,407	\$1,830	\$2,189	\$2,788	\$4,165	\$6,055	\$3,253
Average annual benefit	\$13,843	\$16,879	\$21,957	\$26,625	\$33,456	\$49,985	\$72,654	\$39,033
Average final average salary	\$55,226	\$59,323	\$61,155	\$69,692	\$79,089	\$91,311	\$101,821	\$85,145
Number of retired members	150*	31	96	129	625	406	202	1,639**

* Includes 131 members who did not have service reported.

** Includes 931 members who did not have FAS reported.

2016 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,147	\$1,353	\$1,789	\$2,185	\$2,765	\$4,138	\$5,965	\$3,213
Average annual benefit	\$13,768	\$16,230	\$21,466	\$26,218	\$33,174	\$49,655	\$71,577	\$38,553
Average final average salary	\$55,226	\$57,997	\$60,126	\$70,005	\$78,510	\$91,235	\$100,861	\$84,646
Number of retired members	143*	30	96	125	617	391	193	1,595**

* Includes 124 members who did not have service reported.

** Includes 935 members who did not have FAS reported.

2015 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,132	\$1,417	\$1,750	\$2,114	\$2,735	\$4,101	\$5,681	\$3,130
Average annual benefit	\$13,579	\$17,007	\$20,997	\$25,371	\$32,821	\$49,215	\$68,168	\$37,557
Average final average salary	\$55,075	\$59,425	\$61,768	\$68,985	\$77,441	\$90,785	\$96,758	\$83,520
Number of retired members	139*	30	91	119	611	389	172	1,551**

* Includes 120 members who did not have service reported.

** Includes 949 members who did not have FAS reported.

2014 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,068	\$1,450	\$1,724	\$2,004	\$2,687	\$3,997	\$5,494	\$3,047
Average annual benefit	\$12,812	\$17,405	\$20,686	\$24,051	\$32,249	\$47,960	\$65,932	\$35,562
Average final average salary	\$45,602	\$64,928	\$56,150	\$65,849	\$75,732	\$89,221	\$93,573	\$81,886
Number of retired members	128*	29	87	119	589	383	158	1,493**

* Includes 106 members who did not have service reported.

** Includes 958 members who did not have FAS reported.

2013 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,050	\$1,513	\$1,720	\$2,007	\$2,685	\$4,053	\$5,336	\$3,050
Average annual benefit	\$12,597	\$18,154	\$20,640	\$24,080	\$32,216	\$48,683	\$64,036	\$36,595
Average final average salary	\$49,479	\$64,928	\$55,062	\$62,052	\$75,328	\$90,016	\$93,076	\$81,986
Number of retired members	120*	30	82	116	577	364	158	1,447**

* Includes 99 members who did not have service reported.

** Includes 956 members who did not have FAS reported.

2012 Service	Years Credited Service						30 or more yrs.	Total
	0-4. yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-24 yrs.	25-29 yrs.		
Average monthly benefit	\$1,062	\$1,523	\$1,701	\$2,072	\$2,672	\$3,956	\$5,192	\$3,038
Average annual benefit	\$12,740	\$18,280	\$20,416	\$24,865	\$32,067	\$47,475	\$62,306	\$36,461
Average final average salary	\$50,146	\$51,114	\$53,705	\$64,002	\$74,611	\$88,513	\$92,039	\$80,981
Number of retired members	96*	29	78	110	564	343	156	1,376**

* Includes 77 members who did not have service reported.

** Includes 931 members who did not have FAS reported.

SCHEDULES OF AVERAGE BENEFIT PAYMENT AMOUNTS – OPEB PLAN

	Service	2022	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$302	\$330
Average Annual Benefits			\$3,620	\$3,962
Number of retired members			145	124
**Includes 40 members who did not have service reported				
	Service	2021	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$306	\$350
Average Annual Benefits			\$3,673	\$4,206
Number of retired members			156	130
**Includes 44 members who did not have service reported				
	Service	2020	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$331	\$354
Average Annual Benefits			\$3,971	\$4,244
Number of retired members			159	139
**Includes 44 members who did not have service reported				
	Service	2019	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$336	\$366
Average Annual Benefits			\$4,037	\$4,394
Number of retired members			162	141
**Includes 45 members who did not have service reported				
	Service	2018	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$349	\$381
Average Annual Benefits			\$4,187	\$4,572
Number of retired members			170	145
**Includes 47 members who did not have service reported				
	Service	2017	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$360	\$383
Average Annual Benefits			\$4,320	\$4,591
Number of retired members			175	153
**Includes 48 members who did not have service reported				
	Service	2016	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$366	\$393
Average Annual Benefits			\$4,390	\$4,714
Number of retired members			177	159
**Includes 44 members who did not have service reported				
	Service	2015	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$373	\$392
Average Annual Benefits			\$4,476	\$4,701
Number of retired members			180	168
**Includes 43 members who did not have service reported				
	Service	2014	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$415	\$424
Average Annual Benefits			\$4,978	\$5,094
Number of retired members			163	158
**Includes 35 members who did not have service reported				
	Service	2013	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$433	\$448
Average Annual Benefits			\$5,200	\$5,371
Number of retired members			181	174
**Includes 37 members who did not have service reported				

10-14 yrs	15-19 yrs	20-24 yrs	2020 25-29 yrs	30 or more yrs	Total
\$352	\$370	\$387	\$397	\$397	\$390
\$4,229	\$4,441	\$4,643	\$4,781	\$4,769	\$4,677
217	205	2,953	2,059	3,430	9,133

10-14 yrs	15-19 yrs	20-24 yrs	2020 25-29 yrs	30 or more yrs	Total
\$367	\$383	\$391	\$404	\$405	\$396
\$4,399	\$4,601	\$4,696	\$4,842	\$4,859	\$4,756
227	206	3,066	2,105	3,485	9,375

10-14 yrs	15-19 yrs	20-24 yrs	2020 25-29 yrs	30 or more yrs	Total
\$385	\$395	\$401	\$413	\$409	\$404
\$4,624	\$4,743	\$4,812	\$4,951	\$4,905	\$4,849
233	213	3,110	2,115	3,540	9,509

10-14 yrs	15-19 yrs	20-24 yrs	2019 25-29 yrs	30 or more yrs	Total
\$396	\$399	\$402	\$415	\$412	\$407
\$4,751	\$4,792	\$4,823	\$4,980	\$4,941	\$4,880
243	214	3,163	2,152	3,601	9,676

10-14 yrs	15-19 yrs	20-24 yrs	2018 25-29 yrs	30 or more yrs	Total
\$404	\$410	\$404	\$419	\$415	\$410
\$4,847	\$4,918	\$4,850	\$5,025	\$4,983	\$4,924
248	218	3,241	2,182	3,665	9,869

10-14 yrs	15-19 yrs	20-24 yrs	2017 25-29 yrs	30 or more yrs	Total
\$405	\$406	\$407	\$420	\$420	\$413
\$4,862	\$4,869	\$4,884	\$5,034	\$5,044	\$4,961
260	221	3,289	2,204	3,703	10,005

10-14 yrs.	15-19 yrs.	20-24 yrs.	2016 25-29 yrs.	30 or more yrs.	Total
\$408	\$410	\$411	\$423	\$430	\$419
\$4,896	\$4,918	\$4,927	\$5,075	\$5,159	\$5,031
266	230	3,345	2,237	3,746	10,160

10-14 yrs.	15-19 yrs.	20-24 yrs.	2015 25-29 yrs.	30 or more yrs.	Total
\$426	\$416	\$415	\$425	\$436	\$424
\$4,896	\$4,918	\$4,927	\$5,075	\$5,159	\$5,031
269	223	3,396	2,259	3,770	10,265

10-14 yrs.	15-19 yrs.	20-24 yrs.	2014 25-29 yrs.	30 or more yrs.	Total
\$442	\$424	\$427	\$434	\$451	\$438
\$5,304	\$5,087	\$5,122	\$5,205	\$5,416	\$5,251
269	217	3,360	2,252	3,824	10,243

10-14 yrs.	15-19 yrs.	20-24 yrs.	2013 25-29 yrs.	30 or more yrs.	Total
\$446	\$428	\$434	\$440	\$467	\$448
\$5,356	\$5,135	\$5,208	\$5,276	\$5,607	\$5,377
278	219	3,332	2,241	3,839	10,264

PRINCIPAL PARTICIPATING EMPLOYERS

PRINCIPAL PARTICIPATING EMPLOYERS – PENSION PLAN CURRENT YEAR AND NINE YEARS AGO

	As Of June 30, 2022			As Of June 30, 2013		
	# of Covered	Rank	Percentage of Total	# of Covered	Rank	Percentage of Total
Participating Government	Employees	Rank	Pension Plan	Employees	Rank	Pension Plan
State of New Hampshire	10,563	1	21.70%	10,768	1	22.12%
SAU 42 (Nashua School District)	1,325	2	2.72%	1,285	2	2.64%
Manchester School District	1,241	3	2.55%	1,218	3	2.50%
City of Dover	654	4	1.34%	588	8	1.21%
Timberlane School District	635	5	1.30%	661	5	1.36%
Concord School District	619	6	1.27%	575	10	1.18%
City of Nashua	619	7	1.27%	616	7	1.27%
Merrimack School District	616	8	1.27%	620	6	1.27%
Rochester School District	577	9	1.19%	583	9	1.20%
Londonderry School District	548	10	1.13%	0	0	0.00%
All Other *	31,290		64.27%	31,774		65.26%
Total (461 Governments)	48,687		100.00%	48,688		100.00%

*As of June 30, 2022, "All Other" consisted of:

Type	Number	Employees
City Governments	11	2,480
Town Governments & Related Entities	239	5,959
County Governments & Related Entities	12	2,846
School Districts & Administrative Units	189	20,005
Total	451	31,290

PRINCIPAL PARTICIPATING EMPLOYERS – OPEB PLAN CURRENT YEAR AND NINE YEARS AGO

	As Of June 30, 2022			As Of June 30, 2013		
	# of Covered	Rank	Percentage of Total	# of Covered	Rank	Percentage of Total
Participating Government	Employees	Rank	OPEB Plan	Employees	Rank	OPEB Plan
State of New Hampshire	2,163	1	23.68%	2,588	1	25.21%
Manchester School District	440	2	4.82%	510	2	4.97%
SAU 42 (Nashua School District)	361	3	3.95%	385	3	3.75%
City of Manchester	323	4	3.54%	286	5	2.79%
City of Nashua	289	5	3.16%	245	4	2.39%
Concord School District	180	6	1.97%	230	6	2.24%
City of Concord	177	7	1.94%	183	7	1.78%
Keene School District	160	8	1.75%	165	8	1.61%
Portsmouth School District	128	9	1.40%	143	9	1.39%
Town of Salem	125	10	1.37%	109	10	1.06%
All Other *	4,787		52.41%	5,420		51.80%
Total (365 Governments)	9,133		100.00%	10,264		100.00%

*As of June 30, 2022, "All Other" consisted of:

Type	Number	Employees
City Governments	10	557
Town Governments & Related Entities	132	880
County Governments & Related Entities	12	268
School Districts & Administrative Units	195	3,082
Total	349	4,787

A full list of participating employers as of June 30, 2022 begins on page 121.

LISTING OF PARTICIPATING EMPLOYERS

STATE GOVERNMENT

State of New Hampshire E, P, F
Community College System of
New Hampshire E
Community Development Finance
Authority E
Land & Community Heritage
Investment Program E
New Hampshire Retirement System E
Pease Development Authority E

CITIES AND TOWNS (AND RELATED ENTITIES)

Alexandria E, P
Allenstown E, P, F
Alstead P
Alton E, P, F
Amherst P, F
Andover P
Androscoggin Valley Regional Refuse
Disposal Dist. E
Antrim E, P
Ashland E, P
Atkinson E, P, F
Auburn E, P, F
Barnstead E, P, F
Barrington E, P, F
Bartlett P, F
BCEP Solid Waste District E
Bedford E, P, F
Belmont E, P, F
Bennington E, P
Berlin E, P, F
Berlin Housing Authority E
Berlin Water Works E
Bethlehem E, P, F
Boscawen E, P
Bow E, P, F
Bradford P
Brentwood E, P, F
Bristol E, P, F
Brookline E, P, F
Brookline Public Library E

Campton E, P, F
Canaan E, P
Candia P
Canterbury E, P
Carroll E, P, F
Center Conway Fire Precinct F
Center Harbor E, P
Central Hooksett Water Precinct E
Charlestown E, P
Chester E, P, F
Chesterfield E, P
Chichester E, P
Claremont E, P, F
Clarksville E
Colebrook E, P
Concord E, P, F
Conway E, P
Conway Village Fire District E, F
Cook Memorial Library E
Cornish E
Croydon E
Danville P
Deerfield E, P
Deering P
Derry E, P, F
Derry Housing Authority E
Dorchester E
Dover E, T, P, F
Dover Housing Authority E
Dublin E, P
Dunbarton E, P
Durham E, P, F
East Kingston E, P
Effingham P
Eidelweiss Village District E
Enfield E, P
Epping E, P, F
Epsom E, P, F
Exeter E, P, F
Farmington P, F
Fitzwilliam E, P

Francestown E, P
Franconia P
Franklin E, P, F
Freedom P
Fremont P
Gilford E, P, F
Gilmanton E, P, F
Goffstown E, P, F
Goffstown Village Water Precinct E
Gorham E, P, F
Goshen E
Grafton E, P
Grantham E, P
Greenfield E, P
Greenland E, P, F
Greenville E, P
Groton E, P
Hampstead E, P, F
Hampton E, P, F
Hampton Falls E, P, F
Hancock P
Hanover E, P, F
Harrisville P
Haverhill E, P
Hebron E, P
Henniker E, P, F
Hillsborough P, F
Hinsdale E, P
Holderness E, P
Hollis E, P, F
Hooksett E, P, F
Hooksett Public Library E
Hooksett Sewer Commission E
Hooksett Village Water Precinct E
Hopkinton E, P, F
Hudson E, P, F
Jackson E, P, F
Jaffrey E, P, F
Jefferson E
Keene E, P, F
Kensington P

Kingston E, F, P	Nashua Housing Authority E	Rindge E, P, F
Laconia E, P, F	Nelson E	Rochester E, P, F
Laconia Housing & Redevelopment E	New Boston P	Rockingham Planning Commission E
Laconia Water Works E	New Castle E, P, F	Rollinsford E, P
Lakes Region Mutual Fire Aid E, F	New Durham E, P	Rumney E, P
Lakes Region Planning Commission E	New Hampton E, P, F	Rye E, P, F
Lancaster E, P, F	New Ipswich E, P	Rye Water District E
Langdon P	New London E, P, F	Salem E, P, F
Lebanon E, P, F	New London-Springfield Water Precinct E	Salem Housing Authority E
Lee E, P, F	Newbury P	Salisbury E
Lempster E	Newfields E, P	Sanbornton E, P, F
Lincoln E, P	Newington E, P, F	Sanbornton Public Library E
Lisbon P	Newmarket E, P, F	Sandown E, P, F
Litchfield E, P, F	Newmarket Housing Authority E	Sandown Public Library E
Littleton E, P, F	Newport E, P, F	Sandwich P, F
Littleton Public Library E	Newton E, P	Seabrook P, F
Littleton Water & Light Department E	New Hampshire Municipal Bond Bank E	Shelburne E
Londonderry E, P, F	North Conway Water Precinct/ Fire Department E, F	Somersworth E, P, F
Loudon E, P, F	North Hampton E, P, F	Somersworth Housing Authority E
Lower Bartlett Water Precinct E	Northfield E, P	South Hampton P
Lyme E, P	Northumberland E, P	Southern NH Planning Commission E
Lyndeborough P	Northwood E, P, F	Springfield E, P
Madison E, P	Nottingham P, F	Stark E
Manchester P, F	Orford E, P	Stewartstown E
Marlborough E, P	Ossipee E, P	Strafford P, F
Marlow E	Pelham E, P, F	Stratford E
Mason P	Pembroke E, P, F	Stratham E, P
Meredith E, P, F	Peterborough E, P, F	Sugar Hill E, P
Meriden Village Water District E	Piermont P	Sunapee E, P
Merrimack E, P, F	Pittsburg E, P	Sutton P
Merrimack Village District E	Pittsfield E, P, F	Swanzey P, F
Middleton P	Plainfield E, P	SWNH District Fire Mutual Aid E, F
Milford E, P, F	Plaistow E, P, F	Tamworth E, P, F
Milford Area Communication Center E	Plaistow Public Library E	Thornton E, P
Milton E, F, P	Plymouth E, P, F	Thornton Public Library E
Monroe E	Plymouth Village Water & Sewer E	Tilton E, P
Mont Vernon E, P	Portsmouth E, P, F	Tilton/Northfield Fire District E, F
Moultonborough E, P, F	Portsmouth Housing Authority E	Troy E, P
Nashua E, P, F	Raymond E, P, F	Troy Water & Sewer E
Nashua Airport Authority E		Tuftonboro E, P, F
		Unity E

Lafayette Regional Cooperative School District E, T	North Country Education Service E, T	Thornton School District E, T
Landaff School District T	North Hampton School District E, T	Timberlane Regional School District E, T
Lebanon School District E, T	Northumberland School District E, T	Unity School District E, T
Lempster School District E, T	Northwood School District E, T	Virtual Learning Academy Charter School T
Lincoln Woodstock Coop School District E, T	Nottingham School District E, T	Wakefield School District E, T
Lisbon Regional School District E, T	Oyster River Coop School District E, T	Warren School District E, T
Litchfield School District E, T	Pelham School District E, T	Washington School District E, T
Littleton School District E, T	Pembroke School District E, T	Waterville Valley School District E, T
Londonderry School District E, T	Pemi-Baker Regional School District E, T	Weare School District T
Lyme School District E, T	Piermont School District E, T	Wentworth School District E, T
Madison School District E, T	Pittsburg School District E, T	Westmoreland School District E, T
Manchester School District E, T	Pittsfield School District E, T	White Mountains Regional School District E, T
Marlborough School District E, T	Plainfield School District E, T	Wilton-Lyndeborough School District E, T
Marlow School District E, T	Plymouth School District E, T	Winchester School District E, T
Mascenic Regional School District E, T	Portsmouth School District E, T	Windham School District E, T
Mascoma Valley School District E, T	Profile Coop School District E, T	Winnacunnet Coop School District E, T
Mason School District E, T	Propsect Mountain High School E, T	Winnisquam Regional School District E, T
Merrimack School District E, T	Raymond School District E, T	
Merrimack Valley School District E, T	Rivendell Interstate School District T	
Middleton School District E, T	Rochester School District E, T	
Milan School District E, T	Rollinsford School District E, T	
Milford School District E, T	Rumney School District E, T	
Milton School District E, T	Rye School District E, T	
Monadnock Regional School District E, T	Salem School District E, T	
Monroe School District E, T	Sanborn Regional School District E, T	
Mont Vernon School District E, T	Seabrook School District E, T	
Moultonborough School District E, T	Seacoast Charter School T	
Mountain Lakes District E	Shaker Regional School District E, T	
Nelson School District T	Somersworth School District E, T	
New Boston School District E, T	Souhegan Cooperative School District E, T	
New Castle School District E, T	South Hampton School District E, T	
Newfields School District E, T	Stark School District E, T	
Newfound Area School District E, T	Stewartstown School District T	
Newington School District E, T	Stoddard School District E, T	
Newmarket School District E, T	Strafford School District E, T	
Newport School District E, T	Stratford School District E, T	
Next Charter School T	Stratham School District E, T	
North Country Charter Academy T	Sunapee School District E, T	
	Tamworth School District E, T	
		SCHOOL ADMINISTRATIVE UNITS
		SAU 2 E, T
		SAU 3 E, T
		SAU 6 E
		SAU 7 E, T
		SAU 9 E, T
		SAU 13 E, T
		SAU 15 E
		SAU 16 E, T
		SAU 19 E, T
		SAU 20 E, T
		SAU 21 E, T
		SAU 23 E, T
		SAU 24 E, T
		SAU 29 E, T
		SAU 34 E
		SAU 35 E, T
		SAU 39 E, T
		SAU 41 E, T

SAU 42 E, T
SAU 44 E, T
SAU 46 E, T
SAU 48 E, T
SAU 50 E, T
SAU 53 E, T
SAU 58 E
SAU 67 E, T
SAU 70 E, T

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