

City of Manchester Employees' Contributory Retirement System

2017

MECRS:
Helping Plan Participants Hit
Their Retirement Target

COMPREHENSIVE ANNUAL
FINANCIAL REPORT

For The Year Ended
December 31, 2017

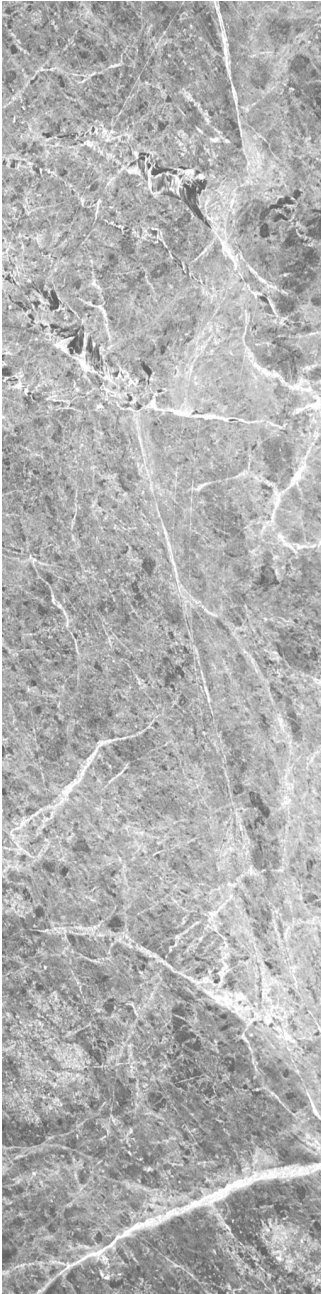


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**CITY OF
MANCHESTER
EMPLOYEES'
CONTRIBUTORY
RETIREMENT
SYSTEM**

**1045 ELM STREET • SUITE 403
MANCHESTER, NH 03101-1824
PHONE (603) 624-6506
FAX (603) 624-6342**



As Chairman of the Board of Trustees (the Board), I am pleased to present the 2017 Annual Report for the Manchester Employees' Contributory Retirement System, (MECRS or the Retirement System). This report includes Financial and Actuarial Valuation summaries for calendar year 2017, as well as a description of the Retirement System benefits. The report also includes management's discussion and analysis of the events of the past year.

The MECRS is a defined benefit plan supported by contributions made by the membership, in conjunction with supporting contributions made by the employer. The Board maintains a watchful eye on state and national events affecting public retirement plans and engages the services of actuaries, financial advisors, auditors and legal consultants to assess the condition of the Retirement System and to assist the Board in its policy and management decisions.

The Retirement System's investment experience for 2017 was a gain of 16.2%, which was more than twice its target assumption of 7.25%. In recognition of the effect of inflation on pensioner annuities, the Board elected to grant a 1.25% Cost of Living Adjustment in 2017 and will revisit the issue in 2018, as it does each year.

As a result of societal changes and an ever changing investment scene, the Board's role of matching investment returns with future pensioner liabilities has become more important than ever. In 2017, the Retirement System made a number of strategic changes to its investment portfolio, as recommended by its investment advisor. Changes in the way investments are allocated allowed the Retirement System to meet cash flow obligations while having a minimal impact on overall investment returns. This year marks my departure from the Board and our new Board Chairman, Richard Molan, a veteran of our Investment Committee, is a fine choice to lead the organization in the coming years, and can continue to leverage his experience as Chairman of the Investment Committee in his new role as Chairman of the Board.

As I depart the Board at the end of 2017, I would like to thank my fellow members on the Retirement System's Board, the retirement system staff, and all of the active and retired members for their support and interest in the Board's activities throughout the year. I trust that I leave the Board in good hands, and that the issues and challenges of the future will be managed to the benefit of all stakeholders.

Sincerely,

Donald R. Pinard
Chairman, Board of Trustees
City of Manchester Employees' Contributory Retirement System

Board of Trustees



DONALD R. PINARD
Chairman
Employee Representative
Term expired January 1, 2018



WILLIAM SANDERS
Treasurer
City Director of Finance
Ex-Officio Member



**MAYOR
THEODORE GATSAS**
Ex-Officio Member



RICHARD MOLAN
Aldermanic Appointee
Term expired January 1, 2018



DIANNE MERCIER
Mayoral Appointment
Term expires January 1, 2020



MICHAEL WOITKOWSKI
Employee Representative
Term expires January 1, 2020



ROBERT LYNCH
Citizen Representative
Term expires January 1, 2019

Administrative Staff



GERARD E. FLEURY
Executive Director



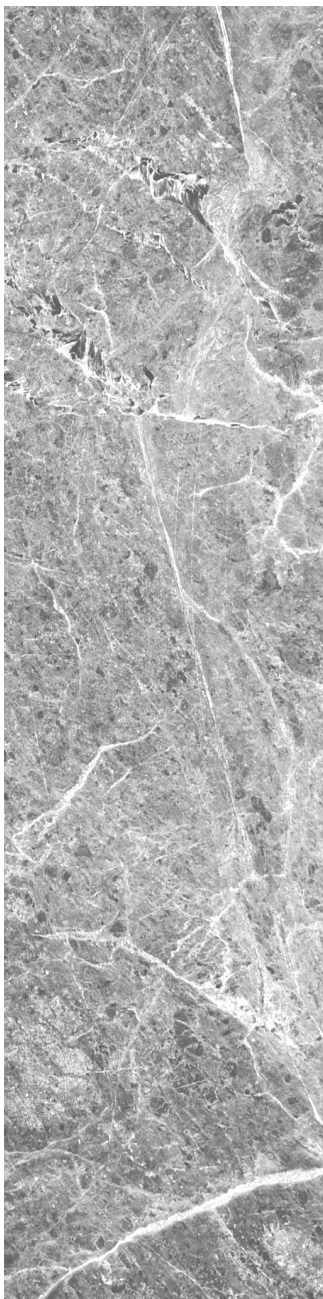
SANDI ABOSHAR
Executive Assistant



SUZANNE WILSON
Administrative Assistant

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Dear Retirement System Participant:

I am pleased to present this Annual Report of the Manchester Employees' Contributory Retirement System (MECRS or the Retirement System) for the year ended December 31, 2017. This report is submitted in compliance with Chapter 218:6, II, Laws of 1973, as amended, is intended to satisfy public pension plan financial reporting requirements, and to assure members of the Retirement System that the Board of Trustees (the Board) is responsibly managing fund assets. The MECRS Annual Report is prepared each year to conform to the most current Governmental Accounting Standards Board pronouncements.

The MECRS is a tax-qualified governmental retirement plan under sections 401(a) and 414(d) of the United States Internal Revenue Code, as amended, and was established under the provisions of New Hampshire Chapter 218, Laws of 1973, on January 1, 1974. Its purpose is to provide service and disability retirement benefits to those City employees who are not Police Officers, Firefighters, or Teachers and who are not eligible to participate in the New Hampshire Retirement System.

The MECRS is administered by a seven-member Board, whose responsibilities include the formulation of policy and determination of employee eligibility for participation and benefits. The Board also oversees the daily administrative, fiscal and investment operations of the Retirement System.

During 2017, the Retirement System updated its contractual relationship with State Street Bank & Trust as investment custodian for the Plan. The revised relationship included increased access to systems needed to manage cash flow with minimal disruption to the investment strategies adopted by the Board. The Board also conducted a salary survey early in 2017 to ensure that the job descriptions of MECRS staff were accurate and that pay scales were appropriate for the industry. That task had not be done for about a decade and it revealed that MECRS job descriptions remain accurate and that salaries have kept pace with industry norms.

I am pleased to report that in 2017 MECRS once again applied for and received a compliance award from the Public Pension Coordinating Council, (PPCC) for having met professional standards for plan funding. In order to receive the award, Plans must meet requirements established by the PPCC. This is the fifteenth year in a row that MECRS has received an award from the PPCC.

In closing, on behalf of the Board of Trustees, I want to reiterate our commitment to stakeholders in the Retirement System and to prompt and accurate service to our constituent members.

Sincerely,

Gerard E. Fleury
Executive Director



Public Pension Coordinating Council

***Recognition Award for Funding
2017***

Presented to

***Manchester Employees' Contributory
Retirement System***

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

Presented by the Public Pension Coordinating Council, a confederation of

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

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is written in a cursive style with a large initial 'A' and 'W'.

Alan H. Winkle
Program Administrator

Portfolio Managers, Advisors, and Service Providers

FOR THE YEAR ENDING DECEMBER 31, 2017

INVESTMENT ADVISOR

NEPC, LLC

ACTUARIAL CONSULTANT

Gabriel, Roeder, Smith & Company

CUSTODIAN

State Street Bank & Trust Co.

INDEPENDENT AUDITOR

Berry Dunn McNeil & Parker, LLC

LEGAL ADVISOR

McLane Middleton,
Professional Association

DOMESTIC EQUITY

Pzena Investment Management
Large Cap Value (Separate Account)

Sands Capital Large Cap Growth
(Separate Account)

Rothschild SMID Cap (Group Trust)

Vanguard S&P 500 Index Fund
(Group Trust)

INTERNATIONAL EQUITY

Gryphon International
(Group Trust)

Causeways International
(Group Trust)

Kabouter International Opportunities II
(Group Trust)

EMERGING MARKETS EQUITY

City of London (Group Trust)

ALTERNATIVE EQUITY

Lexington Partners VII & VIII
(Group Trust)

Newstone Partners (Group Trust)

HEDGE FUNDS – FUND OF FUNDS/ LIQUID ALTERNATIVE COMPOSITE

Permal Fixed Income Holdings
(Group Trust)

Standard Life Investment Absolute
Return Fund (Group Trust)

FIXED INCOME

Income Research and Management
(Group Trust)

Crescent Direct Lending (Group Trust)

Loomis Sayles (Group Trust)

Private Advisors VI (Group Trust)

Blackrock SIO (Group Trust)

Vanguard Inflation Protected
Securities (Group Trust)

CarVal Credit Value Fund B IV LP
(Group Trust)

REAL ESTATE

TA Associates (Group Trust)

PRISA (Group Trust)

DSF Group (Group Trust)

Blue Vista (Group Trust)

Kanye Anderson Energy VI (Group Trust)

GLOBAL TACTICAL ASSET ALLOCATION & REAL ASSETS

Mellon Global TAA 130/30 Fund
(Group Trust)

Pimco All Asset Fund (Group Trust)

Investment Objectives and Guidelines

This statement of investment goals and objectives is set forth in keeping with the fiduciary requirements under existing state and federal laws. Its purpose is to set forth an appropriate set of goals and objectives for the Retirement System's assets and to define guidelines within which the investment managers may formulate and execute their investment decisions.

1. Achieving a total return, consistent with prudent investment management, greater than the earnings assumption for the Plan in order to satisfy long-term plan liabilities and maintaining an acceptable funded ratio is the primary goal of the Plan. The total return target is 7.25% net of fees compounded annually, which considers the actuarial rate of return of 7.25%. Total return, as used herein, includes income plus realized and unrealized gains and losses on Plan assets. In addition, assets of the Plan shall be invested to ensure that principal is preserved and enhanced over time.
2. The total return for the overall Plan shall meet or exceed the Plan's Policy Index (as described in Appendix I*). As a secondary comparison, the Plan shall also be compared with comparable public pension funds as represented by the Consultants Public Pension Fund peer group universe (IF Universe), with the understanding that the Plan's funded status and overall investment risk profile may differ from the average public pension fund in that universe.
3. Total portfolio risk exposure and risk-adjusted returns will be regularly evaluated and compared with a universe of similar funds for the Plan and each investment manager. Total portfolio risk exposure should generally rank in the mid-range of comparable funds. Risk-adjusted returns are expected to consistently rank in the top-half of comparable funds.
4. The Retirement Board is aware that there may be deviations from these performance targets. Normally, results are evaluated over a three- to five-year time horizon, but shorter-term results will be regularly reviewed and earlier action taken if in the best interest of the Plan.

Investment managers shall exceed the return of the designated benchmark index noted below and rank in the top-half of the appropriate asset class and style universe.

Asset Class	Benchmark	Asset Class Universe	Style Universe
Domestic Large Cap Equity	S&P 500, Russell 1000 Growth or Value Index	Equity Funds	Large Core, Growth or Value
Domestic SMID Cap Equity	Russell 2500 Growth or Value Index	Equity Funds	SMID CAP Universe
Developed Int'l Equity	MSCI EAFE Index	Developed Int'l Equity Funds	NA
Int'l Small Cap Equity	MSCI EAFE Small Cap Index	NA	NA
Emerging Int'l Equity	MSCI Emerging Markets Free	Emerging Int'l Equity Funds	NA
Domestic Fixed Income	BC Aggregate	Fixed Income Funds	Core Bonds, Core Plus Bonds
Absolute Return Fixed Income	BC Multiverse	Int'l Fixed Income Funds	NA
Real Estate	NCREIF	Real Estate Funds	NA
Global Tactical Asset Allocation	60% MSCI ACWI & 40% Citigroup WGBI Index	NA	NA
Private Equity	Cambridge Private Equity	NA	NA
Hedge Fund of Funds	HFRI Fund of Funds	NA	NA
Liquid Alternatives	TBD based on manager	NA	NA
Real Assets	TBD based on manager	NA	NA

Investment Objectives and Guidelines

ABBREVIATED INVESTMENT GUIDELINES: Full discretion within the parameters of the guidelines described herein, is granted to the investment managers regarding the asset allocation, the selection of securities, and the timing of transactions.

1. Equity investments, i.e., common stocks, convertibles, warrants and rights are permitted; subject to the guidelines in Appendix I*. Equity specialists may vary equity commitment from 90% to 100% of assets under management. The managers should determine that the securities to be purchased are of an investment grade suitable for this Plan. American Depository Receipts (ADRs), which are dollar denominated foreign securities traded on the domestic U.S. stock exchanges, e.g., Reuters, Nestle, Sony, may be held by each domestic stock manager in proportions which each manager shall deem appropriate.
2. Domestic fixed income investments are permitted, subject to the guidelines in Appendix I*, and may include U.S. Government and Agency obligations, mortgage backed securities; including non-agency mortgages and commercial mortgage-backed securities; asset-backed securities; corporate bonds; debentures; commercial paper; and taxable municipals.
3. The minimum quality rating of any fixed income issue held in an investment grade portfolio shall be B as rated by Moody's, or the equivalent as defined by Fitch or Standard & Poor's, and the overall weighted average quality shall be A or higher. The ratings in this Policy Statement are for guidance only; the investment managers are responsible for making an independent analysis of the credit worthiness of securities and their suitability as investments regardless of the classifications provided by rating agencies.
4. The average duration (interest rate sensitivity) of an actively managed fixed income portfolio shall be within +/- 30% of its benchmark index. Given the nature of their process, absolute return managers may have additional flexibility around this target.
5. Investment in Non US Fixed Income, specifically global sovereign and emerging market debt local currency, securities is permissible. It is expected that investment in these securities will be via a commingled vehicle, therefore being managed under separate guidelines than the ones listed herein. However, as described below, commingled investment vehicles selected by the Board are exempt from the policies and restrictions specified herein.
6. Securities of an individual issuer, excepting the U.S. government, agencies and sovereign nations and their agencies, shall not constitute more than 5% of an investment manager's portfolio at any time, at market value.
7. Investment managers may maintain reserve and cash equivalent investments. However, these investments should be made on the basis of safety and liquidity, and only secondarily by yield available. Such securities shall carry the equivalent of Standard & Poor's A1 or A2 ratings.
8. The use of exchange traded funds (ETF's) is permitted in the portfolio, so long as it is within the parameters of the guidelines listed above. It is understood that an allocation to ETF's is meant to represent broad market exposure via an individual security, therefore, any allocation that falls outside of the parameters of these guidelines requires prior Board approval.

*Appendix I is not included in this report.

INELIGIBLE INVESTMENTS: Unless specifically approved by the Retirement System, certain securities, strategies and investments are ineligible for inclusion within separately managed accounts in the Retirement System's asset base. Among these are:

- Derivative instruments except as permitted in the Derivatives Policy or specifically provided for in individual manager guidelines.
- Privately-placed or other non-marketable debt, except securities issued under Rule 144a.
- Lettered, legend or other so-called restricted stock.
- Commodities – Except by a manager investment in Real Assets.
- Straight preferred stocks and non-taxable municipal securities should not normally be held unless pricing anomalies in the marketplace suggest the likelihood of near-term capital gains when normal spread relationships resume.
- Short sales – Except by GTAA manager in a 130/30 scenario.
- Direct investments in private placements, real estate, oil and gas and venture capital.
- Any transaction prohibited by Employee Retirement Income Security Act (ERISA).

An unabridged version of the Investment Guidelines can be obtained on the MECRS website at <https://ManchesterRetirement.org/wp-content/uploads/Investment-Guidelines-4.pdf>

Summary Plan Description

This document has been prepared in compliance with Chapter 218:6, II, Laws of 1974 as amended and is intended to provide the reader, especially new entrants to the Retirement System, with a summary of important plan provisions. Information contained in this summary plan description is only intended to provide the membership of the City of Manchester Employees' Contributory Retirement System and other interested parties with a general overview of the Retirement System. While every effort is, and will be made to keep information in this description as accurate and up-to-date as possible, no retirement or financial decisions should be made based solely on information contained herein. Questions on matters of entitlement or process should be addressed in writing to the Retirement System's administrative office at the address shown below and in matters of conflict between this document and chapter law, the matter shall default to chapter law.

— Membership —

The Retirement System applies to all *eligible* employees of the City of Manchester, (the City) the Manchester school district, Manchester public library, and the Manchester employees' contributory retirement system including elected and appointed officials. Trustees of the Retirement System who are not otherwise eligible to participate are prohibited from being members in the Retirement System. The Retirement System does not cover certain categories of employees, such as temporary employees, members of boards and commissions who are not *eligible* employees of the City, trustees of the Retirement System who are not otherwise eligible to participate, members of the fire and police departments, or teachers who are eligible to participate in a state-administered retirement system, and other persons who are, or were, eligible to participate in the New Hampshire Retirement System. *Eligible* employees are identified by the number of hours they routinely work per week (generally, more than 32 hours for City workers, or 30 hours for a minimum of 180 days for school district employees, except for school food & nutrition workers for whom the standard is 20 hours per week). Employees who were participants before January 1, 2008 but failed to meet minimum participation standards are grandfathered under certain circumstances. Contact the Retirement System for details.

All covered employees hired after January 1, 1974 are required to participate in the Retirement System as a condition of employment. Employees are 100% vested after five years of service. The normal retirement age is 60 and the benefit is calculated at 1.5% of final average total compensation during the highest three years or 36 highest consecutive months of service in the last ten years of service (hereafter final average earnings) multiplied by the years of service. The benefit was increased to 2% for service completed after January 1, 1999. Effective July 1, 2005, members who are still in service and have service from prior to January 1, 1999 are afforded an option to upgrade that service multiplier to 2% pursuant to established laws and supporting rules established by the Board. Permanent employees of the City prior to January 1, 1974 who were in service as of January 1, 1974, are eligible for early retirement if credited with no less than twenty (20) years of service.

Type of Plan... The City of Manchester Employees' Contributory Retirement System (the Retirement System, MECRS, or the Plan) is a "defined benefit" plan and operates pursuant to Section 8.09 of the City Charter of Manchester, New Hampshire, in accordance with the State of New Hampshire Laws of 1973, Chapter 218 as amended, and is intended to create a tax-qualified governmental retirement plan under sections 401(a) and 414(d) of the Internal Revenue Code as amended. This defined benefit plan is superior to defined contribution plans in that it calculates the retirement benefit based upon average final earnings, creditable service, and age at retirement as opposed to simply the total accumulation of dollars in the Retirement System. The Retirement System is governed by a seven-member board in accordance with Articles I and II of its By Laws and operates in accordance with Administrative Rules established for that purpose. Relevant financial and demographic information about the Retirement System is contained in this report and on a website maintained by the Retirement System at www.ManchesterRetirement.org. That information is also available in hard copy upon request from the Retirement System's administrative offices. The Retirement System exists for the benefit of its membership and maintains administrative offices in Suite 403 of the Chase Building at 1045 Elm Street in Manchester, NH.

The Retirement System may be contacted through its Executive Director by any of the methods listed below:

By phone at: 603-624-6506

By fax at: 603-624-6342

By email at: Gfleury@ManchesterRetirement.org

Or by writing to:

**Manchester Employees' Contributory Retirement System
1045 Elm Street, Suite 403, Manchester, NH 03101-1824**

Duties of the Board of Trustees: The Retirement System's Board is the trustee of the retirement fund and has the obligation of a fiduciary to the Retirement System and its members and beneficiaries. In the fulfillment of its duties and responsibilities, the Retirement System Board acts solely in the interests of the Retirement System, the members, and the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. As trustee, the Retirement System's Board holds legal title to all securities and assets of the Retirement System and has full control and management of them with the power to invest and reinvest the same in accordance with the terms, conditions, limitations, and restrictions imposed by the general statutes of the state of New Hampshire governing the investment of trust funds. In addition to those powers, the Retirement System's Board, as trustee, also has the power to: collect and receive any and all monies and other property due and to give full discharge and acquaintance therefore; appoint advisory committees to aid the retirement board in its duties under this section or to delegate to any corporate fiduciary or an insurance company within or without the state who may or may not be the custodian of stocks and securities, the power and discretion to make decisions with regard to the purchase or sale of any legal object of investment and to take any action necessary to affect decisions by or on behalf of the Retirement System with the same legal effect as if performed by the Retirement System's Board; authorize the payment of compensation to an agent for retirement fund management services; settle or compromise any claims, debts or damages due or owing to or from the Retirement System, and to commence or defend suits or legal proceedings whenever, in its judgment, any interest of the Retirement System so requires employing suitable agents and counsel for this purpose and paying their reasonable expenses and compensation; maintain records of receipts and disbursements and to pay benefits required under the Retirement System to eligible members, or, in the event of their death, to their beneficiaries; and generally do all other things necessary and proper to carry out the operation of the Retirement System.

- Contributions -

Contributions to the Retirement System consist of a member component which equates to 3.75% of wages as defined by regulation and an employer component which varies from year to year with the outcome of an annual actuarial valuation. Beginning in February of 2006 the member rate increased to 5% as part of the establishment of a Section 401(h) Medical Trust. The additional 1.25% attributed to the post retirement medical subsidy is non-refundable in the event of termination and withdrawal from the Retirement System. The factors which can influence the employer's cost of participation include many variables which are cited in the valuation report and can be obtained upon request. Member contributions are deducted by the employer and remitted to the Retirement System following each payroll cycle. The City's matching contribution is also expressed as a percentage of gross wages and is remitted to the Retirement System after each payday. The percentage of the employer contribution is determined by the annual valuation process and is ratified by the Board and incorporated into the City's budget prior to the beginning of the City's fiscal year.

Additional Contributions

Additional Contributions, which technically became effective on March 9, 2004, provide an option for members to *either* reduce the offset associated with retiring prior to age 60 *or*, for the member who upon reaching the normal retirement age, lacks the service required to attain a 50% retirement benefit. The amount needed to *either* reduce the early retirement offset *or* provide a 50% benefit, is derived from the member making additional after tax contributions to their account. Determining how much a member is obligated to pay if they decide to pursue this option and simultaneously determining the contribution limit dictated by Federal regulations on such payments is done by means of an actuarial calculation which must be done at the member's expense. Members who are rapidly approaching their anticipated date of retirement and who are otherwise in a position to avail themselves of this benefit option are advised to contact the Retirement System for further details.

Tax Sheltered Plan

Member contributions deducted from salary by the employer, remitted to the Retirement System on the employee's behalf, and indexed at the prescribed rate of 3.75% are considered tax sheltered under sections 401(a) and 414(d) of the Internal Revenue Code as amended. Effective February 6, 2006, the member contribution increased to 5% as a result of an additional 1.25% post retirement medical subsidy funding obligation. That additional 1.25% is non-refundable in the event of termination and withdrawal from the Retirement System. Generally, pre-tax status is only extended to contributions which are a percentage of wages earned for the period. Permissive service purchases of temporary service and of time previously withdrawn from the Retirement System may be eligible for a trustee to transfer from 401(k), 403(b) and 457 plans. Contact the Retirement System for further details. Other amounts paid in by the member on a voluntary basis for purposes such as Additional Contributions are considered to have been made with post tax dollars. All post tax contributions are tracked by the Retirement System and will be reported as tax exempt in accordance with applicable Federal Tax Rules at the time of their eventual distribution.

Return of Excess Accumulated Contributions Upon Death of a Member

Upon the death of a member after his or her retirement allowance payments have commenced, provided the member has not elected an optional allowance that has become effective, any excess of the member's contributions at retirement over the sum of the retirement allowance payments received shall be paid in one sum to the person or persons nominated by the member, if living, or otherwise to the member's estate. Upon the death of the survivor of a member and the beneficiary nominated by them under the terms of an option, if an option was elected and had become effective, any excess of the retired member's contributions at retirement over the sum of the retirement allowance payments received by the retired member and such beneficiary shall be paid to the person nominated by the member, if living, or otherwise to the estate of the last to survive of the member and such beneficiary. Nomination of a person to receive the return of the member's contributions pursuant to law shall be made by the member in writing filed with the Retirement System prior to retirement. A member may change his or her nomination by a similar writing. However, a designation, revocation, or change of the person nominated under an optional election may be made only at the time the member retires and is an irrevocable election.

Exemption from Taxation & Garnishment

The State Legislature specifically provided with respect to the Retirement System that: “[t]he right to any person to a pension or to the return of contributions, any benefit or right accrued or accruing to any person . . . shall be exempt . . . from levy and sale garnishment, attachment or any other process and shall be unassignable.” By statute, therefore, a member’s interest and benefits under the Retirement System are exempt from attachment or alienation. This sweeping prohibition *does not* contain an exemption for *domestic relations orders* as do private retirement plans and the New Hampshire State Retirement System; therefore, a member’s benefits cannot be divided in a divorce by a qualified domestic relations order (“QDRO”).

Creditable Service

Creditable Service refers to the amount of time a Retirement System participant spends in the service of the employer. Service rendered for the full normal working time in a period of 12 consecutive months entitles a member to one year of service credit. Time spent as a member of any of the various city boards, or in any other capacity rendering incidental employment to the city, is not counted as service. Absence from employment on account of active duty with the armed forces of the United States in time of emergency or war, or as directed by selective service or to meet selective service requirements, or as a member of the national guard, or organized reserves, to meet its requirements, is counted as continuous employment with the city, provided, that the employee returns directly to active employment with the city after he or she becomes eligible for release from such active duty. Any such period of absence is not counted as service unless the employee completes a service buyback.

Upgrading of Select Existing Service Credit

As of July 1, 2005 but prior to their termination of employment and the commencement of a retirement benefit, a member may elect, under rules of the Board, to receive a retirement benefit of 2 percent of their average final earnings for all years of service or any portion thereof, for years when the earned service credit was at the 1.5% rate, provided that the member shall be responsible for payment of 50 percent of the benefit based on methods and assumptions adopted by the Board. The Retirement System shall be responsible for the payment of the remaining 50 percent of the retirement benefit based on methods and assumptions adopted by the Board.

Spousal Consent

As of May 9, 2006, any application for any type of benefit administered by the Retirement System, including but not limited to retirement benefits, return of contributions, or disability retirement allowances shall include a statement made by the spouse of the member, if any, acknowledging that the spouse has read and understands the provisions of this act concerning the benefits and payments options, if any, which member has elected to receive. Acknowledgments have been incorporated into the various applications used by the Retirement System and are signed in the presence of a notary public or Retirement System employee. As of June 20, 2008, the definition of spouse has been expanded to also recognize parties to a civil union under RSA 457-A.

Normal Service Retirement

Any member who either has attained the age of 60 years or was in the service of the city on January 1, 1974 and has completed at least 20 years of service, is eligible for a normal service retirement benefit. Any such member may retire by filing with the Retirement System's Board, a written statement duly attested setting forth the time subsequent to the date of filing that the member desires to be retired, or the Retirement System's Board may, at its option, retire any such eligible member, furnishing written notice thereof at least 60 calendar days in advance of the specified date of such retirement.

The payment of retirement benefits to any member who is eligible to receive them and who has filed all election forms with the Retirement System shall become effective the first day of the month following termination of employment pending approval by the retirement board. No changes to benefit elections are permitted after the commencement of the payment of benefits.

The Retirement System shall not pay retirement or disability benefits to city employees who again become eligible to participate in the Retirement System. A member shall notify the Retirement System of their rehire immediately. Upon rehire after a period of termination, all disbursements under the Retirement System to that member shall cease and the member must resume making contributions to the retirement fund as of the first pay period following their rehire. Rehired members shall have their benefits determined in accordance with laws governing "restoration to service" as defined in the Retirement System's enabling legislation.

Notwithstanding any other provisions, the maximum pension payment payable to any member or beneficiary shall be limited to such extent as may be necessary to comply with the requirements of sections 401(a)(16), 401(a)(17) and 415 of the Internal Revenue Code (the Code). The retirement benefits payable hereunder shall be made in the form, at such time and otherwise in compliance with the distribution and rollover requirements of sections 402(c), 401(a)(9), and 401(a)(31) of the Code.

Members who qualify for a normal service retirement benefit shall receive an annual pension payable during the member's lifetime in an amount equal to the sum of: one and 1/2 percent of the member's final average earnings multiplied by the number of years, including the fractions of years represented by full months, of service completed prior to January 1, 1999; plus two percent of the member's final average earnings multiplied by the number of years, including the fractions of years represented by full months, of service completed after December 31, 1998. However, in the case of a member who was both in the employ of the city on January 1, 1974 and has completed not less than 20 years of service at the time of retirement, the annual pension payable during the member's lifetime shall be equal to the greater of the sum of the amounts determined in accordance with methods stated in the paragraph above, or 50 percent of final average earnings.

Early Retirement - Each member whose age plus years of service equals 80, or who attains age 55 with a minimum of 20 years of service, may have the option, to be exercised by a written notice to the Retirement System's Board, to retire at any time thereafter, prior to the member's normal retirement date. The amount of retirement benefits payable to such retired member shall be computed as provided in accordance with prevailing laws and regulations, except that the date of such early retirement shall be used in determining the member's service, and the amount thus obtained will be reduced for each month by which the date on which benefits commence precedes the month after which the member attains 60 years of age by 1/6 of one percent.

The contingent annuitant and 10-year certain options provided for in Plan Law may be elected by a member under this section, in which case the term "retirement date" shall be deemed to mean early retirement date wherever applicable with respect to laws dealing with Member Death Benefits by reasons of accidental or ordinary death.

Ordinary Disability Retirement

Any member of the Retirement System who, after 15 years of continuous service as an employee of the city, becomes totally and permanently disabled such that they are incapable of performing the essential functions of their position prior to such disability, may be retired for disability according to the prevailing regulations. The determination as to total and permanent disability shall be made by the retirement board upon review of an application for disability benefits submitted by the member and consultation with at least 2 impartial physicians selected by the retirement board who shall examine the member and submit written reports to the Retirement System's Board.

Members who retire for disability of this type shall be entitled to an annual disability benefit payable until the earlier of the termination of such disability or their death, computed on the basis of service completed prior to the date of disability in an amount equal to the sum of: One and 1/2 percent of the member's final average earnings multiplied by the number of years, including the fractions of years represented by full months, of service completed prior to January 1, 1999; plus two percent of the member's final average earnings multiplied by the number of years, including the fractions of years represented by full months, of service completed after December 31, 1998. Disabled members may also receive their disability benefit in the form of a contingent annuity as described under "Optional Retirement Allowances" later in this document. Any member who has upgraded service credit earned between 1974 and 1999 shall have their benefit calculated in keeping with the percentage of such time as may have been upgraded prior to retirement.

Accidental Disability Retirement

Any member of the Retirement System who becomes totally and permanently disabled such that they are incapable of performing the essential functions of their position prior to such disability, if such total disability is shown, to the satisfaction of the Retirement System's Board, to have been sustained during the performance of duties pertaining to the member's employment by the City, shall be entitled to retirement for disability irrespective of the duration of employment. In order for a member to receive such disability benefits, the member must submit an application for disability benefits within 60 days of termination of employment. However, any member receiving a disability benefit on account of total and permanent disability sustained during the performance of duties pertaining to employment by the City, as provided herein, shall receive a benefit equal to the greater of the sum of the amounts determined in accordance with the formula for Ordinary Disability in the section above, or 50 percent of final average earnings. If a member has less than 3 years of service at the time of becoming totally disabled in the performance of duties pertaining to their employment by the City, their pension shall be based upon their annualized disability earnings. The disabled member may also receive their disability benefit in the form of a "Contingent Annuitant Option" as described on page 16.

Accidental Death Benefit

An accidental death may be payable upon the receipt by the board of trustees of proper proof of the death of a member in service indicating that such death was the natural and proximate result of an accident occurring while in the performance of duty at some definite time and place, the board decides that death was the result of an accident in the performance of duty and not caused by the member's own gross negligence, recklessness, or willful misconduct, the member's surviving spouse shall be entitled to the larger of an annual benefit equal to 50 percent of the member's final average earnings paid in equal monthly installments or a monthly benefit computed according to the member's creditable service and final average earnings for the 100 percent contingent annuitant option inclusive of the early retirement reduction of 2 percent per year for each year prior to member's normal retirement age. In lieu of either option, the member's surviving spouse may instead elect a lump sum payment as described in Chapter 218:16 I (c).

If at the time of death, the member is not survived by a spouse and the member has designated their child or children under age 18 as his or her beneficiary/beneficiaries pursuant to section 19 of the retirement laws, then the annual benefit described in paragraph I(a) shall be payable to the member's child or children under such age, divided in such manner as the board in its discretion shall determine, to continue for the benefit of such child or children under said age until every child dies or attains age 18. In lieu of this annual benefit, the child or children may instead elect a lump sum payment as described in the preceding paragraph. The Retirement System shall be fully protected in making any payment hereunder required to be made to a minor if such payment is made to a custodian or guardian for such minor.

If the member does not have a surviving spouse or children, there shall be payable to the beneficiary designated by the member pursuant to section 19 of the retirement law, if living, or otherwise to the member's estate, a lump sum equal to the deceased member's annual base salary at the time of death, in addition to a refund of contributions plus regular interest until the date of payment as provided under section 11, paragraph I of the retirement laws.

Ordinary Death Benefit

An ordinary death benefit may be payable upon receipt by the board of trustees of proper proof of the death of a member in service indicating that such death was not the result of an accident occurring while in the performance of duty. Under such conditions, there shall be a death benefit payable to the member's surviving spouse, if living, or otherwise to the member's designated beneficiary or the member's estate.

If at the time of death, the member has at least 5 years of creditable service or qualifies to retire under the retirement provisions of section 12 or section 14 of the retirement law, and has a spouse, the member's spouse shall be entitled to receive a monthly lifetime benefit equal to the greater of either 50 percent of the service retirement benefit straight life option without reduction that would have been payable to the member had they been eligible to retire immediately prior to death based upon final average earnings and creditable service or, a monthly benefit computed according to the member's creditable service and final average earnings for the 100 percent contingent annuitant option inclusive of the early retirement reduction of 2 percent per year for each year prior to the member's normal retirement age. In lieu of either option, the surviving spouse may instead elect a lump sum equal to the deceased member's annual base salary at the time of death, in addition to a refund of the member's contributions plus regular interest until date of payment as provided under section 11, paragraph I of Chapter 218 Laws of 1974, as amended.

If at the time of death, the member has at least 5 years of creditable service or qualifies to retire under the retirement provisions of section 12 or section 14 of the retirement law, but is not survived by a spouse, and has designated his or her child or children under age 18 as his or her beneficiary or beneficiaries, there shall be payable divided in such manner as the board in its discretion shall determine, to continue for the benefit of such child or children under said age until every child dies or attains age 18, the greater of either 50 percent of the service retirement benefit straight life option without reduction that would have been payable to the member had they been eligible to retire immediately prior to death based upon final average earnings and creditable service or, a monthly benefit computed according to the member's creditable service and final average earnings for the 100 percent contingent annuitant option inclusive of the early retirement reduction of 2 percent per year for each year prior to member's normal retirement age or, a lump

sum equal to the deceased member's annual base salary at the time of death, in addition to a refund of contributions plus regular interest until the date of payment as provided under section 11, paragraph I of Chapter 218 Laws of 1974, as amended.

If at the time of death, the member has at least 5 years of creditable service or qualifies to retire under the retirement provisions of section 12 or section 14 of the retirement law but is not survived by a spouse, and the member's beneficiary is a child or children over age 18 or a person other than the member's spouse, then there shall be payable to the beneficiary if living, or otherwise to the member's estate, a lump sum equal to the deceased member's annual base salary at the time of death, in addition to a refund of the member's contributions plus regular interest until the date of payment as provided under section 11, paragraph I of Chapter 218 Laws of 1974, as amended.

If at the time of death, the member did not have at least 5 years of creditable service or did not qualify under the retirement provisions of section 12 or section 14 of this act, there shall be payable to the member's spouse, if living, or the member's designated beneficiary or beneficiaries, if other than the member's spouse, if living, or otherwise to the member's estate, a lump sum benefit equal to the deceased member's annual base salary at the time of death in addition to a refund of contributions plus regular interest until the date of payment as provided under section 11, paragraph I of Chapter 218 Laws of 1974, as amended.

Vesting

Vesting is the process through which a Retirement System participant becomes irrevocably entitled to a monthly pension benefit in lieu of a cash distribution of paid in contributions and interest. A vested member is almost always financially better off collecting a monthly annuity from a defined benefit plan such as this one as opposed to collecting the cash payout. For the MECRS, vesting is achieved after the completion of five (5) years of participation and contributions into the Retirement System. Unlike an active member however, the spouse of a vested member is not entitled to receive a pension in the event that the vested member passes away before they can qualify to begin receiving their pension.

Optional Retirement Allowances

— CONTINGENT ANNUITANT OPTION —

Instead of the normal form of monthly retirement benefit provided by a Service Retirement, a member may, prior to his or her retirement date, elect a contingent annuitant option providing, if the member does not die before his or her retirement date, for actuarially reduced monthly retirement benefits payable during his or her lifetime after retirement and for the continuance of such payments, or a part of them specified by the member, to such contingent annuitant for his or her life after the death of a retired member. Such election may be made by a member at any time prior to his or her retirement date and may not be changed after his or her retirement date. The death of the contingent annuitant at any time prior to the member's retirement date shall automatically revoke such election; and further provided that if the contingent annuitant is the spouse of the member, a divorce granted to either spouse at any time prior to the member's retirement date shall automatically revoke such election.

If a member who has elected this option dies before his or her retirement date, no benefits shall be payable to the contingent annuitant under this option. In such circumstances, benefits, if any, are to be paid in accordance with provisions associated with a death benefit or a termination of employment. If the member dies after his or her retirement date, the contingent annuitant shall receive for life, commencing on the first day of the calendar month coinciding with or next following the retired member's death, the benefits specified by the retired member for the contingent annuitant.

If the contingent annuitant dies before the member's retirement date, the monthly retirement benefit normally provided under this act shall be payable to the retired member as if the option had not been elected. If the contingent annuitant dies after the member's retirement date, the amount of the payments which the retired member is then receiving or is entitled to receive will at that time (with no provisions for retroactive payments) revert back to what it would have been at the member's retirement date if the option had not been elected and will cease upon the retired member's death.

Instead of the normal form of disability benefit, a disabled member may, prior to the start of disability benefits, elect a contingent annuitant option providing for actuarially reduced monthly disability benefits payable during his or her lifetime and for the continuance of such payments, or a part of them as specified by the disabled member, to such contingent annuitant for his or her life after the death of the disabled member.

Once the contingent annuitant option has been elected by a disabled member, it may not be changed or revoked except in the case of death of the contingent annuitant. If the contingent annuitant dies after the disabled member has started receiving disability benefits, the amount of the payments which the disabled member is then receiving or is entitled to receive shall at that time with no provisions for retroactive payments revert back to what it would have been at start of the payment of disability benefits if the option had not been chosen and will cease upon the disabled member's death.

— TEN-YEAR CERTAIN OPTION —

Instead of the normal form of monthly retirement benefit provided by a Service Retirement, a member may elect an actuarially reduced monthly retirement benefit payable for 10 years certain and life thereafter. Such election may be made by a member at any time prior to his or her retirement date and may not be changed after his or her retirement date. Under this option, 120 monthly payments will be made regardless of how long the member lives. If a member dies after his or her retirement date, but before 120 monthly payments have been made, the balance of the 120 monthly payments

shall be made to the member's beneficiary. If the beneficiary, having survived the retired member, dies before all of said 120 payments have been made, then the computed value of the balance of said payments shall be paid in a lump sum to the beneficiary's estate. If the member dies before his or her retirement date, no benefits shall be payable under this option. If the member survives beyond the 120 month guaranteed payment period, actuarially reduced monthly retirement benefits shall continue until the death of the member at which point the benefit payments shall cease.

Cost of Living Adjustments

The Board of Trustees may adjust the payment to retirees to maintain their incomes at the approximate level with their real incomes at the time of retirement. The Trustees *may* grant a cost of living adjustment (“COLA”) provided that sufficient funds are available to fund any additional benefits either through earnings of the retirement fund or through such special appropriation by the City as may be approved by the board of mayor and aldermen. The determination as to whether sufficient funds are available is determined in accordance with Administrative Rule 7.0 which can be obtained on the Retirement System’s website at www.ManchesterRetirement.org or by contacting the Retirement System and requesting a copy of the Administrative Rules. The amount of any COLA to be granted is determined by applying a standard measured by the U.S. City Average Consumer Price Index for all items as published by the Bureau of Labor Statistics of the U.S. Department of Labor (“Price Index”). The amount, frequency and timing of COLAs on the base benefit and on any additional monthly annuities purchased under the Retirement System’s “additional contribution” program are mutually exclusive of one another and are detailed in Rule 7.0 of the Retirement System. Contact Retirement System administration for details.

Refunds of Contributions

Upon termination of employment, a member becomes eligible for a return of contributions deducted and remitted by the employer along with any additional contributions and permissive service purchases paid in, plus all applicable interest. This payment option is available to all members upon termination of employment but should generally be considered only by members who have not attained vested status. Under no circumstances is a terminated member applying for a lump sum distribution eligible to receive a payout of the employer matching portion or of amounts contributed toward participation in the Section 401(h) Medical Health Trust.

A member who is less than 59½ years of age and who does not elect to “roll over” the taxable portion of a distribution from their plan may be subject to mandatory 20% withholding on their distribution and obligated to pay a 10% excise tax on their early distribution. Retirement System members who must terminate their affiliation with the Retirement System and are not eligible to vest can obtain the necessary forms from the Retirement System’s administrative staff to perform a rollover and avoid tax consequences of the transaction. The Retirement System is not in a position to assist members with tax questions and does not offer investment advice. Members with questions on the disposition of funds received following termination from employment should seek the counsel of tax and financial professionals.

Buybacks & Permissive Service Purchases

A member who ceases to be a member, withdraws their member contributions as described above, and later becomes a member again, may make a request after their return to service for the City for a service buyback of prior service credit for the previous time served as a member. Once the eligibility requirement has been met, if a service buyback is not made, the member’s benefit shall be based solely on the member’s years of service and final average earnings after the break in service.

A member may also make a service buyback request to receive prior service credit for a period prior to becoming a member during which the member was employed by the city in a temporary position or out on worker’s compensation, leave of absence, or engaged in the Comprehensive Employment & Training Act of 1973, (CETA), model city program, or any other capacity the retirement board determines warrants a service buyback. A service buyback for temporary service may only be made if the member became a permanent city employee without incurring a break in service. A service buyback is also available if an employee elected not to participate in the Retirement System in 1974 when the Retirement System was established and otherwise satisfies the requirements of membership.

If a member does not purchase all available prior service credit, the service credit purchase must begin on the latest date of service available. Members are required to submit proof of employment in order to substantiate prior service.

Upon a request for service buyback, the Retirement System’s Board determines the cost of the requested service buyback, which amount includes the contributions the member would have been required to make plus buyback interest, and provide a written statement to the member. The member must pay all amounts related to the service buyback in one lump sum.

Effective December 12, 1994, contributions, benefits, and service credit with respect to qualified military service shall be provided in accordance with section 414(u) of the Code notwithstanding any provision of this chapter to the contrary.

Purchase of Time Withdrawn From Other Public Retirement Plans

Notwithstanding any provision to the contrary, any member of the Retirement System, in service on or after June 30, 2006, who was formerly a member of a public employees' retirement system elsewhere in the United States, can purchase credit for such service as creditable service in the Retirement System; provided, however, that creditable service in the Retirement System which is purchased is not deemed creditable service for the purpose of eligibility for medical and surgical benefits as a retired employee. Only creditable service performed in the City of Manchester as a member of the Retirement System will be counted as creditable service for the purpose of eligibility for medical and surgical benefits as a retired employee. For the purposes of this program, "public employees' retirement system" shall include any retirement system established and maintained by the United States government, the members of which are federal government employees. Also for the purposes of this program, any military service not otherwise authorized pursuant to section 10, paragraph I, *shall not* be included as creditable service in a public employees' retirement system. The member must meet the following conditions to purchase credit under this program:

- (a) The member must have terminated employment and active membership in the other public system and become a member of the Retirement System; and
- (b) The member must apply for service credit, on a form designated by the Board; and
- (c) The member must provide such information and certification from the other public employer and other public retirement system as the Board may require; and
- (d) The member must pay to the Retirement System the full cost for buy-in of creditable service as provided in section 10, paragraph VI, of the Retirement System's enabling legislation, including prepayment of any actuarial calculation fee as determined by the Board; and
- (e) The amount of creditable service purchased must be either the full length of service rendered in the other system or a pro-rata portion of such service purchasable with the maximum amount which the member was permitted to withdraw from the other system; and
- (f) In no case shall the creditable service purchased exceed the service time rendered in the other public system, or include any service period for which the member remains eligible for benefits in the other public system.

After meeting all of the conditions above, and upon payment of the cost of such credit inclusive of all calculation fees, and with the approval of the Board of Trustees, a member shall receive credit for service in other public systems. In no case however, shall other public employees' retirement system service purchased as creditable service in the Retirement System be deemed to be creditable city service for the purposes of eligibility for longevity or other benefits solely within the discretion of the City of Manchester.

Uniformed Services Employment and Reemployment Rights

Retirement System Benefits Impacted by Call to Serve in Active Duty in the Military

Federal and state laws provide certain benefit protections to Retirement System members who are called to serve in active duty of the uniformed services by either the federal government or by the State of New Hampshire. These laws allow the member to receive credit in the Retirement System for time served in the military. The federal law, the Uniformed Services Employment and Reemployment Rights Act of 1994 ("USERRA") affects employment, reemployment, and retention in employment, when employees serve or have served in the uniformed services. The term "uniformed services" includes the Army, Navy, Air Force, Marines, Coast Guard and the reserve component of these services. The term also includes the National Guard, when engaged in active duty for training, inactive duty training or full-time duty, and the commissioned corps of the Public Health Service. Service includes all categories of military training and service, on a voluntary or involuntary basis, in time of peace or war. New Hampshire RSA 110-C:1 is a New Hampshire law that provides similar protections to members who are called by the State of New Hampshire to serve in active duty in the National Guard.

Limits On How Long a Member Can Serve in the Military and Still Retain the Right to Reemployment with the City and the Right to Receive Service Credit in the Retirement System

USERRA generally provides that a member can serve up to 5 years in the armed services and still retain reemployment rights with the City and receive service credit in the Retirement System for their service with the military. USERRA provides that the member must return to City employment within specified time periods in order to preserve their reemployment rights. Please contact the City Human Resources Department for more information.

Credit For Active Duty in the Uniformed Services in the Retirement System Upon Return to City Employment

After they return to City employment and make up their normal required member contributions, a member will receive service credit for their period of military service.

Credit For Active Duty in the Uniformed Services in the Retirement System When Not Returning to City Employment

If a member does not return to City employment and make up the normal required member contributions, they will not receive service credit for their period of military service.

Time Limit After Reemployment to Make the Missed Contributions

A member is allowed three times the amount of their military leave or five years, whichever is less, to make the total employee contribution that they would have made if they were not on active duty.

Calculation of Earnings During a Member's Period of Military Service for Purposes of Determining their Contributions and Benefits

USERRA requires that the Retirement System determine a member's earnings using the rate of pay that they would have received but for their period of military service. Where the rate of earnings they would have received is not reasonably certain, their average rate of earnings during the 12-month period prior to their period of military service must be used. Where the earnings they would have received is not reasonably certain and they were employed by the City for less than 12 months prior to the period of military service, their average earnings must be calculated from this shorter period of employment that preceded their military service.

Interest Requirement When Making Up for Missed Member Contributions

USERRA prohibits the Retirement System from requiring a member to pay interest or otherwise make up a missed contribution by paying an amount greater than the amount the member would have been permitted or required to contribute had the member remained continuously employed during the period of military service.

Withdrawal of Contributions if Called to Serve in Active Duty

Neither USERRA nor RSA 110-C:1 allow a Retirement System member who is called to serve in active duty the right to withdraw his or her member contributions. However, if a member terminates City employment before they are called to serve in active duty, they have the same rights to withdraw contributions as any other member. These rights are described on page 17 in the section entitled, "Refunds of Contributions".

Repayment of Account Balance After Withdrawal of All or Part of a Member's Account from the Retirement System Before Becoming Reemployed by the City

If a member withdrew all or part of their account balance from the Retirement System before they became reemployed, USERRA requires the Retirement System to allow them to repay the withdrawn amounts when they are reemployed. The amount they must repay includes the interest that would have accrued had their contributions not been withdrawn. The repayment of those amounts must be made in any fashion during a time period starting with the date of reemployment and continuing for up to three times the length of the immediate past period of military service, with the repayment period not to exceed five years. Any buyback made after five years must be made in a single lump sum.

In addition to USERRA rights, Chapter 218:10 of the Retirement System statute allows a member to buy back service credit time if they withdrew their contributions following termination of employment. For a discussion of these rules, see the section on page 17 entitled, "Buybacks & Permissive Service Purchases".

Financial Assistance Available to Pay for Post Retirement Health Insurance

As of July 1, 2006, all pensioners (this benefit is limited to the pensioner only and does not cover spouses or dependents under any circumstances) collecting a monthly annuity became entitled to a health insurance subsidy which is applied against the cost of remaining on the City's health insurance plan after retirement. The subsidy is limited to retirees affiliated with the City and School District health insurance programs. The amount of the subsidy varies depending upon the member's date of retirement and their years of service in the Retirement System. For those retiring after March 2006, the subsidy ranged between \$76.97 per month and \$307.89 per month. For those retired prior to March of 2006 the subsidy was half that amount. Subsidies will increase by 4% each year.

<i>Subsidy levels for 2017 are shown in this table</i>	TABLE OF MONTHLY SUBSIDY ENTITLEMENTS FOR CITY COVERAGE				
	Retirement Date	Under 10 Years Service	Over 10 Years Service	Over 15 Years Service	Over 20 Years Service
	Prior to 3/2006	\$38.49	\$76.97	\$115.46	\$153.94
After 3/2006	\$76.97	\$153.94	\$230.92	\$307.89	

Simple Ways to Approximate a Retirement Benefit

Calculating the estimated value of a pension benefit is too important to be delegated to approximations and for that reason, a manual benefit worksheet is not available. Any member who desires a benefit estimate can obtain it in one of two ways. Members who have access to the Internet can visit the Retirement System's website at www.ManchesterRetirement.org where instructions in the News & Information Section will help them to set up a Personal Online Access. That access in turn will allow the member to calculate an estimated benefit based upon various retirement dates they can enter. For those members without Internet access, the Retirement System will calculate a benefit estimate for them on demand and mail it to their home. To obtain an estimate by mail a member need only call the Retirement System at 624-6506 and ask for the calculation.

Other Questions

The administrative staff of the MECRS is always ready to help members with questions or concerns regarding participation and entitlement in their Plan. Members are encouraged to think of administrative staff as a resource at their disposal and to contact them any time they have questions about any aspect of the Retirement System. Members may call, fax, or email questions to the locations listed on page 9.



INDEPENDENT AUDITOR'S REPORT

Board of Trustees
City of Manchester Employees' Contributory Retirement System

Report on the Financial Statements

We have audited the accompanying statement of fiduciary net position of the City of Manchester Employees' Contributory Retirement System (the Retirement System), a component unit of the City of Manchester, New Hampshire, as of December 31, 2017, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Retirement System's basic financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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 U.S. generally accepted auditing standards 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 statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Retirement System as of December 31, 2017 and the changes in financial position for the year then ended in accordance with U.S. generally accepted accounting principles.

Required Supplementary Information

U.S generally accepted accounting principles require that management's discussion and analysis on pages 23 through 28 and the required supplemental information on pages 45 through 50 be presented to supplement the basic financial statements. Such information, although not part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing standards, 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 Information

Our audit was conducted for the purpose of forming opinions on the financial statements of the Retirement System. The information on pages 1 through 20 is presented for purposes of additional analysis and is not a required part of the basic financial statements. The information on pages 1 through 20 has 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 the information.

Report on Summarized Comparative Information

We have previously audited the Retirement System's December 31, 2016 financial statements, and we expressed an unmodified opinion on those audited financial statements in our report dated July 14, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2016 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 July 26, 2018 on our consideration of the Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and 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 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 Retirement System's internal control over financial reporting and compliance.

Berry Dawn McNeil & Parker, LLC

Manchester, New Hampshire
July 26, 2018

Management's Discussion and Analysis

December 31, 2017 and 2016

Our discussion and analysis of the City of Manchester Employees' Contributory Retirement System's (the Retirement System or the Plan) financial performance provides an overview of the Retirement System's financial activities for the year ended December 31, 2017. Please read it in conjunction with the transmittal letter from the Chairman of the Board of Trustees (the Board) and the Retirement System's audited financial statements.

FINANCIAL HIGHLIGHTS

- The Retirement System's total fiduciary net position held in trust for pension and medical benefits was \$231.8 million at December 31, 2017.
- The Retirement System's fiduciary net position increased by \$29.4 million, which is primarily due to increases in the fair value of investments. Contributions to the Retirement System were exceeded by benefit payments, refunds, and administrative expenses by approximately \$2.6 million.
- Employer and employee contributions to the Retirement System were \$16.0 million, which is up from the preceding year because of a change in payment methodology (see "Mechanics Relative to Employer Contributions" on page 24). The employer share of contributions represents 81%, or \$12.9 million. Employee contributions, which include voluntary service upgrades, permissive service purchases and additional contributions paid entirely by members, accounted for the remaining 19%, or \$3.1 million for the year.
- Benefits paid to Retirement System participants were \$17.5 million. At December 31, 2017, there were 902 retirees and beneficiaries in receipt of pension benefits.

Using this Annual Report

This annual report consists of a series of financial statements. The *Statement of Fiduciary Net Position* and *Statement of Changes in Fiduciary Net Position* (on page 29 and 30) provide information about the activities of the Retirement System and the fiduciary net position available for pension and health benefits. The financial statements also contain actuarial information on the value of Retirement System assets, the net pension liability, Other Post-Employment Benefits (OPEB) liability, actuarial accrued liability and the significant actuarial assumptions used in the actuarial valuations.

Reporting on the Retirement System's Finances as a Whole

One of the most important questions asked about the Retirement System's finances is: "Is the Retirement System as a whole better or worse off as a result of the year's activities?" The *Statement of Fiduciary Net Position* and the *Statement of Changes in Fiduciary Net Position* report information about the Retirement System as a whole and about its activities in a way that helps answer this question. These statements include all assets and liabilities using the accrual basis of accounting, which is similar to accounting used by private-sector retirement plans. All of the current year's revenues and expenses are taken into account regardless of when cash is received or paid.

These two statements report the Retirement System's fiduciary net position and changes in them. You can think of the Retirement System's fiduciary net position – the difference between assets and liabilities – as one way to measure the Retirement System's financial health, or financial position. Over time, increases or decreases in the Retirement System's fiduciary net position are one indicator of whether its financial health is improving or deteriorating. You will also need to consider the net pension liability, net OPEB liability and actuarial accrued liability as determined at the first day of each plan year. There are no currently known facts, decisions, or conditions that are expected to have a significant effect on the fiduciary net position or results of operations.

Adherence to Best Practices

The Retirement System operates in compliance with practices adopted by the Board of Trustees to help avoid conflicts of interest and to ensure ethical procedures. Our administrative staff annually prepare and place on file, documents attesting that the Retirement System's financial statements contain no material misstatements or omissions. Procedures formulated and implemented by the Board also remain in place for the reporting, investigation, and subsequent addressing of any suspected irregularities in the operation or practices of the Retirement System. Details on these processes are contained in the Code of Ethics posted to the Retirement System's website and compliance reporting forms designed to be used by stakeholders to report suspected irregularities are also posted on that site.

Mechanics Relative to Employer Contributions

Beginning in 2008, the City began paying its employer obligation in semi-annual installments for most departments. The City's pension obligations continued to be collected on a weekly basis for members employed at the Water Works, Airport, School District, and the Retirement System itself. While the identified departments continued to pay their obligation basis as a percentage of payroll, the balance of City departments had their obligation computed by the Retirement System's actuary and it was paid in July and December of each year until 2016 when the process changed. For 2016 the City paid the July installment but then elected to convert to a percentage of payroll on a weekly basis beginning in January of 2017. That transition, in accordance with details provided by the actuary, eliminated the need for the traditional December payment. Under the new payment method, the City will still owe an annual "True-Up" for 2017, to be followed by a final "true-up" payment for a six month period following the 2018 valuation.

The true-up determined by the actuary was to be collected by the Retirement System prior to the end of the City's fiscal year and could have resulted in either a debit or a credit, depending upon the direction of the variance in the wage estimate initially used for the year. For 2017 and 2016, respectively, the true-up adjustment for the City amounted to \$174,227 and \$(146,479). Those amounts were to have been settled at the end of the City's fiscal year, on or near June 30th each year. At the City's request, a 2017 True-Up credit was carried forward to be applied against any 2018 obligation. Interest was applied at the rate of 7.25% from July 1, 2017 to December 31, 2017 and then computed at 7.0% from January 1, 2018 to June 30, 2018. The interest rate change resulted from the Board's decision to lower the interest rate assumption in January of 2018. The City's final True-Up payment will be due on July 1, 2018, will consist of the net obligation for both years, inclusive of earned interest, and is calculated to be \$17,311.

Investment Policy

The Board's investment policy permits fund assets to be invested in U.S. and non-U.S. equities, U.S. and non-U.S. fixed income securities and equity real estate commingled funds.

The Board of Trustees' investment objectives and risk tolerance are intended to achieve a maximum total return with emphasis on preservation of capital in real terms. The investment mix is designed to participate in rising markets, with defensive action expected to an even greater degree in declining markets. Total return includes interest, dividends, and realized/unrealized gains or losses from investments.

Asset allocations among various classes are:

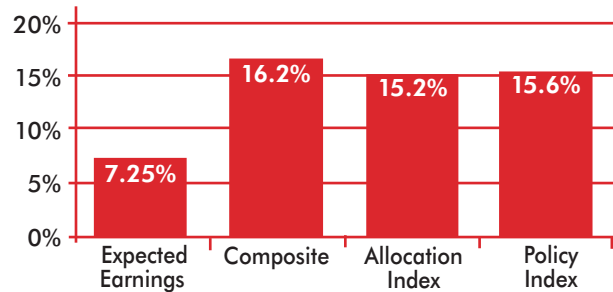
ASSET CLASS	POLICY TARGET	POLICY MIX RANGES	CURRENT MIX
Domestic Large Cap Equity	16%	14% - 24%	22.0%
Domestic SMid Cap Equity	6%	4% - 8%	6.6%
International Equity	15%	12% - 20%	16.0%
Emerging International Equity	5%	2% - 8%	6.2%
Core Bonds	6%	4% - 8%	5.4%
Diversified Fixed Income	6%	4% - 9%	5.6%
Absolute Return	5%	2% - 8%	5.4%
Treasury Inflation Protected Securities	4%	0% - 6%	3.7%
Real Estate/Real Assets	10%	8% - 15%	8.8%
GAA Composite	10%	8% - 15%	9.8%
Private Equity	10%	0% - 15%	3.2%
Liquid Alternatives	5%	0% - 7%	5.4%
Cash	2%	0% - 4%	1.9%

Retirement System's Activities

Operationally, Retirement System expenses for the year ended December 31, 2017 were \$18.6 million. This total includes \$0.8 million in administrative expenses, \$0.2 million in refunds of employee contributions and \$17.5 million in benefits paid to retired members and beneficiaries. A total of 2,174 City employees were participants or beneficiaries at year-end.

The value of the Retirement System's fiduciary net position, after subtracting liabilities of the Retirement System, was \$231,769,735 and \$202,386,938 as of December 31, 2017 and December 31, 2016, respectively. For the year 2017, the Retirement System experienced an increase in its fiduciary net position in the amount of \$29,382,797 or 14.5%. Total fund earnings were positive for 2017 for the second year in a row.

TOTAL FUND EARNINGS 2017



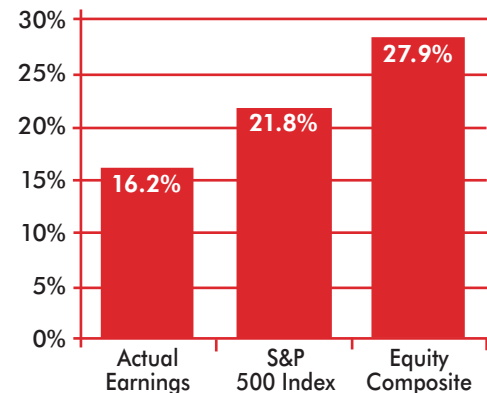
To help assess investment performance, various indexes are employed including a Composite, an Allocation Index, and a Policy Index. The Composite is calculated by taking the actual asset class weights times the actual manager return. When compared to the allocation index, it measures the effectiveness of the managers. The Allocation Index is calculated by taking the actual asset class weights times the return of the respective passive benchmark. It measures the effectiveness of deviating from the target weights. Finally, there is the Policy Index which is calculated by taking the target asset class weights times the return of the respective passive benchmark, (re-balanced monthly). It measures the effectiveness of the Retirement System's Structure.

Compliance with GASB Nos. 67, 68 & 74

The Retirement System received schedules from its actuary designed to satisfy the pension fund disclosure requirements addressed in Governmental Accounting Standards Board, (GASB) Statement No. 67, "Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25". In addition, the Retirement System requested that the actuary prepare schedules for use in the financial statements of the City for its general fund employees, for the Manchester School District for its participants in the Plan, and for City enterprise funds including: the Manchester Airport, the Manchester Water Works, Parking Control and Environmental Protection as may be required by GASB Statement No. 68, "Accounting for Financial Reporting of Pensions".

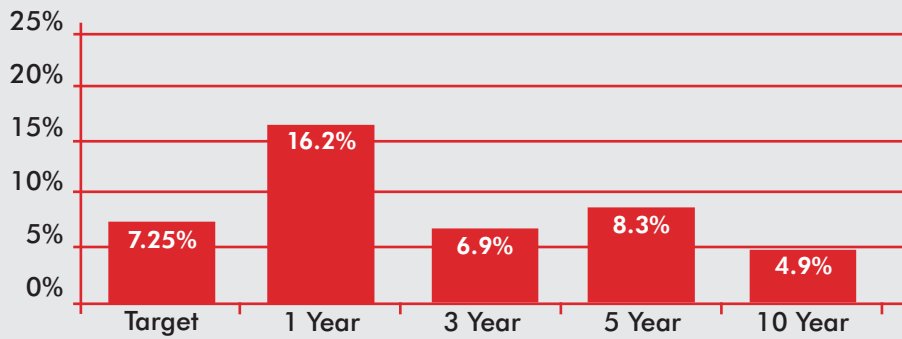
Beginning with the year ended December 31, 2017, the Retirement System received an additional report from its actuary to comply with GASB Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans." Disclosure information can be found on page 39 of this report. Disclosure information pertaining to employer units participating in the Plan can be obtained in the GASB Statement No. 68 document prepared by the actuary and posted under "Plan Information" on the Retirement System's website at www.ManchesterRetirement.org/.

TOTAL FUND EARNINGS VERSUS BENCHMARKS FOR 2017



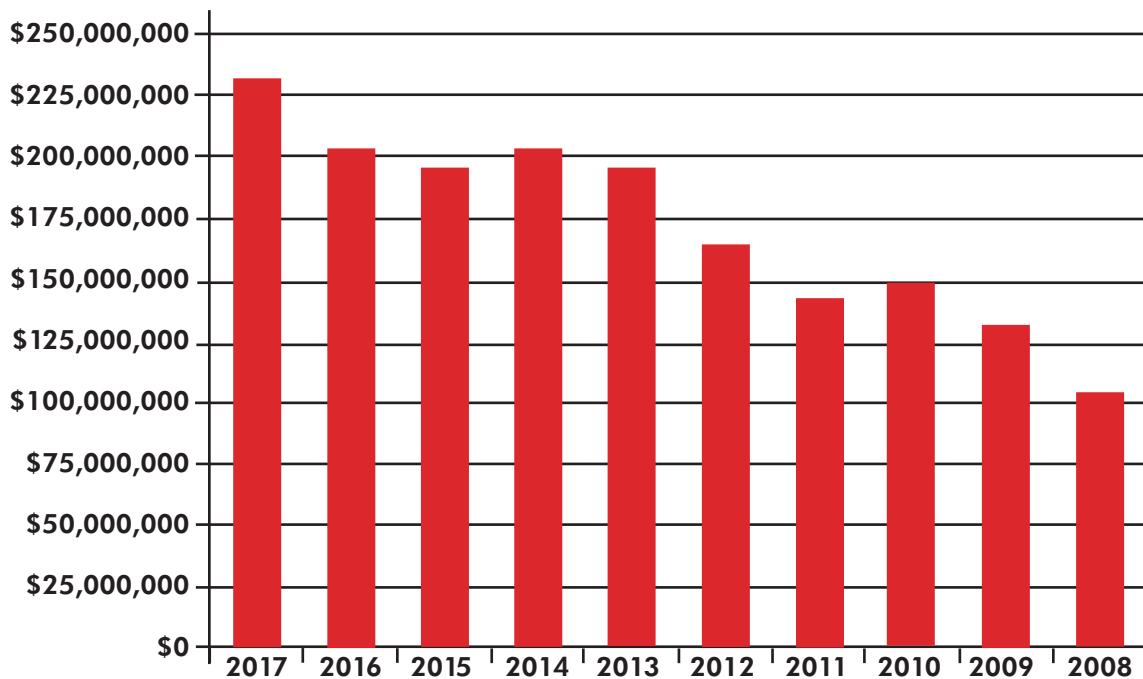
Total Retirement System Investments ended the year with a market value increase of 16.2%, under-performing the positive 21.8% rate of return of the S&P 500 Index. Equities for the fund when measured alone achieved a return of 27.9%, which out-performed the return for the S&P 500.

PERIOD RATES OF RETURN THROUGH 2017



For the year ended December 31, 2017, the Retirement System's rate of return was 16.2%, exceeding the target rate of 7.25%. The rates for multi-year comparative periods were 6.9% for the three year, 8.3% for the five year, and 4.9% for the ten year averages.

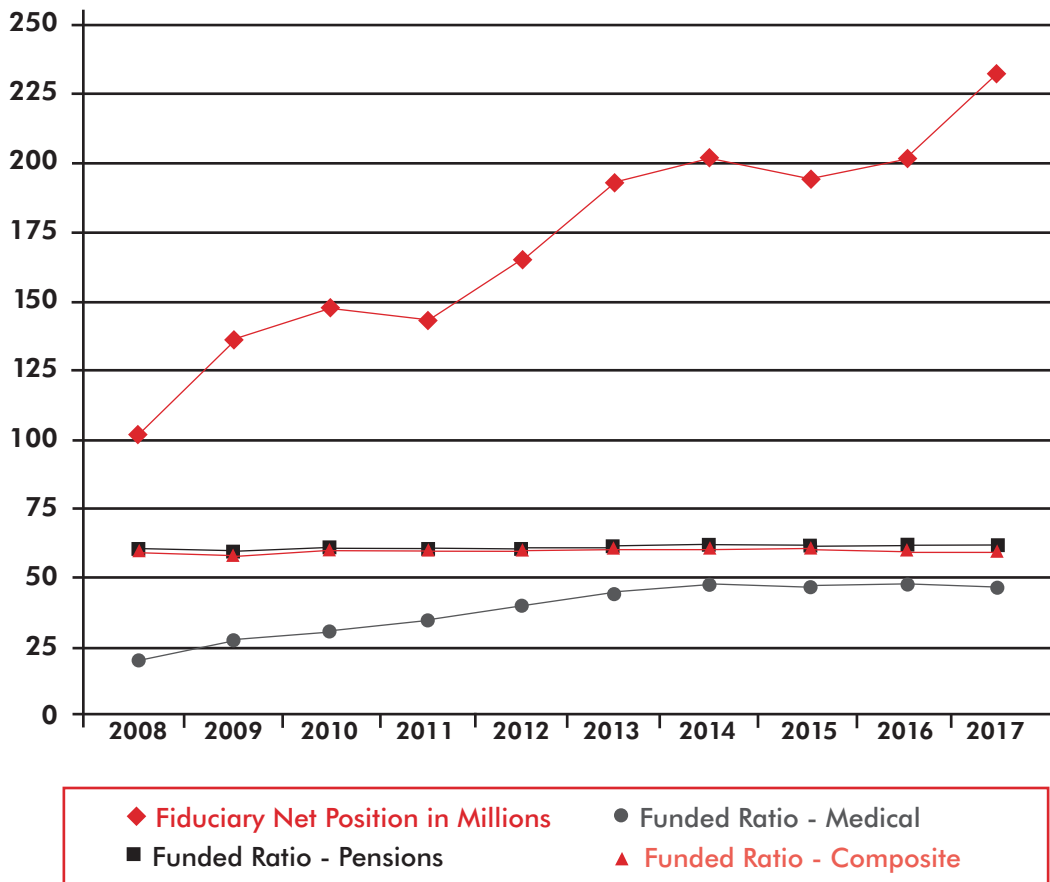
TEN YEAR HISTORY OF FIDUCIARY NET POSITION AVAILABLE FOR BENEFITS: VALUES AS OF 12/31/17



The year 2017 saw an increase in the investment returns. In addition to being a positive return, it succeeded in surpassing the earnings assumption of 7.25% for the fund as a whole. The success in exceeding the earnings assumption was largely attributed to equity returns for all managers. The Retirement System's fiduciary net position increased by 14.5% during 2017, ending the year at \$231.8 million in net position. Historical fiduciary net position values for the past ten years are shown here.

YEAR	FIDUCIARY NET POSITION	YEAR	FIDUCIARY NET POSITION
2017	\$231,769,735	2012	\$166,555,171
2016	\$202,386,938	2011	\$145,912,243
2015	\$196,110,677	2010	\$149,043,185
2014	\$202,146,990	2009	\$128,931,075
2013	\$194,373,638	2008	\$106,403,260

FUNDED RATIO TO PLAN ASSET COMPARISON



The Funded Ratio measures the relationship between the Actuarial Value of Assets and the Actuarial Accrued Liability. The growth of the Retirement System's assets alone can create an appearance of funding adequacy when obligations resulting from benefit enhancements and other factors are actually reducing the funded status of the Retirement System. The Funded Ratio, when charted over time along with the Retirement System's Assets, reveals whether the adequacy of the Retirement System's funding is improving or worsening. A fully-funded plan will have a Funded Ratio of approximately 100%, while a plan funded at less than 60% may be a cause for concern.

Year Ended Dec. 31	Fiduciary Net Position in Millions	Funded Ratio - Pensions	Funded Ratio - Medical	Funded Ratio - Composite
2017	\$231.8	63.0%	47.0%	61.9%
2016	\$202.4	63.7%	48.4%	62.7%
2015	\$196.1	63.3%	47.4%	62.3%
2014	\$202.1	64.3%	48.6%	63.4%
2013	\$194.4	63.5%	45.3%	62.4%
2012	\$166.6	61.6%	41.4%	60.4%
2011	\$145.9	61.6%	37.4%	60.2%
2010	\$149.0	62.4%	34.6%	60.8%
2009	\$128.9	60.5%	28.6%	58.7%
2008	\$106.4	62.5%	21.0%	60.1%

Schedule of Administrative Expenses

	2017	2016	% Increase or Decrease
TRUST RELATED EXPENSES			
Actuarial Expenses	\$ 89,500	\$ 78,400	14.16%
Audit Expenses	30,156	30,000	0.52%
Legal Fees	94,164	97,866	-3.78%
Trustee Education	346	351	-1.32%
Fiduciary Insurance	54,733	54,733	0.00%
Election Service			
Payroll	1,207	1,164	3.68%
Medical Evaluations	8,775	3,807	130.50%
Pre-Retirement			
Counseling	0	3,060	-100.00%
Compensation Study	12,500	0	100.00%
BENEFITS ADMINISTRATION			
Outsourced Payroll	27,944	27,637	1.11%
Benefit Statements	617	652	-5.44%
Annual Reports	9,110	8,680	4.95%
ADMINISTRATIVE OPERATIONS			
Office Supplies	1,010	1,265	-20.14%
Postage	2,713	2,657	2.12%
Printing	870	1,057	-17.73%
Publications	4,850	34,969	-86.13%
Dues	250	250	0.00%
Rent	39,013	38,323	1.80%
Furniture/Fixtures	0	100	-100.00%
Depreciation	835	34,438	-97.58%
Insurance	2,805	2,827	-0.78%
Utilities	3,095	3,038	1.88%
Records Processing	71	0	100.00%
Salaries	222,940	219,910	1.38%
Benefits	145,086	126,690	14.52%
Administrative Travel	226	233	-2.94%
Equipment			
Maintenance	3,262	2,694	21.10%
Equipment Leasing	3,288	3,288	0.00%
Information			
Technology	6,534	6,764	-3.39%
Pension Software			
Maintenance	35,088	34,372	2.08%
Janitorial	3,154	3,055	3.24%
Special Projects	0	10,000	-100.00%
Licenses & Fees	672	576	16.65%
Miscellaneous	226	402	-43.90%
	<u>\$805,040</u>	<u>\$833,258</u>	<u>-3.39%</u>

Active and Retired Members

FOR THE YEAR ENDED DECEMBER 31, 2017

Office/Department	Active or Vested	Retired
Assessors Office	9	6
Airport Authority	77	29
Building Department	0	7
Cemetery Department	10	10
City Clerk's Office	14	12
City Solicitor's Office	11	6
District Court	0	4
Environmental Protection Division	40	27
Facilities	21	44
Finance Department	11	8
Fire Department - (Non- NHRS Group II)	14	14
Fleet Management	24	11
Health Department	59	44
Highway Department	146	113
Human Resources	8	15
Information Systems	18	12
Library	32	29
Mayor's Office	4	4
Manchester Economic Development Office	3	4
Office of Youth Services	11	6
Parking Enterprise	15	5
Parks & Recreation	28	30
Planning Board	36	15
Police Department - (Non- NHRS Group II)	59	33
Probation Department	0	0
Retirement	3	0
Risk Management	2	1
School Department - (Excludes teachers in NHRS)	506	335
Senior Services	4	4
Tax Collector's Office	9	10
Traffic Department	12	6
Water Works Department	77	53
Welfare Department	9	5
	<u>1,272</u>	<u>902</u>

CITY OF MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM

Statement of Fiduciary Net Position

DECEMBER 31, 2017

With Summarized Information as of December 31, 2016

	PENSION TRUST	MEDICAL TRUST	TOTAL 2017	TOTAL 2016
ASSETS				
Cash and cash equivalents	\$3,846,526	\$710,004	\$4,556,530	\$3,158,373
Domestic equity funds	63,308,865	3,449,168	66,758,033	57,848,024
International equity	35,353,752	1,926,129	37,279,881	21,979,054
Fixed income	44,468,147	2,422,695	46,890,842	41,965,601
Emerging market funds	13,625,395	742,333	14,367,728	10,658,912
Specialty investments	21,658,134	1,179,970	22,838,104	24,047,163
Alternative equity (See Note 2 on Page 33)	3,266,018	177,938	3,443,956	2,727,365
Hedge funds of funds	11,907,247	648,726	12,555,973	19,983,557
Fixed income alternative	3,817,849	208,003	4,025,852	3,786,829
Real estate	19,490,553	1,061,876	20,552,429	17,567,330
Total investments	<u>216,894,960</u>	<u>11,816,838</u>	<u>228,712,798</u>	<u>200,563,835</u>
Tax reclaim receivable	16,569	903	17,472	5,583
Accrued interest/dividends	27,395	1,492	28,887	35,853
Employer contribution receivable	236,604	12,816	249,420	248,401
Employee contribution receivable	39,153	13,051	52,204	53,791
Equipment, net of accumulated depreciation of \$617,109 and \$616,275 for 2017 and 2016, respectively	2,375	129	2,504	3,338
Other assets	47	3	50	500
Total assets	<u>221,064,629</u>	<u>12,555,236</u>	<u>233,619,865</u>	<u>204,069,674</u>
LIABILITIES AND FIDUCIARY NET POSITION				
Payable for investments purchased	1,593	87	1,680	93,985
Accounts payable and accrued expenses	402,934	21,953	424,887	248,656
Pension benefits payable	1,423,563	0	1,423,563	1,340,095
Total liabilities	<u>1,828,090</u>	<u>22,040</u>	<u>1,850,130</u>	<u>1,682,736</u>
Fiduciary net position held in trust for benefits	<u>\$219,236,539</u>	<u>\$12,533,196</u>	<u>\$231,769,735</u>	<u>\$202,386,938</u>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

CITY OF MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM

Statement of Changes in Fiduciary Net Position

YEAR ENDED DECEMBER 31, 2017

With Summarized Information for the Year Ending December 31, 2016

	PENSION TRUST	MEDICAL TRUST	TOTAL 2017	TOTAL 2016
Fiduciary net position at beginning of plan year	\$191,930,272	\$10,456,666	\$202,386,938	\$196,110,677
Additions				
Investment income				
Interest	43,231	2,397	45,628	36,044
Dividends	2,290,321	127,972	2,418,293	1,945,877
Net appreciation in fair value	28,850,320	1,593,483	30,443,803	10,957,792
Other investment income	3,897	216	4,113	916
	<u>31,187,769</u>	<u>1,724,068</u>	<u>32,911,837</u>	<u>12,940,629</u>
Less investment expenses				
Investment management fees	661,617	36,826	698,443	663,001
Investment advisor expenses	118,431	6,569	125,000	125,000
Custodial fees	67,091	3,729	70,820	64,817
	<u>847,139</u>	<u>47,124</u>	<u>894,263</u>	<u>852,818</u>
Net investment income	<u>30,340,630</u>	<u>1,676,944</u>	<u>32,017,574</u>	<u>12,087,811</u>
Contributions				
Employer	12,221,415	715,870	12,937,285	8,841,354
Employee	2,048,590	680,167	2,728,757	2,738,593
Employee – additional contributions	90,425	0	90,425	112,743
Buybacks	203,132	0	203,132	217,611
Total contributions	<u>14,563,562</u>	<u>1,396,037</u>	<u>15,959,599</u>	<u>11,910,301</u>
Total additions	<u>44,904,192</u>	<u>3,072,981</u>	<u>47,977,173</u>	<u>23,998,112</u>
Deductions				
Benefits paid to participants	16,545,614	954,291	17,499,905	16,617,445
Additional contribution annuity payments	60,160	0	60,160	50,678
Refunds of employee contributions plus interest	229,271	0	229,271	220,470
Administrative expenses	762,880	42,160	805,040	833,258
Total deductions	<u>17,597,925</u>	<u>996,451</u>	<u>18,594,376</u>	<u>17,721,851</u>
Net increase in fiduciary net position	<u>27,306,267</u>	<u>2,076,530</u>	<u>29,382,797</u>	<u>6,276,261</u>
Fiduciary net position at end of plan year	<u>\$219,236,539</u>	<u>\$12,533,196</u>	<u>\$231,769,735</u>	<u>\$202,386,938</u>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE FINANCIAL STATEMENTS.

— Notes to Financial Statements —

DECEMBER 31, 2017 AND 2016

1. DESCRIPTION OF PLAN

The following brief description of the City of Manchester Employees' Contributory Retirement System (the Retirement System) is provided for general information purposes. Participants should refer to the Plan Document (Chapter 218 Laws of 1973, as amended) for more information.

■ GENERAL

The City of Manchester, New Hampshire (the City) established a single-employer, public employee retirement system on January 1, 1974, to provide pension benefits for certain City employees. The Retirement System is a discretely presented component unit of the City's general purpose financial statements.

At December 31, 2017 and 2016, the Retirement System membership consisted of:

	2017	2016
Retirees and beneficiaries currently receiving benefits	902	875
Terminated vested members	96	96
Active members	<u>1,176</u>	<u>1,180</u>
Total participants	<u>2,174</u>	<u>2,151</u>

■ ADMINISTRATION

The Retirement System is administered by the Retirement Board of Trustees (the Board of Trustees) consisting of seven members. They are: (1) the City's Finance Director; (2) a person appointed by the Board of Mayor and Aldermen; (3) and (4) two citizens of the City, one appointed by the Mayor and one elected by the employees, neither of whom shall be an officer or employee of the City or a member of any commission of the City; and (5) and (6) two members who are employees of the City and elected by the membership of the Retirement System. The seventh Trustee is the Mayor of the City who is an ex-officio member and can vote only to break a tie. The Board of Trustees is responsible for the operation of the Retirement System.

Duties of the Board of Trustees include overseeing investments, approving the actuarial valuation of the Retirement System, including the actuarial assumptions, interpreting statutory provisions, authorizing benefit payments, and formulating administrative policies and procedures.

The daily administrative functions of the Retirement System have been delegated by the Board of Trustees to the Retirement Office. The Retirement Office processes all requests for retirement, maintains member records, and serves as the Retirement System's information center.

All employer and employee contributions are deposited in trust funds managed and controlled by the Board of Trustees. The Board of Trustees has appointed professional investment managers who are directed to invest the assets of the trust funds in high-quality stocks, bonds, and other investments.

■ ELIGIBILITY AND PENSION BENEFITS

Except as described in the following sentence, the Retirement System applies to all full-time and permanent part-time employees of the City, including elected and appointed officials. The Retirement System does not cover certain categories of employees, such as temporary employees, members of boards and commissions who are not full-time or permanent part-time employees of the City, members of the fire and police departments who are eligible to participate in a state-administered retirement system, and other persons who are eligible to participate in the New Hampshire Retirement System.

All covered employees hired after January 1, 1974 are required to participate in the Retirement System as a condition of employment. Employees are 100% vested after five years of service. The normal retirement age is 60 and the benefit is calculated at 1.5% of final average total compensation during the highest three years of service in the last ten years of service (hereafter final average earnings) multiplied by the years of service. The benefit was increased to 2% for service completed after January 1, 1999. Permanent employees of the City of Manchester prior to January 1, 1974, who were in service as of January 1, 1974, are eligible for early retirement if credited with no less than twenty (20) years of service.

Such early retirement benefit shall be equal to the greater of: (i) fifty percent (50%) of the member's final average earnings, or (ii) the sum of the member's years of service multiplied by one and one-half percent (1.5%) of the member's final average earnings (2% for service completed after January 1, 1999). Members enrolled subsequent to January 1, 1974 are eligible for early retirement benefits if their age plus years of service are equal to or greater than 80, or if they have attained age 55 with 20 years or more of service. As of 2006, all eligible employees are required to contribute 5.0% of their salaries to the Retirement System. If an employee leaves covered employment or dies before five years of service, the Retirement System refunds accumulated employee contributions and their earnings, calculated at the rates determined annually by the Board of Trustees (5% for 2015). The City is required to contribute the remaining amounts necessary to finance the benefits for its employees. Benefit provision and employee contribution changes require amendment of Chapter 218 of the City Charter, first by enabling legislation by the New Hampshire legislature and then subject to approval of the voters of the City through referendum.

■ RETIREE HEALTH INSURANCE SUB-TRUST SECTION 401(h) BENEFITS

Beginning in 2006, following the November 2005 ratification by City referendum of Chapter 41 Laws of 2005, the Retirement System began operating a Retiree Health Insurance Sub-Trust (Sub-trust), pursuant to the provisions of Internal Revenue Code Section 401(h). In March of 2006, the member contribution rate increased by 1.25% to accumulate assets from which to pay benefits, and on July 1, 2006, the Retirement System began providing health insurance subsidies to both new and existing retirees based upon their creditable service at retirement. The benefit is limited to members who continue to obtain their health insurance through the City's health insurance plan after they retire. The benefit amount for those already retired on March 1, 2006 was equal to 50% of the amount paid to those retiring after that date. Details on the amount of the subsidy are listed on page 20. As of July 1, 2017, the City's employer contribution rate, which helps fund the benefit, increased from 1.26% to 1.40% based upon the actuarial valuation results.

Contributions to the Sub-trust are commingled with those of the pension trust and are invested in aggregate. All assets are invested as prescribed in the Retirement System's investment guidelines. Under no circumstances are the contributions made by the employee available for refund, and in the event of termination such contributions forfeit to the Retirement System. Assets of the Sub-trust are available solely for the payment of subsidy benefits to qualified members of the Retirement System. Should the Retirement System be discontinued, assets in excess of those required to meet ongoing benefit obligations of the Retirement System would revert to the employer.

■ DISABILITY RETIREMENT

If a participant becomes totally and permanently disabled from a job-related incident, there is no service or age requirement and the minimum benefit is 50% of the final average earnings.

For a non job-related incident, the disability benefits are payable only if 15 years of service have been rendered and are based on the accrued benefit to the date of disability.

■ COST OF LIVING ADJUSTMENTS

Cost of living adjustments (COLA) are granted pursuant to Administrative Rule 7 by the Board of Trustees. During 2012, Administrative Rule 7 was revised to make its provisions more specific. Based upon the Consumer Price Index for 2016 at the time of measurement, the Board of Trustees opted to grant a COLA in 2017 of 1.25% which went into effect in July of 2017 for members retired prior to July 1, 2016.

■ RETIREMENT SYSTEM TERMINATION

In the event the Retirement System is discontinued, members' retirement benefits will automatically become 100% vested to the extent they are funded. Members' termination benefits will be paid from Retirement System assets to the extent accrued under the Retirement System's terms and in accordance with applicable laws.

2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

The financial statements are prepared in accordance with the standards of the Governmental Accounting Standards Board (GASB). The financial statements include certain prior-year summarized comparative information in total but not by fund. Such information does not include sufficient detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the System's financial statements for the year ended December 31, 2016, from which the summarized information was derived.

■ INVESTMENTS

Investments are reported at fair value, which has been determined based primarily on quoted market prices (see Note 3). Fair value for investments that are appraised or otherwise determined is based upon the fair values as determined in good faith by the funds' managers or underlying investments' general partners which may include third-party appraisals and valuations provided by the sponsor of the partnership. Management reviews and approves all such appraisals and valuations prepared by other parties. These values may not reflect the amount that would be realized upon an immediate sale due to lack of liquidity or other market conditions.

Asset values for Alternative Equity as reported on page 29 include balances as of September 30th of each year plus all cash transactions that occurred between October 1st and December 31st of each year. This is due to the late reporting nature of the investment class.

Gains and losses on the sale of investments are computed using the specific identification method of determining cost. Except for the Alternative Equity investments noted in the previous paragraph, the net appreciation in the fair value of investments held by the Retirement System is based on the valuation of investments as of the date of the *Statements of Fiduciary Net Position*.

■ PENSION BENEFITS PAYABLE

Pension benefits are recorded on an accrual basis when due and payable in accordance with the terms of the Retirement System. Pension benefits payable as of December 31, 2017 and 2016 amounting to \$1,423,563 and \$1,340,095, respectively, represent benefits due to participants that have not been paid as of the end of the year.

■ ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates that affect the reported amounts of assets, liabilities, and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

■ RISKS AND UNCERTAINTIES

The Retirement System invests in various securities. Investment securities are exposed to various risks, such as interest rate, custodian credit, foreign currency and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the *Statements of Fiduciary Net Position*. The direct measurement of these risks is complicated by the fact that most securities are held in a group account expressed in U.S. dollars and the exact magnitude of risk associated with components of the group account is not easily attributed to a particular investor (see Note 7 which begins on page 37).

3. INVESTMENTS

The Board of Trustees is obligated by State Law to act solely in the interest of the Retirement System members with respect to investment of funds and is granted full control and management of funds with the power to invest and reinvest in further accordance with statutes. The Board has also adopted By-Laws which call for the operation of an Investment Committee of the Board to review and recommend investment opportunities to the full Board. The Board engages the services of an Investment Consulting firm and routinely works in collaborative fashion with its consultant and actuary to maintain an asset allocation model and formal Investment Objectives and Guidelines. Details on the current allocation and on the Objectives and Guidelines appear elsewhere in this report. Investment performance is reviewed by the Board with the investment consultant quarterly, and issues which require follow-up action are referred to the Investment Committee for subsequent review and recommendation. During 2017, allocations approximating 5 percent were reallocated among existing asset classes.

Investment managers have discretionary investment powers within guidelines developed by the Board of Trustees.

The following table presents the net appreciation (depreciation), including realized and unrealized gains and losses, in fair values of the Retirement System's investments during the years ended December 31, 2017 and 2016

	2017	2016
Domestic Equity	\$12,170,681	\$4,871,162
International equity	8,253,611	(126,640)
Alternative equity	529,347	92,489
Fixed income	1,633,095	1,923,141
Emerging market funds	3,708,816	765,010
Real estate	1,582,993	1,239,591
Specialty investments	2,003,202	1,654,840
Hedge funds of funds	<u>562,058</u>	<u>538,199</u>
Total	<u>\$30,443,803</u>	<u>\$10,957,792</u>

The following table presents the fair value of investments held that represent 5% or more of the Retirement System's fiduciary net position held in trust for benefits at December 31, 2017 and 2016

	2017	2016
Blackrock (Strategic Income Opportunities)	\$12,631,215	\$10,353,675
City of London (Emerging Market Equities)	14,367,728	10,658,912
Gryphon International (International Equity)	24,426,620	13,435,470
Income Research & Mgt. (Core Bonds Fund)	12,597,344	17,935,854
Kabouter International (International Smid Cap)	12,853,262	N/A
Loomis Sayles (Fixed Income Fund)	13,040,360	13,676,073
Mellon Capital EB (Global Tactical Assets)	N/A	13,440,043
Sands Capital (US Large Cap Growth)	20,029,544	16,473,960
Pzena Management (US Large Cap Value Fund)	18,530,097	19,472,103
Rothschild (Smid Cap Equity Fund)	15,478,723	15,095,294
PIMCO (Global Tactical Asset Allocation)	N/A	10,607,119
PRISA (Real Estate)	14,806,218	12,495,067
Standard Life (Global Absolute Return Strategy)	12,555,973	10,171,543
Vanguard S&P 500 (Index Fund)	12,764,348	N/A

N/A – Not applicable in the year in question

In accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, except for investments using Net Asset Value (NAV) as a practical expedient to estimate fair value, the Retirement System categorizes the fair value measurements of its investments within the fair value hierarchy established by U.S. GAAP. The fair value hierarchy conforms to one of three valuation techniques as follows. Level 1 correlates to quoted prices in active markets for identical assets as shown in the table column below, and contains most of the assets held by the Retirement System. Levels 2 and 3 correlate to significant other observable inputs and significant unobservable inputs, respectively, and none of the assets held by the Retirement System fall within those levels. In addition to the three levels identified, assets are also held which are reported in accordance with their NAV. Unfunded commitments in the table below represent the difference between contractual commitments to any investment and the life to date accumulations of capital calls, less any investment distributions which are subject to recall.

<i>Fair Value Measurement</i>						
Investments at Fair Value Dec. 31	Total	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs	Net Asset Value	Unfunded Commitments
Fixed Income						
2017	\$ 46,890,842	\$34,293,498			\$ 12,597,344	
2016	41,965,601	24,029,748			17,935,853	
Domestic Equity						
2017	66,758,033	51,279,310			15,478,723	
2016	57,848,024	42,752,730			15,095,294	
Emerging Markets						
2017	14,367,728				14,367,728	
2016	10,658,912				10,658,912	
Specialty Investments						
2017	22,838,104	11,547,374			11,290,730	
2016	24,047,163	10,607,119			13,440,044	
International Equities						
2017	37,279,881				37,279,881	\$ 5,000,000
2016	21,979,054	8,543,584			13,435,470	0
Real Estate						
2017	20,552,429				20,552,429	3,052,276
2016	17,567,330				17,567,330	3,715,035
Alternative Equity						
2017	3,443,956				3,443,956	2,897,284
2016	2,727,365				2,727,365	4,260,059
Fixed Income Alternative						
2017	4,025,852				4,025,852	7,084,737
2016	3,786,829				3,786,829	3,059,090
Hedge Funds of Funds						
2017	12,555,973				12,555,973	
2016	19,983,557				19,983,557	
Total Investments						
2017	\$228,712,798	\$97,120,182			\$131,592,616	\$18,034,297
2016	200,563,835	85,933,181			114,630,654	11,034,184

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. The annual money-weighted rate of return on Plan investments, net of expenses is shown in the table below.

***Schedule of
the Investment
Returns***

Year Ended	Annual Money-Weighted Rate of Return
December 31, 2017	15.6%
December 31, 2016	6.2%

4. CONTRIBUTIONS

The Retirement System’s legislative authority requires contributions in amounts sufficient to fund the benefits set forth in the Retirement System. The contributions are determined by the Retirement System’s Board of Trustees on the basis of an independent actuary’s valuation and are expressed as a percentage of gross payroll. Significant actuarial assumptions used to compute the actuarially determined contribution requirements are the same as those used to compute the pension fund and health trust obligations.

The employer contribution rates as a percentage of payrolls in 2017 and 2016 were based on actuarial valuations performed as of December 31, 2016 and December 31, 2015, respectively. The City’s contributions for 2017 and 2016 were in the amounts recommended by the actuary. The recommended City contributions for 2017 and 2016 totaled \$12,937,285 and \$8,841,354, respectively. The employer customary contributions represented 24.45% and 23.74% of covered payroll for the years ended December 31, 2017 and 2016, respectively.

As a result of a negotiated settlement, general fund departments of the City had ceased making employer contributions as a percentage of payrolls on a weekly basis beginning January 1, 2008. Between January 1, 2008 and December 31, 2016, when the City elected to return to a weekly percentage of payroll employer contribution method, employer obligations for general fund City employees were paid semiannually in July and December in an amount determined by the actuary. The actuarial valuation accepted by the Board of Trustees in March of each year determined the amount to be paid by the City as lump sums in July and December of that year. Retirement System participants in enterprise funds (the Manchester Water Works and Manchester Airport), employees of the City of Manchester Employees’ Retirement System and participants in the Manchester School District remained on a per-pay-period method of collecting the employer customary contributions.

Beginning January 1, 2017, the City returned to a weekly percentage of payroll method for the payment of the employer obligation to the pension fund. As a result of that transition, and as a result of a procedure sanctioned by the actuary, the December 2016 semi-annual payment was canceled. Under the new payment method, the City will still owe an annual “True-Up” for 2017, to be following by a final “true-up” payment for a six month period following the 2018 valuation.

5. INCOME TAX STATUS

The Retirement System received a determination letter, dated January 7, 1975, from the Internal Revenue Service that the original Plan was qualified under Section 401(a) of the Internal Revenue Code (the Code), and therefore, was exempt from Federal income taxes under provisions of Section 501(a) of the Code. The Retirement System has been amended subsequent to receiving the determination letter. However, the Retirement System and the Retirement System’s tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the Code. On February 21, 2017, the Retirement System received a new favorable determination letter from the Internal Revenue Service, superseding the original determination letter issued in 1975.

6. OPERATING LEASE

In February of 2013, the Retirement System renewed a five-year non-cancelable operating lease for office space with Metropolis Property Management Group. The lease provided the Retirement System with 2,500 feet of office space until the initial term expired on June 30, 2018, however in March 2018 the Retirement System entered into an agreement extending the lease through June 2023. The Retirement System paid \$39,013 and \$38,323 in total rent expense in 2017 and 2016, respectively. Under the terms of the lease, the Retirement System is obligated to make future minimum lease payments on the office space lease of \$248,414 through June of 2023. Under the terms of the renewed lease, rent expense will increase on an annual basis by the lesser of the cumulative increase in the Consumer Price Index for All Urban Consumers (CPI) as published by the Department of Labor for the Manchester, New Hampshire area or 5%.

7. DEPOSIT AND INVESTMENT RISK DISCLOSURE

■ CUSTODIAL CREDIT RISK – DEPOSITS

Custodial credit risk is the risk that in the event of a bank failure, the Retirement System's deposits may not be returned to it. As of December 31, 2017, each cash depositor is insured up to \$250,000 by the Federal Deposit Insurance Corporation. The Retirement System did not have any cash that was exposed to custodial credit risk. The custodial credit risk for the Retirement System's cash equivalents is mitigated since the custodian holds the cash equivalent in the Retirement System's name and not in the name of the custodian for the benefit of the Retirement System.

■ CUSTODIAL CREDIT RISK – INVESTMENTS

The Retirement System does not have a written policy in place to address custodial credit risk on investments, but in practice, it mitigates such risk by requiring custodians to hold its investments in the Retirement System's name and not in the name of the custodian for the benefit of the Retirement System.

■ CONCENTRATION OF CREDIT RISK

The Retirement System's Statement of Investment Objectives, Policies and Guidelines prohibit more than 5% at cost of any security as a percentage of any funds held by the Retirement System. In addition, no more than 5% of the outstanding shares of any one corporation can be held by the Retirement System. Taken together, these guidelines mitigate the magnitude of risk and loss attributable to a single issuer.

■ INTEREST RATE RISK – FIXED INCOME INVESTMENTS

Interest rate risk associated with an adverse effect of changes in the fair value of fixed income securities is not addressed in policy by the Retirement System. While policies do exist to limit the percentage of fair value in a single issue at any one time and of the total percentage held of any issuer's debt instruments, the duration of the remaining life of individual securities is not subject to any limitations and may therefore introduce a measure of interest rate risk.

■ CREDIT QUALITY RISK – FIXED INCOME

Credit quality risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Retirement System controls credit quality through its Investment Guidelines, which limit the fair value in a single issue to 7% or 10% by a single issuer. A minimum BB rating by Standard and Poor's or equivalent rating agency is also required on individual securities with an average weighting of A on the total Fixed Income segment of Trust Assets.

**AS OF DECEMBER 31, 2017, THE RETIREMENT SYSTEM'S
FIXED INCOME INVESTMENTS WERE AS FOLLOWS:**

Management Firm	Quality Rating	Duration	Fair Value
Income Research & Management	Aa2/AA-	5.90 years	\$12,597,344
Loomis Sayles	Not Rated	3.61 years	13,040,360
Blackrock (Strategic Income Opp.)	Not Rated	0.32 years	12,631,215
Vanguard (TIPS)	Not Rated	7.97 years	8,621,923
Total Fixed Income			<u>\$46,890,842</u>

Credit quality reflects the highest of the credit ratings assigned by Moody's Investors Service, Inc. (Moody's), Standard & Poor's (S&P) and Fitch's Investors Service (Fitch). For securities that are not rated by Moody's, S&P or Fitch rating services, credit quality is assigned a rating which, in the management firm's opinion, is equivalent.

■ FOREIGN CURRENCY RISK

Risk associated with fluctuations in the exchange rate between U.S. dollars and the base currency in other countries, while it exists, can be mitigated by policies which the Retirement System has in place. Forward purchases or sales of currencies, including cross-currency hedges, are permitted to protect or enhance the U.S. dollar value of the account. The use of derivative instruments, such as currency futures or options for currency, is also permitted upon completion of any necessary disclosure or other documentation. No speculative currency hedging is permitted.

■ DERIVATIVES

The Retirement System's investment policy recognizes that derivative instruments and strategies can be an important element of general portfolio management. Portfolio management agreements or manager guidelines explicitly authorize the use of derivatives. However except in approved special equity strategies, derivative instruments may not be used to affect a portfolio beyond the value of the underlying assets (i.e., to create leverage).

■ COUNTERPARTY RISK

The Retirement System did not have investments in 2017 which used futures or swaps for any purpose, and by their existence generated counterparty risk.

■ LIQUIDITY RISK

The Retirement System maintains a percentage of its assets in Exchange Trade Funds which feature daily liquidity and has a mechanism in place for those funds to be sold when needed to meet cash flow requirements. Some equity and fixed income investments can be liquidated in Trade Plus 2 or Trade Plus 3 days, while others feature monthly or quarterly liquidity, within a predefined redemption schedule. Some real estate, private equity and private debt investments are deemed illiquid, are funded by periodic capital calls, are designed to achieve a target return while returning capital on a monthly or quarterly basis, and eventually return the entire investment in accordance with the terms of the investment agreement. Less than 20% of total investment assets fall into the illiquid category. The period of illiquidity can range between 5 to 10 years, depending upon the investment.

8. SCHEDULE OF THE NET PENSION LIABILITY (GASB STATEMENT NO. 67)

The “plan net position” cited verbatim from the actuary is also referred to as the “fiduciary net position” elsewhere in this report. The plan net position as a percentage of total pension liability measures the relationship between the plan net position and the total pension liability. Information regarding the plan net position as a percentage of total pension liability based on valuation payroll as of December 31 follows:

Schedule of the Net Pension Liability						
Pension Trust						
	Total pension liability	Plan net position	Net pension liability	Plan net position as a percentage of total pension liability	Annual covered payroll	Net pension liability as a percentage of covered payroll
12/31/2017	\$344,418,296	\$219,277,973	\$125,140,323	63.67%	\$53,364,536	234.50%
12/31/2016	321,887,981	191,930,272	129,957,709	59.63%	52,888,074	245.72%

The plan net position listed in the schedule above differs from the fiduciary net position held in trust for benefits shown on the statement of fiduciary net position due to payables which were recorded after the valuation data was provided to the actuary.

9. SCHEDULE OF THE NET OPEB LIABILITY - MULTIYEAR (GASB STATEMENT NO. 74)

The plan net position as a percentage of total other post-employment benefits (OPEB) liability measures the relationship between the plan net position and the total OPEB liability. Information regarding the plan net position as a percentage of total OPEB liability based on valuation payroll as of December 31 follows:

Schedule of the Net OPEB Liability						
Health Trust						
	Total OPEB liability	Plan net position	Net OPEB liability	Plan net position as a percentage of total OPEB liability	Covered payroll*	Net OPEB liability as a percentage of covered payroll
12/31/2017	\$26,405,178	\$12,535,536	\$13,869,642	47.47%	\$53,364,536	25.99%

The plan net position restricted for OPEB listed in the schedule above differs from the fiduciary net position held in trust for benefits shown on the statement of fiduciary net position due to payables which were recorded after the valuation data was provided to the actuary. Those payments were excluded from the GASB Statement No. 74 information shown above and explain the difference.

10. ACTUARIAL VALUATION METHOD AND ASSUMPTIONS

The Board of Trustees employs an independent actuarial firm to estimate the total pension liability, the total OPEB liability, and to determine future contribution rates.

Normal costs and the allocation of benefit values between service rendered before and after the valuation date were determined using the individual entry-age actuarial cost method having the following characteristics:

- 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.
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

The Retirement System currently has a tiered benefit structure with the ultimate tier being more costly than the initial tier. The normal cost is computed based on this tiered structure. As a result, the normal cost rate is expected to increase as the members affected by the initial tier are replaced by new members, or when members upgrade their prior service.

■ FINANCING OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percentage of payroll contributions over 22 future years for pension benefits and health subsidy benefits. The amortization period is closed.

■ ACTUARIAL ASSET VALUATION METHOD

The contribution requirements and benefit values of the Retirement System are calculated by applying actuarial assumptions to the benefit provisions and members information furnished, using the actuarial cost method described above.

The principal areas of financial risk which require assumptions about future experience are:

- Long-term rate of investment return to be generated by the assets of the Retirement System,
- Patterns of pay increases to members,
- Rates of mortality among members, retirees and beneficiaries,
- Rates of withdrawal of active members,
- Rates of disability among members, and
- The age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a presently covered person survives, a period of time which can be as long as a century.

■ ACTUARIAL ASSUMPTIONS

Actual experience of the Retirement System will not coincide exactly with assumed experience, regardless of the accuracy of the assumption, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions to reflect experience trends (but not random year-to-year fluctuations). The Board has established a policy of performing an Experience Study every 3 to 5 years to evaluate/modify valuation assumptions. Assumptions used in this report are based on the January 1, 2012 to December 31, 2016 experience study of the MECRS and were adopted by the Board. These assumptions were first used in the December 31, 2017 actuarial valuation. The actuary has indicated it believes the assumptions are reasonable individually and in the aggregate.

The rate of investment return was 7.00% per year, compounded annually (net of administrative and investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) is 4.25%.

Calculation of the single discount rate:

GASB Statements No. 67 & No. 74 include specific requirements for the discount rate that is used for the purpose of measurement of the Total Pension Liability and the Total OPEB Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rates based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond is 3.31%; and the resulting Single Discount Rate is 7.00%. Detailed projection tables on this subject have not been included in this report but are available for viewing on the Plan’s website at <https://www.ManchesterRetirement.org/>.

Single discount rate:

A Single Discount Rate of 7.00% was used to measure the Total Pension Liability and the Total OPEB Liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability and Total OPEB Liability.

Regarding the sensitivity of the Net Pension Liability and the Net OPEB Liability to changes in the Single Discount Rate, the following presents the plan's Net Pension Liability and Net OPEB Liability, calculated using a Single Discount Rate of 7.00%, as well as what the plan's Net Pension Liability and Net OPEB Liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

***Sensitivity of Net Pension Liability to the
Single Discount Rate Assumption***

	1% Decrease 6.00%	Current Single Discount Rate Assumption of 7.00%	1% Increase 8.00%
Total Pension Liability	\$385,263,819	\$344,418,296	\$309,818,649
Net Position Restricted for Pensions	<u>\$219,277,973</u>	<u>\$219,277,973</u>	<u>\$219,277,973</u>
Net Pension Liability	<u>\$165,985,846</u>	<u>\$125,140,323</u>	<u>\$ 90,540,676</u>

***Sensitivity of Net OPEB Liability to the
Single Discount Rate Assumption***

	1% Decrease 6.00%	Current Single Discount Rate Assumption of 7.00%	1% Increase 8.00%
Total OPEB Liability	\$29,946,268	\$26,405,178	\$23,448,126
Net Position Restricted for OPEB	<u>\$12,535,536</u>	<u>\$12,535,536</u>	<u>\$12,535,536</u>
Net OPEB Liability	<u>\$17,410,732</u>	<u>\$13,869,642</u>	<u>\$10,912,590</u>

Long-term expected return on plan assets: The assumed rate of investment return was adopted by the Plan's trustees after considering input from the Plan's investment consultant and actuary. Additional information about the assumed rate of investment return is included in the actuarial valuation report as of December 31, 2017.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2017, these best estimates are summarized in the table on the following page:

Assumed Rate of Investment Return

Asset Class	Current Target	2018 30 Year Assumptions - Nominal Arithmetic Return	2018 30 Year Real Returns Weighted Return
Cash	2.0%	2.8%	0.1%
Large Cap Equities	16.0%	8.8%	1.4%
Small/Mid Cap Equities	6.0%	9.6%	0.6%
International Equities (Unhedged)	10.0%	9.6%	1.0%
International Small Cap (Unhedged)	5.0%	10.1%	0.5%
Emerging International Equities	5.0%	12.5%	0.6%
Total Equity	42.0%		
Core Bonds	5.0%	3.9%	0.2%
Treasury Inflation Protected Securities	5.0%	4.0%	0.2%
Diversified Fixed Income	6.0%	5.3%	0.3%
Absolute Return Fixed Income	5.0%	4.5%	0.2%
Total Fixed Income	21.0%		
Real Estate (Core)	10.0%	7.3%	0.7%
Liquid Alternatives	5.0%	5.5%	0.3%
Private Equity	10.0%	11.7%	1.2%
Global Asset Allocation	10.0%	7.1%	0.7%
Total Alternatives	35.0%		
2018 Expected 30 Year Real Return			8.0%
<i>Note: 30 Year Real Returns calculated by discounting NEPC LLC's 30 Year Nominal returns with a 3% 30 year US CPI.</i>			

Healthcare cost trend – healthcare insurance premiums are associated with the benefit entitlements paid by the Retirement System only to the extent that, if premium costs are exceeded by the benefit entitlement, the excess entitlement becomes a gain for the Retirement System. The Health Care Benefit paid is a flat rate based upon years of service at retirement. The initial entitlement increases by 4% annually and the accrued liability associated with the health benefit was attributed to pre-existing retirees covered by the benefit for which no contributions had ever been collected.

Salary increase assumption for an individual member – The rates of salary increase is used to project a member's current salary to the salaries upon which benefit amounts will be based.

If the number of active members remains constant, then the total active member payroll will increase 2.75% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities. Rates of salary increase were updated for the December 31, 2017 valuation.

The post-retirement healthy mortality table was the RP 2014 Mortality Table projected to 2026 using projection scale MP-2017. The projection to 2026 is the margin for mortality improvement. The post-retirement disability mortality table is the RP-2014 Disabled Retiree Annuitant Table projected to 2026 using projection scale MP-2017. Pre-retirement mortality is modeled using the RP-2014 Employee Mortality Table projected to 2026 using projection scale MP-2017 and multiplied by a factor of 80%. These tables were updated for the December 31, 2017 valuation in accordance with an experience study for the System of the 5-year period ended December 31, 2016.

Active members retiring next year under normal & early retirement – A member was assumed to be eligible for normal retirement after attaining age 60 with any amount of service. A member was assumed to be eligible for early retirement after attaining age 55 with at least 20 years of service or if the sum of age and service is at least 80.

Changes in certain assumptions as of December 31, 2017, including but not limited to a reduction in the single discount rate from 7.25% to 7%, resulted in increases to the Total Pension Liability and the Total OPEB Liability of \$9,866,319 and \$2,188,276, respectively.

Marriage Assumption: 75% of males and 75% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.

Pay Increase Timing: Beginning of the year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Decrement Timing: Decrements of all types are assumed to occur mid-year.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.

Decrement Relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operations: Disability and withdrawal decrements do not operate after member reaches retirement eligibility.

Expense Load: 1.00% of payroll.

Normal Form of Benefit: The assumed normal form of benefit is the straight life form.

Benefit Service: Exact fractional service as of the valuation date is used to determine the amount of benefit payable.

Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made.

COLA Assumption: 1.00% compounded annually - Pension only.

Adjustments: Normal and Early retirement costs were increased by 10% to reflect lump sums that are payable at retirement but not available in the active data. Retiree liabilities were increased 1% to account for pop-up retiree benefits.

Post-Retirement Subsidy: 55% of current active and 25% of current terminated vested members were assumed to elect to receive the post-retirement health subsidy upon retirement.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND

A. Total pension liability

- 1. Service cost
- 2. Interest on the total pension liability
- 3. Changes in benefit terms
- 4. Difference between expected and actual experience of the total pension liability
- 5. Changes in assumptions
- 6. Benefit payments, including refunds of employee contributions
- 7. Net change in total pension liability
- 8. Total pension liability - beginning
- 9. Total pension liability - ending

B. Plan fiduciary net position

- 1. Contributions - employer
- 2. Contributions - employee
- 3. Net investment (loss)/income
- 4. Benefit payments, including refunds of employee contributions
- 5. Pension plan administrative expenses
- 6. Other
- 7. Net change in plan fiduciary net position
- 8. Plan fiduciary net position - beginning
- 9. Plan fiduciary net position - ending

C. Net pension liability

D. Plan fiduciary net position as a percentage of the total pension liability

E. Covered-employee payroll

F. Net pension liability as a percentage of covered employee payroll

RELATED RATIOS - PLAN YEARS ENDED DECEMBER 31

	2017	2016	2015	2014
.....	\$ 6,341,280	\$ 6,327,991	\$ 6,468,648	\$ 6,589,804
.....	22,956,480	22,438,990	21,231,157	20,108,289
.....	0	0	0	0
.....	201,281	(5,201,876)	4,528,433	2,603,699
.....	9,866,319	0	0	0
.....	<u>(16,835,045)</u>	<u>(16,032,864)</u>	<u>(14,963,425)</u>	<u>(12,543,344)</u>
.....	\$ 22,530,315	\$ 7,532,241	\$ 17,264,813	\$ 16,758,448
.....	<u>321,887,891</u>	<u>314,355,740</u>	<u>297,090,927</u>	<u>280,332,479</u>
.....	<u>\$344,418,296</u>	<u>\$321,887,981</u>	<u>\$314,355,740</u>	<u>\$297,090,927</u>
.....	\$ 12,221,415	\$ 8,391,456	\$ 11,613,137	\$ 10,959,998
.....	2,342,148	2,389,882	2,744,956	2,254,021
.....	30,429,722	11,543,017	(4,783,148)	6,754,397
.....	<u>(16,835,045)</u>	<u>(16,032,864)</u>	<u>(14,963,425)</u>	<u>(12,543,344)</u>
.....	<u>(759,927)</u>	<u>(791,762)</u>	<u>(693,329)</u>	<u>(679,116)</u>
.....	<u>(50,612)</u>	<u>(61,856)</u>	<u>(65,963)</u>	<u>(50,008)</u>
.....	\$ 27,347,701	\$ 5,437,873	\$ (6,147,772)	\$ 6,695,948
.....	<u>191,930,272</u>	<u>186,492,399</u>	<u>192,640,171</u>	<u>185,866,717</u>
.....	<u>\$219,277,973</u>	<u>\$191,930,272</u>	<u>\$186,492,399</u>	<u>\$192,562,665</u>
.....	\$125,140,323	\$129,957,709	\$127,863,341	\$104,528,262
.....	63.67%	59.63%	59.33%	64.82%
.....	\$ 53,364,536	\$ 52,888,074	\$ 52,953,903	\$ 54,267,183
.....	234.50%	245.72%	241.46%	192.62%

*— Required Supplemental Information —
(unaudited)*

SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS

Plan Year Ended December 31, 2017

G. Total OPEB liability

10. Service cost	\$ 629,368
11. Interest on the total OPEB liability	1,657,437
12. Changes in benefit terms	0
13. Difference between expected and actual experience	(139,278)
14. Changes in assumptions	2,188,276
15. Benefit payments, including refunds of employee contributions	<u>(954,291)</u>
16. Net change in total OPEB liability	3,381,512
17. Total OPEB liability - beginning	<u>23,023,666</u>
18. Total OPEB liability - ending (a)	<u><u>\$26,405,178</u></u>

H. Plan fiduciary net position

10. Employer contributions	\$ 715,870
11. Employee contributions	680,166
12. OPEB net investment (loss)/income	1,681,916
13. Benefit payments, including refunds of employee contributions	(954,291)
14. OPEB plan administrative expenses	(41,993)
15. Other	<u>(2,797)</u>
16. Net change in plan fiduciary net position	2,078,871
17. Plan fiduciary net position - beginning	<u>10,456,665</u>
18. Plan fiduciary net position - ending (b)	<u><u>\$12,535,536</u></u>

I. Net OPEB liability - ending (a) - (b) \$13,869,642

J Plan fiduciary net position as a percentage of the total OPEB liability 47.47%

K. Covered-employee payroll \$53,364,536

L. Net OPEB liability as a percentage of covered employee payroll 25.99%

Information for previous periods is not available. Ultimately, 10 years will be displayed

*— Required Supplemental Information —
(unaudited)*

SCHEDULE OF THE INVESTMENT RETURNS

Year Ended	Annual Money-Weighted Rate of Return
December 31, 2017	15.6%
December 31, 2016	6.2%
December 31, 2015	-2.5%
December 31, 2014	3.7%

Information for previous periods is not available. Ultimately, 10 years will be displayed

SCHEDULE OF THE NET PENSION LIABILITY

	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a Percentage of Total Pension Liability	Covered Payroll*	Net Pension Liability as a Percentage of Covered Payroll
12/31/2017	\$344,418,296	\$219,277,973	\$125,140,323	63.67%	\$53,364,536	234.50%
12/31/2016	321,887,981	191,930,272	129,957,709	59.63%	52,888,074	245.72%
12/31/2015	314,355,740	186,492,399	127,863,341	59.33%	52,953,903	241.46%
12/31/2014	297,090,927	192,562,665	104,528,262	64.82%	54,267,183	192.62%

**Based on valuation payroll as of December 31*

Information for previous periods is not available. Ultimately, 10 years will be displayed

SCHEDULE OF THE NET OPEB LIABILITY

	Total OPEB liability	Plan net position	Net OPEB liability	Plan net position as a percentage of total OPEB liability	Covered payroll*	Net OPEB liability as a percentage of covered payroll
12/31/2017	\$26,405,178	\$12,535,536	\$13,869,642	47.47%	\$53,364,536	25.99%

**Based on valuation payroll as of December 31*

Information for previous periods is not available. Ultimately, 10 years will be displayed

— Required Supplemental Information —
(unaudited)

SCHEDULE OF PENSION CONTRIBUTIONS

	Actuarially Determined Contribution (ADC)#	Actual Contributions	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contributions as a Percentage of Covered Payroll
12/31/2017	\$12,221,415	\$12,221,415	\$0	\$53,364,536	22.90%
12/31/2016	8,391,456	8,391,456	0	52,888,074	15.87%
12/31/2015	11,613,137	11,613,137	0	52,953,903	21.93%
12/31/2014	10,959,998	10,959,998	0	54,267,183	20.20%

*Based on valuation payroll as of December 31

Employer contributes based on percentage of payroll. Employer pays the ADC percentage. Information for previous periods is not available. Ultimately, 10 years will be displayed

■ Notes to Schedule of Pension Contributions - GASB Statement No. 67

Valuation Date: December 31, 2016

Notes: Actuarially determined contribution rates are calculated as of December 31, which is 6 months prior to the beginning of the fiscal year for which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Percentage-of-Payroll, Closed
Remaining Amortization Period	23 years
Asset Valuation Method	5-year smoothed market; 20% corridor
Wage Inflation	3.00%
Salary Increases	3.00% to 7.93% including inflation
Investment Rate of Return	7.25% (net of investment expenses)
Long-Term Municipal Bond Rate	3.31%
Retirement Age	Age and Experience-based table of rates that are specific to the type of eligibility condition
Mortality	RP-2000 Mortality Table projected to 2020 for males and females
Expense Load	0.5% of payroll
COLA Assumption	1.25% compounded annually

Other Information:

Notes: There were no changes to actuarially assumptions or benefit provisions reflected in the total pension liability (TPL) as of December 31, 2016.

— Required Supplemental Information —
(unaudited)

SCHEDULE OF OPEB CONTRIBUTIONS

	Actuarially Determined Contribution (ADC)#	Actual Contributions	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contributions as a Percentage of Covered Payroll
12/31/2017	\$715,870	\$715,870	\$0	\$53,364,536	1.34%

*Based on valuation payroll as of December 31

Employer contributes based on percentage of payroll. Employer pays the ADC percentage.

Information for previous periods is not available. Ultimately, 10 years will be displayed

■ Notes to Schedule of OPEB Contributions - GASB Statement No. 74

Valuation Date: December 31, 2015

Notes: Actuarially determined contribution rates are calculated as of December 31, which is 6 months prior to the beginning of the fiscal year for which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

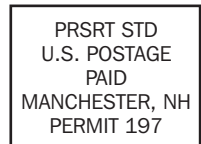
Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Percentage-of-Payroll, Closed
Remaining Amortization Period	23 years
Asset Valuation Method	5-year smoothed market; 20% corridor
Wage Inflation	3.00%
Salary Increases	3.00% to 7.93% including inflation
Long-Term Municipal Bond Rate	3.31%
Investment Rate of Return	7.25% (net of investment expenses)
Retirement Age	Age and Experience-based table of rates that are specific to the type of eligibility condition
Mortality	RP-2000 Mortality Table projected to 2020 for males and females
Expense Load	None
Increases	Annual health subsidy amounts are assumed to increase by 4% annually
Health Care Trend Rates	Not applicable, given that the benefits are fixed stipends
Aging Factors	Not applicable, given that the benefits are fixed stipends

Other Information:

Notes: None



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**This report has been prepared pursuant to Chapter 218:6, II,
Laws of 1973 of the State of New Hampshire, as amended, and is intended
to satisfy public pension plan financial reporting requirements.**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE YEAR ENDED DECEMBER 31, 2017**