#### BARNSTABLE COUNTY RETIREMENT ASSOCIATION

FINANCIAL STATEMENTS

YEAR ENDED DECEMBER 31, 2015

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#### BARNSTABLE COUNTY RETIREMENT ASSOCIATION

#### FINANCIAL STATEMENTS

#### YEAR ENDED DECEMBER 31, 2015

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## 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.

#### **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 Receivables	860,349 869,072,837 3,068,905	\$	1,649,428 857,766,798 2,653,066
Total assets	873,002,091		862,069,292
Net Position Restricted for Pension Benefits\$	873,002,091	\$ :	862,069,292

	2015	2014
Statement of Changes in Fiduciary Net Position		
Additions:		
Contributions:  Member contributions\$	25,867,837	\$ 24,847,689
Employer contributions	53,626,350	51,562,171
Other contributions	3,575,730	3,779,205
Total contributions	83,069,917	80,189,065
Net investment income (loss):		
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

#### **Assets**

Cash	\$ 860,349
Investments: PRIT funds Pooled real estate funds	863,091,249 5,981,588
Total investments	869,072,837
Receivables	3,068,905
Total assets	873,002,091
Net Position Restricted for Pensions	\$ 873,002,091_

See notes to financial statements.

#### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

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	10,932,799
Fiduciary net position at beginning of year	862,069,292
Fiduciary net position at end of year\$	873,002,091
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 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).

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

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

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:	)	MACRS Blanket Policy
Ex-Officio Member:	)	\$50,000,000 Fiduciary Liability
Elected Members:	)	\$1,000,000 Fidelity (ERISA) Bond
Appointed Members:	)	St. Paul Travelers Insurance Company
Staff Employees:	)	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\$ Pooled Real Estate Funds	863,091,249 5,981,588
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-

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	613
Total	8,366

#### **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

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	6.60% 7.10% 9.40% 2.20% 4.70% 4.40%	20.00% 16.00% 7.00% 13.00% 10.00% 4.00%
Hedge fund, GTAA, Risk parity Private equity	3.90% 11.70%	10.00% 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 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.

#### 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>, <u>Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans</u>, 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

	2014		2015
Total pension liability:		•	
Service cost\$	35,328,892	\$	38,066,881
Interest	105,040,822		110,695,407
Changes in benefit terms	-		-
Differences between expected and actual experience	-		-
Changes in assumptions	-		-
Benefit payments, including refunds of employee contributions	(67,547,103)		(72,743,527)
		•	
Net change in total pension liability	72,822,611		76,018,761
Total pension liability, beginning	1,353,810,101		1,426,632,712
Total pension liability, ending (a)\$	1,426,632,712	\$	1,502,651,473
Plan fiduciary net position:			
Member contributions\$	24,666,247	\$	25,867,837
Employer contributions	51,562,171		53,626,350
Net investment income (loss)	60,614,682		5,470,561
Retirement benefits and refunds	(67,547,103)		(72,743,527)
Administration	(1,210,998)		(1,288,422)
Net increase (decrease) in fiduciary net position	68,084,999		10,932,799
Fiduciary net position at beginning of year	793,984,293		862,069,292
Fiduciary net position at end of year (b)\$	862,069,292	\$	873,002,091
Net pension liability - ending (a) - (b)\$	564,563,420	\$	629,649,382
Plan fiduciary net position as a percentage of the total			
pension liability	60.43%		58.10%
Covered-employee payroll (*)\$	253,920,107		264,076,910
Net pension liability as a percentage of covered-employee	222.34%		238.43%
payroll	222.3470		250.4570

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
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)	\$ _	-	\$ pa .
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.

#### 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

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## 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 LLC

#### SCHEDULE OF EMPLOYER ALLOCATIONS

#### FOR THE YEAR ENDED DECEMBER 31, 2015

Employer	FY2016 Pension Fund Appropriation	Direct Appropriation E.R.I., Sheriff and Hospital		FY2016 Total Appropriation		Share of Net Pension Liability	Percent of Total Net Pension Liability
Barnstable County\$	2,703,630	\$ 113,462	\$	2,817,092	\$	32,238,620	5.120%
Barnstable County Hospital	-	7,425		7,425		114,036	0.018%
Barnstable County Retired Sheriffs	-	1,306,971		1,306,971		20,012,789	3.178%
Town of Barnstable	7,969,422	206,192		8,175,614		93,561,206	14.859%
Barnstable Fire District	361,532	4,173		365,705		4,185,105	0.665%
Barnstable Housing Authority	157,188	3,747		160,935		1,841,730	0.293%
Town of Bourne	3,332,382	77,494		3,409,876		39,022,403	6,197%
Bourne Housing Authority	73,354			73,354		839,458	0,133%
Bourne Recreation Authority	99,552	16,493		116,045		1,328,012	0.211%
Bourne Water District	130,990	4,781		135,771		1,553,755	0.247%
	1,964,848	16,372		1,981,220		22,672,955	3.601%
Town of Brewster	10,479	10,572		10,479		119,921	0.019%
Brewster Housing Authority	•	-		•		719,537	0.114%
Buzzards Bay Water District	62,875	-		62,875		•	
Cape Cod Mosquito Control District	230,542	2,616		233,158		2,668,245	0,424%
Cape Cod Regional Technical High School	434,886	-		434,886		4,976,808	0.790%
Centerville/Osterville/Marstons Mills Fire District	1,231,305	4,777		1,236,082		14,145,643	2.247%
Town of Chatham	1,660,951	101,497		1,762,448		20,169,342	3.203%
Chatham Housing Authority	31,438	-		31,438		359,774	0.057%
Cotuit Fire District	225,303	-		225,303		2,578,353	0.409%
Town of Dennis	2,892,256	-		2,892,256		33,098,792	5.257%
Dennis Housing Authority	57,635	2,498		60,133		688,158	0,109%
Dennis Water District	251,501	_,,,,,		251,501		2,878,161	0.457%
Dennis/Yarmouth Regional School District	1,116,033	_		1,116,033		12,771,810	2.028%
	1,325,617	22,975		1,348,592		15,433,200	2.451%
Town of Eastham		22,510		2,326,380		26,622,944	4.228%
Town of Harwich	2,326,380 974,564	1,650		976,214		11,171,730	1.774%
Hyannis Fire District	2,577,880	36,673		2,614,553		29,920,777	4.752%
Town of Mashpee	41,917	30,073		41,917		479,695	0.076%
Mashpee Housing Authority	151,948	4,157		156,105		1,786,456	0.284%
Mashpee Water District	5,124,323	115,478		5,239,801		59,963,947	9.523%
Nantucket Housing Authority	20,958	110,110		20,958		239,842	0.038%
County of Nantucket	172,907	_		172,907		1,978,737	0.314%
Nantucket Regional Transit Authority	31,438	_		31,438		359,774	0.057%
Nauset Regional School District	822,616	-		822,616		9,413,965	1.495%
North Sagamore Water District	52,396	-		52,396		599,616	0.095%
Town of Orleans	1,760,504	-		1,760,504		20,147,095	3.200%
Orleans Housing Authority	41,917	-		41,917		479,695	0.076%
Tri-Town Wastewater Treatment Facility	78,594	-		78,594		899,425	0.143%
Town of Provincetown	1,419,930	-		1,419,930		16,249,588	2.581%
Town of Sandwich	3,206,631	-		3,206,631		36,696,480	5.828%
Sandwich Housing Authority	26,198	-		26,198		299,808	0.048%
Sandwich Water District	199,105	-		199,105		2,278,545	0.362%
Town of Truro	953,606	13,387		966,993		11,066,206	1.758%
Veterans District	52,396	4,008		56,404		645,484	0.103%
Town of Wellfleet	990,283	14,022		1,004,305		11,493,202	1.825%
Town of Yarmouth	3,872,060	95,206		3,967,266		45,401,138	7.211%
Yarmouth Housing Authority	36,677	4,022		40,699		465,757	0.074%
West Barnstable Fire District	115,271	-		115,271		1,319,154	0.210%
Cape Cod Regional Transit Authority	157,188	~		157,188		1,798,849	0.286%
Monomoy Regional School District	864,533		_	864,533	-	9,893,660	1.571%
Total	52,395,939	\$ 2,180,076	<b>\$</b>	54,576,015	\$_	629,649,382	100.000%

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

	_	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
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$ -	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		2,558,321	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	\$ _	3,682,693	\$ 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	-	_	\$ 2,438	\$	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	•		(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		20,00%
Deferred inflows/(Outflows) Recognized in Future Pension Expense							
June 30, 2017	\$	867,549	\$ 1,786	\$	331,214	\$	1,666,047
June 30, 2018		867,549	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 Future Pension Expense	\$	3,682,693	\$ 6,611	\$	1,249,436	\$	6,429,193
Discount Rate Sensitivity 1% decrease (6,75%)	\$	40,883,369	\$ 144,614	\$	25,379,194	\$	118,649,526
Current discount rate (7.75%)	. \$	32,238,620	\$ 114,036	\$	20,012,789	\$	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.							(continued)

		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
Deferred Outflows of Resources			•		e		\$	
Differences between expected and actual experience	\$	-	\$	-	\$	-	Ψ	-
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 share of contributions		181,621		3,397		581,899		1,548
	-		•	149,549	æ	3,678,553	¢ -	68,164
Total Deferred Outflows of Resources	\$ =	513,733	ъ.	149,549	Ф	0,070,000	Ψ=	30,107
<u>Deferred Inflows of Resources</u> <u>Differences between expected and actual experience</u>	\$	-	\$	-	\$	-	\$	<del>u</del>
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		-		43,726		-		222
					· ·	_	\$	222
Total Deferred Inflows of Resources	\$ :		Φ.	43,726	. Φ		· 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 June 30, 2017	\$	119,755	\$	28,650	\$	894,288	\$	17,000
June 30, 2018	Ψ	119,755	*	28,650	•	894,288		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	<u> </u> \$	3,678,553	\$.	67,942
Discount Data Consitivity								
<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)

	_	Bourne Recreation Authority	-	Bourne Water District	_	Town of Brewster	-	Brewster Housing Authority
Net Pension Liability								
Beginning net pension liability	\$	1,129,480	\$	1,283,787	\$	20,436,149	\$	215,127
Ending net pension liability	\$	1,328,012	\$	1,553,755	\$	22,672,955	\$	119,921
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Net difference between projected and actual investment earnings on pension plan investments		105,385		123,299		1,799,230		9,516
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		53,413		91,749		12,504		221
	-		-		•		_	0.727
Total Deferred Outflows of Resources	<sup>\$</sup> =	158,798	Φ.	215,048	» =	1,811,734	Þ⊨	9,737
<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		-		<u>-</u>		88,898		89,513
	_		•		_	00.000		90.512
Total Deferred Inflows of Resources	\$ =		\$.	-	» =	88,898	· Þ =	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	-	(15,282)		(17,860)
Total Employer Pension Expense	\$_	157,713	\$	190,380	\$_	2,494,998	\$_	(4,583)
	-						_	
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)	¢ -	_	œ.		\$	_	\$	_
Contribution deliciency/(excess)	Ψ =		Ψ,		Ψ=		. Ψ =	
Contributions as a percentage of covered payroll		23.13%		20.19%		19.65%		19.84%
Deferred Inflows/(Outflows) Recognized in								
Future Pension Expense June 30, 2017	\$	37,156	\$	49,324	\$	436,705	\$	(15,468)
June 30, 2018		37,156	·	49,324		436,705		(15,468)
June 30, 2019		37,156		49,324		436,705		(15,468)
June 30, 2020 June 30, 2021		36,646 10,684		48,727 18,349		428,001 (15,280)		(15,514) (17,858)
Total Deferred Inflows/(Outflows) Recognized in	-	10,004		10,040	-	(10,200)		(11,000)
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
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)

TOK THE TEAK	-14	DED DECEMBE	-11	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	\$		\$	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			\$	213,409	\$	530,341	\$	1,148,636
<u>Deferred Inflows of Resources</u>			_		_		•	
Differences between expected and actual experience		-	\$	-	\$	-	\$	-
Changes of assumptions		-		-				-
employer contributions and proportionate share of contributions		193				<u>-</u>		46,539
Total Deferred Inflows of Resources	\$	193	\$		\$	<del>.</del>	\$	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		226		334_		27,084	•	(4,090)
Total Employer Pension Expense	\$	79,891	\$	295,754	\$	578,101	\$	1,562,072
Contributions	•	00.075	•	000 047	e	400 040	¢	1 226 092
Statutory required contribution				228,847 (228,847)	φ	426,846 (426,846)		1,236,082 (1,236,082)
Contribution in relation to statutory required contribution			•		•	(420,040)	٠	(1,200,002)
Contribution deficiency/(excess)			. Ъ		Ф		. Þ	10.000
Contributions as a percentage of covered payroll		19.84%		19.70%		19.47%		19.92%
<u>Deferred Inflows/(Outflows) Recognized in</u> <u>Future Pension Expense</u>								
June 30, 2017	\$		\$		\$	126,293	\$	
June 30, 2018		14,571		53,525		126,293		277,904
June 30, 2019		14,571		53,525		126,293 124,382		277,904 272,474
June 30, 2020		14,294 226		52,501 333		27,080		(4,089)
June 30, 2021Total Deferred Inflows/(Outflows) Recognized in			•			21,000	-	(1,000)
Future Pension Expense	. \$	58,233	\$	213,409	\$	530,341	\$	1,102,097
Discount Rate Sensitivity 1% decrease (6.75%)	. \$	912,481	\$	3,383,733	\$	6,311,330	\$	17,938,785
Current discount rate (7.75%)			\$	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)

	_	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
Total Deferred Outflows of Resources	\$_	1,610,611	\$_	29,213	\$_	205,893	\$_	3,305,543
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		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
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	_			7.007	•	0.700	•	705.044
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 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)

	_	Dennis Housing Authority	Dennis Water District		ennis/Yarmouth Regional School District	n 	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	\$ •	\$		\$	15,433,200
Deferred Outflows of Resources 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	_		229,834	\$	1,019,886	\$ _	1,232,410
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		-	45,487		674,480		352,834
Total Deferred Inflows of Resources	\$_	<u>-</u>	\$ 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	48,566		120,983		238,632
June 30, 2019		23,083	48,566		120,983		238,632
June 30, 2020		22,819	47,461		116,080		232,707 (69,027)
June 30, 2021		9,363	(8,812)		(133,623)		(03,021)
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)

	_	Town of Harwich				Hyannis Fire District	_	Town of Mashpee	_	Mashpee Housing Authority
Net Pension Liability										
Beginning net pension liability	\$	24,040,696	\$	10,127,221	\$	26,873,570	\$	376,476		
Ending net pension liability	\$	26,622,944	\$	11,171,730	\$	29,920,777	\$	479,695		
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-		
Net difference between projected and actual investment earnings on pension plan investments		2,112,685		886,541		2,374,387		38,067		
Changes of assumptions		-		-		-		-		
Changes in proportion and differences between employer contributions and proportionate share of contributions		13,277		5,571		14,922		45,508_		
Total Deferred Outflows of Resources	_			892,112	\$_	2,389,309	\$_	83,575		
	. =		•	<del></del>	-		-			
<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		141,199_		91,753_	_	37,987	_	<del>-</del> _		
Total Deferred Inflows of Resources	\$_	141,199	\$	91,753	\$_	37,987	\$_			
Pension Expense Proportionate share of plan pension expense	\$	2,947,611	\$	1,236,900	\$	3,312,737	\$	53,110		
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	_	(25,584)		(17,240)		(4,613)		9,096		
Total Employer Pension Expense	\$ _	2,922,027	\$	1,219,660	\$ _	3,308,124	\$ _	62,206		
Contributions										
Statutory required contribution	\$	2,283,370	\$	958,166	\$	2,566,216	\$	41,917		
Contribution in relation to statutory required contribution	-	(2,283,370)		(958,166)		(2,566,216)		(41,917)		
Contribution deficiency/(excess)	\$ _	-	\$		\$ .	-	\$ .			
Contributions as a percentage of covered payroll		19.47%		19.51%		19.75%		19.84%		
Deferred Inflows/(Outflows) Recognized in										
Future Pension Expense June 30, 2017. June 30, 2018. June 30, 2019. June 30, 2020. June 30, 2021.		505,142 505,142 505,142 494,922 (25,585)	\$	205,471 205,471 205,471 201,182 (17,236)	\$	591,855 591,855 591,855 580,369 (4,612)	\$	18,664 18,664 18,664 18,480 9,103		
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	\$ ;	1,984,763	\$	800,359	\$	2,351,322	. \$ .	83,575		
Discount Rate Sensitivity 1% decrease (6.75%)	\$	33,761,852	\$	14,167,417	\$	37,943,995	\$	608,329		
Current discount rate (7.75%)	. \$	26,622,944	\$	11,171,730	\$	29,920,777	\$	479,695		
1% increase (8.75%)	\$	20,564,234	\$	8,629,327	\$	23,111,563	\$	370,531		
Covered Payroll	. \$	11,725,015	\$	4,911,831	\$	12,992,584	\$	211,262		
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)		

	_	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
	'=		•				-	
<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		-		-		66		179,487
Total Deferred Inflows of Resources	-	_	¢	_	\$	66	· -	179,487
	Ψ=		Ψ		Ψ =		Ψ.	1, 0,127
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	-	(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%
Deferred Inflows/(Outflows) Recognized in								
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		1,216,356		4,856		3,746
June 30, 2020		44,290		1,193,337		4,764 77		2,986 (35,700)
June 30, 2021Total Deferred Inflows/(Outflows) Recognized in	-	9,363		20,980	-			(00,700)
Future Pension Expense	\$ _	188,581	\$	4,863,385	\$ .	19,409	. \$ .	(21,476)
Discount Rate Sensitivity 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)

		Nantucket Regional Transit Authoriy		Nauset Regional School District	North Sagamore Water Distric			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				<u> </u>				
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		-		-		-		-
Changes in proportion and differences between employer contributions and proportionate share of contributions		89						<u> </u>
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. June 30, 2018. June 30, 2019. June 30, 2020. June 30, 2021.		7,287 7,287 7,287 7,149 115	\$	330,850 330,850 330,850 327,236 143,182	\$	20,929 20,929 20,929 20,699 8,977	\$	447,327 447,327 447,327 439,593 45,697
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	\$	29,125	. \$	1,462,968	\$	92,463	\$	1,827,271
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)

	•	Orleans Housing Authority	,	Tri-Town Wastewater Treatment Facility		Town of Provincetown	-	Town of Sandwich
Net Pension Liability	Ф	420.255	\$	806,731	\$	15,112,827	¢	32,376,950
Beginning net pension liability		430,255	Φ	000,731	Φ	10,112,021	Ψ	32,070,930
Ending net pension liability	\$	479,695	\$	899,425	\$	16,249,588	\$	36,696,480
Deferred Outflows of Resources	•		Φ.		đ		\$	
Differences between expected and actual experience	\$	-	\$	-	\$	•	Ф	-
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						0.404		450 405
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
Deferred Inflows of Resources								
Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-
Changes of assumptions		_		_		-		-
Changes in proportion and differences between								
employer contributions and proportionate		400		000		451 670		
share of contributions	-	122		229		451,672	-	
Total Deferred Inflows of Resources	\$ _	122_	\$	229	\$	451,672	\$ .	
Pension Expense								
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
						(55)/	•	
Total Employer Pension Expense	\$ =	53,264	\$	99,865	\$	1,710,391	\$ .	4,154,142
<u>Contributions</u>				70.504		4 000 070	•	0 447 947
Statutory required contribution	\$	41,917	\$	78,594	Ф	1,393,679	Φ	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%		19.47%
Deferred Inflows/(Outflows) Recognized in								
Future Pension Expense June 30, 2017	\$	9,715	\$	18,216	\$	235,221	\$	822,762
June 30, 2018	Ψ	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
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense	\$	38,830	\$	72,805	\$	845,931	\$	3,368,183
Tatalo Folialo Fexponos	Ψ=		. *		•		,	
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
, 10 morado (011 o 10)	7	1 1			•			
Covered Payroll	\$	211,262	\$	396,115	\$	7,156,484	\$	16,161,507

	_	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
Deferred Outflows of Resources 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	\$ =	97,708
<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		74		592		266,027		-
Total Deferred Inflows of Resources	-				\$	266,027	\$	
	Ψ=		Ψ =		Ψ.	200,021	Ψ=	
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		95		107		(52,101)		9,294
Total Employer Pension Expense	\$	33,289	\$_	252,381	\$	1,173,115	\$_	80,760
	=		-		•		_	
Contributions Statutory required contribution	\$	26,198	\$	195,424	\$	949,115	\$	55,361
Contribution in relation to statutory required contribution	_	(26,198)	_	(195,424)		(949,115)	_	(55,361)
Contribution deficiency/(excess)	. \$	_	\$		\$	_	\$_	
Contributions as a percentage of covered payroll		19.84%	-	19.47%	,	19.75%	-	20,96%
, , ,		10,0470		10.4770		10.7070		20,0070
<u>Deferred Inflows/(Outflows) Recognized in</u> <u>Future Pension Expense</u>								
June 30, 2017		6,073	\$	45,532	\$	168,502	\$	22,165
June 30, 2018		6,073		45,532		168,502		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)

		Town of Welfleet						Town of Yarmouth		Yarmouth Housing Authority	_	West Barnstable Fire District
Net Pension Liability												
Beginning net pension liability		10,463,426		40,243,041	\$	415,831	\$	1,021,869				
Ending net pension liability	\$	11,493,202	\$	45,401,138	\$	465,757	\$	1,319,154				
<u>Deferred Outflows of Resources</u> Differences between expected and actual experience	\$	-	\$	-	\$	-	\$	-				
Net difference between projected and actual investment earnings on pension plan investments		912,052		3,602,843		36,961		104,683				
Changes of assumptions		-		-								
Changes in proportion and differences between employer contributions and proportionate share of contributions		5,732		414,557	_	2,338_	_	134,535				
Total Deferred Outflows of Resources	\$ _	917,784	\$	4,017,400	\$ _	39,299	\$ _	239,218				
<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		131,656		<u>-</u>	_	-	-	<u> </u>				
Total Deferred Inflows of Resources	\$ .	131,656	\$	-	\$ _	-	\$ .	-				
Pension Expense Proportionate share of plan pension expense	\$	1,272,492	\$	5,026,675	\$	51,567	\$	146,053				
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions		(25,187)		82,910	_	471		26,904				
Total Employer Pension Expense	\$ .	1,247,305	\$	5,109,585	\$ =	52,038	\$ :	172,957				
Contributions Statutory required contribution	\$	985,738	\$	3,899,969	\$	40,699	\$	113,140				
Contribution in relation to statutory required contribution		(985,738)		(3,899,969)	_	(40,699)		(113,140)				
Contribution deficiency/(excess)	\$ .	-	\$	_	\$ _	-	\$ .	-				
Contributions as a percentage of covered payroll		19.75%		19.98%		22.02%		19.47%				
Deferred Inflows/(Outflows) Recognized in		203,931 203,931 203,931 199,519 (25,184) 786,128	\$	987,979 987,979 987,979 970,550 82,913	\$ -	9,753 9,753 9,753 9,572 468 39,299	\$	53,204 53,204 53,204 52,698 26,908				
Discount Rate Sensitivity	•				-							
1% decrease (6.75%)		14,575,093	\$	57,575,401	\$	590,650	\$	1,672,883				
Current discount rate (7.75%)	\$	11,493,202	\$	45,401,138	\$	465,757	\$	1,319,154				
1% increase (8.75%)	\$	8,877,642	\$	35,068,988	\$	359,763	\$	1,018,947				
Covered Payroll	\$	4,991,054	\$	19,515,284	\$	184,854	\$	580,969				
See notes to schedule of employer allocations and schedule of pension amounts by employer.								(continued)				

		Cape Cod Regional Transit Authority	,	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		0.040		4.005		5 0 4 5 0 4 7
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	\$	1/9,434	Þ	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
Contributions 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%
Deferred Inflows/(Outflows) Recognized in						
Future Pension Expense June 30, 2017 June 30, 2018 June 30, 2019 June 30, 2020 June 30, 2021	\$	637 637 637 (55) (35,223)	\$	117,163 117,163 117,163 113,363 (80,066)	\$	12,552,012 12,552,012 12,552,012 12,310,291
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)

#### 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, 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.

#### 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.