



NHRS

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

**Comprehensive Annual Financial Report For the
Fiscal Year Ended
June 30, 2019**

**Our Mission: To provide secure
retirement benefits and superior service**

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NHRS
New Hampshire Retirement System

**COMPREHENSIVE ANNUAL
FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED
JUNE 30, 2019**

A Component Unit of the State of New Hampshire

Prepared by
New Hampshire Retirement System
54 Regional Drive
Concord, New Hampshire 03301-8507
www.nhrs.org

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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



Richard A. Gustafson, PhD
Chair
Board of Trustees

November 27, 2019

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' Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2019. 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 2019.

The Board has a fiduciary responsibility to ensure that the interests of members and beneficiaries are properly safeguarded over the long term. 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.

We are pleased to report that at the close of the fiscal year, the retirement system's net position restricted for pension and OPEB was \$9,207.6 billion, an increase of approximately \$333.4 million over the prior fiscal year, and an all-time high for the plan.

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 as a result of some 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 may lie ahead, there is a solid foundation in place and meaningful progress is being made to ensure the long-term viability of NHRS.

Employer contribution rates have begun to stabilize, and actually declined in the current biennium for three of the four member groups (Employee, Police and Fire). Employer contributions for the Teacher group, however, increased slightly, mainly due to the ongoing decline in the state's school-age population, which has led to a decline in the number of active teachers over the past decade. A cost-of-living increase granted in 2019 by the Legislature – the first in a decade – will take effect beginning in fiscal year 2021 and is projected to increase employer contribution rates beginning in fiscal year 2022.

At June 30, 2019, the funded ratio of the Pension Plan stood at 64.8% and the OPEB Plan at 5.6%, versus 63.6% and 5.3% 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 postemployment 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.

NHRS pursues a long-term investment strategy designed to meet its funding requirements. The Board sets the assumed rate of investment 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.

The IIC marked the 10th anniversary of its inception on January 1, 2019. It is always important to remember that no market goes up in a straight line and volatility is inevitable, but with a decade of investment performance to look back on, the Legislature's decision to create the IIC has proven to be beneficial for NHRS, as evidenced by its results compared to other public pension plans.

NHRS realized an 5.7% return on investments in the fiscal year ended June 30, 2019, below the retirement system's assumed rate of investment return of 7.25%. 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, ten-year, twenty-year, and twenty five-year returns for the periods ended June 30, 2019, were 9.3%, 6.4%, 9.9%, 5.9%, and 8.2%, respectively. All returns are net of fees.

NHRS has a diversified investment portfolio which, in any given year, can diverge from market indices. The long-term goal of this approach is to reduce risk and mitigate volatility. Compared to the members in the InvestorForce Public Defined Benefit Net Universe, which consists of 535 public pension plans totaling \$700 billion in assets, NHRS performed better than two-thirds of its peers over the three-, five- and 20-year periods and better than 85% of its peers over the 10- and 25-year periods. The one-year return was below the median, with NHRS placing just outside the bottom third of all plans.

NHRS' investment and administrative expenses remain below the average expenses reported in the most recent survey of public pension plans compiled by the National Conference on Public Employee Retirement Plans.

In addition to the information on investments contained in this report, more detailed information on NHRS-specific investment activities and current economic and market climate is provided in the Comprehensive Annual Investment Report (CAIR) for Fiscal Year 2019, issued separately by the IIC.

Through a number of recent and ongoing initiatives, NHRS has continued to strengthen its operations, efficiency, and stakeholder outreach. These efforts include expanded employer education efforts, website improvements, and ongoing cyber-security enhancements to assure the protection of our records and data. One major initiative we launched in 2019 is the multi-year upgrade of our 16-year-old pension administration system, which will create operational efficiencies and provide additional security features.

Since June 30, 2019, the Board welcomed one new Trustee, Benjamin Jean, who replaced Michael Milligan as the State of NH employer representative. We thank former Trustee Milligan for his dedicated service to the retirement system.

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 the legislative changes in support of the sustainability and stability of NHRS and for the benefit of the retirement system's members and beneficiaries.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard A. Gustafson". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Richard A. Gustafson, PhD
Chair, Board of Trustees

BOARD OF TRUSTEES

BOARD OF TRUSTEES



Richard A. Gustafson, PhD
Chair, Public Member
August 2011 to August 2019



Timothy S. Lesko
Public Member
January 2018 to November 2019



Maureen Kelliher
Public Member
June 2014 to July 2019



Robert E. Maloney
Public Member
July 2018 to July 2021



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



Benjamin Jean
Employer Member
July 2019 to July 2022



Scott M. Myers
Employer Member
January 2018 to September 2022



Melvin A. Friese
Employee Member
July 2018 to July 2021



Sue Hannan
Teacher Member
July 2018 to July 2021



George A. Walker
Firefighter Member
July 2012 to July 2021



William Hart
Police Officer Member
August 2016 to July 2018



William Dwyer
State Treasurer
March 2014 ex officio



Christopher C. Coates
Employer Member
September 2018 to July 2019

**INDEPENDENT
INVESTMENT
COMMITTEE**

INDEPENDENT MEMBERS



Keith Quinton
April 2017–Present



Christine Clinton
January 2018–Present



Daniel LaPlante
August 2018–Present

TRUSTEE MEMBERS



Maureen Kelliher, Chair
June 2014–Present



Timothy S. Lesko
January 2018–Present

**CERTIFICATE OF
ACHIEVEMENT**



Government Finance Officers Association

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

Presented to

New Hampshire Retirement System

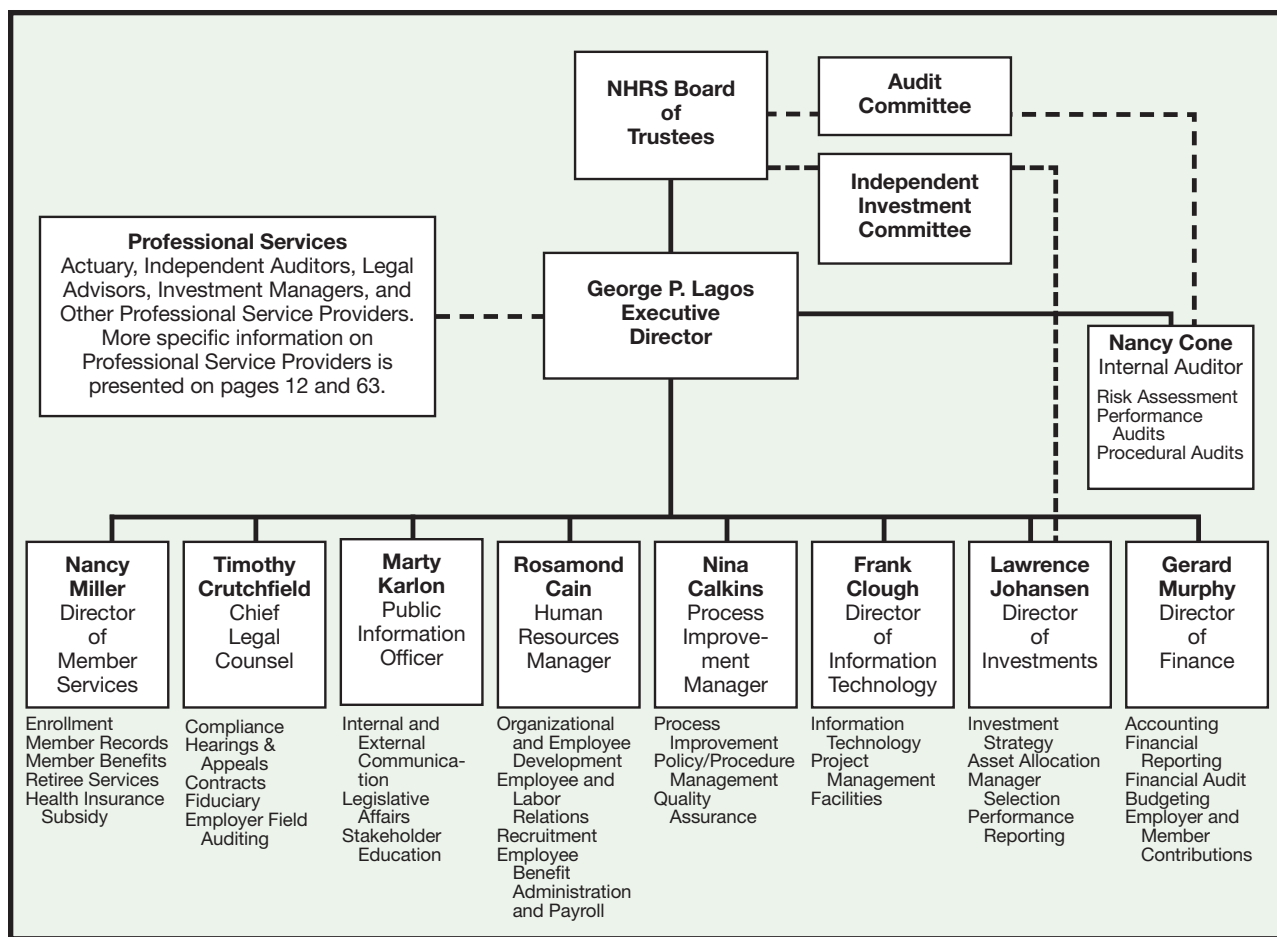
**For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended**

June 30, 2018

Christopher P. Morill

Executive Director/CEO

ADMINISTRATIVE ORGANIZATION



NHRS MANAGEMENT TEAM



Seated left to right: Melissa Pettingill, Larry Johansen, George P. Lagos, Nancy Cone Standing left to right: Tracy Knight, Nina Calkins, Timothy Crutchfield, Gerard Murphy, Margaret Astles, Marty Karlon, Cecile Merrill, Frank Clough, Rosamond Cain, Nancy Miller, Tamre McCrea, Heather Fritzky, Deb Tasker, Mark Cavanaugh. Absent when photo was taken: Tracey Horner.

PROFESSIONAL MANAGERS, ADVISORS AND SERVICE PROVIDERS

DOMESTIC EQUITY MANAGERS

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

NON-U.S. EQUITY MANAGERS

Aberdeen Asset Management Inc.
Artisan Partners
Causeway Capital Management
Fisher Investments
LSV Asset Management
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
DoubleLine Capital
Fidelity Institutional Asset
Management Trust Company
GAM
Income Research &
Management
Loomis Sayles &
Company, L.P.
Manulife Asset Management

PRIVATE DEBT & EQUITY MANAGERS

Aberdeen Standard Investments
Actis
Alcentra
Apollo Global Management
Avenue Capital Group
BlackRock Private Equity Partners
BlueBay Asset Management
Carlyle Group
CarVal Investors
CCMP Capital
Comvest Partners
Collier Capital
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
Riverstone Holdings
RFE Investment Partners
Siguler Guff & Co.
SL Capital Partners
Tennenbaum Capital Partners
Thoma Bravo
Top Tier Capital Partners
VSS
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

NEPC, LLC

ACTUARIAL CONSULTANT

Gabriel, Roeder, Smith & Company

LEGAL ADVISORS

Foster Pepper PLLC
Getman, Stacey, Schulthess &
Steere, P.A.
Groom Law Group
Peter T. Foley, Esquire
Sulloway & Hollis PLLC
McLane Middleton, P.A.

CUSTODIANS

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

CORPORATE GOVERNANCE SERVICES

Institutional Shareholder Services,
Inc.

TRADING COST ADVISOR

Abel/Noser, LLC

LETTER OF
TRANSMITTAL

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



George P. Lagos
Executive Director

November 27, 2019

Dear Chair and Members of the Board of Trustees:

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the New Hampshire Retirement System (NHRS) for the fiscal year ended June 30, 2019. 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 48,288 active members and 38,352 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 2019 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 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 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 CAFR 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 NHRS's 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, 2019, plan net position increased \$333.4 million to \$9,207.6 billion compared to a \$580.9 million net position increase for the prior year. While the economy continues to make positive progress since the great recession of 2008–09, significant financial challenges remain. 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

In order 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, 2019, based on the June 30, 2019 financial schedules prepared by our actuary was 64.8%. The comparable funded ratio at June 30, 2018, based on the June 30, 2018 financial schedules prepared by our actuary was 63.6%. The funded ratio of the OPEB Plan at June 30, 2019, based on the June 30, 2019 financial schedules prepared by our actuary, was 5.6%. The comparable funded ratio at June 30, 2018, based on the June 30, 2018 financial schedules prepared by our actuary was 5.3%. The ratio of Plan net position to the Plan liability under GAAP is separately determined for both the Pension and OPEB plan 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 48.

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 of 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 the fair value of plan net assets. 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, an 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 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 Plans' 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-year periods ended June 30, 2019, were 5.7%, 9.3%, 6.4%, 9.9%, and 5.9%, respectively. A discussion about comparative annualized

returns and related benchmark indices for fiscal years 2019 and 2018 is presented in the Management's Discussion and Analysis beginning on page 21.

For the five, six, seven, eight, nine, and ten years ending June 30, 2019, a period during which the IIC made the investment decisions, total fund performance was in the top quartile.

The outperformance of 90 basis points relative to the median of the InvestorForce Public Defined Benefit Net Universe for the ten years ending June 30, 2019 represents approximately \$192 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 accomplishments during fiscal year 2019 were:

- Launched multi-year upgrade of current pension administration system.
- Completed an independent, third-party actuarial audit, which identified no material issues.
- Developed educational presentations, online materials, and dedicated web page for members approaching retirement as part of a multi-year effort to expand education and outreach to members, retirees, and employers. Also developed and posted financial literacy content for members and retirees on website.
- Co-location (COLO) site completed, which allows for continuity of operations in a disaster event.
- Amended administrative rules as part of a statutorily required 10-year review.
- Issued the June 30, 2018, CAFR and GASB 68 and 75 reports with unmodified (clean) opinions.

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 2019, 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 2016 by NHRS' current actuary, Gabriel, Roeder, Smith and Company and was based on the information available as of June 30, 2015. An actuarial valuation of the assets and liabilities is required by statute at least once during each two-year period. The June 30, 2017 actuarial valuation was used to determine employer contribution rates for fiscal years 2020 and 2021. The June 30, 2019 actuarial valuation will be used to determine employer contribution rates for fiscal years 2022 and 2023. 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 Comprehensive Annual Financial Report for the fiscal year ended June 30, 2018, 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 28 of the past 29 years. A copy of the fiscal year 2018 award is presented on page 10.

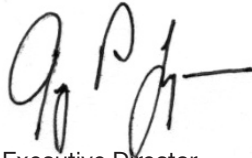
ACKNOWLEDGMENTS

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,

George P. Lagos

Handwritten signature of George P. Lagos in black ink, featuring a stylized 'G' and 'L'.

Executive Director

Gerard Murphy

Handwritten signature of Gerard Murphy in black ink, written in a cursive style.

Director of Finance

NEW HAMPSHIRE RETIREMENT SYSTEM

FINANCIAL SECTION

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INDEPENDENT AUDITORS' REPORT



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P.O. Box 307
Southfield, MI 48037-0307
Tel: 248.352.2500
Fax: 248.352.0018
plantemoran.com

Independent Auditor's Report

To the Board of Trustees
New Hampshire Retirement System

REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of the New Hampshire Retirement System (the "System"), a component unit of the State of New Hampshire, as of and for the year ended June 30, 2019 and the related notes to the financial statements, which collectively comprise the New Hampshire Retirement System's basic financial statements, as listed in the table of contents.

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

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

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

OPINION

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the fiduciary net position of the New Hampshire Retirement System as of June 30, 2019 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.

OTHER MATTERS

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the other required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, 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 supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our 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.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the New Hampshire Retirement System's basic financial statements. The supporting schedules, as identified in the table of contents, and introductory, investment, actuarial, and statistical sections are presented for the purpose of additional analysis and are not a required part of the basic financial statements.

The supporting schedules, as identified in the table of contents, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the 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, as identified in the table of contents, are fairly stated in all material respects in relation to the basic financial statements as a whole.

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

REPORT ON SUMMARIZED COMPARATIVE FINANCIAL INFORMATION

We have previously audited the New Hampshire Retirement System's June 30, 2018 financial statements, and we expressed an unmodified audit opinion on those basic financial statements in our report dated November 29, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018 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 4, 2019 on our consideration of the New Hampshire Retirement 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 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 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 New Hampshire Retirement System's internal control over financial reporting and compliance.

Plante & Moran, PLLC

December 4, 2019

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MANAGEMENT'S DISCUSSION AND ANALYSIS – REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

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, 2019 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 Comprehensive Annual 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, 2019 with summarized comparative information for fiscal year 2018. 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 increased by \$333.4 million (3.8%) from the prior year's net position reflecting strong performance results across all asset classes.

Net investment income during fiscal year 2019 was \$490.3 million, a \$229.9 million (31.9%) decrease over the prior fiscal year. The net investment income for fiscal year 2019 reflects a time-weighted return for the total fund during the year of 5.7% compared to a time-weighted investment return of 8.9% for the fiscal year ended June 30, 2018.

The total contributions received during the fiscal year were \$703.9 million. For fiscal year 2018, total contributions received were \$684.4 million.

Employer contributions for fiscal year 2019 increased 2.8%, to \$479.9 million, compared with employer contributions in fiscal year 2018 of \$466.8 million. The increase in employer contributions in fiscal year 2019 was primarily due to growth in covered payroll.

Member contributions were \$224.0 million in fiscal year 2019, an increase of 2.9% over fiscal year 2018 member contributions of \$217.6 million. The increase in member contributions is primarily due to an increase in earnable compensation rates for contributing members. Overall member normal contributions increased by \$6.4 million or 2.9% over the prior fiscal year. Voluntary member contributions increased by \$0.2 million or 5.1% over fiscal year 2018.

Benefits paid during fiscal year 2019 were \$828.7 million, an increase of 4.8% over benefits paid in fiscal year 2018 of \$791.0 million. The increase in benefits paid in fiscal year 2019 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, 2019 and June 30, 2018.

Condensed Comparative Plan Net Position – Combined Plans

(Dollar Values Expressed in Millions)

	As of June 30, 2019	As of June 30, 2018	Amount Increase (Decrease)	Percentage Increase (Decrease)
Cash	\$ 234.6	\$ 291.3	\$ (56.7)	(19.5%)
Receivables	120.5	112.1	8.4	7.5%
Investments	8,894.5	8,508.7	385.8	4.5%
Other Assets	1.1	0.2	0.9	450.0%
Total Assets	\$ 9,250.7	\$ 8,912.3	\$ 338.4	3.8%
Other Liabilities	43.1	38.1	5.0	13.1%
Total Liabilities	\$ 43.1	\$ 38.1	\$ 5.0	13.1%
Net Position Restricted for Pension and Other Post Employment Benefits	\$ 9,207.6	\$ 8,874.2	\$ 333.4	3.8%

Total assets increased by \$338.4 million (3.8%) in fiscal year 2019. Cash on hand at fiscal year end was \$56.7 million (19.5%) lower than at fiscal year end 2018 reflecting higher draw downs of liquidity reserves necessary to meet operating obligations. Receivables increased by \$8.4 million (7.5%) over the prior fiscal year primarily due to an increase in the pending sales of securities and an increase in the contributions due from employers at fiscal year end. Investments increased by \$385.8 million (4.5%) in fiscal year 2019. The increase in investments is attributable to relatively strong capital market returns, especially US equities. Other assets increased by \$0.9 million for fiscal year 2019.

Total liabilities increased by \$5.0 million (13.1%) at the end of fiscal year 2019 primarily due to an increase in pending purchases of securities at fiscal year end.

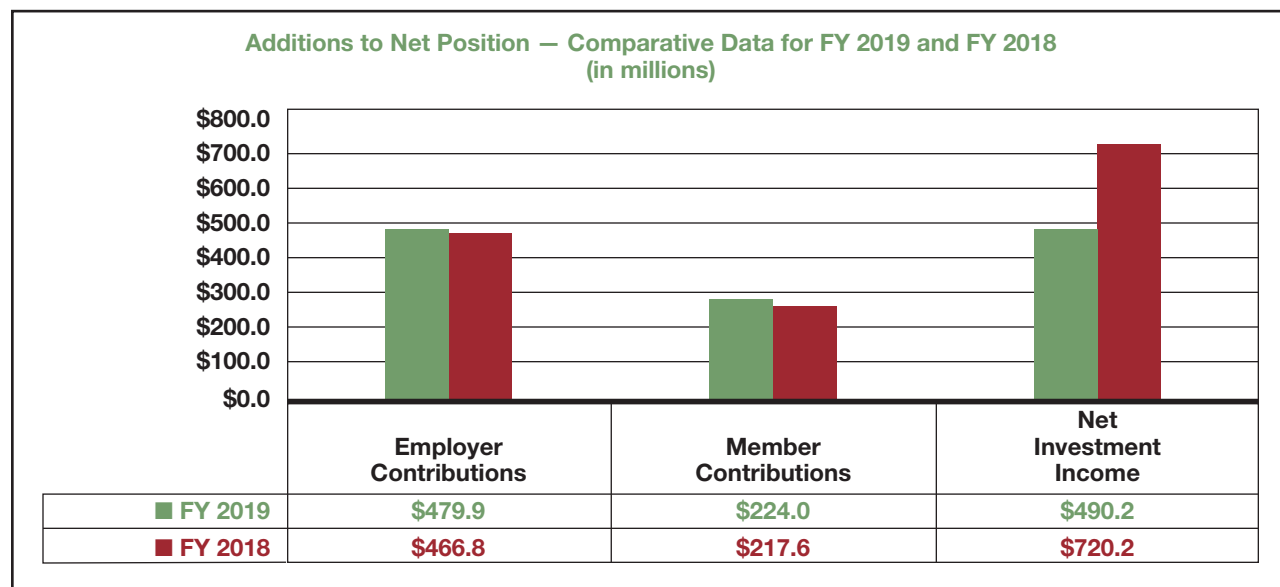
Condensed Comparative Changes in Plan Net Position – Combined Plans
(Dollar Values Expressed in Millions)

	Year Ended June 30, 2019	Year Ended June 30, 2018	Amount Increase (Decrease)	Percentage Increase (Decrease)
ADDITIONS:				
Employer Contributions	\$ 479.9	\$ 466.8	\$ 13.1	2.8%
Member Contributions	224.0	217.6	6.4	2.9%
Net Investment Income (Loss)	490.2	720.2	(229.9)	(31.9%)
Total Additions to Plan Net Position	\$ 1,194.1	\$ 1,404.6	\$ (210.4)	(15.0%)
DEDUCTIONS:				
Benefits Paid	\$ 828.7	\$ 791.0	\$ 37.7	4.8%
Refunds of Contributions	23.5	24.0	(0.5)	(2.1%)
Administrative Expense	7.6	7.8	(0.2)	(2.6%)
Other Deductions	0.9	0.9	0.1	11.1%
Total Deductions from Plan Net Position	\$ 860.7	\$ 823.7	\$ 37.1	4.5%
Total Changes in Plan Net Position	\$ 333.4	\$ 580.9	\$ (247.5)	(42.6%)

ADDITIONS TO NET POSITION

For fiscal year 2019, the combined total of employer and member contributions increased by \$19.5 million or 2.9%. Employer contributions increased from \$466.8 million in fiscal year 2018 to \$479.9 million or 2.8% in fiscal year 2019. The increase in employer contributions is primarily due to higher earnable compensation rates. Member contributions for fiscal year 2019 were \$224.0 million, an increase of \$6.4 million or 2.9% from fiscal year 2018. Member normal contributions increased \$6.2 million or 2.9% in fiscal year 2019 and voluntary member contributions increased by \$0.2 million or 5.1%.

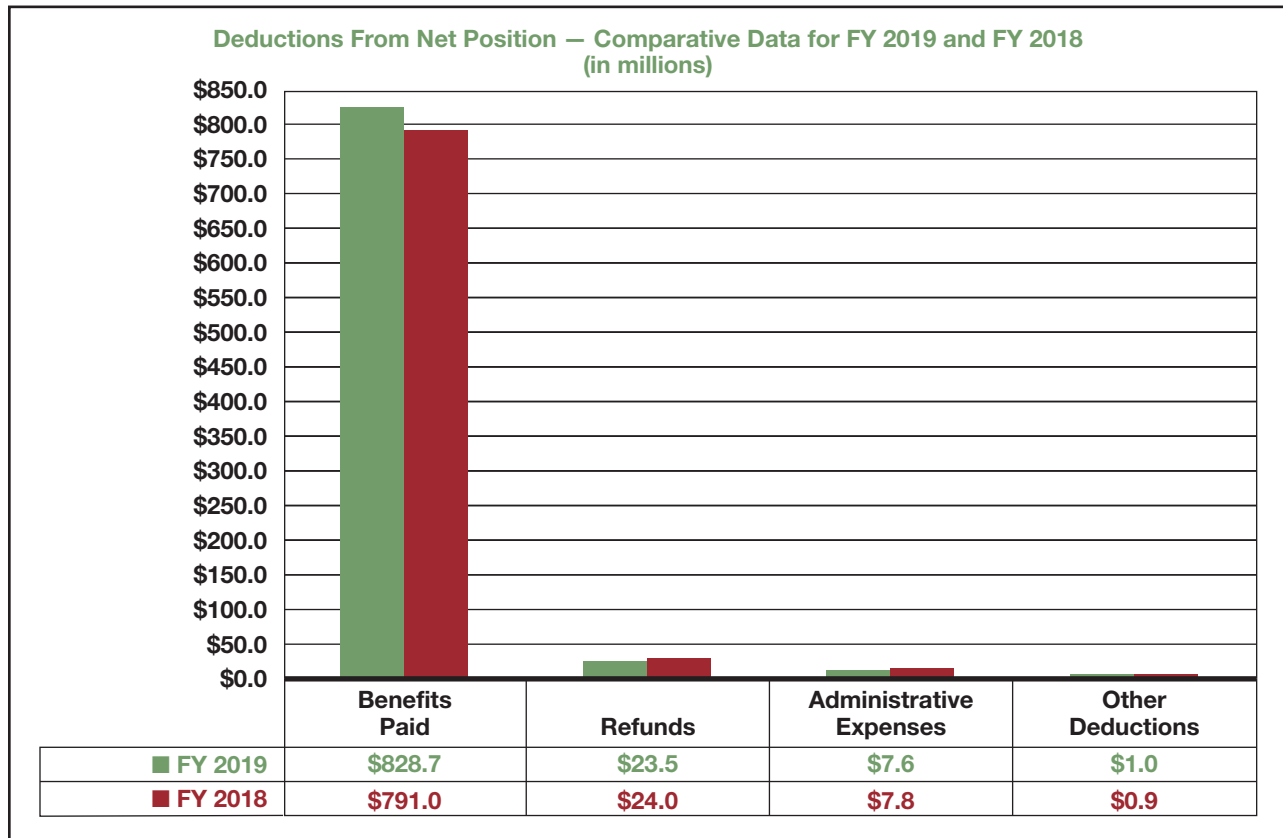
Over the long term, the Plan’s investment portfolio has been a major source for additions to plan net position. There was a net investment income gain in fiscal year 2019 of \$490.2 million compared with a net investment income gain in fiscal year 2018 of \$720.2 million. The net change from year-to-year was (\$230.0) million or (31.9%), a decrease from fiscal year 2018. The decrease in investment income is due to uncertainty in the global markets as evidenced by the significant global downturn in the fourth quarter of 2018 which impacted equity returns.



DEDUCTIONS FROM NET POSITION

Total benefits paid in fiscal year 2019 were \$828.7 million, an increase of \$37.7 million or 4.8% over the fiscal year 2018 level of \$791.0 million. Pension benefits paid in fiscal year 2019 were \$780.9 million, an increase of \$39.2 million or 5.3% compared with the pension benefits paid in fiscal year 2018 of \$741.8 million. The increase in pension benefits paid in fiscal year 2019 is primarily due to an increase in the number of retirees and increased average benefit levels for those new retirees. OPEB benefits paid in fiscal year 2019 were \$47.8 million, which was slightly lower than the benefits paid in 2018. Future OPEB benefit payments are expected to remain flat or decrease over time as there is a very small population of active members that can still qualify for this benefit. Refunds of contributions were \$23.5 million, a decrease of \$0.5 million or 2.3% over the 2018 level of \$24.0 million. The decrease reflects a decrease in the number and dollar value of refund requests from terminated members in 2019.

Administrative expenses decreased by \$0.2 million or 2.6% in fiscal year 2019 to a level of \$7.6 million compared with \$7.8 million in 2018. Administrative expenses decreased primarily due to lower salaries and benefits due to position vacancies.



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 funded ratios for both the Pension and OPEB plan were determined using the entry age normal actuarial cost method for both fiscal year 2019 and 2018.

The total pension liability under GAAP at June 30, 2019, was \$13,982.4 million. The fiduciary net position available to pay pension benefits at June 30, 2019 was \$9,170.8 million, resulting in a net pension liability of \$4,811.7 million and a total pension liability of 65.6% of the plan fiduciary net position at June 30, 2019, as of June 30, 2018, it was \$13,652.1 million. The plan fiduciary value of assets available to pay pension benefits at June 30, 2018 was \$8,836.9 million, resulting in a net pension liability of \$4,815.2 million and a funded ratio of 64.7%.

The total OPEB liability under GAAP at June 30, 2019, was \$475.3 million. The fiduciary net position available to pay postemployment medical benefits at June 30, 2019 was \$36.8 million resulting in a net OPEB liability of \$438.4 million

and a funded ratio of 7.8% at June 30, 2019. As of June 30, 2018, the total OPEB liability was \$495.2 million. The fiduciary net position available to pay OPEB benefits at June 30, 2018 was \$37.3 million resulting in a net OPEB liability of \$457.8 million and a funded ratio of 7.5%.

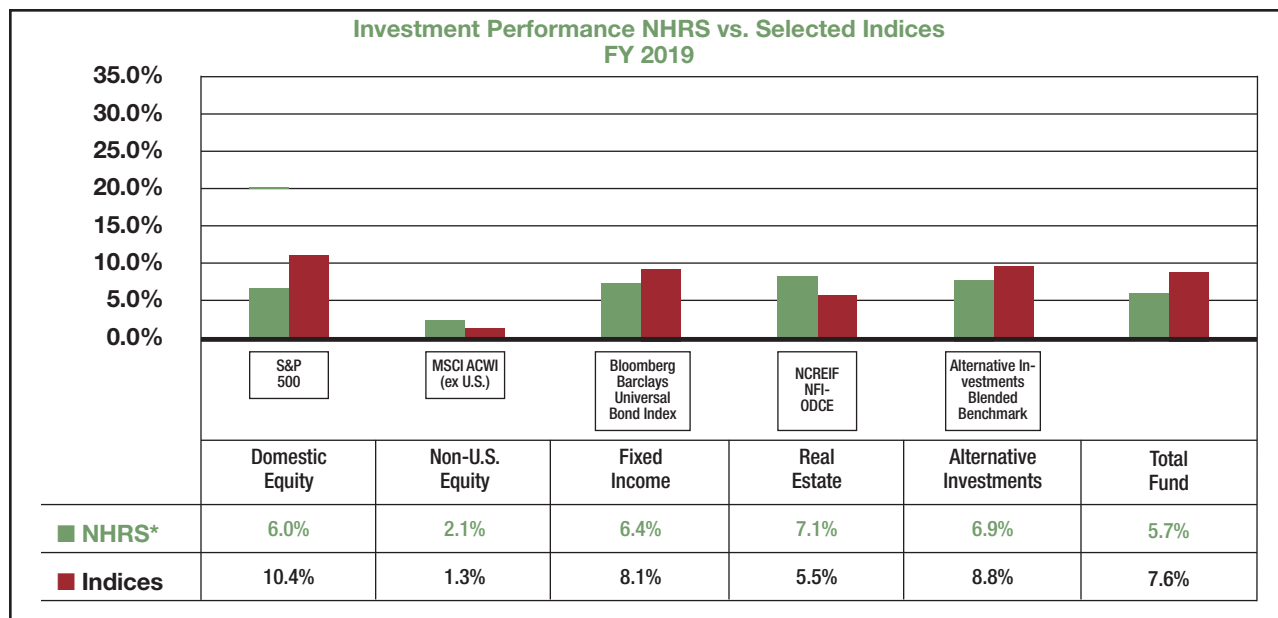
INVESTMENT PERFORMANCE

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 (46%), fixed income investments (23%), and cash equivalents (3%) comprise approximately 72% of invested assets at June 30, 2019. The remaining 28% of assets are invested in real estate (10%) and alternative investments (18%), which 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, 2019, the Plans’ total fund time-weighted rate of return was 5.7% compared to 8.9% for the fiscal year ended June 30, 2018. The difference in year-over-year performance was due to the slowing of the global economy which primarily impacted equity markets.

The total NHRS fund time-weighted rate of return of 5.7% for fiscal year 2019 underperformed the total fund custom index (a blended composition of major market indices in proportion to the NHRS’ asset allocation), which returned 7.6%, by 190 basis points. Domestic Equity generated a return of 6.0%, underperforming the S&P 500 Index return of 10.4% by 440 basis points. The non-U.S. equity portfolio returned 2.1% during fiscal year 2019, outperforming the MSCI All Country World (ex U.S.) index return of 1.3% by 80 basis points. Fixed income returned 6.4% and underperformed the Bloomberg Barclays Capital Universal Bond Index benchmark return of 8.1% by 170 basis points. The real estate portfolio gained 7.1% and outperformed the NCREIF NFI-ODCE (Net of fee) Index return of 5.5% by 160 basis points. The alternative investment class provided a 6.9% return and underperformed the blended benchmark return of 8.8% by 190 basis points. The benchmark for this asset class is 33.3% S&P 500 Index +3%, 33.3% S&P LSTA Leverage Loan Index, 33.3% Cash (1-month USD LIBID) +5%.



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

CONTACTING NHRS

The Comprehensive Annual 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, 2019. Detailed information regarding NHRS' investments as of June 30, 2019 can be found in the Comprehensive Annual 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 Comprehensive Annual 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, 2019 (with summarized financial information as of June 30, 2018)

(in thousands)

	PENSION PLAN 2019	OPEB PLAN 2019	TOTAL 2019	TOTAL 2018
ASSETS:				
Cash & Cash Equivalents	\$ 233,768	\$ 824	\$ 234,592	\$ 291,279
Receivables:				
Due from Employers	45,409	4,767	50,176	50,630
Due from Plan Members	22,247	—	22,247	22,496
Due from Brokers for Securities Sold	25,654	90	25,744	17,390
Interest and Dividends	16,456	58	16,514	17,111
Other	5,791	20	5,811	4,482
Total Receivables	115,557	4,935	120,492	112,109
INVESTMENTS AT FAIR VALUE				
Equity Investments:				
Domestic	2,910,137	10,256	2,920,343	2,954,524
Non-U.S.	1,276,331	4,497	1,280,828	1,282,364
Fixed Income Investments:				
Domestic	1,909,534	6,729	1,916,263	1,627,218
Non-U.S.	187,374	660	188,034	205,798
Real Estate	920,469	3,243	923,712	805,153
Alternative Investments	1,659,442	5,847	1,665,289	1,633,708
TOTAL INVESTMENTS	8,863,287	31,232	8,894,519	8,508,765
Other Assets	1,066	4	1,070	141
TOTAL ASSETS	9,213,678	36,995	9,250,673	8,912,294
LIABILITIES:				
Management Fees and Other Payables	9,800	35	9,835	9,961
Due to Brokers for Securities Purchased	33,105	117	33,222	28,158
TOTAL LIABILITIES	42,905	152	43,057	38,119
NET POSITION RESTRICTED FOR PENSION AND OTHER POST EMPLOYMENT BENEFITS (OPEB)	\$9,170,773	\$36,843	\$9,207,616	\$8,874,175

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, 2019
(with summarized financial information for the year ended June 30, 2018)**

(in thousands)

	PENSION PLAN 2019	OPEB PLAN 2019	TOTAL 2019	TOTAL 2018
ADDITIONS:				
Contributions:				
Employer – Normal	\$ 434,348	\$45,509	\$ 479,857	\$ 466,354
Employer – Other	59	–	59	499
Total Employer Contributions	434,407	45,509	479,916	466,853
Plan Member	223,995	–	223,995	217,572
Total Contributions	658,402	45,509	703,911	684,425
Investment Income (Loss)				
From Investment Activities:				
Net Appreciation (Depreciation) in Fair Value of Investments	328,302	1,353	329,655	559,612
Interest	62,172	245	62,417	54,610
Dividends	73,865	290	74,155	73,895
Net Real Estate Income	14,044	55	14,099	30,984
Alternative Investment Income (Loss)	37,068	142	37,210	29,995
Total Income (Loss) from Investment Activities	515,451	2,085	517,536	749,096
Less: Investment Expenses:				
Investment Management Fees	24,828	98	24,926	26,562
Custodial Fees	659	3	662	633
Investment Advisor Fees	750	3	753	750
Investment Professional Fees	349	1	350	288
Investment Administrative Expense	630	2	632	645
Total Investment Activity Expenses	27,179	106	27,285	28,878
Total Net Income (Loss) from Investment Activities	488,235	1,978	490,213	720,218
TOTAL ADDITIONS	1,146,674	47,488	1,194,162	1,404,643
DEDUCTIONS:				
Benefits Paid	780,907	47,798	828,705	791,004
Refunds of Contributions	23,464	–	23,464	24,010
Administrative Expense	7,436	152	7,588	7,800
Professional Fees	686	2	688	690
Other	238	–	238	225
TOTAL DEDUCTIONS	812,731	47,952	860,683	823,729
CHANGE IN NET POSITION	\$ 333,906	\$ (465)	\$ 333,441	\$ 580,914
NET POSITION RESTRICTED FOR PENSION BENEFITS AND OTHER POSTEMPLOYMENT BENEFITS (OPEB)				
Beginning of the Year	\$8,836,867	\$37,308	\$8,874,175	\$8,293,261
End of the Year	\$9,170,773	\$36,843	\$9,207,616	\$8,874,175

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

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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. 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) No. 14, as amended, the New Hampshire Retirement System is a component unit of the State. This determination was made on the basis of fiscal dependence on the State solely for budget oversight over certain administrative expenses. A copy of the State of New Hampshire's CAFR may be viewed at www.admin.state.nh.us/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, 2019 and 2018 are presented below.

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

EMPLOYERS CONTRIBUTING	2019	2018
State Government	1	1
City Governments	13	13
Town Governments and Related Entities	242	244
County Governments and Related Entities	12	12
School Districts and School Administrative Units	197	197
Total Employers	465	467

MEMBERSHIP DATA	2019	2018
Inactive plan members (or their beneficiaries) currently receiving benefits	38,352	37,012
Inactive members entitled to but not yet receiving benefit payments	2,552	2,420
Active plan members	48,288	48,121
Inactive members not vested	12,530	11,454
Total Membership	101,722	99,007

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.

Group II Members who are age 60, or 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, not to exceed 40 years. Members commencing service on or after July 1, 2011 or members who have a non-vested status as of January 1, 2012 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 $\frac{1}{4}$ 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 comprehensive annual 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 2019, 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, 2019 and June 30, 2018 are presented below.

EMPLOYERS CONTRIBUTING	2019	2018
State Government	1	1
City Governments	13	13
Town Governments and Related Entities	242	244
County Governments and Related Entities	12	12
School Districts and School Administrative Units	197	197
Total Employers	465	467

Membership of the OPEB plan consisted of the following eligible retirees receiving benefits as of June 30, 2019 and 2018:

MEMBERSHIP DATA	2019	2018
Inactive plan members or beneficiaries currently receiving benefit payments	9,650	9,835
Inactive plan members entitled to but not yet receiving benefit payments	2,970	2,934
Active plan members	1,045	1,218
Total Membership	13,665	13,987

The maximum monthly subsidy amounts paid during fiscal year 2019 and 2018 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, 2018, from which the summarized information was derived.

PRIOR YEAR RECLASSIFICATIONS

Certain 2018 information has been reclassified to conform to the 2019 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, 2019 was 5.7% and 8.9% for June 30, 2018. 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.

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, 2019 and 2018, as recommended by the Independent Investment Committee and adopted by the Board of Trustees, is as follows:

ASSET ALLOCATION	2019		2018	
	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%	20–50%	30.0%	20–50%
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	9.0%		4.5%	
Short Duration	—%		2.5%	
Global Multi-Sector Fixed Income	10.0%		11.0%	
Absolute Return Fixed Income	6.0%		7.0%	
Total Fixed Income	25.0%	20–30%	25.0%	20–30%
Private Equity	10.0%		5.0%	
Private Debt	5.0%		5.0%	
Opportunistic	—%		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, 2019 and 2018, NHRS held deposits of \$12.5 million and \$8.8 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, 2019 and 2018:

EFFECTIVE DURATION — FIXED INCOME INVESTMENTS (dollars in thousands)
AT JUNE 30, 2019

Investment Type	Fair Value June 30, 2019	Percentage of Fixed Income Investments	Effective Duration in Years	Weighted Average Effective Duration in Years
Collateralized/Asset Backed Obligations	\$ 133,882	6.4%	3.0	0.2
Corporate Bonds	526,267	25.0	5.6	1.4
Government and Agency Bonds*	641,553	30.5	5.3	1.6
Commingled Fund	263,096	12.5	2.9	0.36
Commingled Fund	267,385	12.7	4.7	0.6
Commingled Fund	225,053	10.7	4.6	0.49
Commingled Fund	47,061	2.2	(2.3)	(0.1)
Totals	\$2,104,297	100.0%		4.6

EFFECTIVE DURATION — FIXED INCOME INVESTMENTS (dollars in thousands)
AT JUNE 30, 2018

Investment Type	Fair Value June 30, 2018	Percentage of Fixed Income Investments	Effective Duration in Years	Weighted Average Effective Duration in Years
Collateralized/Asset Backed Obligations	\$ 143,582	7.8%	3.0	0.2
Corporate Bonds	596,944	32.6	4.9	1.6
Government and Agency Bonds*	656,414	35.8	4.4	1.6
Commingled Fund	210,767	11.5	2.1	0.24
Commingled Fund	225,309	12.3	(1.2)	(0.1)
Totals	\$1,833,016	100.0%		3.5

*Does not include two U.S. Treasury Bills that have a duration of less than one year.

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, 2019 and 2018, including the distribution of those investments by Standard & Poor's quality credit ratings:

CREDIT QUALITY RISK — FIXED INCOME SECURITIES AT JUNE 30, 2019 (in thousands)

Investment Type	Quality Ratings ¹					
	Fair Value June 30, 2019	AAA	AA	A	BBB or Lower	Unrated
Collateralized/Asset Backed Obligations	\$ 133,882	\$ 86,749	\$ 1,080	\$ 1,151	\$ 19,596	\$ 25,306
Corporate Bonds	526,267	3,940	16,961	104,427	397,384	3,555
Government and Agency Bonds ²	206,948	19,681	18,397	91,785	61,295	15,790
Commingled Fund ³	47,061	—	—	47,061	—	—
Commingled Fund ³	225,053	—	—	225,053	—	—
Commingled Fund ³	267,385	—	—	—	267,385	—
Commingled Fund ³	263,096	60,512	15,260	31,045	98,398	57,881
Totals	\$1,669,692	\$170,882	\$51,698	\$500,552	\$844,058	\$102,532
Percent of Total Fair Value		10.23%	3.10%	29.98%	50.55%	6.14%

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 (\$434,605) because these securities are not considered to have credit risk.

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

CREDIT QUALITY RISK — FIXED INCOME SECURITIES AT JUNE 30, 2018 (in thousands)

Investment Type	Quality Ratings ¹					
	Fair Value June 30, 2018	AAA	AA	A	BBB or Lower	Unrated
Collateralized/Asset Backed Obligations	\$ 143,582	\$100,680	\$ 1,936	\$ 5,620	\$ 16,117	\$19,229
Corporate Bonds	596,944	6,304	37,946	147,924	398,154	6,616
Government and Agency Bonds ²	235,113	18,495	43,369	100,842	62,101	10,306
Commingled Fund ³	225,309	—	—	225,309	—	—
Commingled Fund ³	210,767	—	—	—	210,767	—
Totals	\$1,411,715	\$125,479	\$83,251	\$479,695	\$687,139	\$36,151
Percent of Total Fair Value		8.89%	5.90%	33.98%	48.67%	2.56%

¹Ratings were derived primarily from Standard & Poor's (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 (\$421,301) because these securities are not considered to have credit risk.

³Average credit quality rating for the commingled funds was provided by GAM and Manulife respectively.

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, 2019 and 2018, the Plans' combined investment in asset-backed and mortgage-backed securities held in separate account portfolios totaled \$104.3 million and \$127.2 million, 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, 2019, 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, 2019, non-U.S. fixed income securities represent 2.1% 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, 2019 and 2018 is presented on the following schedules:

FOREIGN CURRENCY RISK — NON-U.S. INVESTMENTS (in thousands)
AS OF JUNE 30, 2019

Currency	Equity*	Fixed Income	Real Estate & Alternative Investments	Cash and Cash Equivalents	Totals
Australian dollar	\$ 13,868	\$ 17,912	\$ —	\$ —	\$ 31,780
Brazilian real	6,342	16,885	—	—	23,227
Canadian dollar	21,480	1,813	14,821	—	38,114
Colombian Peso	—	17,435	—	—	17,435
Danish krone	15,065	—	—	—	15,065
Euro	302,594	2,404	61,928	92	367,018
Hong Kong dollar	58,454	—	—	—	58,454
Indonesian rupiah	5,625	13,208	—	—	18,833
Japanese yen	82,086	—	24,690	15	106,791
Malaysian ringgit	—	22,503	—	—	22,503
Mexican peso	—	52,923	—	—	52,923
New Zealand dollar	—	3,217	—	—	3,217
Norwegian krone	2,547	3,304	—	—	5,851
Polish zloty	—	19,854	—	—	19,854
Pound sterling	127,312	—	3,896	—	131,208
South African rand	—	16,576	—	—	16,576
South Korean won	18,281	—	—	—	18,281
Swedish krona	588	—	—	—	588
Swiss franc	58,699	—	—	—	58,699
Turkish lira	765	—	—	—	765
Total investments subject to foreign currency risk	\$713,706	\$188,034	\$105,335	\$ 107	\$1,007,182

*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.

FOREIGN CURRENCY RISK – NON-U.S. INVESTMENTS
AS OF JUNE 30, 2018

(in thousands)

Currency	Equity*	Fixed Income	Real Estate & Alternative Investments	Cash and Cash Equivalents	Totals
Australian dollar	\$ 14,814	\$ 19,778	\$ —	—	\$ 34,592
Brazilian real	3,066	16,062	—	—	19,128
Canadian dollar	29,262	5,078	5,577	—	39,917
Colombian Peso	—	6,923	—	—	6,923
Danish krone	13,727	—	—	—	13,727
Euro	288,271	2,955	77,150	7,982	376,358
Hong Kong dollar	55,560	—	—	—	55,560
Indonesian rupiah	4,289	12,630	—	—	16,919
Japanese yen	80,389	—	19,845	105	100,339
Malaysian ringgit	—	22,564	—	—	22,564
Mexican peso	1,518	55,013	—	—	56,531
New Zealand dollar	—	5,007	—	—	5,007
Norwegian krone	3,423	387	—	—	3,810
Polish zloty	—	19,972	—	—	19,972
Pound sterling	141,935	20,517	4,685	—	167,137
South African rand	—	17,018	—	—	17,018
South Korean won	17,073	—	—	177	17,250
Swedish krona	2,013	—	—	—	2,013
Swiss franc	65,248	—	—	—	65,248
Turkish lira	—	1,895	—	—	1,895
Total investments subject to foreign currency risk	\$720,588	\$205,799	\$ 107,257	\$ 8,264	\$ 1,041,908

*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.

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.

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. 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. Details of the System's outstanding derivatives at June 30, 2019 and June 30, 2018 are shown below:

Derivative Type	Notional Amounts		Fair Value	
	2019	2018	2019	2018
Futures				
Long Equity	\$7,949,340	\$12,111,120	\$7,822,519	\$12,106,047
TOTAL	\$7,949,340	\$12,111,120	\$7,822,519	\$12,106,047

Foreign currency exchange contracts open at June 30, 2019 and 2018 are shown below and on the following page:

**OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2019**

(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:						
Australian Dollar	10,510	4/18/19	7/24/19	0.719068 AUD / USD	—	(176)
Australian Dollar	12,190	5/21/19	8/26/19	0.690155 AUD / USD	156	—
Australian Dollar	4,430	6/6/19	8/26/19	0.70029 AUD / USD	12	—
Chilean Peso	1,820,000	4/3/19	7/15/19	666.9 CLP / USD	—	(48)
Chilean Peso	1,520,000	4/4/19	7/15/19	665.890000 CLP / USD	—	(43)
Chilean Peso	3,570,000	4/8/19	8/14/19	663.890000 CLP / USD	—	(116)
Chilean Peso	4,485,000	5/10/19	9/13/19	686.025000 CLP / USD	73	—
Chilean Peso	3,380,000	6/5/19	10/7/19	693.640000 CLP / USD	109	—
Chilean Peso	1,020,000	6/6/19	10/7/19	691.595000 CLP / USD	28	—
Czech Koruna	104,400	6/25/19	9/26/19	22.348200 CZK / USD	7	—
Czech Koruna	55,500	6/26/19	9/26/19	22.365500 CZK / USD	6	—
Danish Krone	712	6/27/19	7/1/19	6.5646600 DKK / USD	—	—
Danish Krone	216	6/28/19	7/2/19	6.567510 DKK / USD	—	—
Euro	13,510	6/7/19	9/12/19	1.142480 EUR / USD	38	—
Euro	1	6/27/19	7/1/19	1.136670 EUR / USD	—	—
Indonesian Rupiah	47,600,000	4/23/19	7/25/19	14263.5 IDR / USD	25	—
Japanese Yen	51,297	6/24/19	7/1/19	107.226833 JPY / USD	—	(2)
Japanese Yen	542	6/26/19	7/1/19	107.619000 JPY / USD	—	—
Japanese Yen	137	6/27/19	7/2/19	107.787000 JPY / USD	—	—
Japanese Yen	7,492	6/28/19	7/3/19	107.661600 JPY / USD	—	—
New Zealand Dollar	10,730	6/25/19	8/27/19	0.665395 NZD / USD	75	—
New Zealand Dollar	10,720	6/25/19	9/25/19	0.6656950 NZD / USD	75	—
Norwegian Krone	13,600	4/23/19	7/26/19	8.52565 NOK / USD	1	—
Norwegian Krone	73,700	5/20/19	8/23/19	8.75155 NOK / USD	236	—
Norwegian Krone	56,900	5/24/19	8/28/19	8.68507 NOK / USD	134	—
Norwegian Krone	71,800	5/28/19	8/28/19	8.6571 NOK / USD	142	—
Norwegian Krone	73,700	6/19/19	9/24/19	8.707900 NOK / USD	200	—
Pound Sterling	14,410	6/12/19	9/20/19	1.274060 GBP / USD	45	—
Pound Sterling	69	6/28/19	7/2/19	1.269840 GBP / USD	—	—
Russian Ruble	222,000	5/7/19	8/13/19	66.032500 RUB / USD	136	—
Russian Ruble	76,000	6/5/19	8/13/19	65.676000 RUB / USD	40	—
South African Rand	23,900	6/13/19	8/14/19	14.995400 ZAR / USD	92	—
South African Rand	11,200	6/14/19	8/14/19	14.903400 ZAR / USD	39	—
South African Rand	16,100	6/18/19	8/14/19	14.6189000 ZAR / USD	34	—
South Korean Won	16,420,000	6/25/19	9/27/19	1150.530000 KRW / USD	—	(52)
Swedish Krona	93,400	5/13/19	8/16/19	9.550800 SEK / USD	321	—
Swedish Krona	182,100	6/11/19	9/17/19	9.376750 SEK / USD	314	—
Swiss Franc	9	6/28/19	7/2/19	0.97645 CHF / USD	—	—
Foreign currency exchange contracts sold:						
Euro	141	6/27/19	7/1/19	1.1388000 USD / EUR	—	—
Euro	52	6/28/19	7/2/19	1.138800 USD / EUR	—	—
Japanese Yen	11	6/26/19	7/1/19	0.009282 USD / JPY	—	—
Japanese Yen	13	6/26/19	7/1/19	0.009282 USD / JPY	—	—
Japanese Yen	13	6/27/19	7/2/19	0.009282 USD / JPY	—	—
Japanese Yen	22	6/28/19	7/3/19	0.009282 USD / JPY	—	—
Pound Sterling	76	6/27/19	7/1/19	1.272700 USD / GBP	—	—
Pound Sterling	48	6/27/19	7/1/19	1.272700 USD / GBP	—	—
Pound Sterling	103	6/28/19	7/2/19	1.272700 USD / GBP	—	—
South African Rand	5,471	5/10/19	8/14/19	0.070537 USD / ZAR	—	(66)
South African Rand	4,155	6/5/19	8/14/19	0.070537 USD / ZAR	—	(211)
South African Rand	5,291	6/6/19	8/14/19	0.070537 USD / ZAR	—	(317)
South African Rand	4,021	6/13/19	9/11/19	0.070289 USD / ZAR	—	(232)
Swiss Franc	219	6/27/19	7/1/19	1.025641 USD / CHF	—	—
Swiss Franc	206	6/28/19	7/2/19	1.025641 USD / CHF	—	—
Totals					\$2,338	\$(1,263)

OPEN FOREIGN CURRENCY EXCHANGE CONTRACTS
AT JUNE 30, 2018

(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:						
Australian Dollar	10,660	5/14/18	8/17/18	1.353259 AUD/USD	—	(186)
Australian Dollar	12,980	5/11/18	8/17/18	1.353259 AUD/USD	—	(201)
Brazil Real	1,089	6/29/18	7/3/18	3.847400 BRL/USD	2	—
Canadian Dollar	87	6/29/18	7/3/18	1.315450 CAD/USD	—	—
Canadian Dollar	13,830	4/10/18	7/2/18	1.315237 CAD/USD	—	(441)
Canadian Dollar	10,040	4/5/18	7/12/18	1.315237 CAD/USD	—	(241)
Colombian Peso	49,410,000	4/16/18	8/6/18	2941.617713 COP/USD	—	(1,267)
Euro	91	6/28/18	7/2/18	0.856494 EUR/USD	1	—
Euro	274	6/28/18	7/2/18	0.856494 EUR/USD	3	—
Euro	209	6/29/18	7/3/18	0.856494 EUR/USD	—	—
Euro	1,060	6/28/18	8/20/18	0.853457 EUR/USD	12	—
Japanese Yen	2,740,000	5/8/18	8/13/18	110.4600840 JPY/USD	—	(484)
Norwegian Krone	13,600	4/17/18	7/20/18	8.144889 NOK/USD	—	(86)
Norwegian Krone	147,400	5/14/18	8/15/18	8.136463 NOK/USD	—	(413)
Pound Sterling	68	6/28/18	7/2/18	0.757432 GBP/USD	1	—
Pound Sterling	375	6/29/18	7/3/18	0.757432 GBP/USD	—	—
Swedish Krona	177,500	4/18/18	7/25/18	8.931540 SEK/USD	—	(1,466)
Swiss Franc	298	6/28/18	7/2/18	0.992950 SWK/USD	1	—
Swiss Franc	211	6/29/18	7/3/18	0.992950 SWK/USD	—	(1)
Swiss Franc	220	6/29/18	7/3/18	0.992950 SWK/USD	—	—
Turkish Lira	38,000	4/10/18	7/13/18	4.600600 TRY/USD	—	(807)
Foreign currency exchange contracts sold:						
Australian Dollar	8,648	5/14/18	8/17/18	0.7389570 USD/AUD	186	—
Colombian Peso	1,025	5/29/18	8/6/18	0.000340 USD/COP	9	—
Colombian Peso	960	6/20/18	8/6/18	0.000340 USD/COP	4	—
Colombian Peso	693	6/27/18	8/6/18	0.000340 USD/COP	—	(1)
Colombian Peso	1,631	5/23/18	8/6/18	0.000340 USD/COP	33	—
Colombian Peso	1,722	6/13/18	8/6/18	0.000340 USD/COP	43	—
Colombian Peso	1,372	6/5/18	8/6/18	0.000340 USD/COP	30	—
Euro	1,228	6/28/18	7/2/18	1.167550 USD/EUR	—	(12)
Euro	7,842	6/29/18	7/2/18	1.167550 USD/EUR	—	(38)
Euro	16	6/29/18	7/2/18	1.167550 USD/EUR	—	—
Euro	3,372	5/15/18	8/20/18	1.171705 USD/EUR	68	—
Hong Kong Dollar	83	6/28/18	7/3/18	0.127462 USD/HKD	—	—
Hong Kong Dollar	164	6/29/18	7/5/18	0.127464 USD/HKD	—	—
Japanese Yen	520	6/27/18	7/2/18	0.009028 USD/JPY	3	—
Polish Zloty	379	4/12/18	7/20/18	0.267160 USD/PLN	37	—
Pound Sterling	29	6/28/18	7/2/18	1.320250 USD/GBP	—	(1)
Pound Sterling	57	6/29/18	7/3/18	1.320250 USD/GBP	—	—
Pound Sterling	10,840	6/12/18	9/18/18	0.754848 USD/GBP	—	(184)
South African Rand	12,135	4/6/18	7/11/18	0.072886 USD/ZAR	1,348	—
Swedish Krona	59	6/28/18	7/2/18	0.111782 USD/SWK	—	(1)
Swedish Krona	61	6/29/18	7/3/18	0.111782 USD/SWK	—	—
Swedish Krona	112,700	5/14/18	9/21/18	8.891720 USD/SWK	—	(580)
Swedish Krona	74,100	5/11/18	9/21/18	8.891720 USD/SWK	—	(373)
Totals					\$1,781	\$(6,783)

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS

In accordance with GASB 72, except for investments measured using 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 of 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, 2019 and 2018.

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 net asset value (NAV) as a practical expedient are not classified in the fair value hierarchy. At June 30, 2019 and 2018 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, 2019 and 2018.

Investments at Fair Value	June 30, 2019					(in thousands)
	Fair Value Measurements Using					
	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)	433,371	405,676	27,695	—	—	—
Domestic Fixed Income (2)	680,297	9,119	671,178	—	—	—
Commingled Funds (3)	802,595	—	—	—	802,595	—
International Fixed Income (4)	188,034	—	188,034	—	—	—
Equity:						
Domestic Equity Securities	2,800,997	2,797,826	3,171	—	—	—
Commingled Funds (5)	686,517	—	—	—	686,517	—
International Equity Securities	713,707	713,707	—	—	—	—
Real Estate:						
Real Estate Funds (6)	923,712	—	—	—	923,712	217,867
Alternative Investments:						
Private Equity (7)	1,098,494	—	—	—	1,098,494	625,737
Private Debt (8)	566,795	—	—	—	566,795	240,759
Total Investments	\$8,894,519	\$3,926,328	\$890,078	\$ —	\$4,078,113	\$1,084,363

The System has \$196.5M 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 2019 rates range from 0.125% to 6.000%, and maturities from 2019 to 2049. Fiscal 2018 rates range from 0.125% to 6.000%, and maturities from 2018 to 2048.
- (2) Fiscal 2019 rates range from 0.00% to 10.000%, and maturities from 2019 to 2066. Fiscal 2018 rates range from 0.000% to 12.000%, and maturities from 2018 to 2059.
- (3) This represents investments in four 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 2019 rates range from 0.750% to 10.000%, and maturities from 2019 to 2049. Fiscal 2018 rates range from 0.000% to 10.600%, and maturities from 2018 to 2050.
- (5) This represents investments in four 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 58 real estate vehicles consisting of 12 strategic open-end funds and 46 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, 2019.
- (7) This represents 37 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, 2018						
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)	422,571	388,564	34,007	—	—	—
Domestic Fixed Income (2)	768,573	8,412	760,161	—	—	—
Commingled Funds (3)	436,075	—	—	—	436,075	—
International Fixed Income (4)	205,798	—	205,798	—	—	—
Equity:						
Domestic Equity Securities	2,815,885	2,812,581	3,304	—	—	—
Commingled Funds (5)	700,413	—	—	—	700,413	—
International Equity Securities	720,590	720,590	—	—	—	—
Real Estate:						
Real Estate Funds (6)	805,153	—	—	—	805,153	154,796
Alternative Investments:						
Private Equity (7)	908,131	—	—	—	908,131	769,397
Private Debt (8)	514,942	—	—	—	514,942	321,082
Opportunistic (9)	210,634	—	—	—	210,634	—
Total Investments	\$8,508,765	\$3,930,147	\$1,003,270	\$ —	\$3,575,348	\$1,245,275

The System has \$244.1M 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 2018 rates range from 0.125% to 6.000%, and maturities from 2018 to 2048.
- (2) Fiscal 2018 rates range from 0.00% to 12.000%, and maturities from 2018 to 2059.
- (3) This represents investments in two 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 2018 rates range from 0.000% to 10.600%, and maturities from 2018 to 2050.
- (5) This represents investments in five 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 52 real estate vehicles consisting of 11 strategic open-end funds and 41 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, 2018.
- (7) This represents 32 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 20 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.
- (9) AberdeenStandard Investments GARS is held within the Opportunistic sleeve of the Alternative Investments asset allocation as it is an “unconstrained/go anywhere” manager that invests across various geographies and asset classes including equity, credit, interest rates, currencies and real estate. This manager invests on an opportunistic basis to take advantage of market dislocations. This investment has monthly liquidity and requires 5 business day’s notice for redemption.

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)
6/30/2019	\$13,982,427	\$9,170,773	\$4,811,655	65.6%
6/30/2018	\$13,652,069	\$8,836,867	\$4,815,202	64.7%

ACTUARIAL ASSUMPTIONS

The total pension liability as of June 30, 2019 is based on an actuarial valuation performed as of June 30, 2018 rolled forward to June 30, 2019. The roll-forward procedure increases the June 30, 2018 total pension liability with service cost and interest and decreases it with actual benefit payments.

A single discount rate of 7.25% 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 7.25%, which is not reported net of the inflation assumption used to obtain the real weighted returns shown on pg. 45. 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 6.25%	Current Single Rate Assumption 7.25%	1% Increase to 8.25%
6/30/2019	\$6,443,004	\$4,811,655	\$3,463,357
6/30/2018	\$6,406,666	\$4,815,202	\$3,481,507

The June 30, 2018 actuarial valuation rolled forward to June 30, 2019 used the following actuarial assumptions:

Actuarial Cost Method	Entry age normal
Price Inflation	2.5% per year
Wage Inflation	3.25% per year
Salary Increases	5.6% average, including inflation
Investment Rate of Return	7.25% per year, net of investment expenses, including inflation
Retirement Age	Experience-based table of rates that is specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2011–2015.
Mortality	RP-2014 Healthy Annuitant and Employee generational mortality tables for males and females with credibility adjustments, adjusted for fully generational mortality improvements using Scale MP-2015, based on the last experience study.

OPEB

The net OPEB liability of employers as of June 30, 2019 and 2018 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)
6/30/19	\$475,254	\$36,843	\$438,411	7.8%
6/30/18	\$495,154	\$37,308	\$457,846	7.5%

ACTUARIAL ASSUMPTIONS

The total OPEB liability as of June 30, 2019 is based on an actuarial valuation performed as of June 30, 2018 rolled forward to June 30, 2019. The roll-forward procedure increases the June 30, 2018 total OPEB liability with service cost and interest and decreases it with actual benefit payments.

A single discount rate of 7.25% 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 7.25%, which is not reported net of the inflation assumption used to obtain the real weighted returns shown on pg. 45. 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.

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.

SENSITIVITY OF THE NET OPEB LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION				(\$ in thousands)
Fiscal Year Ended	1% Decrease to 6.25%	Current Single Rate Assumption 7.25%	1% Increase to 8.25%	
6/30/19	\$475,523	\$438,411	\$406,163	
6/30/18	\$476,528	\$457,846	\$405,514	

The June 30, 2018 actuarial valuation rolled forward to June 30, 2019 used the following actuarial assumptions:

Actuarial Cost Method	Entry age normal
Price Inflation	2.5% per year
Wage Inflation	3.25% per year
Salary Increases	5.6% average, including inflation
Investment Rate of Return	7.25% net of OPEB plan investment expense, including inflation
Retirement Age	Experience-based table of rates that is specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period 2011–2015.
Mortality	RP-2014 Healthy Annuitant and Employee generational mortality tables for males and females with creditable adjustments, adjusted for fully generational mortality improvements using Scale MP-2015, based on the last experience study.
Health Care Trend Rates	N/A — Benefits are fixed stipends
Aging Factors	N/A — Benefits are fixed stipends

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 2019 and the geometric real rates of return for each asset class:

LONG-TERM EXPECTED REAL RATE OF RETURN

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return*
		2019
Large Cap Equities	22.50%	4.25%
Small/Mid Cap Equities	7.50%	4.50%
Total Domestic Equity	30.00%	
Int'l Equities (unhedged)	13.00%	4.50%
Emerging Int'l Equities	7.00%	6.00%
Total International Equity	20.00%	
Core Bonds	9.00%	1.12%
Global Multi-Sector Fixed Income	10.00%	2.46%
Absolute Return Fixed Income	6.00%	1.50%
Total Fixed Income	25.00%	
Private Equity	10.00%	7.90%
Private Debt	5.00%	4.86%
Total Alternative Investments	15.00%	
Real Estate	10.00%	3.00%
TOTAL	100.00%	

*Real rates of return are presented net of the inflation assumption, which was 3.25% for 2019.

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, 2019 is \$2,825.0 million and the annual covered payroll for the fiscal year ended June 30, 2018 was \$2,752.2 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 2019)			Member Normal Share	(FY 2018)		
		State	Employer Normal Share Local	Total		State	Employer Normal Share Local	Total
Employees								
State	7.00%	11.08%	—	11.08%	7.00%	11.08%	—	11.08%
Local	7.00%	—	11.08%	11.08%	7.00%	—	11.08%	11.08%
Teachers	7.00%	—	15.70%	15.70%	7.00%	—	15.70%	15.70%
Police Officers								
State	11.55%	25.33%	—	25.33%	11.55%	25.33%	—	25.33%
Local	11.55%	—	25.33%	25.33%	11.55%	—	25.33%	25.33%
Firefighters								
State	11.80%	27.79%	—	27.79%	11.80%	27.79%	—	27.79%
Local	11.80%	—	27.79%	27.79%	11.80%	—	27.79%	27.79%

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 2019 and 2018, 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 2019)			Member Normal Share	(FY 2018)		
		State	Employer Normal Share Local	Total		State	Employer Normal Share Local	Total
Employees								
State	—	1.07%	—	1.07%	—	1.07%	—	1.07%
Local	—	—	0.30%	0.30%	—	—	0.30%	0.30%
Teachers	—	—	1.66%	1.66%	—	—	1.66%	1.66%
Police Officers								
State	—	4.10%	—	4.10%	—	4.10%	—	4.10%
Local	—	—	4.10%	4.10%	—	—	4.10%	4.10%
Firefighters								
State	—	4.10%	—	4.10%	—	4.10%	—	4.10%
Local	—	—	4.10%	4.10%	—	—	4.10%	4.10%

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 2019)			Member Normal Share**	(FY 2018)		
		Pension Plan*	Employer Normal Share OPEB Plan*	Total Contributions		Pension Plan*	Employer Normal Share OPEB Plan*	Total Contributions
Employees	\$ 89,782	\$138,326	\$ 8,196	\$236,304	\$ 87,103	\$134,583	\$ 7,924	\$229,610
Teachers	81,113	178,461	18,812	278,386	79,338	174,223	18,441	272,002
Police Officers	37,209	80,580	13,055	130,844	35,913	77,547	12,539	125,999
Firefighters	15,891	36,981	5,446	58,318	15,218	35,807	5,290	56,315
Total Contributed	\$223,995	\$434,348	\$45,509	\$703,852	\$217,572	\$422,160	\$44,194	\$683,926

*Includes contributions made by both State and local employers

**Includes voluntary member contributions of \$4.6 million in FY 2019 and \$4.4 million in FY 2018.

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 2019)			Member Normal Share	(FY 2018)		
		Pension Plan*	Employer Normal Share OPEB Plan*	Total Contributions		Pension Plan*	Employer Normal Share OPEB Plan*	Total Contributions
Employees	7.21%	11.11%	0.66%	18.98%	7.23%	11.17%	0.66%	19.05%
Teachers	7.14%	15.72%	1.66%	24.51%	7.11%	15.61%	1.65%	24.37%
Police Officers	11.89%	25.74%	4.17%	41.80%	11.88%	25.66%	4.15%	41.69%
Firefighters	12.09%	28.06%	4.14%	44.30%	11.82%	27.82%	4.11%	43.76%
Total Contributed	7.93%	15.37%	1.61%	24.91%	7.91%	15.34%	1.61%	24.85%

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 2019 was based on the June 30, 2015 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 \$7.6 million and \$7.8 million for June 30, 2019 and 2018, respectively, are included in the accompanying Combining Statements of Changes in Fiduciary Net Position.

Administrative expenses consist primarily of salaries and benefits for 63 full-time and part-time employees, the costs associated with operating and maintaining computer systems, and other administrative costs.

NOTE 8 — 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's financial status.

NOTE 9 — 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, 2019 is \$3,247,338.

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, 2019 is \$5,923,435.

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

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

(\$ in thousands)

Fiscal Year Ended	June 30, 2019	June 30, 2018
Total Pension Liability		
Service Cost	\$ 275,380	\$ 269,751
Interest on the Total Pension Liability	970,599	936,988
Benefit Changes	—	—
Difference Between Expected and Actual Experience of the Total Pension Liability	(111,250)	39,112
Assumption Changes	—	—
Benefit Payments	(780,907)	(741,753)
Refunds	(23,464)	(24,010)
Net Changes in Total Pension Liability	330,358	480,088
Total Pension Liability — Beginning	13,652,069	13,171,981
Total Pension Liability — Ending	\$13,982,427	\$13,652,069
Plan Fiduciary Net Position		
Contributions — Employer	\$ 434,407	\$ 422,659
Contributions — Member	223,995	217,572
Pension Plan Net Investment Income	488,270	717,090
Benefit Payments	(780,907)	(741,753)
Refunds	(23,464)	(24,010)
Pension Plan Administrative Expense	(7,436)	(7,767)
Other Custodial, Professional and Non-Investment Expenses	(959)	(912)
Net Change in Plan Fiduciary Net Position	333,906	582,879
Plan Fiduciary Net Position — Beginning	8,836,867	8,253,988
Plan Fiduciary Net Position — Ending	\$ 9,170,773	\$ 8,836,867
Net Pension Liability	\$ 4,811,654	\$ 4,815,202
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	65.6%	64.7%
Covered Payroll	\$ 2,825,006	\$ 2,752,235
Net Pension Liability as a Percentage of Covered Payroll	170.3%	175.0%

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.

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
6/30/2019	\$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%
6/30/2012	\$254,557	\$254,557	—	\$2,487,757	10.2%
6/30/2011	\$274,582	\$274,582	—	\$2,517,779	10.9%
6/30/2010	\$269,677	\$269,677	—	\$2,481,384	10.9%

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

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

(\$ in thousands)

Fiscal Year Ended	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
Total OPEB Liability				
Service Cost	\$ 857	\$ 984	\$ 1,099	\$ 1,218
Interest on the Total OPEB Liability	34,197	34,247	35,235	36,542
Benefit Changes	—	—	—	—
Difference between expected and actual experience of the Total OPEB Liability	(7,156)	12,667	—	(4,538)
Assumption Changes	—	—	—	—
Benefit Payments	(47,798)	(49,251)	(50,560)	(51,805)
Refunds	—	—	—	—
Net Changes in Total OPEB Liability	(19,900)	(1,353)	(14,226)	(18,583)
Total OPEB Liability — Beginning	495,154	496,507	510,733	529,316
Total OPEB Liability — Ending	\$475,254	\$495,154	\$496,507	\$510,733
Plan Fiduciary Net Position				
Contributions — Employer	\$ 45,509	\$ 44,194	\$59,197	\$58,174
Contributions — Member	—	—	—	—
OPEB Plan Net Investment Income	1,981	3,129	4,046	149
Benefit Payments	(47,798)	(49,251)	(50,560)	(51,805)
Refunds	—	—	—	—
OPEB Plan Administrative Expense	(152)	(33)	(32)	(17)
Other custodial, professional and non-investment expenses	(6)	(4)	(5)	(3)
Net Change in Plan Fiduciary Net Position	(466)	(1,965)	12,646	6,498
Plan Fiduciary Net Position — Beginning	37,308	39,273	26,627	20,129
Plan Fiduciary Net Position — Ending	\$ 36,842	\$ 37,308	\$39,273	\$26,627
Net OPEB Liability	\$438,411	\$457,846	\$457,234	\$484,106
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	7.8%	7.5%	7.9%	5.2%
Covered Payroll*	\$2,825,006	\$2,752,235	\$2,667,612	\$2,601,404
Net OPEB Liability as a Percentage of Covered Payroll	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
6/30/19	\$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%
6/30/11	\$32,901	\$32,560	—	\$2,517,779	1.3%
6/30/10	\$32,560	\$32,560	—	\$2,481,384	1.3%

SCHEDULE OF INVESTMENT RETURNS

Fiscal Year Ended	Annual Money Weighted Rate of Return — Net of Investment Expenses
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 2019 were determined by the System’s actuary based on the June 30, 2015 actuarial valuation. Significant actuarial assumptions and methods used to determine 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** 21 years beginning July 1, 2018 (30 years beginning July 1, 2009)
- **Asset Valuation Method** Five-year smoothed market, 20% corridor
- **Payroll Growth** 3.25%
- **Price Inflation** 2.50%
- **Salary Increase** 5.6% average, including price inflation
- **Investment Rate of Return** 7.25%, net of pension plan investment expenses, including inflation
- **Mortality** RP 2014 Healthy Annuitant and Employee generational mortality tables for males and females with credibility adjustments, adjusted for fully generational mortality improvements using Scale MP-2015, based on the last experience study

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** 3.25%
- **Price Inflation** 2.50%
- **Salary Increase** 5.6% average, including price inflation
- **Investment Rate of Return** 7.25% per year, net of OPEB plan investment expense, including inflation for determining solvency contributions
- **Funding Discount Rate** 3.25% per year
- **Mortality** RP 2014 Healthy Annuitant and Employee generational mortality tables for males and females with credibility adjustments, adjusted for fully generational mortality improvements using Scale MP-2015, based on the last experience study

CHANGES OF BENEFIT TERMS

None

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. The last actuarial review was performed during fiscal year 2016 and was based on the information available as of June 30, 2015.

Assumption changes adopted as a results 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

The full experience study results can be viewed at www.nhrs.org/docs/default-source/actuarial/july-1-2010---june-30-2015-experience-study.pdf

2019:

None.

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

(in thousands)

	YEAR ENDED JUNE 30	
	2019	2018
INVESTMENT ACTIVITY FEES:		
Equity Investments:		
Domestic	\$ 7,687	\$ 9,435
Non-U.S.	9,629	10,630
Fixed Income Investments	5,390	4,371
Real Estate	2,182	2,126
Custodial Fees	662	633
Investment Advisor Fees	753	750
Investment Professional Fees	350	288
Investment Staff Administrative Expense	632	645
TOTAL INVESTMENT ACTIVITY FEES	\$ 27,285	\$ 28,878

INTEREST INCOME

(in thousands)

	YEAR ENDED JUNE 30	
	2019	2018
Fixed Income Investments	\$ 56,843	\$ 53,201
Cash and Cash Equivalents	5,574	1,409
TOTAL INTEREST INCOME	\$ 62,417	\$ 54,610

DIVIDEND INCOME

(in thousands)

	YEAR ENDED JUNE 30	
	2019	2018
Equity Investments:		
Domestic	\$ 46,360	\$ 46,894
Non-U.S.	27,795	27,001
TOTAL DIVIDEND INCOME	\$ 74,155	\$ 73,895

CONTRIBUTIONS	(in thousands)	
	YEAR ENDED JUNE 30	
	2019	2018
CONTRIBUTIONS – PENSION PLAN		
EMPLOYER CONTRIBUTIONS:		
Employees	\$ 138,547	\$ 134,713
Teachers	178,286	174,562
Police Officers	80,589	77,571
Firefighters	36,981	35,812
Other	4	1
TOTAL EMPLOYER CONTRIBUTIONS	\$ 434,407	\$ 422,659
PLAN MEMBER CONTRIBUTIONS:		
Employees	\$ 89,782	87,103
Teachers	81,114	79,338
Police Officers	37,208	35,913
Firefighters	15,891	15,218
TOTAL PLAN MEMBER CONTRIBUTIONS	\$ 223,995	\$ 217,572
TOTAL CONTRIBUTIONS – PENSION PLAN	\$ 658,402	\$ 640,231
CONTRIBUTIONS – OPEB PLAN		
EMPLOYER NORMAL:		
OPEB Contributions	\$ 45,509	\$ 44,194
TOTAL CONTRIBUTIONS – OPEB PLAN	\$ 45,509	\$ 44,194
TOTAL CONTRIBUTIONS	\$ 703,911	\$ 684,425
BENEFITS		
		(in thousands)
		YEAR ENDED JUNE 30
		2019
		2018
PENSION BENEFITS AND ADDITIONAL ALLOWANCES:		
Employees	\$ 260,767	\$ 245,720
Teachers	307,924	293,371
Police Officers	145,058	138,186
Firefighters	67,158	64,476
TOTAL PENSION BENEFITS AND ADDITIONAL ALLOWANCES	\$ 780,907	\$ 741,753
POSTEMPLOYMENT MEDICAL BENEFITS:		
Group II Police and Fire	\$ 16,574	16,675
Group I Teachers	19,801	20,366
Group I Political Subdivision Employees	4,946	5,139
Group I State Employees	6,477	7,071
TOTAL POSTEMPLOYMENT MEDICAL BENEFITS	\$ 47,798	\$ 49,251
TOTAL BENEFITS	\$ 828,705	\$ 791,004
REFUNDS OF CONTRIBUTIONS		
		(in thousands)
		YEAR ENDED JUNE 30
		2019
		2018
Employees	\$ 12,928	\$ 13,502
Teachers	5,419	6,271
Police Officers	4,484	3,841
Firefighters	633	396
TOTAL REFUNDS OF CONTRIBUTIONS	\$ 23,464	\$ 24,010

**ADMINISTRATIVE EXPENSE FOR THE YEARS ENDED
JUNE 30, 2019 AND 2018**

(in thousands)

	2019 EXPENSE	UNAUDITED 2019 BUDGET*	UNAUDITED OVER (UNDER) BUDGET	2018 EXPENSE	UNAUDITED 2018 BUDGET*	UNAUDITED OVER (UNDER) BUDGET
Salaries and Wages	\$ 3,770	\$ 4,563	\$ (794)	\$ 3,905	\$ 3,724	\$ 181
Fringe Benefits	1,969	2,712	(743)	1,920	1,948	(28)
Supplies, Utilities and Postage	309	259	50	256	224	32
Organizational Dues	12	19	(7)	16	17	(1)
Equipment	5	5	—	5	3	2
Travel — Staff	11	64	(53)	20	17	3
Board Expenses	20	39	(19)	17	17	—
Employee Training	33	88	(55)	34	34	—
State Services	25	50	(25)	17	17	—
Office Rents and Expenses	540	580	(40)	542	541	1
Computer Support and System Development	645	1,087	(442)	896	762	134
Consulting	249	234	15	167	234	(67)
Workers Compensation	—	8	(8)	—	—	—
Unemployment Compensation	—	4	(4)	5	4	1
TOTAL	\$ 7,588	\$ 9,712	\$ (2,124)	\$ 7,800	\$ 7,542	\$ 258

*The New Hampshire biennial budget is composed of the initial operating budget and supplemented by additional appropriations. These appropriations are generated by 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	
	2019	2018
Legal Fees	\$ 172	\$ 153
Actuarial Fees	186	232
Audit Fees	330	305
TOTAL PROFESSIONAL FEES	\$ 688	\$ 690

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NEW HAMPSHIRE RETIREMENT SYSTEM

INVESTMENT SECTION

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

INVESTMENT CONSULTANT'S LETTER



NEPC, LLC

KEVIN M. LEONARD
SENIOR CONSULTANT

October 14, 2019

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

Dear NHRS Fiduciaries:

NEPC, LLC (NEPC) is pleased to introduce this overview of the New Hampshire Retirement System (NHRS) investment program for the fiscal year ended June 30, 2019.

The overall objective of NHRS is to provide service, disability, death and vested retirement benefits, and other postemployment benefits to members and their beneficiaries. To ensure a solid foundation for the future of the System, NHRS plans and implements an investment program designed to achieve the maximum rate of return over the long term, while prudently managing the risk of the portfolio. Additionally, the NHRS investment program is administered in accordance with sound governance practices and applicable statutes. The Board of Trustees (Trustees) established an Investment Policy which includes asset allocation targets and acceptable ranges as well as asset class benchmarks for performance measurement. The Trustees retain the services of actuaries and consultants to provide guidance regarding actuarial matters, asset allocation, and investment policy. The Independent Investment Committee (Committee) manages the investment program pursuant to the investment policy, develops asset class guidelines, monitors and evaluates performance, and makes determinations regarding the retention of managers. Professional investment managers are selected by the Committee to manage portfolios in accordance with investment management agreements. 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 2019.

The U.S. economic expansion entered its tenth year, setting a record for duration, although total cumulative GDP growth trails other recoveries. The Federal Reserve Bank initially maintained its path of methodically normalizing monetary policy through increasing interest rates, however the Fed shifted its stance on monetary policy in early 2019 signaling potential interest rate cuts in the near future. US market volatility returned in late 2018 in response to concerns over the Fed's pace of interest rate increases, slowing global economic growth, and the U.S.–China trade tensions. Many of these concerns eased in the first half of 2019 and volatility dissipated through the end of the fiscal year. U.S. stocks, as a result, posted their tenth consecutive year of positive returns and outperformed international equities. Global capital markets continued to be largely driven by accommodative Central Bank policy from both the European Central Bank and Bank of Japan. Despite this, volatility increased in global markets in the year ending June 30, 2019 as concerns of slowing economic growth, historically low and broadly negative real interest rates and fears over U.S. trade policy caused uncertainty to impact investor sentiment. Despite these risks, U.S. equities posted a robust 10.4% return as measured by the S&P 500 Index. International developed-markets equities, as measured by the MSCI EAFE Index, performed positively (1.1% for the year) but lagged domestic equities by 9.3%. Underperformance in international developed-markets was driven by uncertainty stemming from slowing economic growth and U.S. trade policy. Emerging markets equities underperformed U.S. and outperformed developed-international equities as markets reacted to U.S. Dollar strength and negative sentiment associated with the trade tensions between the U.S. and China. Driven by declining interest rates, U.S. high quality fixed income investments generated a positive return for the year, returning 7.9% as measured by the Bloomberg Barclays U.S. Aggregate Bond Index.

For the fiscal year ended June 30, 2019, the NHRS Total Fund returned 5.7% on a net-of- fees basis, underperforming the Total Fund custom benchmark return of 7.6% and ranking in the 66th percentile (1% being the highest, 100% being the lowest) relative to other investors in the InvMetrics Public Defined Benefit Net Universe (universe). During the following periods the NHRS Total Fund provided strong annualized net-of-fees returns relative to the universe: For the trailing three years ending June 30, 2019, the NHRS Total Fund return of 9.3% ranked in the 27th percentile of the universe; For the trailing five years ending June 30, 2019 the NHRS Total Fund return of 6.4% ranked in the 24th percentile of the universe;

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For the trailing ten year period ending June 30, 2019, the NHRS Total Fund returned 9.9% and ranked in the 11th percentile of the universe; For the trailing twenty- five year period ending June 30, 2019, the NHRS Total Fund returned 8.2%, exceeding the current assumed rate of return of 7.25%, and ranking in the 15th percentile of the universe.

During fiscal year 2019, the Committee rebalanced the traditional equity portfolio, restructured the traditional fixed income portfolio and continued to implement the expansion of the alternative investment portfolio.

NEPC provides NHRS with quarterly economic and investment market updates and performance reviews, investment manager monitoring and selection advice, and related investment services for traditional and non-traditional asset classes. Investment performance analysis and comparisons produced by NEPC have been calculated using standard performance evaluation methodologies and are consistent with industry standards. Performance results are calculated using a time-weighted return methodology and are reported on a net-of-fees basis.

A handwritten signature in black ink, appearing to be 'D. M. L.', is located in the lower-left quadrant of the page.

**INVESTMENT
REPORTS**

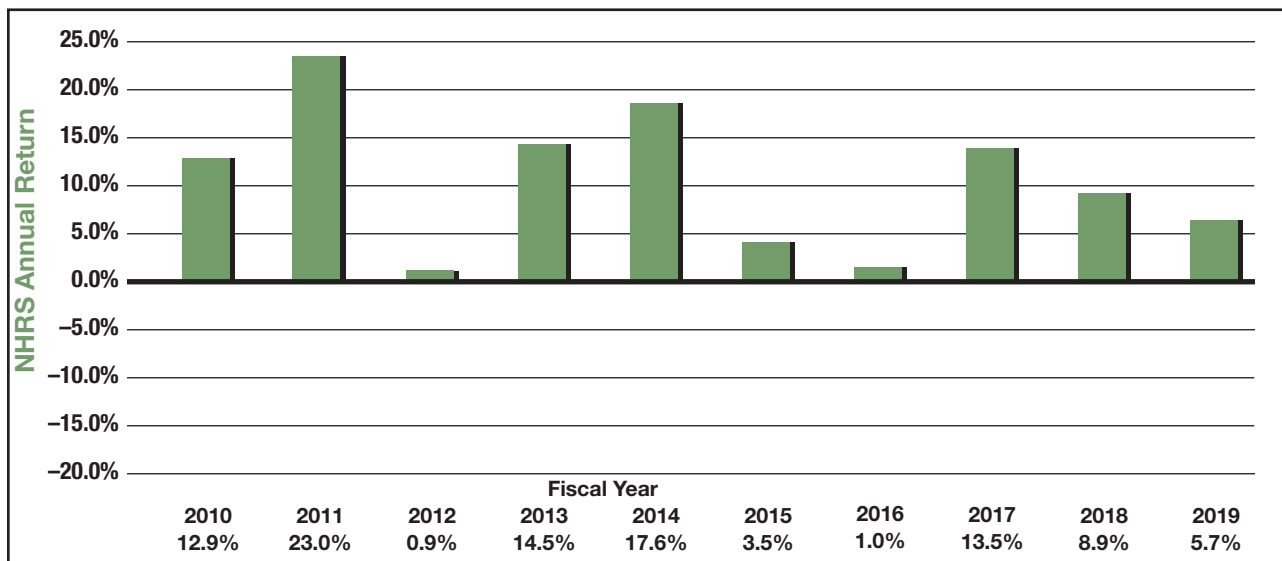
ANNUALIZED INVESTMENT RETURNS—ACTUAL VERSUS INDICES

	Current Year 2019	3 Year	Annualized 5 Year	10 Year
Total NHRS Fund	5.7%	9.3%	6.4%	9.9%
Total Fund Custom Index*	7.6	9.1	6.8	10.0
Domestic Equity	6.0	13.2	9.1	13.9
Total Domestic Equity Blended Benchmark*	10.4	14.2	10.7	14.9
Non-U.S. Equity	2.1	9.8	3.4	7.4
Total Non-U.S. Equity Blended Benchmark*	1.3	9.4	2.2	6.5
Fixed Income	6.4	3.5	2.8	5.2
Total Fixed Income Blended Benchmark*	8.1	2.8	3.2	4.4
Real Estate	7.1	8.9	10.7	10.9
Total Real Estate Blended Benchmark*	5.5	6.6	8.8	9.5
Alternative Investments	6.9	9.9	7.4	7.7
Total Alternative Investments Blended Benchmark*	8.8	9.8	9.3	12.1
Cash Equivalents	2.3	1.5	0.9	0.5
90 Day T-Bills	2.3	1.4	0.9	0.5

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.

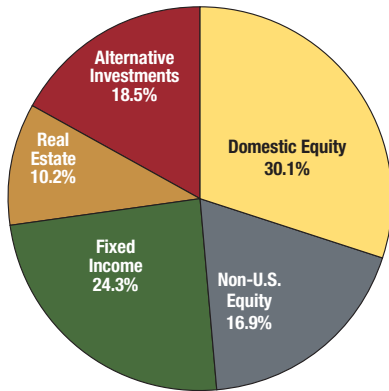
Ten Year History of Time-Weighted Total NHRS Fund Annual Returns



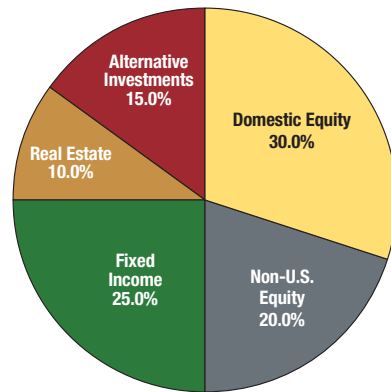
ACTUAL ASSET ALLOCATION VERSUS TARGET ASSET ALLOCATION

	Actual %	As of June 30, 2019	
		Target %	Target Range %
Domestic Equity	30.1%	30.0%	20 – 40
Non-U.S. Equity	16.9	20.0	15 – 25
Fixed Income	24.3	25.0	20 – 30
Real Estate	10.2	10.0	5 – 20
Alternative Investments	18.5	15.0	5 – 25
TOTAL FUND	100.0%	100.0%	

Actual Asset Allocation as of June 30, 2019



Target Asset Allocation as of June 30, 2019



TEN LARGEST STOCK HOLDINGS BY FAIR VALUE*

(in thousands)

	Shares	Stock	June 30, 2019 Fair Value
1	479,635	Microsoft Corp	\$64,252
2	24,460	Amazon.com Inc	46,318
3	233,607	Apple Inc.	46,235
4	198,498	Johnson & Johnson	27,647
5	228,379	JPMorgan Chase & Co	25,533
6	128,403	Facebook Inc	24,782
7	22,788	Alphabet Inc	24,632
8	2,156,200	AIA Group Ltd	23,252
9	419,181	Cisco Systems Inc	22,942
10	113,331	Linde PLC	22,799

TEN LARGEST FIXED INCOME HOLDINGS BY FAIR VALUE*

(in thousands)

	Par**	Security	June 30, 2019 Fair Value
1	50,725,000	U.S. Treasury Note — Var Rate, 2021	\$50,684
2	22,311,000	U.S. Treasury Bond — 4.500%, 2036	29,437
3	25,740,000	U.S. Treasury Bond — 3.000%, 2049	28,270
4	21,770,000	U.S. Treasury Note — 2.875%, 2023	22,774
5	17,995,000	U.S. Treasury Bond — 3.375%, 2048	21,183
6	19,660,000	U.S. Treasury Note — 2.625%, 2029	20,732
7	20,000,000	U.S. Treasury Note — 2.250%, 2020	20,026
8	19,580,000	U.S. Treasury Note — 2.250%, 2021	19,732
9	15,550,000	U.S. Treasury Bond — 3.000%, 2048	17,054
10	305,000,000	Mexican Bonos — 7.750%, 2042	15,743

*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, 2019		
	Assets Under Management (in thousands)	Fees (in thousands)	Average Basis Points
INVESTMENT MANAGEMENT FEES			
Equity Portfolios:			
Domestic	\$ 2,555,812	\$ 7,687	30
Non-U.S.	1,681,404	9,629	57
Fixed Income Portfolios	2,194,058	5,390	25
Alternative Investments*	1,665,289	—	—
Real Estate	923,712	2,182	24
Cash and Cash Equivalents**	96,356	—	—
TOTAL INVESTMENT MANAGEMENT FEES	\$ 9,116,631	\$ 24,888	27
INVESTMENT SERVICE FEES			
Custodial Fees	\$ 9,116,631	\$ 662	1
Investment Advisor Fees — External	9,116,631	753	1
Investment Professional Fees	9,116,631	350	1
Investment Administrative Expenses — Internal	9,116,631	632	1
TOTAL INVESTMENT MANAGEMENT AND SERVICE FEES	\$ 9,116,631	\$ 27,285	30

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

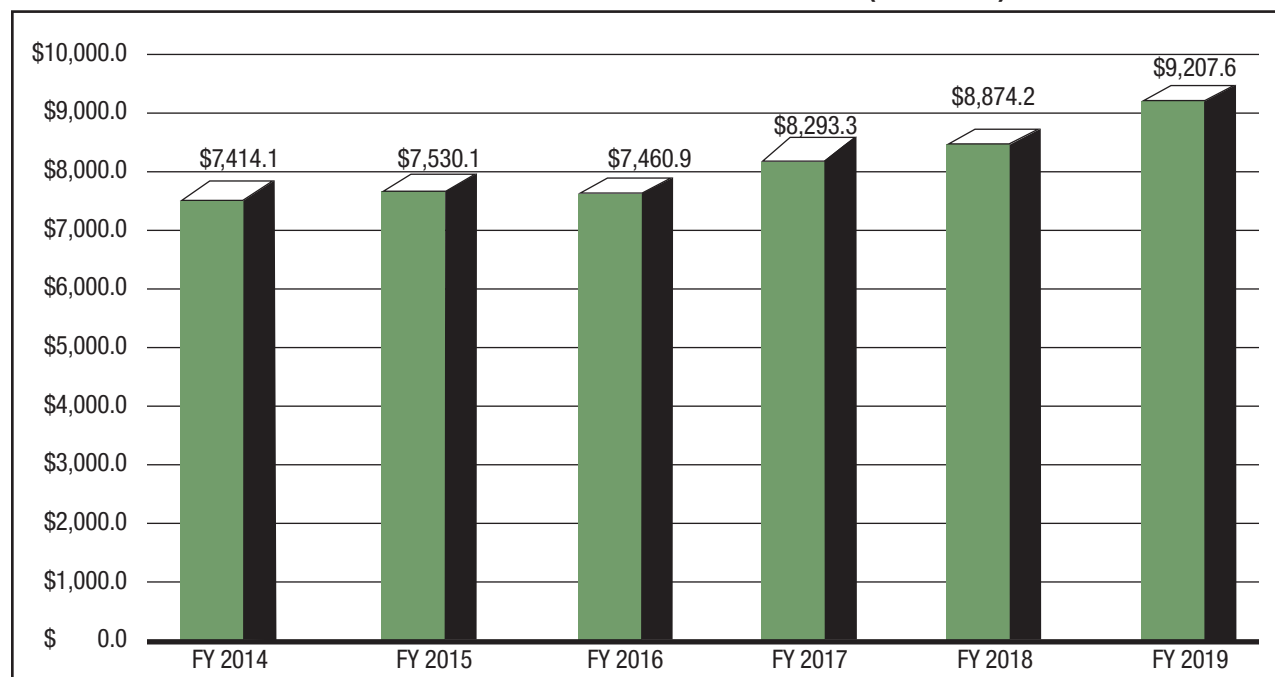
**Does not include cash and cash equivalents held in manager portfolios, only in designated cash portfolios.

SCHEDULE OF BROKERAGE COMMISSIONS PAID

Brokerage Firm	YEAR ENDED JUNE 30, 2019		
	Number of Shares Traded (in thousands)	Total Commissions (in thousands)	Commissions Per Share
Goldman Sachs & Company	6,915	\$ 85	0.01
J.P. Morgan	5,791	83	0.01
Morgan Stanley & Company Inc.	6,698	79	0.01
Liquidnet	4,115	74	0.02
UBS Securities/Warburg	5,413	71	0.01
Jefferies & Company, Inc.	3,082	69	0.02
Merrill Lynch & Company Inc.	8,544	67	0.01
Credit Suisse	6,646	65	0.01
Citigroup Global Markets Inc.	5,716	60	0.01
Cowen and Company LLC	2,470	45	0.02
Instinet, Inc.	2,949	42	0.01
BTIG LLC	1,419	38	0.03
Barclay's Capital Inc.	1,737	37	0.02
Raymond James & Assoc., Inc.	1,186	35	0.03
Bernstein Sanford C & Co, New York	1,849	28	0.02
Investment Tech Group	2,067	24	0.01
RBC Capital Markets, LLC	1,560	23	0.01
Deutsche Bank	1,116	21	0.02
Fox River Execution Tech., LLC	1,038	20	0.02
All Others (119 not listed separately)	21,192	409	0.02
TOTAL BROKERAGE COMMISSIONS PAID	91,503	\$ 1,375	0.02

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

Net Position Restricted for Pension and OPEB (in millions)



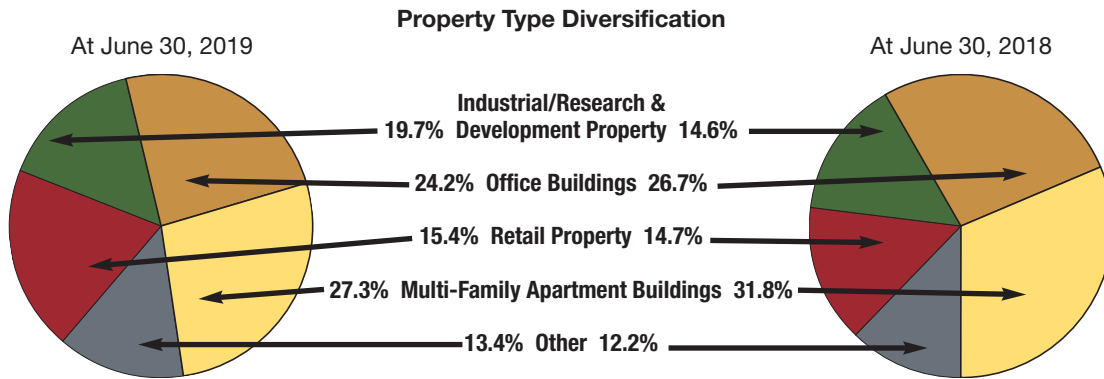
SUMMARY OF INVESTMENTS

TYPE OF INVESTMENT	June 30, 2019	
	Fair Value (in millions)	Percent of Total Fair Value
FIXED INCOME		
Collateralized/Asset Backed Securities	\$ 133.9	1.5%
Corporate Bonds	526.2	5.9%
Government and Agency Bonds	632.4	7.1%
Doubleline Capital Floating Rate Fund	4.7	0.1%
Doubleline Capital Global Bond	4.4	0.0%
Blackrock Strategic Income Opportunities	263.1	3.0%
Fidelity	267.4	3.0%
GAM	47.1	0.5%
Manulife	225.1	2.5%
TOTAL FIXED INCOME	\$2,104.3	23.7%
EQUITY		
Consumer Discretionary	\$ 461.6	5.2%
Consumer Staples	192.6	2.2%
Energy	190.5	2.1%
Financial Services	774.3	8.7%
Health Care	477.0	5.4%
Producer Durables	430.8	4.8%
Information Technology	613.8	6.9%
Materials	216.6	2.4%
Utilities	155.5	1.7%
Ishares Russell 2000 ETF	2.0	0.0%
Neuberger Berman Emerging Markets Equity Fund	178.3	2.0%
Segall Bryant & Hamill Int'l Small Cap	119.4	1.3%
Wellington Emerging Markets Local Equity Fund	165.5	1.9%
LSV International Value Fund	223.3	2.5%
TOTAL EQUITY	\$4,201.2	47.2%
OTHER INVESTMENTS		
Alternative Investments	\$1,665.3	18.7%
Real Estate	923.7	10.4%
TOTAL INVESTMENTS	\$8,894.5	100.0%

REAL ESTATE INVESTMENTS BY TYPE

(in thousands)

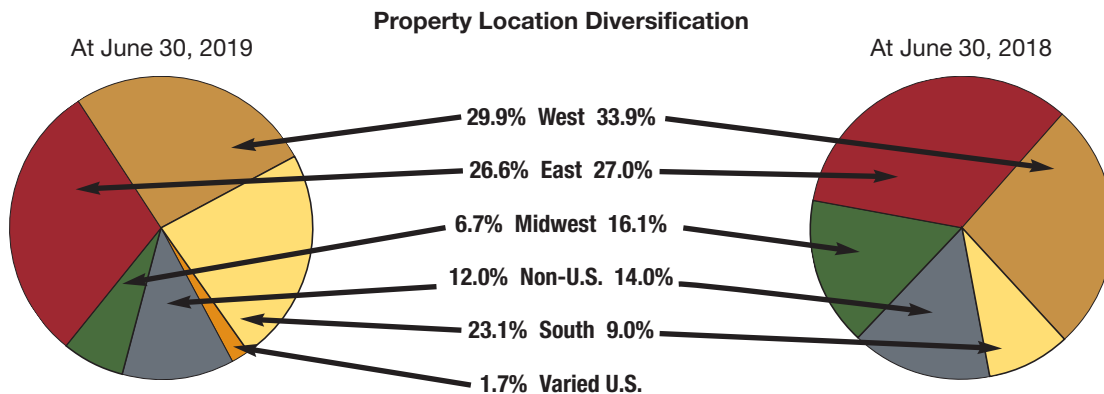
	JUNE 30	
	2019	2018
Office Buildings	\$223,538	\$214,958
Multi-Family Apartment Buildings	252,174	256,049
Retail Property	142,252	118,384
Industrial/Research & Development Property	181,971	117,304
Other	123,777	98,458
TOTAL REAL ESTATE INVESTMENTS BY TYPE	\$923,712	\$805,153



REAL ESTATE INVESTMENTS BY LOCATION

(in thousands)

	JUNE 30	
	2019	2018
West	\$276,190	\$272,907
East	245,707	217,758
South	213,378	72,085
Midwest	61,889	129,855
Varied U.S.	15,703	—
Non-U.S.	110,845	112,548
TOTAL REAL ESTATE INVESTMENTS BY LOCATION	\$923,712	\$805,153



ALTERNATIVE INVESTMENTS	(in thousands)	
	JUNE 30	
	2019	2018
Venture Capital	\$ —	\$ 542
Growth Equity	281,094	241,182
Buyouts	470,012	343,444
Secondaries	208,456	183,679
Mezzanine	8,124	11,773
Distressed	242,005	224,615
Absolute Return Strategies	—	816
Opportunistic	—	210,634
Direct Lending Strategies	317,551	279,471
Energy	138,047	137,552
TOTAL ALTERNATIVE INVESTMENTS	\$1,665,289	\$1,633,708

NET APPRECIATION (DEPRECIATION) IN FAIR VALUE OF INVESTMENTS	(in thousands)	
	YEAR ENDED JUNE 30	
	2019	2018
Equity Investments:		
Domestic	\$ 107,573	\$ 321,900
Non-U.S.	17,065	108,512
Fixed Income Investments	89,304	(43,877)
Temporary Investments	—	6
Real Estate	45,760	47,951
Growth Equity	22,023	29,945
Buyouts	45,302	39,259
Secondaries	20,768	31,706
Mezzanine	(1,334)	(444)
Distressed	(403)	(1,067)
Absolute Return Strategies	58	(809)
Opportunistic	(1,632)	(4,308)
Direct Lending	(6,978)	8,289
Energy	(7,836)	22,549
Venture Capital	(15)	—
TOTAL NET APPRECIATION (DEPRECIATION) IN FAIR VALUE OF INVESTMENTS	\$ 329,655	\$ 559,612

ALTERNATIVE INVESTMENT INCOME (LOSS)

(in thousands)

	YEAR ENDED JUNE 30	
	2019	2018
Distressed	\$ 5,864	\$ 3,200
Secondaries	507	2,243
Direct Lending	26,802	18,069
Opportunistic	94	550
Energy	179	901
Mezzanine	2,128	845
Buyouts	228	1,530
Growth Equity	1,408	2,657
TOTAL ALTERNATIVE INVESTMENT INCOME*	\$ 37,210	\$ 29,995

*Other alternative investment types not listed above had no income (loss) for either of the years reported. For a complete list of alternative investment types see page 70.

REAL ESTATE INVESTMENTS INCOME AND EXPENSES

(in thousands)

	NET INCOME	
	YEAR ENDED JUNE 30	
	2019	2018
Office Buildings	\$ 3,412	\$ 13,956
Multi-Family Apartment Buildings	3,849	4,723
Retail Property	2,171	7,830
Industrial/Research & Development Property	2,778	588
Hotels	42	817
Other	1,889	3,070
TOTAL	\$ 14,099	\$ 30,984

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NEW HAMPSHIRE RETIREMENT SYSTEM

ACTUARIAL SECTION

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

ACTUARIAL CERTIFICATION



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October 31, 2019

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

Attention: Mr. George Lagos

Dear Board Members:

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System 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, 2019.
- 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, 2019.
- To provide supporting schedules for the Comprehensive Annual Financial Report (CAFR) 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 the New Hampshire Retirement System (NHRS) staff, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries as of June 30, 2019. 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 Comprehensive Annual Financial Report for the System’s use in the Actuarial Section, the Statistical Section, Notes to the Financial Statements and Required Supplementary Information:

- Summary of Actuarial Assumptions and Methods
 - o Percent Retiring Within Next Year
 - o Probabilities of Becoming Disabled Within Next Year
 - o Percent Separating Within Next Year
 - o 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
- Schedule of Retired and Vested Members by Type of Benefit

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

- 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, 2019 in this report are based on the assumptions adopted by the Board pursuant to the June 30, 2015 experience study and the census information as of June 30, 2019. The actuarial accrued liability as of June 30, 2019 differs from the total pension (OPEB) liability as of June 30, 2019 under GASB Statement Nos. 67 and 74 because the total pension (OPEB) liability is based on a roll-forward of the June 30, 2018 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 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. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used.

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 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, 2015 Experience Study.

We certify that the information contained in this June 30, 2019 accounting report of the NHRS is accurate and fairly presents the actuarial position of the New Hampshire Retirement System as of June 30, 2019 under the current actuarial assumptions. 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.

David T. Kausch and Heidi G. Barry 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,

David T. Kausch, FSA, EA, FCA, MAAA, PhD



Heidi G. Barry, ASA, FCA, MAAA DTK/HGB:sc



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 and interest combined) percent-of-payroll contributions over 20 years from the contribution effective date of July 1, 2019 (FY 2020).

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 market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is unbiased with respect to market value. At any time it may be either greater or less than market value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to market value. Funding value was limited to a 20% corridor around the market value.

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

For purposes of determining the medical subsidy solvency rate, the Market 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 rate determined by the June 30, 2015 interim valuation is illustrative for the 2018–19 biennium. The unfunded actuarial accrued liability (UAAL) was determined using the funding 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 a 20 year period beginning on July 1, 2019. 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 this report are scheduled to begin. It was assumed that the entire pension contribution determined by the June 30, 2013 valuation effective from July 1, 2015 to June 30, 2017 would be contributed to the net pension position.

ECONOMIC ASSUMPTIONS

The investment return rate assumed in the valuation is 7.25% per year, compounded annually (net after investment expenses). The investment return rate assumed in the medical subsidy valuations is 3.25% 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 7.25% on the market value of assets.

The wage inflation rate assumed in this valuation was 3.25% 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.

No specific price inflation assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 3.0% would be consistent with the other economic assumptions.

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 7.25% 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 2.50% 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 — 3.75% 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, 2018 interim valuation.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
COLA	None assumed.
Decrement Operation	Disability and withdrawal do not operate during normal retirement eligibility.
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.
Forfeitures	The percent of vested members who quit before retirement who elect to refund and forfeit their pension is assumed to be 25% at first vesting eligibility, grading to 0% at first retirement eligibility.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll at the time contributions are made.
Liability Adjustments	Normal, early, and vesting retirement liabilities are increased by 7.5%, 5.0%, 11.5%, and 11.5% 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: 60% of males and 60% of females are assumed to be married for purposes of death-in-service benefits. Group II: 60% of males and 60% 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 rate for the medical subsidy benefits were determined to provide an estimated margin of 20% of the benefits payable by June 30, 2019.

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:

Annual Rate of							
Age	Years of Service	Withdrawal and Vesting		Death*		Disability**	
		Men	Women	Men	Women	Men	Women
	0	23.00%	30.00%				
	1	20.00	22.00				
	2	15.00	16.00				
	3	12.00	12.00				
	4	10.00	8.00				
25	5+	7.20	7.20	.04%	.02%	.03%	.02%
30		7.20	7.20	.04	.03	.03	.02
35		5.04	5.04	.05	.04	.03	.03
40		5.04	5.04	.06	.05	.08	.06
45		5.04	5.04	.10	.07	.16	.11
50		3.96	3.96	.17	.12	.27	.23
55		3.60	3.60	.30	.21	.47	.42
60		3.60	3.60	—	—	—	—

Annual Rate of Normal Retirement					
Age	For Members Hired Prior to July 1, 2011		For Members Hired On or After July 1, 2011		
	Men	Women	Men	Women	
60	11.00%	11.00%	—	—	
61	11.00	11.00	—	—	
62	16.00	15.00	—	—	
63	16.00	14.00	—	—	
64	14.00	14.00	—	—	
65	16.00	20.00	45.00%	44.00%	
66	25.00	22.00	45.00	44.00	
67	23.00	22.00	23.00	22.00	
68	21.00	18.00	21.00	18.00	
69	20.00	19.00	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	10.00%	3.25%	13.25%
2	6.00	3.25	9.25
3	2.50	3.25	5.75
4	2.00	3.25	5.25
5	1.50	3.25	4.75
6	1.25	3.25	4.50
7-9	1.00	3.25	4.25
10-25	0.50	3.25	3.75

DEATHS AFTER RETIREMENT:

MORTALITY RATE			MORTALITY RATE		
AGE	MEN	WOMEN	AGE	MEN	WOMEN
35	.13%	.13%	60	.87%	.64%
40	.18	.18	65	1.22	.96
45	.27	.24	70	1.86	1.51
50	.41	.31	75	3.01	2.50
55	.62	.45	80	5.08	4.27

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	35.00%	31.00%				
	1	17.00	16.00				
	2	14.00	13.00				
	3	10.00	11.00				
	4	8.00	8.00				
25	5+	4.00	6.00	.04%	.01%	.01%	.00%
30		4.00	6.00	.04	.02	.02	.00
35		2.80	4.20	.05	.03	.02	.01
40		2.80	4.20	.06	.04	.04	.04
45		2.80	4.20	.09	.05	.07	.06
50		2.20	3.30	.15	.09	.17	.11
55		2.00	3.00	.26	.15	.38	.35
60		2.00	3.00	—	—	—	—

*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.

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	18.00%	13.00%	—	—
61	19.00	15.00	—	—
62	20.00	19.00	—	—
63	21.00	19.00	—	—
64	22.00	21.00	—	—
65	23.00	25.00	58.00%	56.00%
66	30.00	32.00	58.00	56.00
67	25.00	27.00	25.00	27.00
68	25.00	27.00	25.00	27.00
69	25.00	27.00	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	10.00%	3.25%	13.25%
2	6.00	3.25	9.25
3	3.25	3.25	6.50
4	2.75	3.25	6.00
5	2.50	3.25	5.75
6	2.25	3.25	5.50
7	2.00	3.25	5.25
8	1.75	3.25	5.00
9	1.50	3.25	4.75
10	1.25	3.25	4.50
11–25	1.00	3.25	4.25

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.11%	.09%	60	.75%	.45%
40	.16	.13	65	1.05	.67
45	.23	.17	70	1.60	1.06
50	.36	.22	75	2.60	1.76
55	.53	.31	80	4.38	2.99

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%	30.00%				
	1	15.00	20.00				
	2	10.00	13.00				
	3	7.00	11.50				
	4	5.00	10.00				
25	5+	5.88	5.88	.04%	.01%	.03%	.03%
30		4.93	4.93	.04	.02	.03	.03
35		4.13	4.13	.05	.03	.07	.07
40		3.45	3.45	.06	.04	.16	.16
45		2.83	2.83	.08	.06	.28	.28
50		2.40	2.40	.15	.11	.45	.45
55		1.98	1.98	.26	.18	.67	.67
60		1.60	1.60	—	—	—	—

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	22.00%	3.25%	25.25%
2	15.00	3.25	18.25
3	7.00	3.25	10.25
4	5.00	3.25	8.25
5	3.75	3.25	7.00
6	2.50	3.25	5.75
7	2.00	3.25	5.25
8	1.50	3.25	4.75
9-25	1.00	3.25	4.25

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.11%	.11%	60	.74%	.55%
40	.16	.16	65	1.04	.82
45	.23	.20	70	1.58	1.29
50	.35	.27	75	2.57	2.14
55	.53	.38	80	4.34	3.65

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	22%					
46	22%	27%				
47	22%	27%	31%			
48	22%	25%	31%	34%		
49	22%	25%	31%	34%	38%	
50	22%	25%	27%	34%	38%	40%
51	22%	22%	27%	31%	38%	40%
52	22%	22%	22%	31%	33%	40%
53	22%	22%	22%	22%	33%	38%
54	22%	22%	22%	22%	22%	38%
55	22%	22%	22%	22%	22%	22%
56	22%	22%	22%	22%	22%	22%
57	22%	22%	22%	22%	22%	22%
58	22%	22%	22%	22%	22%	22%
59	22%	22%	22%	22%	22%	22%
60	22%	22%	22%	22%	22%	22%
61	20%	20%	20%	20%	20%	20%
62	22%	22%	22%	22%	22%	22%
63	22%	22%	22%	22%	22%	22%
64	20%	20%	20%	20%	20%	20%
65	25%	25%	25%	25%	25%	25%
66	50%	50%	50%	50%	50%	50%
67	50%	50%	50%	50%	50%	50%
68	50%	50%	50%	50%	50%	50%
69	50%	50%	50%	50%	50%	50%
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	7.75%	7.75%				
	1	4.50	4.50				
	2	3.00	3.00				
	3	2.75	2.75				
	4	2.25	2.25				
25	5+	1.25	1.25	.04%	.01%	.06%	.06%
30		1.25	1.25	.04	.02	.07	.07
35		1.25	1.25	.05	.03	.09	.09
40		1.25	1.25	.06	.04	.12	.12
45		1.25	1.25	.08	.06	.18	.18
50		1.25	1.25	.15	.10	.27	.27
55		1.25	1.25	.26	.17	.40	.40
60		1.25	1.25	—	—	—	—

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	22.00%	3.25%	25.25%
2	15.00	3.25	18.25
3	7.00	3.25	10.25
4	5.00	3.25	8.25
5	3.75	3.25	7.00
6	2.50	3.25	5.75
7	2.00	3.25	5.25
8	1.50	3.25	4.75
9-25	1.00	3.25	4.25

DEATHS AFTER RETIREMENT:

AGE	MORTALITY RATE		AGE	MORTALITY RATE	
	MEN	WOMEN		MEN	WOMEN
35	.11%	.11%	60	.75%	.52%
40	.16	.15	65	1.05	.78
45	.23	.19	70	1.60	1.23
50	.36	.25	75	2.60	2.04
55	.53	.36	80	4.38	3.48

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	12%					
46	12%	15%				
47	12%	15%	18%			
48	12%	15%	18%	22%		
49	12%	15%	18%	22%	26%	
50	17%	15%	18%	21%	26%	30%
51	17%	17%	18%	21%	26%	30%
52	17%	17%	17%	21%	21%	30%
53	17%	17%	17%	17%	21%	22%
54	17%	17%	17%	17%	17%	22%
55	22%	22%	22%	22%	22%	22%
56	22%	22%	22%	22%	22%	22%
57	22%	22%	22%	22%	22%	22%
58	22%	22%	22%	22%	22%	22%
59	22%	22%	22%	22%	22%	22%
60	28%	28%	28%	28%	22%	28%
61	28%	28%	28%	28%	28%	28%
62	28%	28%	28%	28%	28%	28%
63	28%	28%	28%	28%	28%	28%
64	28%	28%	28%	28%	28%	28%
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 2010 through 2019. 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
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%)
2012	24,747	1,076,831	43,514	(0.23%)
2011	25,539	1,113,867	43,614	3.68%
2010	25,987	1,093,147	42,065	2.72%

*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	
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%
2012	1,111	14,711	457	4,890	14,141	178,056	5.84%
2011	1,113	16,521	428	4,578	13,487	168,235	7.64%
2010	1,070	18,300	460	4,624	12,802	156,292	9.59%

*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
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%
2012	18,161	1,036,605	57,079	1.70%
2011	18,466	1,036,376	56,123	2.28%
2010	18,603	1,020,745	54,870	2.30%

*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	
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%
2012	712	16,420	183	5,150	9,956	212,259	5.61%
2011	504	10,402	164	3,644	9,427	200,989	3.48%
2010	849	22,231	269	5,199	9,087	194,231	9.61%

*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
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%
2010	4,231	258,472	61,090	2.27%

*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	
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%
2010	189	7,711	52	1,413	2,702	88,327	7.68%

*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
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 %
2010	1,646	109,020	66,233	1.67 %

*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	
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%
2010	53	2,490	36	766	1,254	43,205	4.16%

*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)
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%
2014	\$2,842,340	\$5,789,052	\$2,413,782	\$6,700,553	100.00%	67.00%	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)
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%
2014	\$1,083,878	\$1,823,517	\$784,437	\$2,195,284	100.00%	61.00%	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)
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%
2014	\$1,113,650	\$2,198,892	\$966,511	\$2,482,496	100.00%	62.00%	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 7.75% interest rate for fiscal years prior to 2015 and 7.25% 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)
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%
2014	\$422,972	\$1,209,741	\$454,133	\$1,361,280	100.00%	78.00%	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)
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%
2014	\$221,840	\$556,902	\$208,701	\$661,493	100.00%	79.00%	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 7.75% interest rate for fiscal years prior to 2015 and 7.25% 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 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009	June 30 2007
			State Employees	Political Subdivision Employees			
Projected Normal Rate*	11.08	10.34%	10.51%	10.44%	10.71%	9.09%	8.74%
Decremental Experience	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—
Method Change	—	—	—	—	—	—	0.98
Effect of Legislation	—	—	—	—	(1.95)	(0.15)	(0.57)
Asset (Gains)/Losses	(0.20)	(0.44)	0.52	0.52	0.31	1.18	(0.36)
Current New Entrants	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—
Assumption Changes	—	1.18	—	—	1.01	—	0.41
Other (Gains)/Losses	—	—	(0.17)	(0.10)	0.36	0.59	(0.11)
ACTUAL NORMAL RATE	10.88%	11.08%	10.86%	10.86%	10.44%	10.71%	9.09%

TEACHERS

YEAR ENDED	June 30 2017	June 30 2015	June 30 2013	June 30 2011	June 30 2009	June 30 2007
Projected Normal Rate *	15.70	12.09%	11.96%	11.51%	9.38%	8.93%
Decremental Experience	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—
Method Change	—	—	—	—	—	0.82
Effect of Legislation	—	—	—	(2.27)	—	(0.72)
Asset (Gains)/Losses	(0.09)	(0.30)	0.61	0.39	1.55	(0.46)
Current New Entrants	—	—	—	—	—	—
Amendments	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—
Assumption Changes	0.38	3.91	—	2.05	—	0.80
Other (Gains)/Losses	—	—	0.15	0.28	0.58	0.01
ACTUAL NORMAL RATE	15.99%	15.70%	12.72%	11.96%	11.51%	9.38%

*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 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009	June 30 2007
			State Employees	Political Subdivision Employees			
Projected Normal Rate *	25.33	20.88%	21.45%	21.35%	22.92%	17.34%	18.21%
Decremental Experience	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—
Method Change	—	—	—	—	—	—	1.11
Effect of Legislation	—	—	—	—	(7.15)	—	(2.17)
Asset (Gains)/Losses	(0.56)	(1.57)	1.31	1.31	0.85	2.89	(0.90)
Current New Entrants	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—
Assumption Changes	—	6.02	—	—	4.00	—	0.31
Other Asset (Gains)/Losses	—	—	(0.22)	(0.12)	0.73	2.69	0.78
ACTUAL NORMAL RATE	24.77%	25.33%	22.54%	22.54%	21.35%	22.92%	17.34%

FIREFIGHTERS

YEAR ENDED	June 30 2017	June 30 2015	June 30, 2013		June 30 2011	June 30 2009	June 30 2007
			State Firefighters	Political Subdivision Firefighters			
Projected Normal Rate *	27.79	23.38%	23.90%	23.79%	28.25%	22.52%	24.49%
Decremental Experience	—	—	—	—	—	—	—
Pensioner's Experience	—	—	—	—	—	—	—
Excess Salary Increases	—	—	—	—	—	—	—
Method Change	—	—	—	—	—	—	2.48
Effect of Legislation	—	—	—	—	(8.58)	—	(2.61)
Asset (Gains)/Losses	(1.36)	(1.39)	1.46	1.46	0.99	3.24%	(1.05)
Current New Entrants	—	—	—	—	—	—	—
Amendments	—	—	—	—	—	—	—
Target Rate System Experience	—	—	—	—	—	—	—
Assumption Changes	—	5.80	—	—	3.39	—	0.21
Other Asset (Gains)/Losses	—	—	(0.04)	0.07	(0.26)	2.49%	(1.00)
ACTUAL NORMAL RATE	26.43%	27.79%	25.32%	25.32%	23.79%	28.25%	22.52%

*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)
6/30/19	\$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	\$7,820,761	\$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%
6/30/10	\$5,233,838	\$ 8,953,932	\$3,720,094	58.5%	\$2,481,384	149.9%

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)
6/30/19	\$ 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%
6/30/10	\$ 57,818	\$ 1,033,863	\$ 976,044	5.6%	\$2,481,384	39.3%

MEMBERSHIP COMPOSITION – PENSION PLAN

	JUNE 30	
	2019	2018
ACTIVE CONTRIBUTING MEMBERS:		
Employees	24,654	24,511
Teachers	17,730	17,752
Police Officers	4,216	4,197
Firefighters	1,688	1,661
TOTAL ACTIVE CONTRIBUTING MEMBERS*	48,288	48,121
*Excludes inactive		
RETIRED MEMBERS:		
Employees	18,824	18,193
Teachers	13,740	13,223
Police Officers	4,082	3,923
Firefighters	1,706	1,673
TOTAL RETIRED MEMBERS	38,352	37,012
TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:		
Employees	1,366	1,324
Teachers	1,034	947
Police Officers	125	127
Firefighters	27	22
TOTAL TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:	2,552	2,420
INACTIVE MEMBERS:		
Non-Vested Inactive Members	12,530	11,454
TOTAL TERMINATED AND INACTIVE MEMBERS	12,530	11,454

MEMBERSHIP COMPOSITION – OPEB PLAN

	JUNE 30	
	2019	2018
ACTIVE CONTRIBUTING MEMBERS:		
OPEB Plan	1,045	1,218
TOTAL ACTIVE CONTRIBUTING MEMBERS	1,045	1,218
RETIRED MEMBERS:		
OPEB Plan	9,676	9,869
TOTAL RETIRED MEMBERS	9,676	9,869
TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:		
OPEB Plan	2,944	2,934
TOTAL TERMINATED MEMBERS ENTITLED TO BUT NOT YET RECEIVING BENEFITS:	2,944	2,934
INACTIVE MEMBERS:		
Non-Vested Inactive Members	—	—
TOTAL TERMINATED AND INACTIVE MEMBERS	2,944	2,934

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 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> <p>(i) if survived by a spouse, 50% of the service retirement benefit payable until death or remarriage.</p> <p>(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> <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 his 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 2019 (5.7%), fiscal year 2018 (8.9%), fiscal year 2017 (13.5%), and fiscal year 2016 (1.0%) 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 61% over the decade, member contributions to the pension plan were 50% lower a decade ago. Pension benefits rose 59% over the decade. OPEB contributions have increased 40% and benefits paid have decreased 20% 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 2019. 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 2019	FY 2018	FY 2017	FY 2016
Additions:				
Employer Contributions	\$ 434,407	\$ 422,659	\$ 366,653	\$ 357,482
Member Contributions	223,995	217,572	213,061	207,949
Net Investment Income (Loss)	488,272	717,089	978,246	61,878
Net Position Transfers	—	—	—	—
Other	—	—	—	—
Total Additions to Net Position	\$ 1,146,674	\$ 1,357,320	\$ 1,557,960	\$ 627,309
Deductions:				
Pension Benefits	\$ 780,907	\$ 741,753	\$ 706,304	\$ 670,360
Refunds of Contributions	23,464	24,010	23,408	24,233
Administrative Expense	7,436	7,767	7,671	7,061
Professional Fees	686	687	644	950
Other	275	224	263	313
Total Deductions from Net Position	\$ 812,768	\$ 774,441	\$ 738,290	\$ 702,917
Change in Net Position	\$ 333,906	\$ 582,879	\$ 819,670	\$ (75,608)

CHANGES IN NET POSITION OPEB PLAN – LAST TEN FISCAL YEARS

	FY 2019	FY 2018	FY 2017	FY 2016
Additions:				
Employer Contributions	\$ 45,509	\$ 44,194	\$ 59,197	\$ 58,174
Net Investment Income (Loss)	1,979	3,129	4,045	148
Net Position Transfers	—	—	—	—
Other	—	—	—	—
Total Additions to Net Position	\$ 47,488	\$ 47,323	\$ 63,242	\$ 58,322
Deductions:				
Benefits Paid	\$ 47,798	\$ 49,251	\$ 50,560	\$ 51,805
Net Position Transfers	—	—	—	—
Administrative Expense	152	33	32	17
Professional Fees	2	3	4	2
Other	1	1	—	1
Total Deductions from Net Position	\$ 47,953	\$ 49,288	\$ 50,596	\$ 51,825
Change in Net Position	\$ (465)	\$ (1,965)	\$ 12,646	\$ 6,497

(in thousands)					
FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
\$ 332,294	\$ 328,444	\$ 249,835	\$ 254,557	\$ 274,582	\$ 269,677
204,063	199,033	196,489	199,593	152,412	149,512
249,806	1,092,585	813,671	19,811	1,121,460	546,492
—	—	—	—	—	89,505
—	—	111	—	13,399	(1,292)
\$ 786,163	\$ 1,620,062	\$ 1,260,106	\$ 473,961	\$ 1,561,853	\$ 1,053,894
\$ 631,312	\$ 599,476	\$ 573,469	\$ 547,051	\$ 519,970	\$ 490,075
26,345	26,120	23,191	26,535	22,830	21,851
7,582	7,377	6,999	6,261	7,312	6,391
1,318	1,080	972	1,162	1,425	1,205
308	366	818	50	743	1,776
\$ 666,865	\$ 634,419	\$ 605,449	\$ 581,059	\$ 552,280	\$ 521,298
\$ 119,298	\$ 985,643	\$ 654,657	(\$ 107,098)	\$ 1,009,573	\$ 532,596

(in thousands)					
FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
\$ 48,915	\$ 48,881	\$ 49,712	\$ 48,964	\$ 32,901	\$ 32,560
1,119	5,381	4,490	(164)	10,194	21,777
—	—	—	—	—	17,482
—	—	—	—	122	(51)
\$ 50,034	\$ 54,262	\$ 54,202	\$ 48,800	\$ 43,217	\$ 71,768
\$ 53,297	\$ 53,811	\$ 55,146	\$ 58,599	\$ 59,863	\$ 59,875
—	—	—	—	—	89,505
34	36	1,028	(23)	67	255
5	5	5	(33)	13	48
2	1	4	(5)	7	71
\$ 53,338	\$ 53,853	\$ 56,183	\$ 58,538	\$ 59,950	\$ 149,754
\$ (3,304)	\$ 409	\$ (1,981)	\$ (9,738)	\$ (16,733)	\$ (77,986)

SCHEDULE OF BENEFIT AND REFUND DEDUCTIONS BY TYPE

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

	FY 2019	FY 2018	FY 2017	FY 2016
Type of Benefit				
Age and Service Benefits:				
Service Retirement	\$ 491,781	\$ 452,862	\$ 425,306	\$ 398,056
Early Retirement	171,766	168,717	166,373	162,987
Survivors	43,832	41,693	39,420	36,989
Vested Deferred	31,554	29,321	27,581	25,937
Other	13,432	12,624	12,066	11,201
Death in Service Benefit	3,495	2,396	2,314	2,608
Disability Benefits				
Duty Related	22,594	22,216	21,843	21,599
Non Duty Related	10,027	9,772	9,410	9,200
Survivors	2,426	2,152	1,991	1,783
Total Benefits	\$ 780,907	\$ 741,753	\$ 706,304	\$ 670,360
Type of Refund				
Separation	\$ 18,768	\$ 18,504	\$ 19,032	\$ 18,856
Death	4,696	5,507	4,376	5,377
Total Refunds	\$ 23,464	\$ 24,011	\$ 23,408	\$ 24,233

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

	FY 2019	FY 2018	FY 2017	FY 2016
OPEB PLAN				
Type of Benefit				
Medical Subsidy Payments	\$ 47,798	\$ 49,251	\$ 50,560	\$ 51,805
Total Benefits	\$ 47,798	\$ 49,251	\$ 50,560	\$ 51,805

(in thousands)

FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
\$ 368,298	\$ 344,810	\$ 325,542	\$ 308,230	\$ 287,736	\$ 270,523
159,342	156,539	154,821	150,023	145,483	138,643
34,572	32,444	30,738	29,128	28,986	27,079
24,161	22,463	20,730	19,446	19,217	18,063
10,421	9,585	8,800	7,826	6,803	5,882
2,430	1,744	1,719	1,800	1,654	1,326
21,152	20,837	20,674	20,374	19,769	18,682
9,047	9,080	8,787	8,581	8,676	8,312
1,889	1,974	1,658	1,643	1,646	1,565
\$ 631,312	\$ 599,476	\$ 573,469	\$ 547,051	\$ 519,970	\$ 490,075
\$ 20,121	\$ 21,429	\$ 18,133	\$ 20,299	\$ 18,362	\$ 18,580
6,224	4,691	5,058	6,236	4,468	3,271
\$ 26,345	\$ 26,120	\$ 23,191	\$ 26,535	\$ 22,830	\$ 21,851

(in thousands)

FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
\$ 53,298	\$ 53,145	\$ 55,145	\$ 58,599	\$ 59,863	\$ 59,978
\$ 53,298	\$ 53,145	\$ 55,145	\$ 58,599	\$ 59,863	\$ 59,978

SCHEDULE OF RETIRED AND VESTED MEMBERS BY TYPE OF BENEFIT

SCHEDULE OF RETIRED AND VESTED MEMBERS BY TYPE OF BENEFITS AS OF JUNE 30, 2019 PENSION PLAN

Amount of Monthly Benefit	Number of Retirees	Type of Retirement*						
		1	2	3	4	5	6	7
EMPLOYEES								
\$1-500	5,436	4,273	48	2	14	–	581	518
501-1,000	5,702	4,360	261	109	13	2	453	504
1,001-1,500	3,460	2,703	87	231	12	4	207	216
1,501-2,000	2,054	1,727	25	98	6	3	122	73
2,001-2,500	1,271	1,123	10	25	–	2	80	31
2,501-3,000	804	731	6	8	1	1	47	10
3,001-3,500	532	495	–	6	2	–	21	8
3,501-4,000	384	360	2	1	–	–	19	2
Over 4,000	547	516	1	2	4	–	20	4
Totals	20,190	16,288	440	482	52	12	1,550	1,366
TEACHERS								
\$1-500	1,650	1,261	1	–	–	–	88	300
501-1,000	2,266	1,692	32	–	5	–	156	381
1,001-1,500	2,104	1,708	79	3	6	–	113	195
1,501-2,000	2,099	1,859	30	5	7	–	118	80
2,001-2,500	2,104	1,950	17	10	–	1	83	43
2,501-3,000	1,628	1,539	7	4	–	–	58	20
3,001-3,500	1,365	1,302	3	2	–	–	49	9
3,501-4,000	798	771	–	–	2	–	22	3
Over 4,000	760	736	–	–	1	–	20	3
Totals	14,774	12,818	169	24	21	1	707	1,034
POLICE OFFICERS								
\$1-500	227	188	–	–	–	1	36	2
501-1,000	368	201	12	1	1	–	139	14
1,001-1,500	426	194	24	5	2	1	158	42
1,501-2,000	363	218	18	32	2	1	69	23
2,001-2,500	413	295	9	57	1	1	27	23
2,501-3,000	443	303	2	94	–	–	33	11
3,001-3,500	408	344	1	42	2	3	13	3
3,501-4,000	348	300	2	32	1	–	10	3
Over 4,000	1,211	1,133	2	60	1	1	10	4
Totals	4,207	3,176	70	323	10	8	495	125
FIREFIGHTERS								
\$1-500	50	29	–	–	–	2	19	–
501-1,000	106	43	2	–	–	–	59	2
1,001-1,500	173	72	7	3	1	3	77	10
1,501-2,000	157	69	8	8	–	1	67	4
2,001-2,500	168	102	7	17	1	3	34	4
2,501-3,000	164	129	2	23	–	–	8	2
3,001-3,500	164	140	–	17	–	2	4	1
3,501-4,000	151	135	–	10	–	1	2	3
Over 4,000	600	572	–	15	1	–	11	1
Totals	1,733	1,291	26	93	3	12	281	27

* 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.

No Option	Option Selected #									Other*
	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	
3,117	118	357	126	859	315	13	13	-	-	518
3,173	91	430	127	989	367	15	6	-	-	504
1,791	64	316	98	686	279	7	3	-	-	216
1,041	29	207	83	446	166	6	3	-	-	73
554	12	154	57	334	123	2	4	-	-	31
334	15	111	43	193	96	1	1	-	-	10
204	5	99	30	136	49	1	-	-	-	8
149	6	64	25	96	41	1	-	-	-	2
198	5	94	47	129	68	1	1	-	-	4
10,561	345	1,832	636	3,868	1,504	47	31	-	-	1,366
705	27	113	42	355	98	5	5	-	-	300
1,190	38	137	37	383	92	6	2	-	-	381
1,022	41	179	61	461	135	5	5	-	-	195
985	47	173	52	545	206	2	9	-	-	80
913	36	192	78	592	238	4	8	-	-	43
684	36	147	56	468	212	1	4	-	-	20
579	23	133	54	418	141	2	6	-	-	9
344	16	89	26	210	109	-	1	-	-	3
354	6	89	33	174	101	-	-	-	-	3
6,776	270	1,252	439	3,606	1,332	25	40	-	-	1,034
152	1	11	14	22	25	-	-	-	-	2
269	5	15	10	21	31	1	2	-	-	14
289	9	14	16	19	37	-	-	-	-	42
215	11	8	26	17	63	-	-	-	-	23
193	18	12	54	15	96	-	2	-	-	23
186	21	13	74	15	123	-	-	-	-	11
144	15	9	98	9	129	-	1	-	-	3
118	8	3	72	8	136	-	-	-	-	3
319	19	13	337	19	497	3	-	-	-	4
1,885	107	98	701	145	1,137	4	5	-	-	125
42	-	3	-	1	4	-	-	-	-	-
99	-	1	-	1	3	-	-	-	-	2
131	5	7	7	8	5	-	-	-	-	10
117	7	5	7	7	10	-	-	-	-	4
93	8	7	20	7	29	-	-	-	-	4
58	8	4	30	9	53	-	-	-	-	2
47	6	3	41	3	63	-	-	-	-	1
48	5	2	30	1	62	-	-	-	-	3
166	11	1	157	5	257	1	1	-	-	1
801	50	33	292	42	486	1	1	-	-	27

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, 2019
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	8,154	558	7,468	14	114
501-1,000	1,493	44	413	675	361
1,001-1,500	21	2	7	5	7
1,501-2,000	8	—	—	8	—
Over \$2,000	—	—	—	—	—
Total	9,676	604	7,888	702	482

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**SCHEDULES OF AVERAGE
BENEFIT PAYMENT
AMOUNTS**

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

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	\$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							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	\$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							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	\$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							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	\$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							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	\$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							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	\$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							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	\$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							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	\$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.

2011 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	\$336	\$393	\$571	\$837	\$1,126	\$1,519	\$2,257	\$1,039
Average annual benefit	\$4,032	\$4,719	\$6,856	\$10,049	\$13,517	\$18,228	\$27,079	\$12,474
Average final average salary	\$32,512	\$37,153	\$38,954	\$43,438	\$45,838	\$51,964	\$61,282	\$46,178
Number of retired members	936*	1,341	3,334	2,144	2,226	1,277	2,229	13,487**

* Includes 172 members who did not have service reported.

** Includes 7,913 members who did not have FAS reported.

2010 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	\$335	\$386	\$561	\$822	\$1,110	\$1,495	\$2,222	\$1,017
Average annual benefit	\$4,017	\$4,632	\$6,738	\$9,861	\$13,321	\$17,938	\$26,660	\$12,208
Average final average salary	\$32,068	\$35,498	\$37,739	\$41,663	\$44,745	\$50,812	\$60,543	\$45,062
Number of retired members	900*	1,291	3,169	2,059	2,091	1,213	2,079	12,802**

* Includes 161 members who did not have service reported.

** Includes 8,088 members who did not have FAS reported.

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

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.

2011 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	\$432	\$484	\$670	\$1,023	\$1,439	\$1,848	\$2,664	\$1,777
Average annual benefit	\$5,185	\$5,804	\$8,044	\$12,271	\$17,272	\$22,178	\$31,972	\$21,321
Average final average salary	\$50,528	\$53,243	\$45,371	\$53,207	\$58,790	\$63,226	\$69,426	\$61,398
Number of retired members	188*	214	1,111	1,021	1,859	1,608	3,426	9,427**

* Includes 79 members who did not have service reported.

** Includes 5,148 members who did not have FAS reported.

2010 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	\$417	\$478	\$664	\$1,005	\$1,435	\$1,847	\$2,656	\$1,781
Average annual benefit	\$5,001	\$5,733	\$7,970	\$12,064	\$17,224	\$22,162	\$31,869	\$21,375
Average final average salary	\$50,790	\$52,875	\$44,197	\$51,833	\$57,897	\$62,372	\$68,973	\$60,970
Number of retired members	171*	203	1,040	965	1,793	1,570	3,345	9,087**

* Includes 72 members who did not have service reported.

** Includes 5,182 members who did not have FAS reported.

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

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	\$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						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	\$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						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	\$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.

2011 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	\$957	\$1,386	\$1,482	\$2,072	\$2,893	\$4,082	\$5,432	\$2,823
Average annual benefit	\$11,485	\$16,635	\$17,788	\$24,867	\$34,719	\$48,981	\$65,188	\$33,876
Average final average salary	\$47,377	\$52,498	\$46,123	\$58,423	\$74,403	\$87,050	\$97,076	\$75,213
Number of retired members	230*	149	314	251	1,218	523	195	2,880**

* Includes 140 members who did not have service reported.

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

2010 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	\$942	\$1,352	\$1,483	\$2,034	\$2,845	\$3,940	\$5,114	\$2,724
Average annual benefit	\$11,310	\$16,222	\$17,792	\$24,413	\$34,137	\$47,277	\$61,371	\$32,689
Average final average salary	\$44,656	\$50,016	\$45,342	\$57,278	\$70,960	\$85,452	\$93,848	\$72,439
Number of retired members	218*	145	305	241	1,140	482	171	2,702**

* Includes 129 members who did not have service reported.

** Includes 1,814 members who did not have FAS reported.

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

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	\$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						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	\$1,157	\$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						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	\$1,154	\$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.

2011 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	\$1,063	\$1,519	\$1,600	\$2,062	\$2,656	\$3,846	\$4,971	\$2,967
Average annual benefit	\$12,751	\$18,225	\$19,194	\$24,749	\$31,877	\$46,151	\$59,651	\$35,599
Average final average salary	\$50,146	\$51,114	\$49,051	\$64,919	\$73,582	\$86,853	\$90,415	\$79,520
Number of retired members	90*	30	73	111	555	328	149	1,336**

**Includes 71 members who did not have service reported.

**Includes 942 members who did not have FAS reported.

2010 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	\$1,020	\$1,487	\$1,607	\$2,041	\$2,592	\$3,770	\$4,749	\$2,871
Average annual benefit	\$12,244	\$17,846	\$19,283	\$24,493	\$31,109	\$45,240	\$56,983	\$34,454
Average final average salary	\$55,668	\$47,729	\$50,024	\$62,405	\$71,694	\$86,042	\$89,392	\$78,232
Number of retired members	80*	28	73	109	530	304	130	1,254**

* Includes 62 members who did not have service reported.

** Includes 946 members who did not have FAS reported.

SCHEDULES OF AVERAGE BENEFIT PAYMENT AMOUNTS – OPEB PLAN

	Service	2019	0-4 yrs**	5-9 yrs
Average Monthly Benefit			\$336	\$366
Annual Benefits		\$653,981		\$619,557
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
Annual Benefits		\$711,727		\$662,965
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
Annual Benefits		\$756,048		\$702,393
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
Annual Benefits		\$776,997		\$749,533
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
Annual Benefits		\$805,749		\$789,827
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
Annual Benefits		\$811,354		\$804,819
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
Annual Benefits		\$941,225		\$934,509
Number of retired members			181	174
**Includes 37 members who did not have service reported				
	Service	2012	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$395	\$446
Annual Benefits		\$1,074,690		\$904,456
Number of retired members			227	169
**Includes 94 members who did not have service reported				
	Service	2011	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$406	\$451
Annual Benefits		\$1,158,273		\$941,454
Number of retired members			238	174
**Includes 103 members who did not have service reported				
	Service	2010	0-4 yrs.**	5-9 yrs.
Average Monthly Benefit			\$415	\$467
Annual Benefits		\$1,226,420		\$964,536
Number of retired members			246	172
**Includes 108 members who did not have service reported				

10-14 yrs	15-19 yrs	20-24 yrs	2019 25-29 yrs	30 or more yrs	Total
\$396	\$399	\$402	\$415	\$412	\$407
\$1,154,510	\$1,025,557	\$15,256,064	\$10,717,768	\$17,793,776	\$47,221,213
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
\$1,201,937	\$1,072,127	\$15,719,934	\$10,963,933	\$18,261,256	\$48,593,879
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
\$1,264,225	\$1,076,033	\$16,063,911	\$11,095,969	\$18,677,378	\$49,635,957
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
\$1,302,304	\$1,131,240	\$16,480,299	\$11,351,956	\$19,325,316	\$51,117,645
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
\$1,375,276	\$1,112,003	\$16,906,473	\$11,528,248	\$19,732,252	\$52,249,828
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
\$1,426,682	\$1,103,825	\$17,210,363	\$11,720,646	\$20,711,693	\$53,789,382
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
\$1,488,868	\$1,124,533	\$17,352,821	\$11,824,268	\$21,523,385	\$55,189,609
278	219	3,332	2,241	3,839	10,264

10-14 yrs.	15-19 yrs.	20-24 yrs.	2012 25-29 yrs.	30 or more yrs.	Total
\$449	\$438	\$445	\$446	\$481	\$458
\$1,509,858	\$1,181,439	\$18,133,415	\$12,107,889	\$22,532,887	\$57,444,634
280	225	3,394	2,264	3,902	10,461

10-14 yrs.	15-19 yrs.	20-24 yrs.	2011 25-29 yrs.	30 or more yrs.	Total
\$458	\$445	\$457	\$456	\$497	\$470
\$1,555,067	\$1,221,548	\$18,843,776	\$12,433,418	\$23,543,318	\$59,696,854
283	229	3,434	2,273	3,946	10,577

10-14 yrs.	15-19 yrs.	20-24 yrs.	2010 25-29 yrs.	30 or more yrs.	Total
\$464	\$450	\$463	\$461	\$503	\$476
\$1,607,489	\$1,229,834	\$18,996,737	\$12,510,895	\$24,025,062	\$60,560,973
289	228	3,416	2,264	3,977	10,592

PRINCIPAL PARTICIPATING EMPLOYERS

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

	As Of June 30, 2019			As Of June 30, 2010		
	# of Covered	Percentage of Total		# of Covered	Percentage of Total	
Participating Government	Employees	Rank	Pension Plan	Employees	Rank	Pension Plan
State of New Hampshire	10,843	1	22.45%	11,792	1	23.37%
SAU 42 (Nashua School District)	1,264	2	2.62%	1,287	3	2.55%
Manchester School District	1,243	3	2.57%	1,328	2	2.63%
City of Dover	645	4	1.34%	—	—	—
Timberlane School District	643	5	1.33%	671	4	1.33%
Merrimack School District	623	6	1.29%	659	5	1.31%
City of Nashua	622	7	1.29%	612	7	1.21%
Concord School District	592	8	1.23%	627	6	1.24%
SAU 54 (Rochester School District)	589	9	1.22%	599	8	1.19%
Merrimack County	559	10	1.16%	594	9	1.18%
All Other *	30,665		63.50%	32,298		64.00%
Total (465 Governments)	48,288		100.00%	50,467		100.00%

*As of June 30, 2019, "All Other" consisted of:

Type	Number	Employees
City Governments	11	2,420
Town Governments & Related Entities	242	5,713
County Governments & Related Entities	11	2,642
School Districts & School Administrative Units	191	19,890
Total	455	30,665

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

	As Of June 30, 2019			As Of June 30, 2010		
	# of Covered	Percentage of Total		# of Covered	Percentage of Total	
Participating Government	Employees	Rank	OPEB Plan	Employees	Rank	OPEB Plan
State of New Hampshire	2,424	1	25.05%	2,792	1	26.36%
Manchester School District	477	2	4.93%	522	2	4.93%
SAU 42 (Nashua School District)	390	3	4.03%	390	3	3.68%
City of Manchester	302	4	3.12%	301	4	2.84%
City of Nashua	295	5	3.05%	270	5	2.55%
Concord School District	191	6	1.97%	232	6	2.19%
City of Concord	184	7	1.90%	190	7	1.79%
Keene School District	174	8	1.80%	165	8	1.56%
Portsmouth School District	141	9	1.46%	149	9	1.41%
Town of Salem	127	10	1.31%	100	10	0.94%
All Other *	4,971		51.37%	5,481		51.75%
Total (360 Governments)	9,676		100.00%	10,592		100.00%

*As of June 30, 2019, "All Other" consisted of:

Type	Number	Employees
City Governments	14	590
Town Governments & Related Entities	130	848
County Governments & Related Entities	12	292
School Districts & School Administrative Units	194	3,241
Total	350	4,971

A full list of participating employers as of June 30, 2019 begins on page 119.

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)

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

Troy Water & Sewer E
 Tuffonboro E, P, F
 Unity E
 Village District of Eastman E
 Wakefield E, P, F
 Walpole E, P
 Warner E, P
 Warner Village Water District E
 Warren P
 Washington E, P
 Waterville Estates Village District E
 Waterville Valley E, P, F
 Weare E, P
 Webster E, P
 Weeks Public Library E
 Westmoreland E
 Whitefield E, P, F
 Wilmot E, P
 Wilton P
 Winchester E, P
 Windham E, P, F
 Wolfeboro E, P, F
 Woodstock E, P
 Woodsville Fire District E
 Woodsville Water & Light
 Department E

COUNTY GOVERNMENTS (AND RELATED ENTITIES)

Belknap County E, P
 Belknap County Conservation
 District E
 Carroll County E, P
 Cheshire County E, P
 Coos County E, P
 Coos County Nursing Home E
 Grafton County E, P
 Hillsborough County E, P
 Merrimack County E, P
 Rockingham County E, P
 Strafford County E, P
 Sullivan County E, P

SCHOOL DISTRICTS

Allenstown School District T
 Alton School District E, T
 Amherst School District E, T
 Andover School District E, T
 Ashland School District E, T
 Auburn School District E, T
 Barnstead School District E, T
 Barrington School District E, T
 Bartlett School District E, T
 Bath School District E, T
 Bedford School District E, T
 Bethlehem School District E, T
 Bow School District E, T
 Brentwood School District E, T
 Brookline School District E, T
 Campton School District E, T
 Candia School District E, T
 Chester School District E, T
 Chesterfield School District T
 Chichester School District E, T
 Claremont School District E, T
 Cochecho Academy of the Arts T
 Colebrook School District T
 Concord School District E, T
 Contoocook Valley Regional
 School District E, T
 Conway School District E, T
 Cornish School District E, T
 Croydon School District T
 Deerfield School District T
 Dresden School District E, T
 Dunbarton School District T
 East Kingston School District E, T
 Epping School District E, T
 Epsom School District T
 Errol School District T
 Exeter School District E, T
 Exeter Regional Co-Op School
 District E, T

Fall Mountain Regional School
 District E, T
 Farmington School District E, T
 Franklin School District E, T
 Freedom School District E, T
 Fremont School District E, T
 Gilford School District E, T
 Gilmanton School District E, T
 Goffstown School District E, T
 Governor Wentworth Regional
 School District E, T
 Grantham School District E, T
 Great Bay eLearning Charter
 School T
 Greenland School District E, T
 GRS Cooperative School
 District E, T
 Hampstead School District E, T
 Hampton Falls School
 District E, T
 Hampton School District E, T
 Hanover School District E, T
 Harrisville School District E, T
 Haverhill Coop School
 District E, T
 Henniker School District E, T
 Hill School District E, T
 Hillsboro-Deering School District E, T
 Hinsdale School District E, T
 Holderness School District E, T
 Hollis School District E, T
 Hollis/Brookline Coop School
 District E, T
 Hooksett School District E, T
 Hopkinton School District E, T
 Hudson School District E, T
 Inter-Lakes School District E, T
 Jackson School District E, T
 Jaffrey-Rindge Coop School
 District E, T
 John Stark Regional School
 District E, T
 Kearsarge Regional Cooperative
 School District E, T
 Keene School District E, T

Kensington School District E, T	North Country Charter Academy T	Thornton School District E, T
Laconia School District E, T	North Country Education Service E, T	Timberlane Regional School District E, T
Lafayette Regional Cooperative School District E, T	North Hampton School District E, T	Unity School District E, T
Landaff School District T	Northumberland School District E, T	Virtual Learning Academy Charter School T
Lebanon School District E, T	Northwood School District E, T	Wakefield School District E, T
Lempster School District E, T	Nottingham School District E, T	Warren School District E, T
Lincoln Woodstock Coop School District E, T	Oyster River Coop School District E, T	Washington School District E, T
Lisbon Regional School District E, T	Pelham School District E, T	Waterville Valley School District E, T
Litchfield School District E, T	Pembroke School District E, T	Weare School District T
Littleton School District E, T	Pemi-Baker Regional School District E, T	Wentworth School District E, T
Londonderry School District E, T	Piermont School District E, T	Westmoreland School District E, T
Lyme School District E, T	Pittsburg School District E, T	White Mountains Regional School District E, T
Madison School District E, T	Pittsfield School District E, T	Wilton-Lyndeborough School District E, T
Manchester School District E, T	Plainfield School District E, T	Winchester School District E, T
Marlborough School District E, T	Plymouth School District E, T	Windham School District E, T
Marlow School District E, T	Portsmouth School District E, T	Winnacunnet Coop School District E, T
Mascenic Regional School District E, T	Profile Coop School District E, T	Winnisquam Regional School District E, T
Mascoma Valley School District E, T	Propsect Mountain High School E, T	
Mason School District E, T	Raymond School District E, T	
Merrimack School District E, T	Rivendell Interstate School District T	
Merrimack Valley School District E, T	Rollinsford School District E, T	SCHOOL ADMINISTRATIVE UNITS
Middleton School District E, T	Rumney School District E, T	SAU 2 E, T
Milan School District E, T	Rye School District E, T	SAU 3 E, T
Milford School District E, T	Salem School District E, T	SAU 6 E
Milton School District E, T	Sanborn Regional School District E, T	SAU 7 E, T
Monadnock Regional School District E, T	Seabrook School District E, T	SAU 9 E, T
Monroe School District E, T	Seacoast Charter School T	SAU 10 E, T
Mont Vernon School District E, T	Shaker Regional School District E, T	SAU 13 E, T
Moultonborough School District E, T	Somersworth School District E, T	SAU 15 E
Nelson School District T	Souhegan Cooperative School District E, T	SAU 16 E, T
New Boston School District E, T	South Hampton School District E, T	SAU 19 E, T
New Castle School District E, T	Stark School District E, T	SAU 20 E
Newfields School District E, T	Stewartstown School District T	SAU 21 E, T
Newfound Area School District E, T	Stoddard School District E, T	SAU 23 E, T
Newington School District E, T	Strafford School District E, T	SAU 24 E, T
Newmarket School District E, T	Stratford School District E, T	SAU 29 E, T
Newport School District E, T	Stratham School District E, T	SAU 34 E
Next Charter School T	Sunapee School District E, T	SAU 35 E, T
	Tamworth School District E, T	SAU 39 E

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 54 E, T
SAU 55 E
SAU 56 E, T
SAU 58 E
SAU 67 E, T
SAU 70 E, T

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