

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**FINANCIAL STATEMENTS**  
**AND REQUIRED SUPPLEMENTARY INFORMATION**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**  
**WITH INDEPENDENT AUDITOR'S REPORT**

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**INDEX TO FINANCIAL STATEMENTS**  
**AND REQUIRED SUPPLEMENTARY INFORMATION**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

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**LYNCHMARINI & ASSOCIATES INC.**

CERTIFIED PUBLIC ACCOUNTANTS

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## **INDEPENDENT AUDITOR'S REPORT**

To the Honorable Bristol County Retirement Board  
Bristol County Retirement System  
Taunton, Massachusetts

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Bristol County Retirement System, as of and for the year ended December 31, 2017 and the related notes to the financial statements, which collectively comprise the Bristol County Retirement System's basic financial statements as listed in the table of contents.

### **Management's Responsibility for the Financial Statements**

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

### **Auditors' Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits 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 Bristol County Retirement System'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 Bristol County Retirement System'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 fiduciary net position of the Bristol County Retirement System as of December 31, 2017, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

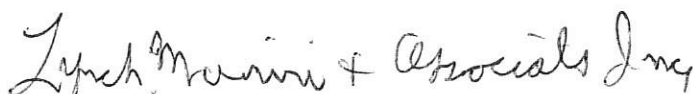
## Other Matters

### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, on pages 3 through 6, the Schedule of Changes in the Net Pension Liability and Related Ratios on page 23, Schedule of Contributions and Related Ratios on page 24, the Schedule of Investment Returns on page 25 and Notes to Required Supplementary Information on Page 26, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated September 11, 2018 on our consideration of the Bristol County Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Bristol County Retirement System's internal control over financial reporting and compliance.



Norwell, Massachusetts  
September 11, 2018

## **MANAGEMENT'S DISCUSSION AND ANALYSIS**

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**DECEMBER 31, 2017**

As management of the Bristol County Retirement System (System) we offer readers of the System's financial statements this narrative overview and analysis of the financial activities of the System for the year ended December 31, 2017.

**FINANCIAL HIGHLIGHTS**

The fiduciary net position held in trust for pension benefits totaled approximately \$681 million at December 31, 2017, and \$598 million at December 31, 2016. The net position is available for payment of monthly retirement benefits and other distributions to the System's participants.

The total number of participants in the System as of December 31, 2017 was 6,492 active and retired.

The funded ratio of the System was 68.6% at January 1, 2018, the date of the latest actuarial valuation.

**OVERVIEW OF THE FINANCIAL STATEMENTS**

The System is a multiple-employer cost sharing public employee retirement plan, which is a defined benefit plan. The System covers substantially all non-teaching employees in the County, 14 towns and 22 special districts and housing authorities. Pursuant to Massachusetts General Law ("MGL") the System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation and group classification.

Contribution rates for active members are set at 5%, 7%, 8% or 9% of gross regular compensation, as defined; depending on the date membership began. Certain employees contribute an additional 2% on compensation over \$30,000 per annum.

The System's financial statements are comprised of a Statement of Fiduciary Net Position, a Statement of Changes in Fiduciary Net Position, and Notes to the Financial Statements. Also included is certain required supplementary information, and audits of Specific Elements, Accounts, and Items of Financial Statement Schedules.

The System is administered by the Bristol County Retirement Board and is governed by Chapter 32 of the Massachusetts General Laws.

The Statement of Fiduciary Net Position presents fairly the information on the System's assets and liabilities and the resulting net position restricted for pension benefits. This statement reflects the System's investments at fair market value, along with cash and short-term investments, receivables, and other assets and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pension benefits changed during the year ended December 31, 2017. It reflects contributions by members and participating employers along with deductions for retirement benefits, refunds and withdrawals, and administrative expenses. Investment income during the period is also presented showing income from investing and securities lending activities.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**DECEMBER 31, 2017**

**OVERVIEW OF THE FINANCIAL STATEMENTS (continued)**

The Notes to Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

The System is on a funding schedule to be 100% funded by the year 2028. The participating governmental entities contribute to this schedule annually based on the status of the bi-annual actuarial evaluation.

The Required Supplementary Information also includes the Schedule of Changes in the Net Pension Liability and Related ratios, Schedule of Contributions, Schedule of investment Return and Notes to Required Supplementary information.

The Audits of Specific Elements, Accounts and Items of Financial Statements include the pension schedules of Employer Allocations, Pension Amounts by Employer and Notes to the related schedules.

**FINANCIAL ANALYSIS**

**ASSET COMPARISON– 2017 compared to 2016**

	(\$ in millions) December 31, <u>2017</u>	(\$ in millions) December 31, <u>2016</u>
Domestic Equity and Funds	\$ 164.3	\$ 168.0
Real Estate Funds	58.6	49.1
Venture Capital Funds	58.5	27.4
Hedge Funds	33.6	31.1
International Equity Funds	183.9	147.6
Fixed Income		
Corporate Bond Funds	86.6	86.9
U.S. Government Securities	26.1	24.1
International Bonds	<u>57.2</u>	<u>42.4</u>
Total Managed Investments	668.8	576.6
Receivables	4.3	3.7
Cash and Other Assets	<u>12.7</u>	<u>21.3</u>
<b>Total Assets</b>	<b><u>\$ 685.8</u></b>	<b><u>\$ 601.6</u></b>

The decrease in the System's cash is attributable to the System increasing its investment in pooled international equities, private equity, and pooled real estate investment funds. The System's overall returns as published in Public Employee Retirement Administration Commission's (PERAC) annual report for the past three years were 16.83% in 2017, 7.01% in 2016, and .40% in 2015. As published in PERAC's annual report, during the period from 1985 to 2017 the System has achieved a return of 9.01% in annual performance.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**DECEMBER 31, 2017**

**CONTRIBUTIONS AND DEDUCTIONS**

Contributions to the System by members and employees for the years ended December 31, 2017 and 2016 are summarized below:

	(\$ in millions) December 31, <u>2017</u>	(\$ in millions) December 31, <u>2016</u>
Member Contributions	\$ 17.3	\$ 16.8
Employer and Other Contributions	<u>39.7</u>	<u>38.2</u>
<b>Total</b>	<b><u>\$ 57.0</u></b>	<b><u>\$ 55.0</u></b>

The member contributions increased by 3%, while employer contributions increased by 4%. The increase in employer and other contributions are primarily due to a 3% increase in pension appropriations and the increase in member contributions is primarily due to a 3% increase in member deductions, which is commensurate with active member salary increases. The employer contributions are based on actuarial calculations.

Deductions from System assets for the year ended December 31, 2017 and 2016 are summarized below:

	(\$ in millions) December 31, <u>2017</u>	(\$ in millions) December 31, <u>2016</u>
Member Benefits	\$ 59.5	\$ 56.1
Refunds and Transfers	6.0	5.3
Administration	<u>0.9</u>	<u>1.1</u>
<b>Total</b>	<b><u>\$ 66.4</u></b>	<b><u>\$ 62.5</u></b>

The change in member benefits is attributable to increases in monthly benefits and newer retirees. The change in refunds and transfers is attributable to payments to other retirement systems.

**ECONOMIC FACTORS**

**Funding**

A pension fund is well funded when it has enough money in reserve to meet all expected future obligations to participants. The funded ratios of the System at December 31, 2017 (based on the latest actuarial valuation completed as of January 1, 2018), is as follows:

<u>2017</u>	<u>2016</u>
68.6%	64.17%

**PLAN AMENDMENTS**

Any changes in benefits or other matters related to the System require an action by the State Legislature. Many also require local acceptance by the governing body of the member units.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**DECEMBER 31, 2017**

**OTHER**

Other than changes in the fair value of System assets as may be impacted by the stock and bond markets, no other matters are known by management to have a significant impact on the operations or financial position of the System.

**REQUESTS FOR INFORMATION**

This financial report is designed to provide a general overview of the System's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Bristol County Retirement System, 645 County Street, County Crossing, Taunton, MA 02780.

## **BASIC FINANCIAL STATEMENTS**

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**STATEMENT OF FIDUCIARY NET POSITION**  
**DECEMBER 31, 2017**

**ASSETS**

Cash and short-term investments	\$ 12,377,224
Receivables	
Employee	993,039
Employer	63,928
Securities sold	980,466
Interest and dividends	321,775
Other systems	<u>1,967,176</u>
Total receivables	4,326,384
Investments, at fair value	
Domestic equities and funds	164,322,445
Real estate funds	58,569,799
Venture capital funds	58,533,914
Hedge funds	33,638,138
International equities and funds	183,946,319
Fixed income	
Domestic bonds and funds	86,557,873
U.S. government security	26,128,134
International bonds and funds	<u>57,223,787</u>
Total investments	668,920,409
Other assets	<u>140,495</u>
Total assets	<u><u>\$ 685,764,512</u></u>

**LIABILITIES**

Due to brokers and investment managers	\$ 1,531,525
Due to other systems	3,356,960
Accounts payable	<u>268,280</u>
Total liabilities	<u>5,156,765</u>

<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<u><u>\$ 680,607,747</u></u>
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The accompanying notes are an integral part of these financial statements.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

**ADDITIONS**

Contributions

Employer	\$ 37,652,388
Plan Members	17,328,977
Other systems and state	1,883,057
Miscellaneous	135,520
Total contributions	<u>56,999,942</u>

Investment Income

Net increase (decrease) in fair value of investments	
Domestic equities and funds	30,993,913
Real estate funds	3,135,650
Venture capital funds	3,856,036
Hedge funds	2,520,859
International equities and funds	35,872,834
Domestic bonds and funds	2,700,626
U.S. government security	323,359
International bonds and funds	3,422,642
Interest and dividends	<u>14,834,209</u>
	97,660,128
Less investment expense	<u>(5,434,327)</u>
Net investment income	<u>92,225,801</u>
Total additions	<u>149,225,743</u>

**DEDUCTIONS**

Benefits	59,506,314
Refunds and transfers of contributions	5,976,930
Administrative and other expenses	<u>919,117</u>
Total deductions	<u>66,402,361</u>

<b>NET CHANGE IN FIDUCIARY NET POSITION</b>	<b>82,823,382</b>
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Fiduciary Net Position, Beginning of Year	<u>597,784,365</u>
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Fiduciary Net Position, End of Year	<u><u>\$ 680,607,747</u></u>
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The accompanying notes are an integral part of these financial statements.

## **NOTES TO FINANCIAL STATEMENTS**

# **BRISTOL COUNTY RETIREMENT SYSTEM**

## **NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017**

### **1. PLAN DESCRIPTIONS AND CONTRIBUTION INFORMATION**

The following brief description of the System is provided for general information purposes only. Participants should refer to Chapter 32 of the Massachusetts General Laws, the System's Retirement Guide, and other applicable statements, for more complete information.

#### General

The System is a multiple-employer cost sharing public employee retirement plan, which is a defined benefit pension plan covering eligible County and local municipal employees, except teachers covered by the Commonwealth of Massachusetts Teachers' Retirement System. Membership in the System is mandatory immediately upon the commencement of employment for all permanent, full-time employees. The supervisory authority for the management and operation of the System is the Retirement Board, which acts as a fiduciary for investment of the funds and the application of System interpretations.

As of January 1, 2018 the date of the latest updated valuation, the System's membership consisted of:

	<u>2017</u>
Retirees and beneficiaries currently receiving benefits	2,219
Inactive participants	772
Disabled participants	281
Active participants	<u>3,220</u>
	<u>6,492</u>

#### Benefits

Members become vested after 10 years of creditable service. A superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with ten years of service if hired after 1978 and if classified in groups 1 or 2. A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching the age of 60 with ten years of service if in group 1, 55 years of age with ten years of service if in group 2, and 55 years of age if hired prior to 1978 or if classified in group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions, whose normal retirement is at age 55).

#### Contributions

The contributions rates for active members are pursuant to statute. Active members contribute 5, 7, 8, or 9% of their gross regular compensation depending on the date upon which their membership began and certain employees contribute an additional 2% over \$30,000 of annual compensation. Deductions are deposited in the annuity savings fund and earn interest at a rate determined by the Public Employee Retirement Administration Commission ("PERAC") actuary. When a member's retirement becomes effective their deduction and related interest are transferred to the annuity reserve fund. Any cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by the Commonwealth of Massachusetts' state law during those years are the responsibility of the Commonwealth and deposited into the pension fund. Cost-of-living adjustments granted after 1997 must be approved by the system and all costs are the responsibility of the system.

Employer contributions are based on an actuarial calculation. The System and its members determine and pay pension costs on an accrual basis. Employer contributions are due semiannually on a fiscal year basis in July and January; however, in 2017, the System authorized an actuarially determined discount of approximately 2% on contributions paid in advance of July 1<sup>st</sup>. The Commonwealth of Massachusetts currently reimburses the System on a semi-annual basis for increases granted to retirement members between 1981 and 1997.

## **BRISTOL COUNTY RETIREMENT SYSTEM**

### **NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017**

#### **Participating Employers**

As of December 31, 2017, there were 37 participating employers consisting of:

Towns	14
County	1
Special districts and housing authorities	<u>22</u>
	<u>37</u>

The accounting records of the System are maintained on a calendar year basis in accordance with the standards and procedures established by the Commissioner of the Public Employee Retirement Administration Commission (PERAC).

The Chairman of the System's Board of Directors also serves as Treasurer for Bristol County, which is a member of the System.

#### **Tax Status**

The System is a qualified plan under the Internal Revenue Code of 1986, as amended and, therefore, is exempt from federal income taxes. The plan administrator believes that the System is designed and is currently being operated in substantial compliance with the applicable requirements of the Internal Revenue Code and will retain its status as a qualified plan.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The following are the significant accounting policies followed by the Bristol County Retirement System (System) also referred to as the (Plan).

#### **Basis of Accounting**

The accompanying financial statements of the Bristol County Retirement System have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles.

Bristol County Retirement System is a special-purpose government engaged only in fiduciary activities. The financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of trade dates. Member and employer contributions are established by statute. Member contributions are a percentage of salaries and are recognized in the period in which employees' salaries are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

The System is administered by the Bristol County Retirement Board (Board) and is governed by Chapter 32 of the Massachusetts General Laws and other applicable statutes. Administrative expenses are paid with funds provided by operations of the plan.

#### **Fair Value Measurement**

The System measures assets and liabilities at fair value according to the hierarchy established by generally accepted accounting principles. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

## **BRISTOL COUNTY RETIREMENT SYSTEM**

### **NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017**

The hierarchy is based upon valuation inputs, which are assumptions that market participants would use when pricing an asset or a liability, including assumptions about risk. The following levels are considered:

- Level 1 inputs are quoted prices in active markets for identical assets or liabilities at the measurement date.
- Level 2 inputs are directly observable for an asset or a liability (including quoted prices for similar assets or liabilities), as well as inputs that are indirectly observable for the asset or liability.
- Level 3 inputs are unobservable for an asset or liability.

#### Cash and short-term investments

Cash and cash equivalents are considered to be cash on hand and demand deposits with an original maturity date of three months or less. Short term investments are marketable securities, stated at fair value, that are expected to be sold or converted to cash within three to twelve months from December 31, 2017. Short-term investments include bills, notes and commercial paper, valued at fair value. All short term investments are measured using level 1 inputs. For more information regarding cash and short-term investments, see Note 3.

#### Accounts Receivable

Accounts receivable consist of employee deductions, securities sold, amounts due from other systems and interest and dividends receivable. These receivables are considered to be 100% collectible and there is no allowance for uncollectible accounts.

#### Investments, at fair value

Investments are reported at fair value. Debt and equity securities are reported at fair value, as determined by the System's custodial agent, using pricing services or prices quoted by independent brokers based on the latest reported sales prices at current exchange rates for securities traded on national or international exchanges. The fair value of the pro rata share of units owned by the System in equity index and commingled trust funds and mutual funds, is determined by the respective fund trustee based on quoted sales prices of the underlying securities. The fair value of real estate funds is provided by the fund's manager based on the value of the underlying real estate properties as determined from independent appraisals. Securities for which such valuations are unavailable are reported at their fair value as estimated in good faith by the Board based on the information provided by the investment managers responsible for such investments. Fair values for investments in pooled investment vehicles (non-exchange traded commingled funds) are based on the commingled fund's published net asset value (NAV) which are valued based on the underlying marketable securities or in the absences of readily ascertainable market values, the price of identical or similar securities.

Net investment income includes net appreciation (depreciation) in the fair value of investments, interest income, dividend income, and investment income from real estate and investment expenses, which includes investment management and custodial fees and all other significant investment related costs. Foreign currency translation gains and losses are reflected in the net appreciation (depreciation) in the fair value of investments. Investment income from real estate includes the System's pro rata share of income from operations, net appreciation (depreciation) in the fair value of the underlying real estate properties and the System's real estate investment management fees.

The System may invest in various traditional financial instruments that fall under the broad definition of derivatives, which may include U.S. Treasury Strips, collateralized mortgage obligations, convertible stocks and bonds, and variable rate instruments. These investments do not increase investment risk beyond allowable limits specified in the System's investment policy.

## **BRISTOL COUNTY RETIREMENT SYSTEM**

### **NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017**

Investment securities underlying commingled or mutual fund investments are exposed to various risks, such as interest rate, market and credit risks. Due to the risks associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities may occur in the near term and that such change could materially affect the amounts reported in the statement of System's net position.

For more information regarding the fair values of investments, see Note 3.

#### **Other Assets**

Other assets consist of two condominiums which are owned by a Trust that is related to the System. The System's administrative offices are located in the condominiums, which were purchased via funding by the member units and general funds. Carrying amount approximates cost, net of accumulated depreciation.

#### **Deferred Outflows of Resources and Deferred Inflows of Resources**

In addition to assets, the statement of fiduciary net position will report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of fiduciary net position that applies to a future period and so will not be recognized as an outflow of resources (deduction). There were no deferred outflows of resources at December 31, 2017.

In addition to liabilities, the statement of fiduciary net position reports a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (addition). There were no deferred inflows of resources at December 31, 2017.

#### **Use of Estimates**

The preparation of the System's financial statements in conformity with accounting principles generally accepted in the United States of America requires the Board to make significant estimates and assumptions that affect the reported amounts of net position held in trust for pension benefits at the date of the financial statements and the actuarial information included in the required supplementary information as of the benefit information date, the changes in Plan net position during the reporting period and, when applicable, disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

#### **Risks and Uncertainties**

Contributions to the System and the actuarial information in Schedule in the required supplementary information are reported based on certain assumptions pertaining to interest rates, inflation rates and employee compensation and demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions may occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the financial statements.

### **3. CASH AND SHORT TERM INVESTMENTS, AND INVESTMENTS**

The System maintains deposits in authorized financial institutions. In the case of deposits, custodial credit risk is the risk that, in the event of a bank failure, the System's deposits may not be returned. The System does not have a formal deposit policy for custodial credit risk. At December 31, 2017, cash and short-term investment deposits totaled \$13,234,914 and had a carrying amount of \$12,377,224. Of the deposit amounts, \$10,686,671 was exposed to custodial credit risk at December 31, 2017, because it was uninsured and uncollateralized. The difference between deposit amounts and carrying amounts generally represents outstanding checks.

# BRISTOL COUNTY RETIREMENT SYSTEM

## NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2017

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1 – Quoted prices for identical investments in active markets;
- Level 2 – Observable inputs other than quoted market prices, and;
- Level 3 – Unobservable inputs.

The System has the following recurring fair value measurements as of December 31, 2017:

		Fair Value Measurements Using		
	12/31/2017	Level 1	Level 2	Level 3
<b>Investments by fair value level:</b>				
Debt securities:				
U.S. Treasury securities	\$ 26,128,134	\$ 26,128,134	\$	\$
Auto loans receivable	18,705		18,705	
CMO	3,045,768		3,045,768	
Corporate bonds	17,010,190	17,010,190		
Credit card receivable	870,409		870,409	
FNMA	171,111		171,111	
Municipal bonds	1,094,804		1,094,804	
Other asset backed	4,613,152		4,613,152	
Total debt securities	52,952,273	43,138,324	9,813,949	
Equity securities:				
Capital markets	6,194,676	6,194,676		
Healthcare providers and service	8,879,273	8,879,273		
Banking	9,702,154	9,702,154		
Insurance	10,432,046	10,432,046		
Electronic equipment	6,737,040	6,737,040		
Semiconductors	9,325,177	9,325,177		
International	32,099,270	32,099,270		
Other	54,153,131	54,153,131		
Total equity securities	137,522,767	137,522,767		
Pooled investments:				
Equity mutual funds-international	74,353,337	74,353,337		
Fixed income mutual funds-domestic	59,733,734	59,733,734		
Fixed income mutual funds-international	13,539,413	13,539,413		
Real estate investment trusts	13,130,928	13,130,928		
Total pooled investments	160,757,412	160,757,412		
Total investments by fair value level	351,232,452	\$ 341,418,503	\$ 9,813,949	\$
<b>Investments measured at net asset value (NAV):</b>				
Pooled domestic equities	58,898,948			
Pooled international equities	77,493,712			
Pooled international fixed income	43,684,374			
Private equity funds	54,292,955			
Hedge funds	33,638,138			
Timberland funds	4,240,959			
Real estate funds	45,438,871			
Total investments measured at NAV	317,687,957			
Total investments measured at fair value	\$ 668,920,409			

# BRISTOL COUNTY RETIREMENT SYSTEM

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using the following approaches:

- Municipal Bonds: quoted prices for similar securities in active markets;
- Collateralized Mortgage Obligations (CMO), Auto Loans, Credit Card Receivable, Federal National Mortgage Association (FNMA), and Other Asset Backed Securities: matrix pricing based on the securities' relationship to benchmark quoted prices.

Investments valued using the net asset value (NAV) per share (or its equivalent) are considered select "pooled investments" and, unlike more traditional investments, generally do not have readily obtainable market values and take the form of limited partnerships and private investment trusts. If December 31 statements are available, these values are used preferentially. However, some partnerships/trusts are unable to provide statements timely. If December 31 valuations are not available, the value is derived from the most recently available valuation, taking into account subsequent calls and distributions. The following table presents the unfunded commitments, redemption terms and fair value of the pooled investments measured at NAV:

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (if currently eligible)</u>	<u>Redemption Notice Period</u>
Pooled domestic equities (1)	\$ 58,898,948	\$	Daily	1 - 10 days
Pooled international equities (2)	77,493,712		Daily	5 days
Pooled international fixed income (3)	43,684,374		Daily	1 - 10 days
Private equity funds (4)	54,292,955	44,188,414	Ineligible	N/A
Hedge funds (5)	33,638,138		Quarterly	45 - 90 days
Timberland funds (6)	4,240,959	1,240,366	Ineligible	N/A
Real estate (7)	<u>45,438,871</u>	9,401,495	Daily/ Ineligible	1 day / N/A
Total investments measured at NAV	<u>\$ 317,687,957</u>			

1. *Pooled domestic equities.* This type includes investments in two (2) private investment trusts that invest primarily in certain common stocks of companies or American Depositary Receipts traded on major U.S. stock exchanges. The fair values of the investments in this type have been determined using the NAV per share of the investments. The underlying assets are valued using the market approach for quotations that are readily available; for investments whose quotations are not readily available, the trustee determines the fair value in good faith using applicable valuation inputs.

2. *Pooled international equities.* This type includes two (2) private investment trusts that invest primarily in equity securities outside of North America. Both trusts provide exposure to economies that offer different business cycles and growth opportunities than North American markets. The fair values of the investments in this type have been determined using the NAV per share of the investments. The underlying assets are valued using the market approach, or if information is not available, then valuation procedures are performed in good faith by the investment manager.

3. *Pooled international fixed income.* This type includes two (2) private investment trusts that invest primarily in international fixed income securities issued by foreign governments, their agencies, corporations and local/quasi-governmental entities. The investments also include exposure to derivative instruments created to hedge or gain exposure to emerging market fixed income securities. The fair values of the investments in this type are determined using the NAV per share. The market approach is used to value the underlying investments within each fund.

## BRISTOL COUNTY RETIREMENT SYSTEM

### NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

4. *Private equity funds.* This type includes investments in nine (9) private equity funds that invest in limited partnerships and limited liability companies in the form of investee funds (primary and secondary) and direct investments in partnership units and common stock. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Plan's ownership interest in partners' capital of the investments. These investments can never be redeemed. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 1 to 14 years.

5. *Hedge funds.* This type includes investments in one (1) hedge fund which is invested on behalf of the System by the Pension Reserves Investment Trust (PRIT) Fund. The hedge fund invests in event-driven strategies such as credit-event, equity-event, multi-event driven, and stressed/distressed credit positions. The fair values of the investment in this type have been determined using the NAV per share. Redemption frequency for this investment is quarterly with 45 – 90 days' notice.

6. *Timberland funds.* This type includes investments in two (2) funds that acquire, hold, lease, mortgage, sell, exchange, dispose and otherwise exercise control over timberland property. Properties are primarily located in the U.S., Brazil and Austria. The fair values of the funds have been determined using the NAV per share. The investments can never be redeemed. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 7 years.

7. *Real Estate.* This type includes six (6) privately held real estate investment trusts that focus on acquiring, holding and disposing of residential and commercial real estate. Other strategies include capitalizing on the current dislocation in the residential and commercial mortgage loan and structured securities markets. Two (2) of the six (6) investments can never be redeemed. Distributions from the non-redeemable funds will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 1 to 4 years.

*Credit risk* is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. Credit risk is measured by the assignment of a rating by a nationally recognized statistical rating organization. Equity securities, money market funds, repurchase agreements, international equity funds and equity mutual funds are not rated as to credit risk. The investment policy of the System does not formally address credit risk; however, the Board provides guidelines with each investment manager, as applicable. At December 31, 2017, the System had \$52,952,273 of individual debt securities. In addition, the System held \$59,733,734 of domestic fixed income mutual funds and \$57,223,787 of international fixed income funds. The average rating for domestic fixed income mutual funds was BBB+ (all managed by PIMCO and are based on Moody's ratings) and the average rating of international fixed income funds was AA-, BB+ and BB (for funds managed by Colchester Global, Stone Harbor and Ashmore, respectively, and are based on S&P ratings).

# BRISTOL COUNTY RETIREMENT SYSTEM

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

At December 31, 2017, the System's individual debt securities had the following ratings:

### Ratings by S&P

<u>Investment Type</u>	<u>Fair Value</u>	<u>S&amp;P Rating</u>					
		<u>AAA</u>	<u>AA</u>	<u>A</u>	<u>BBB</u>	<u>BB</u>	<u>Not Rated</u>
Auto Loans Receivable	\$ 18,705	\$ 18,705	\$	\$	\$	\$	\$
CMO	3,045,768	2,903,296					142,472
Corporate Bonds	17,010,190	147,637	334,703	5,357,700	11,006,006	164,144	
Credit Card Receivable	870,409	651,393					219,016
FNMA	171,111						171,111
Government Issues	26,128,134		26,128,134				
Municipals	1,094,804		1,040,170	54,634			
Other Asset Backed	<u>4,613,152</u>	<u>1,208,209</u>	<u>543,746</u>	<u>-</u>	<u>122,795</u>	<u>-</u>	<u>2,738,402</u>
Total Debt Securities	<u>\$52,952,273</u>	<u>\$4,929,240</u>	<u>\$28,046,753</u>	<u>\$5,412,334</u>	<u>\$11,128,801</u>	<u>\$164,144</u>	<u>\$ 3,271,001</u>

### Ratings by Moody's

<u>Investment Type</u>	<u>Fair Value</u>	<u>Moody's Rating</u>					
		<u>Aaa</u>	<u>Aa</u>	<u>A</u>	<u>Baa</u>	<u>Ba</u>	<u>Not Rated</u>
Auto Loans Receivable	\$ 18,705	\$ 18,705	\$	\$	\$	\$	\$
CMO	3,045,768	2,903,296					142,472
Corporate Bonds	17,010,190	2,771,766	1,137,930	142,168	10,976,605	1,081,130	900,591
Credit Card Receivable	870,409	870,409					
FNMA	171,111	171,111					
Government Issues	26,128,134	26,128,134					
Municipals	1,094,804	60,062	677,262	357,480			
Other Asset Backed	<u>4,613,152</u>	<u>1,531,499</u>	<u>-</u>	<u>378,811</u>	<u>-</u>	<u>-</u>	<u>2,702,842</u>
Total Debt Securities	<u>\$52,952,273</u>	<u>\$34,454,982</u>	<u>\$1,815,192</u>	<u>\$878,459</u>	<u>\$10,976,605</u>	<u>\$1,081,130</u>	<u>\$3,745,905</u>

*Interest rate risk* is the risk that changes in market interest rates that will adversely affect the fair market value of an investment. Generally, the longer the maturity of an investment the greater the sensitivity of its fair market value to changes in market interest rates. The investment policy of the System does not formally address interest rate risk; however, the Board provides guidelines with each investment manager, as applicable. The average maturity as of December 31, 2017 for the domestic fixed income mutual funds is 8.83 years and the average maturity for the international fixed income funds is 7.43, 8.55 and 9.18 years (for Colchester Global, Stone Harbor and Ashmore Fixed Income, respectively).

# BRISTOL COUNTY RETIREMENT SYSTEM

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

The following represents the System's individual debt securities' maturities as of December 31, 2017:

<u>Investment Type</u>	<u>Investment Maturities (in Years)</u>				
	<u>Fair Value</u>	<u>Less than 1</u>	<u>1-5</u>	<u>6-10</u>	<u>More than 10</u>
Auto Loans Receivable	\$ 18,705	\$	\$ 18,705	\$	\$
CMO	3,045,768				3,045,768
Corporate Bonds	17,010,190		6,558,840	6,473,315	3,978,035
Credit Card Receivable	870,409		870,409		
FNMA	171,111		171,111		
Government Issues	26,128,134	129,233	13,740,002	7,062,226	5,196,673
Municipals	1,094,804	54,634	508,494		531,676
Other Asset Backed	<u>4,613,152</u>	<u>-</u>	<u>1,678,410</u>	<u>1,026,796</u>	<u>1,907,946</u>
Total Debt Securities	<u>\$ 52,952,273</u>	<u>\$ 183,867</u>	<u>\$ 23,545,971</u>	<u>\$14,562,337</u>	<u>\$ 14,660,098</u>

*Foreign currency risk* is the risk that changes in exchange rates will adversely affect the fair market value of an investment. The System's investment policy does not formally address foreign currency risk. The following table represents the System's foreign currency exposure by investment type at December 31, 2017:

<u>Currency</u>	<u>Cash</u>	<u>Equity</u>	<u>Real Estate</u>	<u>Total</u>
Australian Dollar	\$ 590	\$ 770,693	\$ 716,034	\$ 1,487,317
Brazilian Real	18,781	850,474		869,255
Canadian Dollar	912	231,118	261,451	493,481
Swiss Franc	976	1,742,214		1,743,190
Czech Koruna	1,898			1,898
Danish Krone	1,022	154,541		155,563
Euro	14,142	7,066,818	864,609	7,945,569
British Pound	2,953	2,753,044	888,436	3,644,433
Hong Kong Dollar	4,662	3,054,876	660,802	3,720,340
Hungarian Forint	6,656	156,236		162,892
Japanese Yen	9,271	9,068,482	667,134	9,744,887
South Korean Won	4,756	1,428,642		1,433,398
Mexican Peso	893			893
Malaysian Ringgit	2,607			2,607
Norwegian Krone		160,118		160,118
New Zealand Dollar	854			854
Swedish Krona	4,088	972,120		976,208
Singapore Dollar		108,414	164,093	272,507
Turkish Lira	<u>-</u>	<u>601,969</u>	<u>-</u>	<u>601,969</u>
Total	<u>\$ 75,061</u>	<u>\$ 29,119,759</u>	<u>\$ 4,222,559</u>	<u>\$ 33,417,379</u>

*Concentration of credit risk* is assumed to arise when the amount of investments that the System has with anyone issuer exceeds 5% or more of the total value of the System's investments. The System does not have more than 5% of its investments in any one issuer, except for certain pooled funds when the underlying investments are held with more than one issuer.

# BRISTOL COUNTY RETIREMENT SYSTEM

## NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

### Schedule of investment returns

The annual money-weighted rate of return, net of investment expense for the year ended December 31, 2017 was 15.65%, which has been calculated in accordance with the Provisions of GASB #67, *Financial Reporting for Pension Plans*.

### 4. ACTUARIAL VALUATION

Components of the net pension liability as of December 31, 2017

Total Pension Liability	\$ 992,655,817
The Pension Plan's Fiduciary Net Position	<u>\$ 680,607,747</u>
Net Pension Liability	\$ 312,048,070

The Pension Plan's Fiduciary Net Position as a percentage of Total Pension Liability	68.56%
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Additional information as of the latest actuarial valuation follows:

Valuation date	January 1, 2018
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, open group
Remaining amortization period	11 years
Asset valuation method	Market Value

Actuarial assumptions:

Investment rate of return	7.75%												
Projected salary increases	<table><tr><th><u>Service</u></th><th><u>Rate</u></th></tr><tr><td>0-1</td><td>5.50%</td></tr><tr><td>2</td><td>4.00%</td></tr><tr><td>3-4</td><td>3.50%</td></tr><tr><td>5-7</td><td>3.00%</td></tr><tr><td>8+</td><td>2.75%</td></tr></table>	<u>Service</u>	<u>Rate</u>	0-1	5.50%	2	4.00%	3-4	3.50%	5-7	3.00%	8+	2.75%
<u>Service</u>	<u>Rate</u>												
0-1	5.50%												
2	4.00%												
3-4	3.50%												
5-7	3.00%												
8+	2.75%												
Cost-of-living adjustments	3.00% of the lesser of the pension amount and \$18,000 per year												
Discount rate	7.75%												
Inflation	4.00%												
Rates of retirement	Varies based upon age for general employees, police, and fire employees												
Rates of disability	Varies based upon age for general employees, police, and fire employees. General employees – 35% ordinary, 65% service connected Police & Fire – 5% ordinary, 95% service connected												
Mortality rates	Pre-Retirement – RP-2014 Blue Collar Mortality Table with Scale MP-2014, fully generational.												

## BRISTOL COUNTY RETIREMENT SYSTEM

### NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2017

Healthy Retiree – Group 1 & 2 retirees are represented by the RP-2014 Blue Collar Mortality Table set forward five years for males and 3 years for females, fully generational. Group 4 retirees are represented by the RP-2014 Blue Collar Mortality Table set forward three years for males and six years for females, fully generational.

Disabled Retirees – Group 1 & 2 disabled retirees are represented by the RP-2000 Mortality Table set forward six years. Group 4 disabled retirees are represented by the RP-2000 Mortality Table set forward two years. Generational adjusting is based on Scale MP-2014.

#### Family Composition

Assumption that 80% of members will be survived by a spouse, and that females are three years younger than males.

#### Survivor Benefits

Occupational Death – Survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participants annual salary

Non-Occupational Death – Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of \$250 per month to the surviving spouse, plus \$120 for the first child, plus \$90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of \$250 per month plus \$120 for the first child and \$90 each additional child.

Refund of contributions – Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

#### Cost-of-Living Adjustments

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment (COLA) will be determined by an annual vote of the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is \$18,000. All COLA's granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and not the liability of the Retirement System.

For financial reporting purposes, the projection of benefits for the System does not explicitly incorporate the potential effects of the legal limit on employer contributions disclosed in Note 2.

## BRISTOL COUNTY RETIREMENT SYSTEM

### NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

#### Discount Rate

The discount rate used to measure the total pension liability was 7.75%. The discount rate was selected based on a projection of employer and employee contributions, benefit payments, expenses and the long term expected rate of return on trust assets. Under Chapter 32 of the Massachusetts General Law, employers are required to make the necessary contributions to the trust such that the Plan reaches a full funding status by 2040.

#### Sensitivity of the net position liability to changes in the discount rate

The following presents the net position liability calculated using the discount rate of 7.75%, as well as what the net position liability would be if it were calculated using a discount rate that is 1-percentage point lower (6.75%) or 1-percentage point higher (8.75%)

	<u>1% decrease</u> (6.75%)	<u>Current Discount Rate</u> (7.75%)	<u>1% increase</u> (8.75%)
Bristol County Retirement System's net pension liability as of December 31, 2017	\$423,489,749	\$312,048,070	\$218,181,423

The Plan Fiduciary Net Position as a percentage of the Total Pension liability is 68.6%

#### Investment policy

The Plan does not have a formal investment policy. The Board is in the process of formalizing an investment policy. The Board approved target weights and expected rates of return on November 4, 2014.

As of November 4, 2014, the Plan's portfolio target weights and assumed long-term rates of return at the asset class level are as follows:

<u>Asset Class</u>	<u>Portfolio Target</u> <u>Weight</u>	<u>Long term Expected</u> <u>Rate of Return</u>
Equity	46.5%	7.9%
Fixed income	24.5%	4.6%
Private equity	8.5%	10.5%
Real estate funds	7.5%	6.5%
Hedge funds	5.0%	5.9%
Infrastructure	5.0%	7.6%
Timber	3.0%	7.5%

## 5. LEGALLY REQUIRED RESERVE ACCOUNTS

The balances in the System's legally required reserves at December 31, 2017:

	<u>2017</u>	<u>Purpose</u>
Annuity Savings Fund	\$ 156,400,000	Active members' contribution balance
Annuity Reserve Fund	51,885,066	Retired members' contribution account
Pension Reserve Fund	472,262,961	Amounts appropriated to fund future retirement benefits
Military Credit	59,720	Members' contribution while on military leave
	<u>\$ 680,607,747</u>	

All reserve accounts are funded at levels required by state statute.

## BRISTOL COUNTY RETIREMENT SYSTEM

### NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

#### 6. COMMITMENTS AND CONTINGENCIES

The System is involved in certain lawsuits at December 31, 2017. In the opinion of the System's management, the ultimate resolution of these legal actions will not result in a material loss to the System.

#### 7. RECENT ACCOUNTING PRONOUNCEMENTS

##### **Pronouncements implemented in 2017:**

The GASB issued Statement #73, *Accounting and Financial Reporting for Pensions and Related Assets That are Not Within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and 68*, which was required to be implemented during fiscal year 2017. This pronouncement did not have a material effect on the System.

The GASB issued Statement #74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans ("OPEB")*, which was required to be implemented in fiscal year 2017. The pronouncement addresses reporting by OPEB plans that administer benefits on behalf of governments. This pronouncement did not have a material effect on the System.

The GASB issued Statement #76, *The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments*, which was required to be implemented in fiscal year 2017. The pronouncement replaces previously issued guidance and improves financial reporting by redefining the hierarchy of generally accepted accounting principles (GAAP). This pronouncement did not have a material effect on the System.

The GASB issued Statement #82, *Pension Issues- an amendment of statements #67, #68, and #73*, which was required to be implemented in 2017. The pronouncement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations for the guidance in an Actuarial Standard of Practice for financial reporting purposes and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. This pronouncement did not have a material effect on the System.

##### **Future Pronouncements**

The GASB issued Statement #75, *Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions*, which is required to be implemented in fiscal year 2018. The pronouncement replaces previously issued guidance and establishes new accounting and financial reporting requirements for governments whose employees are provided other post-employment benefits. The System expects to implement the pronouncement as applicable.

The GASB issued Statement #84, *Fiduciary Activities*, which is required to be implemented in fiscal year 2019. The pronouncement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangement that are fiduciary activities. The System expects to implement the pronouncement as applicable.

The GASB issued Statement #85, *Omnibus 2017*, which is required to be implemented in fiscal year 2018. The statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). The System expects to implement the pronouncement as applicable.

**BRISTOL COUNTY RETIREMENT SYSTEM**

**NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED DECEMBER 31, 2017**

The GASB issued Statement #87, Leases, which is required to be implemented in fiscal year 2020. This statement will increase the usefulness of governments' financial statements by required the reporting of certain lease liabilities that are currently not reported. It will enhance comparability of financial statements among governments by requiring lessees and lessors to report leases under a single model. The System expects to implement the pronouncement as applicable.

The GASB issued Statement #89, Accounting For Interest Cost Incurred Before the End of a Construction Period, which is required to be implemented in fiscal year 2020. This Statement will improve financial reporting by providing users of financial statements with more relevant information about capital assets and the cost of borrowing for a reporting period. The System expects to implement the pronouncement as applicable.

**REQUIRED SUPPLEMENTARY INFORMATION**

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS**

	2017	2016	2015	2014
<b>Total pension liability:</b>				
Service cost	\$ 16,358,649	\$ 15,729,470	\$ 15,124,490	\$ 16,427,712
Interest	70,979,193	69,256,778	68,495,323	68,538,354
Experience (Gain) and Loss	39,172,630		23,510,546	
Changes in Plan Provisions			8,062,908	
Change in assumptions			(13,807,975)	
Benefit payments, including refunds of employee contributions	(65,483,244)	(61,382,742)	(62,046,359)	(56,581,624)
Net change in total pension liability	61,027,228	23,603,506	39,338,933	28,384,442
Total pension liability, beginning	931,628,589	908,025,083	868,686,150	840,301,708
Total pension liability, ending (a)	<u>\$ 992,655,817</u>	<u>\$ 931,628,589</u>	<u>\$ 908,025,083</u>	<u>\$ 868,686,150</u>
<b>Plan fiduciary net position increase (decrease):</b>				
Member contributions, transfers in, and other	\$ 19,347,554	\$ 18,716,780	\$ 18,270,738	\$ 14,991,145
Employer contributions	37,652,388	36,312,416	34,411,381	32,216,280
Net investment income (loss)	92,225,801	33,689,630	(5,679,765)	27,547,920
Retirement benefits and refunds	(65,483,244)	(61,382,742)	(59,773,359)	(52,732,330)
Administrative expenses	(919,117)	(1,149,837)	1,405,035	(1,507,773)
Net increase (decrease) in fiduciary net position	82,823,382	26,186,247	(11,365,970)	20,515,242
Fiduciary net position at beginning of year	597,784,365	571,598,118	582,964,088	562,448,846
Fiduciary net position at end of year (b)	<u>\$ 680,607,747</u>	<u>\$ 597,784,365</u>	<u>\$ 571,598,118</u>	<u>\$ 582,964,088</u>
<b>Net pension liability - ending (a) - (b)</b>	<u>\$ 312,048,070</u>	<u>\$ 333,844,224</u>	<u>\$ 336,426,965</u>	<u>\$ 285,722,062</u>
Plan fiduciary net position as a percentage of total pension liability	68.56%	64.17%	62.95%	67.11%
Covered-employee payroll	\$ 164,456,820	\$ 155,392,270	\$ 152,406,793	\$ 141,877,055
Net pension liability as a percentage of covered employee payroll	189.74%	214.84%	220.74%	201.39%

Note: This schedule is intended to present information for 10 years.  
Until a 10-year trend is compiled, information is presented for those years  
for which information is available.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF CONTRIBUTIONS AND RELATED RATIOS**

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarial determined contribution	\$ 38,352,544	\$ 36,641,656	\$ 34,405,310	\$ 32,305,486
Discounts on contributions from early payments and adjustments for interest and other payments	(700,156)	(689,802)	(643,501)	(89,206)
Contributions in relation to the actuarially determined contributions	<u>37,652,388</u>	<u>36,312,416</u>	<u>34,411,381</u>	<u>32,216,280</u>
Contribution deficiency (excess)	\$	\$ (360,562)	\$ (649,572)	\$
Covered-employee payroll	\$ 164,456,820	\$ 155,392,270	\$ 152,406,793	\$ 141,877,055
Contributions as a percentage of covered- employee payroll	22.89%	23.37%	22.58%	22.71%

Note: This schedule is intended to present information for 10 years.  
Until a 10-year trend is compiled, information is presented for those years  
for which information is available.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF INVESTMENT RETURNS**

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense calculated in accordance with the provisions of GASB #67, <i>Financial Reporting for Pension Plans</i>	15.65%	2.94%	-0.55%	5.29%

Note: This schedule is intended to present information for 10 years.  
Until a 10-year trend is compiled, information is presented for those years  
for which information is available.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION  
DECEMBER 31, 2017

**NOTE 1 – CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS**

The Schedule of Changes in the Net Pension Liability and Related Ratios includes the detailed changes in the systems total pension liability, changes in the systems net position, and the ending net pension liability. It also demonstrates the system's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

The System performs an actuarial valuation bi-annually. The latest valuation date was January 1, 2018. Changes in benefit terms, differences between expected and actual experience and changes in assumptions have been included in these financial statements.

**NOTE 2 – CONTRIBUTIONS**

Governmental employers are required to pay an annual appropriation as established by PERAC. The total appropriation includes the amounts to pay the pension portion of each member's retirement allowance, an amount to amortize the actuarially determined unfunded liability to zero in accordance with the system's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The total appropriations are payable on July 1 and January 1. Employers may choose to pay the entire appropriation in July at a discounted rate. Accordingly, actual employer contributions may be less than the "total appropriation". The pension fund appropriations are allocated amongst employers based on employer allocation of net pension liability.

**NOTE 3 – MONEY WEIGHTED RATE OF RETURN**

The money weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense. A money weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. Inputs to the money weighted rate of return calculation are determined monthly.

**BRISTOL COUNTY RETIREMENT SYSTEM**

INDEPENDENT AUDITOR'S REPORT  
ON AUDIT OF SPECIFIC ELEMENTS, ACCOUNTS,  
AND ITEMS OF FINANCIAL STATEMENTS

**INDEPENDENT AUDITOR'S REPORT**

To the Honorable Bristol County Retirement Board  
Bristol County Retirement System  
Taunton, Massachusetts

**Report on the Financial Statements**

We have audited the accompanying schedule of employer allocations of the Bristol County Retirement System, as of and for the year ended December 31, 2017 and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense included in the accompanying schedule of pension amounts by employer of the Bristol County Retirement System as of and for the year ended December 31, 2017, and the related notes.

**Management's Responsibility for the Financial Statements**

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

**Auditor's Responsibility**

Our responsibility is to express opinions on the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer allocations and specified column totals included in the schedule of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of the employer allocations and the specified column totals included in the schedule of pension amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer, 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 schedule of pension amounts by employer 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 schedule of employer allocations and the specified column totals included in the schedule of pension amounts by employer.

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

## Opinions

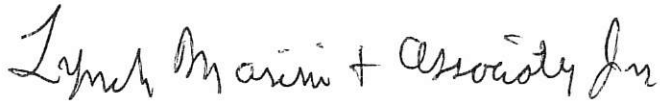
In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for the Bristol County Retirement System as of and for the year ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

## Other Matters

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Bristol County Retirement System as of and for the year ended December 31, 2017, and our report thereon dated September 11, 2018, expressed an unmodified opinion on those financial statements.

## Restriction on Use

This report is intended solely for the information and the use of the Bristol County Retirement System management, the Bristol County Retirement System employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.



Norwell, Massachusetts  
September 11, 2018

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**SCHEDULE OF EMPLOYER ALLOCATIONS**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

Employer	FY18 Total Appropriation	Employer Allocation Percent of Total Net Pension Liability
Bristol County	\$ 3,635,730	9.6560%
Town of Acushnet	1,161,794	3.0856%
Acushnet Hous. Auth.	23,061	0.0612%
Town of Berkley	524,221	1.3923%
Town of Dartmouth	4,644,743	12.3359%
Dartmouth Hous. Auth.	63,391	0.1684%
Dartmouth Fire Dis. #3	64,367	0.1710%
Dartmouth Fire Dis. #2	10,919	0.0290%
Dartmouth Fire Dis. #1	35,795	0.0951%
Town of Dighton	664,690	1.7653%
Dighton Hous. Auth.	5,377	0.0143%
Dight.-Reh. Reg. School	796,839	2.1163%
Dighton Water Dist.	81,759	0.2171%
Town of Easton	4,054,011	10.7669%
Easton Hous. Auth.	85,283	0.2265%
Town of Freetown	963,251	2.5583%
Freet.-Lakev.Reg. Sch.	691,159	1.8356%
Town of Mansfield	4,212,838	11.1888%
Mansfield Housing	65,312	0.1735%
Brist.Cnty. Mosquito Cont.	123,713	0.3286%
Town of Norton	2,601,305	6.9087%
Norton Housing Auth.	35,919	0.0954%
Town of Raynham	1,899,112	5.0438%
Raynham Hous. Auth.	55,497	0.1474%
Raynham Water Dist.	83,657	0.2222%
Town of Rehoboth	826,206	2.1943%
Town of Seekonk	2,545,846	6.7614%
Seekonk Housin. Auth.	25,831	0.0686%
Seekonk Water District	78,590	0.2087%
Town of Somerset	3,078,552	8.1762%
Somerset Housing Auth.	61,192	0.1625%
Town of Swansea	1,820,075	4.8339%
Swansea Housing Auth.	22,358	0.0594%
Swansea Water District	80,689	0.2143%
Town of Westport	2,315,199	6.1489%
Westport Housing Auth.	11,169	0.0296%
Somerset Berkley Schools	202,938	0.5390%
Total	<u>\$ 37,652,388</u>	<u>100.0000%</u>

See notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

		Deferred Outflows of Resources			
			Net Difference	Changes in	
			Between	Proportion	
			Projected	and Differences	
		Differences	and Actual	Between	
		Between	Investment	Employer	
		Expected	Earnings on	Contributions	
	Net Pension	and Actual	Pension Plan	and Proportionate	Total
Employer	Liability	Experience	Investments	Share of	Deferred
				Contributions	Outflows
Bristol County	\$ 30,131,330	\$ 3,817,116	\$ 2,856,554	\$ 873,837	\$ 7,547,507
Town of Acushnet	9,628,546	1,219,769	912,819		2,132,588
Acushnet Hous. Auth	190,973	24,193	18,105	24,327	66,625
Town of Berkley	4,344,641	550,390	411,886	91,576	1,053,852
Town of Dartmouth	38,493,899	4,876,505	3,649,354	495,659	9,021,518
Dartmouth Hous.Auth	525,488	66,570	49,818	4,616	121,004
Dartmouth Fire Dis.#3	533,602	67,598	50,587	22,928	141,113
Dartmouth Fire Dis.#2	90,494	11,464	8,579	9,669	29,712
Dartmouth Fire Dis.#1	296,757	37,594	28,133	28,799	94,526
Town of Dighton	5,508,579	697,842	522,232	40,753	1,260,827
Dighton Hous. Auth.	44,623	5,653	4,231	7,231	17,115
Dight.-Reh. Reg. School	6,603,867	836,594	626,069	45,254	1,507,917
Dighton Water Dist.	677,456	85,821	64,226	34,875	184,922
Town of Easton	33,597,870	4,256,264	3,185,193	37,580	7,479,037
Easton Hous. Auth	706,788	89,537	67,006	102,147	258,690
Town of Freetown	7,983,118	1,011,321	756,826	462,694	2,230,841
Freet.-Lakev.Reg. Sch	5,727,949	725,631	543,029	129,191	1,397,851
Town of Mansfield	34,914,400	4,423,045	3,310,004	212,147	7,945,196
Mansfield Housing	541,403	68,586	51,327	4,283	124,196
Brist.Cnty.Mosquito.Cont.	1,025,389	129,899	97,209	27,643	254,751
Town of Norton	21,558,443	2,731,079	2,043,813	190,160	4,965,052
Norton Housing Auth	297,694	37,712	28,222	2,548	68,482
Town of Raynham	15,739,065	1,993,864	1,492,117	145,647	3,631,628
Raynham Hous.Auth	459,958	58,268	43,605	41,851	143,724
Raynham Water Dist	693,370	87,838	65,734	25,692	179,264
Town of Rehoboth	6,847,264	867,429	649,144	21,152	1,537,725
Town of Seekonk	21,098,797	2,672,848	2,000,239	270,617	4,943,704
Seekonk Housin. Auth.	214,065	27,118	20,294	22,238	69,650
Seekonk Water District	651,244	82,501	61,740	27,291	171,532
Town of Somerset	25,513,649	3,232,134	2,418,781	1,156,192	6,807,107
Somerset Housing Auth.	507,078	64,238	48,073	43,341	155,652
Town of Swansea	15,084,077	1,910,889	1,430,022		3,340,911
Swansea Housing Auth.	185,356	23,482	17,572	13,211	54,265
Swansea Water District	668,718	84,715	63,397	59,010	207,122
Town of Westport	19,187,505	2,430,722	1,819,042	18,780	4,268,544
Westport Housing Auth.	92,678	11,741	8,786	4,193	24,720
Somerset Berkley Schools	1,681,937	213,072	159,454	46,520	419,046
Total for All Entities	\$ 312,048,070	\$ 39,531,042	\$ 29,583,222	\$ 4,743,652	\$ 73,857,916

See notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

Employer	Deferred Inflows of Resources				Pension Expense			
	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense	Revenue
Bristol County	\$ 492,985	3,621,397	\$ 1,588	\$ 4,115,970	\$ 4,058,005	\$ 423,116	\$ 4,481,121	\$ 187,062
Town of Acushnet	157,534	1,157,227	16,305	1,331,066	1,296,749	(8,032)	1,288,717	59,776
Acushnet Hous. Auth.	3,124	22,953	4,929	31,006	25,721	9,305	35,026	1,186
Town of Berkley	71,083	522,170	511,703	1,104,956	585,125	(200,911)	384,214	26,972
Town of Dartmouth	629,806	4,626,469	1,841	5,258,116	5,184,255	229,699	5,413,954	238,979
Dartmouth Hous. Auth.	8,598	63,157	18,450	90,205	70,771	(6,881)	63,890	3,262
Dartmouth Fire Dis. #3	8,730	64,132	88,826	161,688	71,864	(32,367)	39,497	3,313
Dartmouth Fire Dis. #2	1,480	10,876	21,533	33,889	12,186	(6,342)	5,844	562
Dartmouth Fire Dis. #1	4,856	35,666	11,116	51,638	39,966	9,032	48,998	1,842
Town of Dighton	90,126	662,060	83,165	835,351	741,880	(22,428)	719,452	34,198
Dighton Hous. Auth.	730	5,363	40,870	46,963	6,009	(16,056)	(10,047)	277
Dight.-Reh. Reg. School	108,047	793,699	254,641	1,156,387	889,390	(101,124)	788,266	40,998
Dighton Water Dist.	11,084	81,421	148,016	240,521	91,239	(55,020)	36,219	4,206
Town of Easton	549,701	4,038,029	93,450	4,681,180	4,524,869	(23,465)	4,501,404	208,583
Easton Hous. Auth.	11,563	84,947	18,370	114,880	95,189	39,823	135,012	4,388
Town of Freetown	130,613	959,467	87,078	1,177,158	1,075,145	180,271	1,255,416	49,561
Freet.-Lakev.Reg. Sch.	93,716	688,425	609,826	1,391,967	771,425	(232,631)	538,794	35,560
Town of Mansfield	571,241	4,196,259	893,183	5,660,683	4,702,176	(334,969)	4,367,207	216,756
Mansfield Housing	8,858	65,070	15,862	89,790	72,916	(5,820)	67,096	3,361
Brist.Cnty.Mosquito.Cont.	16,776	123,238	69,381	209,395	138,096	(21,228)	116,868	6,366
Town of Norton	352,722	2,591,046	1,180	2,944,948	2,903,432	77,329	2,980,761	133,840
Norton Housing Auth.	4,870	35,779	2,482	43,131	40,095	(271)	39,824	1,848
Town of Raynham	257,509	1,891,632	48,860	2,198,001	2,119,696	48,844	2,168,540	97,712
Raynham Hous. Auth.	7,526	55,281	5,195	68,002	61,946	14,812	76,758	2,856
Raynham Water Dist	11,345	83,334	60,277	154,956	93,381	(18,277)	75,104	4,305
Town of Rehoboth	112,029	822,953	66,386	1,001,368	922,170	(15,781)	906,389	42,509
Town of Seekonk	345,201	2,535,802	67,020	2,948,023	2,841,528	98,613	2,940,141	130,986
Seekonk Housin. Auth.	3,502	25,728	3,800	33,030	28,830	8,981	37,811	1,329
Seekonk Water District	10,655	78,271	139,352	228,278	87,709	(53,727)	33,982	4,043
Town of Somerset	417,433	3,066,410	427,991	3,911,834	3,436,111	367,515	3,803,626	158,394
Somerset Housing Auth.	8,297	60,944	9,501	78,742	68,292	13,707	81,999	3,148
Town of Swansea	246,793	1,812,911	271,692	2,331,396	2,031,484	(122,311)	1,909,173	93,645
Swansea Housing Auth.	3,033	22,277		25,310	24,962	6,161	31,123	1,151
Swansea Water District	10,941	80,371	233,435	324,747	90,059	(84,744)	5,315	4,152
Town of Westport	313,930	2,306,090	30,105	2,650,125	2,584,123	(6,628)	2,577,495	119,120
Westport Housing Auth.	1,517	11,139	1,125	13,781	12,482	985	13,467	575
Somerset Berkley Schools	27,519	202,147	384,892	614,558	226,517	(159,165)	67,352	10,442
Total for All Entities	\$ 5,105,473	\$ 37,504,140	\$ 4,743,426	\$ 47,353,039	\$ 42,025,793	\$ 15	\$ 42,025,808	\$ 1,937,263

See notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

Employer	Deferred Inflows/(Outflows) Recognized in Future Pension Expense				Covered Employer Payroll
	June 30, 2019	June 30, 2020	June 30, 2021	June 30, 2022	
Bristol County	\$ 2,089,272	\$ 1,592,663	\$ 91,919	\$ (342,318)	\$ 5,019,635
Town of Acushnet	502,352	382,328	26,216	(109,374)	5,785,644
Acushnet Hous. Auth.	22,162	16,440	(789)	(2,194)	62,227
Town of Berkley	(27,437)	(12,341)	38,018	(49,344)	3,056,984
Town of Dartmouth	2,318,992	1,767,542	114,156	(437,288)	20,009,363
Dartmouth Hous. Auth.	19,010	14,916	2,824	(5,951)	297,445
Dartmouth Fire Dis. #3	(13,911)	(8,515)	7,890	(6,039)	748,078
Dartmouth Fire Dis. #2	(3,937)	(2,138)	2,927	(1,029)	143,352
Dartmouth Fire Dis. #1	28,031	20,379	(2,169)	(3,353)	112,073
Town of Dighton	259,339	201,325	27,406	(62,594)	4,036,032
Dighton Hous. Auth.	(18,242)	(13,231)	2,122	(497)	96,479
Dight.-Reh. Reg. School	221,538	173,130	31,884	(75,022)	4,554,269
Dighton Water Dist.	(35,549)	(23,906)	11,570	(7,714)	548,790
Town of Easton	1,766,904	1,339,083	73,576	(381,706)	18,124,306
Easton Hous. Auth.	88,815	65,994	(2,968)	(8,031)	303,207
Town of Freetown	654,136	490,608	(381)	(90,680)	3,935,779
Freet.-Lakev. Reg. Sch.	3,761	14,804	52,406	(65,087)	4,587,661
Town of Mansfield	1,418,843	1,101,150	161,148	(396,628)	21,254,745
Mansfield Housing	21,204	16,558	2,779	(6,135)	301,313
Brist. Cnty. Mosquito Cont.	24,892	21,455	10,641	(11,632)	775,500
Town of Norton	1,239,101	948,763	77,170	(244,930)	12,539,421
Norton Housing Auth.	15,281	11,871	1,577	(3,378)	212,266
Town of Raynham	898,619	680,745	33,068	(178,805)	8,171,286
Raynham Hous. Auth.	44,184	33,624	1,749	(3,835)	162,742
Raynham Water Dist	11,778	11,275	9,121	(7,866)	637,986
Town of Rehoboth	350,609	261,576	1,961	(77,789)	3,665,867
Town of Seekonk	1,246,916	944,567	43,910	(239,712)	11,695,609
Seekonk Housin. Auth.	22,596	16,872	(414)	(2,434)	56,066
Seekonk Water District	(34,776)	(23,978)	9,415	(7,407)	605,809
Town of Somerset	1,853,114	1,374,464	(42,438)	(289,867)	11,263,883
Somerset Housing Auth.	45,771	34,505	874	(4,240)	218,317
Town of Swansea	650,651	493,855	36,364	(171,355)	8,178,998
Swansea Housing Auth.	17,174	13,137	743	(2,099)	78,877
Swansea Water District	(75,829)	(52,416)	18,216	(7,596)	905,677
Town of Westport	1,006,089	768,669	61,632	(217,971)	10,848,000
Westport Housing Auth.	6,441	4,904	350	(756)	41,097
Somerset Berkley Schools	(112,751)	(81,432)	17,771	(19,100)	1,422,037
Total for All Entities	<u>\$ 16,525,143</u>	<u>\$ 12,599,245</u>	<u>\$ 922,244</u>	<u>\$ (3,541,756)</u>	<u>\$ 164,456,820</u>

See notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**FOR THE YEAR ENDED DECEMBER 31, 2017**

Employer	Discount Rate Sensitivity			Schedule of Contributions			
	1% decrease (6.75%)	Current discount rate (7.75%)	1% increase (8.75%)	Statutory Required Contribution	Contribution in Relation to the Statutory Required Contribution	Contribution Deficiency/ (Excess)	Contributions as a Percentage of Covered Employee Payroll
Bristol County	\$ 40,892,065	\$ 30,131,330	\$ 21,067,515	\$ 3,635,730	\$ 3,635,730	\$	72.43%
Town of Acushnet	13,067,165	9,628,546	6,732,178	1,161,794	1,161,794		20.08%
Acushnet Hous. Auth.	259,175	190,973	133,526	23,061	23,061		37.06%
Town of Berkley	5,896,232	4,344,641	3,037,727	524,221	524,221		17.15%
Town of Dartmouth	52,241,136	38,493,899	26,914,532	4,644,743	4,644,743		23.21%
Dartmouth Hous. Auth.	713,155	525,488	367,416	63,391	63,391		21.31%
Dartmouth Fire Dis. #3	402,738	533,602	207,490	64,367	64,367		8.60%
Dartmouth Fire Dis. #2	122,812	90,494	63,273	10,919	10,919		7.62%
Dartmouth Fire Dis. #1	724,166	296,757	373,089	35,795	35,795		31.94%
Town of Dighton	7,475,845	5,508,579	3,851,540	664,690	664,690		16.47%
Dighton Hous. Auth.	60,559	44,623	31,200	5,377	5,377		5.57%
Dight.-Reh. Reg. School	8,962,290	6,603,867	4,617,354	796,839	796,839		17.50%
Dighton Water Dist.	919,394	677,456	473,670	81,759	81,759		14.90%
Town of Easton	45,596,599	33,597,870	23,491,279	4,054,011	4,054,011		22.37%
Easton Hous. Auth.	959,201	706,788	494,178	85,283	85,283		28.13%
Town of Freetown	10,834,110	7,983,118	5,581,712	963,251	963,251		24.47%
Freet.-Lakev.Reg. Sch.	7,773,557	5,727,949	4,004,922	691,159	691,159		15.07%
Town of Mansfield	47,383,297	34,914,400	24,411,782	4,212,838	4,212,838		19.82%
Mansfield Housing	734,753	541,403	378,544	65,312	65,312		21.68%
Brist. Cnty. Mosquito Cont.	1,391,584	1,025,389	716,941	123,713	123,713		15.95%
Town of Norton	29,257,560	21,558,443	15,073,437	2,601,305	2,601,305		20.75%
Norton Housing Auth.	404,008	297,694	208,144	35,919	35,919		16.92%
Town of Raynham	21,359,920	15,739,065	11,004,589	1,899,112	1,899,112		23.24%
Raynham Hous. Auth.	624,222	459,958	321,598	55,497	55,497		34.10%
Raynham Water Dist.	940,992	693,370	484,798	83,657	83,657		13.11%
Town of Rehoboth	9,292,611	6,847,264	4,787,535	826,206	826,206		22.54%
Town of Seekonk	28,633,762	21,098,797	14,752,058	2,545,846	2,545,846		21.77%
Seekonk Housin. Auth.	290,513	214,065	149,672	25,831	25,831		46.07%
Seekonk Water District	883,821	651,244	455,343	78,590	78,590		12.97%
Town of Somerset	34,625,278	25,513,649	17,838,876	3,078,552	3,078,552		27.33%
Somerset Housing Auth.	688,169	507,078	354,543	61,192	61,192		28.03%
Town of Swansea	20,471,018	15,084,077	10,546,628	1,820,075	1,820,075		22.25%
Swansea Housing Auth.	251,552	185,356	129,599	22,358	22,358		28.35%
Swansea Water District	907,537	668,718	467,561	80,689	80,689		8.91%
Town of Westport	26,039,893	19,187,505	13,415,702	2,315,199	2,315,199		21.34%
Westport Housing Auth.	126,457	92,678	65,480	11,169	11,169		27.18%
Somerset Berkley Schools	2,282,604	1,681,937	1,175,993	202,938	202,938		14.27%
Total for All Entities	\$ 423,489,750	\$ 312,048,070	\$ 218,181,424	\$ 37,652,388	\$ 37,652,388	\$	22.89%

See notes to the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**DECEMBER 31, 2017**

**1. SCHEDULE OF EMPLOYER ALLOCATIONS**

Governmental Accounting Standards Board (GASB) Statement #68 requires employers participating in a cost-sharing pension plan to recognize pension liabilities as employees provide services to the government and earn their pension benefits. Employers participating in cost-sharing plans are required to recognize their proportionate share of the plan's collective pension amounts for all benefits provided through the plan including the net pension liability, deferred outflows of resources, deferred inflows of resources, and pension expense.

GASB Statement #68 requires the allocation of the collective pension amounts be consistent with the manner in which contributions to the plan are determined. As permissible under GASB Statement #68, The Schedule of Employer Allocations is used to demonstrate the allocation of Bristol County Retirement System's collective pension amounts. The fiscal year 2018 statutory contributions included in the Schedule of Employer Allocations were based on the actuarial accrued liability and normal cost for each employer.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans shall, on or before October 15 of each year, furnish the actuary with such information as he may require to enable him to determine the amount to be paid for the pension fund thereof for the fiscal year commencing on the next following July 1. The actuary shall, on or before December 15, immediately preceding such fiscal year, determine such amount and specify in a written notice to said board the amount so required to be paid; however, that any community which has a valid and current actuarial report shall only appropriate the amount specified in their actuarial report and the actuary shall not require a larger amount to be appropriated. The System has a valid actuarial reported dated January 1, 2018 which was used as a basis for employer appropriations.

In 2010, the Bristol County Sheriffs functions were taken over by the Commonwealth of Massachusetts. Bristol County continues to pay for the retirement obligations related to previously retired Sheriff's employees. These liabilities are actuarially determined and are included in the County's funding schedule.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC completed an analysis of the costs and liabilities attributable to the additional benefits payable in accordance with the ERIP.

The accrued liability for the members who accept the ERIP is separately identified in the System's funding schedule and is amortized using straight-line and increasing amortization, as follows:

- Level amortization of the 2010 Early Retirement Incentive by June 30, 2022; \$227,493 over 4 years
- Increasing amortization of the 2002 Early Retirement Incentive by June 30, 2023, \$3,902,554 over 5 years with 4.5% increasing payments
- Level amortization of the 2003 Early Retirement Incentive by June 30, 2022, \$1,383,377 over 4 years

**BRISTOL COUNTY RETIREMENT SYSTEM**  
**NOTES TO SCHEDULE OF EMPLOYER ALLOCATIONS AND**  
**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**  
**DECEMBER 31, 2017**

**2. SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

The Schedule of Pension Amounts by Employer presents the net pension liability, the various categories of deferred outflows of resources and deferred inflows of resources, and pension expense for all participating employers including differences between expected and actual economic experience; differences between projected and actual investment earnings, net; and changes of assumptions. In 2017, the System conducted an Experience Study as of December 31, 2017 which significantly changed the projected Net Pension Liability for each member unit of the System. The results and allocations of this Experience Study have been allocated to the member units and will be amortized in accordance with GASB 67.