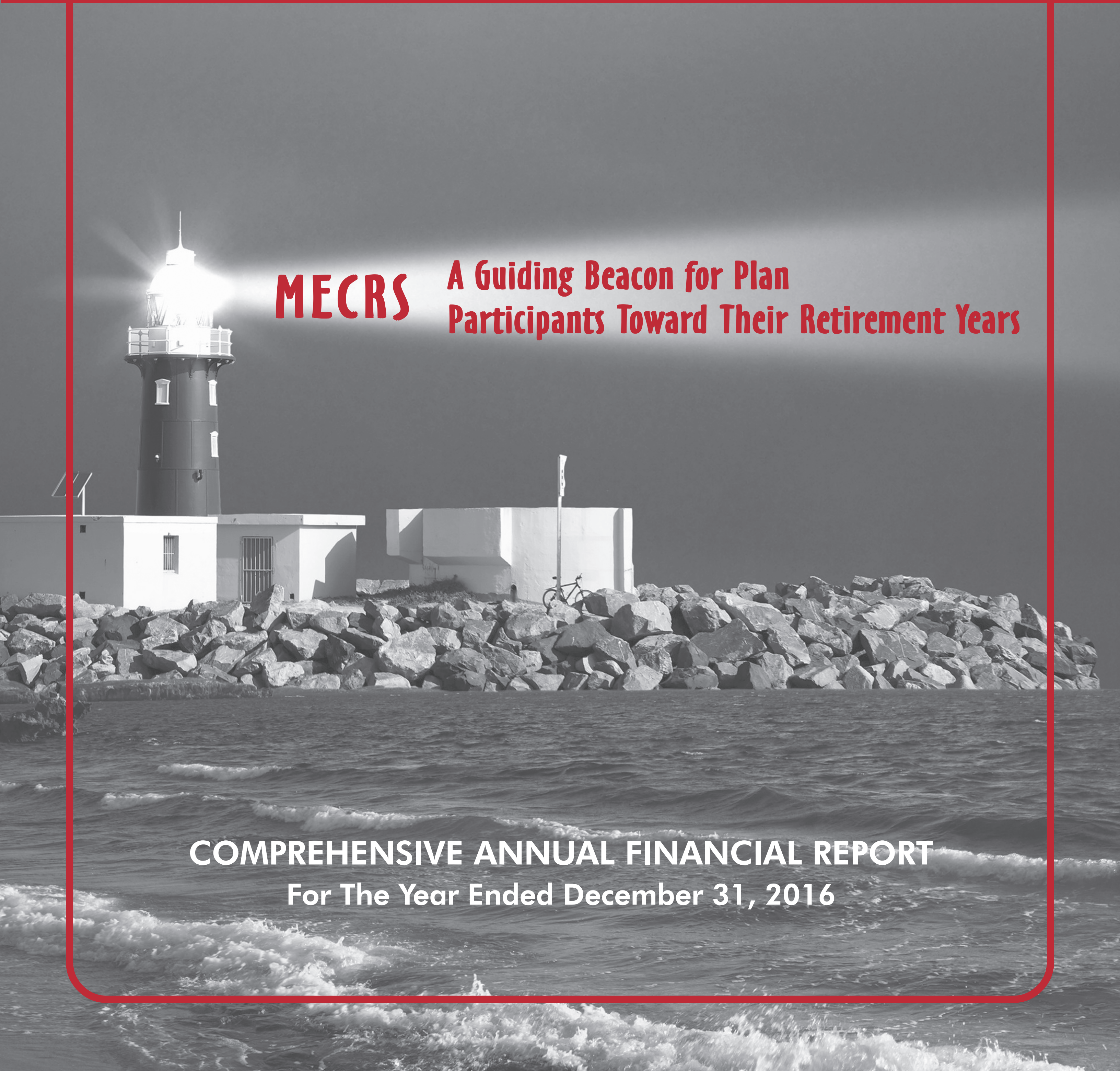
2016

# City of Manchester Employees' Contributory Retirement System



## MECRS

### A Guiding Beacon for Plan Participants Toward Their Retirement Years

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For The Year Ended December 31, 2016

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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, I am pleased to present the 2016 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 2016, 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 of Trustees (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.

As a matter of practice, the Board routinely reviews the Retirement System's asset allocation and investment performance in order to maintain the optimum blend of investment classes in the portfolio. The objective is to match earnings assumptions as closely as possible with long-term liabilities of the Retirement System in order to create stability in the funded ratio and maintain or improve the Retirement System's financial strength. In 2016, the Retirement System made a number of strategic changes to its investment portfolio, as recommended by its financial advisors. The changes resulted in a smaller allocation to domestic equities in favor of fixed income, a new income generating energy investment, and expanded allocations to real estate. These changes were driven, in part, by changes in the Plan's population demographics, which saw a record number of retirees.

The Retirement System's investment experience for 2016 was a gain of 7.1%, only slightly short of its target assumption of 7.25%. In recognition of disappointing investment returns in recent years however, when combined with very low inflation rates, the Board elected to forego a Cost of Living Adjustment in 2016 and will revisit the issue in 2017, as it does each year.

In closing, on behalf of the Retirement System's Board of Trustees and staff, I wish to thank the membership for its support and interest in the Board's activities throughout 2016, and to note that the Board remains committed to keeping the Retirement System financially sound, while recognizing its obligations to retirees and the future expectations of active plan participants.

Sincerely,

Donald R Pinard

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

# Board of Trustees

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

**WILLIAM SANDERS**
**Treasurer**
City Director of Finance
Ex-Officio Member

**MAYOR**
**THEODORE GATSAS**
Ex-Officio Member

**RICHARD MOLAN**
Aldermanic Appointee
*Term expires 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

CITY OF
MANCHESTER
EMPLOYEES'
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SYSTEM

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

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, 2016. 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 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 of Trustees (the 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 2016, the Retirement System replaced its aged and technologically obsolete website with a new version which retained all of the functions of its original site, but offered improved reliability and security. Existing website users were migrated to the new site and many new users were solicited in the months following the rollout. In 2016, the Retirement System also conducted a semi-annual Pre-Retirement Seminar, which was well attended. By the end of 2016, the number of retirees grew by approximately 5 percent, while the number of active contributing members dropped approximately 2 percent, reflecting the mature status of the plan's population.

I am pleased to report that in 2016 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 fourteenth 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*
# *2016*

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)

Alan H. Winkle
Program Administrator

# Portfolio Managers, Advisors, and Service Providers

**AS OF DECEMBER 31, 2016**

**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)

**EMERGING MARKETS EQUITY**

City of London (Group Trust)

**ALTERNATIVE EQUITY**

Lexington Partners VII & VIII (Group Trust)

Newstone Partners (Group Trust)

Kanye Anderson Energy VI (Group Trust)

**HEDGE FUNDS – FUND OF FUNDS/ LIQUID ALTERNATIVE COMPOSITE**

Archstone Offshore Fund (Group Trust)

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)

**REAL ESTATE**

TA Associates (Group Trust)

PRISA (Group Trust)

DSF Group (Group Trust)

Blue Vista(Group Trust)

**TACTICAL ASSET ALLOCATION & REAL ASSETS**

Mellon Global TAA 130/30 Fund (Group Trust)

Wellington Capital (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-1.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.**

## 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**

## 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.

**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 for certain budgetary units while for other divisions, an actuarially determine lump sum contribution is made twice a year in July and December. 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 annuity as described further on in this document.

## 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 additional 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 Pubic 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 <u>either</u> the full length of service rendered in the other system <u>or</u> 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 and 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 $74.01 per month and $296.05 per month. For those retired prior to March of 2006 the subsidy was half that amount. Subsidies will increase by 4% each year.

| Subsidy levels for 2016 are shown in this table | 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 | $37.01 | $74.01 | $111.02 | $148.02 |
| | After 3/2006 | $74.01 | $148.02 | $222.04 | $296.05 |

## 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.**

BerryDunn

# 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, 2016, 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, 2016 and 2015, and the changes in financial position for the years then ended in accordance with U.S. generally accepted accounting principles.

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### *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 47 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, 2015 financial statements, and we expressed an unmodified opinion on those audited financial statements in our report dated July 18, 2016. In our opinion, the summarized comparative information presented herein as of and for the year ended December 31, 2015 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 14, 2017 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 Dunn McNeil & Parker, LLC

Manchester, New Hampshire
July 14, 2017

# *Management's Discussion and Analysis*

## *December 31, 2016 and 2015*

**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, 2016. 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 $202.4 million at December 31, 2016.
- The Retirement System's fiduciary net position increased by $6.3 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 $5.8 million.
- Employer and employee contributions to the Retirement System were $11.9 million, which is down from the preceding year because of a change in payment methodology. See "Mechanics…" on page 24. The employer share of contributions represents 74%, or $8.8 million. Employee contributions, which include voluntary service upgrades, permissive service purchases and additional contributions paid entirely by members, accounted for the remaining 26%, or $3.1 million for the year.
- Benefits paid to Retirement System participants were $16.6 million. At December 31, 2016, there were 875 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, 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 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 following by a final "true-up" payment for a six month period following the 2018 valuation.

The true-up determined by the actuary is then collected by the Retirement System prior to the end of the City's fiscal year and can result in either a debit or a credit depending upon the direction of the variance in the wage estimate initially used for the year. For 2016 and 2015, respectively, the true-up adjustment for the City amounted to $(146,479) and $283,732. Those amounts are settled at the end of the City's fiscal year, on or near June 30th each year.

## 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:

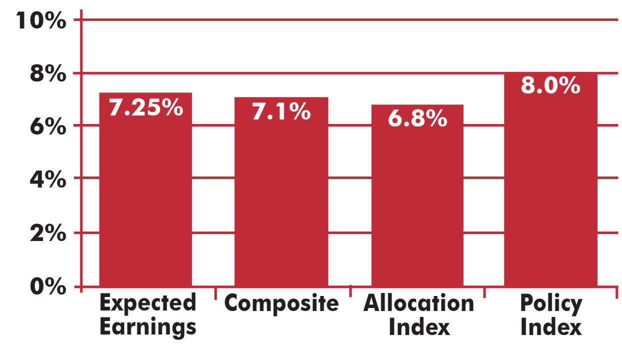
| ASSET CLASS | POLICY MIX | CURRENT MIX |
|---|---|---|
| GAA Composite | 10.0% | 11.81% |
| Domestic Equity Composite | 22.0% | 28.39% |
| International Equity Composite | 20.0% | 16.03% |
| Fixed Income Composite | 20.0% | 20.62% |
| Alternatives Composite | 16.0% | 13.02% |
| Real Estate/Real Assets Composite | 10.0% | 8.61% |
| Cash | 2.0% | 1.52% |

## Retirement System's Activities

Operationally, Retirement System expenses for the year ended December 31, 2016 were $17.7 million. This total includes $.8 million in administrative expenses, $.2 million in refunds of employee contributions and $16.6 million in benefits paid to retired members and beneficiaries. A total of 2,151 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 $202,386,938 and $196,110,677 as of December 31, 2016 and December 31, 2015, respectively. For the year 2016, the Retirement System experienced an increase in its fiduciary net position in the amount of $6,276,261 or 3.2%. Total fund earnings were positive for 2016 after having experiencing a negative return in 2015.

### TOTAL FUND EARNINGS 2016

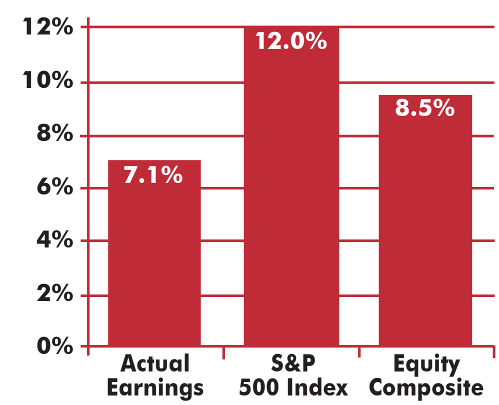



To help assess investment performance, various indexes are employed including a Composite, an Allocation Index, and a Policy Index. The Composite is calculated by taking the actual asset class weights times the actual manager return. When compared to the allocation index, it measures the effectiveness 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

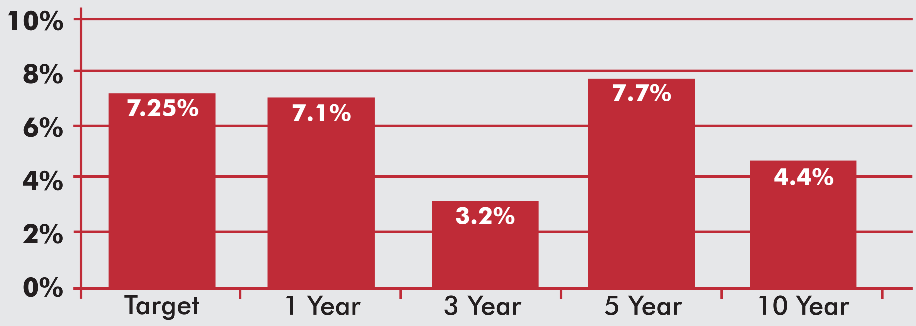
The Retirement System received schedules from its actuary designed to satisfy the pension fund disclosure requirements addressed in Governmental Accounting Standards Board (GASB) Statement No. 67, "Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25". In addition, the Retirement 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". Disclosure information on GASB Statement No. 67 can be found beginning on page 39 of this report. Disclosure information pertaining to employer units participating in the Plan can be located in the GASB Statement Nos. 67 and 68 document prepared by the actuary and posted on the Retirement System's website at https://www.manchesterretirement.org/rules.asp.

### TOTAL FUND EARNINGS VERSUS BENCHMARKS FOR 2016



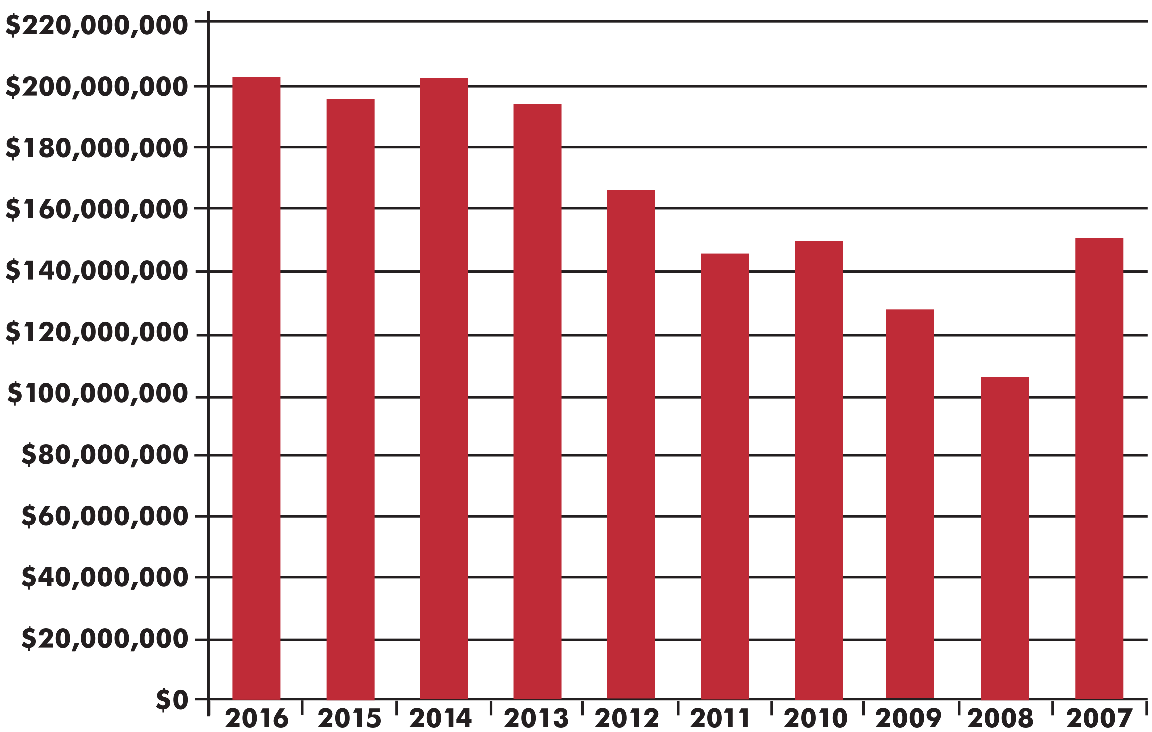

Total Retirement System Investments ended the year with a market value increase of 7.1%, under-performing the positive 12.0% rate of return of the S&P 500 Index. Equities for the fund when measured alone achieved a return of 8.5%, which also under-performed the return for the S&P 500.

## PERIOD RATES OF RETURN THROUGH 2016




For the year ended December 31, 2016, the Retirement System's rate of return failed to exceed the target rate of 7.25%, with the average return for the year being 7.1%. The rates for multi-year comparative periods were, 3.2% for the three year, 7.7% for the five year, and 4.4% for the ten year averages.

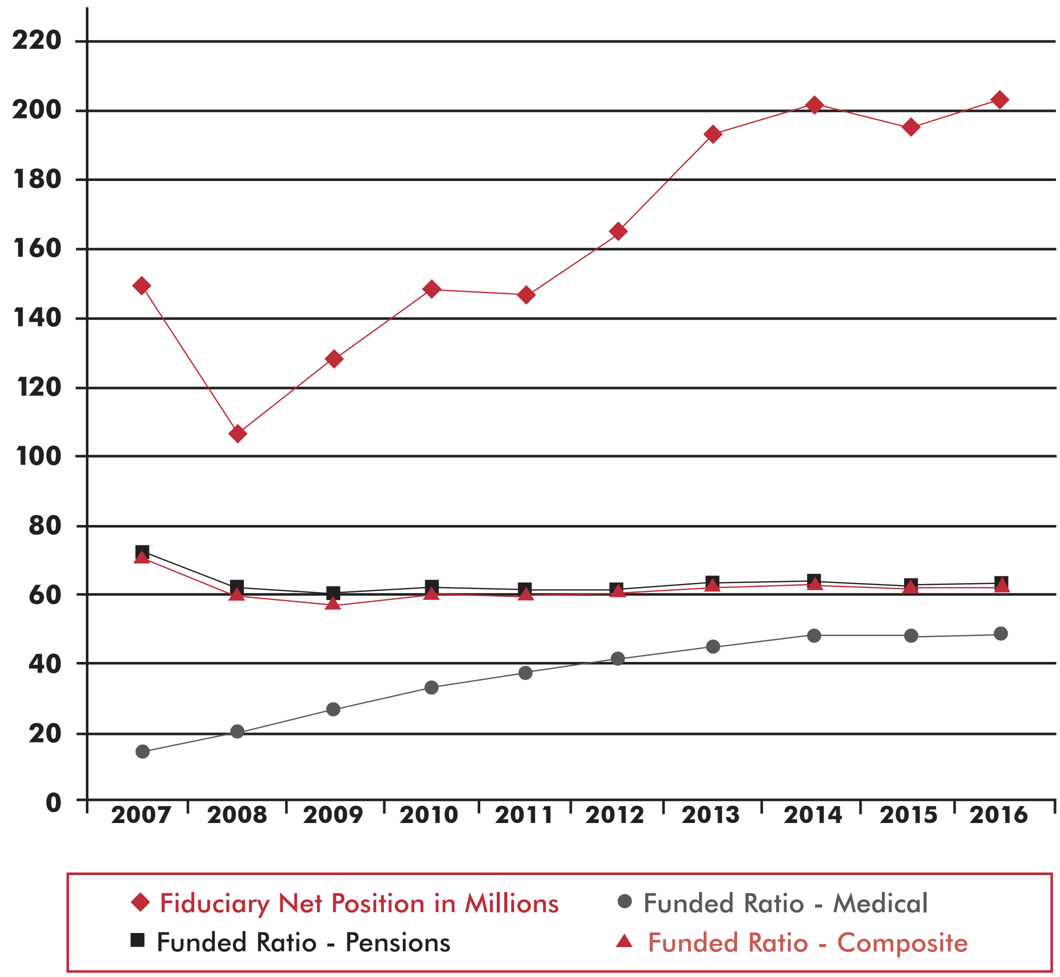
## TEN YEAR HISTORY OF FIDUCIARY NET POSITION AVAILABLE FOR BENEFITS: VALUES AS OF 12/31/16




The year 2016 saw an increase in the investment returns. While the total return was positive, it failed by a narrow margin to meet the earnings assumption of 7.25% for the fund as a whole. The failure to make the earnings assumption was largely attributed to an equity manager whose investment selections underperformed and resulted in a loss for the year. The Retirement System's fiduciary net position increased by 3.2% during 2016, ending the year at $202.4 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* |
|---|---|---|---|
| 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 |
| 2012 | $166,555,171 | 2007 | $149,196,664 |

# 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 |
|---|---|---|---|---|
| 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% |
| 2007 | $149.2 | 74.2% | 16.8% | 71.0% |

# Schedule of Administrative Expenses

| | 2016 | 2015 | % Increase or Decrease |
|---|---|---|---|
| **TRUST RELATED EXPENSES** | | | |
| Actuarial Expenses | $78,400 | $55,500 | 41.26% |
| Audit Expenses | 30,000 | 30,000 | 0.00% |
| Legal Fees | 97,866 | 68,181 | 43.54% |
| Trustee Education | 351 | 1,861 | -81.15% |
| Fiduciary Insurance | 54,733 | 54,733 | 0.00% |
| Election Service Payroll | 1,164 | 1,185 | -1.80% |
| Medical Evaluations | 3,807 | 3,350 | 13.64% |
| Pre-Retirement Counseling | 3,060 | 0 | 100.00% |
| **BENEFITS ADMINISTRATION** | | | |
| Outsourced Payroll | 27,637 | 26,461 | 4.44% |
| Benefit Statements | 652 | 643 | 1.40% |
| Annual Reports | 8,680 | 8,011 | 8.35% |
| **ADMINISTRATIVE OPERATIONS** | | | |
| Advertising | 0 | 78 | -100.00% |
| Office Supplies | 1,265 | 1,181 | 7.14% |
| Postage | 2,657 | 2,607 | 1.92% |
| Printing | 1,057 | 752 | 40.58% |
| Publications | 34,969 | 1,715 | 1,939.04% |
| Dues | 250 | 250 | 0.00% |
| Rent | 38,323 | 38,037 | 0.75% |
| Furniture/Fixtures | 100 | 324 | -69.14% |
| Depreciation | 34,438 | 44,805 | -23.14% |
| Insurance | 2,827 | 2,546 | 11.04% |
| Utilities | 3,038 | 3,635 | -16.42% |
| Records Processing | 0 | 128 | -100.00% |
| Salaries | 219,910 | 210,517 | 4.46% |
| Benefits | 126,690 | 116,989 | 8.29% |
| Administrative Travel | 233 | 237 | -1.71% |
| Equipment Maintenance | 2,694 | 2,755 | -2.23% |
| Equipment Leasing | 3,288 | 3,371 | -2.45% |
| Information Technology | 6,764 | 10,116 | -33.14% |
| Pension Software Maintenance | 34,372 | 34,124 | 0.73% |
| Janitorial | 3,055 | 3,010 | 1.49% |
| Special Projects | 10,000 | 0 | 100.00% |
| Licenses & Fees | 576 | 651 | -11.54% |
| Miscellaneous | 402 | 135 | 197.89% |
| | $833,258 | $727,888 | 14.48% |

# Active and Retired Members

**FOR THE YEAR ENDED DECEMBER 31, 2016**

| Office/Department | Active or Vested | Retired |
|---|---|---|
| Assessors Office | 9 | 6 |
| Airport Authority | 76 | 27 |
| Building Department | 0 | 8 |
| Cemetery Department | 9 | 13 |
| City Clerk's Office | 14 | 14 |
| City Solicitor's Office | 13 | 3 |
| District Court | 1 | 3 |
| Environmental Protection Division | 39 | 27 |
| Facilities | 20 | 45 |
| Finance Department | 11 | 7 |
| Fire Department - (Non- NHRS Group II) | 15 | 14 |
| Fleet Management | 22 | 10 |
| Health Department | 62 | 42 |
| Highway Department | 142 | 113 |
| Human Resources | 9 | 15 |
| Information Systems | 18 | 9 |
| Library | 33 | 29 |
| Mayor's Office | 4 | 4 |
| Manchester Economic Development Office | 2 | 4 |
| Office of Youth Services | 11 | 6 |
| Parking Enterprise | 16 | 5 |
| Parks & Recreation | 29 | 29 |
| Planning Board | 35 | 16 |
| Police Department - (Non- NHRS Group II) | 61 | 28 |
| Probation Department | 1 | 0 |
| Retirement | 3 | 1 |
| Risk Management | 2 | 1 |
| School Department - (Excludes teachers in NHRS) | 506 | 321 |
| Senior Services | 5 | 4 |
| Tax Collector's Office | 9 | 10 |
| Traffic Department | 11 | 6 |
| Water Works Department | 78 | 51 |
| Welfare Department | 10 | 4 |
| | 1,276 | 875 |

# *Statement of Fiduciary Net Position*

**DECEMBER 31, 2016**

**With Summarized Information as of December 31, 2015**

| | PENSION TRUST | MEDICAL TRUST | TOTAL 2016 | TOTAL 2015 |
|---|---|---|---|---|
| **ASSETS** | | | | |
| Cash and cash equivalents | $2,550,017 | $608,356 | $3,158,373 | $5,061,140 |
| Investments, at fair value | | | | |
| Domestic equity funds | 55,010,859 | 2,837,165 | 57,848,024 | 67,385,979 |
| International equity | 20,901,088 | 1,077,966 | 21,979,054 | 17,016,324 |
| Fixed income | 39,907,392 | 2,058,209 | 41,965,601 | 31,523,632 |
| Emerging market funds | 10,136,144 | 522,768 | 10,658,912 | 9,893,902 |
| Specialty investments | 22,867,766 | 1,179,397 | 24,047,163 | 31,852,030 |
| Alternative equity *(See Note 2 on Page 33)* | 2,593,601 | 133,764 | 2,727,365 | 2,487,757 |
| Hedge funds of funds | 19,003,460 | 980,097 | 19,983,557 | 18,786,716 |
| Fixed income alternative | 3,601,103 | 185,726 | 3,786,829 | 3,399,563 |
| Real estate | 16,705,738 | 861,592 | 17,567,330 | 10,258,430 |
| **Total investments** | 190,727,151 | 9,836,684 | 200,563,835 | 192,604,333 |
| Tax reclaim receivable | 5,309 | 274 | 5,583 | 2,493 |
| Accrued interest/dividends | 34,095 | 1,758 | 35,853 | 27,694 |
| Employer contribution receivable | 235,638 | 12,763 | 248,401 | 0 |
| Employee contribution receivable | 40,343 | 13,448 | 53,791 | 0 |
| Equipment, net of accumulated depreciation of $616,275 and $581,837 for 2016 and 2015, respectively | 3,174 | 164 | 3,338 | 33,603 |
| Other assets | 475 | 25 | 500 | 2,454 |
| **Total assets** | 193,596,203 | 10,473,471 | 204,069,674 | 197,731,717 |
| **LIABILITIES AND FIDUCIARY NET POSITION** | | | | |
| Payable for investments purchased | 89,375 | 4,610 | 93,985 | 66,531 |
| Accounts payable and accrued expenses | 236,461 | 12,195 | 248,656 | 258,159 |
| Pension benefits payable | 1,340,095 | 0 | 1,340,095 | 1,296,350 |
| **Total liabilities** | 1,665,931 | 16,805 | 1,682,736 | 1,621,040 |
| **Fiduciary net position held in trust for benefits** | $191,930,272 | $ 10,456,666 | $202,386,938 | $196,110,677 |

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, 2016**
**With Summarized Information for the Year Ending December 31, 2015**

| | PENSION TRUST | MEDICAL TRUST | TOTAL 2016 | TOTAL 2015 |
|---|---|---|---|---|
| Fiduciary net position at beginning of plan year | $186,492,399 | $9,618,278 | $196,110,677 | $202,146,990 |
| Additions, net of appreciation in fair value of investments | | | | |
| Investment income/(loss) | | | | |
| Interest | 34,240 | 1,804 | 36,044 | 1,720 |
| Dividends | 1,847,947 | 97,930 | 1,945,877 | 2,268,515 |
| Net appreciation/(depreciation) in fair value | 10,408,195 | 549,597 | 10,957,792 | (6,506,351) |
| Other investment income | 869 | 47 | 916 | 4,922 |
| | 12,291,251 | 649,378 | 12,940,629 | (4,231,194) |
| Less investment expenses | | | | |
| Investment management fees | 629,782 | 33,219 | 663,001 | 672,259 |
| Investment advisor expenses | 118,751 | 6,249 | 125,000 | 125,000 |
| Custodial fees | 61,556 | 3,261 | 64,817 | 67,950 |
| | 810,089 | 42,729 | 852,818 | 865,209 |
| Net investment income/(loss) | 11,481,162 | 606,649 | 12,087,811 | (5,096,403) |
| Contributions | | | | |
| Employer | 8,391,457 | 449,897 | 8,841,354 | 12,038,443 |
| Employee | 2,059,528 | 679,065 | 2,738,593 | 2,802,113 |
| Employee – additional contributions | 112,743 | 0 | 112,743 | 140,829 |
| Buybacks | 217,611 | 0 | 217,611 | 498,339 |
| Total contributions | 10,781,339 | 1,128,962 | 11,910,301 | 15,479,724 |
| Total additions | 22,262,501 | 1,735,611 | 23,998,112 | 10,383,321 |
| Deductions | | | | |
| Benefits paid to participants | 15,761,716 | 855,729 | 16,617,445 | 15,200,333 |
| Additional contribution annuity payments | 50,678 | 0 | 50,678 | 44,823 |
| Refunds of employee contributions plus interest | 220,470 | 0 | 220,470 | 446,590 |
| Administrative expenses | 791,764 | 41,494 | 833,258 | 727,888 |
| Total deductions | 16,824,628 | 897,223 | 17,721,851 | 16,419,634 |
| Net increase/(decrease) in fiduciary net position | 5,437,873 | 838,388 | 6,276,261 | (6,036,313) |
| **Fiduciary net position at end of plan year** | $191,930,272 | $ 10,456,666 | $202,386,938 | $196,110,677 |

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

# — Notes to Financial Statements —

## DECEMBER 31, 2016 AND 2015

## 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, 2016 and 2015, the Retirement System membership consisted of:**

| | 2016 | 2015 |
|---|---|---|
| Retirees and beneficiaries currently receiving benefits | 875 | 836 |
| Terminated vested members | 96 | 98 |
| Active members | 1,180 | 1,197 |
| Total Participants | 2,151 | 2,131 |

### ■ 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, 2015, the City's employer contribution rate, which helps fund the benefit, increased to .99% 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 2014 at the time of measurement, the Board of Trustees opted to grant a COLA in 2015 of 1.25% which went into effect in July of 2015 for members retired prior to July 1, 2014. No COLA was granted in 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).

## 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. 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 (depreciation) 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, 2016 and 2015 amounting to $1,340,095 and $1,296,350, 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 2016, allocations approximating 6 percent were moved from domestic equity to international equity, and approximately 2 percent was taken from the alternative asset group and reallocated and fixed income.

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, 2016 and 2015**

| | 2016 | 2015 |
|---|---|---|
| Domestic Equity | $4,871,162 | ($677,286) |
| International equity | (126,640) | (83,890) |
| Alternative equity | 92,489 | 516,199 |
| Fixed income | 1,923,141 | (3,580,785) |
| Emerging market funds | 765,010 | (1,184,117) |
| Real estate | 1,239,591 | 1,004,115 |
| Specialty investments | 1,654,840 | (1,907,252) |
| Hedge funds of funds | 538,199 | (593,335) |
| Total | $10,957,792 | $(6,506,351) |

**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, 2016 and 2015**

| | 2016 | 2015 |
|---|---|---|
| Blackrock (Strategic Income Opportunities) | $10,353,673 | N/A |
| City of London (Emerging Market Equities) | 10,658,912 | 9,893,902 |
| Gryphon International (International Equity) | 13,435,470 | N/A |
| Income Research & Mgt. (Core Bonds Fund) | 17,935,854 | 16,366,211 |
| Loomis Sayles (Fixed Income Fund) | 13,676,073 | 15,157,420 |
| Mellon Capital EB (Global Tactical Assets) | 13,440,043 | 17,815,313 |
| Sands Capital (US Large Cap Growth) | 16,473,960 | 17,649,048 |
| Pzena Management (US Large Cap Value Fund) | 19,472,103 | 15,826,309 |
| Rothschild (Smid Cap Equity Fund) | 15,095,294 | 15,787,879 |
| PIMCO (Global Tactical Asset Allocation) | 10,607,119 | N/A |
| PRISA (Real Estate) | 12,495,067 | N/A |
| Standard Life (Global Absolute Return Strategy) | 10,171,543 | N/A |
| Vanguard S&P 500 (Index Fund) | N/A | 18,086,400 |

*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.

### *Fair Value Measurement*

| 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** | | | | | | |
| 2016 | $ 41,965,601 | $24,029,748 | | | $ 17,935,853 | |
| 2015 | 31,523,632 | 15,157,421 | | | 16,366,211 | |
| **Domestic Equity** | | | | | | |
| 2016 | 57,848,024 | 42,752,730 | | | 15,095,294 | |
| 2015 | 67,385,979 | 51,598,100 | | | 15,787,879 | |
| **Emerging Markets** | | | | | | |
| 2016 | 10,658,912 | | | | 10,658,912 | |
| 2015 | 9,893,902 | | | | 9,893,902 | |
| **Specialty Investments** | | | | | | |
| 2016 | 24,047,163 | 10,607,119 | | | 13,440,044 | |
| 2015 | 31,852,030 | 9,358,864 | | | 22,493,166 | |
| **International Equities** | | | | | | |
| 2016 | 21,979,054 | 8,543,584 | | | 13,435,470 | |
| 2015 | 17,016,324 | 8,506,256 | | | 8,510,068 | |
| **Real Estate** | | | | | | |
| 2016 | 17,567,330 | | | | 17,567,330 | $ 3,715,035 |
| 2015 | 10,258,430 | | | | 10,258,430 | |
| **Alternative Equity** | | | | | | |
| 2016 | 2,727,365 | | | | 2,727,365 | 4,260,059 |
| 2015 | 2,487,757 | | | | 2,487,757 | 5,133,120 |
| **Fixed Income Alternative** | | | | | | |
| 2016 | 3,786,829 | | | | 3,786,829 | 3,059,090 |
| 2015 | 3,399,563 | | | | 3,399,563 | 3,625,429 |
| **Hedge Funds of Funds** | | | | | | |
| 2016 | 19,983,557 | | | | 19,983,557 | |
| 2015 | 18,786,716 | | | | 18,786,717 | |
| **Total Investments** | | | | | | |
| 2016 | $200,563,835 | $85,933,181 | | | $114,630,654 | $11,034,184 |
| 2015 | $192,604,333 | $84,620,641 | | | $107,983,692 | $ 8,758,549 |

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, 2016 | 6.2% |
| December 31, 2015 | -2.5% |
| December 31, 2014 | 3.7% |
| *Information for previous periods is not available* | |

## 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 obligation.

The employer contribution rates as a percentage of payrolls in 2016 and 2015 were based on actuarial valuations performed as of December 31, 2015 and December 31, 2014, respectively. The City's contributions for 2016 and 2015 were in the amounts recommended by the actuary. The recommended City contributions for 2016 and 2015 totaled \$8,841,354 and \$12,038,443, respectively, which included amortization of the net pension liability and unfunded actuarial accrued liability (credits) related to actuarial gains and assumption changes. At December 31, 2016 and 2015, the unfunded prior service costs are being amortized over periods of twenty-three and twenty-four years, respectively. The employer customary contributions represented 23.74% and 21.71% of covered payroll for 2016 and 2015, respectively. Effective July 1, 2004, those amounts began being collected on a weekly basis as a percentage of payroll.

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 cancelled. 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.

As of July 1, 2004, active members were afforded a new option for a defined contribution overlay to their defined benefit plan but limited statutorily to specific purposes. The entire actuarial expense associated with the program is borne by the member, including the cost of the calculation which must be performed to determine contributions limits. Eligible members can choose to contribute actuarially-determined amounts to either offset early retirement reductions or approach or attain a 50% average final earnings benefit level. As of December 31, 2016 and 2015, respectively, participation in the program consisted of 39 persons, consisting of 23 active contributors and 16 retirees collecting an annuity, and 38 persons, consisting of 24 active contributors and 14 retirees collecting an annuity, based upon lifetime contributions. Voluntary contributions for 2016 and 2015 totaled \$112,743 and \$140,829, respectively. Annuity payments plus COLA attributed to additional contributions for the same periods were \$50,678 and \$44,823, respectively.

The Retirement System also accepts voluntary contributions from members for various permissive service purchases and service credit upgrades, which are shown as buybacks on the *Statements of Changes in Fiduciary Net Position*. Time worked prior to enrollment, where there was no break in service leading up to enrollment and attributed to an initial period of temporary employment and service previously withdrawn from this or other public retirement plans, may be purchased by the member. In addition, members with service prior to 1999 which was credited at 1.5%, may voluntarily upgrade such time to the present 2% accrual rate as allowed by statute and pursuant to regulations adopted by the Board of Trustees.

On June 23, 1995, the Retirement System purchased, from an insurance company, a non-participating single premium contract for $1,943,011 to fund the 1992, 1993, and 1995 COLA benefits granted to current retirees covered by the Retirement System. The Retirement System continues to make the entire monthly payment to retirees; however, the insurance company transfers to the Retirement System the aggregate COLA amount each month.

## 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 provides the Retirement System with 2,500 feet of office space until the initial term expires on June 30, 2018. The Retirement System paid $38,323 and $38,037 in total rent expense in 2016 and 2015, respectively. Under the terms of the current lease, the Retirement System is obligated to make future minimum lease payments on the office space lease of $57,912 through June 30, 2018. 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. The Retirement System does not have a deposit policy for custodial credit risk and depends upon practices of the custodian bank to mitigate that risk through the structure of its short-term investment fund. As of December 31, 2016, each depositor is insured up to $250,000 by the Federal Deposit Insurance Corporation (FDIC). On that date, the Retirement System had $2,908,371 in excess of the FDIC limit, which was exposed to custodial credit risk.

### ■ 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, 2016, THE RETIREMENT SYSTEM'S FIXED INCOME INVESTMENTS WERE AS FOLLOWS:**

| Management Firm | Quality Rating | Duration | Fair Value |
|---|---|---|---|
| Income Research & Management | Aa3/AA- | 5.77 years | $17,935,859 |
| Loomis Sayles | BBB | 3.98 years | 13,676,073 |
| Blackrock (Strategic Income Opp.) | Not Rated | 0.32 years | 10,353,673 |
| Total Fixed Income | | | $41,965,601 |

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 had investments for part of 2015 in Portable Alpha, which used futures and swaps to replicate the return of the S&P 500 (beta), while using Hedge Funds as an alpha generator. There is an element of counterparty risk taken on by the Portable Alpha Manager in the replication of the S&P 500. The nature and magnitude of such risks are disclosed in the subscription agreements and the net effect of any losses which might result were included in performance results at the end of each month.

## 8. FUNDED RATIO – HEALTH TRUST (GASB STATEMENT NO. 43)

The funded ratio measures the relationship between valuation assets and the actuarial accrued liability. Information regarding the funded ratio for the Health Trust portion of the Plan as of the most recent valuation date of December 31, 2016 is as follows:

### *Comparative Statement of Valuation Assets and Actuarial Accrued Liability*

**Health Trust – December 31, 2016**

| | |
|---|---|
| Actuarial accrued liability | $ 23,023,666 |
| Actuarial value of plan assets | 11,150,682 |
| Unfunded actuarial accrued liability | $ 11,872,984 |
| Funded ratio | 48.4% |
| Annual covered payroll | $ 52,888,074 |
| Unfunded actuarial liability to annual covered payroll | 22.4% |

## 9. 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 "plan 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 – December 31**

| | 2016 | 2015 |
|---|---|---|
| Total pension liability | $321,887,981 | $314,355,740 |
| Plan net position | 191,930,272 | 186,492,399 |
| Net pension liability | $129,957,709 | $127,863,341 |
| Plan net position as a percentage of total pension liability | 59.63% | 59.33% |
| Annual covered payroll | $ 52,888,074 | $ 52,953,903 |
| Net pension liability as a percentage of covered payroll | 245.72% | 241.46% |

The development of actuarial accrued liability table below identifies the distribution of the actuarial accrued liability among retirees, deferred members and active members for both the pension and health trusts as of December 31, 2016:

***Development of Actuarial Accrued Liability***

| | PENSION | HEALTH |
|---|---|---|
| Present Value of Future Benefits - Retirees | $169,340,013 | $ 11,411,189 |
| Present Value of Future Benefits - Deferreds | 6,115,895 | 407,835 |
| Present Value of Future Benefits - Actives | 202,735,154 | 16,501,583 |
| Total Present Value of Future Benefits | 378,191,062 | 28,320,607 |
| Present Value of Future Normal Cost | 56,303,081 | 5,296,941 |
| **Actuarial Accrued Liability** | $321,887,981 | $ 23,023,666 |

## 10. ACTUARIAL VALUATION METHOD AND ASSUMPTIONS

The Board of Trustees employs an independent actuarial firm to estimate the total pension liability and the actuarial present value of accumulated plan benefits and to determine future contribution rates.

The required schedule of funding progress immediately following the notes to the financial statements presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

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.

### ■ FINANCING OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percentage of payroll contributions over 24 future years for pension benefits and over 24 future years for health subsidy benefits. The amortization period is closed for both pension benefits and health subsidy benefits.

### ■ ACTUARIAL ASSET VALUATION METHOD

Last year's valuation assets are increased by contributions and reduced by refunds, benefit payments and expenses. An amount equal to the assumed investment return for the year is then added. Differences between actual return on a market value basis and an assumed return are phased in over a five-year period. The contribution requirements and benefit values of the Retirement System are calculated by applying actuarial assumptions to the benefit provisions and member 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 is expected to survive, 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 (usually small) 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). Assumptions used in this report are based on the January 1, 2007 – December 31, 2011 experience study of the Retirement System and were adopted by the Board in August 2012. These assumptions were used for the first time in the December 31, 2012 actuarial valuation.

***The rate of investment return was 7.25% 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 Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of measurement of the Total Pension 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 7.25%; the municipal bond is 3.65%; and the resulting Single Discount Rate is 7.25%. 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 7.25% was used to measure the Total Pension Liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.25%. 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.

Regarding the sensitivity of the Net Pension Liability to changes in the Single Discount Rate, the following presents the plan's Net Pension Liability, calculated using a Single Discount Rate of 7.25%, as well as what the plan's Net Pension 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 6.25% | Current Single Discount Rate Assumption of 7.25% | 1% Increase 8.25% |
|---|---|---|---|
| Total Pension Liability | $359,478,187 | $321,887,981 | $289,908,866 |
| Net Position Restricted for Pensions | $191,930,272 | $191,930,272 | $191,930,272 |
| Net Pension Liability | $167,547,915 | $129,957,709 | $ 97,978,594 |

***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, 2016.

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, 2016, these best estimates are summarized in the table on the following page:

## *Assumed Rate of Investment Return*

| Asset Class | Current Target | 2017 30 Year Assumptions - Nominal *Arithmetic Return* | 2017 30 Year Real Returns *Weighted Return* |
|---|---|---|---|
| **Cash** | **2.0%** | 3.0% | 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% | 10.3% | 0.5% |
| Emerging International Equities | 5.0% | 12.7% | 0.6% |
| **Total Equity** | **42.0%** | | |
| Core Bonds | 9.0% | 4.2% | 0.4% |
| Diversified Fixed Income | 6.0% | 5.6% | 0.3% |
| Absolute Return Fixed Income | 5.0% | 4.5% | 0.2% |
| **Total Fixed Income** | **20.0%** | | |
| Real Estate (Core) | 10.0% | 8.4% | 0.8% |
| Liquid Alternatives | 5.0% | 6.4% | 0.3% |
| Private Equity | 6.0% | 11.7% | 0.7% |
| Hedge Funds | 5.0% | 6.8% | 0.3% |
| Global Asset Allocation | 10.0% | 7.7% | 0.8% |
| **Total Alternatives** | **36.0%** | | |
| **2017 Expected 30 Year Real Return** | | | **8.1%** |

*Note: 30 Year Real Returns calculated by discounting NEPC LLC's 30 Year Nominal returns with a 3% 30 year US CPI.*

***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. Projections of benefits for financial reporting purposes are based on the provisions of the plan in effect at the time of each valuation and are determined by the actuary during the valuation process. The contribution share ratio, between employers and Retirement System members, is determined by statute and is a fixed percentage of reportable wages paid.

## *Salary Increase Assumption For an Individual Member*

The rates of salary increase used for individual members are in accordance with this table. This assumption 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 3.0% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

| Service | Merit & Seniority | Base (Economic) | Increase Next Year |
|---|---|---|---|
| 1 | 3.96% | 3.00% | 6.96% |
| 2 | 4.93% | 3.00% | 7.93% |
| 3 | 4.72% | 3.00% | 7.72% |
| 4 | 4.20% | 3.00% | 7.20% |
| 5 | 3.88% | 3.00% | 6.88% |
| 6 | 3.43% | 3.00% | 6.43% |
| 7 | 3.05% | 3.00% | 6.05% |
| 8 | 2.76% | 3.00% | 5.76% |
| 9 | 2.56% | 3.00% | 5.56% |
| 10 | 2.35% | 3.00% | 5.35% |
| 15 | 1.58% | 3.00% | 4.58% |
| 20 | 1.27% | 3.00% | 4.27% |
| 25 | 1.25% | 3.00% | 4.25% |
| 30 | 1.25% | 3.00% | 4.25% |
| 35 | 1.25% | 3.00% | 4.25% |
| 40 | 1.25% | 3.00% | 4.25% |

## *Single Life Retirement Values*

| Sample Attained | Present Value of $1 Monthly for Life | | Percent Dying Next Year | | Future Life Expectancy (years) | |
|---|---|---|---|---|---|---|
| AGES | MALE | FEMALE | MALE | FEMALE | MALE | FEMALE |
| 50 | $148.84 | $150.73 | 0.1487% | 0.1189% | 32.77 | 34.63 |
| 55 | 140.89 | 143.37 | 0.2469% | 0.2314% | 28.04 | 29.88 |
| 60 | 130.74 | 134.14 | 0.4887% | 0.4573% | 23.47 | 25.31 |
| 65 | 118.50 | 123.10 | 0.9607% | 0.8780% | 19.17 | 21.02 |
| 70 | 104.41 | 110.47 | 1.6413% | 1.5145% | 15.22 | 17.06 |
| 75 | 88.00 | 96.22 | 2.8538% | 2.3935% | 11.58 | 13.47 |
| 80 | 70.35 | 80.35 | 5.2647% | 3.9866% | 8.42 | 10.23 |

***The mortality table*** was the RP 2000 Mortality Table projected to 2020. This assumption is used to measure the probabilities of members dying after retirement. 90% of these rates are used to measure the probability of dying before retirement. The projection to 2020 is the margin for mortality improvement. Post-retirement disabled mortality rates are based on the health mortality rates, set forward 10 years.

### *Active Members Retiring Next Year Under Normal & Early Retirement*

The rates of retirement used to measure the probability of eligible members retiring during the next year are illustrated on this chart.

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.

| Ages | % Retiring Males | % Retiring Females | % Retiring Rule of 80 |
|---|---|---|---|
| 50 | | | 5% |
| 51 | | | 5% |
| 52 | | | 5% |
| 53 | | | 5% |
| 54 | | | 5% |
| 55 | 5% | 7% | 5% |
| 56 | 5% | 7% | 5% |
| 57 | 5% | 7% | 5% |
| 58 | 5% | 7% | 5% |
| 59 | 5% | 7% | 5% |
| 60 | 10% | 13% | |
| 61 | 10% | 15% | |
| 62 | 20% | 28% | |
| 63 | 20% | 15% | |
| 64 | 15% | 10% | |
| 65 | 25% | 25% | |
| 66 | 20% | 25% | |
| 67 | 15% | 25% | |
| 68 | 15% | 10% | |
| 69&70 | 15% | 20% | |
| 71-74 | 50% | 20% | |
| 75-79 | 100% | 20% | |
| 80 | 100% | 100% | |

### *Rates of disability*

were divided equally between duty and non-duty disability, and are as follows:

| Sample Ages | % of Active Members Becoming Disabled Within Next Year | |
|---|---|---|
| | MALE | FEMALE |
| 20 | 0.002% | 0.002% |
| 25 | 0.002% | 0.002% |
| 30 | 0.002% | 0.002% |
| 35 | 0.011% | 0.011% |
| 40 | 0.043% | 0.043% |
| 45 | 0.088% | 0.088% |
| 50 | 0.144% | 0.144% |
| 55 | 0.214% | 0.214% |
| 60 | 0.318% | 0.318% |

***Rates of separation from active membership*** are shown here (rates do not apply to members eligible to retire and do not include separation due to death or disability). This assumption measures the probabilities of members remaining in employment.

| Sample Ages | Service | % of Active Members Separating Within Next Year | |
|---|---|---|---|
| | | MALE | FEMALE |
| | 0-1 | 20.00% | 30.00% |
| | 1-2 | 17.00% | 20.00% |
| | 2-3 | 11.50% | 15.00% |
| | 3-4 | 9.00% | 12.50% |
| | 4-5 | 8.00% | 11.00% |
| | 5-6 | n/a | 8.00% |
| | 5 & Up (Male) | | |
| 30 | 6 & Up (Female) | 5.14% | 5.30% |
| 35 | | 3.80% | 4.45% |
| 40 | | 3.00% | 3.85% |
| 45 | | 2.57% | 3.40% |
| 50 | | 2.40% | 2.95% |

**Marriage Assumption:** 100% of males and 100% 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:** 0.50% 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:** For Manchester School District and enterprise funds of the City (Airport, Water Works), and the Retirement System, contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made. For the remaining City group, employer contributions are assumed to be received on a semiannual basis in December and July.

**COLA Assumption:** 1.25% compounded annually.

**Adjustments:** Normal and Early retirement costs were increased by 9% 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.

# — Required Supplemental Information —

## (unaudited)

### SCHEDULE OF FUNDING PROGRESS - HEALTH TRUST

| Actuarial Valuation Date | Actuarial Value of Plan Assets | Unfunded Actuarial Liability | Actuarial Accrued Liability | Funded Ratio | Annual Covered Payroll | Unfunded Liability to Covered Payroll |
|---|---|---|---|---|---|---|
| 12/31/16 | $11,150,682 | $11,872,984 | $23,023,666 | 48.4% | $52,888,074 | 22.4% |
| 12/31/15 | 10,259,881 | 11,386,138 | 21,646,019 | 47.4% | 52,953,903 | 21.5% |
| 12/31/14 | 9,433,100 | 9,992,959 | 19,426,059 | 48.6% | 54,267,183 | 18.4% |
| 12/31/13 | 8,145,055 | 9,834,211 | 17,979,266 | 45.3% | 53,315,564 | 18.4% |
| 12/31/12 | 6,870,093 | 9,725,530 | 16,595,623 | 41.4% | 51,881,338 | 18.7% |
| 12/31/11 | 5,837,021 | 9,763,341 | 15,600,362 | 37.4% | 51,117,552 | 19.1% |
| 12/31/10 | 4,875,596 | 9,219,533 | 14,095,129 | 34.6% | 51,399,670 | 17.9% |
| 12/31/09 | 3,748,342 | 9,342,146 | 13,090,448 | 28.6% | 50,547,690 | 18.5% |
| 12/31/08 | 2,605,141 | 9,820,788 | 12,425,929 | 21.0% | 50,740,516 | 19.4% |
| 12/31/07 | 1,908,457 | 9,398,059 | 11,306,516 | 16.9% | 48,556,218 | 19.4% |

***Funded ratio is the actuarial value of Health trust assets as a percentage of the actuarial accrued liability.***

### SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR HEALTH TRUST

| Valuation Year Ended December 31 | Fiscal Year Ended June 30 | Annual Required Contribution (ARC) as a Percent of Valuation Payroll - Health | Actual Contributions |
|---|---|---|---|
| 2016 | 2018 | 1.40% | $428,315 |
| 2015 | 2017 | 1.26% | 425,306 |
| 2014 | 2016 | .99% | 613,606 |
| 2013 | 2015 | .93% | 462,201 |
| 2012 | 2014 | .93% | 526,321 |
| 2011 | 2013 | .97% | 451,122 |
| 2010 | 2012 | .87% | 457,292 |
| 2009 | 2011 | .85% | 461,074 |
| 2008 | 2010 | .93% | 487,909 |
| 2007 | 2009 | .91% | 641,197 |

***Actual Contributions shown above satisfy 100% of the employer obligations for the Health Trust determined by the actuary and certified by the Retirement System's Board of Trustees.***

# SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

**PLAN YEAR ENDING DECEMBER 31**

| | 2016 | 2015 | 2014 |
|---|---|---|---|
| **A. Total pension liability** | | | |
| 1. Service cost | $ 6,327,991 | $ 6,468,648 | $ 6,589,804 |
| 2. Interest on the total pension liability | 22,438,990 | 21,231,157 | 20,108,289 |
| 3. Changes in benefit terms | 0 | 0 | 0 |
| 4. Difference between expected and actual experience of the total pension liability | (5,201,876) | 4,528,433 | 2,603,699 |
| 5. Changes in assumptions | 0 | 0 | 0 |
| 6. Benefit payments, including refunds of employee contributions | (16,032,864) | (14,963,425) | (12,543,344) |
| 7. Net change in total pension liability | $ 7,532,241 | $ 17,264,813 | $ 16,758,448 |
| 8. Total pension liability - beginning | 314,355,740 | 297,090,927 | 280,332,479 |
| 9. Total pension liability - ending | **$321,887,981** | **$314,355,740** | **$297,090,927** |
| **B. Plan fiduciary net position** | | | |
| 1. Contributions - employer | $ 8,391,457 | $ 11,613,137 | $ 10,959,998 |
| 2. Contributions - employee | 2,389,882 | 2,744,956 | 2,254,021 |
| 3. Net investment (loss)/income | 11,543,017 | (4,783,148) | 6,754,397 |
| 4. Benefit payments, including refunds of employee contributions | (16,032,864) | (14,963,425) | (12,543,344) |
| 5. Pension plan administrative expenses | (791,764) | (693,331) | (679,116) |
| 6. Other | (61,857) | (65,961) | (50,008) |
| 7. Net change in plan fiduciary net position | $ 5,437,873 | $ (6,147,772) | $ 6,695,948 |
| 8. Plan fiduciary net position - beginning | 186,492,399 | 192,640,171 | 185,866,717 |
| 9. Plan fiduciary net position - ending | **$191,930,272** | **$186,492,399** | **$192,562,665** |
| **C. Net pension liability** | **$129,957,709** | **$127,863,341** | **$104,528,262** |
| **D. Plan fiduciary net position as a percentage of the total pension liability** | **59.63%** | **59.33%** | **64.82%** |
| **E. Covered-employee payroll** | **$ 52,888,074** | **$ 52,953,903** | **$ 54,267,183** |
| **F. Net pension liability as a percentage of covered employee payroll** | **245.72%** | **241.46%** | **192.62%** |

## SCHEDULE OF THE INVESTMENT RETURNS

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

*INFORMATION FOR PREVIOUS PERIODS IS NOT AVAILABLE.*

## 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 |
|---|---|---|---|---|---|---|
| 12/31/2016 | $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.*

## SCHEDULE OF CONTRIBUTIONS

| | Actuarially Determined Contribution (ADC)# | Actual Contributions | Contribution Deficiency (Excess) | Covered Payroll* | Actual Contributions as a Percentage of Covered Payroll |
|---|---|---|---|---|---|
| 12/31/2016 | $ 8,391,457 | $ 8,391,457 | $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*

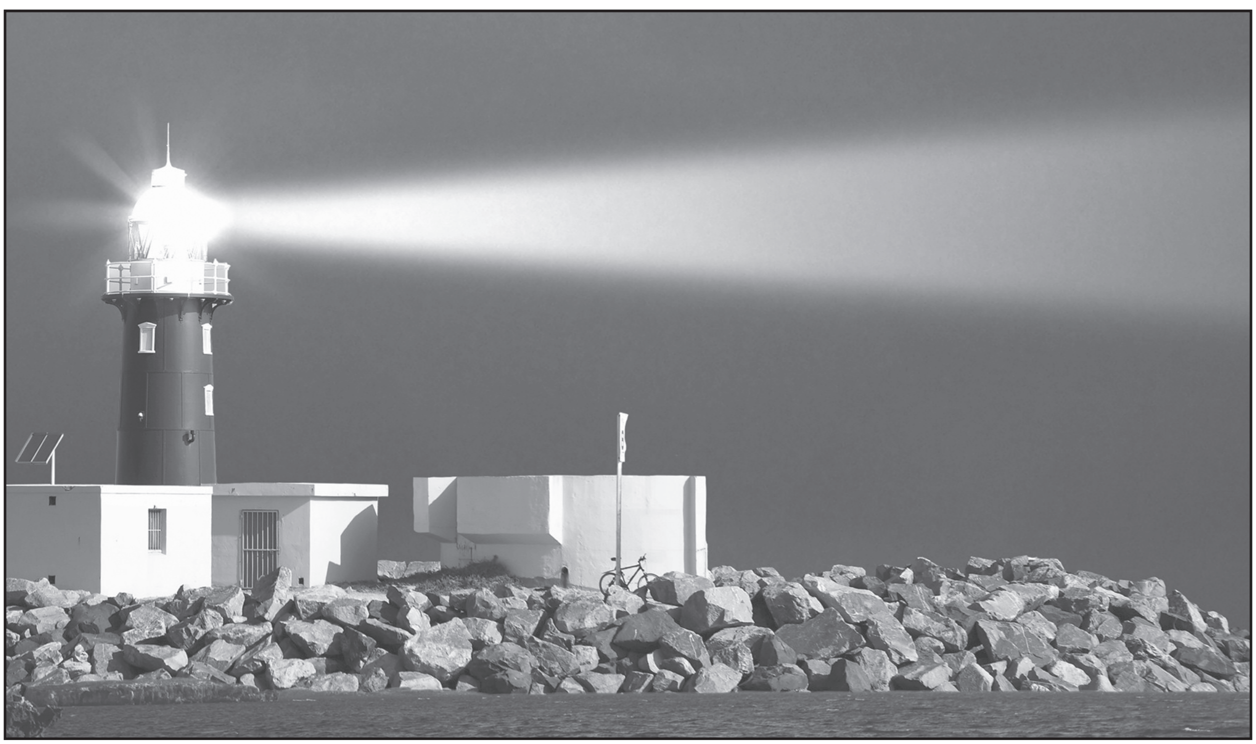
*# Employer contributes based on percentage of payroll. Employer pays the ADC percentage.*

*INFORMATION FOR PREVIOUS PERIODS IS NOT AVAILABLE.*

## ■ Notes to Schedule of Contributions

| | |
|---|---|
| **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% |
| Salary Increases | 3.00% to 7.93% including inflation |
| Investment Rate of Return | 7.25% (net of investment expenses) |
| Long-Term Municipal Bond Rate | 3.78% |
| 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. |

Generally, the actuarial assumptions of the Health Trust are consistent with those above.



CITY OF
MANCHESTER
EMPLOYEES'
CONTRIBUTORY
RETIREMENT
SYSTEM

1045 ELM STREET • SUITE 403
MANCHESTER, NH 03101-1824



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, 2016