BARNSTABLE COUNTY

RETIREMENT SYSTEM

AUDIT REPORT

JANUARY 1, 2014 - DECEMBER 31, 2018



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COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESQ., Chairman

JOHN W. PARSONS, ESQ., Executive Director

Auditor SUZANNE M. BUMP | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES M. MACHADO | RICHARD MacKINNON, Jr. | JENNIFER F. SULLIVAN

March 1, 2021

The Public Employee Retirement Administration Commission (PERAC) has completed a review of the audits of the Barnstable County Retirement System conducted by the firm of Powers & Sullivan, LLC, Certified Public Accountants. Powers & Sullivan conducted these audits 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. The audits covered the period from January 1, 2014 to December 31, 2018.

We conducted an inspection of the work papers prepared by Powers & Sullivan. We determined that the audits were conducted in a competent professional manner and the work papers demonstrated that audit tests and procedures were performed in sufficient detail to allow us to accept the final audit reports as issued.

We identified specific differences between these financial audits designed to provide an opinion on financial statements and our compliance audits performed in accordance with the accounting and management standards established by PERAC in regulation 840 CMR 25.00 and in compliance with the provisions specified in PERAC Memo #18/2019.

Accordingly, we supplemented the field work conducted in the audits by Powers & Sullivan with certain limited procedures designed to provide additional assurance that the accounting and management standards established by PERAC were adhered to and complied with. The specific objectives of our review were to determine: I) that the Board is exercising appropriate fiduciary oversight, 2) that cash and investment balances are accurately stated, 3) that travel expenses were properly documented and accounted for, 4) that retirement contributions are accurately deducted, 5) that retirement allowances were correctly calculated, and 6) that required member documentation is maintained.

To achieve these objectives, we inspected certain records of the Barnstable County Retirement System in the above areas. Specifically, we reviewed the minutes of the Board meetings for compliance with fiduciary oversight, and verified cash and investment balances. We tested a sample of travel expenses for Board approvals, supporting documentation and proper accounting. We tested the payroll records of a sample of active members to confirm that the correct percentage of regular compensation is being deducted, including the additional two percent over \$30,000. We





Barnstable County Audit Report March 1, 2021 Page 2

tested a sample of members who retired during our audit period to verify that their retirement allowance was calculated in accordance with the statute. We also reviewed a sample of member files for accuracy and completeness.

In our opinion, the financial records are being maintained and the management functions are being performed in conformity with the standards established by PERAC with the exception related to our supplemental work which is detailed in the finding presented in this report.

It should be noted that the financial statements included in this audit report were based on the work performed by Powers & Sullivan and the tests conducted for the periods referenced in their opinions. These audits were not performed by employees or representatives of PERAC. It should also be noted that the opinions expressed in these audit reports were based on the laws and regulations in effect at the time.

The financial statements and footnotes presented in this report were limited to the express results as of and for the years ended December 31, 2018, December 31, 2017, December 31, 2016, December 31, 2015, and December 31, 2014.

In closing, I wish to acknowledge the work of Powers & Sullivan, who conducted these examinations, and PERAC examiners, Michelle Lastra, George Nsia, and Richard Wrona, who conducted limited procedures to supplement the field work, and express my appreciation to the Barnstable County Retirement Board and staff for their courtesy and cooperation.

Sincerely,

John W. Parsons, Esq. Executive Director

EXPLANATION OF FINDING AND RECOMMENDATION

Vacation Payouts at Retirement:

Three of the sampled retirees had lump sum vacation payments included in their 3-year average salaries. The Board was using these payments to bridge the gap between the final day worked and the retirement date. For example, if a member's last day worked was October Ist and they received a lump sum payment for 5 weeks of vacation time, then the retirement date would be November 5th. These members were also receiving creditable service for the time represented by the lump sum.

These payments are not regular compensation pursuant to 840 CMR 15.03 (3): "wages' shall not include ... I-time lump sum payments in lieu of or for unused vacation ..." Since these members are not receiving regular compensation, they cannot earn creditable service during this period either.

If the member wants to be able to include the remaining vacation time in the 3-year average then they must remain on the payroll and be paid on their normal weekly/bi-weekly schedule until the time owed is used. If this is done then creditable service would be granted too.

Recommendation: Units must be instructed to stop taking retirement contributions out of lump sum vacation payments at the end of members' careers. The Board must stop using these payments in the calculation of average salaries and crediting this time as service.

Board Response:

This issue was resolved in July 2019 by abandoning the longstanding practice of extending the retirement date of members who received vacation time payments upon retirement. At that time, all units were advised to cease withholding retirement deductions from unused and/or accrued vacation time. Any deductions withheld from these pay types in error since are promptly refunded and not used as regular compensation in retirement calculations.

FINAL DETERMINATION:

PERAC Audit staff will follow up in six (6) months to ensure appropriate actions have been taken regarding all findings.

SUPPLEMENTARY INFORMATION

SCHEDULE OF ALLOCATION OF INVESTMENTS OWNED

(percentages by category)

	AS OF DECEMBER 31, 2018			
		PERCENTAGE OF TOTAL		
	MARKET VALUE	ASSETS		
Cash	\$1,382,733	0.1%		
Pooled Real Estate Funds	1,093,400	0.1%		
PRIT Cash Fund	831,536	0.1%		
PRIT Core Fund	<u>1,069,334,612</u>	<u>99.7</u> %		
Grand Total	\$1,072,642,281	<u>100.0</u> %		

For the year ending December 31, 2018, the rate of return for the investments of the Barnstable County Retirement System was -1.81%. For the five-year period ending December 31, 2018, the rate of return for the investments of the Barnstable County Retirement System averaged 6.50%. For the 34-year period ending December 31, 2018, since PERAC began evaluating the returns of the retirement systems, the rate of return on the investments of the Barnstable County Retirement System was 7.42%.

The composite rate of return for all retirement systems for the year ending December 31, 2018 was -2.25%. For the five-year period ending December 31, 2018, the composite rate of return for the investments of all retirement systems averaged 6.22%. For the 34-year period ending December 31, 2018, since PERAC began evaluating the returns of the retirement systems, the composite rate of return on the investments of all retirement systems averaged 9.00%.

ADMINISTRATION OF THE SYSTEM

The System is administered by a five-person Board of Retirement consisting of two members appointed by the governing authority, a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the Advisory Council.

Appointed Member: Robert Lawton, Chairman

Appointed Member: Ronald Bergstrom Term Expires: 1/6/22

Elected Member: Robert F. Rolanti Term Expires: 1/6/23

Elected Member: Harold S. Brunelle Term Expires: 1/6/21

Appointed Member: TK Menesale Serves until a successor is appointed

The Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the system. The board must annually file a financial statement of condition for the system with the Executive Director of PERAC.

The investment of the system's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the system has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the System must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by two persons designated by the Board.

Retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. Fidelity insurance is the only required policy coverage under Ch. 32 §21 and §23 as well as 840 CMR 17.01. The policy is designed to cover specific intentional acts such as theft, fraud or embezzlement and also specify who commits such acts, most commonly employees of the system. This coverage reimburses the system for the losses it suffers as a result of its employees' actions. It does not insure the employees for their illegal acts. Statutorily required coverage is provided by the current fidelity insurance policy to a limit of \$1,000,000 with a \$10,000 deductible issued through Travelers Casualty and Surety Company. The system also has Fiduciary coverage to a limit of \$50,000,000 under a blanket policy issued through the Massachusetts Association of Contributory Retirement Systems.

BOARD REGULATIONS

The Barnstable Retirement Board has adopted Supplemental Regulations which are available on the PERAC website at https://www.mass.gov/barnstable-county-retirement-board-regulations.

ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by the Segal Group, Inc. as of January I, 2020.

The actuarial liability for active members was	\$876,734,111
The actuarial liability for inactive members was	25,004,875
The actuarial liability for retired members was	1,093,208,896
The total actuarial liability was	\$1,994,947,882
System assets as of that date were (actuarial value)	1,212,111,231
The unfunded actuarial liability was	\$ <u>782,836,651</u>
The ratio of system's assets to total actuarial liability was	60.8%
As of that date the total covered employee payroll was	\$293,746,441

The normal cost for employees on that date was 10.3% of payroll The normal cost for the employer (including expenses) was 6.4% of payroll

The principal actuarial assumptions used in the valuation are as follows:

Investment Return: 7.15% per annum

Rate of Salary Increase: Varies by group and service

SCHEDULE OF FUNDING PROGRESS AS OF JANUARY 1, 2020

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Cov. Payroll ((b-a)/c)
1/1/2020	\$1,212,111,231	\$1,994,947,882	\$782,836,651	60.8%	\$293,746,441	266.5%
1/1/2018	\$1,061,514,465	\$1,783,937,286	\$722,422,821	59.5%	\$271,510,348	266.1%
1/1/2016	\$910,455,464	\$1,563,442,019	\$652,986,555	58.2%	\$258,172,567	252.9%
1/1/2014	\$776,973,700	\$1,353,810,101	\$576,836,401	57.4%	\$253,920,106	227.2%
1/1/2012	\$651,063,981	\$1,173,483,848	\$522,419,867	55.5%	\$239,437,303	218.2%

For valuations as of 1/1/2016 and later, the covered payroll was set equal to the total payroll.

MEMBERSHIP EXHIBIT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Retirement in Past Years	2007	2010	2011	2012	2015	2011	2015	2010	2017	2010
Superannuation	100	137	128	135	139	148	192	159	141	199
·	3	137	0	133	137	3	2	137	2	
Ordinary Disability	-	2	-	2	' 	-		1	-	6
Accidental Disability	15	10	16	8	15	13	10	13	5	7
Total Retirements	118	149	144	145	155	16 4	204	173	I 4 8	212
Total Retirees, Beneficiaries and										
Survivors	2,481	2,495	2,648	2,708	2,787	2,891	3,035	3,099	3,122	3,254
Total Active Members	5,195	4,812	4,710	4,744	4,766	4,709	4,718	4,875	4,644	4,762
Pension Payments										
Superannuation	\$27,398,326	\$29,997,228	\$32,879,167	\$35,186,853	\$37,618,932	\$40,556,776	\$44,014,168	\$47,819,695	\$51,797,759	\$55,918,217
Survivor/Beneficiary Payments	1,5 4 8,989	1,692,407	1,820,226	2,057,144	2,224,297	2,383,170	2,515,430	2,671,530	2,835,800	3,100,767
Ordinary Disability	780,611	792,511	843,608	914,833	897,222	893,856	926,257	924,996	899,941	780,979
Accidental Disability	7,701,100	7,834,604	8,327,393	8,798,663	9,461,897	10,112,977	10,553,996	11,339,886	11,497,457	11,699,921
Other	1,956,935	2,308,699	2,241,304	2,307,689	2,502,823	2,636,111	2,820,889	2,928,901	3,619,239	4,385,615
Total Payments for Year	\$ <u>39,385,961</u>	\$ <u>42,625,449</u>	\$ <u>46,111,698</u>	\$ <u>49,265,182</u>	\$ <u>52,705,171</u>	\$ <u>56,582,891</u>	\$ <u>60,830,740</u>	\$ <u>65,685,008</u>	\$ <u>70,650,196</u>	\$ <u>75,885,499</u>

LEASED PREMISES

The Barnstable County Retirement Board leases approximately 6,127 square feet of space for its offices located at 750 Attucks Lane, Hyannis, MA. They signed a ten-year lease which will expire December 31, 2028. The landlord is Renaissance Trust 2000, LLC.

The following schedule displays the minimum lease obligations on non-cancelable operating leases as of December 31, 2018:

For the year ending:	Annual Rent
2019	\$ 134,794
2020	134,794
2021	134,794
2022	134,794
2023	134,794
2024	134,794
2025	147,048
2026	147,048
2027	147,048
2028	<u>147,048</u>

Total future minimum lease payments required \$1,396,956

Notes: The lease does provide a termination provision effective after the seventh year of the lease, with a termination penalty of one year's rent of \$147,048.

In addition to lease payments, Barnstable County Retirement is obligated to pay common area maintenance fees. These total about \$39,000 per year or about \$6.30 per square foot. The amounts vary depending on actual costs incurred by the landlord.

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2018

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2018

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Financial Section

Barnstable County Retirement Association

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Financial Section

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable County Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the Barnstable County Retirement Association's financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial 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 Barnstable County Retirement Association as of December 31, 2018, and the results of its operations and changes in its financial 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 Management's Discussion and Analysis; the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 August 27, 2019, on our consideration of the Barnstable County Retirement Association'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 Barnstable County Retirement Association's internal control over financial reporting and compliance.

Restriction on Use

This report is intended solely for the information and use of the Barnstable County Retirement Association, the Public Employee Retirement Administration Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

August 27, 2019

Powers & Sullivan LC.

Management's Discussion and Analysis

As management of the Barnstable County Retirement Association, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2018. The Association complies with financial reporting requirements issued by the Governmental Accounting Standards Board (GASB).

The GASB is the authoritative standard setting body that provides guidance on how to prepare financial statements in conformity with generally accepted accounting principles (GAAP). Users of these financial statements rely on the GASB to establish consistent reporting standards for all governments in the United States. This consistent application is the only way users can assess the financial condition of a public retirement system compared to others.

Financial Highlights

- The Association's assets exceeded its liabilities at the close of the most recent year by \$1.1 billion (net position)
- The Association's net position decreased by \$28.5 million for the year ended December 31, 2018.
- Total investment loss was \$20.3 million; investment expenses were \$5.8 million; and net investment loss was \$26.2 million.
- Total contributions were \$95.6 million including \$62.5 million from employers, \$28.3 million from members, and \$4.9 million from other transfers in and settlements.
- Retirement benefits, refunds and transfers to other systems amounted to \$96.6 million.
- Administrative expenses were \$1.4 million.
- The Total Pension Liability is \$1.9 billion as of December 31, 2018 while the Net Pension Liability is \$790.4 million
- The Plan fiduciary net position as a percentage of the total pension liability is 57.63%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Association's fiduciary financial statements. These fiduciary financial statements comprise of four components: 1) management's discussion and analysis, 2) fiduciary financial statements, 3) notes to the financial statements and 4) required supplementary information

Fiduciary Financial Statements

The *statement of net position* presents information on all assets and deferred outflows less deferred inflows and liabilities with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position is improving or deteriorating.

The statement of changes in fiduciary net position presents information showing how the Association's net position changed during the most recent year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, additions and deductions are reported in this statement for some items that will only result in cash flows in future periods.

Notes to the Financial Statements

The notes provide additional information that is essential to a full understanding of the data provided in the fiduciary financial statements.

Barnstable County Retirement Association

Management's Discussion and Analysis

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of the Association's financial position. The Association's net position was \$1.075 billion at the close of 2018.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year-end the Association's net position includes investments of \$1.070 billion, cash and cash equivalents of \$2.2 million and accounts receivable of \$2.4 million.

In 2018, the Association's contributions were \$95.6 million and net investment loss was \$26.2 million while retirement benefit payments, refunds, transfers and administration expenses were \$98.0 million, which resulted in a current decrease of \$28.5 million. In 2017, the Association's contributions were \$91.3 million and net investment income was \$160.8 million while retirement benefit payments, refunds, transfers and administration expenses were \$90.8 million, which resulted in a prior year increase of \$161.3 million.

In 2018, the Association's current contributions of \$95.6 million did not fully support deductions totaling \$98.0 million, which resulted in a current deficiency of (\$2.4) million. In 2017, the current contributions fully supported the current expenses.

The main difference of the change in net position between years was the change in net investment income between years. Net investment income was \$160.8 million in 2017, however in 2018 the Association experienced net investment loss of \$26.2 million. The annual money weighted rate of return was -2.34% and 17.17% in 2018 and 2017 respectively. Fluctuations in the Association's annual investment returns are expected.

The following tables present summarized financial information for the past two years:

	2018	2017
Assets:		
Cash and cash equivalents\$	2,214,268	\$ 2,459,946
Investments	1,070,428,012	1,097,123,904
Receivables	2,369,266	3,910,288
Total assets	1,075,011,546	1,103,494,138
Liabilities:		
Accounts payable	777	323
Net Position Restricted for Pension Benefits \$	1,075,010,769	\$ 1,103,493,815

Barnstable County Retirement Association

Management's Discussion and Analysis

	2018	2017
Additions: Contributions:		
Member contributions\$ Employer contributions	28,253,747 62,518,733	\$ 27,339,086 59,204,601
Other contributions	4,862,203	4,753,312
Total contributions	95,634,683	91,296,999
Net investment income (loss): Total investment income (loss) Less, investment expenses	(20,308,800) (5,842,481)	166,164,987 (5,352,824)
Net investment income (loss)	(26,151,281)	160,812,163
Total additions	69,483,402	252,109,162
Deductions: Administration Retirement benefits, refunds and transfers	1,385,431 96,581,017	1,282,473 89,495,593
Total deductions	97,966,448	90,778,066
Net increase (decrease) in fiduciary net position	(28,483,046)	161,331,096
Fiduciary net position at beginning of year	1,103,493,815	942,162,719
Fiduciary net position at end of year \$	1,075,010,769	\$ 1, 103, 493, 815

Requests for Information

This financial report is designed to provide a general overview of the Association's finances for all those with an interest in the Association's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Association's Board, 750 Attucks Lane, Hyannis, MA 02601.

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2018

Assets	
Cash and cash equivalents\$ Investments:	2,214,268
Investments in Pension Reserve Investment Trust	1,069,334,612
Pooled real estate funds	1,093,400
Total investments	1,070,428,012
Receivables, net of allowance for uncollectibles:	
Member deductions	2,369,266
Total Assets	1,075,011,546
Liabilities	
Accounts payable	777
Net Position Restricted for Pensions \$	1,075,010,769

See notes to financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

YEAR ENDED DECEMBER 31, 2018

Additions: Contributions:		
Employer pension appropriation	¢	62,518,733
Member contributions		28,253,747
Transfers from other systems		1,427,259
3(8)c reimbursements from other systems		2,586,821
Workers compensation settlements		62,900
Federal grant reimbursements		150,861
State COLA reimbursements		493,910
Member makeup payments and redeposits		137,899
Interest not refunded		230
Other revenue		2,323
Office revertee	_	2,020
Total contributions	_	95,634,683
Net investment income (loss):		
Investment income (loss)		(20,308,800)
Less: investment expense	_	(5,842,481)
Net investment income (loss)	_	(26,151,281)
Total additions	_	69,483,402
Deductions:		
Administration		1,385,431
Benefits and refunds		91,853,586
Transfers to other systems		2,019,136
3(8)c reimbursements to other systems	_	2,708,295
Total deductions		97,966,448
Net increase (decrease) in fiduciary net position		(28,483,046)
Fiduciary net position at beginning of year	_	1,103,493,815
Fiduciary net position at end of year	\$_	1,075,010,769

See notes to financial statements.

Barnstable County Retirement Association

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NOTE 1 - PLAN DESCRIPTION

The Barnstable County Retirement Association is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Barnstable County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Association is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. The Association has 50 participating employers.

The Association is governed by a five member Board who establish the policies under which the Association operates. Board members also approve all of the Association's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the Association are managed by the Executive Director.

The legislative body for the Association is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi-annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board

The Association is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan 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 those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement Association; Group 1, Group 2, and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

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A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The difference between the total retirement benefit and the annuity is the pension.

Active members contribute between 5 and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the PERAC actuary. When a member's retirement becomes effective, his/her deductions 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 borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the Association and all costs are borne by the Association.

The pension portion of any retirement benefit is paid from the Pension Fund of the Association. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The Association adopted Section 22d of Chapter 32 in April of 1989. The Association's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036.

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the Association, are now paid from investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements of the Barnstable County Retirement Association 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.

BCRA is a special-purpose government engaged only in fiduciary activities. Accordingly, the financial statements are reported using the flow of economic resources measurement focus and the accrual basis of accounting. Under this method, additions are recorded when earned and deductions are recorded when the liabilities are incurred

Cash and Investments

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition. Investments are carried at fair value.

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The fair values were determined by the closing price for those securities traded on national stock exchanges and at the average bid-and-asked quotation for those securities traded in the over-the-counter market. The fair value of private equities are based on management's valuation of estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values. Real estate assets are reported at fair value utilizing an income approach to valuation along with independent appraisals and estimates by management.

Fair Value Measurements

The Retirement Association reports required types of financial instruments in accordance with the fair value standards. These standards require an entity to maximize the use of observable inputs (such as quoted prices in active markets) and minimize the use of unobservable inputs (such as appraisals or valuation techniques) to determine fair value. Fair value standards also require the government to classify these financial instruments into a three-level hierarchy, based on the priority of inputs to the valuation technique or in accordance with net asset value practical expedient rules, which allow for either Level 2 or Level 3 depending on lock up and notice periods associated with the underlying funds.

Instruments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1 – Quoted prices are available in active markets for identical instruments as of the reporting date. Instruments, which are generally included in this category, include actively traded equity and debt securities, U.S. government obligations, and mutual funds with quoted market prices in active markets.

Level 2 – Pricing inputs are other than quoted in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies. Certain fixed income securities, primarily corporate bonds, are classified as Level 2 because fair values are estimated using pricing models, matrix pricing, or discounted cash flows.

Level 3 – Pricing inputs are unobservable for the instrument and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

In some instances the inputs used to measure fair value may fall into different levels of the fair value hierarchy and are based on the lowest level of input that is significant to the fair value measurement.

Market price is affected by a number of factors, including the type of instrument and the characteristics specific to the instrument. Instruments with readily available active quoted prices generally will have a higher degree of market price observability and a lesser degree of judgment used in measuring fair value. It is reasonably possible that change in values of these instruments will occur in the near term and that such changes could materially affect amounts reported in these financial statements. For more information on the fair value of the Retirement Association's financial instruments, see Note 4 – Cash and Investments.

Accounts Receivable

Accounts receivable consist of member deductions, pension fund appropriations, and federal grant reimbursements. These receivables are considered 100% collectible and therefore do not report an allowance for uncollectibles.

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Deferred Outflows/Inflows of Resources

In addition to assets, the statement of fiduciary net position will sometimes 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(s) and so will not be recognized as an outflow of resources (deduction) until then. The BCRA did not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of fiduciary net position will sometimes report 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(s) and so will not be recognized as an inflow of resources (addition) until that time. The BCRA did not have any items that qualify for reporting in this category.

NOTE 3 - PLAN ADMINISTRATION

The Association is administered by a five-person Board of Retirement consisting of the County Finance Director/Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such Association, and a fifth member appointed by the Advisory Council consisting of representatives from the member units.

Chairperson	Mary T. McIsaac	Term Expires:	Indefinite
Appointed Member	Ronald Bergstrom	Term Expires:	1/6/2020
Elected Member	Harold S. Brunelle	Term Expires:	1/6/2021
Elected Member	Robert F. Rolanti	Term Expires:	12/31/2019
Appointed Member	Judith C. Sprague	Term Expires:	Indefinite

Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the Association. The Board must annually file a financial statement of condition for the Association with the Executive Director of PERAC.

The investment of the Association's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC actuary performs verification prior to payment, unless the Association has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the Association must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian:

Ex-Officio Member:

Elected Members:

Appointed Members:

Staff Employees:

) MACRS Blanket Policy

\$50,000,000 Fiduciary Liability

\$1,000,000 Fidelity (ERISA) Bond

St. Paul Travelers Insurance Company

National Union Fire Arch Insurance

Company

NOTE 4 - CASH AND INVESTMENTS

Custodial Credit Risk - Deposits

At December 31, 2018, the carrying amount of the Association's deposits totaled \$2,214,268; this is comprised of \$1,382,732 of cash deposited with banks along with \$831,536 in the PRIT cash fund. Of the \$1,382,732, the bank balance totaled \$3,412,065, which was covered by Federal Depository Insurance. The \$831,536 in the PRIT Cash Fund is uninsured and uncollateralized.

Investments

The Association's investments are as follows:

	December 31, 2018
Investment Type	
PRIT Pooled Funds\$	1,069,334,612
Pooled Real Estate Funds	1,093,400
•	
Total Investments\$	1,070,428,012

Approximately 99% of the Retirement Association's investments are in Pension Reserve Investment Trust (PRIT), which meets the criteria of an external investment pool. This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The Association does not have the ability to control any of the investment decisions relative to its funds in PRIT. PRIT investments are valued using the net asset value (NAV) method.

The remaining investments consist of real estate investments. The fair value of the investments in pooled real estate funds are categorized in Level 3 of the Fair Value Hierarchy as pricing inputs are unobservable and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

The Association's annual money-weighted rate of return on pension plan investments was -2.34%. The money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

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NOTE 5 - MEMBERSHIP

The following table represents the Association's membership at December 31, 2018:

Retirees and beneficiaries currently receiving benefits	3,254 795 4,762
Total	8,811

NOTE 6 - ACTUARIAL VALUATION

Components of the net pension liability as of December 31, 2018 were as follows:

Total pension liability \$	1,865,385,410
The pension plan's fiduciary net position	(1,075,010,769)
The net pension liability\$	790,374,641
The pension plan's fiduciary net position as a percentage of the total pension liability	57.63%

The total pension liability was determined by an actuarial valuation as of January 1, 2018, using the following actuarial assumptions, applied to all periods included in the measurement that was rolled back to December 31, 2018:

Valuation date	January 1, 2018
Actuarial cost method	Entry Age Normal Cost Method.
Amortization method	Appropriations increase at 5.28% per year
Remaining amortization period	17 years from July 1, 2018 for 2002 and 2003 Early Retirement Incentives, retiree sheriffs liability and remaining unfunded liability, and 4 years from July 1, 2018 for 2010 Early Retirement Incentive.
Asset valuation method	The net pension liability is calculated using the market value of assets. The Association also uses an actuarial value of assets that gradually reflects year-to-year changes in the market value of assets in determining contribution requirements.
Inflation rate	3.25%
Projected salary increases	Varies by length of service with ultimate rates of 4.00% for Group 1, 4.25% for Group 2 and 4.50% for Group 4.

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Cost of living adjustments	3.0% of the first \$18,000 of retirement income.
Rates of retirement	Varies based upon age for general employees, police and fire employees.
Rates of disability	For general employees, it was assumed that 55% of all disabilities are accidental disability. For police and fire employees, 90% of all disabilities are assumed to be accidental disability.
Mortality Rates: Pre-Retirement	The RP-2014 Blue Collar Employee Mortality Table projected generationally with Scale MP-2017.
Healthy Retiree	The RP-2014 Blue Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2017.
Disabled Retiree	The RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year and projected generationally with Scale MP-2017.
Investment rate of return/Discount rate.	7.375%, net of pension plan investment expense, including inflation.

Investment policy: The pension plan's policy in regard to the allocation of invested assets is established by PRIT. Plan assets are managed on a total return basis with a long-term objective of achieving a fully funded status for the benefits provided through the pension plan.

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 inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity International developed markets equity International emerging markets equity Core fixed income High-yield fixed income Real estate Commodities Hedge fund, GTAA, Risk parity Private equity	21.00% 13.00% 5.00% 15.00% 8.00% 10.00% 4.00% 11.00% 13.00%	6.16% 6.69% 9.47% 1.89% 4.00% 4.58% 4.77% 3.68% 10.00%
_	100.00%	_

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Discount rate: The discount rate used to measure the total pension liability was 7.375%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rate. For this purpose, only employer contributions that are intended to fund the service costs for future plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. 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.

Sensitivity of the net pension liability to changes in the discount rate: The following presents the net pension liability, calculated using the discount rate of 7.375%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.375%) or 1-percentage-point higher (8.375%) than the current rate:

	Current				
	1% Decrease	Discount Rate	1% Increase		
	(6.375%)	(7.375%)	(8.375%)		
Barnstable County Retirement Association's net					
pension liability as of December 31, 2018\$	1,008,933,895 \$	790,374,641 \$	606,529,204		

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 Association's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

NOTE 7 - COMMITMENTS AND CONTINGENCIES

Various legal actions and claims are pending against the Association. Litigation is subject to many uncertainties, and the outcome of individual litigated matters is not always predictable. Although the amount of liability, if any, at December 31, 2018 cannot be ascertained, management believes any resulting liability should not materially affect the financial position at December 31, 2018.

NOTE 8 - IMPLEMENTATION OF GASB PRONOUNCEMENTS

During 2018, the following GASB pronouncements were implemented:

- The GASB issued Statement #85, *Omnibus 2017*. The financial statements and related notes were not impacted by the implementation of this pronouncement.
- The GASB issued Statement #86, Certain Debt Extinguishment Issues. The financial statements and related notes were not impacted by the implementation of this pronouncement.

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The following GASB pronouncements will be implemented in the future:

- The GASB issued Statement #83, Certain Asset Retirement Obligations, which is required to be implemented in 2019.
- The GASB issued Statement #84, Fiduciary Activities, which is required to be implemented in 2019.
- The GASB issued Statement #87, Leases, which is required to be implemented in 2020.
- The GASB issued Statement #88, Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements, which is required to be implemented in 2019.
- The GASB issued Statement #89, Accounting for Interest Costs Incurred Before the End of a Construction Period, which is required to be implemented in 2020.
- The GASB issued Statement #90, Majority Equity Interests An Amendment of GASB Statements No. 14 and No. 61, which is required to be implemented in 2019.
- The GASB issued Statement #91, Conduit Debt Obligations, which is required to be implemented in 2021.

Management is currently assessing the impact the implementation of these pronouncements will have on the financial statements.

NOTE 9 - SUBSEQUENT EVENTS

Management has evaluated subsequent events through August 27, 2019, which is the date the financial statements were available to be issued.

Required Supplementary Information

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

Total pension liability: Service cost\$ Interest Changes in benefit terms. Differences between expected and actual experience Changes in assumptions.	December 31, 2014 36,820,342 105,040,822	\$ December 31, 2015 38,962,546 110,695,407	\$ December 31, 2016 42,095,884 116,551,753 23,494,437 (10,802,611) 50,013,040	\$ December 31, 2017 41,043,966 125,242,091 (3,055,533) 61,743,785	\$	December 31, 2018 42,023,138 131,278,572
Benefit payments	(69,038,553)	(73,639,192)	(79, 260, 605)	(85,780,394)		(91,853,586)
Net change in total pension liability	72,822,611	76,018,761	142,091,898	139,193,915		81,448,124
Total pension liability - beginning	1,353,810,101	1,426,632,712	1,502,651,473	1,644,743,371		1,783,937,286
Total pension liability - ending (a)\$	1,426,632,712	\$ 1,502,651,473	\$ 1,644,743,371	\$ 1,783,937,286	\$	1,865,385,410
Plan fiduciary net position: Employer pension appropriation	51,562,171 24,847,689 3,779,205 60,614,682 (1,210,998) (69,038,553) (2,469,197) 68,084,999	\$ 53,626,350 25,867,837 3,575,730 5,470,561 (1,288,422) (73,639,192) (2,680,065)	\$ 56,269,527 26,411,361 4,900,585 64,678,206 (1,384,804) (79,260,605) (2,453,642) 69,160,628	\$ 59,204,601 27,339,086 4,753,312 160,812,163 (1,282,473) (85,780,394) (3,715,199)	\$	62,518,733 28,253,747 4,862,203 (26,151,281) (1,385,431) (91,853,586) (4,727,431) (28,483,046)
Net increase (decrease) in inductary net position	00,004,000	10,002,700	00,100,020	101,001,000		(20,400,040)
Fiduciary net position - beginning of year	793,984,293	862,069,292	873,002,091	942,162,719		1,103,493,815
Fiduciary net position - end of year (b)\$	862,069,292	\$ 873,002,091	\$ 942,162,719	\$ 1,103,493,815	\$.	1,075,010,769
Net pension liability - ending (a)-(b)\$	564,563,420	\$ 629,649,382	\$ 702,580,652	\$ 680,443,471	\$	790,374,641
Plan fiduciary net position as a percentage of the total pension liability	60.43%	58.10%	57.28%	61.86%		57.63%
Covered payroll\$	253,920,107	\$ 264,076,910	\$ 269,672,807	\$ 271,510,348	\$	283,145,854
Net pension liability as a percentage of covered payroll	222.34%	238.43%	260.53%	250.61%		279.14%

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.

See notes to required supplementary information.

Barnstable County Retirement Association

Required Supplementary Information

SCHEDULE OF CONTRIBUTIONS

	December 31, 2014	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018
Actuarially determined contribution \$	51,562,171 \$	53,626,350 \$	56,269,527 \$	59,204,601 \$	62,518,733
Contributions in relation to the actuarially determined contribution	(51,562,171)	(53,626,350)	(56,269,527)	(59,204,601)	(62,518,733)
Contribution deficiency (excess) \$	\$	\$	\$	\$	
Covered payroll\$	253,920,107 \$	264,076,910 \$	269,672,807 \$	271,510,348 \$	283,145,854
Contributions as a percentage of covered payroll	20.31%	20.31%	20.87%	21.81%	22.08%

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.

See notes to required supplementary information.

SCHEDULE OF INVESTMENT RETURNS

 Year
 Annual money-weighted rate of return, net of investment expense

 December 31, 2018.
 -2.34%

 December 31, 2017.
 17.17%

 December 31, 2016.
 7.40%

 December 31, 2015.
 0.57%

 December 31, 2014.
 7.58%

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.

See notes to required supplementary information.

Barnstable County Retirement System Audit Report

NOTE A - 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 Association's total pension liability, changes in the Associations net position, and the ending net pension liability. It also demonstrates the plan's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

NOTE B - 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 Association'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 covered payroll.

NOTE C - 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.

NOTE D - CHANGES IN ACTUARIAL ASSUMPTIONS AND PLAN PROVISIONS

Changes	in	Accur	mntione	

None

Changes in Plan Provisions

None

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Required Supplementary Information

Audit of Specific Elements, Accounts and Items of Financial Statements

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable County Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

We have audited the accompanying schedule of employer allocations of the Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2018, and the related notes. We have also audited the total for all entities of the rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense included in the accompanying schedule of pension amounts by employer of the BCRA Pension Plan as of and for the year ended December 31, 2018, and the related notes.

Management's Responsibility for the Schedules

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 the 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 row 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 row 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 employer allocations and the specified row 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 row 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 employer allocations and the specified row totals included in 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 row 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 opinions.

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, total contributions and total pension expense for the total of all participating entities for the Barnstable County Retirement Association as of and for the year ended December 31, 2018, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Barnstable County Retirement Association as of and for the year ended December 31, 2018, and our report thereon, dated August 27, 2019, expressed an unmodified opinion on those financial statements.

Restriction on Use

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

August 27, 2019

Powers & Sullivan LC

SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR ENDED DECEMBER 31, 2018

Employer	FY2019 Pension Fund Appropriation	_	Direct Appropriation E.R.I., Sheriff and Hospital	 FY2019 Total Appropriation		Share of Net Pension Liability	Percent of Total Net Pension Liabilit
Barnstable County	\$ 2,659,382	\$	126,287	\$ 2,785,669 \$;	34,388,815	4.351%
Barnstable County Hospital	-		8,262	8,262		113,988	0.014%
Barnstable County Retired Sheriffs	_		1,506,576	1,506,576		24.908,609	3.151%
Town of Barnstable	9,263,504		217,094	9,480,598		117,037,064	14.808%
Barnstable Fire District	409,133		4,645	413,778		5,108,049	0.646%
Barnstable Housing Authority	177,087		4,170	181,257		2,237,600	0.283%
Town of Bourne	3.669.984		86,253	3,756,237		46,370,383	5.867%
Bourne Housing Authority	61,065		,	61,065		753,842	0.095%
Bourne Recreation Authority	109,916		18,357	128,273		1,583,518	0.200%
Bourne Water District	140,449		5,322	145,771		1,799,529	0.228%
Town of Brewster	2,363,201		18,224	2,381,425		29,398,461	3.720%
Brewster Housing Authority.	12,213		10,221	12,213		150,768	0.019%
Buzzards Bay Water District	79,384			79,384		979,988	0.124%
Cape Light Compact JPE	277,827			277,827		3,429,747	0.434%
· · · ·			0.010				
Cape Cod Mosquito Control District	287,004		2,912	289,916		3,578,985	0.453%
Cape Cod Regional Technical High School	506,836			506,836		6,256,841	0.792%
Centerville/Osterville/Marstons Mills Fire District	1,422,806		5,317	1,428,123		17,630,040	2.231%
Town of Chatham	1,972,388		101,140	2,073,528		25,597,503	3.239%
Chatham Housing Authority	36,639		-	36,639		452,305	0.057%
Cotuit Fire District	305,323		-	305,323		3,769,183	0.477%
Town of Dennis	3,291,383		-	3,291,383		40,631,805	5.141%
Dennis Housing Authority	73,278		2,781	76,059		938,941	0.119%
Dennis Water District	262,578		-	262,578		3,241,500	0.410%
Dennis/Yarmouth Regional School District	1,349,528		-	1,349,528		16,659,793	2.108%
Town of Eastham	1,563,254		25,572	1,588,826		19,613,903	2.482%
Town of Harwich	2,815,079		-	2,815,079		34,751,878	4.397%
Hyannis Fire District	1,105,270		1,837	1,107,107		13,667,129	1.729%
Town of Mashpee	2,973,847		40,818	3,014,665		37,215,748	4.709%
Mashpee Housing Authority	61,065			61,065		753,842	0.095%
Mashpee Water District	158,768		4,628	163,396		2,017,108	0.255%
Town of Nantucket	6,259,124		128,530	6,387,654		78,854,971	9.977%
Nantucket Housing Authority	18,319		-	18,319		226,146	0.029%
County of Nantucket	232,046		-	232,046		2,864,585	0.362%
Nantucket Regional Transit Authority	36,639		-	36,639		452,305	0.057%
Nauset Regional School District North Sagamore Water District	891,544 54,958		-	891,544 54,958		11,006,024 678,451	1.393% 0.086%
Town of Orleans	2.088,410			2,088,410		25,781,220	3.262%
Orleans Housing Authority	42,745			42.745		527,683	0.067%
Town of Provincetown	1.807.513		_	1,807,513		22,313,573	2.823%
Town of Sandwich	3,914,243		_	3,914,243		48,320,951	6.114%
Sandwich Housing Authority	30,532		_	30,532		376,915	0.048%
Sandwich Water District	195,407		_	195,407		2,412,281	0.305%
Town of Truro	1,135,802		14.901	1,150,703		14,205,317	1.797%
Veterans District	61,065		4,463	65,528		808,937	0.102%
Town of Wellfleet	1,264,038		15,607	1,279,645		15,797,094	1.999%
Town of Yarmouth	4,298,950		99,447	4,398,397		54,297,786	6.870%
Yarmouth Housing Authority	36,639		4,477	41,116		507,573	0.064%
West Barnstable Fire District	116,023		-	116,023		1,432,293	0.181%
Cape Cod Regional Transit Authority	189,300		-	189,300		2,336,890	0.296%
Monomoy Regional School District Provincetown Housing Authority	983,141	_	<u>-</u>	 983,141 -	_	12,136,781 -	1.536% 0.000%
Total	\$ 61,064,629	\$_	2,447,620	\$ 63,512,249	·_	790,374,641	100.000%

See notes to schedule of employer allocations and schedule of pension amounts by employer.

Barnstable County Retirement Association

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Employer Allocations

FOR THE YEAR ENDED DECEMBER 31, 2018

	Barnstable County		Barnstable County Hospital		Barnstable County Retired Sheriffs		Town of Bamstable
Net Pension Liability							
Beginning net pension liability\$	33,423,155	\$	98,671	\$	21,125,831	\$	102,598,144
Ending net pension liability\$	34,388,815	\$	113,988	\$	24,908,609	\$	117,037,064
Deferred Outflows of Resources Differences between expected and actual experience \$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments	2,008,302		6,657		1,454,659		6,834,948
Changes of assumptions	2,878,983		9,543		2,085,313		9,798,172
Changes in proportion and differences between employer contributions and proportionate share of contributions	658,584		-		258,385		1,373,686
Total Deferred Outflows of Resources\$	5,545,869	\$	16,200	\$	3,798,357	\$	18,006,806
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience\$	323,638	\$	1,073	\$	234,418	\$	1,101,450
Net difference between projected and actual investment earnings on pension plan investments	-		-		-		-
Changes of assumptions	-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions	4,042,462		16,579		1,298,304		2,099,363
Total Deferred Inflows of Resources\$	4,366,100	\$	17,652	\$	1,532,722	\$	3,200,813
Pension Expense Proportionate share of plan pension expense\$	4,273,785	\$	14,165	\$	3,095,601	\$	14,545,171
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	(577,545)	_	(4,795)		(315,907)		(224,332)
Total Employer Pension Expense\$	3,696,240	\$	9,370	\$.	2,779,694	\$ _	14,320,839
<u>Contributions</u>							
Statutory required contribution\$	2,830,830	\$	8,112	\$	1,479,152	\$	9,308,022
Contribution in relation to statutory required contribution	(2,830,830)		(8,112)		(1,479,152)		(9,308,022)
Contribution deficiency/(excess)\$	-	\$.	-	\$.		\$.	-
Contributions as a percentage of covered payroll	22.83%		N/A		N/A		21.67%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense							
June 30, 2020\$	856,367 320,753	\$	(42)	\$	722,708 334.769	\$	4,655,764
June 30, 2021	320,753 68,437		(1,815) (1,416)		334,769		2,832,884 2,938,579
June 30, 2023	523,535		2,057		856,841		4,663,783
June 30, 2024	(589,323)		(236)		(31,324)		(285,017)
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense\$	1,179,769	\$	(1,452)	\$	2,265,635	\$	14,805,993
Discount Rate Sensitivity	10.000.000	•	145 500	•	04 700 404		440 400 074
1% decrease (6.375%)\$	43,898,222	\$	145,509	\$	31,796,491	\$	149,400,874
Current discount rate (7.375%)\$	34,388,815		113,988	\$	24,908,609	\$	117,037,064
1% increase (8.375%)\$		\$	87,474	\$	19,114,731	\$	89,813,605
Covered Payroll	12,401,788	Ф	-	\$	-	Ф	42,953,226
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

		Barnstable Fire District		Barnstable Housing Authority		Town of Bourne		Bourne Housing Authority
	-	THE DISTRICT	-	/ identified		Dounic	-	rationty
Net Pension Liability Beginning net pension liability	\$	4,723,263	\$	2,056,991	\$	40,456,504	\$	713,971
Ending net pension liability	\$	5,108,049	\$	2,237,600	\$	46,370,383	\$	753,842
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	=	\$	=	\$	=	\$	-
Net difference between projected and actual investment earnings on pension plan investments		298,309		130,676		2,708,024		44,024
Changes of assumptions		427,639		187,329		3,882,063		63,111
Changes in proportion and differences between employer contributions and proportionate share of contributions		175,839		156,611		299,813		2,054
Total Deferred Outflows of Resources	-	901,787	\$	474,616	\$	6,889,900	\$	109,189
Deferred Inflows of Resources	* =	501,101	* =	111,010	*	0,000,000	* =	100,100
Differences between expected and actual experience	\$	48,073	\$	21,058	\$	436,398	\$	7,095
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate								
share of contributions	-	259,179	-	281,228		1,238,021	-	158,807
Total Deferred Inflows of Resources	\$ =	307,252	\$.	302,286	\$	1,674,419	\$ =	165,902
Pension Expense Proportionate share of plan pension expense	\$	634,820		278,086	\$	5,762,836	\$	93,687
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		15,048		(18,664)		(204,523)		120 077
	-						-	(38,677
Total Employer Pension Expense	\$ =	649,868	\$ =	259,422	\$	5,558,313	\$ =	55,010
Contributions Statutory required contribution	¢	406,246	æ	187,687	•	3.738.770	æ	59.953
			Φ		φ		Φ	
Contribution in relation to statutory required contribution	-	(406,246)	•	(187,687)		(3,738,770)	-	(59,953
Contribution deficiency/(excess)	\$	-	\$.	-	\$		\$ _	-
Contributions as a percentage of covered payroll		21.41%		22.86%		21.97%		21.179
<u>Deferred Outflows/(Inflows) Recognized in</u> Future Pension Expense								
June 30, 2020	\$	228,038 148,475	\$	74,637 39,782	\$	1,728,983 1,006,746	\$	(7,244 (18,989
June 30, 2021		108.081		39,782 46,066		853.377		(19,856
June 30, 2023		161,437		30,864		1,700,073		(330
June 30, 2024	_	(51,496)	_	(19,019)		(73,698)	_	(10,294
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	594,535	\$	172,330	\$	5,215,481	\$_	(56,713
Discount Rate Sensitivity 1% decrease (6.375%)	¢	6,520,558	•	2,856,355	\$	59,193,006	\$	962,299
Current discount rate (7.375%).		5,108,049	\$	2,237,600	\$	46,370,383	\$	753,842
1% increase (8.375%)			\$	1,717,122	•	35.584.380	\$	578,494
Covered Payroll		1,897,077	•	821,123		17,017,066	\$	283,146
See notes to schedule of employer allocations and schedule	•	.,	•		•		•	,
of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	Bourne Recreation Authority	_	Bourne Water District		Town of Brewster	_	Brewster Housing Authority
Net Pension Liability	1 001 000	\$	4 550 400	£	05.055.000	\$	400.044
Beginning net pension liability\$			1,550,129	*	25,055,360	\$	129,811
Ending net pension liability\$	1,583,518	\$	1,799,529	\$	29,398,461	ф	150,768
Deferred Outflows of Resources Differences between expected and actual experience \$	-	\$	=	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments	92,477		105,092		1,716,866		8,805
Changes of assumptions	132,570		150,654		2,461,197		12,622
Changes in proportion and differences between employer contributions and proportionate							
share of contributions	76,703	-	118,283		1,126,796	-	759
Total Deferred Outflows of Resources\$	301,750	\$ =	374,029	\$	5,304,859	\$ =	22,186
Deferred Inflows of Resources Differences between expected and actual experience\$	14,903	\$	16,936	\$	276,673	\$	1,419
Net difference between projected and actual investment earnings on pension plan investments			-		-		
Changes of assumptions	-		-		-		
Changes in proportion and differences between employer contributions and proportionate	57.005		440.004		444.000		05.04
share of contributions	57,835	-	110,831		413,930	-	35,81
Total Deferred Inflows of Resources\$	72,738	\$ =	127,767	\$.	690,603	\$ =	37,23
Pension Expense Proportionate share of plan pension expense\$	196,800	\$	223,641	\$	3,653,595	\$	18,733
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	2,943		1,901		128,875		(17,68
Total Employer Pension Expense\$	199,743	\$ _	225,542	\$	3,782,470	\$ _	1,04
Contributions Statutory required contribution\$	128,273	\$	143,118	\$	2,342,130	\$	12,21
Contribution in relation to statutory required contribution	(128,273)		(143,118)		(2,342,130)		(12,213
Contribution deficiency/(excess)\$	-	\$_	_	\$	_	\$_	
Contributions as a percentage of covered payroll	25.17%	Ī	21.98%		21.37%	_	21.57
Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense June 30, 2020\$		\$	76,936	\$	1,354,703	\$	(11,400
June 30, 2021	44,305 32,364		48,907 29,124		896,815 888,638		(13,746
June 30, 2023	72,967		91,314		1,431,029		6,068
June 30, 2024	10,405	-	(19)		43,071	_	4
Future Pension Expense\$	229,012	\$_	246,262	\$	4,614,256	\$_	(15,044
Discount Rate Sensitivity 1% decrease (6.375%)\$	2.021.402	\$	2.297.146	\$	37.527.904	\$	192.459
Current discount rate (7.375%). \$			1,799,529	\$	29,398,461	\$	150,768
1% increase (8.375%)\$			1.380.949	*		\$	115,699
Covered Payroll. \$			651,235		10,957,745	•	56,629
	000,000	•		•	,,,,,,	•	00,021
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(con

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

		Buzzards Bay Water District	•	Cape Light Compact JPE	•	Cape Cod Mosquito Control District	-	Cape Cod Regional Technical High School
Net Pension Liability Beginning net pension liability	6	778,876	\$		\$	2 952 144	\$	4 608 363
Ending net pension liability		979,988	\$	3,429,747	\$	-,,	\$	6,256,841
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		57,231		200,297		209,012		365,399
Changes of assumptions		82,043		287,134		299,628		523,814
Changes in proportion and differences between employer contributions and proportionate share of contributions.		95,946		2,355,147		218,075		678 813
							-	,
Total Deferred Outflows of Resources	\$	235,220	\$	2,842,578	\$	726,715	\$ =	1,568,026
Deferred Inflows of Resources Differences between expected and actual experience	\$	9,223	\$	32,278	\$	33,682	\$	58,884
Net difference between projected and actual investment earnings on pension plan investments						-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions.		27.407				119 131		401.697
							-	
Total Deferred Inflows of Resources	\$	36,630	\$	32,278	\$	152,813	\$ =	460,581
Pension Expense Proportionate share of plan pension expense	\$	121,794	\$	426,244	\$	444,792	\$	777,588
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		12,381		471,030		29,078		38,233
Total Employer Pension Expense	\$	134,175	\$	897,274	\$	473,870	\$ =	815,821
Contributions Statutory required contribution	\$	79,384	\$	277,827	\$	284,639	\$	497,610
Contribution in relation to statutory required contribution		(79,384)		(277,827)		(284,639)		(497,610
				(211,021)				(401,010
Contribution deficiency/(excess)	\$		\$		\$		\$ _	-
Contributions as a percentage of covered payroll		21.57%		22.82%		21.39%		21.17%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2020	6	53,243	\$	614.040	ø	178,311	\$	299.125
June 30, 2021	Φ	37,979	Φ	560,621	Φ	122,565	Φ	201,675
June 30, 2022		36,972		557,884		119,375		169,596
June 30, 2023		59,779		606,727		132,872		312,769
June 30, 2024		10,617		471,028		20,779	_	124,280
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	198,590	\$	2,810,300	\$	573,902	\$.	1,107,445
Discount Rate Sensitivity 1% decrease (6.375%)	•	4.050.000		4 070 400	,	4 500 000	\$	7.007.021
, ,		1,250,980	\$	4,378,162		.,,	*	7,987,021
Current discount rate (7.375%)		979,988	\$	3,429,747	\$	3,578,985	\$	6,256,841
1% increase (8.375%)	\$	752,037	\$	2,631,969	\$	2,746,494	\$	4,801,466
Covered Payroll	\$	368,090	\$	1,217,527	\$	1,330,786	\$	2,350,111
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

		Centerville/ Osterville/ Martsons Mills Fire District		Town of Chatham		Chatham Housing Authority	_	Cotuit Fire District
Net Pension Liability Beginning net pension liability	\$	14,985,740	\$	21,967,203	\$	389,444	\$	3,180,421
Ending net pension liability	\$	17,630,040	\$	25,597,503	\$	452,305	\$	3,769,183
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,029,592		1,494,890		26,415		220,120
Changes of assumptions		1,475,962		2,142,987		37,866		315,551
Changes in proportion and differences between employer contributions and proportionate share of contributions.		195,685		180,585		2,298		273,143
Total Deferred Outflows of Resources			\$		\$		\$_	808,814
Deferred Inflows of Resources Differences between expected and actual experience		165,919	\$	240,902		4,257	\$	35,472
Net difference between projected and actual investment earnings on pension plan investments	Φ	100,515	Φ	240,502	φ	4,207	Ψ	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate								
share of contributions		157,284 323,203	Φ.	224,586 465,488		4,328	-	89,754 125,226
	Ф,	323,203	Ф	400,400	*	4,520	* =	125,226
Pension Expense Proportionate share of plan pension expense	\$	2,191,031	\$	3,181,216	\$	56,210	\$	468,423
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(8,751)		(53,710)		627		25,674
Total Employer Pension Expense	\$	2,182,280	\$	3,127,506	\$	56,837	\$_	494,097
Contributions								
Statutory required contribution	\$	1,402,127	\$	2,035,784	\$	36,639	\$	299,765
Contribution in relation to statutory required contribution		(1,402,127)		(2,035,784)		(36,639)	-	(299,765)
Contribution deficiency/(excess)	\$		\$		\$		\$.	
Contributions as a percentage of covered payroll		21.25%		22.26%		21.57%		21.17%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2020. June 30, 2021. June 30, 2022. June 30, 2023.	\$	726,369 451,774 441,800 726,335	\$	1,013,629 614,938 690,132 1,021,441	\$	19,487 12,442 11,969 18,222	\$	182,838 124,131 165,743 200,360
June 30, 2024 Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	31,758 2,378,036	\$	12,834 3,352,974	\$	62,251	\$	10,516 683,588
Discount Rate Sensitivity 1% decrease (6.375%)	¢	22,505,207	\$	32,675,882	4	577,379	s -	4,811,461
Current discount rate (7.375%).	\$	17,630,040	\$	25,597,503	\$		\$	3,769,183
1% increase (8.375%)	\$	13,529,197	\$		\$		\$	2,892,451
Covered Payroll			\$	9,145,611	\$		\$	1,415,729
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	_	Town of Dennis		Dennis Housing Authority	_	Dennis Water District		Dennis/Yarmouth Regional School District
Net Pension <u>Liability</u> Beginning net pension liability	\$	35,309,162	\$	808,810	\$	2,920,800	\$	13,889,994
Ending net pension liability		40,631,805	\$	938,941	\$	3,241,500	\$	16,659,793
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		2,372,891		54,834		189,303		972,929
Changes of assumptions		3,401,637		78,607		271,374		1,394,734
Changes in proportion and differences between employer contributions and proportionate share of contributions.		686,079		62,319		45,040		548,805
Total Deferred Outflows of Resources	_	6,460,607	 \$	195,760	\$	505,717	\$	2.916,468
Deferred inflows of Resources	-				•			
Differences between expected and actual experience	\$	382,392	\$	8,837	\$	30,506	\$	156,788
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		717,729		369		231,097		463,298
Total Deferred Inflows of Resources	_	1,100,121	·	9,206	\$	261,603	\$	620,086
Pension Expense	-				-			
Proportionate share of plan pension expense	\$	5,049,651	\$	116,691	\$	402,848	\$	2,070,451
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		35,260		20,197		(54,832)		(49,111)
Total Employer Pension Expense	\$ =	5,084,911	\$	136,888	\$ =	348,016	\$	2,021,340
Contributions								
Statutory required contribution	\$	3,231,470	\$	76,059	\$	257,798	\$	1,324,963
Contribution in relation to statutory required contribution				(76,059)	-	(257,798)		(1,324,963)
Contribution deficiency/(excess)	\$ _	-	\$	-	\$ -	-	\$	
Contributions as a percentage of covered payroll		21.17%		22.39%		21.17%		21.17%
<u>Deferred Outflows/(Inflows) Recognized in</u> Future Pension Expense								
June 30, 2020. June 30, 2021. June 30, 2022. June 30, 2023. June 30, 2024.		1,729,485 1,096,635 928,421 1,655,577 (49,632)	\$	59,348 44,721 34,612 47,654 219	\$	80,329 29,845 36,067 118,378 (20,505)	\$	645,553 386,071 506,398 685,217 73,143
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$_	5,360,486	\$	186,554	\$_	244,114	\$	2,296,382
Discount Rate Sensitivity 1% decrease (6.375%)	œ.	51,867,561	\$	1,198,583	\$	4,137,860	\$	21,266,661
Current discount rate (7.375%).		40,631,805	\$	938,941	\$	3.241.500	\$	16,659,793
1% increase (8.375%)		31,180,626	\$	720,538	\$	2,487,509	\$	12,784,635
		15,261,562		339,775	\$	1,217,509		6.257.523
Covered Payroll	Ψ	10,201,002	φ	558,115	Ψ	1,217,021	Φ	0,201,023
of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

		Town of Eastham	_	Town of Harwich		Hyannis Fire District	_	Town of Mashpee
Net Pension Liability								
Beginning net pension liability	\$	16,956,243	\$	30,570,977	\$	12,416,917	\$	31,854,119
Ending net pension liability	\$	19,613,903	\$	34,751,878	\$	13,667,129	\$	37,215,748
Deferred Outflows of Resources								
Differences between expected and actual experience \$	\$	-	\$	=	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,145,449		2,029,505		798,158		2,173,394
Changes of assumptions		1,642,048		2,909,378		1,144,193		3,115,650
Changes in proportion and differences between employer contributions and proportionate share of contributions		274,943		846,199		185,464		503,998
Total Deferred Outflows of Resources		3,062,440	_				_	
Total Deletted Outliows of Resources	•	3,062,440	* =	5,785,082	\$	2,127,815	* =	5,793,042
Deferred Inflows of Resources Differences between expected and actual experience	\$	184,589	\$	327,055	\$	128,623	\$	350,243
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		393,180		575 861		588,922		766,925
Total Deferred Inflows of Resources	_	577,769	_	902,916	•	717,545	\$	1.117.168
	•	311,109	\$ =	902,910	\$.	717,545	*=	1,117,100
Pension Expense Proportionate share of plan pension expense	\$	2,437,581	\$	4,318,902	\$	1,698,528	\$	4,625,110
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(40,017)		137,111		(69,315)		(49,109)
Total Employer Pension Expense	\$	2,397,564	\$ _	4,456,013	\$	1,629,213	\$ _	4,576,001
Contributions Statutory required contribution	\$	1,559,905	\$	2,763,836	\$	1,086,954	\$	2,962,112
Contribution in relation to statutory required contribution		(1,559,905)		(2,763,836)		(1,086,954)		(2,962,112)
* *		(1,000,000)	_	(2,100,000)	•	(1,000,001)		(2,002,112)
Contribution deficiency/(excess)	—		\$ -		\$		\$ -	
Contributions as a percentage of covered payroll		21.52%		21.17%		21.21%		21.48%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2020	\$	777,824	\$	1,586,161	\$	500,563	\$	1,502,676
June 30, 2021.	*	472,334	*	1,044,894	*	287,697	*	923,031
June 30, 2022		525,709		1,042,749		294,026		897,946
June 30, 2023		718,710		1,309,938		430,649		1,319,861
June 30, 2024		(9,906)	_	(101,576)		(102,665)	_	32,360
Future Pension Expense	\$	2,484,671	\$	4,882,166	\$	1,410,270	\$	4,675,874
Discount Rate Sensitivity								
1% decrease (6.375%)	\$	25,037,660	\$	44,361,681	\$	17,446,448	\$	47,506,875
Current discount rate (7.375%)	\$	19,613,903	\$	34,751,878	\$	13,667,129	\$	37,215,748
1% increase (8.375%)	\$	15,051,603	\$	26,668,402	\$	10,488,081	\$	28,559,163
Covered Payroll	\$	7,248,534	\$	13,053,024	\$	5,124,940	\$	13,789,203
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	_	Mashpee Housing Authority		Mashpee Water District		Town of Nantucket	-	Nantucket Housing Authority
Net Pension Liability Beginning net pension liability	\$	584,160	\$	1,802,295	\$	65,965,497	\$	259,622
Ending net pension liability	\$	753,842	\$	2,017,108	\$	78,854,971	\$	226,146
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		44,024		117,799		4,605,119		13,207
Changes of assumptions		63,111		168,869		6,601,626		18,933
Changes in proportion and differences between employer contributions and proportionate share of contributions.		100,559		21,170		2,739,006		1,411
Total Deferred Outflows of Resources	_	207,694	\$	307,838	\$	13,945,751	\$ _	33,551
Deferred Inflows of Resources	_						-	
Differences between expected and actual experience	\$	7,095	\$	18,983	\$	742,115	\$	2,128
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		_		132.228		869.218		51,696
Total Deferred Inflows of Resources	\$_	7,095	\$	151,211	\$	1,611,333	\$	53,824
Pension Expense	-						•	
Proportionate share of plan pension expense	\$	93,686	\$	250,683	\$	9,799,963	\$	28,102
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	29,425		(20,408)		493,225	_	(9,933
Total Employer Pension Expense	\$ =	123,111	\$.	230,275	\$	10,293,188	\$ =	18,169
Contributions								
Statutory required contribution		61,065	\$	160,422	\$	6,271,380	\$	18,319
Contribution in relation to statutory required contribution	_	(61,065)		(160,422)		(6,271,380)	-	(18,319
Contribution deficiency/(excess)	\$_		\$,		\$		\$.	
Contributions as a percentage of covered payroll Deferred Outflows/(Inflows) Recognized in		21.57%		21.79%		21.61%		21.57%
Future Pension Expense June 30, 2020	Φ.	60,858	\$	63,699	\$	3,781,242	\$	(503)
June 30, 2021	Φ	49,115	Φ	32,282	Φ	2,553,053	Φ	(4,030
June 30, 2022.		39,411 40,661		21,308 49,668		2,469,156 3,219,878		(4,282 (1,193
June 30, 2023. June 30, 2024.		10,554		(10,330)		3,219,070		(10,265
Total Deferred Outflows/(Inflows) Recognized in	\$	200,599	\$	156,627	\$	12,334,418	\$	(20,273
Discount Rate Sensitivity	•				,		•	,
1% decrease (6.375%)	\$	962,299	\$	2,574,891	\$	100,660,432	\$	288,681
Current discount rate (7.375%)	\$	753,842	\$	2,017,108	\$	78,854,971	\$	226,146
1% increase (8.375%)	\$	578,494	\$	1,547,918	\$	60,512,876	\$	173,543
Covered Payroll	\$	283,146	\$	736,179	\$	29,022,450	\$	84,944
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	County of Nantucket		Nantucket Regional Transit Authority		Nauset Regional School District		North Sagamore Water District
Net Pension Liability Beginning net pension liability	\$ 2.271.723	\$	389.444	\$	9.865.791	\$	584,160
Ending net pension liability		\$	452,305	\$	11,006,024	\$	678,451
Deferred Outflows of Resources Differences between expected and actual experience	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments	167,291		26,415		642,750		39,621
Changes of assumptions	239,819		37,866		921,409		56,799
Changes in proportion and differences between employer contributions and proportionate share of contributions.	358,763		2,298		400,076		18,856
Total Deferred Outflows of Resources		\$	66,579	\$	1,964,235	\$	115,276
Deferred Inflows of Resources							
Differences between expected and actual experience \$	26,959	\$	4,257	\$	103,579	\$	6,385
Net difference between projected and actual investment earnings on pension plan investments			-		-		-
Changes of assumptions	-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions.	153,871		71		501,102		27,441
Total Deferred Inflows of Resources		\$	4,328	\$	604.681	æ	33,826
	100,030	Ψ	4,320	Φ	004,001	Φ	33,020
Pension Expense Proportionate share of plan pension expense	356,003	\$	56,210	\$	1,367,810	\$	84,318
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	18,801		627		45,391		66
Total Employer Pension Expense		\$	56,837	\$	1,413,201	\$	84,384
Contributions Statutory required contribution	\$ 227,822	\$	36,639	\$	885,979	\$	53,958
Contribution in relation to statutory required contribution	(227,822)		(36,639)		(885,979)		(53,958)
Contribution deficiency/(excess)	-	\$		\$		\$	_
Contributions as a percentage of covered payroll	21.17%		21.57%		21.43%		21.17%
Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense June 30, 2020	138,246	s	19,487	\$	504,309	\$	28,355
June 30, 2021	93,629	*	12,442	*	332,888	*	17,788
June 30, 2022	127,042		11,969		180,923		8,270
June 30, 2023. June 30, 2024.	194,992 31,134		18,222 131		401,085 (59,651)		27,003 34
Total Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense	585,043	\$	62,251	\$	1,359,554	\$	81,450
Discount Rate Sensitivity 1% decrease (6.375%)	3,656,718	\$	577,379	\$	14,049,477	\$	866,060
Current discount rate (7.375%)	2,864,585	\$	452,305	\$	11,006,024	\$	678,451
1% increase (8.375%)	2,198,267	\$	347,096	\$	8,445,963	\$	520,640
Covered Payroll	1,075,954	\$	169,888	\$	4,133,929	\$	254,831
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(∞ntinued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	_	Town of Orleans	Orleans Housing Authority		Town of Provincetown		Town of Sandwich
Net Pension Liability Beginning net pension liability	\$	22.457.666	\$ 519,255	£	18 173 830	\$	41,345,467
Ending net pension liability		25,781,220	\$ 527,683	\$	22,313,573	\$	48,320,951
Deferred Outflows of Resources							
Differences between expected and actual experience	\$	-	\$ -	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,505,619	30,817		1,303,109		2,821,937
Changes of assumptions		2,158,367	44,177		1,868,061		4,045,361
Changes in proportion and differences between employer contributions and proportionate share of contributions.		766,138	2,942		1,185,834		1,352,828
Total Deferred Outflows of Resources			\$ 77,936	\$	4,357,004	\$	8,220,126
Deferred Inflows of Resources							
Differences between expected and actual experience	\$	242,631	\$ 4,966	\$	209,996	\$	454,755
Net difference between projected and actual investment earnings on pension plan investments		-	-		-		-
Changes of assumptions		-	-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		366,256	51,750		292,061		
Total Deferred Inflows of Resources	\$ —	608,887	\$ 56,716	\$	502,057	\$.	454,755
Proportionate share of plan pension expense	\$	3,204,045	\$ 65,578	\$	2,773,093	\$	6,005,244
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	120,243	(9,517)		166,131		395,874
Total Employer Pension Expense	\$ _	3,324,288	\$ 56,061	\$	2,939,224	\$.	6,401,118
Contributions							
Statutory required contribution	\$	2,050,395	\$ 42,745	\$	1,774,611	\$	3,842,992
Contribution in relation to statutory required contribution	_	(2,050,395)	(42,745)		(1,774,611)		(3,842,992)
Contribution deficiency/(excess)	\$_	-	\$ 	\$		\$	-
Contributions as a percentage of covered payroll		21.17%	21.57%		21.17%		21.17%
Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense June 30, 2020. June 30, 2021. June 30, 2022. June 30, 2023. June 30, 2024.		1,195,243 793,696 727,429 1,144,911 (40,042)	\$ 12,486 4,265 3,693 10,954 (10,178)	\$	1,096,540 748,997 819,910 1,023,101 166,399	\$	2,410,713 1,658,102 1,528,325 2,124,500 43,731
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$_	3,821,237	\$ 21,220	\$	3,854,947	\$	7,765,371
Discount Rate Sensitivity							
1% decrease (6.375%)		32,910,401	\$ 673,601	\$	28,483,859	\$	61,682,957
Current discount rate (7.375%)		25,781,220	\$ 527,683	\$	22,313,573	\$	48,320,951
1% increase (8.375%)	\$	19,784,368	\$ 404,941	\$	17,123,315	\$	37,081,235
Covered Payroll	\$	9,683,588	\$ 198,202	\$	8,381,117	\$	18,149,649
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

		Sandwich Housing Authority		Sandwich Water District		Town of Truro	_	Veterans District
Net Pension Liability Beginning net pension liability	\$	324,538	\$	2,077,007	\$	11.908.476	\$	697,101
Ending net pension liability		376,915	\$	2,412,281	\$	14,205,317	\$	808,937
Deferred Outflows of Resources								
Differences between expected and actual experience Net difference between projected and actual	\$	-	\$	-	\$	-	\$	-
investment earnings on pension plan investments		22,012		140,877		829,588		47,242
Changes of assumptions		31,555		201,953		1,189,249		67,723
Changes in proportion and differences between employer contributions and proportionate share of contributions		2,835		3,666		286,806		58,995
Total Deferred Outflows of Resources	\$	56,402	\$.	346,496	\$	2,305,643	\$_	173,960
Deferred Inflows of Resources			•		•		-	
Differences between expected and actual experience	\$	3,547		22,702		133,688		7,613
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		67		165,264		130,225		28,115
Total Deferred Inflows of Resources	s —	3,614	\$	187,966	\$	263,913	\$	35,728
Pension Expense					•		-	
Proportionate share of plan pension expense	\$	46,842		299,794		1,765,413		100,530
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		754_	_	(54,058)		(1,600)	_	10,101
Total Employer Pension Expense	\$	47,596	\$.	245,736	\$.	1,763,813	\$ _	110,631
Contributions								
Statutory required contribution	\$	30,532	\$	191,850	\$	1,129,757	\$	64,335
Contribution in relation to statutory required contribution	_	(30,532)		(191,850)		(1,129,757)	-	(64,335)
Contribution deficiency/(excess)	\$		\$.		\$.		\$ _	-
Contributions as a percentage of covered payroll		21.57%		21.17%		21.45%		22.72%
<u>Deferred Outflows/(Inflows) Recognized in</u> Future Pension Expense								
June 30, 2020	\$	16,470 10,599	\$	46,527 8,955	\$	590,719 369 469	\$	43,831 31,232
June 30, 2021 June 30, 2022		10,198		6,920		410,237		21,290
June 30, 2023		15,411		96,009 119		619,269		41,937
June 30, 2024	\$	52,788	\$	158,530	\$	52,036 2,041,730	\$	(58) 138,232
Discount Rate Sensitivity							•	
1% decrease (6.375%)	\$	481,142		3,079,340		18,133,459		1,032,629
Current discount rate (7.375%)	\$	376,915	\$	2,412,281	\$	14,205,317	\$	808,937
1% increase (8.375%)	\$	289,243		1,851,171		10,901,083		620,774
Covered Payroll	\$	141,573	\$	906,067	\$	5,266,513	\$	283,146
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	_	Town of Wellfleet		Town of Yarmouth		Yarmouth Housing Authority		West Barnstable Fire District
Net Pension Liability Beginning net pension liability	\$	13,084,397	\$	46,788,644	\$	437 636	\$	1,427,942
Ending net pension liability.		15,797,094	\$	54,297,786	\$	507,573	\$	1,432,293
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		922,548		3,170,983		29,642		83,646
Changes of assumptions		1,322,510		4,545,733		42,493		119,910
Changes in proportion and differences between employer contributions and proportionate share of contributions.		799,311		218,748		2,912		56,480
Total Deferred Outflows of Resources	_	3,044,369		7,935,464	\$	75.047	\$	260,036
	* =	3,044,309	Φ,	1,930,404	Φ,	75,047	Φ.	200,030
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	148,669	\$	511,004	\$	4,777	\$	13,480
Net difference between projected and actual investment earnings on pension plan investments		-		-		-		-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		52,663		1,166,521		41,064		155,073
Total Deferred Inflows of Resources	\$	201,332	\$	1,677,525	\$	45,841	\$	168,553
Pension Expense	_						•	
Proportionate share of plan pension expense	\$	1,963,238	\$	6,748,033	\$	63,082	\$	178,002
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		160,851		(243,867)		(9,273)		(3,381)
Total Employer Pension Expense	\$ _	2,124,089	\$	6,504,166	\$	53,809	\$	174,621
0.43.5								
Contributions Statutory required contribution	\$	1,256,352	\$	4,318,333	\$	41,116	\$	113,911
Contribution in relation to statutory required contribution		(1,256,352)		(4,318,333)		(41,116)		(113,911)
Contribution deficiency/(excess)	\$	-	\$	-	\$	-	\$.	-
Contributions as a percentage of covered payroll		21.44%		21.66%		24.20%		21.17%
<u>Deferred Outflows/(Inflows) Recognized in</u> Future Pension Expense								
June 30, 2020	\$	819,543	\$	2,020,189	\$	11,891	\$	56,341
June 30, 2021		573,500 586,078		1,174,488 1,048,249		3,984 3,112		34,028 5,977
June 30, 2023		780,821		2,018,259		10,166		26,056
June 30, 2024	-	83,095		(3,246)		53		(30,919)
Future Pension Expense	\$	2,843,037	\$	6,257,939	\$	29,206	\$	91,483
Discount Rate Sensitivity 1% decrease (6.375%).	\$	20,165,404	\$	69,312,544	\$	647,930	\$	1,828,359
Current discount rate (7.375%)	\$	15,797,094	\$	54,297,786	\$	507,573	\$	1,432,293
1% increase (8.375%)	\$	12,122,604	\$	41,667,826	\$	389,509	\$	1,099,134
Covered Payroll		5,861,119	\$	19,933,468	\$	169,888	\$	537,977
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2018

	Cape Cod Regional Transit Authority		Monomoy Regional School District		Provincetown Housing Authority	Totals
Net Pension Liability Beginning net pension liability	\$ 2,077,007	\$	10,449,951	\$	129,811	\$ 680,443,471
Ending net pension liability	\$ 2,336,890	\$	12,136,781	\$	-	\$ 790,374,641
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	-	\$	-	\$	-	\$ -
Net difference between projected and actual investment earnings on pension plan investments	136,474		708,786		-	46,157,764
Changes of assumptions	195,641		1,016,074		-	66,169,041
Changes in proportion and differences between employer contributions and proportionate share of contributions.	284,579		138,137		55,536	20,257,938
Total Deferred Outflows of Resources	\$ 616,694	\$	1,862,997	\$	55,536	\$ 132,584,743
Deferred Inflows of Resources Differences between expected and actual experience	\$ 21,993	\$	114,221	\$	-	\$ 7,438,327
Net difference between projected and actual investment earnings on pension plan investments	-		-		-	-
Changes of assumptions	-		-		-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.	261,013		352 437		103 306	19,671,103
Total Deferred Inflows of Resources		. \$	466,658	\$	103,306	\$ 27,109,430
Pension Expense				·		
Proportionate share of plan pension expense	\$ 290,422	\$	1,508,339	\$	-	\$ 98,226,410
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	(20,576)	_	(109,278)		(2,167)	148,814
Total Employer Pension Expense	\$ 269,846	\$	1,399,061	\$	(2,167)	\$ 98,375,224
<u>Contributions</u>						
Statutory required contribution		\$	965,245	\$	-	\$ 62,544,990
Contribution in relation to statutory required contribution			(965,245)			(62,544,990
Contribution deficiency/(excess)		\$		\$		\$
Contributions as a percentage of covered payroll	21.17%		21.17%		N/A	22.099
Deferred Outflows/(Inflows) Recognized in Future Pension Expense						
June 30, 2020	\$ 76,865 40,467	\$	396,789 207,758	\$	(2,167) (2,167)	\$ 33,105,075 20,794,779
June 30, 2022	73,828		278,136		(2,170)	20,164,430
June 30, 2023	152,743		513,053		(20,604)	31,411,029
June 30, 2024	(10,215)		603		(20,662)	-
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$ 333,688	\$	1,396,339	\$	(47,770)	\$ 105,475,313
Discount Rate Sensitivity 1% decrease (6.375%)	\$ 2,983,101	\$	15,492,918	\$		\$ 1,008,933,895
Current discount rate (7.375%).		\$	12,136,781	\$	_	\$ 790,374,641
1% increase (8.375%)		\$	9,313,700	\$	-	\$ 606,529,204
Covered Payroll		\$	4,558,648	\$	-	\$ 283,145,854
See notes to schedule of employer allocations and schedule of pension amounts by employer.						(concluded

Barnstable County Retirement Association

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NOTE I - Schedule of Employer Allocations

Governmental Accounting Standards Board (GASB) Statement #68 requires employers participating in a costsharing 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, contributions 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 Barnstable County Retirement Association's collective pension amounts.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans allocate the annual required pension fund appropriation to employer units based on their proportionate share of the aggregate of the annual rates of regular compensation of all members in service of the Association who are employees of any government unit at the close of business on the September 30th immediately preceding the fiscal year. Accordingly, the proportionate aggregate rates of regular compensation as of the close of business on September 30, 2017 were applied to allocate the Association's December 31, 2018 pension fund appropriation by member unit.

The Barnstable County Hospital was operated by Barnstable County from the late 1800s to 1995, when it was closed and all employees were terminated. The remaining payments due from the Barnstable County Retirement Association to the former employees of the Barnstable County Hospital were actuarially determined and are separately identified in the Association's funding schedule. Barnstable County continues to pay for the retirement obligations related to previously retired Hospital employees.

In 2012, the Barnstable County Sheriff's functions were taken over by the Commonwealth of Massachusetts. Barnstable County continues to pay for the retirement obligations related to previously retired Sheriff's employees. These liabilities are actuarially determined and are separately identified in the Association's funding schedule.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC completes 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 as retirees including the ERIP less the accrued liability for the members as active employees excluding the ERIP represents the increase in accrued liability due to the ERIP. The net increase is amortized for each member unit accepting the ERIP, and is separately identified in the Association's funding schedule. The 2003 ERIP amortization is occurring over 25 years, increasing 4.5% per year. The 2010 ERIP amortization is occurring over a 10 year, straight-line basis.

The allocation percentage of the total net pension liability is a blended rate of the following three items. (1) The proportionate share of active employer's covered payroll is applied to the fiscal year 2018 pension fund appropriation calculated by the actuary. (2) ERI is a direct charge calculated by PERAC for only the employers that accepted the ERI. (3) The direct amortization of the actuarially determined net pension liability for Barnstable County Sheriff and Barnstable County Hospital since they no longer have active covered payroll.

Barnstable County Retirement Association

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NOTE II - 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, contributions 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.

Changes in Assumptions

None

Changes in Plan Provisions

None

NOTE III - Change in Member Units

Cape Light Compact JPE

The Cape Light Compact (Compact) was originally established in 1997 pursuant to an Inter-Municipal Agreement for the purpose of providing competitive electric supply, green power options, energy efficiency programs and consumer advocacy for the residents and businesses of Cape Cod and Martha's Vineyard. Prior to 2017, the Compact operated through Barnstable County and all employees were employees of Barnstable County. The Compact was charged for their proportionate share of employee related costs, including their share of Barnstable County's annual pension assessment. Accordingly, the full net pension liability was reported under Barnstable County as the employer and member unit of Barnstable County Retirement Association.

In 2017, the Cape Light Compact reorganized and reconstituted itself as a joint powers entity (JPE). As of July 1, 2017, the Cape Light Compact JPE became the legal and operational successor to the Cape Light Compact. As of that date, employees who were previously employees of Barnstable County became employees of the Cape Light Compact JPE. For the year ended December 31, 2018, Cape Light Compact JPE has been assessed its share of the pension fund appropriation for Barnstable County Retirement Association, for the first time. As a result, previously reported net pension liabilities of the transferred employees are now reported under the new entity (Cape Light Compact JPE) as a new member unit and are no longer included within the net pension liability of Barnstable County.

As of December 31, 2017, the Compact was 9.81% of Barnstable County's Net Pension Liability and related Deferred Outflows and Deferred Inflows of Resources. This represents an increase from 9.58% as of December 31, 2016. The Compact's share of the Net Pension Liability, Deferred Outflows of Resources, and Deferred Inflows of Resources totaled \$3,278,811 in Net Pension Liability; \$408,597 in Deferred Outflows from changes in assumptions; \$141,479 in Deferred Outflows from changes in proportion; \$46,972 in Deferred Inflows from differences between expected and actual experience, \$213,988 in Deferred Inflows from the difference between projected and actual investment earnings on pension plan investments; and \$123,182 in Deferred Inflows from changes in proportion, as of December 31, 2017.

Barnstable County Retirement Association

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Provincetown Housing Authority

Each member unit's share of the net pension liability is based on the pension fund appropriation, which is based on the covered payroll of the member unit. The Provincetown Housing Authority did not have covered payroll and, as a result, had no pension fund appropriation or net pension liability for the year ended December 31, 2018.

Barnstable County Retirement Association

Audit of Specific Elements, Accounts and Items of Financial Statements

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2017

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2017

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Financial Section

Barnstable County Retirement Association

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Financial Section

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable County Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise the Barnstable County Retirement Associations' financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial 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 Barnstable County Retirement Association as of December 31, 2017, and the results of its operations and changes in its financial 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 Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 25, 2018, on our consideration of the Barnstable County Retirement Association'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 Barnstable County Retirement Association's internal control over financial reporting and compliance.

Restriction on Use

This report is intended solely for the information and use of the Barnstable County Retirement Association, the Public Employee Retirement Administration Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

September 25, 2018

Powers & Sullivan LLC

Management's Discussion and Analysis

As management of the Barnstable County Retirement Association, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2017. The Association complies with financial reporting requirements issued by the Governmental Accounting Standards Board (GASB).

The GASB is the authoritative standard setting body that provides guidance on how to prepare financial statements in conformity with generally accepted accounting principles (GAAP). Users of these financial statements rely on the GASB to establish consistent reporting standards for all governments in the United States. This consistent application is the only way users can assess the financial condition of a public retirement system compared to others.

Financial Highlights

- The Association's assets exceeded its liabilities at the close of the most recent year by \$1.1 billion (net position)
- The Association's net position increased by \$161.3 million for the year ended December 31, 2017.
- Total investment income was \$166.2 million; investment expenses were \$5.4 million; and net investment income was \$160.8 million.
- Total contributions were \$91.3 million including \$59.2 million from employers, \$27.3 million from members, and \$4.8 million from other transfers in and settlements.
- Retirement benefits, refunds and transfers to other systems amounted to \$89.5 million.
- Administrative expenses were \$1.3 million.
- The Total Pension Liability is \$1.8 billion as of December 31, 2017 while the Net Pension Liability is \$680.4 million
- The Plan fiduciary net position as a percentage of the total pension liability is 61.86%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Association fiduciary financial statements. These fiduciary financial statements comprise of four components: 1) management's discussion and analysis, 2) fiduciary financial statements, 3) notes to the financial statements and 4) required supplementary information.

Fiduciary Financial Statements

The *statement of net position* presents information on all assets and deferred outflows less deferred inflows and liabilities with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position is improving or deteriorating.

The statement of changes in fiduciary net position presents information showing how the Association's net position changed during the most recent year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, additions and deductions are reported in this statement for some items that will only result in cash flows in future periods.

Notes to the financial statements

The notes provide additional information that is essential to a full understanding of the data provided in the fiduciary financial statements.

Barnstable County Retirement Association

Management's Discussion and Analysis

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Returns be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of the Association's financial position. The Association's net position exceeded liabilities by \$1.1 billion at the close of 2017.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year-end the Association's net position include investments of \$1.1 billion, cash and cash equivalents of \$2.5 million and accounts receivable of \$3.9 million.

In 2017, the Association's contributions were \$91.3 million and net investment income was \$160.8 million while retirement benefit payments, refunds, transfers and administration expenses were \$90.8 million, which resulted in a current increase of \$161.3 million. In 2016, the Association's contributions were \$87.6 million and net investment income was \$64.7 million while retirement benefit payments, refunds, transfers and administration expenses were \$83.1 million, which resulted in a prior year increase of \$69.2 million.

For both years, the current contributions fully supported the current expenses. Total contributions increased by \$3.7 million from 2016, while total deductions increased by \$7.7 million from 2016. The major difference in the change in net position when comparing the 2017 and 2016 results is net investment income. Net investment income was \$160.8 million and \$64.7 million in 2017 and 2016 respectively. The annual money weighted rate of return was 17.17% and 7.40% in 2017 and 2016 respectively. Fluctuations in the Association's annual investment returns are expected.

The following tables present summarized financial information for the past two years:

	2017		2016
Assets:			
Cash and cash equivalents\$	2,459,946	\$	1,824,611
Investments	1,097,123,904		937,995,441
Receivables	3,910,288		2,368,212
Total assets	1,103,494,138		942,188,264
		•	
Liabilities:			
Accounts payable	323		25,545
• •		•	
Net Position Restricted for Pension Benefits \$	1,103,493,815	\$	942,162,719

Barnstable County Retirement Association

Management's Discussion and Analysis

	2017	2016
Additions: Contributions: Member contributions	27,339,086 59,204,601 4,753,312	\$ 26,411,361 56,269,527 4,900,585
Total contributions	91,296,999	87,581,473
Net investment income (loss): Total investment income (loss) Less, investment expenses	166,164,987 (5,352,824)	69,523,173 (4,844,967)
Net investment income (loss)	160,812,163	64,678,206
Total additions	252,109,162	152,259,679
Deductions: Administration	1,282,473 89,495,593 90,778,066	1,384,804 81,714,247 83,099,051
Net increase (decrease) in fiduciary net position	161,331,096	69,160,628
Fiduciary net position at beginning of year	942,162,719	873,002,091
Fiduciary net position at end of year \$	1,103,493,815	\$ 942,162,719

Requests for Information

This financial report is designed to provide a general overview of the Association's finances for all those with an interest in the Association's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Association's Board, 750 Attucks Lane, Hyannis, MA 02601.

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2017

Assets	
Cash and cash equivalents\$ Investments:	2,459,946
Investments in Pension Reserve Investment Trust	1,093,385,971
Pooled real estate funds	3,737,933
Total investments	1,097,123,904
Receivables, net of allowance for uncollectibles:	
Member deductions	3,910,288
Total Assets	1,103,494,138
Liabilities	
Accounts payable	323
Net Position Restricted for Pensions\$	1,103,493,815

See notes to financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

YEAR ENDED DECEMBER 31, 2017

Additions:	
Contributions:	
Employer pension appropriation	\$ 59,204,601
Member contributions	27,339,086
Transfers from other systems	1,481,792
3(8)c reimbursements from other systems	2,368,447
Workers compensation settlements	94,496
Federal grant reimbursements	87,636
State COLA reimbursements	526,289
Member makeup payments and redeposits	193,869
Interest not refunded	783
Total contributions	91,296,999
Net investment income (loss):	
Investment income (loss).	166,164,987
investment income (loss)	100, 104,967
Less: investment expense	(5,352,824)
Net investment income (loss)	160,812,163
Total additions	252,109,162
Deductions:	
Administration	1,282,473
Benefits and refunds	85,780,394
Transfers to other systems	1,718,253
3(8)c reimbursements to other systems	1,996,946
Total deductions	90,778,066
Net increase (decrease) in fiduciary net position	161,331,096
Fiduciary net position at beginning of year	942,162,719
Fiduciary net position at end of year	\$1,103,493,815

See notes to financial statements.

Barnstable County Retirement Association

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NOTE 1 - PLAN DESCRIPTION

The Barnstable County Retirement Association is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Barnstable County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Association is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. The Association has 50 participating employers.

Originally established in 1922, the Association is governed by a five member Board who establish the policies under which the Association operates. Board members also approve all of the Association's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the Association are managed by the Executive Director.

The legislative body for the Association is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi-annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The Association is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan 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 those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement Association; Group 1, Group 2, and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

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A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension.

Active members contribute between 5 and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the PERAC actuary. When a member's retirement becomes effective, his/her deductions 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 borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the Association and all costs are borne by the Association.

The pension portion of any retirement benefit is paid from the Pension Fund of the Association. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The Association adopted Section 22d of Chapter 32 in April of 1989. The Association's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036.

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the Association, are now paid from investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements of the Barnstable County Retirement Association 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.

BCRA is a special-purpose government engaged only in fiduciary activities. Accordingly, the financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, additions are recorded when earned and deductions are recorded when the liabilities are incurred

Cash and Investments

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition. Investments are carried at fair value. The

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fair values were determined by the closing price for those securities traded on national stock exchanges and at the average bid-and-asked quotation for those securities traded in the over-the-counter market. The fair value of private equities are based on management's valuation of estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values. Real estate assets are reported at fair value utilizing an income approach to valuation along with independent appraisals and estimates by management.

Fair Value Measurements

The Retirement Association reports required types of financial instruments in accordance with the fair value standards. These standards require an entity to maximize the use of observable inputs (such as quoted prices in active markets) and minimize the use of unobservable inputs (such as appraisals or valuation techniques) to determine fair value. Fair value standards also require the government to classify these financial instruments into a three-level hierarchy, based on the priority of inputs to the valuation technique or in accordance with net asset value practical expedient rules, which allow for either Level 2 or Level 3 depending on lock up and notice periods associated with the underlying funds.

Instruments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1 – Quoted prices are available in active markets for identical instruments as of the reporting date. Instruments, which are generally included in this category, include actively traded equity and debt securities, U.S. government obligations, and mutual funds with quoted market prices in active markets.

Level 2 – Pricing inputs are other than quoted in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies. Certain fixed income securities, primarily corporate bonds, are classified as Level 2 because fair values are estimated using pricing models, matrix pricing, or discounted cash flows.

Level 3 – Pricing inputs are unobservable for the instrument and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

In some instances the inputs used to measure fair value may fall into different levels of the fair value hierarchy and is based on the lowest level of input that is significant to the fair value measurement.

Market price is affected by a number of factors, including the type of instrument and the characteristics specific to the instrument. Instruments with readily available active quoted prices generally will have a higher degree of market price observability and a lesser degree of judgment used in measuring fair value. It is reasonably possible that change in values of these instruments will occur in the near term and that such changes could materially affect amounts reported in these financial statements. For more information on the fair value of the Retirement Administration's financial instruments, see Note 4 – Cash and Investments.

Accounts Receivable

Accounts receivable consist of member deductions, pension fund appropriations, and federal grant reimbursements. These receivables are considered 100% collectible and therefore do not report an allowance for uncollectibles.

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Deferred Outflows/Inflows of Resources

In addition to assets, the statement of fiduciary net position will sometimes 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(s) and so will not be recognized as an outflow of resources (deduction) until then. The BCRA did not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of fiduciary net position will sometimes report 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(s) and so will not be recognized as an inflow of resources (addition) until that time. The BCRA did not have any items that qualify for reporting in this category.

NOTE 3 - PLAN ADMINISTRATION

The Association is administered by a five-person Board of Retirement consisting of the County Finance Director/Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such Association, and a fifth member appointed by the Advisory Council consisting of representatives from the member units.

Chairman	Mary T. McIsaac	Term Expires:	Indefinite
Appointed Member	Leo G. Cakounes	Term Expires:	1/3/2019
Elected Member	Harold S. Brunelle	Term Expires:	1/6/2021
Elected Member	Robert F. Rolanti	Term Expires:	12/31/2019
Appointed Member	Judith C. Sprague	Term Expires:	Indefinite

Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the Association. The Board must annually file a financial statement of condition for the Association with the Executive Director of PERAC.

The investment of the Association's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the Association has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the Association must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian:

Ex-Officio Member:

Elected Members:

Appointed Members:

Staff Employees:

) MACRS Blanket Policy

\$50,000,000 Fiduciary Liability

\$1,000,000 Fidelity (ERISA) Bond

St. Paul Travelers Insurance Company

National Union Fire Arch Insurance

Company

NOTE 4 - CASH AND INVESTMENTS

Custodial Credit Risk - Deposits

At December 31, 2017, the carrying amount of the Association's deposits totaled \$2,459,946; this is comprised of \$653,081 of cash deposited with banks along with \$1,806,865 in the PRIT cash fund. Of the \$653,081, the bank balance totaled \$2,333,004, which was covered by Federal Depository Insurance. The \$1,806,865 in the PRIT Cash Fund is uninsured and uncollateralized.

Investments

The Association's investments are as follows:

	December 31, 2017
Investment Type	
PRIT Pooled Funds\$	1,093,385,971
Pooled Real Estate Funds	3,737,933
Total Investments\$	1,097,123,904

Approximately 99% of the Retirement Association's investments are in Pension Reserve Investment Trust (PRIT), which meets the criteria of an external investment pool. This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The Administration does not have the ability to control any of the investment decisions relative to its funds in PRIT. PRIT investments are valued using the net asset value (NAV) method.

The remaining investments consist of two closed end real estate investments which are scheduled to mature during 2018. The fair value of the investments in pooled real estate funds are categorized in Level 3 of the Fair Value Hierarchy as pricing inputs are unobservable and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

The Administration's annual money-weighted rate of return on pension plan investments was 17.17%. The money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

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NOTE 5 - MEMBERSHIP

The following table represents the Association's membership at January 1, 2018:

Retirees and beneficiaries currently receiving benefits	3,122
Inactive members	730
Active members	4,644
-	
Total	8,496

NOTE 6 – ACTUARIAL VALUATION

Components of the net pension liability as of December 31, 2017 were as follows:

Total pension liability\$	1,783,937,286
The pension plan's fiduciary net position	(1,103,493,815)
The net pension liability\$	680,443,471
The pension plan's fiduciary net position as a percentage of the total pension liability	61.86%

The total pension liability was determined by an actuarial valuation as of January 1, 2018, using the following actuarial assumptions, applied to all periods included in the measurement that was rolled back to December 31, 2017:

Valuation date	January 1, 2018
Actuarial cost method	Entry Age Normal Cost Method.
Amortization method	Appropriations increase at 5.28% per year
Remaining amortization period	17 years from July 1, 2018 for 2002 and 2003 Early Retirement Incentives, retiree sheriffs liability and remaining unfunded liability, and 4 years from July 1, 2018 for 2010 Early Retirement Incentive.
Asset valuation method	The net pension liability is calculated using the market value of assets. The Association also uses an actuarial value of assets that gradually reflects year-to-year changes in the market

Barnstable County Retirement Association

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value of assets in determining contribution requirements.

Year Ended December 31, 2017

Rates of retirement...... Varies based upon age for general employees, police

and fire employees.

Rates of disability..... For general employees, it was assumed that 55% of all

disabilities are accidental disability. For police and fire employees, 90% of all disabilities are assumed to

be accidental disability.

Mortality Rates:

generationally with Scale MP-2017.

Healthy Retiree...... The RP-2014 Blue Collar Healthy Annuitant Mortality Table

projected generationally with Scale MP-2017.

Disabled Retiree..... The RP-2014 Blue Collar Healthy Annuitant Mortality Table

set forward one year and projected generationally with

Scale MP-2017.

Investment rate of return/Discount rate... 7.375%, net of pension plan investment expense, including inflation.

Investment policy: The pension plan's policy in regard to the allocation of invested assets is established by PRIT. Plan assets are managed on a total return basis with a long-term objective of achieving a fully funded status for the benefits provided through the pension plan.

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 inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity International developed markets equity International emerging markets equity. Core fixed income. High-yield fixed income. Real estate Commodities Hedge fund, GTAA, Risk parity Private equity.	17.50% 15.50% 6.00% 12.00% 10.00% 10.00% 4.00% 13.00% 12.00%	6.15% 7.11% 9.41% 1.68% 4.13% 4.90% 4.71% 3.94% 10.28%
<u>-</u>	100.00%	=

Discount rate: The discount rate used to measure the total pension liability was 7.375%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rate. For this purpose, only employer contributions that are intended to fund the service costs for future plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. 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.

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 7.375%, as well as what the net position liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.375%) or 1-percentage-point higher (8.375%) than the current rate:

		Current	
	1% Decrease	Discount Rate	1% Increase
	(6.375%)	(7.375%)	(8.375%)
Barnstable County Retirement Association's net			
pension liability as of December 31, 2017\$	892.516.460 \$	680.443.471 \$	502.131.729

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 Association's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

NOTE 7 – COMMITMENTS AND CONTINGENCIES

Various legal actions and claims are pending against the Association. Litigation is subject to many uncertainties, and the outcome of individual litigated matters is not always predictable. Although the amount of liability, if any, at December 31, 2017 cannot be ascertained, management believes any resulting liability should not materially affect the financial position at December 31, 2017.

Barnstable County Retirement Association

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NOTE 8 - IMPLEMENTATION OF GASB PRONOUNCEMENTS

During 2017, the following GASB pronouncements were implemented:

• GASB Statement #82, Pension Issues – an amendment of GASB Statements #67, #68, and #73. The financial statements and related notes were updated to be in compliance with this pronouncement.

The following GASB pronouncements will be implemented in the future:

- The GASB issued Statement #83, Certain Asset Retirement Obligations, which is required to be implemented in 2019.
- The GASB issued Statement #84, Fiduciary Activities, which is required to be implemented in 2020.
- The GASB issued Statement #85, Omnibus 2017, which is required to be implemented in 2018.
- The GASB issued Statement #86, Certain Debt Extinguishment Issues, which is required to be implemented in 2018.
- The GASB issued Statement #87, Leases, which is required to be implemented in 2021.
- The GASB issued Statement #88, Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements, which is require to be implemented in 2019.
- The GASB issued Statement #89, Accounting for Interest Cost Incurred before the End of a Construction Period, which is required to be implemented in 2020.

Management is currently assessing the impact the implementation of these pronouncements will have on the basic financial statements.

NOTE 9 - SUBSEQUENT EVENTS

Management has evaluated subsequent events through September 25, 2018, which is the date the financial statements were available to be issued.

Required Supplementary Information

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

	December 31,		December 31,		December 31,		December 31,
Total pension liability:	2014		2015		2016	-	2017
Service cost\$	36,820,342	\$	38.962.546	\$	42.095.884	\$	41,043,966
Interest	105,040,822	•	110,695,407	*	116,551,753	•	125,242,091
Changes in benefit terms	-		-		23,494,437		-
Differences between expected and actual experience	-		_		(10,802,611)		(3,055,533)
Changes in assumptions	-		_		50,013,040		61,743,785
Benefit payments.	(69,038,553)		(73,639,192)		(79,260,605)		(85,780,394)
Net change in total pension liability	72,822,611		76,018,761		142,091,898		139,193,915
Total pension liability - beginning	1,353,810,101		1,426,632,712		1,502,651,473	-	1,644,743,371
Total pension liability - ending (a)\$	1,426,632,712	\$	1,502,651,473	\$	1,644,743,371	\$.	1,783,937,286
Plan fiduciary net position:							
Employer pension appropriation\$	51,562,171	\$	53,626,350	\$	56,269,527	\$	59,204,601
Member contributions	24,847,689		25,867,837		26,411,361		27,339,086
Other contributions	3,779,205		3,575,730		4,900,585		4,753,312
Net investment income (loss)	60,614,682		5,470,561		64,678,206		160,812,163
Administrative expenses	(1,210,998)		(1,288,422)		(1,384,804)		(1,282,473)
Retirement benefits and refunds	(69,038,553)		(73,639,192)		(79,260,605)		(85,780,394)
Other retirement deductions	(2,469,197)		(2,680,065)		(2,453,642)	-	(3,715,199)
Net increase (decrease) in fiduciary net position	68,084,999		10,932,799		69,160,628		161,331,096
Fiduciary net position - beginning of year	793,984,293		862,069,292		873,002,091		942,162,719
Fiduciary net position - end of year (b)\$	862,069,292	\$	873,002,091	\$	942,162,719	\$.	1,103,493,815
Net pension liability - ending (a)-(b)\$	564,563,420	\$	629,649,382	\$	702,580,652	\$.	680,443,471
Plan fiduciary net position as a percentage of the total							
pension liability	60.43%		58.10%		57.28%		61.86%
Covered payroll \$	253,920,107	\$	264,076,910	\$	269,672,807	\$	271,510,348
Net pension liability as a percentage of	222.2407		220.4207		200 500/		250.040/
covered payroll	222.34%		238.43%		260.53%		250.61%

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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.

See notes to required supplementary information.

Barnstable County Retirement Association

Required Supplementary Information

SCHEDULE OF CONTRIBUTIONS

	December 31, 2014	 December 31, 2015	 December 31, 2016	 December 31, 2017
Actuarially determined contribution \$	51,562,171	\$ 53,626,350	\$ 56,269,527	\$ 59,204,601
Contributions in relation to the actuarially determined contribution	(51,562,171)	 (53,626,350)	(56,269,527)	 (59,204,601)
Contribution deficiency (excess)\$	-	\$ -	\$ -	\$ -
Covered payroll\$	253,920,107	\$ 264,076,910	\$ 269,672,807	\$ 271,510,348
Contributions as a percentage of covered payroll	20.31%	20.31%	20.87%	21.81%

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.

See notes to required supplementary information.

SCHEDULE OF INVESTMENT RETURNS

 Year
 Annual money-weighted rate of return, net of investment expense

 December 31, 2017
 17.17%

 December 31, 2016
 7.40%

 December 31, 2015
 0.57%

 December 31, 2014
 7.58%

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.

See notes to required supplementary information.

NOTE A - 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 Associations total pension liability, changes in the Associations net position, and the ending net pension liability. It also demonstrates the plan's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

NOTE B - 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 Association'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 covered payroll.

NOTE C - 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.

NOTE D - CHANGES IN ACTUARIAL ASSUMPTIONS AND PLAN PROVISIONS

Changes in Assumptions

The following assumption changes were reflected in the January 1, 2018 actuarial valuation:

- The mortality tables for non-disabled participants were changed from the RP-2000 Employee and Healthy
 Annuitant Mortality Tables projected generationally using Scale BB2D from 2009 to the RP-2014 Blue
 Collar Employee and Healthy Annuitant Mortality Tables projected generationally using Scale MP-2017.
- The mortality tables for disabled participants were changed from the RP-2000 Healthy Annuitant Mortality
 Table projected generationally using Scale BB2D from 2015 to the RP-2014 Blue Collar Healthy
 Annuitant Mortality Table set forward 1 year projected generationally using Scale MP-2017.
- The long-term salary increase assumption was lowered by 0.25%, to 4.00% for Group 1 participants, 4.25% for Group 2 participants, and 4.50% for Group 4 participants.
- The investment rate of return and discount rate assumption were lowered from 7.625% to 7.375%.

Changes in Plan Provisions

The following plan provision change was reflected in the January 1, 2018 actuarial valuation:

 The Cost of Living Adjustment Base was increased from \$15,000 to \$16,000 as of July 1, 2015, to \$17,000 as of July 1, 2016, and to \$18,000 as of July 1, 2017.

Barnstable County Retirement Association

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Required Supplementary Information

Audit of Specific Elements, Accounts and Items of Financial Statements

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable County Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

We have audited the accompanying schedule of employer allocations of the Barnstable County Retirement Association (BCRA) 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 rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense included in the accompanying schedule of pension amounts by employer of the BCRA Pension Plan as of and for the year ended December 31, 2017, and the related notes.

Management's Responsibility for the Schedules

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 the 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 row 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 row 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 employer allocations and the specified row 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 row 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 employer allocations and the specified row totals included in 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 row 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 opinions.

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, total contributions and total pension expense for the total of all participating entities for the Barnstable County Retirement Association as of and for the year ended December 31, 2017, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Barnstable County Retirement Association as of and for the year ended December 31, 2017, and our report thereon, dated September 25, 2018, expressed an unmodified opinion on those financial statements.

Restriction on Use

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

September 25, 2018

Powers & Sullivan LLC

SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR ENDED DECEMBER 31, 2017

Employer	FY2018 Pension Fund Appropriation		Direct Appropriation E.R.I., Sheriff and Hospital		FY2018 Total Appropriation	_	Share of Net Pension Liability	Percent of Total Net Pension Liability
Barnstable County	\$ 2.864,261	\$	121,429	\$	2.985.690	\$	33,423,155	4.912%
Barnstable County Hospital			7,944		7,944		98,671	0.015%
Barnstable County Retired Sheriffs			1,431,018		1,431,018		21,125,831	3.105%
Town of Barnstable	8.952.267		212.824		9,165,091		102,598,144	15.078%
Barnstable Fire District	, ,		4,466		421,929		4,723,263	0.694%
Barnstable Housing Authority	179,741		4,010		183,751		2,056,991	0.302%
Town of Bourne			82,936		3,613,979		40,456,504	5.946%
			82,936					
Bourne Housing Authority	63,779		47.054		63,779		713,971	0.105%
Bourne Recreation Authority			17,651		116,219		1,301,008	0.191%
Bourne Water District			5,117		138,473		1,550,129	0.228%
Town of Brewster			17,523		2,238,195		25,055,360	3.682%
Brewster Housing Authority			-		11,596		129,811	0.019%
Buzzards Bay Water District	69,577		-		69,577		778,876	0.114%
Cape Cod Mosquito Control District	260,915		2,800		263,715		2,952,144	0.434%
Cape Cod Regional Technical High School	411,665				411,665		4,608,363	0.677%
Centerville/Osterville/Marstons Mills Fire District			5.113		1,338,676		14,985,740	2.202%
Town of Chatham	.,		101,140		1,962,330		21,967,203	3.228%
Chatham Housing Authority			101,140		34,789		389,444	0.057%
Cotuit Fire District	284,107		_		284,107		3.180.421	0.467%
			-					
Town of Dennis	3,154,167		-		3,154,167		35,309,162	5.189%
Dennis Housing Authority	69,577		2,674		72,251		808,810	0.119%
Dennis Water District	260,915		-		260,915		2,920,800	0.429%
Dennis/Yarmouth Regional School District	1,240,793		-		1,240,793		13,889,994	2.041%
Town of Eastham	1,490,112		24,589		1,514,701		16,956,243	2.492%
Town of Harwich	2,730,905		-		2,730,905		30,570,977	4.493%
Hyannis Fire District	1,107,437		1,766		1,109,203		12,416,917	1.825%
Town of Mashpee	2,806,280		39,248		2,845,528		31,854,119	4.6819
Mashpee Housing Authority	52,183		-		52,183		584,160	0.086%
Mashpee Water District	156,549		4,450		160,999		1,802,295	0.265%
Town of Nantucket	5,769,110		123,587		5,892,697		65,965,497	9.694%
Nantucket Housing Authority	23,192		-		23,192		259,622	0.038%
County of Nantucket	202,933		-		202,933		2,271,723	0.334%
Nantucket Regional Transit Authority	34,789		-		34,789		389,444	0.057%
Nauset Regional School District	881,311		-		881,311		9,865,791	1.450%
North Sagamore Water District	52,183		-		52,183		584,160	0.086%
Town of Orleans	2,006,143		-		2,006,143		22,457,666	3.300%
Orleans Housing Authority	46,385		-		46,385		519,255	0.076%
Ground Water Protection District	-		-		-		-	0.000%
Town of Provincetown			-		1,623,468		18,173,830	2.6719
Town of Sandwich			-		3,693,390		41,345,467	6.076%
Sandwich Housing Authority			-		28,991		324,538	0.048%
Sandwich Water District	185,539				185,539		2,077,007	0.305%
Town of Truro			14,328		1,063,784		11,908,476	1.750%
Veterans District	57,981		4,291		62,272		697,101	0.1029
Town of Wellfleet	1,153,822		15,007		1,168,829		13,084,397	1.923%
Town of Yarmouth			97,766		4,179,629		46,788,644	6.876%
Yarmouth Housing Authority			4,305		39,094		437,636	0.0649
West Barnstable Fire District	127,558		-		127,558		1,427,942	0.2109
Cape Cod Regional Transit Authority	185,539		-		185,539		2,077,007	0.305%
Monomoy Regional School District Provincetown Housing	933,494 11,596	_	-		933,494 11,596	_	10,449,951 129,811	1.536% 0.019%
Total	\$ 57.981,002	•	2.345,982	¢	60,326,984	•	680,443,471	100.000%

See notes to schedule of employer allocations and schedule of pension amounts by employer.

FOR THE YEAR ENDED DECEMBER 31, 2017

	_ E	Barnstable County		Barnstable County Hospital		Barnstable County Retired Sheriffs	_	Town of Barnstable
Net Pension Liability Beginning net pension liability\$	F	36,191,018	\$	115,799	\$	21,978,311	\$	103,876,895
Ending net pension liability\$	\$	33,423,155	\$	98,671	\$	21,125,831	\$	102,598,144
Deferred Outflows of Resources Differences between expected and actual experience\$	\$	_	s	_	\$	_	s	_
Net difference between projected and actual investment earnings on pension plan investments		-		_		-		-
Changes of assumptions		4,165,110		12,296		2,632,649		12,785,526
Changes in proportion and differences between employer contributions and proportionate share of contributions.		830,233		_		7,614		1,677,542
Total Deferred Outflows of Resources\$	\$ <u></u>	4,995,343	\$	12,296	\$	2,640,263	\$	14,463,068
Deferred Inflows of Resources								
Differences between expected and actual experience \$	\$	478,819	\$	1,414	\$	302,648	\$	1,469,820
Net difference between projected and actual investment earnings on pension plan investments		2,181,327		6,440		1,378,755		6,695,959
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions.		1,255,678		19,953		1,175,461		917,399
Total Deferred Inflows of Resources\$		3,915,824		27.807	\$	2.856.864	· -	9,083,178
	-	3,313,024	Φ.	27,007	Ψ.	2,030,004	Φ.	9,000,170
Pension Expense Proportionate share of plan pension expense\$	\$	3,886,770	\$	11,476	\$	2,456,714	\$	11,931,102
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		11,786		(4,558)		(284,576)	_	60,695
Total Employer Pension Expense\$	\$	3,898,556	\$	6,918	\$	2,172,138	\$	11,991,797
Contributions								
Statutory required contribution\$		2,932,885	\$.,	\$	1,404,973	\$	9,003,460
Contribution in relation to statutory required contribution	_	(2,932,885)		(7,799)	-	(1,404,973)	-	(9,003,460
Contribution deficiency/(excess)\$	—	-	\$	_	\$		\$	-
Contributions as a percentage of covered payroll		21.87%		N/A		N/A		21.48%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2019. \$ June 30, 2020. June 30, 2021. June 30, 2022. June 30, 2023. June 30, 2023.	\$	586,900 575,027 (29,648) (285,502) 232,742	1	(2,860) (2,895) (4,678) (4,280) (798)	\$	78,937 71,433 (310,747) (262,580) 206,356	\$	1,826,108 1,789,660 (66,497 37,494 1,793,125
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense\$	\$	1,079,519	\$	(15,511)	\$	(216,601)	\$	5,379,890
Discount Rate Sensitivity								
1% decrease (6.375%)\$		43,840,105	\$	129,424	\$	27,710,092	\$	134,574,784
Current discount rate (7.375%)\$		33,423,155	\$	98,671	\$	21,125,831	\$	102,598,144
1% increase (8.375%)\$		24,664,540	\$	72,814	\$	15,589,759	\$	75,712,071
Covered Payroll\$	\$	13,412,612	\$	-	\$	-	\$	41,921,199
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

		Barnstable Fire District		Barnstable Housing Authority		Town of Bourne	_	Bourne Housing Authority
Net Pension Liability Beginning net pension liability	\$	4,807,406	\$	2,391,232	\$	42,164,706	\$	870,559
Ending net pension liability	\$	4,723,263	\$	2,056,991	\$	40,456,504	\$	713,971
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		=		=		-		-
Changes of assumptions		588,601		256,338		5,041,589		88,973
Changes in proportion and differences between employer contributions and proportionate share of contributions.		240,694		196,812		361,515		2,488
Total Deferred Outflows of Resources			\$	453,150	\$	5,403,104	\$_	91,461
Deferred Inflows of Resources							_	
Differences between expected and actual experience	\$	67,665	\$	29,468	\$	579,579	\$	10,228
Net difference between projected and actual investment earnings on pension plan investments		308,259		134,248		2,640,349		46,596
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		_		225,978		1,062,031		136,164
Total Deferred Inflows of Resources		375,924	\$	389.694	\$	4,281,959	\$	192,988
Pension Expense	٠,		*		٠,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*	
Proportionate share of plan pension expense	\$	549,261		239,205	\$	4,704,669	\$	83,031
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		66,546		355		(130.820)		(28,385
Total Employer Pension Expense	\$	615,807	\$	239,560	\$	4,573,849	\$	54,646
Contributions Statutory required contribution	\$	414,249	\$	187,041	\$	3,511,643	\$	62,618
Contribution in relation to statutory required contribution		(414,249)		(187,041)		(3,511,643)	_	(62,618
Contribution deficiency/(excess)	\$	-	\$	-	\$		\$	
Contributions as a percentage of covered payroll		21.19%		22.22%		21.24%		20.979
Deferred Outflows/(Inflows) Recognized in								
<u>Future Pension Expense</u> June 30, 2019	\$	147,819 146,142	\$	35,750 35,019	\$	565,317 550,946	\$	(16,100 (16,353
June 30, 2021		60,686 19,991		(2,199) 3,963		(180,982) (334,847)		(29,274 (30,201
June 30, 2023	-	78,733		(9,077)		520,711	-	(9,599
Future Pension Expense	\$	453,371	\$	63,456	\$.	1,121,145	\$_	(101,527
Discount Rate Sensitivity 1% decrease (6.375%)	\$	6,195,358	\$	2,698,095	\$	53,065,531	\$	936,491
Current discount rate (7.375%)	\$	4,723,263	\$	2,056,991	\$	40,456,504	\$	713,971
1% increase (8.375%)	\$	3,485,522	\$	1,517,954	\$	29,854,785	\$	526,872
Covered Payroll	\$	1,954,875	\$	841,682	\$	16,534,981	\$	298,661
See notes to schedule of employer allocations and schedule								

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

	-	Bourne Recreation Authority		Bourne Water District		Town of Brewster	_	Brewster Housing Authority
Net Pension Liability Beginning net pension liability	\$	1,347,104	\$	1,466,779	\$	24,381,943	\$	133,933
Ending net pension liability	\$	1,301,008	\$	1,550,129	\$	25,055,360	\$	129,811
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		162,128		193,174		3,122,337		16,176
Changes in proportion and differences between employer contributions and proportionate share of contributions.		36,317		156,320		1,141,145		695
Total Deferred Outflows of Resources	-			349,494		4,263,482	_	16.871
	۰.	198,445	\$	349,494	\$	4,263,482	\$	10,8/1
Deferred Inflows of Resources Differences between expected and actual experience	\$	18,638	\$	22,207	\$	358,942	\$	1,860
Net difference between projected and actual investment earnings on pension plan investments		84,909		101,168		1,635,210		8,472
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		76,926		146.833		557,835		53,707
Total Deferred Inflows of Resources			¢	270,208	•	2,551,987	¢ -	64,039
	Ψ.	100,473	Ψ	270,200	Ψ.	2,001,007	Ψ.	04,000
Pension Expense Proportionate share of plan pension expense	\$	151,298	\$	180,260	\$	2,913,679	\$	15,100
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(7.460)		1,924		85,803		(17,732
Total Employer Pension Expense					\$	2,999,482	\$	(2,632
Total Employer Fortier Exposite	Ψ.	110,000	Ψ,	102,101	Ψ.	2,000,102	Ψ.	(2,002
Contributions Statutory required contribution	•	116,219		135,952	•	2,197,453	•	11,596
			Φ		Φ		Φ	
Contribution in relation to statutory required contribution	-	(116,219)		(135,952)		(2,197,453)	-	(11,596
Contribution deficiency/(excess)			\$		\$	-	\$_	-
Contributions as a percentage of covered payroll		25.18%		21.77%		21.13%		21.35%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2019 June 30, 2020	\$	14,927 14,464	\$	28,597 28,047	\$	516,932 508,032	\$	(15,498 (15,544
June 30, 2021		(9,075)		1		54,742		(17,890
June 30, 2022		(20,959) 18,615		(19,782) 42,423		46,800 584,989		(157 1,921
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$_	17,972	\$		\$	1,711,495	\$_	(47,168
Discount Rate Sensitivity							_	
1% decrease (6.375%)		1,706,491	\$	2,033,260	\$	32,864,331	\$	170,265
Current discount rate (7.375%)	\$	1,301,008	\$	1,550,129	\$	25,055,360	\$	129,811
1% increase (8.375%)	\$	960,076	\$	1,143,916	\$	18,489,546	\$	95,792
Covered Payroll	\$	461,568	\$	624,474	\$	10,398,846	\$	54,302
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

	_	Buzzards Bay Water District		Cape Cod Mosquito Control District		Cape Cod Regional Technical High School		Centerville/ Osterville/ Martsons Mills Fire District
Net Pension Liability	•	700.000		0.047./01		E 450.000	•	45 500 000
Beginning net pension liability		736,626	\$	3,247,484	\$	5,156,391	\$	15,529,637
Ending net pension liability	\$	778,876	\$	2,952,144	\$	4,608,363	\$	14,985,740
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		97,062		367,889		574,283		1,867,486
Changes in proportion and differences between employer contributions and proportionate								
share of contributions	-	53,755		152,278		85,438		49,126
Total Deferred Outflows of Resources	\$.	150,817	\$	520,167	\$	659,721	\$	1,916,612
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	11,158	\$	42,292	\$	66,019	\$	214,685
Net difference between projected and actual investment earnings on pension plan investments		50,833		192,669		300,760		978,029
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate share of contributions		36,557		148,914		515,764		210,009
Total Deferred Inflows of Resources	\$	98,548	\$	383,875	\$	882,543	\$	1,402,723
Pension Expense								
Proportionate share of plan pension expense	\$	90,577	\$	343,302	\$	535,906	\$	1,742,688
Net amortization of deferred amounts from changes in proportion and differences between employer								
contributions and proportionate share of contributions	-	1,760		8,302		(86,046)		(40,506
Total Employer Pension Expense	\$.	92,337	\$	351,604	\$	449,860	\$	1,702,182
Contributions								
Statutory required contribution	\$	69,577	\$	258,915	\$	404,171	\$	1,338,676
Contribution in relation to statutory required contribution	-	(69,577)		(258,915)		(404,171)		(1,338,676
Contribution deficiency/(excess)	\$	_	\$		\$		\$	-
Contributions as a percentage of covered payroll		21.35%		21.19%		20.97%		21.44%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2019.	¢	15,162	\$	59,100	\$	(6,750)	•	217,354
June 30, 2020.	Ψ	14,885	Ψ	58,051	Ψ	(8,387)	Ψ	212,031
June 30, 2021		793		4,640		(91,757)		(59,087
June 30, 2022. June 30, 2023.		(153) 21,582		1,569 12,932		(123,114) 7,186		(68,883 212,474
Total Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense	\$.	52,269	\$	136,292	\$	(222,822)	\$.	513,889
Discount Rate Sensitivity 1% decrease (6.375%)	\$	1,021,628	\$	3,872,236	\$	6,044,648	\$	19,656,327
Current discount rate (7.375%)		778,876	\$	2,952,144	\$	4,608,363	\$	14,985,740
1% increase (8.375%)		574,770	\$	2,178,529	\$	3,400,732	\$	11,058,693
Covered Payroll		325,812	\$	1,221,797	\$	1,927,723	\$	6,244,738
See notes to schedule of employer allocations and schedule								
See notes to scriedule of employer allocations and scriedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

	-	Town of Chatham		Chatham Housing Authority		Cotuit Fire District	-	Town of Dennis
let Pension Liability Beginning net pension liability	\$	22,730,937	\$	401,799	\$	3,013,475	\$	35,826,92
Ending net pension liability	\$	21,967,203	\$	389,444	\$	3,180,421	\$	35,309,16
<u>peferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	_	\$	_	\$	
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		2,737,499		48,532		396,336		4,400,14
Changes in proportion and differences between employer contributions and proportionate share of contributions.		154,814		2,104		280,582		909,56
	_			50.636			_	
Total Deferred Outflows of Resources	* -	2,892,313	ъ.	50,036	\$	676,918	\$.	5,309,70
peferred Inflows of Resources Differences between expected and actual experience	\$	314,702	\$	5,579	\$	45,563	\$	505,83
Net difference between projected and actual investment earnings on pension plan investments		1,433,667		25,417		207,567		2,304,41
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate share of contributions		329,548		52		134,630		608,16
Total Deferred Inflows of Resources		2,077,917	œ.	31,048		387,760	¢ -	3,418,41
	Ψ.	2,077,017	Ψ.	31,040	Ψ,	307,700	Ψ.	5,410,41
ension Expense Proportionate share of plan pension expense	\$	2,554,554	\$	45,287	\$	369,850	\$	4,106,08
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(66,548)		493		15,155		84,89
Total Employer Pension Expense	\$	2,488,006	\$	45,780	\$	385,005	\$	4,190,97
Ontributions Statutory required contribution	\$	1,933,226	\$	34,789	\$	278,935	\$	3,096,75
Contribution in relation to statutory required contribution		(1,933,226)		(34,789)		(278,935)		(3,096,75
Contribution deficiency/(excess)	\$_	_	\$.		\$		\$_	
Contributions as a percentage of covered payroll		22.18%		21.36%		20.97%		20.97
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2019	s	311,443	\$	7,194	\$	69,881	\$	692 45
June 30, 2020		303,640		7,056		68,751		679,91
June 30, 2021		(93,785) (18,526)		10 (463)		11,211 52.883		41,113 (127,40
June 30, 2022		311,624		5,791		86,432		605,19
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	ŝ	814,396	\$	19,588	\$		\$	1,891,28
piscount Rate Sensitivity	•	,	٠,		٠,		•	
1% decrease (6.375%)	\$	28,813,698	\$	510,823	\$	4,171,658	\$	46,313,92
Current discount rate (7.375%)	\$	21,967,203	\$	389,444	\$	3,180,421	\$	35,309,16
	•	16,210,650	\$	287,390	\$	2,346,984	\$	26,056,31
1% increase (8.375%)	Ψ							

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

		Dennis Housing Authority	_	Dennis Water District		Dennis/Yarmouth Regional School District	٦ -	Town of Eastham
Net Pension Liability Beginning net pension liability	\$	768,232	\$	2,946,514	\$	14,665,600	\$	17,835,831
Ending net pension liability	\$	808,810	\$	2,920,800	\$	13,889,994	\$	16,956,243
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		100,792		363,982		1,730,937		2,113,04
Changes in proportion and differences between employer contributions and proportionate share of contributions.		80,833		55,177		244,097		357,914
Total Deferred Outflows of Resources			\$	419,159	\$		\$	2,470,95
Deferred Inflows of Resources	٠.		•		*		٠.	
Differences between expected and actual experience	\$	11,587	\$	41,843	\$	198,988	\$	242,915
Net difference between projected and actual investment earnings on pension plan investments		52,786		190,623		906,516		1,106,632
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate share of contributions				173,061		646 570		456,74
Total Deferred Inflows of Resources	-	64,373	¢ -	405,527	•	1,752,074	¢ -	1,806,28
		04,073	Ψ.	400,027	Ψ	1,732,074	Ψ.	1,000,20
Pension Expense Proportionate share of plan pension expense	\$	94,056	\$	339,666	\$	1,615,259	\$	1,971,83
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		19,978		(34.332)		(122.256)		(30.11;
Total Employer Pension Expense		114,034	\$	305,334	\$	1,493,003	\$	1,941,72
			•				•	
Contributions Statutory required contribution	\$	72,251	\$	256,166	s	1,218,207	\$	1,487,12
Contribution in relation to statutory required contribution		(72,251)	•	(256,166)	•	(1,218,207)	•	(1,487,12
Contribution deficiency/(excess)			-	(230,100)		(1,210,207)	-	(1,407,123
		22.18%	Φ.	20.97%	Φ	20.97%	Φ.	21.319
Contributions as a percentage of covered payroll		22.18%		20.91%		20.97%		21.31
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2019. June 30, 2020.		33,895 33,608	\$	15,926 14,889	\$	116,750 111,816	\$	261,654 255,63
June 30, 2021		18,972		(37,950)		(139,477)		(51,133
June 30, 2022		8,863		(31,848)		(18,730)		2,176
June 30, 2023		21,914	-	52,615		152,601	-	196,342
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	117,252	\$	13,632	\$	222,960	\$	664,670
Discount Rate Sensitivity								
1% decrease (6.375%)		1,060,890	\$	3,831,118	\$	18,219,072	\$	22,240,975
Current discount rate (7.375%)		808,810	\$	2,920,800	\$	13,889,994	\$	16,956,243
1% increase (8.375%)	\$	596,859	\$	2,155,395	\$	10,250,090	\$	12,512,821
Covered Payroll	\$	325,812	\$	1,221,797	\$	5,810,321	\$	6,977,816
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continue

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

		Town of Harwich		Hyannis Fire District	Town of Mashpee		Mashpee Housing Authority
Net Pension Liability Beginning net pension liability	\$	31,340,183	\$	12,878,386	\$ 34,148,007	\$	602,693
Ending net pension liability	\$	30,570,977	\$	12,416,917	\$ 31,854,119	\$	584,160
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$ -	\$	-
Net difference between projected and actual investment earnings on pension plan investments							
Changes of assumptions		3,809,679		1,547,365	3,969,581		72,797
Changes in proportion and differences between employer contributions and proportionate							
share of contributions		1,101,624		241,234	456,274	-	66,660
Total Deferred Outflows of Resources	\$	4,911,303	\$	1,788,599	\$ 4,425,855	\$	139,457
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	437,959	\$	177,884	\$ 456,341	\$	8,369
Net difference between projected and actual investment earnings on pension plan investments		1,995,183		810,377	2,078,926		38,125
Changes of assumptions		-		=	-		-
Changes in proportion and differences between employer contributions and proportionate							
share of contributions		84,719		98,021	962,454	-	-
Total Deferred Inflows of Resources	\$	2,517,861	\$.	1,086,282	\$ 3,497,721	\$	46,494
Pension Expense Proportionate share of plan pension expense	\$	3,555,089	\$	1,443,962	\$ 3,704,303	\$	67,934
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		238.687		33,349	(81,466)		18,871
Total Employer Pension Expense		3,793,776	\$	1,477,311	\$ 3,622,837	\$	86,805
Contributions Statutory required contribution	\$	2,681,194	\$	1,089,012	\$ 2,793,731	\$	52,183
Contribution in relation to statutory required contribution		(2,681,194)		(1,089,012)	(2,793,731)	_	(52,183
Contribution deficiency/(excess)	\$	_	\$	_	\$ _	\$_	-
Contributions as a percentage of covered payroll	ľ	20.97%		21.00%	21.26%	•	21.369
Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense June 30, 2019	\$	764,724	\$	247,008	\$ 466,650	\$	28,923
June 30, 2020		753,864		242,597	455,334		28,715
June 30, 2021		200,790 198,040		17,958 23.684	(120,957) (145,871)		18,145 8,501
June 30, 2022		476,024		171,070	272,978		8,679
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense.	. \$	2,393,442	\$	702,317	\$	\$	92,963
Discount Rate Sensitivity							
1% decrease (6.375%)	\$	40,098,997	\$	16,286,881	\$ 41,782,051	\$	766,225
Current discount rate (7.375%)	\$	30,570,977	\$	12,416,917	\$ 31,854,119	\$	584,160
1% increase (8.375%)	\$	22,559,784	\$	9,163,035	\$ 23,506,674	\$	431,080
Covered Payroll	\$	12,788,137	\$	5,185,848	\$ 13,141,101	\$	244,359
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

	_	Mashpee Water District	_	Town of Nantucket	_	Nantucket Housing Authority		County of Nantucket
Net Pension Liability								
Beginning net pension liability.		1,994,615	\$	69,565,696	\$	267,866	\$	2,008,983
Ending net pension liability	\$	1,802,295	\$	65,965,497	\$	259,622	\$	2,271,723
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		224,598		8,220,457		32,354		283,096
Changes in proportion and differences between employer contributions and proportionate share of contributions		30,401		1,583,006		1,402		254,000
Total Deferred Outflows of Resources	-		\$	9.803.463	\$	33.756	\$	537.096
	٠.		*		٠.			
Deferred Inflows of Resources Differences between expected and actual experience	\$	25,820	\$	945,020	\$	3,719	\$	32,545
Net difference between projected and actual investment earnings on pension plan investments		117,625		4,305,169		16,944		148,262
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate		99,887		1 000 F00		40		247 426
share of contributions	-		-	1,086,522	-		-	217,126
Total Deferred Inflows of Resources	\$	243,332	\$	6,336,711	\$	20,703	\$	397,933
Pension Expense Proportionate share of plan pension expense	\$	209,584	\$	7,671,099	\$	30,189	\$	264,176
Net amortization of deferred amounts from changes in proportion and differences between employer								
contributions and proportionate share of contributions	-	(10,078)	-	182,137	-	330	-	(12,336
Total Employer Pension Expense	\$	199,506	\$.	7,853,236	\$	30,519	\$	251,840
Contributions _								
Statutory required contribution	\$	158,068	\$	5,785,432	\$	23,192	\$	199,239
Contribution in relation to statutory required contribution	_	(158,068)	_	(5,785,432)	_	(23,192)	_	(199,239
Contribution deficiency/(excess)	\$		\$	_	\$	_	\$	-
Contributions as a percentage of covered payroll		21.56%		21.42%		21.35%		20.979
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense		20.024		4.047.000	•	4.707		20.754
June 30, 2019	Ф	20,934 20,294	\$	1,317,209 1,293,775	\$	4,797 4,705	\$	26,754 25,947
June 30, 2021		(12,312)		100,355		4		(15,152
June 30, 2022		(23,348)		18,238		(308)		18,441
June 30, 2023	_	6,099	_	737,175	_	3,855		83,173
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	11,667	\$	3,466,752	\$	13,053	\$	139,163
Discount Rate Sensitivity								
1% decrease (6.375%)	\$	2,364,017	\$	86,524,883	\$	340,540	\$	2,979,747
Current discount rate (7.375%)	\$	1,802,295	\$	65,965,497	\$	259,622	\$	2,271,723
1% increase (8.375%)	\$	1,330,001	\$	48,679,090	\$	191,588	\$	1,676,412
Covered Payroll	\$	733,078	\$	27,015,280	\$	108,604	\$	950,286
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

		Nantucket Regional Transit Authority	,	Nauset Regional School District		North Sagamore Water District	-	Town of Orleans
Net Pension Liability Beginning net pension liability	\$	401,799	\$	10,044,928	\$	602,693	\$	22,098,852
Ending net pension liability	. \$	389,444	\$	9,865,791	\$	584,160	\$	22,457,666
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		48,532		1,229,450		72,797		2,798,619
Changes in proportion and differences between employer contributions and proportionate share of contributions		2,104		556,023		27,791		970,395
Total Deferred Outflows of Resources			\$		\$	100,588	\$	3,769,014
Deferred Inflows of Resources								
Differences between expected and actual experience	\$	5,579	\$	141,337	\$	8,369	\$	321,728
Net difference between projected and actual investment earnings on pension plan investments		25,417		643,881		38,125		1,465,676
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate share of contributions.		52		253,712		36.509		210,034
					_			
Total Deferred Inflows of Resources	. \$	31,048	\$	1,038,930	\$	83,003	\$.	1,997,438
Pension Expense Proportionate share of plan pension expense	. \$	45,287	\$	1,147,292	\$	67,934	\$	2,611,590
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		493		105,050		33		160.28
Total Employer Pension Expense	\$	45,780	\$	1,252,342	\$	67,967	\$	2,771,872
Contributions Statutory required contribution	\$	34,789	\$	884,280	\$	51,233	\$	1,969,625
Contribution in relation to statutory required contribution		(34,789)		(884,280)		(51,233)	_	(1,969,625
Contribution deficiency/(excess)	\$		\$		\$		\$	
Contributions as a percentage of covered payroll		21.36%		21.43%		20.97%	•	20.979
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2019.	\$	7,194	\$	274,811	\$	10,085	\$	546,712
June 30, 2020		7,056 10		271,307		9,877 (691)		538,735 132,440
June 30, 2021		(463)		92,819 (59,508)		(10,210)		65,932
June 30, 2023		5,791		167,114		8,524		487,75
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	. \$	19,588	\$	746,543	\$	17,585	\$	1,771,576
Discount Rate Sensitivity		E40.000	œ.	10.040.050	•	700 005	÷	20.457.00
1% decrease (6.375%)		510,823	\$	12,940,650	\$	766,225	\$	29,457,024
Current discount rate (7.375%)		389,444	\$	9,865,791	\$	584,160	\$	22,457,666
1% increase (8.375%)		287,390	*	7,280,438	*	431,080	*	16,572,587
Covered Payroll	. \$	162,906	\$	4,126,957	\$	244,359	\$	9,394,258
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continu

Barnstable County Retirement Association

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FOR THE	YEAR	ENDED	DECEMBER:	31,	2017	

	-	Orleans Housing Authority		Ground Water Protection District		Town of Provincetown		Town of Sandwich
Net Pension Liability Beginning net pension liability	\$	535,732	\$	937,531	\$	18,951,432	\$	41,586,017
Ending net pension liability	\$	519,255	\$	-	\$	18,173,830	\$	41,345,467
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		64,708		-		2,264,777		5,152,370
Changes in proportion and differences between employer contributions and proportionate share of contributions		2,802		1,362		471,737		1,486,326
Total Deferred Outflows of Resources	_		\$	1,362	\$	2,736,514	\$	6,638,696
Deferred Inflows of Resources	•							
Differences between expected and actual experience	\$	7,439	\$	-	\$	260,358	\$	592,314
Net difference between projected and actual investment earnings on pension plan investments		33,889		-		1,186,096		2,698,369
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		74		1,362		410,243		
Total Deferred Inflows of Resources			· ·	1,362	•	1,856,697		3,290,683
	* -	41,402	Ψ	1,302	Φ,	1,000,007	Ψ.	3,290,003
Pension Expense Proportionate share of plan pension expense	\$	60,386	\$	(735,649)	\$	2,113,430	\$	4,808,047
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		658		(148,814)		(271)		352,145
Total Employer Pension Expense	\$	61,044	\$	(884,463)	\$	2,113,159	\$	5,160,192
Contributions Statutory required contribution	\$	46,385	\$	-	\$	1,593,916	\$	3,626,159
Contribution in relation to statutory required contribution		(46,385)		_		(1,593,916)		(3,626,159
Contribution deficiency/(excess)	\$	-	\$		\$	-	\$	-
Contributions as a percentage of covered payroll		21.36%		N/A		20.97%		20.97%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2019	\$	9,593	\$	-	\$	312,447	\$	1,063,579
June 30, 2020		9,408		-		305,991		1,048,892
June 30, 2021		12 (620)		-		(22,805) 49.066		300,887 171,346
June 30, 2023		7,715		_		235,118		763,309
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	26,108	\$		\$	879,817	\$	3,348,013
Discount Rate Sensitivity								
1% decrease (6.375%)		681,088	\$	-	\$	23,838,044	\$	54,231,558
Current discount rate (7.375%)		519,255	\$	-	\$	18,173,830	\$	41,345,467
1% increase (8.375%)	\$	383,182	\$	-	\$	13,411,336	\$	30,510,794
Covered Payroll	\$	217,208	\$	-	\$	7,602,290	\$	17,295,209
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

TOTAL TEXAS	INDED DECE	IIDL		1, 2011				
	Sandwich Housing Authority		_	Sandwich Water District		Town of Truro		Veterans District
Net Pension Liability Beginning net pension liability	\$ 334,82	26	\$	2,142,916	\$	12,290,256	\$	653,400
Ending net pension liability	\$ 324,53	38	\$	2,077,007	\$	11,908,476	\$	697,101
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions	40,44	13		258,831		1,484,005		86,871
Changes in proportion and differences between employer contributions and proportionate share of contributions	2,90	06		3,750		34,105		78,075
Total Deferred Outflows of Resources			\$_	262,581	\$	1,518,110	\$	164,946
Deferred Inflows of Resources		_						
Differences between expected and actual experience	\$ 4.64	19	\$	29,755	\$	170,601	\$	9,987
Net difference between projected and actual investment earnings on pension plan investments	21,18	31		135,554		777,194		45,496
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate								
share of contributions	4	14_	-	220,130		191,370	-	36,77
Total Deferred Inflows of Resources	\$ 25,87	74	\$_	385,439	\$	1,139,165	\$	92,254
Pension Expense Proportionate share of plan pension expense	\$ 37,74	13		241,532		1,384,833		81,066
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	64	14		(54,179)		(53,642)		10,154
Total Employer Pension Expense	\$ 38,38	37	\$_	187,353	\$	1,331,191	\$	91,220
Contributions Statutory required contribution	\$ 30,37	72	\$	182,162	\$	1,063,784	\$	61,138
Contribution in relation to statutory required contribution	(30,37	72)	_	(182,162)		(1,063,784)		(61,138
Contribution deficiency/(excess)	\$	-	\$_		\$	-	\$	
Contributions as a percentage of covered payroll	22.37	7%		20.97%		21.65%		22.529
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2019.	\$ 6,22	28	\$	(18,440)	\$	151,268	\$	22.149
June 30, 2020	6,11		*	(19,178)	•	147,038	•	21,901
June 30, 2021	24			(56,754)		(68,405)		9,290
June 30, 2022	(16 5,05			(58,789) 30,303		(27,338) 176,382		(652 20,004
Total Deferred Outflows/(Inflows) Recognized in			-	00,000		170,002	-	20,004
Future Pension Expense	\$ 17,47	75	\$ _	(122,858)	\$.	378,945	\$	72,692
Discount Rate Sensitivity								
1% decrease (6.375%)			\$	2,724,344	\$	15,619,975	\$	914,365
Current discount rate (7.375%)		38	\$	2,077,007	\$	11,908,476	\$	697,101
1% increase (8.375%)		92	\$	1,532,722	\$	8,787,832	\$	514,424
Covered Payroll	\$ 135,75	55	\$	868,833	\$	4,914,337	\$	271,510
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

	-	Town of Wellfleet		Town of Yarmouth		Yarmouth Housing Authority		West Barnstable Fire District
Net Pension Liability Beginning net pension liability	\$	13,034,923	\$	49,192,133	\$	519,649	\$	1,473,251
Ending net pension liability	\$	13,084,397	\$	46,788,644	\$	437,636	\$	1,427,942
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments								
Changes of assumptions		1,630,545		5,830,685		54,537		177,947
Changes in proportion and differences between employer contributions and proportionate		107.010				2.004		00.541
share of contributions	_	487,913	-	293,692		2,931		83,545
Total Deferred Outflows of Resources	\$ _	2,118,458	\$	6,124,377	\$	57,468	\$	261,492
Deferred Inflows of Resources Differences between expected and actual experience	\$	187,447	\$	670,293	\$	6,270	\$	20,457
Net difference between projected and actual investment earnings on pension plan investments		853,940		3,053,612		28,562		93,193
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate		70.004				50.074		
share of contributions		78,994	-	1,465,842		50,674		
Total Deferred Inflows of Resources	\$ _	1,120,381	\$	5,189,747	\$.	85,506	\$	113,650
Proportionate share of plan pension expense	\$	1,521,580	\$	5,441,030	\$	50,895	\$	166,049
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		77,754		(240,618)		(9.326)		27,539
Total Employer Pension Expense	_	1,599,334	\$	5,200,412	\$	41,569	\$	193,588
Contributions Statutory required contribution	\$	1,150,399	\$	4,106,672	\$	39,094	\$	125,236
Contribution in relation to statutory required contribution		(1,150,399)		(4,106,672)		(39,094)		(125,236
Contribution deficiency/(excess)			\$		\$	_	\$	
Contributions as a percentage of covered payroll		21.29%	•	21.48%		24.00%		20.979
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2019	£	302,898	\$	564,477	\$	(1,796)	\$	52 110
June 30, 2020.	*	298,250	*	547,856	*	(1,951)	*	51,602
June 30, 2021		61,534		(298,622)		(9,871)		25,764
June 30, 2022. June 30, 2023.		74,590 260,805		(424,901) 545,820		(10,743) (3,677)		(2,468 20,834
Total Deferred Outflows/(Inflows) Recognized in	-		•		•			
Future Pension Expense	\$ _	998,077	\$.	934,630	\$	(28,038)	\$	147,842
Discount Rate Sensitivity 1% decrease (6.375%)	\$	17,162,395	\$	61,371,208	\$	574,031	\$	1,872,990
Current discount rate (7.375%)		13,084,397	\$	46,788,644	\$	437,636	\$	1,427,942
		9.655.601	\$	34,527,577	\$	322,951	\$	1,053,749
1% increase (8.375%)	Ψ							
1% increase (8.375%)		5,403,056	\$	19,114,328	\$	162,906	\$	597,323

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2017

		oco ococmo		01,2011			
		Cape Cod Regional Transit Authority	,	Monomoy Regional School District	Provincetown Housing Authority		Totals
Net Pension Liability							
Beginning net pension liability	\$	1,674,157	\$	10,580,661	\$ 133,933	\$	702,580,650
Ending net pension liability	\$	2,077,007	\$	10,449,951	\$ 129,811	\$	680,443,471
Deferred Outflows of Resources							
Differences between expected and actual experience	\$	-	\$	-	\$ -	\$	-
Net difference between projected and actual investment eamings on pension plan investments							
Changes of assumptions		258,831		1,302,247	16,176		84,795,179
Changes in proportion and differences between employer contributions and proportionate share of contributions.		355,130		168,404	74,030		15,914,677
				100,101		-	15,514,077
Total Deferred Outflows of Resources	\$	613,961	\$	1,470,651	\$ 90,206	\$	100,709,856
<u>Deferred Inflows of Resources</u> <u>Differences between expected and actual experience</u>	\$	29,755	\$	149,706	\$ 1,860	\$	9,748,018
Net difference between projected and actual investment earnings on pension plan investments		135,554		682,005	8,472		44,408,433
Changes of assumptions		-		-	-		-
Changes in proportion and differences between							
employer contributions and proportionate share of contributions		290,855		495,615	_		15,179,028
						-	
Total Deferred Inflows of Resources	\$	456,164	\$	1,327,326	\$ 10,332	\$	69,335,479
Pension Expense Proportionate share of plan pension expense	\$	241,536	\$	1,215,221	\$ 15,100	\$	78,392,869
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(10,362)		(109.884)	18,494		_
						-	
Total Employer Pension Expense	\$	231,174	\$	1,105,337	\$ 33,594	\$.	78,392,869
Contributions							
Statutory required contribution		182,162		916,502	\$ 11,596	\$	59,292,237
Contribution in relation to statutory required contribution		(182,162)		(916,502)	(11,596)	-	(59,292,237)
Contribution deficiency/(excess)	\$		\$		\$ 	\$	-
Contributions as a percentage of covered payroll		20.97%		20.97%	21.35%		21.84%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense							
June 30, 2019		25,377	\$	69,929	\$ 20,728	\$	11,857,244
June 30, 2020		24,639 (12,938)		66,217 (122,837)	20,682 18,333		11,615,530 (694,766)
June 30, 2022		20,363		(52,460)	18,210		(1,325,115)
June 30, 2023		100,356		182,476	1,921		9,921,484
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	\$	157,797	\$	143,325	\$ 79,874	\$	31,374,377
Discount Rate Sensitivity							
1% decrease (6.375%)	\$	2,724,344	\$	13,706,875	\$ 170,265	\$	892,516,460
Current discount rate (7.375%)	\$	2,077,007	\$	10,449,951	\$ 129,811	\$	680,443,471
1% increase (8.375%)	\$	1,532,722	\$	7,711,518	\$ 95,792	\$	502,131,729
Covered Payroll	. \$	868,833	\$	4,371,317	\$ 54,302	\$	271,510,348
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(concluded)

Barnstable County Retirement Association

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NOTE I - Schedule of Employer Allocations

Governmental Accounting Standards Board (GASB) Statement #68 requires employers participating in a costsharing 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, contributions 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 Barnstable County Retirement Association's collective pension amounts.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans allocate the annual required pension fund appropriation to employer units based on their proportionate share of the aggregate of the annual rates of regular compensation of all members in service of the Association who are employees of any government unit at the close of business on the September 30th immediately preceding the fiscal year. Accordingly, the proportionate aggregate rates of regular compensation as of the close of business on September 30, 2016 were applied to allocate the Association's December 31, 2017 pension fund appropriation by member unit.

The Barnstable County Hospital was operated by Barnstable County from the late 1800s to 1995, when it was closed and all employees were terminated. The remaining payments due from the Barnstable County Retirement Association to the former employees of the Barnstable County Hospital were actuarially determined and are separately identified in the Association's funding schedule. Barnstable County continues to pay for the retirement obligations related to previously retired Hospital employees.

In 2012, the Barnstable County Sheriff's functions were taken over by the Commonwealth of Massachusetts. Barnstable County continues to pay for the retirement obligations related to previously retired Sheriff's employees. These liabilities are actuarially determined and are separately identified in the Association's funding schedule.

As of December 31, 2016, the Ground Water Protection District was dissolved and is no longer a member unit of the Association. Accordingly, the Association has not reported a net pension liability or related deferred outflows of resources or deferred inflows of resources for the Ground Water Protection District as of December 31, 2017. The effect of the change in proportion from the dissolution of the Ground Water Protection District is included in deferred inflows and deferred outflows of the remaining member units.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC complete 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 as retirees including the ERIP less the accrued liability for the members as active employees excluding the ERIP represents the increase in accrued liability due to the ERIP. The net increase is amortized for each member unit accepting the ERIP, and is separately identified in the Association's funding schedule. The 2003 ERIP amortization is occurring over 25 years, increasing 4.5% per year. The 2010 ERIP amortization is occurring over a 10 year, straight-line basis.

The allocation percentage of the total net pension liability is a blended rate of the following three items. (1) The proportionate share of active employer's covered payroll is applied to the fiscal year 2018 pension fund appropriation calculated by the actuary. (2) ERI is a direct charge calculated by PERAC for only the employers that accepted the ERI. (3) The direct amortization of the actuarial determined net pension liability for Barnstable County Sheriff and Barnstable County Hospital since they no longer have active covered payroll.

Barnstable County Retirement Association

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NOTE II - 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, contributions 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.

Changes in Assumptions

The following assumption changes were reflected in the January 1, 2018 actuarial valuation:

- The mortality tables for non-disabled participants were changed from the RP-2000 Employee and Healthy
 Annuitant Mortality Tables projected generationally using Scale BB2D from 2009 to the RP-2014 Blue
 Collar Employee and Healthy Annuitant Mortality Tables projected generationally using Scale MP-2017.
- The mortality tables for disabled participants were changed from the RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2015 to the RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward 1 year projected generationally using Scale MP-2017.
- The long-term salary increase assumption was lowered by 0.25%, to 4.00% for Group 1 participants, 4.25% for Group 2 participants, and 4.50% for Group 4 participants.
- The investment rate of return and discount rate assumption were lowered from 7.625% to 7.375%.

Changes in Plan Provisions

The following plan provision change was reflected in the January 1, 2018 actuarial valuation:

 The Cost of Living Adjustment Base was increased from \$15,000 to \$16,000 as of July 1, 2015, to \$17,000 as of July 1, 2016, and to \$18,000 as of July 1, 2017.

Barnstable County Retirement Association

Audit of Specific Elements, Accounts and Items of Financial Statements BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2016

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2016

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Financial Section

Barnstable County Retirement Association

Financial Section

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2016, and the related notes to the financial statements, which collectively comprise the Barnstable County Retirement Associations' financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial 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 Barnstable County Retirement Association as of December 31, 2016 and the results of its operations and changes in its financial 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 Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Return be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 August 22, 2017, on our consideration of the Barnstable County Retirement Association'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 Barnstable County Retirement Association's internal control over financial reporting and compliance.

Restriction on Use

This report is intended solely for the information and use of the Barnstable County Retirement Association, the Public Employee Retirement Administration Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

August 22, 2017

Pavers & Sullivan LLC

Management's Discussion and Analysis

As management of the Barnstable County Retirement Association, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2016. The Association complies with financial reporting requirements issued by the Governmental Accounting Standards Board (GASB).

The GASB is the authoritative standard setting body that provides guidance on how to prepare financial statements in conformity with generally accepted accounting principles (GAAP). Users of these financial statements rely on the GASB to establish consistent reporting standards for all governments in the United States. This consistent application is the only way users can assess the financial condition of a public retirement system compared to others.

Financial Highlights

- The Association's assets exceeded its liabilities at the close of the most recent year by \$942.2 million (net position).
- The Association's net position increased by \$69.2 million for the year ended December 31, 2016.
- Total investment income was \$69.5 million; investment expenses were \$4.8 million; and net investment income was \$64.7 million.
- Total contributions were \$87.6 million including \$56.3 million from employers, \$26.4 million from members, and \$4.9 million from other transfers in and settlements.
- Retirement benefits, refunds and transfers to other systems amounted to \$81.7 million.
- Administrative expenses were \$1.4 million.
- The Total Pension Liability is \$1.6 billion as of December 31, 2016 while the Net Pension Liability is \$702.6 million
- The Plan fiduciary net position as a percentage of the total pension liability is 57.28%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Association fiduciary financial statements. These fiduciary financial statements comprise of four components: 1) management's discussion and analysis, 2) fiduciary financial statements, 3) notes to the financial statements and 4) required supplementary information.

Fiduciary Financial Statements

The *statement of net position* presents information on all assets and deferred outflows less deferred inflows and liabilities with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position is improving or deteriorating.

The statement of changes in fiduciary net position presents information showing how the Association's net position changed during the most recent year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, additions and deductions are reported in this statement for some items that will only result in cash flows in future periods.

Notes to the financial statements

The notes provide additional information that is essential to a full understanding of the data provided in the fiduciary financial statements.

Barnstable County Retirement Association

Management's Discussion and Analysis

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Return be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of the Association's financial position. The Association's net position exceeded liabilities by \$942.2 million at the close of 2016.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year end the Association's net position include investments of \$938 million, cash of \$1.8 million and accounts receivable of \$2.4 million.

In 2016 the Association's contributions were \$87.6 million and net investment income was \$64.7 million while retirement benefit payments, refunds, transfers and administration expenses were \$83.1 million which resulted in a current increase of \$69.2 million. In 2015 the Association's contributions were \$83.1 million and net investment income was \$5.5 million while retirement benefit payments, refunds, transfers and administration expenses were \$77.6 million which resulted in a prior year increase of \$10.9 million.

For both years, the current contributions not only fully supported the current expenses but contributed to the increase in net position. The major difference in the change in net position when comparing the 2016 and 2015 results is net investment income. Net investment income was \$64.7 million and \$5.5 million in 2016 and 2015 respectively. The annual money weighted rate of return was 7.40% and 0.57% in 2016 and 2015 respectively. Fluctuations in the Association's annual investment returns are expected.

The following tables present summarized financial information for the past two years.

	2016	2015
Statement of Fiduciary Net Position Assets:		
Cash\$	1,824,611	\$ 860,349
Investments	937,995,441	869,072,837
Receivables	2,368,212	3,068,905
Total assets	942,188,264	873,002,091
Liabilities: Accounts payable	25,545	
Net Position Restricted for Pension Benefits\$	942,162,719	\$ 873,002,091

Barnstable County Retirement Association

Management's Discussion and Analysis

	2016		2015
Statement of Changes in Fiduciary Net Position			
Additions:			
Contributions:	00 444 004	_	05 007 007
Member contributions\$ Employer contributions	26,411,361 56,269,527	\$	25,867,837 53,626,350
Other contributions	4,900,585		3,575,730
Other continuations	4,900,000		5,575,750
Total contributions	87,581,473		83,069,917
Net investment income (loss):			
Total investment income (loss)	69,523,173		9,956,947
Less, investment expenses	(4,844,967)		(4,486,386)
Net investment income (loss)	64,678,206		5,470,561
	450.050.050		00 5 40 450
Total additions	152,259,679		88,540,478
Deductions:			
Administration	1,384,804		1,288,422
Retirement benefits, refunds and transfers	81,714,247		76,319,257
Total deductions	83,099,051		77,607,679
Not increase (decrease) in fiduciary not position	60 160 638		10.032.700
Net increase (decrease) in fiduciary net position	69,160,628		10,932,799
Fiduciary net position at beginning of year	873,002,091		862,069,292
, ,	, , , , , , , , , , , , , , , , , , , ,		, - 1
Fiduciary net position at end of year\$	942,162,719	\$	873,002,091

Requests for Information

This financial report is designed to provide a general overview of the Association's finances for all those with an interest in the Association's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Association's Board, 750 Attucks Lane, Hyannis, MA 02601.

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2016

Assets Cash.....\$ 1,824,611 933,767,669 PRIT funds..... Pooled real estate funds..... 4,227,772 Total investments..... 937,995,441 Receivables.... 2,368,212 Total assets.....______ 942,188,264 Liabilities Accounts payable..... **Net Position Restricted for Pensions......** \$ ____942,162,719

See notes to financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED DECEMBER 31, 2016

Additions: Contributions:	
Member contributions\$	26,411,361
Retirement benefits - transfers from other systems	1,769,226
Retirement benefits - 3(8)c contributions from other systems	2,236,573
Retirement benefits - worker's compensation settlements	39,650
Retirement benefits - state COLA reimbursements	855,136
Employer contributions	56,269,527
Total contributions	87,581,473
Net investment income (loss):	
Total investment income (loss)	69,523,173
Less, investment expenses	(4,844,967)
Net investment income (loss)	64,678,206
Total additions	152,259,679
Deductions:	
Administration	1,384,804
Retirement benefits - transfers to other systems	1,074,219
Retirement benefits - 3(8)c payments to other systems	1,379,423
Retirement benefits and refunds	79,260,605
Total deductions	83,099,051
Net increase (decrease) in fiduciary net position	69,160,628
Fiduciary net position at beginning of year	873,002,091
Fiduciary net position at end of year\$	942,162,719

Barnstable County Retirement Association

See notes to financial statements.

NOTE 1 - PLAN DESCRIPTION

The Barnstable County Retirement Association is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Barnstable County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Association is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. The Association has 51 participating employers.

Originally established in 1937, the Association is governed by a five member Board who establish the policies under which the Association operates. Board members also approve all of the Association's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the Association are managed by the Executive Director.

The legislative body for the Association is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi-annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The Association is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan 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 those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement Association; Group 1, Group 2 and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

Barnstable County Retirement Association

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A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension.

Active members contribute between 5 and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the PERAC actuary. When a member's retirement becomes effective, his/her deductions 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 borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the Association and all costs are borne by the Association.

The pension portion of any retirement benefit is paid from the Pension Fund of the Association. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The Association adopted Section 22d of Chapter 32 in April of 1989. The Association's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036.

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the Association, are now paid from investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements of the Barnstable County Retirement Association 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.

BCRA is a special-purpose government engaged only in fiduciary activities. Accordingly, the financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, additions are recorded when earned and deductions are recorded when the liabilities are incurred

Cash and Investments

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition. Investments are carried at fair value. The

Barnstable County Retirement Association

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fair values were determined by the closing price for those securities traded on national stock exchanges and at the average bid-and-asked quotation for those securities traded in the over-the-counter market. The fair value of private equities are based on management's valuation of estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values. Real estate assets are reported at fair value utilizing an income approach to valuation along with independent appraisals and estimates by management.

Fair Value Measurements

The Retirement Association reports required types of financial instruments in accordance with the fair value standards. These standards require an entity to maximize the use of observable inputs (such as quoted prices in active markets) and minimize the use of unobservable inputs (such as appraisals or valuation techniques) to determine fair value. Fair value standards also require the government to classify these financial instruments into a three-level hierarchy, based on the priority of inputs to the valuation technique or in accordance with net asset value practical expedient rules, which allow for either Level 2 or Level 3 depending on lock up and notice periods associated with the underlying funds.

Instruments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1 – Quoted prices are available in active markets for identical instruments as of the reporting date. Instruments, which are generally included in this category, include actively traded equity and debt securities, U.S. government obligations, and mutual funds with quoted market prices in active markets.

Level 2 – Pricing inputs are other than quoted in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies. Certain fixed income securities, primarily corporate bonds, are classified as Level 2 because fair values are estimated using pricing models, matrix pricing, or discounted cash flows.

Level 3 – Pricing inputs are unobservable for the instrument and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

In some instances the inputs used to measure fair value may fall into different levels of the fair value hierarchy and is based on the lowest level of input that is significant to the fair value measurement.

Market price is affected by a number of factors, including the type of instrument and the characteristics specific to the instrument. Instruments with readily available active quoted prices generally will have a higher degree of market price observability and a lesser degree of judgment used in measuring fair value. It is reasonably possible that change in values of these instruments will occur in the near term and that such changes could materially affect amounts reported in these financial statements. For more information on the fair value of the Retirement Administration's financial instruments, see Note 4 – Cash and Investments.

Accounts Receivable

Accounts receivable consist of member deductions, pension fund appropriations, and federal grant reimbursements. These receivables are considered 100% collectible and therefore do not report an allowance for uncollectibles.

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Deferred Outflows/Inflows of Resources

In addition to assets, the statement of fiduciary net position will sometimes 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(s) and so will not be recognized as an outflow of resources (deduction) until then. The BCRA did not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of fiduciary net position will sometimes report 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(s) and so will not be recognized as an inflow of resources (addition) until that time. The BCRA did not have any items that qualify for reporting in this category.

NOTE 3 - PLAN ADMINISTRATION

The Association is administered by a five-person Board of Retirement consisting of the County Finance Director/Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such Association, and a fifth member appointed by the Advisory Council consisting of representatives from the member units.

Chairman	Mary T. McIsaac	Term Expires:	Indefinite
Appointed Member	Mary Pat Flynn	Term Expires:	1/3/2018
Elected Member	Mark Foley	Term Expires:	1/6/2018
Elected Member	Robert Rolanti	Term Expires:	12/31/2019
Appointed Member	Judith C. Sprague	Term Expires:	12/31/2017

Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the Association. The Board must annually file a financial statement of condition for the Association with the Executive Director of PERAC.

The investment of the Association's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the Association has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the Association must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian:

Ex-Officio Member:

Elected Members:

Appointed Members:

Staff Employees:

) MACRS Blanket Policy

\$50,000,000 Fiduciary Liability

\$1,000,000 Fidelity (ERISA) Bond

St. Paul Travelers Insurance Company

National Union Fire Arch Insurance

Company

NOTE 4 - CASH AND INVESTMENTS

Custodial Credit Risk - Deposits

At December 31, 2016, the carrying amount of the Association's deposits totaled \$1,824,611 and the bank balance totaled \$2,816,988. Of the bank balance, \$1,714,042 was covered by Federal Depository Insurance and \$1,102,946 was uninsured and uncollateralized.

Investments

The Association's investments are as follows:

	December 31, 2016
Investment Type	
PRIT Pooled Funds\$	933,767,669
Pooled Real Estate Funds	4,227,772
Total Investments\$	937,995,441

Approximately 99% of the Retirement Association's investments are in Pension Reserve Investment Trust (PRIT), which meets the criteria of an external investment pool. This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The Administration does not have the ability to control any of the investment decisions relative to its funds in PRIT. PRIT investments are valued using the net asset value (NAV) method.

The remaining investments consist of two closed end real estate investments which are scheduled to mature during 2018. The fair value of the investments in pooled real estate funds are categorized in Level 3 of the Fair Value Hierarchy as pricing inputs are unobservable and include situations where there is little, if any, market activity for the instrument. The inputs into the determination of fair value require significant management judgment or estimation.

The Administration's annual money-weighted rate of return on pension plan investments was 7.40%. The money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

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NOTE 5 - MEMBERSHIP

The following table represents the Association's membership at January 1, 2016:

Retirees and beneficiaries currently receiving benefits	2,937
Inactive members	622
Active members	4,699
Total	8.258

NOTE 6 - ACTUARIAL VALUATION

Components of the net pension liability as of December 31, 2016 were as follows:

Total pension liability	\$ 1,644,743,370
The pension plan's fiduciary net position	 (942,162,719)
The net pension liability	\$ 702,580,651
The pension plan's fiduciary net position as a percentage of the total pension liability	57.28%

The total pension liability was determined by an actuarial valuation as of January 1, 2016, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2016:

Valuation date	January 1, 2016
Actuarial cost method	Entry Age Normal Cost Method.
Amortization method	Appropriations increase at 5.28% per year
Remaining amortization period	20 years from July 1, 2016 for 2002 and 2003 Early Retirement Incentives, retiree sheriffs liability and remaining unfunded liability, and 6 years from July 1, 2016 for 2010 Early Retirement Incentive.
Asset valuation method	A preliminary actuarial value is first determined by ta

A preliminary actuarial value is first determined by taking the actuarial value of assets at the beginning of the year and adding assumed investment earnings (at the assumed actuarial rate of return) and the net new money during the year (contributions less benefit payments and administrative expenses). Twenty percent of the difference between the market value of assets as reported in the Association's Annual Statement and the preliminary actuarial value of assets is added to the preliminary actuarial value. In order for the actuarial value to not differ too significantly from the market value of assets, the final actuarial value of assets must be within 20% of the market value of assets.

Barnstable County Retirement Association

Projected salary increases	Varies by length of service with ultimate rates of 4.25% for Group 1, 4.50% for Group 2 and 4.75% for Group 4.
Cost of living adjustments	3.0% of first \$16,000 of retirement income as of July 1, 2015, \$17,000 as of July 1, 2016, and \$18,000 as of July 1, 2017.
Rates of retirement	Varies based upon age for general employees, police and fire employees.
Rates of disability	For general employees, it was assumed that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).
Mortality Rates:	
Pre-Retirement	The RP-2000 Employee Mortality Table projected generationally with Scale BB2D from 2009.
Healthy Retiree	The RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009.
Disabled Retiree	The RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2015.
Investment rate of return/Discount rate	7.625%, net of pension plan investment expense, including inflation.

Investment policy: The pension plan's policy in regard to the allocation of invested assets is established by PRIT. Plan assets are managed on a total return basis with a long-term objective of achieving a fully funded status for the benefits provided through the pension plan.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges 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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of January 1, 2016 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity. International developed markets equity International emerging markets equity. Core fixed income. High-yield fixed income. Real estate. Commodities. Hedge fund, GTAA, Risk parity. Private equity.	18.00% 16.00% 6.00% 13.00% 10.00% 4.00% 13.00% 10.00%	6.44% 7.40% 9.42% 2.02% 4.43% 5.00% 4.43% 3.75% 10.47%
	100.00%	

Discount rate: The discount rate used to measure the total pension liability was 7.625%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that contributions will be made at rates equal to the actuarially determined contribution 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.

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 7.625%, as well as what the net position liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.625%) or 1-percentage-point higher (8.625%) than the current rate:

		Current	
	1% Decrease	Discount	1% Increase
	(6.625%)	(7.625%)	(8.625%)
Barnstable County Retirement Association's net			
pension liability as of December 31, 2016\$	894,041,463 \$	702,580,650 \$	541,092,898

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 Association's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

NOTE 7 - COMMITMENTS AND CONTINGENCIES

Various legal actions and claims are pending against the Association. Litigation is subject to many uncertainties, and the outcome of individual litigated matters is not always predictable. Although the amount of liability, if any, at December 31, 2016 cannot be ascertained, management believes any resulting liability should not materially affect the financial position at December 31, 2016.

NOTE 8 - IMPLEMENTATION OF GASB PRONOUNCEMENTS

During 2016, the following GASB pronouncements were implemented:

Barnstable County Retirement Association

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- GASB <u>Statement #72</u>, Fair Value Measurement and Application. Notes to the basic financial statements were changed to provide additional disclosure on fair value measurement.
- GASB <u>Statement #73</u>, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68. This pronouncement did not impact the basic financial statements.
- GASB <u>Statement #76</u>, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments. This pronouncement did not impact the basic financial statements.
- GASB <u>Statement #78</u>, Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans. This pronouncement did not impact the basic financial statements.
- GASB <u>Statement #79</u>, Certain External Investment Pools and Pool Participants. The basic financial statements and related notes were updated to be in compliance with this pronouncement.

The following GASB pronouncement will be implemented in the future:

• The GASB issued <u>Statement #82</u>, Pension Issues – an amendment of GASB Statements #67, #68, and #73, which is required to be implemented in 2018.

Management is currently assessing the impact the implementation of this pronouncement will have on the financial statements.

NOTE 9 - SUBSEQUENT EVENTS

Management has evaluated subsequent events through August 22, 2017, which is the date the financial statements were available to be issued.

Required Supplementary Information

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

		2014	2015	2016
Total pension liability:				
Service cost	\$	35,328,892 \$	38,066,881 \$	39,648,941
Interest		105,040,822	110,695,407	116,551,753
Changes in benefit terms		-	-	23,494,437
Differences between expected and actual experience		-	-	(10,802,611)
Changes in assumptions		-	-	50,013,039
Benefit payments, including refunds of employee contributions	_	(67,547,103)	(72,743,527)	(76,813,662)
Net change in total pension liability		72,822,611	76,018,761	142,091,897
Total pension liability, beginning	_	1,353,810,101	1,426,632,712	1,502,651,473
Total pension liability, ending (a)	\$_	1,426,632,712 \$	1,502,651,473 \$	1,644,743,370
Plan fiduciary net position:				
Member contributions	\$	24,666,247 \$	25,867,837	26,411,361
Employer contributions		51,562,171	53,626,350	56,269,527
Net investment income (loss)		60,614,682	5,470,561	64,678,206
Retirement benefits and refunds		(67,547,103)	(72,743,527)	(76,813,662)
Administration	_	(1,210,998)	(1,288,422)	(1,384,804)
Net increase (decrease) in fiduciary net position		68,084,999	10,932,799	69,160,628
Fiduciary net position at beginning of year	_	793,984,293	862,069,292	873,002,091
Fiduciary net position at end of year (b)	\$_	862,069,292 \$	873,002,091 \$	942,162,719
Net pension liability - ending (a) - (b)	\$_	564,563,420 \$	629,649,382 \$	702,580,651
Plan fiduciary net position as a percentage of the total				
pension liability		60.43%	58.10%	57.28%
Covered-employee payroll.	\$	253,920,107 \$	264,076,910 \$	269,672,807
Net pension liability as a percentage of covered-employee		222.2424	220.4201	200 5001
payroll		222.34%	238.43%	260.53%

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.

See notes to required supplementary information.

SCHEDULE OF CONTRIBUTIONS

	2014	2015	2016
Actuarially determined contribution Contributions in relation to the actuarially	\$ 51,562,171	\$ 53,626,350	\$ 56,269,527
determined contribution	(51,562,171)	(53,626,350)	(56,269,527)
Contribution deficiency (excess)	\$ -	\$ -	\$
Covered-employee payroll	\$ 253,920,107	\$ 264,076,910	\$ 269,672,807
Contributions as a percentage of covered- employee payroll	20.31%	20.31%	20.87%

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.

See notes to required supplementary information.

SCHEDULE OF INVESTMENT RETURN

	2014	2015	2016
Annual money-weighted rate of return, net of investment expense	7.58%	0.57%	7.40%

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.

The annual money-weighted rate of return has been calculated by the Pension Reserves Investment Management Board (PRIM).

See notes to required supplementary information.

NOTE A - 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 Associations total pension liability, changes in the Associations net position, and the ending net pension liability. It also demonstrates the plan's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

NOTE B - 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 Association'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 covered payroll.

NOTE C - 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.

Audit of Specific Elements, Accounts and Items of Financial Statements

Powers & Sullivan, LLC

Certified Public Accountants



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Independent Auditor's Report

To the Honorable Barnstable Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

We have audited the accompanying schedule of employer allocations of the Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2016, and the related notes. We have also audited the total for all entities of the rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense included in the accompanying schedule of pension amounts by employer of the BCRA Pension Plan as of and for the year ended December 31, 2016, and the related notes.

Management's Responsibility for the Schedules

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 the 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 row 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 row 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 employer allocations and the specified row 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 row 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 employer allocations and the specified row totals included in 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 row 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 opinions.

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, total contributions and total pension expense for the total of all participating entities for the Barnstable County Retirement Association as of and for the year ended December 31, 2016, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Barnstable County Retirement Association as of and for the year ended December 31, 2016, and our report thereon, dated August 22, 2017, expressed an unmodified opinion on those financial statements.

Restriction on Use

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

August 22, 2017

Powers & Sullivan LLC

SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR ENDED DECEMBER 31, 2016

Employer	FY2017 Pension Fund Appropriation		Direct Appropriation E.R.I., Sheriff and Hospital	 FY2017 Total Appropriation	_	Share of Net Pension Liability	Percent of Total Net Pension Liability
Barnstable County	\$ 2,856,822	\$	118,000	\$ 2,974,822	\$	36,191,018	5.151%
Barnstable County Hospital	· · · · -		7,722	7,722		115,799	0.016%
Barnstable County Retired Sheriffs	-		1,359,250	1,359,250		21,978,311	3.128%
Town of Barnstable	8.328.270		210,182	8,538,452		103,876,895	14.785%
Barnstable Fire District	390,818		4,340	395,158		4,807,406	0.684%
Barnstable Housing Authority	192,657		3,897	196,554		2,391,232	0.340%
Town of Bourne	3,385,252		80,594	3,465,846		42,164,706	6.001%
Bourne Housing Authority	71,558		-	71,558		870,559	0.124%
Bourne Recreation Authority	93,576		17,153	110,729		1,347,104	0.192%
Bourne Water District	115,594		4,972	120,566		1,466,779	0.209%
Town of Brewster	1,987,115		17,027	2,004,142		24,381,943	3.470%
Brewster Housing Authority	11,009		,	11,009		133,933	0.019%
Buzzards Bay Water District	60,549		_	60,549		736,626	0.105%
Cape Cod Mosquito Control District	264,215		2,721	266,936		3,247,484	0.462%
Cape Cod Regional Technical High School	423,844		2,721	423,844		5,156,391	0.734%
Centerville/Osterville/Marstons Mills Fire District	1,271,534		4,968	1,276,502		15,529,637	2.210%
Town of Chatham				1,868,433		22.730.937	3.235%
	1,766,936		101,497				
Chatham Housing Authority	33,027			33,027		401,799	0.057%
Cotuit Fire District	247,701			247,701		3,013,475	0.429%
Town of Dennis	2,944,894			2,944,894		35,826,921	5.099%
Dennis Housing Authority	60,549		2,598	63,147		768,232	0.109%
Dennis Water District	242,197		-	242,197		2,946,514	0.419%
Dennis/Yarmouth Regional School District	1,205,480		-	1,205,480		14,665,600	2.087%
Town of Eastham	1,442,172		23,894	1,466,066		17,835,831	2.539%
Town of Harwich	2,576,094		-	2,576,094		31,340,183	4.461%
Hyannis Fire District	1,056,859		1,716	1,058,575		12,878,386	1.833%
Town of Mashpee	2,768,751		38,140	2,806,891		34,148,007	4.860%
Mashpee Housing Authority	49,540		4 202	49,540		602,693	0.086%
Mashpee Water District	159,630 5,598,050		4,323 120,097	163,953 5,718,147		1,994,615 69,565,696	0.284% 9.901%
Nantucket Housing Authority	22,018		120,091	22,018		267,866	0.038%
County of Nantucket	165,134			165,134		2,008,983	0.286%
Nantucket Regional Transit Authority	33.027		-	33.027		401,799	0.057%
Naus et Regional School District	825.671		-	825.671		10.044.928	1.430%
North Sagamore Water District	49,540		-	49,540		602,693	0.086%
Town of Orleans	1,816,477		-	1,816,477		22,098,852	3.145%
Orleans Housing Authority	44,036		-	44,036		535,732	0.076%
Tri-Town Wastewater Treatment Facility	77,063		-	77,063		937,531	0.133%
Town of Provincetown	1,557,766		-	1,557,766		18,951,432	2.697%
Town of Sandwich	3,418,279		-	3,418,279		41,586,017	5.919%
Sandwich Housing Authority	27,522		-	27,522		334,826	0.048%
Sandwich Water District	176,143		-	176,143		2,142,916	0.305%
Town of Truro	996,310		13,922	1,010,232		12,290,256	1.749%
Veterans District	49,540		4,168 14,583	53,708		653,400	0.093%
Town of Vermeet	1,056,859 3,946,708		96,777	1,071,442 4,043,485		13,034,923 49,192,133	1.855% 7.002%
Yarmouth Housing Authority	38,531		4.183	4,043,465		519.649	0.074%
West Barnstable Fire District	121,098		4,103	121,098		1,473,251	0.210%
Cape Cod Regional Transit Authority	137,612		_	137,612		1,674,157	0.238%
Monomoy Regional School District	869,707		-	869,707		10,580,661	1.506%
Provincetown Housing	11,009		-	 11,009	_	133,933	0.019%
Total	\$ 55,044,743	\$_	2,256,724	\$ 57,301,467	\$_	702,580,650	100.000%

See notes to schedule of employer allocations and schedule of pension amounts by employer.

FOR THE YEAR ENDED DECEMBER 31, 2016

	Barnstable County		Barnstable County Hospital	Barnstable County Retired Sheriffs		Town of Barnstable
Net Pension Liability Beginning net pension liability\$	32,238,620	\$	114,036	\$ 20,012,789	\$	93,561,206
Ending net pension liability\$	36,191,018	\$	115,799	\$ 21,978,311	\$	103,876,895
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience\$	· -	\$	-	\$ -	\$	-
Net difference between projected and actual investment earnings on pension plan investments	2,057,208		6,582	1,249,314		5,904,684
Changes of assumptions	2,146,874		6,869	1,303,767		6,162,045
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,072,687		-	10,152		110,528
Total Deferred Outflows of Resources §		\$	13,451	\$ 2,563,233	· •	12,177,257
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience\$	463,716	\$	1,484	\$ 281,608	\$	1,330,977
Changes of assumptions	-		-	-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions	_		11,231	878,581		1,199,302
Total Deferred Inflows of Resources\$	463,716	\$	12,715	\$ 1,160,189	\$	2,530,279
Pension Expense Proportionate share of plan pension expense\$		-	17,562	\$ 3,333,277	\$	15,754,187
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	259,512	_	(2,345)	(187,243)		(257,572)
Total Employer Pension Expense \$	5,748,323	\$.	15,217	\$ 3,146,034	\$.	15,496,615
Contributions Statutory required contribution\$	2,926,285	\$	7,579	\$ 1,334,120	\$	8,398,711
Contribution in relation to statutory required contribution	(2,926,285)		(7,579)	(1,334,120)		(8,398,711)
Contribution deficiency/(excess)\$		\$_	_	\$ -	\$	-
Contributions as a percentage of covered payroll	20.91%		N/A	N/A		20.58%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense						
June 30, 2018. \$ June 30, 2019. June 30, 2020. June 30, 2021. June 30, 2021. June 30, 2022.	1,275,202 1,275,202 1,262,751 628,630 371,268	\$	905 905 865 (1,162) (777)	\$ 429,572 429,572 422,010 36,936 84,954	\$	2,657,701 2,657,701 2,621,963 801,885 907,728
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense\$	4,813,053	\$_	736	\$ 1,403,044	\$	9,646,978
Discount Rate Sensitivity 1% decrease (6.625%)\$	46,053,462	\$	147,356	\$ 27,967,638	\$	132,184,478
Current discount rate (7.625%)\$	36,191,018	\$	115,799	\$ 21,978,311	\$	103,876,895
1% increase (8.625%)\$	27,872,534	\$	89,183	\$ 16,926,609	\$	80,000,851
Covered Payroll \$	13,996,018	\$	-	\$ -	\$	40,801,496
See notes to schedule of employer allocations and schedule of pension amounts by employer.						(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Barnstable Fire District	_	Barnstable Housing Authority		Town of Bourne	_	Bourne Housing Authority
Net Pension Liability								
Beginning net pension liability	\$	4,185,105	\$	1,841,730	\$	39,022,403	\$	839,458
Ending net pension liability	\$	4,807,406	\$	2,391,232	\$	42,164,706	\$	870,559
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual								
investment earnings on pension plan investments		273,267		135,925		2,396,771		49,485
Changes of assumptions		285,178		141,849		2,501,237		51,642
Changes in proportion and differences between								
employer contributions and proportionate share of contributions		242,224		238,062		480,990		2,767
Total Deferred Outflows of Resources	-	800,669	\$	515,836	\$	5,378,998	· -	103,894
	³ =	000,003	Φ=	313,030	Þ	3,370,330	° =	103,034
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	61,597	\$	30,639	\$	540,257	\$	11,155
Changes of assumptions		_		_		-		_
Changes in proportion and differences between								
employer contributions and proportionate								
share of contributions	-	-	-	34,981		947,188	-	45,650
Total Deferred Inflows of Resources	\$_	61,597	\$_	65,620	\$	1,487,445	\$_	56,805
Pension Expense								
Proportionate share of plan pension expense	\$	729,104	\$	362,659	\$	6,394,794	\$	132,034
Net amortization of deferred amounts from changes								
in proportion and differences between employer contributions and proportionate share of contributions		55,710		39,004		(69,963)		(8,522)
• •	-	704.044	_	401,663	· •\$	6,324,831	_	123,512
Total Employer Pension Expense	» =	784,814	» =	401,003	, 3	0,324,031	» =	123,312
Contributions								
Statutory required contribution	\$	387,852	\$	196,554	\$	3,395,528	\$	71,558
Contribution in relation to statutory required contribution	_	(387,852)	_	(196,554)		(3,395,528)	_	(71,558)
Contribution deficiency/(excess)	\$	_	\$	-	\$	-	\$	-
Contributions as a percentage of covered payroll	•	20.26%	-	20.82%	•	20.47%	_	20.41%
		20.20 %		20.0270		20.47 70		20.4170
<u>Deferred Outflows/(Inflows) Recognized in</u> <u>Future Pension Expense</u>								
June 30, 2018	\$	190,628	\$	106,113	\$	1,113,376	\$	15,910
June 30, 2019		190,628		106,113		1,113,376		15,910
June 30, 2020		188,974		105,291		1,098,870		15,611
June 30, 2021		104,737 64,105		63,388 69,311		360,074 205,857		353 (695)
Total Deferred Outflows/(Inflows) Recognized in	-	64,105	-	65,511		203,637	-	(693)
Future Pension Expense	\$_	739,072	\$_	450,216	\$	3,891,553	\$_	47,089
Discount Rate Sensitivity								
1% decrease (6.625%)	\$	6,117,470	\$	3,042,870	\$	53,655,040	\$	1,107,798
Current discount rate (7.625%)	\$	4,807,406	\$	2,391,232	\$	42,164,706	\$	870,559
1% increase (8.625%)	\$	3,702,423	\$	1,841,610	\$	32,473,171	\$	670,463
Covered Payroll		1,914,677	\$	943,855	\$	16,584,878	\$	350,575
See notes to schedule of employer allocations and schedule								
of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

		Bourne Recreation Authority	_	Bourne Water District		Town of Brewster	_	Brewster Housing Authority
et Pension Liability Beginning net pension liability	\$	1,328,012	\$	1,553,755	\$	22,672,955	\$	119,921
Ending net pension liability	\$	1,347,104	\$	1,466,779	\$	24,381,943	\$	133,933
eferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		76,574		83,376		1,385,944		7,613
Changes of assumptions		79,911		87,010		1,446,352		7,945
Changes in proportion and differences between employer contributions and proportionate share of contributions		45,096		74,118		21,957		494
Total Deferred Outflows of Resources	•		-	244,504	· -	2,854,253	* -	16,052
eferred Inflows of Resources	٠.		*=		*=		Ψ=	,
Differences between expected and actual experience	\$	17,261	\$	18,794	\$	312,406	\$	1,716
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		92,633		183,542		701,740		71,610
Total Deferred Inflows of Resources			-	202,336	\$_	1,014,146	- \$_	73,326
ension Expense Proportionate share of plan pension expense	. \$	204,303	\$	222,456	\$	3,697,820	\$	20,314
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(7,371)	_	(18,215)		(139,013)	_	(17,795
Total Employer Pension Expense	\$_	196,932	\$_	204,241	\$_	3,558,807	\$_	2,519
ontributions Statutory required contribution	\$	110,729	\$	118,337	\$	1,967,090	\$	11,009
Contribution in relation to statutory required contribution		(110,729)	_	(118,337)	_	(1,967,090)	_	(11,009
Contribution deficiency/(excess)	. \$ _		\$_	_	\$_		\$_	
Contributions as a percentage of covered payroll		24.15%		20.90%		20.21%		20.419
eferred Outflows/(Inflows) Recognized in Future Pension Expense	•	30 435	s	22 950	\$	545.050	\$	(44.000
June 30, 2018. June 30, 2019. June 30, 2020. June 30, 2021.		30,435 29,972 6,366 (5,521)	Þ	22,950 22,950 22,445 (3,256) (22,921)	Þ	545,259 545,259 536,871 109,662 103,056	Þ	(14,036 (14,036 (14,082 (16,426 1,306
Total Deferred Outflows/(Inflows) Recognized in Future Pension Expense	-		\$	42,168	· -	1,840,107	\$	(57,274
iscount Rate Sensitivity 1% decrease (6.625%)	\$	1,714,208	\$	1,866,490	\$	31,026,287	\$	170,431
Current discount rate (7.625%)	\$	1,347,104	\$	1,466,779	\$	24,381,943	\$	133,933
1% increase (8.625%)	\$	1,037,475	\$	1,129,640	\$	18,777,769	\$	103,149

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

		Buzzards Bay Water District		Cape Cod Mosquito Control District		Cape Cod Regional Technical High School		Centerville/ Osterville/ Martsons Mills Fire District
Net Pension Liability Beginning net pension liability	\$	719,537	\$	2,668,245	\$	4,976,808	\$	14,145,643
Ending net pension liability	\$	736,626	\$	3,247,484	\$	5,156,391	\$	15,529,637
Deferred Outflows of Resources Differences between expected and actual experience	\$	_	\$	-	\$	-	\$	
Net difference between projected and actual investment earnings on pension plan investments		41,872		184,597		293,105		882,752
Changes of assumptions		43,697		192,643		305,881		921,228
Changes in proportion and differences between employer contributions and proportionate								
share of contributions		2,355		188,691		110,850		28,49
Total Deferred Outflows of Resources	\$	87,924	\$	565,931	\$	709,836	\$	1,832,47
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	9,438	\$	41,610	\$	66,069	\$	198,98 ⁻
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate								
share of contributions		45,707				272,872		212,19
Total Deferred Inflows of Resources	\$	55,145	\$	41,610	\$	338,941	\$	411,17
Pension Expense Proportionate share of plan pension expense	\$	111,717	\$	492,522	\$	782,025	\$	2,355,26
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(8,625)		37,806		(26,988)		(37,55
Total Employer Pension Expense	\$	103,092	. \$	530,328	\$	755,037	\$	2,317,70
Contributions								
Statutory required contribution	\$	60,549	\$	262,001	\$	416,008	\$	1,252,90
Contribution in relation to statutory required contribution		(60,549)		(262,001)		(416,008)		(1,252,90
Contribution deficiency/(excess)	\$	-	\$		\$		\$	
Contributions as a percentage of covered payroll		20.41%		20.24%		20.03%		20.11
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2018	\$	12,048	\$	128,946	\$	117,725	\$	398.27
June 30, 2019		12,048		128,946		117,725		398,27
June 30, 2020		11,795		127,828		115,951		392,93
June 30, 2021		(1,113)		70,925		25,605		120,82
June 30, 2022		(1,999)		67,676		(6,111)		110,97
Total Deferred Outflows/(Inflows) Recognized in	_		_	504.004	_	270 005	_	4 404 00
Future Pension Expense	\$,	32,779	. \$	524,321	\$	370,895	\$	1,421,29
Discount Rate Sensitivity 1% decrease (6.625%)	\$	937,367	\$	4,132,456	\$	6,561,567	\$	19,761,63
Current discount rate (7.625%)		736,626	\$	3,247,484	\$	5,156,391	\$	15,529,63
1% increase (8.625%)		567,314	\$	2,501,050	\$	3,971,200	\$	11,960,16
Covered Payroll	\$	296,640	\$	1,294,429	\$	2,076,481	\$	6,229,442
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continue

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Town of Chatham	_	Chatham Housing Authority	_	Cotuit Fire District	_	Town of Dennis
Net Pension Liability Beginning net pension liability	•	20,169,342	\$	359,774	\$	2,578,353	\$	33,098,792
Ending net pension liability	ъ	22,730,937	\$	401,799	\$	3,013,475	\$	35,826,921
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,292,096		22,839		171,295		2,036,512
Changes of assumptions		1,348,414		23,835		178,761		2,125,276
Changes in proportion and differences between employer contributions and proportionate share of contributions		174,172		1,478		96,344		560,736
Total Deferred Outflows of Resources	-		s -	48,152	\$	446,400	\$	4,722,524
Deferred Inflows of Resources	Ψ=	2,011,002	*=	10,102	Ψ.	110,100	*=	1,122,021
Differences between expected and actual experience	\$	291,252	\$	5,148	\$	38,612	\$	459,051
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions	_	390,520	_	70	_	179,506	_	760,207
Total Deferred Inflows of Resources	\$_	681,772	\$_	5,218	\$_	218,118	\$_	1,219,258
Pension Expense Proportionate share of plan pension expense	\$	3,447,428	\$	60,939	\$	457,029	\$	5,433,591
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	(62,392)	_	304	_	(25,556)		(12,736)
Total Employer Pension Expense	\$_	3,385,036	\$_	61,243	\$_	431,473	\$_	5,420,855
Contributions								
Statutory required contribution	\$	1,833,890	\$	33,027	\$	243,122	\$	2,890,449
Contribution in relation to statutory required contribution	-	(1,833,890)	_	(33,027)	-	(243,122)	-	(2,890,449)
Contribution deficiency/(excess)	\$_	<u>-</u>	\$_		\$_		\$_	
Contributions as a percentage of covered payroll		21.19%		20.41%		20.03%		20.03%
<u>Deferred Outflows/(Inflows) Recognized in</u> Future Pension Expense								
June 30, 2018		575,545	\$	11,580	\$	59,016	\$	992,736
June 30, 2019		575,545		11,580		59,016		992,736
June 30, 2020		567,724 169,440		11,442 4,402		57,979 5,178		980,410 352,669
June 30, 2022		244,656		3,930		47,093		184,715
Total Deferred Outflows/(Inflows) Recognized in	-		-				-	
Future Pension Expense	\$_	2,132,910	\$ _	42,934	\$_	228,282	\$.	3,503,266
<u>Discount Rate Sensitivity</u> 1% decrease (6.625%)	\$	28,925,362	\$	511,293	\$	3,834,678	\$	45,590,142
Current discount rate (7.625%)	\$	22,730,937	\$	401,799	\$	3,013,475	\$	35,826,921
1% increase (8.625%)	\$	17,506,244	\$	309,446	\$	2,320,829	\$	27,592,123
Covered Payroll	\$	8,656,497	\$	161,804	\$	1,213,528	\$	14,427,495
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Dennis Housing Authority		Dennis Water District		ennis/Yarmouth Regional School District	n -	Town of Eastham
Net Pension Liability Beginning net pension liability	\$	688,158	\$	2,878,161	\$	12,771,810	\$	15,433,200
Ending net pension liability	\$	768,232	\$	2,946,514	\$	14,665,600	\$	17,835,831
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		43,669		167,489		833,637		1,013,843
Changes of assumptions		45,572		174,789		869,973		1,058,033
Changes in proportion and differences between employer contributions and proportionate share of contributions		39,059		2,592		297,247		437,775
Total Deferred Outflows of Resources			\$	344,870	\$	2,000,857	- \$	2,509,651
Deferred Inflows of Resources	-		•	· ·			•	
Differences between expected and actual experience	\$	9,843	\$	37,754	\$	187,911	\$	228,531
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions				218,602		539,584		282,267
Total Deferred Inflows of Resources	\$_	9,843	\$	256,356	\$_	727,495	\$_	510,798
Pension Expense Proportionate share of plan pension expense	\$	116,510	\$	446,870	\$	2,224,218	\$	2,705,020
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	9,685		(44,965)	_	(75,191)	_	17,296
Total Employer Pension Expense	\$_	126,195	\$	401,905	\$_	2,149,027	\$_	2,722,316
Contributions								
Statutory required contribution	\$	63,147	\$	237,719	\$	1,183,193	\$	1,438,962
Contribution in relation to statutory required contribution	_	(63,147)		(237,719)	-	(1,183,193)	-	(1,438,962)
Contribution deficiency/(excess)	\$=		\$		\$_		\$_	
Contributions as a percentage of covered payroll		21.29%		20.03%		20.03%		20.37%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2018	\$	31,245	\$	37,728	\$	336,395	\$	517,853
June 30, 2019		31,245 30,981		37,728 36,714		336,395 331,349		517,853 511,717
June 30, 2021		17,517		(14,910)		74,384		199,208
June 30, 2022	-	7,469		(8,746)	-	194,839	-	252,222
Future Pension Expense	\$=	118,457	\$	88,514	\$_	1,273,362	\$_	1,998,853
<u>Discount Rate Sensitivity</u> 1% decrease (6.625%)	\$	977,581	\$	3,749,476	\$	18,662,132	\$	22,696,289
Current discount rate (7.625%)	\$	768,232	\$	2,946,514	\$	14,665,600	\$	17,835,831
1% increase (8.625%)	\$	591,653	\$	2,269,262	\$	11,294,719	\$	13,736,276
Covered Payroll	\$	296,640	\$	1,186,560	\$	5,905,834	\$	7,065,428
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Town of Harwich		Hyannis Fire District	_	Town of Mashpee	_	Mashpee Housing Authority
Net Pension Liability								
Beginning net pension liability	\$	26,622,944	\$	11,171,730	\$	29,920,777	\$	479,695
Ending net pension liability	\$	31,340,183	\$	12,878,386	\$	34,148,007	\$	602,693
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,781,472		732,047		1,941,077		34,259
Changes of assumptions		1,859,120		763,954		2,025,681		35,752
Changes in proportion and differences between employer contributions and proportionate share of contributions		1,149,159		294.497		552,299		83,829
	-							
Total Deferred Outflows of Resources	\$ _	4,789,751	\$	1,790,498	\$ _	4,519,057	\$_	153,840
<u>Deferred Inflows of Resources</u> <u>Differences between expected and actual experience</u>	\$	401,562	\$	165,011	\$	437,539	\$	7,722
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		112,959		73,402		30,390	_	
Total Deferred Inflows of Resources	\$_	514,521	\$	238,413	\$_	467,929	\$_	7,722
Pension Expense Proportionate share of plan pension expense	\$	4,753,118	\$	1,953,163	\$	5,178,962	\$	91,408
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	202,122		40,771	_	103,460	_	18,587
Total Employer Pension Expense	\$_	4,955,240	\$	1,993,934	\$_	5,282,422	\$_	109,995
Contributions Statutory required contribution	\$	2,528,468	\$	1,039,004	\$	2,754,998	\$	49,540
Contribution in relation to statutory required contribution	-	(2,528,468)		(1,039,004)	_	(2,754,998)	_	(49,540)
Contribution deficiency/(excess)	\$_		\$	-	\$_	-	\$_	
Contributions as a percentage of covered payroll		20.03%		20.07%		20.31%		20.41%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2018	¢	1,081,675	\$	402,199	\$	1,061,813	\$	35,501
June 30, 2019		1,081,675	۳	402,199	Ψ	1,061,813	Ψ	35,501
June 30, 2020		1,070,892		397,768		1,050,065		35,294
June 30, 2021		521,767 519,221		172,122 177,797		451,739 425,698		24,732 15,090
Total Deferred Outflows/(Inflows) Recognized in	-				-			
Future Pension Expense	\$ =	4,275,230	\$	1,552,085	\$ _	4,051,128	\$ _	146,118
Discount Rate Sensitivity 1% decrease (6.625%)	\$	39,880,722	\$	16,387,887	\$	43,453,705	\$	766,936
Current discount rate (7.625%)	\$	31,340,183	\$	12,878,386	\$	34,148,007	\$	602,693
1% increase (8.625%)	\$	24,136,661	\$	9,918,298	\$	26,299,106	\$	464,166
Covered Payroll	\$	12,620,687	\$	5,177,718	\$	13,564,542	\$	242,706
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Mashpee Water District	_	Town of Nantucket	_	Nantucket Housing Authority	_	County of Nantucket
Net Pension Liability								
Beginning net pension liability	\$	1,786,456	\$	59,963,947	\$	239,842	\$	1,978,737
Ending net pension liability	\$	1,994,615	\$	69,565,696	\$	267,866	\$	2,008,983
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		113,380		3,954,327		15,226		114,197
Changes of assumptions		118,322		4,126,681		15,890		119,174
Changes in proportion and differences between employer contributions and proportionate share of contributions		39,280		1,945,093		993		1,775
	_		•		_		•	
Total Deferred Outflows of Resources	\$ =	270,982	\$ _	10,026,101	\$ =	32,109	\$_	235,146
Deferred Inflows of Resources Differences between expected and actual experience	\$	25,557	\$	891,346	\$	3,432	\$	25,741
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		-		_		53		280,381
Total Deferred Inflows of Resources	\$	25,557	\$	891,346	\$	3,485	\$	306,122
Pension Expense Proportionate share of plan pension expense	_		\$	10,550,489	\$	40,623	\$	304,688
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	9,729		393,215	_	204		(62,861)
Total Employer Pension Expense	\$=	312,237	\$.	10,943,704	\$_	40,827	\$_	241,827
Contributions								
Statutory required contribution	\$	160,922	\$	5,613,325	\$	22,018	\$	162,081
Contribution in relation to statutory required contribution	_	(160,922)	_	(5,613,325)	_	(22,018)	_	(162,081)
Contribution deficiency/(excess)	\$_		\$		\$_	_	\$	
Contributions as a percentage of covered payroll	_	20.58%	•	20.47%	_	20.41%		20.03%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense	_		_		_		_	
June 30, 2018	\$	65,707 65,707	\$	2,345,555 2,345,555	\$	7,722 7,722	\$	(6,480) (6,480)
June 30, 2020		65,021		2,321,622		7,629		(7,171)
June 30, 2021		30,072		1,102,723		2,932		(42,371)
June 30, 2022	-	18,918	•	1,019,300	-	2,619	-	(8,474)
Future Pension Expense	\$=	245,425	\$_	9,134,755	\$ _	28,624	\$_	(70,976)
<u>Discount Rate Sensitivity</u> 1% decrease (6.625%)	\$	2,538,166	\$	88,523,095	\$	340,862	\$	2,556,449
Current discount rate (7.625%)	\$	1,994,615	\$	69,565,696	\$	267,866	\$	2,008,983
1% increase (8.625%)	\$	1,536,152	\$	53,576,059	\$	206,297	\$	1,547,217
Covered Payroll	\$	782,051	\$	27,425,724	\$	107,869	\$	809,018
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2016

		Nantucket Regional Transit Authoriy	!	Nauset Regional School District	North Sagamore Water District	_	Town of Orleans
Net Pension Liability							
Beginning net pension liability	\$	359,774	\$	9,413,965	\$ 599,616	\$	20,147,095
Ending net pension liability	\$	401,799	\$	10,044,928	\$ 602,693	\$	22,098,852
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$ -	\$	-
Net difference between projected and actual investment earnings on pension plan investments		22,839		570,984	34,259		1,256,166
Changes of assumptions		23,835		595,872	35,752		1,310,918
Changes in proportion and differences between employer contributions and proportionate		4.470		570 720	26 400		403 624
share of contributions		1,478		572,732	36,199	-	193,621
Total Deferred Outflows of Resources	\$	48,152	\$	1,739,588	\$ 106,210	\$.	2,760,705
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	5,148	\$	128,706	\$ 7,722	\$	283,153
Changes of assumptions		-		-	-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		70_		317,140	45,636_		262,543_
Total Deferred Inflows of Resources	\$	5,218	\$	445,846	\$ 53,358	\$	545,696
Pension Expense Proportionate share of plan pension expense		60,939	\$	1,523,434	\$ 91,404	\$	3,351,559
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		304		79,755	(92)		(4,646)
Total Employer Pension Expense	\$	61,243	\$	1,603,189	\$ 91,312	\$	3,346,913
Contributions							
Statutory required contribution.	\$	33,027	\$	803,000	\$ 48,624	\$	1,782,894
Contribution in relation to statutory required contribution		(33,027)		(803,000)	(48,624)	_	(1,782,894)
Contribution deficiency/(excess)	\$.		\$		\$ 	\$_	
Contributions as a percentage of covered payroll	ľ	20.41%		19.85%	20.03%	•	20.03%
Deferred Outflows/(Inflows) Recognized in							
Future Pension Expense							
June 30, 2018	\$	11,580 11,580	\$	361,663 361,663	\$ 16,822 16,822	\$	615,552 615,552
June 30, 2020		11,442		358,207	16,615		607,949
June 30, 2021		4,402		182,204	6,055		220,745
June 30, 2022		3,930		30,005	(3,462)	-	155,211
Future Pension Expense	\$	42,934	\$	1,293,742	\$ 52,852	\$_	2,215,009
Discount Rate Sensitivity 1% decrease (6.625%)	\$	511,293	\$	12,782,281	\$ 766,936	\$	28,121,028
Current discount rate (7.625%)	\$	401,799	\$	10,044,928	\$ 602,693	\$	22,098,852
1% increase (8.625%)	\$	309,446	\$	7,736,108	\$ 464,166	\$	17,019,444
Covered Payroll	\$	161,804	\$	4,045,092	\$ 242,706	\$	8,899,203
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

		Orleans Housing Authority		Wastewater Treatment Facility		Town of Provincetown	-	Town of Sandwich
Net Pension Liability Beginning net pension liability	\$	479,695	s	899,425	\$	16,249,588	\$	36,696,480
Ending net pension liability		535,732	\$	937,531	\$		\$	41,586,017
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		30,453		53,292		1,077,257		2,363,876
Changes of assumptions		31,780		55,615		1,124,211		2,466,909
Changes in proportion and differences between employer contributions and proportionate								
share of contributions		1,973		1,786		579,356		824,653
Total Deferred Outflows of Resources	\$	64,206	\$	110,693	\$	2,780,824	\$ _	5,655,438
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	6,864	\$	12,013	\$	242,825	\$	532,842
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate share of contributions		98		45,612		361,337		-
Total Deferred Inflows of Resources	\$	6,962	\$	57,625	\$	604,162	\$_	532,842
Pension Expense Proportionate share of plan pension expense	\$	81,253	\$	142,189	\$	2,874,217	\$	6,307,031
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		406		(8,708)		25,862		183,175
Total Employer Pension Expense	\$.	81,659	\$	133,481	\$	2,900,079	\$.	6,490,206
Contributions								
Statutory required contribution	\$	44,036	\$	75,638	\$	1,528,966	\$	3,355,082
Contribution in relation to statutory required contribution		(44,036)		(75,638)		(1,528,966)	_	(3,355,082
Contribution deficiency/(excess)	\$	-	\$		\$		\$_	-
Contributions as a percentage of covered payroll		20.41%		20.03%		20.03%		20.03%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2018	\$	15,441	\$	17,604	\$	557,728	\$	1,350,274
June 30, 2019	*	15,441	•	17,604	Ψ	557,728	•	1,350,274
June 30, 2020		15,257		17.281		551,208		1,335,967
June 30, 2021		5,868		854		219,147		607,316
June 30, 2022		5,237		(275)		290,851		478,765
Total Deferred Outflows/(Inflows) Recognized in		57,244	\$	53,068				
Future Pension Expense	⊅.	J1,2 44	*	33,008	\$	2,176,662	\$ _	5,122,596
Discount Rate Sensitivity 1% decrease (6.625%)	\$	681,724	\$	1,193,018	\$	24,115,901	\$	52,918,654
Current discount rate (7.625%)	\$	535,732	\$	937,531	\$	18,951,432	\$	41,586,017
1% increase (8.625%)	\$	412,594	\$	722,040	\$	14,595,456	\$	32,027,494
Covered Payroll	\$	215,738	\$	377,542	\$	7,631,740	\$	16,746,681
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Sandwich Housing Authority		Sandwich Water District	_	Town of Truro	_	Veterans District
Net Pension Liability								
Beginning net pension liability	\$	299,808	\$	2,278,545	\$	11,066,206	\$	645,484
Ending net pension liability	\$	334,826	\$	2,142,916	\$	12,290,256	\$	653,400
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		19,033		121,810		698,616		37,141
Changes of assumptions		19,862		127,119		729,066		38,760
Changes in proportion and differences between employer contributions and proportionate share of contributions		1,232		1,961		10,440		37,508
Total Deferred Outflows of Resources		40,127		250,890	\$	1,438,122	_	113,409
	*=	40,121	۵.	250,690	» ₌	1,430,122	\$_	113,409
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	4,290	\$	27,457	\$	157,475	\$	8,372
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		59		275,191		252,515		45,964
Total Deferred Inflows of Resources	\$_	4,349	\$	302,648	\$_	409,990	\$	54,336
Pension Expense Proportionate share of plan pension expense	_		\$	325,000	\$	1,863,968	\$	99,098
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	255		(54,624)	_	(58,836)	_	168_
Total Employer Pension Expense	\$_	51,033	\$	270,376	\$_	1,805,132	\$_	99,266
Contributions								
Statutory required contribution	\$	27,522	\$	172,886	\$	991,555	\$	52,715
Contribution in relation to statutory required contribution	_	(27,522)		(172,886)	-	(991,555)	_	(52,715)
Contribution deficiency/(excess)	\$_		\$.		\$_		\$_	
Contributions as a percentage of covered payroll		20.41%		20.03%		20.31%		21.72%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2018		9,652	\$	5,516	\$	286,086	\$	18,505
June 30, 2019		9,652 9,537		5,516 4,779		286,086 281,858		18,505 18,281
June 30, 2021		3,669		(32,768)		66,515		6.832
June 30, 2022		3,268		(34,801)		107,587		(3,050)
Total Deferred Outflows/(Inflows) Recognized in							_	
Future Pension Expense	\$=	35,778	\$.	(51,758)	\$ =	1,028,132	\$ =	59,073
<u>Discount Rate Sensitivity</u> 1% decrease (6.625%)	\$	426,073	\$	2,726,880	\$	15,639,485	\$	831,459
Current discount rate (7.625%)	\$	334,826	\$	2,142,916	\$	12,290,256	\$	653,400
1% increase (8.625%)	\$	257,869	\$	1,650,366	\$	9,465,349	\$	503,216
Covered Payroll	\$	134,836	\$	862,953	\$	4,881,078	\$	242,706
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2016

	_	Town of Welfleet	_	Town of Yarmouth	_	Yarmouth Housing Authority	_	West Barnstable Fire District
Net Pension Liability Beginning net pension liability	\$	11,493,202	\$	45,401,138	\$	465,757	\$	1,319,154
Ending net pension liability	\$	13,034,923	\$	49,192,133	\$	519,649	\$	1,473,251
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		740,945		2,796,231		29,538		83,744
Changes of assumptions		773,240		2,918,109		30,826		87,394
Changes in proportion and differences between employer contributions and proportionate share of contributions		155,695		356,989		2,782		109,242
Total Deferred Outflows of Resources	-		\$	6,071,329	\$_	63,146	\$	280,380
Deferred Inflows of Resources	-		•		-			
Differences between expected and actual experience	\$	167,017	\$	630,300	\$	6,658	\$	18,877
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		105,325		1,009,170	_	38		
Total Deferred Inflows of Resources	\$_	272,342	\$_	1,639,470	\$_	6,696	\$_	18,877
Pension Expense Proportionate share of plan pension expense	\$	1,976,907	\$	7,460,589	\$	78,812	\$	223,439
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	5,037		(113,854)	_	643		27,232
Total Employer Pension Expense	\$_	1,981,944	\$.	7,346,735	\$_	79,455	\$.	250,671
Contributions								
Statutory required contribution	\$	1,051,633	\$	3,970,199	\$	42,714	\$	118,859
Contribution in relation to statutory required contribution	-	(1,051,633)	-	(3,970,199)	_	(42,714)	-	(118,859)
Contribution deficiency/(excess)	\$ _		\$.		\$ =	-	\$	
Contributions as a percentage of covered payroll		20.31%		20.53%		22.63%		20.03%
Deferred Outflows/(Inflows) Recognized in Future Pension Expense								
June 30, 2018	\$	370,858	\$	1,266,708	\$	15,227	\$	68,578
June 30, 2019		370,858 366,374		1,266,708 1,249,784		15,227 15,048		68,578 68,071
June 30, 2021		137,983		387,864		5,941		42,253
June 30, 2022	-	151,465	-	260,795	-	5,007	-	14,023
Future Pension Expense	\$ =	1,397,538	\$.	4,431,859	\$=	56,450	\$_	261,503
<u>Discount Rate Sensitivity</u> 1% decrease (6.625%)	\$	16,587,080	\$	62,597,520	\$	661,260	\$	1,874,724
Current discount rate (7.625%)	\$	13,034,923	\$	49,192,133	\$	519,649	\$	1,473,251
1% increase (8.625%)	\$	10,038,853	\$	37,885,350	\$	400,209	\$	1,134,623
Covered Payroll	\$	5,177,718	\$	19,335,540	\$	188,771	\$	593,280
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2016

	1	Cape Cod Regional Fransit Authority	,	Monomoy Regional School District		Provincetown Housing Authority	_	Totals
Net Pension Liability								
Beginning net pension liability	\$	1,798,849	\$	9,893,660	\$	-	\$	629,649,382
Ending net pension liability	\$	1,674,157	\$	10,580,661	\$	133,933	\$	702,580,650
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		95,164		601,437		7,613		39,936,832
Changes of assumptions		99,312		627,652		7,945		41,677,532
Changes in proportion and differences between employer contributions and proportionate share of contributions		3,475		0.424		02.452		44 200 400
	-			9,134		92,152	-	11,298,198
Total Deferred Outflows of Resources	\$ _	197,951	\$	1,238,223	\$	107,710	\$ _	92,912,562
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	21,451	\$	135,570	\$	1,716	\$	9,002,176
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		372,541		639,783		-		11,298,198
Total Deferred Inflows of Resources	\$_	393,992	\$	775,353	\$	1,716	\$_	20,300,374
Pension Expense Proportionate share of plan pension expense	\$	253,908	\$	1,604,688	\$	20,313	\$	106,554,935
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	(80,858)		(142,143)		18,431		_
Total Employer Pension Expense	\$_	173,050	\$	1,462,545	\$	38,744	\$_	106,554,935
Contributions Statutory required contribution	\$	135,068	\$	853,628	\$	10,805	\$	56,269,528
Contribution in relation to statutory required contribution	-	(135,068)		(853,628)		(10,805)	_	(56,269,528)
Contribution deficiency/(excess)	\$_		\$		\$		\$_	
Contributions as a percentage of covered payroll		20.03%		20.03%		20.03%		20.87%
Deferred Outflows/(Inflows) Recognized in								
Future Pension Expense June 30, 2018.	•	(33,873)	¢	154,800	\$	22,190	\$	19,717,711
June 30, 2019	Ψ	(33,873)	Ψ	154,800	٠	22,190	Ÿ	19,717,711
June 30, 2020		(34,449)		151,160		22,144		19,475,997
June 30, 2021		(63,784)		(34,228)		19,797		7,165,701
June 30, 2022	-	(30,062)		36,338		19,673	-	6,535,068
Future Pension Expense	\$_	(196,041)	\$	462,870	\$	105,994	\$ _	72,612,188
Discount Rate Sensitivity 1% decrease (6.625%)	\$	2,130,385	\$	13,464,005	\$	170,431	\$	894,041,463
Current discount rate (7.625%)	\$	1,674,157	\$	10,580,661	\$	133,933	\$	702,580,650
1% increase (8.625%)	\$	1,289,354	\$	8,148,702	\$	103,149	\$	541,092,898
Covered Payroll	\$	674,182	\$	4,260,830	\$	53,935	\$	269,672,807
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(concluded)

Barnstable County Retirement Association

NOTE I - 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, contributions 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 Barnstable County Retirement Association's collective pension amounts.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans allocate the annual required pension fund appropriation to employer units based on their proportionate share of the aggregate of the annual rates of regular compensation of all members in service of the Association who are employees of any government unit at the close of business on the September 30th immediately preceding the fiscal year. Accordingly, the proportionate aggregate rates of regular compensation as of the close of business on September 30, 2015 were applied to allocate the Association's December 31, 2016 pension fund appropriation by member unit.

The Barnstable County Hospital was operated by Barnstable County from the late 1800s to 1995, when it was closed and all employees were terminated. The remaining payments due from the Barnstable County Retirement Association to the former employees of the Barnstable County Hospital were actuarially determined and are separately identified in the Association's funding schedule. Barnstable County continues to pay for the retirement obligations related to previously retired Hospital employees.

In 2012, the Barnstable County Sheriff's functions were taken over by the Commonwealth of Massachusetts. Barnstable County continues to pay for the retirement obligations related to previously retired Sheriff's employees. These liabilities are actuarially determined and are separately identified in the Association's funding schedule.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC complete 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 as retirees including the ERIP less the accrued liability for the members as active employees excluding the ERIP represents the increase in accrued liability due to the ERIP. The net increase is amortized for each member unit accepting the ERIP, and is separately identified in the Association's funding schedule. The 2003 ERIP amortization is occurring over 25 years, increasing 4.5% per year. The 2010 ERIP amortization is occurring over a 10 year, straight-line basis.

The allocation percentage of the total net pension liability is a blended rate of the following three items. (1) The proportionate share of active employer's covered payroll is applied to the fiscal year 2016 pension fund appropriation calculated by the actuary. (2) ERI is a direct charge calculated by PERAC for only the employers that accepted the ERI. (3) The direct amortization of the actuarial determined net pension liability for Barnstable County Sheriff and Barnstable County Hospital since they no longer have active covered payroll.

Barnstable County Retirement Association

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NOTE II - 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, contributions 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.

Changes in Assumptions

The following assumption changes were reflected in the January 1, 2016 actuarial valuation:

- The investment return assumption was decreased from 7.75% to 7.625%
- The pre-retirement mortality assumption was changed from the RP-2000 Employee Mortality Table
 projected generationally using Scale AA from 2010 to the RP-2000 Employee Mortality Table projected
 generationally using Scale BB2D from 2009.
- The post-retirement mortality assumption for non-disabled participants was changed from the RP-2000
 Healthy Annuitant Mortality Table projected generationally using Scale AA from 2010 to the RP-2000
 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2009.
- The mortality assumption for disabled participants was changed from the RP-2000 Healthy Annuitant
 Mortality Table set forward three years for males only projected generationally using Scale AA from 2010
 to the RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2015.
- The administrative expense assumption was increased from \$1,150,000 to \$1,500,000 based on the fiscal 2017 expense budget.

Changes in Plan Provisions

The following plan provision change was reflected in the January 1, 2016 actuarial valuation:

• The Cost of Living Adjustment base was increased from \$15,000 to \$16,000 as of July 1, 2015, to \$17,000 as of July 1, 2016 and to \$18,000 as of July 1, 2017.

Barnstable County Retirement Association

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BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2015

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2015

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Financial Section

Barnstable County Retirement Association

Financial Section

Powers & Sullivan, LLC

Certified Public Accountants



100 Quannapowitt Parkway Suite 101 Wakefield, MA 01880 T. 781-914-1700 F. 781-914-1701 www.powersandsullivan.com

Independent Auditor's Report

To the Honorable Barnstable Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2015, and the related notes to the financial statements, which collectively comprise the Barnstable County Retirement Associations' financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial 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 Barnstable County Retirement Association as of December 31, 2015 and the results of its operations and changes in its financial 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 Management's Discussion and Analysis, the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Return be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 August 25, 2016, on our consideration of the Barnstable County Retirement Association'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 Barnstable County Retirement Association's internal control over financial reporting and compliance.

Restriction on Use

This report is intended solely for the information and use of the Barnstable County Retirement Association, the Public Employee Retirement Administration Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

August 25, 2016

Powers & Sullivan LLC

Management's Discussion and Analysis

As management of the Barnstable County Retirement Association, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2015. The Association complies with financial reporting requirements issued by the Governmental Accounting Standards Board (GASB).

The GASB is the authoritative standard setting body that provides guidance on how to prepare financial statements in conformity with generally accepted accounting principles (GAAP). Users of these financial statements rely on the GASB to establish consistent reporting standards for all governments in the United States. This consistent application is the only way users can assess the financial condition of a public retirement system compared to others.

Financial Highlights

- The Association's assets exceeded its liabilities at the close of the most recent year by \$873 million (net position)
- The Association's net position increased by \$10.9 million for the year ended December 31, 2015.
- Total investment income was \$10.0 million; investment expenses were \$4.5 million; and net investment income was \$5.5 million.
- Total contributions were \$83.1 million including \$53.6 from employers and \$25.9 from members.
- Retirement benefits, refunds and transfers amounted to \$76.3 million.
- Administrative expenses were \$1.3 million.
- The Total Pension Liability is \$1.5 billion as of December 31, 2015 while the Net Pension Liability is \$629.6 million.
- The Plan fiduciary net position as a percentage of the total pension liability is 58.1%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Association fiduciary financial statements. These fiduciary financial statements comprise of four components: 1) management's discussion and analysis, 2) fiduciary financial statements, 3) notes to the financial statements and 4) required supplementary information.

Fiduciary Financial Statements

The *statement of net position* presents information on all assets and deferred outflows less deferred inflows and liabilities with the difference reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position is improving or deteriorating.

The statement of changes in fiduciary net position presents information showing how the Association's net position changed during the most recent year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, additions and deductions are reported in this statement for some items that will only result in cash flows in future periods.

Notes to the financial statements

The notes provide additional information that is essential to a full understanding of the data provided in the fiduciary financial statements.

Barnstable County Retirement Association

Management's Discussion and Analysis

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Schedule of Changes in the Net Pension Liability and Related Ratios; the Schedule of Contributions; and the Schedule of Investment Return be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of the Association's financial position. The Association's net position exceeded liabilities by \$873 million at the close of 2015.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year end the Association's net position include investments of \$869.1 million, cash of \$860,000 and accounts receivable of \$3.1 million.

In 2015 the Association's contributions were \$83.1 million and net investment income was \$5.5 million while retirement benefit payments, refunds, transfers and administration expenses were \$77.6 million which resulted in a current increase of \$10.9 million. In 2014 the Association's contributions were \$80.2 million and net investment income was \$60.6 million while retirement benefit payments, refunds, transfers and administration expenses were \$72.7 million which resulted in a prior year increase of \$68.1 million.

For both years, the current contributions not only fully supported the current expenses but contributed to the increase in net position. The major difference in the change in net position when comparing the 2015 and 2014 results is net investment income. Net investment income was \$5.5 million and \$60.6 million in 2015 and 2014 respectively. The annual money weighted rate of return was 0.57% and 7.58% in 2015 and 2014 respectively. Fluctuations in the Association's annual investment returns are expected.

The following tables present summarized financial information for the past two years.

	2015	2014	
Statement of Fiduciary Net Position Assets:			
Cash\$ Investments\$	860,349 869,072,837	\$	1,649,428 857,766,798
Receivables	3,068,905	-	2,653,066
Total assets	873,002,091	-	862,069,292
Net Position Restricted for Pension Benefits\$	873,002,091	\$	862,069,292

Barnstable County Retirement Association

Management's Discussion and Analysis

	2015	2014
Statement of Changes in Fiduciary Net Position		
Additions:		
Contributions:	OF 007 007	© 04.047.000
Member contributions\$ Employer contributions	25,867,837 53,626,350	\$ 24,847,689 51,562,171
Other contributions.	3,575,730	3,779,205
	0,010,100	0,110,200
Total contributions	83,069,917	80,189,065
Net investment income (loss):	0.050.047	05 007 004
Total investment income (loss)	9,956,947	65,037,021
Less, investment expenses	(4,486,386)	(4,422,339)
Net investment income (loss)	5,470,561	60,614,682
Total additions	88,540,478	140,803,747
Deductions:		
Administration	1,288,422	1,210,998
Retirement benefits, refunds and transfers	76,319,257	71,507,750
Total deductions	77,607,679	72,718,748
	,,	. =,
Net increase (decrease) in fiduciary net position	10,932,799	68,084,999
Fiduciary net position at beginning of year	862,069,292	793,984,293
Fiduciary net position at end of year\$	873,002,091	\$ 862,069,292

Requests for Information

This financial report is designed to provide a general overview of the Association's finances for all those with an interest in the Association's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Association's Board, 750 Attucks Lane, Hyannis, MA 02601.

STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2015

Net Position Restricted for Pensions...... \$ 873,002,091

See notes to financial statements.

Barnstable County Retirement Association

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STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

FOR THE YEAR ENDED DECEMBER 31, 2015

Additions: Contributions:	
Member contributions\$	25,867,837
Retirement benefits - transfers from other systems	1,049,267
Retirement benefits - 3(8)c contributions from other systems	2,165,645
Retirement benefits - worker's compensation settlements	48,500
Retirement benefits - state COLA reimbursements	312,318
Employer contributions	53,626,350
Total contributions	83,069,917
Net investment income (loss):	
Total investment income (loss)	9,956,947
Less, investment expenses	(4,486,386)
Net investment income (loss)	5,470,561
•	
Total additions	88,540,478
Deductions:	
Administration	1,288,422
Retirement benefits - transfers to other systems	1,365,519
Retirement benefits - 3(8)c payments to other systems	1,314,546
Retirement benefits and refunds	73,639,192
Total deductions	77,607,679
Net increase (decrease) in fiduciary net position	10.032.700
Net increase (decrease) in inductary het position	10,932,799
Fiduciary net position at beginning of year	862,069,292
Fiduciary net position at end of year\$	873,002,091

Barnstable County Retirement Association

See notes to financial statements.

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NOTE 1 - PLAN DESCRIPTION

The Barnstable County Retirement Association is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Barnstable County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Association is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. The Association has 50 participating employers.

Originally established in 1937, the Association is governed by a five member Board who establish the policies under which the Association operates. Board members also approve all of the Association's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the Association are managed by the Executive Director.

The legislative body for the Association is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi-annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The Association is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan 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 those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement Association; Group 1, Group 2 and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

Barnstable County Retirement Association

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A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension.

Active members contribute between 5 and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the PERAC actuary. When a member's retirement becomes effective, his/her deductions 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 borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the Association and all costs are borne by the Association.

The pension portion of any retirement benefit is paid from the Pension Fund of the Association. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The Association adopted Section 22d of Chapter 32 in April of 1989. The Association's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036.

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the Association, are now paid from investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements of the Barnstable County Retirement Association 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.

BCRA is a special-purpose government engaged only in fiduciary activities. Accordingly, the financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, additions are recorded when earned and deductions are recorded when the liabilities are incurred

Cash and Investments

Cash and cash equivalents are considered to be cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition. Investments are carried at fair value. The

Barnstable County Retirement Association

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fair values were determined by the closing price for those securities traded on national stock exchanges and at the average bid-and-asked quotation for those securities traded in the over-the-counter market. The fair value of private equities are based on management's valuation of estimates and assumptions from information and representations provided by the respective general partners, in the absence of readily ascertainable market values. Real estate assets are reported at fair value utilizing an income approach to valuation along with independent appraisals and estimates by management.

Accounts Receivable

Accounts receivable consist of member deductions, pension fund appropriations, and federal grant reimbursements. These receivables are considered 100% collectible and therefore do not report an allowance for uncollectibles.

Deferred Outflows/Inflows of Resources

In addition to assets, the statement of fiduciary net position will sometimes 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(s) and so will not be recognized as an outflow of resources (deduction) until then. The BCRA did not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of fiduciary net position will sometimes report 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(s) and so will not be recognized as an inflow of resources (addition) until that time. The BCRA did not have any items that qualify for reporting in this category.

NOTE 3 - PLAN ADMINISTRATION

The Association is administered by a five-person Board of Retirement consisting of the County Finance Director/Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such Association, and a fifth member appointed by the Advisory Council consisting of representatives from the member units.

Chairman	Mary T. McIsaac	Term Expires:	Indefinite
Appointed Member	Mary Pat Flynn	Term Expires:	1/3/2017
Elected Member	Mark Foley	Term Expires:	1/6/2018
Elected Member	Robert Rolanti	Term Expires:	12/31/2016
Appointed Member	Judith C. Sprague	Term Expires:	12/31/2017

Barnstable County Retirement Association

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Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the Association. The Board must annually file a financial statement of condition for the Association with the Executive Director of PERAC.

The investment of the Association's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the Association has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the Association must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian:

Ex-Officio Member:

Elected Members:

Appointed Members:

Staff Employees:

) MACRS Blanket Policy

\$50,000,000 Fiduciary Liability

\$1,000,000 Fidelity (ERISA) Bond

St. Paul Travelers Insurance Company

National Union Fire Arch Insurance

Company

NOTE 4 - CASH AND INVESTMENTS

Custodial Credit Risk - Deposits

At December 31, 2015, the carrying amount of the Association's deposits totaled \$860,349 and the bank balance of \$1,835,036 was covered by Federal Depository Insurance.

Investments

The Association's investments are as follows:

	December 31, 2015
Investment Type	
PRIT Pooled Funds\$	863,091,249
Pooled Real Estate Funds	5,981,588
	000 070 007
Total Investments \$	869,072,837

Approximately 99% of the Retirement Association's investments are in Pension Reserve Investment Trust (PRIT). This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The Administration does not have the ability to control any of the investment decisions relative to its funds in PRIT.

The remaining investments consist of two closed end real estate investments which are scheduled to mature during 2018.

The Administration's annual money-weighted rate of return on pension plan investments was .57%. The money-

Barnstable County Retirement Association

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weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

NOTE 5 - MEMBERSHIP

The following table represents the Association's membership at January 1, 2014:

Retirees and beneficiaries currently receiving benefits	3,035
Inactive members	613
Active members	4,718
Total	8 366
Total	0,300

NOTE 6 - ACTUARIAL VALUATION

Components of the net pension liability as of December 31, 2015 were as follows:

Total pension liability\$	1,502,651,473
The pension plan's fiduciary net position	873,002,091
The net pension liability\$	629,649,382
The pension plan's fiduciary net position as a percentage of the total pension liability	58.10%

The total pension liability was determined by an actuarial valuation as of January 1, 2014, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2015:

Valuation date	January 1, 2014
Actuarial cost method	Entry Age Normal Cost Method.
Amortization method	Payments increast at 4.0%, except for 2010 Early Retirement Incentive, which is a level payment.
Remaining amortization period	22 years from July 1, 2014 for 2002 and 2003 Early Retirement Incentives, retiree sheriffs liability and remaining unfunded liability, and 8 years from July 1, 2014 for 2010 Early Retirement Incentive.
Asset valuation method	Sum of actuarial value at beginning of the year, contributions and investment earnings based on the actuarial interest assumption less benefit payments and operating expenses plus 20% of the market value at the end of the year in excess of that sum, plus additional adjustment toward market value as necessary so that the final actuarial value is within 20% of market value.
Inflation rate	4.00%
Projected salary increases	Varies by length of service with ultimate rates of 4.25% for Group 1, 4.50% for Group 2 and 4.75% for Group 4.
Cost of living adjustments	3.0% of the first \$15,000 of retirement income.
Rates of retirement	Varies based upon age for general employees, police and fire employees.
Rates of disability	For general employees, it was assumed that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).
Mortality Rates:	
Pre-Retirement	The RP-2000 Employee Mortality Table projected generationally with a Scale AA from 2010.
Healthy Retiree	The RP-2000 Healthy Annuitant Mortality Table projected generationally with a Scale AA from 2010.
Disabled Retiree	The RP-2000 Healthy Annuitant Mortality Table set forward three years for males only projected generationally with Scale AA from 2010.
Investment rate of return/Discount rate	7.75%, net of pension plan investment expense, including inflation previously 7.875%

Investment policy: The pension plan's policy in regard to the allocation of invested assets is established by PRIT. Plan assets are managed on a total return basis with a long-term objective of achieving a fully funded status for the benefits provided through the pension plan.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to

Barnstable County Retirement Association

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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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of January 1, 2014 are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return	Long-Term Expected Asset Allocation
Domestic equity	6.60%	20.00%
Domestic equity		
International developed markets equity	7.10%	16.00%
International emerging markets equity	9.40%	7.00%
Core fixed income	2.20%	13.00%
High-yield fixed income	4.70%	10.00%
Real estate	4.40%	10.00%
Commodities	4.40%	4.00%
Hedge fund, GTAA, Risk parity	3.90%	10.00%
Private equity	11.70%	10.00%

Discount rate: The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that contributions will be made at rates equal to the actuarially determined contribution 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.

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% than the current rate:

		Current	
	1% Decrease	Discount	1% Increase
	(6.75%)	(7.75%)	(8.75%)
Barnstable County Retirement Association's net			
pension liability as of December 31, 2015\$	798,489,114 \$	629,649,382 \$	486,357,107

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 Association's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

NOTE 7 - COMMITMENTS AND CONTINGENCIES

Various legal actions and claims are pending against the Association. Litigation is subject to many uncertainties, and the outcome of individual litigated matters is not always predictable. Although the amount of liability, if any, at December 31, 2015 cannot be ascertained, management believes any resulting liability should not materially affect the financial position at December 31, 2015.

Barnstable County Retirement Association

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NOTE 8 - IMPLEMENTATION OF GASB PRONOUNCEMENTS

The following GASB pronouncements will be implemented in the future:

- The GASB issued <u>Statement #72</u>, Fair Value Measurement and Application, which is required to be implemented in 2016.
- The GASB issued <u>Statement #76</u>, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments, which is required to be implemented in 2016.
- The GASB issued <u>Statement #78</u>, Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans, which is required to be implemented in 2016.
- The GASB issued <u>Statement #79</u>, Certain External Investment Pools and Pool Participants, which is required to be implemented in 2016 with certain provisions to be implemented in 2016.
- The GASB issued <u>Statement #82</u>, Pension Issues an amendment of GASB Statements #67, #68, and #73, which is required to be implemented in 2017.

Management is currently assessing the impact the implementation of these pronouncements will have on the financial statements.

NOTE 9 - SUBSEQUENT EVENTS

Management has evaluated subsequent events through August 25, 2016, which is the date the financial statements were available to be issued.

Required Supplementary Information

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS

	20	14		2015
Total pension liability:		··	-	2010
Service cost	\$ 35	5,328,892	\$	38,066,881
Interest	105	5,040,822		110,695,407
Changes in benefit terms		-		-
Differences between expected and actual experience		-		-
Changes in assumptions		-		-
Benefit payments, including refunds of employee contributions	(67	7,547,103)	_	(72,743,527)
Net change in total pension liability	72	2,822,611		76,018,761
Total pension liability, beginning	1,353	3,810,101	_	1,426,632,712
Total pension liability, ending (a).	\$1,426	6,632,712	\$_	1,502,651,473
Plan fiduciary net position:				
Member contributions	\$ 24	1,666,247	\$	25,867,837
Employer contributions	51	1,562,171		53,626,350
Net investment income (loss)	60	0,614,682		5,470,561
Retirement benefits and refunds	(67	7,547,103)		(72,743,527)
Administration	(1	1,210,998)	_	(1,288,422)
Net increase (decrease) in fiduciary net position	68	3,084,999		10,932,799
Fiduciary net position at beginning of year	793	3,984,293	_	862,069,292
Fiduciary net position at end of year (b)	\$ 862	2,069,292	\$_	873,002,091
Net pension liability - ending (a) - (b)	\$564	1,563,420	\$_	629,649,382
Plan fiduciary net position as a percentage of the total				
pension liability		60.43%		58.10%
Covered-employee payroll (*)	\$ 253	3,920,107		264,076,910
Net pension liability as a percentage of covered-employee payroll		222.34%		238.43%

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.

See notes to required supplementary information.

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Required Supplementary Information

SCHEDULE OF CONTRIBUTIONS

	_	2014	2015
Actuarially determined contribution Contributions in relation to the actuarially	\$	51,562,171	\$ 53,626,350
determined contribution	_	(51,562,171)	(53,626,350)
Contribution deficiency (excess)	\$_		\$
Covered-employee payroll	\$	253,920,107	\$ 264,076,910
Contributions as a percentage of covered- employee payroll		20.31%	20.31%

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.

See notes to required supplementary information.

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SCHEDULE OF INVESTMENT RETURN

	2014	2015
Annual money-weighted rate of return, net of investment expense	7.58%	0.57%

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.

The annual money-weighted rate of return has been calculated by the Pension Reserves Investment Management Board (PRIM).

See notes to required supplementary information.

NOTE A - 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 Associations total pension liability, changes in the Associations net position, and the ending net pension liability. It also demonstrates the plan's net position as a percentage of the total pension liability and the net pension liability as a percentage of covered payroll.

Since the Association performs an actuarial valuation bi-annually, there are no reported amounts for the changes in benefit terms, differences between expected and actual experience and changes in assumptions as of December 31, 2015.

NOTE B - 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 Association'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 covered payroll.

NOTE C - 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.

Audit of Specific Elements, Accounts and Items of Financial Statements

Powers & Sullivan, LLC

Certified Public Accountants



100 Quannapowitt Parkway Suite 101 Wakefield, MA 01880 T. 781-914-1700 F. 781-914-1701 www.powersandsullivan.com

Independent Auditor's Report

To the Honorable Barnstable Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

We have audited the accompanying schedule of employer allocations of the Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2015, and the related notes. We have also audited the total for all entities of the rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, total contributions and total pension expense included in the accompanying schedule of pension amounts by employer of the BCRA Pension Plan as of and for the year ended December 31, 2015, and the related notes.

Management's Responsibility for the Schedules

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 the 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 row 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 row 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 employer allocations and the specified row 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 row 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 employer allocations and the specified row totals included in 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 row 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 opinions.

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, total contributions and total pension expense for the total of all participating entities for the Barnstable County Retirement Association as of and for the year ended December 31, 2015, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Barnstable County Retirement Association as of and for the year ended December 31, 2015, and our report thereon, dated August 25, 2016, expressed an unmodified opinion on those financial statements.

Restriction on Use

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

August 25, 2016

Powers & Sullivan LC

SCHEDULE OF EMPLOYER ALLOCATIONS

FOR THE YEAR ENDED DECEMBER 31, 2015

		Direct			
	FY2016	Appropriation			
	Pension	E.R.I.,	FY2016	Share of	Percent of
	Fund	Sheriff and	Total	Net Pension	Total Net
Employer	Appropriation	Hospital	Appropriation	Liability	Pension Liability
Barnstable County	\$ 2,703,630				5.1209
Barnstable County Hospital	-	7,425	7,425	114,036	0.0189
Barnstable County Retired Sheriffs		1,306,971	1,306,971	20,012,789	3.1789
Town of Barnstable	7,969,422	206,192	8,175,614	93,561,206	14.8599
Barnstable Fire District	361,532	4,173	365,705	4,185,105	0.6659
Barnstable Housing Authority	157,188	3,747	160,935	1,841,730	0.2939
Town of Bourne	3,332,382	77,494	3,409,876	39,022,403	6.1979
Bourne Housing Authority	73,354	-	73,354	839,458	0.1339
Bourne Recreation Authority	99,552	16,493	116,045	1,328,012	0.2119
Bourne Water District	130,990	4,781	135,771	1,553,755	0.2479
Town of Brewster	1,964,848	16,372	1,981,220	22,672,955	3.6019
Brewster Housing Authority	10,479	-	10,479	119,921	0.0199
Buzzards Bay Water District	62,875	-	62,875	719,537	0.1149
Cape Cod Mosquito Control District	230,542	2,616	233,158	2,668,245	0.4249
Cape Cod Regional Technical High School	434,886	-	434,886	4,976,808	0.7909
Centerville/Osterville/Marstons Mills Fire District	1,231,305	4,777	1,236,082	14,145,643	2.2479
Town of Chatham	1,660,951	101,497	1,762,448	20,169,342	3.2039
Chatham Housing Authority	31,438	-	31,438	359,774	0.0579
Cotuit Fire District	225,303	-	225,303	2,578,353	0.4099
Town of Dennis	2,892,256	-	2,892,256	33,098,792	5.2579
Dennis Housing Authority	57,635	2,498	60,133	688,158	0.1099
Dennis Water District	251,501	2,.00	251,501	2,878,161	0.4579
Dennis/Yarmouth Regional School District	1,116,033		1,116,033	12,771,810	2.0289
Town of Eastham	1,325,617	22.975	1,348,592	15,433,200	2.4519
Town of Harwich	2.326.380	22,570	2.326.380	26,622,944	4.2289
Hyannis Fire District	974,564	1.650	976,214	11,171,730	1.7749
Town of Mashpee	2,577,880	36,673	2,614,553	29,920,777	4.7529
Mashpee Housing Authority	41,917	-	41,917	479,695	0.0769
Mashpee Water District	151,948	4,157	156,105	1,786,456	0.2849
Town of Nantucket	5,124,323	115,478	5,239,801	59,963,947	9.5239
Nantucket Housing Authority	20,958	-	20,958	239,842	0.0389
County of Nantucket	172,907	-	172,907	1,978,737	0.3149
Nantucket Regional Transit Authority	31,438	-	31,438	359,774	0.0579
Nauset Regional School District	822,616	-	822,616	9,413,965	1.4959
North Sagamore Water District	52,396	-	52,396	599,616	0.0959
Town of Orleans	1,760,504	-	1,760,504	20,147,095	3.2009
Orleans Housing Authority	41,917		41,917	479,695	0.0769
Tri-Town Wastewater Treatment Facility	78,594	-	78,594	899,425	0.1439 2.5819
Town of Provincetown	1,419,930 3,206,631		1,419,930 3,206,631	16,249,588 36,696,480	5.8289
Sandwich Housing Authority	26,198	-	26.198	299,808	0.0489
Sandwich Water District	199,105	-	199,105	2,278,545	0.3629
Town of Truro	953,606	13,387	966,993	11,066,206	1.7589
Veterans District	52,396	4.008	56,404	645,484	0.1039
Town of Wellfleet	990,283	14,022	1,004,305	11,493,202	1.8259
Town of Yarmouth	3,872,060	95,206	3,967,266	45,401,138	7.2119
Yarmouth Housing Authority	36,677	4,022	40,699	465,757	0.0749
West Barnstable Fire District	115,271	-	115,271	1,319,154	0.2109
Cape Cod Regional Transit Authority	157,188	-	157,188	1,798,849	0.2869
Monomoy Regional School District	864,533		864,533	9,893,660	1.5719
Total	\$52,395,939_	2,180,076	\$54,576,015_\$	629,649,382	100.000%

See notes to schedule of employer allocations and schedule of pension amounts by employer.

FOR THE YEAR ENDED DECEMBER 31, 2015

		Barnstable County		Barnstable County Hospital		Barnstable County Retired Sheriffs		Town of Barnstable
Net Pension Liability Beginning net pension liability	\$	27,571,253	\$	102,751	\$	17,928,841	\$	85,153,333
Ending net pension liability	\$	32,238,620	\$	114,036	\$	20,012,789	\$	93,561,206
Deferred Outflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		2,558,321		9,049		1,588,131		7,424,624
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		1,124,372		_		12.690		55,626
Total Deferred Outflows of Resources			\$	9,049	\$	1,600,821	\$	7,480,250
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	•	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions.		-		2,438		351,385		1,051,057
Total Deferred Inflows of Resources	-	_	\$		\$	351,385	\$	1,051,057
Pension Expense Proportionate share of plan pension expense	•	3,569,361	\$	12,626	\$	2,215,755	\$	10,358,810
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	224,871		(488)		(67,746)		(199,071
Total Employer Pension Expense	\$.	3,794,232	\$	12,138	\$	2,148,009	\$.	10,159,739
Contributions Statutory required contribution	\$	2,762,340	\$	7,288	\$	1,282,792	\$	8,035,227
Contribution in relation to statutory required contribution		(2,762,340)		(7,288)		(1,282,792)		(8,035,227
Contribution deficiency/(excess)	\$.		\$		\$		\$.	
Contributions as a percentage of covered payroll		20.27%		N/A		N/A		20.009
<u>Deferred Inflows/(Outflows) Recognized in</u> Future Pension Expense								
June 30, 2017	\$	867,549	\$	1,786	\$	331,214	\$	1,666,047
June 30, 2018.		867,549	7	1,786	-	331,214	•	1,666,047
June 30, 2019		867,549		1,786		331,214		1,666,047
June 30, 2020.		855,173		1,742		323,532		1,630,134
June 30, 2021		224,873		(489)		(67,738)		(199,082
Total Deferred Inflows/(Outflows) Recognized in	-			(.55)		(,.00)		(,002
Future Pension Expense	\$.	3,682,693	\$	6,611	\$	1,249,436	\$.	6,429,193
Discount Rate Sensitivity	•	40,883,369	\$	144,614	\$	25,379,194	\$	118,649,526
1% decrease (6.75%)		32,238,620	\$	114,036	\$	20,012,789	s	93,561,206
1% increase (8.75%)		24,901,926	\$	88,084	\$	15,458,384	\$	72,269,038
Covered Payroll	\$	13,626,369	\$	_	\$	-	\$	40,166,098
See notes to schedule of employer allocations and schedule of pension amounts by employer.	•	. 5,525,500	•		•		•	(continue

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Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

	Barnstable Fire District	_	Barnstable Housing Authority		Town of Bourne	_	Bourne Housing Authority
Net Pension Liability							
Beginning net pension liability\$	3,536,684	\$	1,703,916	\$	34,318,522	\$	752,951
Ending net pension liability\$	4,185,105	\$	1,841,730	\$	39,022,403	\$	839,458
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience \$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments	332,112		146,152		3,096,654		66,616
Changes of assumptions	-		-		-		-
Changes in proportion and differences between employer contributions and proportionate	404 604		3.397		581.899		1.548
share of contributions		-				-	,
Total Deferred Outflows of Resources\$	513,733	\$ _	149,549	\$.	3,678,553	\$ =	68,164
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience \$	-	\$	-	\$	-	\$	-
Changes of assumptions	-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions	_		43,726		_		222
Total Deferred Inflows of Resources\$	_	\$		•	_	•	222
•		* =	10,120	Ψ.		*=	
Pension Expense Proportionate share of plan pension expense\$	463,362	\$	203,911	\$	4,320,441	\$	92,942
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	36,326	_	(8,067)		116,384	_	266
Total Employer Pension Expense\$	499,688	\$.	195,844	\$.	4,436,825	\$_	93,208
Contributions							
Statutory required contribution\$	358,943	\$	160,935	\$	3,352,724	\$	73,354
Contribution in relation to statutory required contribution	(358,943)	_	(160,935)		(3,352,724)	_	(73,354)
Contribution deficiency/(excess)\$	-	\$_	-	\$.	-	\$_	
Contributions as a percentage of covered payroll	19.70%		20.31%		19.96%		19.84%
Deferred Inflows/(Outflows) Recognized in							
Future Pension Expense	440 755	_	00.050	_	004.000		47.000
June 30, 2017\$ June 30, 2018\$	119,755 119,755	\$	28,650 28,650	\$	894,288 894,288	\$	17,000 17,000
June 30, 2019	119,755		28,650		894,288		17,000
June 30, 2020	118,147		27,942		879,308		16,678
June 30, 2021	36,321		(8,069)		116,381		264
Total Deferred Inflows/(Outflows) Recognized in						_	
Future Pension Expense\$	513,733	\$.	105,823	\$.	3,678,553	\$_	67,942
<u>Discount Rate Sensitivity</u> 1% decrease (6.75%)\$	5,307,334	\$	2,335,589	\$	49,486,211	\$	1,064,562
Current discount rate (7.75%)\$	4,185,105	\$	1,841,730	\$	39,022,403	\$	839,458
1% increase (8.75%)\$	3,232,680	\$	1,422,599	\$	30,141,889	\$	648,421
Covered Payroll\$	1,822,131	\$	792,231	\$	16,795,291	\$	369,708
See notes to schedule of employer allocations and schedule of pension amounts by employer.							(continued)

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2015

Net Pension Liability Beginning net pension liability Ending net pension liability Deferred Outflows of Resources Differences between expected and actual experience Net difference between projected and actual investment earnings on pension plan investments Changes of assumptions. Changes in proportion and differences between employer contributions and proportionate share of contributions Total Deferred Outflows of Resources Deferred Inflows of Resources Differences between expected and actual experience Changes of assumptions	\$ \$ =	1,129,480 1,328,012 - 105,385 - 53,413 158,798	\$ \$ \$	1,283,787 1,553,755 - 123,299 - 91,749 215,048	\$ \$ \$	20,436,149 22,672,955 - 1,799,230 - 12,504 1,811,734	\$ \$ \$	215,127 119,921 - 9,516 - 221 9,737
Ending net pension liability Deferred Outflows of Resources Differences between expected and actual experience Net difference between projected and actual investment earnings on pension plan investments Changes of assumptions Changes in proportion and differences between employer contributions and proportionate share of contributions Total Deferred Outflows of Resources Deferred Inflows of Resources Differences between expected and actual experience	\$ \$ =	1,328,012 - 105,385 - 53,413	\$ \$	1,553,755 - 123,299 - 91,749	\$	22,672,955 - 1,799,230 - 12,504	\$	119,921 - 9,516 - 221
Deferred Outflows of Resources Differences between expected and actual experience Net difference between projected and actual investment earnings on pension plan investments Changes of assumptions Changes in proportion and differences between employer contributions and proportionate share of contributions Total Deferred Outflows of Resources Deferred Inflows of Resources Differences between expected and actual experience	\$ - \$=	105,385 - 53,413	\$ =	123,299 - 91,749	\$	1,799,230 - 12,504	\$	9,516 - 221
Differences between expected and actual experience Net difference between projected and actual investment earnings on pension plan investments Changes of assumptions Changes in proportion and differences between employer contributions and proportionate share of contributions Total Deferred Outflows of Resources Deferred Inflows of Resources Differences between expected and actual experience	-\$=	53,413	· - * =	91,749	_	12,504	-	221
investment earnings on pension plan investments	* <u>_</u>	53,413	-	91,749	- * <u>-</u>	12,504	- \$_	221
Changes in proportion and differences between employer contributions and proportionate share of contributions	* <u>_</u>		-		- \$_		\$_	
employer contributions and proportionate share of contributions	* <u>_</u>		-		\$ _		\$_	
Total Deferred Outflows of Resources Deferred Inflows of Resources Differences between expected and actual experience	* <u>_</u>		-		\$ =		\$_	
Deferred Inflows of Resources Differences between expected and actual experience	_	158,798	-	215,048	\$ =	1,811,734	. \$ _	9.737
Differences between expected and actual experience	\$	-	\$				_	5,.07
Changes of assumptions		-		-	\$	-	\$	-
				-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		_		_		88,898		89,513
Total Deferred Inflows of Resources	- \$		\$	_	\$	88,898	\$	89,513
Pension Expense Proportionate share of plan pension expense	-	147,033	\$	172,027	\$	2,510,280	\$	13,277
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	10,680	_	18,353 190,380	-	(15,282)	-	(17,860
Total Employer Pension Expense	⊸ -	107,710	\$_	190,380	Ф-	2,494,990	\$.	(4,565
Contributions Statutory required contribution	\$	116,045	\$	133,261	\$	1,946,029	\$	10,479
Contribution in relation to statutory required contribution	_	(116,045)	_	(133,261)	_	(1,946,029)	_	(10,479
Contribution deficiency/(excess)	\$_	-	\$_	_	\$_	_	\$_	
Contributions as a percentage of covered payroll	_	23.13%	_	20.19%	-	19.65%		19.84%
Deferred Inflows/(Outflows) Recognized in Future Pension Expense		27.450		40.004	_	400 705		45.400
June 30, 2017	\$	37,156 37,156	\$	49,324 49,324	\$	436,705 436,705	\$	(15,466 (15,466
June 30, 2019		37,156		49,324		436,705		(15,468
June 30, 2020		36,646 10,684		48,727 18,349		428,001 (15,280)		(15,514 (17,858
Total Deferred Inflows/(Outflows) Recognized in	-	10,004	-	10,343	-	(13,200)	-	(17,000
Future Pension Expense	\$_	158,798	\$_	215,048	\$_	1,722,836	\$.	(79,776
Discount Rate Sensitivity 1% decrease (6.75%)	\$	1,684,117	\$	1,970,392	\$	28,752,683	\$	152,080
Current discount rate (7.75%)	\$	1,328,012	\$	1,553,755	\$	22,672,955	\$	119,921
1% increase (8.75%)	\$	1,025,790	\$	1,200,159	\$	17,513,165	\$	92,632
Covered Payroll	\$	501,746	\$	660,192	\$	9,902,884	\$	52,815

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

101(112184)		DED DECEMBE		01, 2010	-		-	
		Buzzards Bay Water District		Cape Cod Mosquito Control District		Cape Cod Regional Technical High School		Centerville/ Osterville/ Martsons Mills Fire District
Net Pension Liability								
Beginning net pension liability	\$	645,393	\$	2,392,026	\$	4,302,581	\$	12,739,373
Ending net pension liability	\$	719,537	\$	2,668,245	\$	4,976,808	\$	14,145,643
Deferred Outflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		57,099		211,741		394,939		1,122,539
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate								
share of contributions		1,327		1,668		135,402		26,097
Total Deferred Outflows of Resources	\$	58,426	\$	213,409	\$	530,341	\$	1,148,636
Deferred Infloring of Beneutrons								
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between								
employer contributions and proportionate share of contributions		193				-		46,539
Total Deferred Inflows of Resources	\$	193	\$		\$	-	\$	46,539
Pension Expense Proportionate share of plan pension expense	\$	79,665	\$	295,420	\$	551,017	\$	1,566,162
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions Total Employer Pension Expense	•	226_ 79,891	s	334_ 295.754	•	27,084 578,101		(4,090) 1,562,072
Total Employer Fersion Expense	Ψ	75,051	Ŷ	233,734	Ψ,	370,101	, 4	1,502,072
Contributions								
Statutory required contribution	\$	62,875	\$	228,847	\$	426,846	\$	1,236,082
Contribution in relation to statutory required contribution		(62,875)		(228,847)		(426,846)		(1,236,082)
Contribution deficiency/(excess)	\$		\$		\$	-	\$	
Contributions as a percentage of covered payroll		19.84%		19.70%		19.47%		19.92%
<u>Deferred Inflows/(Outflows) Recognized in</u> Future Pension Expense								
June 30, 2017	\$	14,571	\$	53,525	\$	126,293	\$	277,904
June 30, 2018		14,571		53,525		126,293		277,904
June 30, 2019		14,571		53,525		126,293		277,904
June 30, 2020.		14,294		52,501		124,382		272,474
June 30, 2021	\$	58,233	\$	213,409	\$	27,080 530,341	· •	1,102,097
·	1				1			
Discount Rate Sensitivity 1% decrease (6.75%)	\$	912,481	\$	3,383,733	\$	6,311,330	\$	17,938,785
Current discount rate (7.75%)	\$	719,537	\$	2,668,245	\$	4,976,808	\$	14,145,643
1% increase (8.75%)	\$	555,789	\$	2,061,021	\$	3,844,210	\$	10,926,455
Covered Payroll	\$	316,892	\$	1,161,938	\$	2,191,838	\$	6,205,807
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

	_	Town of Chatham	_	Chatham Housing Authority	_	Cotuit Fire District	_	Town of Dennis
Net Pension Liability								
Beginning net pension liability	\$	18,671,253	\$	322,696	\$	2,581,550	\$	28,881,100
Ending net pension liability	\$	20,169,342	\$	359,774	\$	2,578,353	\$	33,098,792
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		1,600,554		28,550		204,607		2,626,581
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		10,057		663		1,286		678,962
			_	29,213	_	205.893		3.305.543
Total Deferred Outflows of Resources	\$ _	1,610,611	\$ =	29,213	\$_	205,893	\$_	3,305,543
<u>Deferred Inflows of Resources</u> <u>Differences between expected and actual experience</u>	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions	_	488,150		88	_	224,382	_	-
Total Deferred Inflows of Resources	\$_	488,150	\$_	88	\$_	224,382	\$_	-
Pension Expense Proportionate share of plan pension expense	\$	2,233,088	\$	39,833	\$	285,467	\$	3,664,597
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	(95,620)	_	111	_	(44,616)	_	135,797
Total Employer Pension Expense	\$.	2,137,468	\$_	39,944	\$_	240,851	\$.	3,800,394
Candrida di ann								
Contributions Statutory required contribution	\$	1,729,864	\$	31,438	\$	221,138	\$	2,838,784
Contribution in relation to statutory required contribution	_	(1,729,864)	_	(31,438)	_	(221,138)		(2,838,784)
Contribution deficiency/(excess)	\$_	_	\$_		\$_	-	\$_	-
Contributions as a percentage of covered payroll		20.66%	-	19.84%		19.47%		19.47%
Deferred Inflows/(Outflows) Recognized in								
Future Pension Expense	_		_		_			
June 30, 2017		306,456 306,456	\$	7,287 7,287	\$	6,780 6,780	\$	795,614 795,614
June 30, 2019		306,456		7,287		6,780		795,614
June 30, 2020		298,713		7,149		5,790		782,908
June 30, 2021		(95,620)		115		(44,619)		135,793
Total Deferred Inflows/(Outflows) Recognized in	-	(55,520)	-		-	(11,515)	-	,
Future Pension Expense	\$	1,122,461	\$_	29,125	\$	(18,489)	\$	3,305,543
Discount Rate Sensitivity 1% decrease (6.75%)	\$	25,577,730	\$	456,249	\$	3,269,733	\$	41,974,193
Current discount rate (7.75%)	\$	20,169,342	\$	359,774	\$	2,578,353	\$	33,098,792
1% increase (8.75%)	\$	15,579,312	\$	277,900	\$	1,991,584	\$	25,566,344
Covered Payroll	\$	8,371,238	\$	158,446	\$	1,135,531	\$	14,577,045
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

	_	Dennis Housing Authority		Dennis Water District		ennis/Yarmoutl Regional School District	h -	Town of Eastham
Net Pension Liability								
Beginning net pension liability	\$	562,267	\$	2,635,330	\$	12,262,370	\$	14,262,018
Ending net pension liability	\$	688,158	\$	2,878,161	\$	12,771,810	\$	15,433,200
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		54,609		228,399		1,013,517		1,224,714
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		46,822		1,435		6,369		7.696
Total Deferred Outflows of Resources	_	101,431	\$	229,834	\$	1,019,886	\$	1,232,410
	Ψ=	101,431	٠,	225,034	Ψ.	1,019,000	Ψ.	1,232,410
<u>Deferred Inflows of Resources</u> <u>Differences between expected and actual experience</u>	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		-		45,487		674,480		352,834
Total Deferred Inflows of Resources	\$		\$	45,487	\$	674,480	\$	352,834
Pension Expense Proportionate share of plan pension expense	\$	76,191	\$	318,661	\$	1,414,056	\$	1,708,717
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	9,365		(8,813)		(133,622)		(69,027)
Total Employer Pension Expense	\$_	85,556	\$	309,848	\$.	1,280,434	\$.	1,639,690
Contributions Statutory required contribution	\$	60,133	\$	246,851	\$	1,095,400	\$	1,323,659
Contribution in relation to statutory required contribution	_	(60,133)		(246,851)		(1,095,400)		(1,323,659)
Contribution deficiency/(excess)	\$_	_	\$	_	\$		\$_	
Contributions as a percentage of covered payroll	_	20.70%		19.47%	•	19.47%	•	19.81%
Deferred Inflows/(Outflows) Recognized in Future Pension Expense								
June 30, 2017		23,083	\$	48,566	\$	120,983	\$	238,632
June 30, 2018		23,083 23,083		48,566 48,566		120,983 120,983		238,632 238,632
June 30, 2020		22,819		47,461		116,080		232,707
June 30, 2021	_	9,363		(8,812)		(133,623)	_	(69,027)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	. \$	101,431	\$	184,347	\$	345,406	\$	879,576
	-				•			
Discount Rate Sensitivity 1% decrease (6.75%)	\$	872,685	\$	3,649,934	\$	16,196,553	\$	19,571,591
Current discount rate (7.75%)	. \$	688,158	\$	2,878,161	\$	12,771,810	\$	15,433,200
1% increase (8.75%)	\$	531,549	\$	2,223,163	\$	9,865,268	\$	11,920,992
Covered Payroll	\$	290,485	\$	1,267,569	\$	5,624,838	\$	6,681,146
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

\$ \$ \$ \$	24,040,696 26,622,944 - 2,112,685 - 13,277 2,125,962	\$ \$ \$	10,127,221 11,171,730 - 886,541 - 5,571 892,112	\$ \$ \$	26,873,570 29,920,777 - 2,374,387 - 14,922	\$ \$	376,476 479,696 38,067
\$ \$	26,622,944 - 2,112,685 - 13,277	\$	11,171,730 - 886,541 - 5,571	\$	29,920,777	\$	479,695 38,067
\$ \$ \$	2,112,685	\$	886,541 5,571	\$	- 2,374,387 -	Ť	38,067
\$ <u>-</u> \$ <u>-</u> \$	13,277		5,571	_	-	\$	
* <u>-</u>	13,277	\$	5,571	_	-	_	
\$ <u>_</u> \$		\$		-	14,922	_	45,50
\$ <u></u>		\$		-	14,922	_	45,50
\$ <u></u>		\$		-		-	
\$	-				2,389,309	\$	83,57
	-			-		*=	
		\$	-	\$	-	\$	
	-		-		-		
	141,199		91,753		37,987		
-	141.199	s	91.753	s -	37.987	· -	
Ψ=	,	Υ.	- 1,1, - 2	*=		~=	
\$	2,947,611	\$	1,236,900	\$	3,312,737	\$	53,11
_	(25,584)		(17,240)	_	(4,613)	_	9,09
\$_	2,922,027	\$.	1,219,660	\$_	3,308,124	\$_	62,20
\$	2,283,370	\$	958,166	\$	2,566,216	\$	41,91
_	(2,283,370)		(958,166)	_	(2,566,216)	_	(41,91
\$_	-	\$.		\$_	-	\$_	
	19.47%		19.51%		19.75%		19.84
æ	505 142	e	205.471	¢	501 955	•	18,66
		Ÿ		Ψ		Ψ	18,66
	505,142		205,471		591,855		18,66
	494,922		201,182		580,369		18,48
_	(25,585)		(17,236)	_	(4,612)	_	9,10
æ	1 984 763	•	800 359	æ	2 351 322	•	83,57
Ψ.	1,001,100	٠,	000,000	Ψ-	2,001,022	Ψ.	00,01
\$	33,761,852	\$	14,167,417	\$	37,943,995	\$	608,32
\$	26,622,944	\$	11,171,730	\$	29,920,777	\$	479,69
\$	20,564,234	\$	8,629,327	\$	23,111,563	\$	370,53
\$	11,725,015	\$	4,911,831	\$	12,992,584	\$	211,26
		\$ 141,199 \$ 2,947,611 (25,584) \$ 2,922,027 \$ 2,283,370 (2,283,370) \$	\$ 141,199 \$ \$ \$ 2,947,611 \$ \$ (25,584) \$ \$ 2,922,027 \$ \$ \$ (2,283,370) \$ \$ (2,283,370) \$ \$ 19,47% \$ 505,142 \$ 505,142 \$ 505,142 \$ 494,922 \$ (25,585) \$ 1,984,763 \$ \$ 1,984,763 \$ \$ 33,761,852 \$ \$ 26,622,944 \$ \$ \$ 20,564,234 \$	\$ \frac{141,199}{\$} \\$ \frac{91,753}{\$}\$ \$ 2,947,611 \$ 1,236,900 \[\frac{(25,584)}{\$} \text{(17,240)} \] \$ 2,922,027 \$ 1,219,660 \$ 2,283,370 \$ 958,166 \[\frac{(2,283,370)}{\$} \text{(958,166)} \] \$ \frac{-5}{19,47%} \text{19,51%} \$ \frac{505,142}{505,142} \text{205,471} \\ \frac{505,142}{494,922} \text{201,472} \\ \frac{40}{494,922} \text{201,472} \\ \frac{(17,236)}{(17,236)} \] \$ \frac{1,984,763}{3} \text{800,359} \$ 33,761,852 \$ 14,167,417 \$ 26,622,944 \$ 11,171,730 \$ 20,564,234 \$ 8,629,327	\$ 141,199 \$ 91,753 \$ \$ \$ 2,947,611 \$ 1,236,900 \$ \$ (25,584)	\$ \begin{array}{c c c c c c c c c c c c c c c c c c c	\$\frac{141,199}{\$}\$\$ \$\frac{91,753}{\$}\$\$ \$\frac{37,987}{\$}\$\$ \$\frac{1}{3}\$\$ \$\$ 2,947,611 \$\$ 1,236,900 \$\$ 3,312,737 \$\$ \[\frac{(25,584)}{\$}\$ \$\frac{(17,240)}{\$}\$ \$\frac{(4,613)}{\$}\$\$ \$\$ 2,922,027 \$\$ 1,219,660 \$\$ 3,308,124 \$\$ \$\$ 2,283,370 \$\$ 958,166 \$\$ 2,566,216 \$\$ (2,283,370) \$\$ (958,166) \$\$ (2,566,216) \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2015

	_	Mashpee Water District		Town of Nantucket	_	Nantucket Housing Authority	_	County of Nantucket
Net Pension Liability								
Beginning net pension liability	\$	1,546,588	\$	53,675,407	\$	215,127	\$	1,989,947
Ending net pension liability	\$	1,786,456	\$	59,963,947	\$	239,842	\$	1,978,737
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		141,766		4,758,486		19,033		157,024
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		46,815		104.899		442		987
Total Deferred Outflows of Resources	\$	188,581	\$	4,863,385	\$	19,475	\$	158,011
Deferred Inflows of Resources	-		•		_		-	
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		-		-		66		179,487
Total Deferred Inflows of Resources	\$_	-	\$	_	\$_	66	\$_	179,487
Pension Expense Proportionate share of plan pension expense	\$	197,791	\$	6,639,024	\$	26,555	\$	219,080
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	9,364		20,983	_	77	_	(35,696)
Total Employer Pension Expense	\$_	207,155	\$.	6,660,007	\$_	26,632	\$_	183,384
Contributions Statutory required contribution	\$	153,219	\$	5,142,928	\$	20,958	\$	169,710
Contribution in relation to statutory required contribution			•		Ψ		•	
• •	_	(153,219)	•	(5,142,928)	-	(20,958)	-	(169,710)
Contribution deficiency/(excess)	\$ =	-	\$.		\$ =		\$ =	
Contributions as a percentage of covered payroll		20.01%		19.91%		19.84%		19.47%
<u>Deferred Inflows/(Outflows) Recognized in</u> Future Pension Expense								
June 30, 2017		44,976	\$	1,216,356	\$	4,856	\$	3,746
June 30, 2018		44,976		1,216,356		4,856		3,746
June 30, 2019		44,976 44,290		1,216,356 1,193,337		4,856 4,764		3,746 2,986
June 30, 2020		9,363		20,980		4,164		(35,700)
Total Deferred Inflows/(Outflows) Recognized in	-	0,000		20,550	-		-	(00,100)
Future Pension Expense	\$	188,581	\$.	4,863,385	\$_	19,409	\$.	(21,476)
<u>Discount Rate Sensitivity</u> 1% decrease (6.75%)	\$	2,265,489	\$	76,043,208	\$	304,152	\$	2,509,332
Current discount rate (7.75%)	\$	1,786,456	\$	59,963,947	\$	239,842	\$	1,978,737
1% increase (8.75%)	\$	1,379,902	\$	46,317,670	\$	185,258	\$	1,528,426
Covered Payroll	\$	765,823	\$	25,826,722	\$	105,631	\$	871,454
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

FOR THE YEAR ENDED DECEMBER 31, 2015

		Nantucket Regional Transit Authoriy		Nauset Regional School District		North Sagamore Water District		Town of Orleans
Net Pension Liability								
Beginning net pension liability	\$	322,696	\$	7,583,303	\$	484,045	\$	17,801,947
Ending net pension liability	\$	359,774	\$	9,413,965	\$	599,616	\$	20,147,095
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		28,550		747,053		47,583		1,598,789
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions.		664		715.915		44,880		228.482
							•	
Total Deferred Outflows of Resources	\$	29,214	\$	1,462,968	\$	92,463	\$	1,827,271
Deferred Inflows of Resources Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		89					_	-
Total Deferred Inflows of Resources	\$	89	\$		\$		\$	-
Pension Expense Proportionate share of plan pension expense	\$	39,833	\$	1,042,285	\$	66,388	\$	2,230,625
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		111_		143,188		8,976		45,695
Total Employer Pension Expense	\$	39,944	\$	1,185,473	\$	75,364	\$	2,276,320
Contributions								
Statutory required contribution	\$	31,438	\$	804,792	\$	51,427	\$	1,727,956
Contribution in relation to statutory required contribution		(31,438)		(804,792)		(51,427)		(1,727,956
Contribution deficiency/(excess)	\$		\$		\$		\$	-
Contributions as a percentage of covered payroll		19.84%		19.41%		19.47%		19.47%
Deferred Inflows/(Outflows) Recognized in Future Pension Expense								
June 30, 2017	\$	7,287	\$		\$	20,929	\$	447,327
June 30, 2018		7,287 7,287		330,850 330,850		20,929 20,929		447,327 447,327
June 30, 2020		7,149		327,236		20,699		439,593
June 30, 2021		115		143,182		8,977		45,697
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	¢	29,125	\$	1,462,968	\$	92,463	\$	1,827,271
. didie i elision Expense	φ	23,123	٠	1,702,300	φ	32,403	φ,	1,021,211
Discount Rate Sensitivity 1% decrease (6.75%)	\$	456,249	\$	11,938,307	\$	760,401	\$	25,549,512
Current discount rate (7.75%)	\$	359,774	\$	9,413,965	\$	599,616	\$	20,147,095
1% increase (8.75%)	\$	277,900	\$	7,271,583	\$	463,158	\$	15,562,124
Covered Payroll	\$	158,446	\$	4,146,007	\$	264,077	\$	8,872,984
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued

Barnstable County Retirement Association

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FOR THE YEAR ENDED DECEMBER 31, 2015

		Orleans Housing Authority		Tri-Town Wastewater Treatment Facility		Town of Provincetown	-	Town of Sandwich
Net Pension Liability Beginning net pension liability	\$	430,255	\$	806,731	\$	15,112,827	\$	32,376,950
Ending net pension liability	\$	479,695	\$	899,425	\$	16,249,588	\$	36,696,480
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$		\$		\$		\$	_
Net difference between projected and actual investment earnings on pension plan investments		38.067	•	71.375	•	1.289 499	•	2,912,078
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate								
share of contributions		885		1,659		8,104		456,105
Total Deferred Outflows of Resources	\$	38,952	\$	73,034	\$	1,297,603	\$_	3,368,183
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	
Changes of assumptions		-		-		-		
Changes in proportion and differences between employer contributions and proportionate		400		200		454.670		
share of contributions	-	122		229		451,672	-	
Total Deferred Inflows of Resources	\$.	122	\$	229	\$	451,672	\$ _	-
<u>Pension Expense</u> Proportionate share of plan pension expense	\$	53,110	\$	99,582	\$	1,799,105	\$	4,062,922
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		154		283		(88,714)		91,220
Total Employer Pension Expense	\$	53,264	\$	99,865	\$	1,710,391	\$.	4,154,142
Contributions								
Statutory required contribution	\$	41,917	\$	78,594	\$	1,393,679	\$	3,147,347
Contribution in relation to statutory required contribution		(41,917)		(78,594)		(1,393,679)		(3,147,347
Contribution deficiency/(excess)	\$.	-	\$	-	\$		\$_	
Contributions as a percentage of covered payroll		19.84%		19.84%		19.47%		19.479
<u>Deferred Inflows/(Outflows) Recognized in</u> <u>Future Pension Expense</u>								
June 30, 2017		9,715	\$	18,216	\$		\$	822,762
June 30, 2018		9,715		18,216		235,221		822,762
June 30, 2019		9,715		18,216		235,221		822,762
June 30, 2020		9,531		17,871		228,983		808,675
June 30, 2021	-	154		286		(88,715)	-	91,222
Future Pension Expense	\$	38,830	\$	72,805	\$	845,931	\$	3,368,183
Discount Rate Sensitivity 1% decrease (6.75%)	\$	608,329	\$	1,140,602	\$	20,606,896	\$	46,536,600
Current discount rate (7.75%)	\$	479,695	\$	899,425	\$	16,249,588	\$	36,696,480
1% increase (8.75%)	\$	370,531	\$	694,737	\$	12,551,593	\$	28,345,291
Covered Payroll	\$	211,262	\$	396,115	\$	7,156,484	\$	16,161,507
See notes to schedule of employer allocations and schedule of pension amounts by employer.				,		.,,		(continue

Barnstable County Retirement Association

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

FOR THE YEAR ENDED DECEMBER 31, 2015

		Sandwich Housing Authority		Sandwich Water District		Town of Truro		Veterans District
Net Pension Liability Beginning net pension liability	\$	268,907	\$	2,043,727	\$	10,242,087	\$	523,273
Ending net pension liability	\$	299,808	\$	2,278,545	\$	11,066,206	\$	645,484
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		23,792		180,816		878,168		51,223
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		553		1,137		5,518		46,485
Total Deferred Outflows of Resources		24,345	\$	181,953	\$	883,686	 s	97,708
Deferred Inflows of Resources	٠,		٠.	· ·				
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		74		592		266,027		-
Total Deferred Inflows of Resources	\$	74	\$	592	\$	266,027	\$	-
Pension Expense Proportionate share of plan pension expense	\$	33,194	\$	252,274	\$	1,225,216	\$	71,466
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions Total Employer Pension Expense		95 33,289	\$	107 252,381	\$	(52,101) 1,173,115		9,294 80,760
Contributions Statutory required contribution	\$	26,198	s	195,424	\$	949,115	\$	55,361
Contribution in relation to statutory required contribution		(26,198)	Ī	(195,424)	•	(949,115)		(55,361
Contribution deficiency/(excess)			s.	_	\$	-	· · ·	-
Contributions as a percentage of covered payroll		19.84%	•	19.47%		19.75%		20.96%
Deferred Inflows/(Outflows) Recognized in								
Future Pension Expense June 30, 2017	•	6.073	\$	45,532	\$	168,502	\$	22.165
June 30, 2018		6,073	٠	45,532	φ	168,502	φ	22,165
June 30, 2019		6,073		45,532		168,502		22,165
June 30, 2020.		5,957		44,656		164,254		21,916
June 30, 2021		95		109		(52,101)		9,297
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	\$	24,271	\$	181,361	\$	617,659	\$	97,708
Discount Rate Sensitivity 1% decrease (6.75%)	\$	380,201	\$	2,889,532	\$	14,033,598	\$	818,571
Current discount rate (7.75%)		299,808	\$	2,278,545	\$	11,066,206	\$	645,484
1% increase (8.75%)		231,579	\$	1,760,005	\$	8,547,819	\$	498,589
Covered Payroll		132,038	\$	1,003,492	\$	4,806,200	\$	264,077
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

Barnstable County Retirement Association

Pension Amounts by Employer

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

FOR THE YEAR ENDED DECEMBER 31, 2015

_	Town of Welfleet		Town of Yarmouth		Yarmouth Housing Authority	_	West Barnstable Fire District
\$	10,463,426	\$	40,243,041	\$	415,831	\$	1,021,86
\$	11,493,202	\$	45,401,138	\$	465,757	\$	1,319,15
\$	-	\$	-	\$	-	\$	
	912,052		3,602,843		36,961		104,68
	-		-				
	5.732		414.557		2.338		134,53
-		· ·		s -		\$	239,21
Ψ=	317,704	٠,	4,017,400	Ψ=	05,255	Ψ=	203,21
\$	-	\$	-	\$	-	\$	
	-		-		-		
	131,656		_		-	_	
\$_	131,656	\$		\$_		\$_	
. \$	1,272,492	\$	5,026,675	\$	51,567	\$	146,05
	(25,187)		82,910	_	471		26,90
\$_	1,247,305	\$.	5,109,585	\$_	52,038	\$.	172,95
\$	985,738	\$	3,899,969	\$	40,699	\$	113,14
-	(985,738)		(3,899,969)	_	(40,699)		(113,14
· \$_		\$.	_	\$_	_	\$	
	19.75%		19.98%		22.02%		19.47
•	002.024	•	007.070	•	0.752	•	52.00
		\$		\$		\$	53,20 53,20
							53,20
							52,69
							26,90
_		•		_		-	
\$	786,128	\$.	4,017,400	\$_	39,299	\$.	239,21
. \$	14,575,093	\$	57,575,401	\$	590,650	\$	1,672,88
. \$	11,493,202	\$	45,401,138	\$	465,757	\$	1,319,15
. \$	8,877,642	\$	35,068,988	\$	359,763	\$	1,018,94
Ψ	, , , , , , , , , , , , , , , , , , , ,						
		Welfleet \$ 10,463,426 \$ 11,493,202 \$	Welfleet	Welfleet Yarmouth \$ 10,463,426 \$ 40,243,041 \$ 11,493,202 \$ 45,401,138 \$ - \$ - 912,052 3,602,843 - - 5,732 414,557 \$ 917,784 \$ 4,017,400 \$ - \$ - 131,656 - \$ 1,272,492 \$ 5,026,675 \$ 1,247,305 \$ 5,109,585 \$ 985,738 \$ 3,899,969 (985,738) (3,899,969) \$ 985,738 3,899,969 \$ 985,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 3,899,969 \$ 995,738 \$ 4,017,400 \$ 14,575,093 \$ 57,575,401 \$ 11,493,202 \$ 45,401,138	Welfleet Yarmouth \$ 10,463,426 \$ 40,243,041 \$ \$ 11,493,202 \$ 45,401,138 \$ \$ - \$ \$ - \$ 912,052 3,602,843 - \$ - \$ 5,732 414,557 \$ 917,784 \$ 4,017,400 \$ \$ - \$ \$ - \$ \$ 131,656 - \$ \$ \$ 1,272,492 \$ 5,026,675 \$ \$ 1,247,305 \$ 5,109,585 \$ \$ 985,738 \$ 3,899,969 \$ (985,738) (3,899,969) \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 \$ \$ 203,931 \$ 987,979 <td>Welfleet Yarmouth Authority \$ 10,463,426 \$ 40,243,041 \$ 415,831 \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$ - \$ - \$ - 912,052 3,602,843 36,961 - - - 5,732 414,557 2,338 \$ 917,784 \$ 4,017,400 \$ 39,299 \$ - \$ - \$ - \$ 131,656 - \$ - \$ 1,272,492 \$ 5,026,675 \$ 51,567 \$ 1,247,305 \$ 5,109,585 \$ 52,038 \$ 985,738 3,899,969 \$ 40,699 (985,738) (3,899,969) (40,699) \$ - \$ - \$ - 19,75% 19,98% 22,02% \$ 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 <t< td=""><td>Welfleet Yamouth Authority \$ 10,463,426 \$ 40,243,041 \$ 415,831 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$ \$ - \$ - \$ - \$ - \$ \$ \$ \$ \$ 912,052 3,602,843 36,961 \$ \$ 917,784 \$ 4,017,400 \$ 39,299 \$ \$ - \$ - \$ - \$ - \$ - \$ \$ \$ \$ 131,656 \$ - \$ - \$ \$ \$ 1,272,492 \$ 5,026,675 \$ 51,567 \$ 1,247,305 \$ 5,109,585 \$ 52,038 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ \$ 19,75% 19,98% 22,02% \$ 203,931 \$ 987,979 \$ 9,753 \$ 199,519 \$ 970,550 9,572 \$ 25,184) \$ 82,913 468 \$ 786,128 \$ 4,017,400 \$ 39,299 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$</td></t<></td>	Welfleet Yarmouth Authority \$ 10,463,426 \$ 40,243,041 \$ 415,831 \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$ - \$ - \$ - 912,052 3,602,843 36,961 - - - 5,732 414,557 2,338 \$ 917,784 \$ 4,017,400 \$ 39,299 \$ - \$ - \$ - \$ 131,656 - \$ - \$ 1,272,492 \$ 5,026,675 \$ 51,567 \$ 1,247,305 \$ 5,109,585 \$ 52,038 \$ 985,738 3,899,969 \$ 40,699 (985,738) (3,899,969) (40,699) \$ - \$ - \$ - 19,75% 19,98% 22,02% \$ 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 9,753 203,931 \$ 987,979 <t< td=""><td>Welfleet Yamouth Authority \$ 10,463,426 \$ 40,243,041 \$ 415,831 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$ \$ - \$ - \$ - \$ - \$ \$ \$ \$ \$ 912,052 3,602,843 36,961 \$ \$ 917,784 \$ 4,017,400 \$ 39,299 \$ \$ - \$ - \$ - \$ - \$ - \$ \$ \$ \$ 131,656 \$ - \$ - \$ \$ \$ 1,272,492 \$ 5,026,675 \$ 51,567 \$ 1,247,305 \$ 5,109,585 \$ 52,038 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ \$ 19,75% 19,98% 22,02% \$ 203,931 \$ 987,979 \$ 9,753 \$ 199,519 \$ 970,550 9,572 \$ 25,184) \$ 82,913 468 \$ 786,128 \$ 4,017,400 \$ 39,299 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$</td></t<>	Welfleet Yamouth Authority \$ 10,463,426 \$ 40,243,041 \$ 415,831 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$ \$ - \$ - \$ - \$ - \$ \$ \$ \$ \$ 912,052 3,602,843 36,961 \$ \$ 917,784 \$ 4,017,400 \$ 39,299 \$ \$ - \$ - \$ - \$ - \$ - \$ \$ \$ \$ 131,656 \$ - \$ - \$ \$ \$ 1,272,492 \$ 5,026,675 \$ 51,567 \$ 1,247,305 \$ 5,109,585 \$ 52,038 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ 985,738 \$ 3,899,969 \$ 40,699 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ \$ 19,75% 19,98% 22,02% \$ 203,931 \$ 987,979 \$ 9,753 \$ 199,519 \$ 970,550 9,572 \$ 25,184) \$ 82,913 468 \$ 786,128 \$ 4,017,400 \$ 39,299 \$ \$ 11,493,202 \$ 45,401,138 \$ 465,757 \$

Barnstable County Retirement Association

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Pension Amounts by Employer

SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

FOR THE YEAR ENDED DECEMBER 31, 2015

	Cape Cod Regional Transit Authority	У	Monomoy Regional School District	Totals
Net Pension Liability				
Beginning net pension liability	\$ 1,828,599	\$	9,358,123	\$ 564,563,420
Ending net pension liability	\$ 1,798,849	\$	9,893,660	\$ 629,649,382
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$ -	\$	-	\$ -
Net difference between projected and actual investment earnings on pension plan investments	142,749		785,119	49,966,327
Changes of assumptions	-		-	-
Changes in proportion and differences between employer contributions and proportionate				
share of contributions	3,318		4,935	5,345,047
Total Deferred Outflows of Resources	\$ 146,067	\$	790,054	\$ 55,311,374
<u>Deferred Inflows of Resources</u> Differences between expected and actual experience	\$ -	\$	-	\$ -
Changes of assumptions	-		-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	179,434		405,268	5,345,047
Total Deferred Inflows of Resources	\$ 179,434	's	405,268	\$ 5,345,047
Pension Expense Proportionate share of plan pension expense	199,163	\$	1,095,390	\$ 69,712,847
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	(35,226)		(80,062)	
Total Employer Pension Expense	\$ 163,937	\$	1,015,328	\$ 69,712,847
<u>Contributions</u> Statutory required contribution	\$ 157,188	\$	848,550	\$ 53,626,350
Contribution in relation to statutory required contribution	(157,188)		(848,550)	(53,626,350)
Contribution deficiency/(excess)	\$ 	\$		\$
Contributions as a percentage of covered payroll	19.84%		19.47%	20.31%
<u>Deferred Inflows/(Outflows) Recognized in</u> <u>Future Pension Expense</u>				
June 30, 2017	637 637	\$	117,163 117,163	\$ 12,552,012 12,552,012
June 30, 2019	637		117,163	12,552,012
June 30, 2020	(55)		113,363	12,310,291
June 30, 2021	(35,223)		(80,066)	
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	\$ (33,367)	\$	384,786	\$ 49,966,327
Discount Rate Sensitivity 1% decrease (6.75%)	\$ 2,281,212	\$	12,546,635	\$ 798,489,114
Current discount rate (7.75%)	\$ 1,798,849	\$	9,893,660	\$ 629,649,382
1% increase (8.75%)	\$ 1,389,478	\$	7,642,115	\$ 486,357,107
Covered Payroll	\$ 792,231	\$	4,357,269	\$ 264,076,910
See notes to schedule of employer allocations and schedule of pension amounts by employer.				(concluded)

Barnstable County Retirement Association

Pension Amounts by Employer

NOTE I - Schedule of Employer Allocations

Governmental Accounting Standards Board (GASB) Statement #68 requires employers participating in a costsharing 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, contributions 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 Barnstable County Retirement Association's collective pension amounts.

Massachusetts General Law (MGL) Chapter 32 Section 22 Paragraph 7c dictates that Massachusetts cost sharing defined benefit pension plans allocate the annual required pension fund appropriation to employer units based on their proportionate share of the aggregate of the annual rates of regular compensation of all members in service of the Association who are employees of any government unit at the close of business on the September 30th immediately preceding the fiscal year. Accordingly, the proportionate aggregate rates of regular compensation as of the close of business on September 30, 2014 were applied to allocate the Association's fiscal year 2016 pension fund appropriation by member unit.

The Barnstable County Hospital was operated by Barnstable County from the late 1800s to 1995, when it was closed and all employees were terminated. The remaining payments due from the Barnstable County Retirement Association to the former employees of the Barnstable County Hospital were actuarially determined and are separately identified in the Association's funding schedule. Barnstable County continues to pay for the retirement obligations related to previously retired Hospital employees.

In 2012, the Barnstable County Sheriff's functions were taken over by the Commonwealth of Massachusetts. Barnstable County continues to pay for the retirement obligations related to previously retired Sheriff's employees. These liabilities are actuarially determined and are separately identified in the Association's funding schedule.

When a member unit accepts an Early Retirement Incentive Program (E.R.I. or ERIP), PERAC complete 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 as retirees including the ERIP less the accrued liability for the members as active employees excluding the ERIP represents the increase in accrued liability due to the ERIP. The net increase is amortized for each member unit accepting the ERIP, and is separately identified in the Association's funding schedule. The 2003 ERIP amortization is occurring over 25 years, increasing 4.5% per year. The 2010 ERIP amortization is occurring over a 10 year, straight-line basis.

The allocation percentage of the total net pension liability is a blended rate of the following three items. (1) The proportionate share of active employer's covered payroll is applied to the fiscal year 2016 pension fund appropriation calculated by the actuary. (2) ERI is a direct charge calculated by PERAC for only the employers that accepted the ERI. (3) The direct amortization of the actuarial determined net pension liability for Barnstable County Sheriff and Barnstable County Hospital since they no longer have active covered payroll.

Barnstable County Retirement Association

39 Audit of Specific Elements Accounts and Items of Financial Statements

NOTE II - 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, contributions 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. Since the Association performs an actuarial valuation bi-annually, there are no reported differences between expected and actual experience or a change of assumptions as of December 31, 2015.

Barnstable County Retirement Association

40 Audit of Specific Elements Accounts and Items of Financial Statements

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS PREPARED IN ACCORDANCE WITH PERAC RULES AND REGULATIONS

YEAR ENDED DECEMBER 31, 2014

BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2014

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Financial Section

Barnstable County Retirement Association

Financial Section

Powers & Sullivan, LLC

Certified Public Accountants



100 Quannapowitt Parkway Suite 101 Wakefield, MA 01880 T. 781-914-1700 F. 781-914-1701 www.powersandsullivan.com

Independent Auditor's Report

To the Honorable Barnstable Retirement Board Barnstable County Retirement Association Barnstable, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of the Barnstable County Retirement Association (BCRA) as of and for the year ended December 31, 2014, and the related notes to the financial statements, which collectively comprise the Barnstable County Retirement Association's 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 the Commonwealth of Massachusetts Public Employee Retirement Administration Commission Rules and Regulations 840 CMR 5.03: Annual Report. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the Commonwealth of Massachusetts Public Employee Retirement Administration Commission Rules and Regulations 840 CMR 25.00: "The Conduct of Field Examinations of Contributory Retirement Associations," in existence as of August 27, 2004, 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 respective financial position of the Barnstable County Retirement Association as of December 31, 2014, and the results of its operations and changes in its fund balances for the year then ended in accordance with the financial reporting provisions of the Commonwealth of Massachusetts Public Employee Retirement Administration Commission Rules and Regulations 840 CMR 5.03: Annual Report described in Note 2.

Basis of Accounting

We draw attention to Note 2 of the financial statements which describes the basis of accounting. As described in Note 2 to the financial statements, the financial statements are prepared by the BCRA on the basis of financial reporting provisions prescribed by the Commonwealth of Massachusetts Public Employee Retirement Administration Commission Rules and Regulations 840 CMR 5.03: Annual Report, which is a basis of accounting other than accounting principles generally accepted in the United States of America, to meet the requirements of the Commonwealth of Massachusetts Public Employee Retirement Administration Commission (PERAC). Our opinion is not modified with respect to this matter.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated May 26, 2015, on our consideration of the Barnstable County Retirement Association'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 Barnstable County Retirement Association's internal control over financial reporting and compliance.

Restriction on Use

Powers & Sullivan LLC

This report is intended solely for the information and use of the Barnstable Country Retirement Association, the Public Employee Retirement Commission and all member units and is not intended to be and should not be used by anyone other than these specified parties.

May 26, 2015

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STATEMENT OF ASSETS, LIABILITIES, AND FUND BALANCE

DECEMBER 31, 2014

Assets		
Cash	\$	1,649,428
Investments: PRIT funds Pooled real estate funds		850,169,226 7,597,572
Receivables	_	2,653,066
Total assets	\$_	862,069,292
Fund Balance		
Annuity Savings Fund	\$	242,573,808 74,220,567 198,540 171,250 544,905,127
Total fund balance	\$_	862,069,292

See notes to financial statements.

STATEMENT OF CHANGES IN FUND BALANCE

YEAR ENDED DECEMBER 31, 2014

Jacomo:	Annuity Savings Fund	Annuity Reserve Fund	,	Military Service Fund
Income: Receipts\$ Investment income	25,907,728 353,693	\$ 2,443 2,067,699	\$	14,370 184
Total income	26,261,421	2,070,142		14,554
Disbursements and depreciation: Disbursements	(3,833,303)	(11,097,682)	,	(2,595)
Net change in fund balance before interfund transfers in (out)	22,428,118	(9,027,540)		11,959
Interfund transfers in (out), net	(14,133,071)	14,170,792		(10)
Net change in fund balance	8,295,047	5,143,252		11,949
Fund balance at beginning of year	234,278,761	69,077,315		186,591
Fund balance at end of year\$	242,573,808	\$ 74,220,567	\$	198,540

See notes to financial statements.

Barnstable County Retirement Association

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,	Pension Fund	Pension Reserve Fund	Expense Fund	Total
\$	53,372,419	\$ 921,196 56,953,017	\$ 5,633,337	\$ 80,218,156 65,007,930
,	53,372,419	57,874,213	5,633,337	145,226,086
	(56,574,170)		(5,633,337)	(77,141,087)
	(3,201,751)	57,874,213	-	68,084,999
	2,862,532	(2,900,243)		
	(339,219)	54,973,970	-	68,084,999
	510,469	489,931,157		793,984,293
\$	171,250	\$ 544,905,127	\$ 	\$ 862,069,292

STATEMENT OF INCOME

YEAR ENDED DECEMBER 31, 2014

Members deductions\$	24,197,965
Transfers of members' accounts from other systems	1,060,039
Members' makeup payments and redeposits	649,724
Reimbursements from other systems for Pension Fund	2,062,269
Received from Commonwealth for COLA and Survivor Benefits	656,897
Employers' contributions to Pension Fund	50,627,593
Workers compensation	25,660
Contributions received for military Service	14,370
Federal grant reimbursement	109,587
Interest not refunded	988
Miscellaneous	2,443
Pension Reserve appropriation	810,621
Investment income (loss)	65,007,930
Total income\$	145,226,086

See notes to financial statements.

Barnstable County Retirement Association

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STATEMENT OF DISBURSEMENTS

YEAR ENDED DECEMBER 31, 2014

Refunds of members' accounts from Annuity Savings Fund	\$ 2,591,822
Annuity portion of retirement allowance payments from Annuity Reserve Fund	10,873,985
Option B refunds from Annuity Reserve Fund	223,697
Superannuation and termination retirement allowance payments from Pension Fund	40,548,055
Survivor allowance payments from Pension Fund	2,383,170
Ordinary disability payments from Pension Fund	893,856
Accidental disability payments from Pension Fund	10,112,977
Accidental death benefits from Pension Fund	1,061,372
Section 101 benefits from Pension Fund	347,024
Reimbursements to other systems from Pension Fund	1,227,716
Payment from Military Service Fund	2,595
Investment management and custodial fees from Expense Fund	4,422,339
Board member stipend from Expense Fund	23,626
Staff salaries from Expense Fund	523,046
Legal expenses from Expense Fund	132,217
Travel expenses from Expense Fund	1,378
Fiduciary insurance from Expense Fund	45,418
Professional services.	48,793
Administrative expenses from Expense Fund	298,934
Furniture and equipment expenses from Expense Fund	5,782
Rent from Expense Fund	128,744
Education and training	3,060
Transfer of members accounts to other systems	1,241,481
Total disbursements and depreciation	\$ 77,141,087

See notes to financial statements.

Barnstable County Retirement Association

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STATEMENT OF INVESTMENT INCOME

YEAR ENDED DECEMBER 31, 2014

Gross investment income\$	23,686,161
Add: Profit on the sale of investments Increase in market value of securities	36,838,321 53,727,903
Less: Loss on the sale of investments Decrease in market value of securities	(194,205) (49,050,250)
Net investment income (loss)	65,007,930
Investment income required: Annuity Savings Fund Annuity Reserve Fund Special Military Service Credit Fund Pension Reserve Fund Expense Fund	353,693 2,067,699 184 56,953,017 5,633,337
Total investment income required	65,007,930
Excess (deficiency) of investment income requiring transfer from Pension Reserve Fund\$	

See notes to financial statements.

NOTE 1 - PLAN DESCRIPTION

The Barnstable County Retirement Association is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of the governmental member units deemed eligible by the Barnstable County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Association is mandatory immediately upon the commencement of employment for all permanent employees working a minimum of 25 hours per week. As of January 1, 2014, the Association had 50 participating employers.

Originally established in 1937, the Association is governed by a five member Board who establish the policies under which the Association operates. Board members also approve all of the Association's financial transactions, including the approval of retirement benefits to members. The day-to-day operations of the Association are managed by the Executive Director.

The legislative body for the System is an Advisory Council consisting of treasurers of the member units. The Advisory Council meets semi- annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

The Association is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts contributory retirement system benefits are, with certain exceptions, uniform from system to system. The Plan 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 those hired prior to April 2, 2012. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

There are three classes of membership in the retirement system; Group 1, Group 2 and Group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, Group 4 consists of police officers, firefighters, and other hazardous positions.

Any individual in Group 1 or Group 2 whose membership began before January 1, 1978, and who maintains an annuity savings fund account, is eligible to receive a superannuation retirement allowance at age 55 or later, regardless of how many years of credible service he or she has completed.

There are no minimum vesting requirements for individuals in Group 4.

Members in Groups 1 and 2, hired after January 1, 1978 and prior to April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 20 years of service or upon the completion of 10 years of service and upon reaching the age of 55.

Members in Groups 1 and 2, hired on or after April 2, 2012, are eligible to receive a superannuation retirement allowance upon the completion of 10 years of service and upon reaching the age of 60 (Group 1) or age 55 (Group 2).

Barnstable County Retirement Association

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A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension.

Active members contribute between 5 and 9% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. Members hired on or after January 1, 1979, contribute an additional 2% of annual regular compensation in excess of \$30,000. Deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the Public Employee Retirement Administration Commission's (PERAC) actuary. When a member's retirement becomes effective, his/her deductions 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 borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the System and all costs are borne by the System.

The pension portion of any retirement benefit is paid from the Pension Fund of the System. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. In past years, retirement systems were paying only the actual retirement benefits that were due each year. Systems had no statutory authorization to put aside money for the future benefits of employees who are currently employed. Large unfunded liabilities resulted from operating under this pay-as-you-go basis. In 1977, legislation authorized local governments to appropriate funds to meet future pension obligations. In 1983, additional legislation was passed requiring the transfer of investment earnings (in excess of the amount credited to member accounts) into the Pension Reserve Fund. Additionally, Chapter 32 of the MGL requires Massachusetts retirement systems to adopt funding schedules designed to reduce the unfunded actuarial liability of the system to zero by no later than June 30, 2040. The Association adopted Section 22d of Chapter 32 in April of 1989. The Association's current funding schedule is designed to reduce the unfunded actuarial liability to zero by 2036. These initiatives have significantly reduced the rate of growth of Massachusetts Retirement Systems' unfunded liabilities, and in some Systems have actually reduced such liability.

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the system, are now paid from investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service are entitled to request a refund of their accumulated total deductions.

Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements are presented on the basis of accounting and reporting practices prescribed by PERAC. Financial accounting and reporting standards required by generally accepted accounting principles (GAAP) differ in some respects from the requirements of PERAC. The valuation of assets, liabilities and net assets are substantially the same. The main difference between GAAP and PERAC is that the financial statements for the changes in net assets/fund balances are presented in different formats.

The underlying accounting records of the Association are maintained on a calendar year basis in accordance with the standards and procedures established by PERAC.

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The Annuity Savings Fund is the fund in which members' contributions are deposited. Voluntary contributions, redeposits, and transfers to and from other systems are also accounted for in this fund. Members' contributions to the fund earn interest at a rate determined by PERAC. Interest for some members who withdraw from the Association with less than 10 years of service is transferred to the Pension Reserve Fund. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund after a period of 10 years of inactivity.

The Annuity Reserve Fund is the fund to which a Member's account is transferred upon retirement from the Annuity Savings Fund and the Special Military Service Credit Fund. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance.

The Special Military Service Credit Fund contains contributions and interest for members while on military leave for service in the Armed Forces who will receive creditable service for the period of that leave. Creditable service is granted provided the member returns to the same governmental unit within two years of the date of discharge from the military. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund.

The Pension Fund contains the amounts appropriated by the governmental units as established by PERAC to pay the pension portion of each retirement allowance.

The Pension Reserve Fund contains the amounts appropriated by the governmental units for the purpose of funding retirement benefits. Any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund and Military Service Credit Fund is credited to the Pension Reserve Fund. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain or loss of market valued investments as of the valuation date is credited to the Pension Reserve Fund.

The Expense Fund contains amounts transferred from investment income and rental income from the Association's office building for the purpose of administering the Association.

The Investment Income Account is credited with all interest and dividends derived from invested funds. At the end of the year, the interest credited to the Annuity Savings Fund, Annuity Reserve Fund, Special Military Credit Service Fund and Expense Fund is distributed from this account and the remaining balance is transferred to the Pension Reserve

NOTE 3 - PLAN ADMINISTRATION

The Association is administered by a five-person Board of Retirement consisting of the County Finance Director/Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such system, and a fifth member appointed by the Advisory Council consisting of representatives from the member units.

Chairman	E. Mark Zielinski	Term Expires:	Indefinite
Appointed Member	Mary Pat Flynn	Term Expires:	Indefinite
Elected Member	Mark Foley	Term Expires:	1/6/2018
Elected Member	Robert Rolanti	Term Expires:	12/31/2016
Appointed Member	Judith C. Sprague	Term Expires:	12/31/2017

Barnstable County Retirement Association

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Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the Association. The Board must annually file a financial statement of condition for the Association with the Executive Director of PERAC.

The investment of the Association's funds is the responsibility of the Board. All retirement allowances must be approved by the Retirement Board. The PERAC Actuary performs verification prior to payment, unless the Association has obtained a waiver for superannuation calculations allowing them to bypass this requirement. All expenses incurred by the Association must be approved by a majority vote of the Board. Payments shall be made only upon vouchers signed by three persons designated by the Board.

The following retirement board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts as follows:

Treasurer-Custodian:

Ex-Officio Member:

Elected Members:

Appointed Members:

Staff Employees:

) MACRS Blanket Policy

\$50,000,000 Fiduciary Liability

\$1,000,000 Fidelity (ERISA) Bond

St. Paul Travelers Insurance Company

National Union Fire Arch Insurance

Company

NOTE 4 - CASH AND INVESTMENTS

Custodial Credit Risk - Deposits

At December 31, 2014, the carrying amount of the System's deposits totaled \$1,649,428 and the bank balance totaled \$2,454,425 which was covered by Federal Depository Insurance.

<u>Investments</u>

The System's investments are as follows:

	December 31, 2014
Investment Type	
PRIT Pooled Funds\$	850,169,226
Pooled Real Estate Funds	7,597,572
Total Investments\$	857,766,798

Approximately 99% of the Retirement System's investments are in Pension Reserve Investment Trust (PRIT). This investment pool was established by the Treasurer of the Commonwealth of Massachusetts, who serves as Trustee. PRIT is administered by the Pension Reserves Investment Management Board. The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The Administration does not have the ability to control any of the investment decisions relative to its funds in PRIT.

The remaining investments consist of two closed end real estate investments which are scheduled to mature during 2015 and 2016.

Barnstable County Retirement Association

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The Administration's annual money-weighted rate of return on pension plan investments was 7.58. The money — weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested, measured monthly.

NOTE 5 - ACTUARIAL VALUATION

Components of the net pension liability as of the January 1, 2014 actuarial valuation were as follows:

Total pension liability\$	1,426,632,712
The pension plan's fiduciary net position	862,069,292
The net pension liability\$	564,563,420
The pension plan's fiduciary net position as a percentage of the total pension liability	60.43%

The significant assumptions and other inputs used to measure the total pension liability as of January 1, 2014 were as follows:

104/3.	
Valuation date	January 1, 2014
Actuarial cost method	Entry Age Normal Cost Method.
Amortization method	Payments increast at 4.0%, except for 2010 Early Retirement Incentive, which is a level payment.
Remaining amortization period	22 years from July 1, 2014 for 2002 and 2003 Early Retirement Incentives, retiree sheriffs liability and remaining unfunded liability, and 8 years from July 1, 2014 for 2010 Early Retirement Incentive.
Asset valuation method	Sum of actuarial value at beginning of the year, contributions and investment earnings based on the actuarial interest assumption less benefit payments and operating expenses plus 20% of the market value at the end of the year in excess of that sum, plus additional adjustment toward market value as necessary so that the final actuarial value is within 20% of market value.
Inflation rate	4.00%
Projected salary increases	Varies by length of service with ultimate rates of 4.25% for Group 1, 4.50% for Group 2 and 4.75% for Group 4.
Cost of living adjustments	3.0% of the first \$15,000 of retirement income.
Rates of retirement	Varies based upon age for general employees, police and fire employees.
Rates of disability	For general employees, it was assumed that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

Mortality Rates:	
Pre-Retirement	The RP-2000 Employee Mortality Table projected generationally with a Scale AA from 2010.
Healthy Retiree	The RP-2000 Healthy Annuitant Mortality Table projected generationally with a Scale AA from 2010.
Disabled Retiree	The RP-2000 Healthy Annuitant Mortality Table set forward three years for males only projected generationally with Scale AA from 2010.
Investment rate of return/Discount rate	7.75%, net of pension plan investment expense, including inflation previously 7.875%

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges 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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of January 1, 2014 are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return	Long-Term Expected Asset Allocation
Domestic equity International developed markets equity. International emerging markets equity Core fixed income High-yield fixed income Real estate Commodities Hedge fund, GTAA, Risk parity Private equity	6.60% 7.10% 9.40% 2.20% 4.70% 4.40% 4.40% 3.90% 11.70%	20.00% 16.00% 7.00% 13.00% 10.00% 4.00% 10.00%

Discount rate: The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that contributions will be made at rates equal to the actuarially determined contribution rated. 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.

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% than the current rate:

		Current	
	1% Decrease	Discount	1% Increase
	(6.75%)	(7.75%)	(8.75%)
Barnstable County Retirement Association's net			
pension liability as of December 31, 2014\$	727,809,353 \$	564,563,420 \$	426,139,334

Barnstable County Retirement Association

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NOTE 6 - MEMBERSHIP

The following table represents the Association's membership at December 31, 2014:

	2014
Retirees and beneficiaries currently receiving benefits	2,729 513 138 4,696
Total	8,076

NOTE 7 - SCHEDULE OF FUNDING PROGRESS

The Schedule of Funding Progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

Schedule of Funding Progress

			Actuarial				UAAL as a
	Actuarial		Accrued	Unfunded			Percentage
Actuarial	Value of		Liability (AAL)	AAL	Funded	Covered	of Covered
Valuation	Assets		Entry Age	(UAAL)	Ratio	Payroll	Payroll
Date	(A)	_	(B)	 (B-A)	_(A/B)	(C)	((B-A)/C)
01/01/14 \$	776,973,700	\$	1,353,810,101	\$ 576,836,401	57.4% \$	253,920,106	227.2%
01/01/12	651,063,981		1,173,483,848	522,419,867	55.5%	239,437,303	218.2%
01/01/10	554,876,554		1,030,210,321	475,333,767	53.9%	234,374,075	202.8%





COMMONWEALTH OF MASSACHUSETTS | PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION

PHILIP Y. BROWN, ESQ., Chairman

JOHN W. PARSONS, ESQ., Executive Director

Auditor SUZANNE M. BUMP | KATHLEEN M. FALLON | KATE FITZPATRICK | JAMES M. MACHADO | RICHARD MACKINNON, JR. | JENNIFER F. SULLIVAN

December 1, 2021

Robert Lawton, Jr., Chairperson Barnstable County Retirement Board 750 Attucks Lane Hyannis, MA 02601

REFERENCE: Report of the Examination of the Barnstable County Retirement Board for the five-year period from January 1, 2014 through December 31, 2018.

Dear Chairperson Lawton:

The Public Employee Retirement Administration Commission has completed a follow-up review of the finding and recommendation contained in its audit report of the Barnstable County Retirement Board for the period referenced above. We conduct these visits as a regular part of the oversight process to ensure the timely implementation of the recommendation contained in that report. The examination also addressed the other matters discussed at the completion of the audit. The results are as follows:

The Audit Report cited a finding that lump sum vacation payments were included in threeyear average salaries.

Follow-up Result: The Board has stopped including vacation payouts in retirement calculations. When deductions have been taken in error from the vacation payouts, refunds were issued. This issue is resolved.

The additional matters discussed have been reviewed and have been significantly resolved.

The Commission wishes to acknowledge the effort demonstrated by the staff of the Barnstable County Retirement Board to correct a significant amount of the issues from the most recent examination of the system.

Thank you for your continued cooperation in this matter

John W. Parsons, Esq.

Executive Director





