

***ESSEX REGIONAL RETIREMENT SYSTEM***

***FINANCIAL STATEMENTS***

***YEAR ENDED DECEMBER 31, 2015***

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**FINANCIAL STATEMENTS**

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# ***Financial Section***



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## **Independent Auditor's Report**

To the Honorable Essex Retirement Board  
Essex Regional Retirement System  
Danvers, Massachusetts

## **Report on the Financial Statements**

We have audited the accompanying financial statements of the Essex Regional Retirement System (ERRS) as of and for the year ended December 31, 2015, and the related notes to the financial statements, which collectively comprise the Essex Regional Retirement System'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 Essex Regional Retirement System 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 22, 2016, on our consideration of the Essex Regional Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Essex Regional Retirement System's internal control over financial reporting and compliance.

## **Restriction on Use**

This report is intended solely for the information and use of Essex Regional Retirement System, 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.

*Powers & Sullivan LLC*

August 22, 2016

## ***Management's Discussion and Analysis***

As management of the Essex Regional Retirement System, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2015. The System 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 System's assets exceeded its liabilities at the close of the most recent year by \$378 million (net position).
- The System's net position increased by \$6.9 million for the year ended December 31, 2015.
- Total investment income was \$6.2 million; investment expenses were \$2.1 million; and net investment income was \$4.1 million.
- Total contributions were \$48.2 million including \$27.9 from employers, \$12.5 from members and a one-time contribution from Essex Tech of \$4.1 million.
- Retirement benefits, refunds and transfers amounted to \$44.5 million.
- Administrative expenses were \$949,000.
- The Total Pension Liability is \$741.7 million as of December 31, 2015 while the Net Pension Liability is \$363.3 million.
- The Plan fiduciary net position as a percentage of the total pension liability is 51.01%.

### ***Overview of the Financial Statements***

This discussion and analysis is intended to serve as an introduction to the System 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 system'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 System's financial position. The System's net position exceeded liabilities by \$378 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 system's net position include investments of \$372.5 million, cash of \$995,000 accounts receivable of \$5.5 million, and capital assets of \$205,000.

In 2015 the System's contributions were \$48.2 million and net investment income was \$4.1 million while retirement benefit payments, refunds, transfers and administration expenses were \$45.4 million which resulted in a current increase of \$6.9 million. In 2014 the System's contributions were \$42.2 million and net investment income was \$29.3 million while retirement benefit payments, refunds, transfers and administration expenses were \$45 million which resulted in a prior year increase of 26.5 million.

In 2015 the System recognized a contribution from Essex North Shore Agricultural and Technical School District (Essex Tech) as the successor agency to both the Essex Agricultural and Technical High School and the North Shore Vocational Regional School. Legislation requires Essex Tech to reimburse ERRS for the actuarially determined liability associated with the retired members from Essex Agricultural and Technical High School who remain with ERRS. Accordingly in 2015, PERAC approved a funding schedule for Essex Tech to pay ERRS in equal annual payments of \$421,947 from 2017 through 2033. The \$4,156,756 present value of these payments has been recorded as an intergovernmental receivable and contribution in 2015.

The main difference of the increase in net position between years was the combination of the one-time \$4.1 million Essex Tech contribution along with the change in net investment income between years. Net investment income was \$4.1 million and \$39.2 million in 2015 and 2014 respectively. The annual money weighted rate of return was 1.04% and 8.48% in 2015 and 2014 respectively. Fluctuations in the system's annual investment returns are expected.

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

	<u>2015</u>	<u>2014</u>
<b>Statement of Fiduciary Net Position</b>		
Assets:		
Cash.....	\$ 994,843	\$ 794,947
Investments.....	372,507,562	369,752,995
Receivables.....	5,531,842	1,325,268
Capital assets, net of accumulated depreciation.....	<u>205,425</u>	<u>219,799</u>
Total assets.....	<u>379,239,672</u>	<u>372,093,009</u>
Liabilities:		
Accounts payable.....	900,910	621,553
Abandoned property.....	<u>-</u>	<u>745</u>
Total liabilities.....	<u>900,910</u>	<u>622,298</u>
Net Position Restricted for Pension Benefits.....	<u>\$ 378,338,762</u>	<u>\$ 371,470,711</u>

	<u>2015</u>	<u>2014</u>
<b>Statement of Changes in Fiduciary Net Position</b>		
Additions:		
Contributions:		
Member contributions.....	\$ 15,676,204	\$ 15,594,962
Employer contributions.....	27,966,800	26,140,616
Other contributions.....	390,749	439,509
Essex Agricultural and Technical High School.....	<u>4,156,756</u>	<u>-</u>
Total contributions.....	<u>48,190,509</u>	<u>42,175,087</u>
Net investment income (loss):		
Total investment income (loss).....	6,246,628	31,533,042
Less, investment expenses.....	<u>(2,142,796)</u>	<u>(2,210,181)</u>
Net investment income (loss).....	<u>4,103,832</u>	<u>29,322,861</u>
Total additions.....	<u>52,294,341</u>	<u>71,497,948</u>
Deductions:		
Administration.....	949,046	936,725
Retirement benefits, refunds and transfers.....	<u>44,477,244</u>	<u>44,082,262</u>
Total deductions.....	<u>45,426,290</u>	<u>45,018,987</u>
Net increase (decrease) in fiduciary net position.....	6,868,051	26,478,961
Fiduciary net position at beginning of year.....	<u>371,470,711</u>	<u>344,991,750</u>
Fiduciary net position at end of year.....	<u>\$ 378,338,762</u>	<u>\$ 371,470,711</u>

### ***Requests for Information***

This financial report is designed to provide a general overview of the System's finances for all those with an interest in the System's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the System's Board, 491 Maple St #202, Danvers, MA 01923.

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**STATEMENT OF FIDUCIARY NET POSITION**

DECEMBER 31, 2015

**Assets**

Cash.....	\$ 994,843
Investments:	
PRIT funds.....	350,223,248
Money market mutual funds.....	1,407,149
Pooled alternative investments.....	14,860,342
Pooled real estate funds.....	6,011,639
Fixed income investments.....	<u>5,184</u>
Total investments.....	<u>372,507,562</u>
Receivables:	
Members contributions.....	1,374,837
Essex Agricultural and Technical High School.....	4,156,756
Other.....	<u>249</u>
Total receivables.....	<u>5,531,842</u>
Capital assets, net of accumulated depreciation.....	<u>205,425</u>
Total assets.....	<u><u>379,239,672</u></u>

**Liabilities**

Accounts payable.....	<u>900,910</u>
<b>Net Position Restricted for Pensions</b>	<u><u>\$ 378,338,762</u></u>

See notes to financial statements.

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**

FOR THE YEAR ENDED DECEMBER 31, 2015

Additions:	
Contributions:	
Member contributions.....	\$ 12,491,708
Retirement benefits - transfers from other systems.....	1,731,912
Retirement benefits - 3(8)c contributions from other systems.....	1,452,584
Employer contributions.....	27,893,676
Employer contributions - federal grant reimbursements.....	73,124
Retirement benefits - state COLA reimbursements.....	361,853
Retirement benefits - worker's compensation benefits.....	28,896
Essex Agricultural and Technical High School.....	<u>4,156,756</u>
Total contributions.....	<u>48,190,509</u>
Net investment income (loss):	
Total investment income (loss).....	6,246,628
Less, investment expenses.....	<u>(2,142,796)</u>
Net investment income (loss).....	<u>4,103,832</u>
Total additions.....	<u>52,294,341</u>
Deductions:	
Administration.....	949,046
Retirement benefits - transfers to other systems.....	1,948,912
Retirement benefits - 3(8)c contributions to other systems.....	2,534,324
Retirement benefits and refunds.....	<u>39,994,008</u>
Total deductions.....	<u>45,426,290</u>
Net increase (decrease) in fiduciary net position.....	6,868,051
Fiduciary net position at beginning of year.....	<u>371,470,711</u>
Fiduciary net position at end of year.....	<u>\$ <u>378,338,762</u></u>

See notes to financial statements.

**NOTE 1 – PLAN DESCRIPTION**

Essex Regional Retirement System is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering all employees of governmental member units deemed eligible by the Essex Regional 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 Plan is mandatory immediately upon the commencement of employment for all non-teaching permanent, full time employees. The Plan is administered by the Essex Regional Retirement System (the System).

Originally instituted in 1937, as part of Essex County government, the Board served as the regional retirement system for Essex County upon the abolition of county government in 1996 and the current system structure was created by special legislation in July, 2010 (Chapter 34B, Section 19A of the Massachusetts General Laws). The System is governed by a five member Board who establish the policies under which the System operates. Board members also approve all of the System's financial transactions, including the approval of retirement benefits to members. Board members are appointed or elected as specified by MGL Ch. 34B, Section 19A for terms ranging from 3 to 5 years.

The day-to-day operations of the System are managed by the Executive Director. The legislative body for the System is an Advisory Council consisting of full-time treasurers or other qualified officials of the member units. The Advisory Council meets twice annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

As of January 1, 2014, the System had 1,729 retirees and beneficiaries, 2,677 active participants and 1,110 inactive participants with a vested right to retirement benefits or to receive a refund of their contributions.

The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws. The 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 System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For 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.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with 10 years of service if hired after 1978 and if classified in groups 1 or 2. A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching the age of 60 with 10 years of service if in group 1, 50 years of age with 10 years of service if in group 2, and 55 years of age if hired prior to 1978 or if classified in group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions, whose normal retirement is at age 55).

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 11% of their gross regular compensation. The percentage rate is keyed to the date upon which an employee's membership commences. These 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. These initiatives have significantly reduced the rate of growth of the Retirement System's 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 and who are not eligible to receive a retirement allowance or are under the age of 55 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 Essex Regional Retirement System have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles.

ERRS 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, future appropriations from Essex Technical High School for the unfunded actuarial liability for retirees from Essex Agricultural and Technical School, 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 ERRS 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 ERRS did not have any items that qualify for reporting in this category.

## **NOTE 3 – PLAN ADMINISTRATION**

The System is administered by a five-person Board of Retirement. The first member shall be a chief executive or chief administrative officer of a member town, unit or district belonging to the Essex regional retirement system for a term of 3 years. This member shall be chosen by weighted vote of the chief executive or chief administrative officers of member towns, units or districts belonging to the Essex regional retirement system. The second member shall be a member of the regional retirement board advisory council, and shall be elected by a majority of those present and voting at a public meeting of the council and shall serve for a term of 3 years. The third and fourth members shall be elected by the members in or retired from service of the Essex county retirement system from among persons retired under the system and shall serve for a term of 3 years. The fifth member, who shall not be an employee, retiree or official of the retirement system, or of any of its constituent governmental units, shall be chosen by the other 4 members and shall serve for a term of 5 years.

First Member	Alan J. Benson	Term Expires:	12/1/2017
Second Member	Kevin A. Merz	Term Expires:	12/1/2018
Third Member	Susan J. Yaskell	Term Expires:	12/1/2016
Fourth Member	H. Joseph Maney	Term Expires:	12/1/2016
Fifth Member	Vincent R. Malgeri	Term Expires:	12/12/2020

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 PERAC.

The ERRS Advisory Council consists of the full time treasurers, elected or appointed, for each town, unit or district within the System. The members of the Advisory Council elect the second member of the Board of Retirement as well as a Chair from among its members. The ERRS Advisory Council is required by statute to meet twice per year, typically in the spring and fall. All ERRS Advisory Council meetings are open, public meetings and are subject to the Commonwealth's Open Meeting Law.

The investment of the System's funds is the responsibility of the Board. Disability retirement allowances must be approved by the Retirement Board and are then submitted to the PERAC Actuary for verification prior to payment. Superannuation retirement allowances are not required to obtain PERAC's verification. 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.

ERRS board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. The MACRS program for ERRS provides \$50,000,000 fiduciary protection for Trustees and employees, as well as a \$1,000,000 fidelity policy for crime coverage.

#### **NOTE 4 – CASH AND INVESTMENTS**

##### Custodial Credit Risk - Deposits

At December 31, 2014, the carrying amount of the System's deposits totaled \$994,843 and the bank balance totaled \$1,393,401 which was covered by Federal Depository Insurance.

Investments

The System's investments are as follows:

<b>Investment Type</b>	<u>Fair Value</u>	<u>Maturity</u> <u>Over 10 Years</u>
<u>Debt Securities:</u>		
Fixed Income.....	\$ 5,184	\$ <u>5,184</u>
<u>Other Investments:</u>		
PRIT Pooled Funds.....	350,223,248	
Money Market Mutual Funds.....	1,407,149	
Pooled Alternative Investments.....	14,860,342	
Pooled Real Estate Funds.....	<u>6,011,639</u>	
Total Investments.....	\$ <u>372,507,562</u>	

Approximately 94% of the Retirement System's investments are in Pension Reserve Investment Trust (PRIT) Pooled Funds. 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.

Approximately 6% of the System's funds are invested in pooled alternative investments and pooled real estate funds. The market values of assets in those funds are based on the quoted values obtained from each pool.

The Administration's annual money-weighted rate of return on pension plan investments was 1.04%. 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 – RECEIVABLES**

At December 31, 2014, receivables for the System are as follows:

	<u>Gross</u> <u>Amount</u>	<u>Allowance for</u> <u>Uncollectibles</u>	<u>Net</u> <u>Amount</u>
<u>Receivables:</u>			
Member contributions.....	\$ 1,374,837	\$ -	\$ 1,374,837
Essex Agricultural and Technical High School.....	4,156,756	-	4,156,756
Other.....	<u>249</u>	<u>-</u>	<u>249</u>
Total.....	\$ <u>5,531,842</u>	\$ <u>-</u>	\$ <u>5,531,842</u>

As more fully described in Note 9, the intergovernmental receivable consists of the present value of a stream of future payments to be received from Essex Technical High School (Essex Tech), as the successor agency of Essex Agricultural and Technical School from fiscal year 2017 through fiscal year 2033 for the unfunded actuarial

liability for its retirees in the Essex Regional Retirement System.

**NOTE 6 – CAPITAL ASSETS**

Capital assets are depreciated on a straight-line basis. The estimated useful lives of capital assets are 33 years for buildings and 5 to 20 years for equipment.

The majority of capital assets owned by the System consist of two condominiums in Danvers, Massachusetts that were purchased for the administrative offices of the System. Both units were purchased in fiscal year 2000 for a total of \$375,250. Total capital asset activity for the year ended December 31, 2015, was as follows:

	<u>Beginning Balance</u>	<u>Increases</u>	<u>Decreases</u>	<u>Ending Balance</u>
<u>Capital assets being depreciated:</u>				
Buildings.....	\$ 375,250	\$ -	\$ -	\$ 375,250
Equipment.....	<u>15,580</u>	<u>-</u>	<u>-</u>	<u>15,580</u>
Total capital assets being depreciated.....	<u>390,830</u>	<u>-</u>	<u>-</u>	<u>390,830</u>
<u>Less accumulated depreciation for:</u>				
Buildings.....	(163,241)	(11,258)	-	(174,499)
Equipment.....	<u>(7,790)</u>	<u>(3,116)</u>	<u>-</u>	<u>(10,906)</u>
Total accumulated depreciation.....	<u>(171,031)</u>	<u>(14,374)</u>	<u>-</u>	<u>(185,405)</u>
Total capital assets being depreciated, net.....	<u>219,799</u>	<u>(14,374)</u>	<u>-</u>	<u>205,425</u>
Total governmental activities capital assets, net.....	<u>\$ 219,799</u>	<u>\$ (14,374)</u>	<u>\$ -</u>	<u>\$ 205,425</u>

**NOTE 7 – MEMBERSHIP**

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

Active members.....	2,677
Inactive members entitled to a return of contributions.....	1,110
Inactive employees or beneficiaries currently receiving benefits.....	<u>1,729</u>
Total.....	<u><u>5,516</u></u>

**NOTE 8 – ACTUARIAL VALUATION**

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.....	Closed - Approximate level percent of payroll.
Remaining amortization period.....	20 years for the fresh start base
Asset valuation method.....	Market value adjusted by accounts payable and receivables adjusted to phase in over 5 years investment gains or losses above or below the expected rate of investment return. The actuarial value of assets must be no less than 90% of the adjusted market value nor more than 110% of the adjusted market value.
Projected salary increases.....	Select and Ultimate. 7.50% year one, 6.5% year two, 6.00% year three, 5.50% year four, 5.00% year five, 3.75% ultimate rate.
Cost of living adjustments.....	3.0% of the first \$13,000 of a members retirement allowance is assumed to be granted every year.
Rates of retirement.....	Varies based upon age for general employees, police and fire employees.
Rates of disability.....	Disability is assumed to be 45% ordinary and 55% accidental for Group 1 and 2 and 10% ordinary and 90% accidental for Group 4.
Mortality Rates:	
Pre-Retirement.....	The RP-2000 mortality table (sex-distinct) projected with scale BB and Generational Mortality. During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used.
Disabled Retiree.....	The RP-2000 mortality table for healthy annuitants (sex-distinct) projected with scale BB and Generational Mortality set-forward by 2 years. Death is assumed to be due to the same cause as the disability 40% of the time.
Investment rate of return/Discount rate.....	8.00% per year

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

Total pension liability.....	\$	741,677,667
The pension plan's fiduciary net position.....		<u>378,338,762</u>
The net pension liability.....	\$	<u><u>363,338,905</u></u>
The pension plan's fiduciary net position as a percentage of the total pension liability.....		51.01%

*Investment policy:* The pension plan's policy in regard to the allocation of invested assets is established by PRIT and the Board. 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:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Long-Term Expected Asset Allocation</u>
Core Bonds.....	0.97%	13.00%
Value-Added Bonds.....	3.80%	10.00%
Large Cap Equities.....	4.61%	14.50%
Mid/Small Cap Equities.....	4.85%	3.50%
International Equities.....	5.10%	16.00%
Emerging Market Equities.....	6.31%	6.00%
Private Equity.....	6.55%	10.00%
Real Estate.....	3.40%	10.00%
Timber/Natural Resources.....	3.64%	4.00%
Hedge Funds.....	3.64%	9.00%
Cash/Portfolio Completion.....	0.00%	4.00%

*Discount rate:* The discount rate used to measure the total pension liability was 8.00%. 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 8.00%, as well as what the net position liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00%) or 1-percentage-point higher (9.00%) than the current rate.

	1.0% Decrease (7.00%)	Current Discount Rate (8.00%)	1.0% Increase (9.00%)
Essex Regional Retirement System's net pension liability as of December 31, 2015.....	\$ 446,289,310	\$ 363,338,905	\$ 299,228,489

*Contributions:* Governmental employers are required to pay an annual appropriation as established by PERAC. The total appropriation includes the amounts to pay the pension portion of each member's retirement allowance, an amount to amortize the actuarially determined unfunded liability to zero in accordance with the system's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The pension fund appropriations are allocated amongst employers based on covered payroll.

**NOTE 9 – ESSEX AGRICULTURAL AND TECHNICAL HIGH SCHOOL**

Chapter 463 of the Acts of 2004 created the Essex North Shore Agricultural and Technical School District (Essex Tech). This legislation established Essex Tech as the successor agency to both the Essex Agricultural and Technical High School and the North Shore Vocational Regional School. Prior to July 1, 2014, the non-teacher employees of the Essex Agricultural and Technical High School were members of ERRS. The legislation required that all active and inactive members be transferred to the Salem Contributory Retirement System. Accordingly, as of June 30, 2014, all active and inactive members of ERRS have been transferred to the Salem Contributory Retirement System. Essex Tech, as the successor agency, is required to reimburse ERRS for the actuarially determined liability associated with the retired members from Essex Agricultural and Technical High School who remain with ERRS. Accordingly, PERAC approved a funding schedule that requires Essex Tech to pay ERRS equal annual assessments of \$421,947 from 2017 through 2033. The \$4,156,756 present value of these payments has been recorded as an intergovernmental receivable by ERRS as of December 31, 2015.

**NOTE 10 – COMMITMENTS AND CONTINGENCIES**

Various legal actions and claims are pending against the System. 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 11 – IMPLEMENTATION OF GASB PRONOUNCEMENTS**

The following GASB pronouncements will be implemented in the future:

- The GASB issued Statement #72, Fair Value Measurement and Application, which is required to be implemented in 2016.
- The GASB issued Statement #76, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments, which is required to be implemented in 2016.

- The GASB issued Statement #78, *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*, which is required to be implemented in 2016.
- The GASB issued Statement #79, *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 Statement #82, *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 12 – SUBSEQUENT EVENTS**

Management has evaluated subsequent events through August 22, 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
<b>Total pension liability:</b>		
Service cost.....	\$ 14,800,758	\$ 15,392,788
Interest.....	54,243,222	56,453,975
Changes in benefit terms.....	-	-
Differences between expected and actual experience.....	-	-
Changes in assumptions.....	-	-
Benefit payments, including refunds or member contributions....	<u>(42,572,513)</u>	<u>(40,901,999)</u>
Net change in total pension liability.....	26,471,467	30,944,764
Total pension liability, beginning.....	<u>684,261,436</u>	<u>710,732,903</u>
Total pension liability, ending <b>(a)</b> .....	<u>\$ 710,732,903</u>	<u>\$ 741,677,667</u>
<b>Plan fiduciary net position:</b>		
Member contributions.....	\$ 14,524,722	\$ 12,491,708
Employer contributions.....	26,140,616	27,966,800
Net investment income (loss).....	29,322,861	4,103,832
Retirement benefits and refunds.....	(42,572,513)	(40,901,999)
Administrative expenses.....	(936,725)	(949,046)
Other contribution.....	<u>-</u>	<u>4,156,756</u>
Net increase (decrease) in fiduciary net position.....	26,478,961	6,868,051
Fiduciary net position at beginning of year.....	<u>344,991,750</u>	<u>371,470,711</u>
Fiduciary net position at end of year <b>(b)</b> .....	<u>\$ 371,470,711</u>	<u>\$ 378,338,762</u>
<b>Net pension liability - ending (a) - (b)</b> .....	<u>\$ 339,262,192</u>	<u>\$ 363,338,905</u>
Plan fiduciary net position as a percentage of the total pension liability.....	52.27%	51.01%
Covered-employee payroll.....	123,190,220	128,258,043
Net pension liability as a percentage of covered-employee payroll.....	275.40%	283.29%

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

See notes to required supplementary information.

**SCHEDULE OF CONTRIBUTIONS**

	2014	2015
Actuarially determined contribution.....	\$ 26,066,222	\$ 32,050,432
Contributions in relation to the actuarially determined contribution.....	(26,066,222)	(32,123,557)
Contribution deficiency (excess).....	\$ -	\$ (73,125)
Covered-employee payroll.....	\$ 123,190,220	\$ 128,258,043
Contributions as a percentage of covered- employee payroll.....	21.16%	25.05%

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**

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	<u>2014</u>	<u>2015</u>
Annual money-weighted rate of return, net of investment expense.....	8.48%	1.04%

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 systems total pension liability, changes in the systems 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 system 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 system's funding schedule, and additional appropriations in accordance with adopted early retirement incentive programs. The total appropriations are payable on July 1 and January 1. Employers may choose to pay the entire appropriation in July at a discounted rate. Accordingly, actual employer contributions may be less than the "total appropriation". The pension fund appropriations are allocated amongst employers based on 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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## **Independent Auditor's Report**

To the Honorable Essex Retirement Board  
Essex Regional Retirement System  
Danvers, Massachusetts

We have audited the accompanying schedule of employer allocations of the Essex Regional Retirement System (ERRS) 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 ERRS 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 Essex Regional Retirement System 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 Essex Regional Retirement System as of and for the year ended December 31, 2015, and our report thereon, dated August 22, 2016, expressed an unmodified opinion on those financial statements.

## **Restriction on Use**

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

*Powers & Sullivan LLC*

August 22, 2016

**SCHEDULE OF EMPLOYER ALLOCATIONS**

FOR THE YEAR ENDED DECEMBER 31, 2015

Employer	2016 Pension Fund Appropriation	Current Direct E.R.I. Appropriation	FY2016 Total Appropriation	Remaining Direct E.R.I. Liability	Allocated Net Pension Liability	Share of Net Pension Liability including E.R.I.	Percent of Total Net Pension Liability including E.R.I.
Retirement Board.....	\$ 105,923	\$ -	\$ 105,923	\$ -	\$ 1,374,161	\$ 1,374,161	0.378%
Town of Boxford.....	1,025,780	-	1,025,780	-	13,307,669	13,307,669	3.663%
Town of Essex.....	473,866	-	473,866	-	6,147,565	6,147,565	1.692%
Town of Georgetown.....	1,376,998	79,349	1,456,347	228,038	17,864,100	18,092,138	4.979%
Town of Groveland.....	632,750	7,172	639,922	72,666	8,208,807	8,281,473	2.279%
Town of Hamilton.....	735,886	-	735,886	-	9,546,806	9,546,806	2.628%
Town of Ipswich.....	3,027,166	-	3,027,166	-	39,272,090	39,272,090	10.809%
Town of Lynnfield.....	2,207,657	145,516	2,353,173	500,875	28,640,419	29,141,294	8.020%
Town of Manchester-by-the-Sea.....	961,669	-	961,669	-	12,475,940	12,475,940	3.434%
Town of Merrimac.....	671,774	45,935	717,709	128,655	8,715,077	8,843,732	2.434%
Town of Middleton.....	1,379,786	-	1,379,786	-	17,900,262	17,900,262	4.927%
Town of Nahant.....	674,562	-	674,562	-	8,751,239	8,751,239	2.409%
Town of Newbury.....	551,914	-	551,914	-	7,160,105	7,160,105	1.971%
Town of North Andover.....	4,150,507	-	4,150,507	-	53,845,435	53,845,435	14.820%
Town of Rockport.....	1,485,709	7,978	1,493,687	21,367	19,274,423	19,295,790	5.311%
Town of Rowley.....	774,910	-	774,910	-	10,053,076	10,053,076	2.767%
Town of Salisbury.....	972,819	102,456	1,075,275	274,397	12,620,589	12,894,986	3.549%
Town of Topsfield.....	964,456	-	964,456	-	12,512,102	12,512,102	3.444%
Town of Wenham.....	574,214	-	574,214	-	7,449,402	7,449,402	2.050%
Town of West Newbury.....	512,890	29,416	542,306	78,782	6,653,835	6,732,617	1.853%
East Essex Veterans District.....	19,512	-	19,512	-	253,135	253,135	0.070%
Byfield Water District.....	30,662	-	30,662	-	397,784	397,784	0.109%
Lynnfield Center Water District.....	94,773	-	94,773	-	1,229,513	1,229,513	0.338%
Lynnfield Water District.....	61,324	-	61,324	-	795,567	795,567	0.219%
NE Massachusetts Mosquito Control District.....	153,309	-	153,309	-	1,988,918	1,988,918	0.547%
Hamilton-Wenham Regional School.....	794,422	-	794,422	-	10,306,211	10,306,211	2.837%
Manchester-Essex Regional School.....	504,528	-	504,528	-	6,545,348	6,545,348	1.801%
Masconomet Regional School.....	510,103	-	510,103	-	6,617,673	6,617,673	1.821%
Pentucket Regional School.....	1,014,630	37,680	1,052,310	105,725	13,163,021	13,268,746	3.652%
Triton Regional School.....	925,432	30,710	956,142	82,247	12,005,832	12,088,079	3.327%
Essex Housing Authority.....	8,362	4,084	12,446	10,938	108,486	119,424	0.033%
Georgetown Housing Authority.....	41,812	-	41,812	-	542,432	542,432	0.149%
Groveland Housing Authority.....	27,874	-	27,874	-	361,621	361,621	0.100%
Hamilton Housing Authority.....	11,150	-	11,150	-	144,649	144,649	0.040%
Ipswich Housing Authority.....	94,773	27,045	121,818	72,432	1,229,513	1,301,945	0.358%
Lynnfield Housing Authority.....	19,512	-	19,512	-	253,135	253,135	0.070%
Manchester Housing Authority.....	22,299	-	22,299	-	289,297	289,297	0.080%
Middleton Housing Authority.....	16,725	-	16,725	-	216,973	216,973	0.060%
Nahant Housing Authority.....	11,150	7,721	18,871	78,235	144,649	222,884	0.061%
North Andover Housing Authority.....	125,435	13,573	139,008	46,719	1,627,297	1,674,016	0.461%
Rockport Housing Authority.....	50,174	-	50,174	-	650,919	650,919	0.179%
Rowley Housing Authority.....	11,150	-	11,150	-	144,649	144,649	0.040%
Salisbury Housing Authority.....	30,662	-	30,662	-	397,784	397,784	0.109%
Topsfield Housing Authority.....	13,937	-	13,937	-	180,811	180,811	0.050%
Wenham Housing Authority.....	19,512	6,114	25,626	16,375	253,135	269,510	0.074%
West Newbury Housing Authority.....	-	-	-	-	-	-	0.000%
<b>Total.....</b>	<b>\$ 27,874,458</b>	<b>\$ 544,749</b>	<b>\$ 28,419,207</b>	<b>\$ 1,717,451</b>	<b>\$ 361,621,454</b>	<b>\$ 363,338,905</b>	<b>100.000%</b>

See notes to other supplementary information.

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Agricultural School Retirees	Retirement Board	Town of Boxford	Town of Essex	Town of Georgetown
<b>Net Pension Liability</b>					
Beginning net pension liability.....	\$ 4,103,556	\$ 1,214,284	\$ 12,389,026	\$ 5,672,204	\$ 16,916,706
Ending net pension liability.....	\$ -	\$ 1,374,161	\$ 13,307,669	\$ 6,147,565	\$ 18,092,138
<b>Deferred Outflows of Resources</b>					
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	-	73,522	712,000	328,913	955,783
Changes of assumptions.....	-	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	47,736	-	20,649	-
Total Deferred Outflows of Resources.....	\$ -	\$ 121,258	\$ 712,000	\$ 349,562	\$ 955,783
<b>Deferred Inflows of Resources</b>					
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	44,061	-	290,173
Total Deferred Inflows of Resources.....	\$ -	\$ -	\$ 44,061	\$ -	\$ 290,173
<b>Pension Expense</b>					
Proportionate share of plan pension expense.....	\$ 35,168	\$ 125,875	\$ 1,215,144	\$ 561,050	\$ 1,935,422
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	11,367	(10,491)	4,916	(69,089)
Total Employer Pension Expense.....	\$ 35,168	\$ 137,242	\$ 1,204,653	\$ 565,966	\$ 1,866,333
<b>Contributions</b>					
Statutory required contribution.....	\$ 4,156,756	\$ 103,904	\$ 1,006,232	\$ 464,836	\$ 1,428,594
Contribution in relation to statutory required contribution.....	(4,156,756)	(103,904)	(1,007,830)	(464,836)	(1,428,594)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ (1,598)	\$ -	\$ -
Contributions as a percentage of covered payroll.....	N/A	13.66%	19.84%	20.83%	21.96%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>					
June 30, 2017.....	\$ -	\$ 29,398	\$ 164,140	\$ 85,588	\$ 165,334
June 30, 2018.....	-	29,398	164,140	85,588	165,334
June 30, 2019.....	-	29,398	164,140	85,588	165,334
June 30, 2020.....	-	30,790	177,617	91,814	183,425
June 30, 2021.....	-	2,274	(2,098)	984	(13,817)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ -	\$ 121,258	\$ 667,939	\$ 349,562	\$ 665,610
<b>Discount Rate Sensitivity</b>					
1% decrease (7%).....	\$ -	\$ 1,689,373	\$ 16,360,244	\$ 7,557,721	\$ 22,189,887
Current discount rate (8%).....	\$ -	\$ 1,374,161	\$ 13,307,669	\$ 6,147,565	\$ 18,092,138
1% increase (9%).....	\$ -	\$ 1,130,542	\$ 10,948,406	\$ 5,057,688	\$ 14,925,084
Covered Payroll.....	\$ -	\$ 760,843	\$ 5,080,198	\$ 2,231,674	\$ 6,505,666
See notes to schedule of employer allocations and schedule of pension amounts by employer.					

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Town of Groveland	Town of Hamilton	Town of Ipswich	Town of Lynnfield
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 7,906,594	\$ 9,315,057	\$ 36,691,344	\$ 26,824,501
Ending net pension liability.....	\$ 8,281,473	\$ 9,546,806	\$ 39,272,090	\$ 29,141,294
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	439,196	510,783	2,101,174	1,532,348
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	-
Total Deferred Outflows of Resources.....	<u>\$ 439,196</u>	<u>\$ 510,783</u>	<u>\$ 2,101,174</u>	<u>\$ 1,532,348</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	240,109	375,217	234,773	226,886
Total Deferred Inflows of Resources.....	<u>\$ 240,109</u>	<u>\$ 375,217</u>	<u>\$ 234,773</u>	<u>\$ 226,886</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 838,824	\$ 866,871	\$ 3,598,057	\$ 3,268,529
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>(57,169)</u>	<u>(89,337)</u>	<u>(55,898)</u>	<u>(54,020)</u>
Total Employer Pension Expense.....	<u>\$ 781,655</u>	<u>\$ 777,534</u>	<u>\$ 3,542,159</u>	<u>\$ 3,214,509</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 639,922	\$ 721,863	\$ 2,969,479	\$ 2,308,330
Contribution in relation to statutory required contribution.....	<u>(639,922)</u>	<u>(721,863)</u>	<u>(2,987,388)</u>	<u>(2,316,800)</u>
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (17,909)</u>	<u>\$ (8,470)</u>
Contributions as a percentage of covered payroll.....	24.02%	20.80%	21.97%	23.26%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 50,552	\$ 35,942	\$ 459,452	\$ 321,816
June 30, 2018.....	50,552	35,942	459,452	321,816
June 30, 2019.....	50,552	35,942	459,452	321,816
June 30, 2020.....	58,865	45,610	499,224	350,821
June 30, 2021.....	<u>(11,434)</u>	<u>(17,870)</u>	<u>(11,179)</u>	<u>(10,807)</u>
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ 199,087</u>	<u>\$ 135,566</u>	<u>\$ 1,866,401</u>	<u>\$ 1,305,462</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 10,164,446	\$ 11,736,696	\$ 48,280,501	\$ 35,710,965
Current discount rate (8%).....	\$ 8,281,473	\$ 9,546,806	\$ 39,272,090	\$ 29,141,294
1% increase (9%).....	\$ 6,826,166	\$ 7,854,291	\$ 32,309,699	\$ 24,063,749
Covered Payroll.....	\$ 2,663,576	\$ 3,470,734	\$ 13,598,463	\$ 9,961,467
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Town of Manchester- by-the-Sea	Town of Merrimac	Town of Middleton	Town of Nahant
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 10,868,675	\$ 8,126,535	\$ 16,640,684	\$ 8,067,505
Ending net pension liability.....	\$ 12,475,940	\$ 8,843,732	\$ 17,900,262	\$ 8,751,239
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	667,500	466,283	957,718	468,217
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	558,641	-	-	35,059
Total Deferred Outflows of Resources.....	\$ 1,226,141	\$ 466,283	\$ 957,718	\$ 503,276
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	40,052	40,045	-
Total Deferred Inflows of Resources.....	\$ -	\$ 40,052	\$ 40,045	\$ -
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,144,189	\$ 970,041	\$ 1,634,513	\$ 798,731
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	133,009	(9,536)	(9,535)	8,348
Total Employer Pension Expense.....	\$ 1,277,198	\$ 960,505	\$ 1,624,978	\$ 807,079
<b>Contributions</b>				
Statutory required contribution.....	\$ 943,343	\$ 704,032	\$ 1,353,492	\$ 661,707
Contribution in relation to statutory required contribution.....	(943,343)	(704,032)	(1,355,445)	(661,707)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ (1,953)	\$ -
Contributions as a percentage of covered payroll.....	21.48%	22.96%	22.11%	21.62%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 296,725	\$ 104,828	\$ 225,362	\$ 123,186
June 30, 2018.....	296,725	104,828	225,362	123,186
June 30, 2019.....	296,725	104,828	225,362	123,186
June 30, 2020.....	309,360	113,654	243,490	132,049
June 30, 2021.....	26,606	(1,907)	(1,903)	1,669
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ 1,226,141	\$ 426,231	\$ 917,673	\$ 503,276
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 15,337,728	\$ 10,842,836	\$ 22,006,306	\$ 10,758,638
Current discount rate (8%).....	\$ 12,475,940	\$ 8,843,732	\$ 17,900,262	\$ 8,751,239
1% increase (9%).....	\$ 10,264,131	\$ 7,298,671	\$ 14,726,796	\$ 7,199,767
Covered Payroll.....	\$ 4,392,184	\$ 3,066,196	\$ 6,129,251	\$ 3,060,264
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Town of Newbury	Town of North Andover	Town of Rockport	Town of Rowley
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 6,480,618	\$ 49,719,115	\$ 17,788,267	\$ 9,078,854
Ending net pension liability.....	\$ 7,160,105	\$ 53,845,435	\$ 19,295,790	\$ 10,053,076
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	383,087	2,880,892	1,031,239	537,870
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	125,241	150,890	61,215	192,084
Total Deferred Outflows of Resources.....	<u>\$ 508,328</u>	<u>\$ 3,031,782</u>	<u>\$ 1,092,454</u>	<u>\$ 729,954</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	-
Total Deferred Inflows of Resources.....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 654,552	\$ 4,942,880	\$ 1,788,498	\$ 919,192
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	29,819	35,926	14,575	45,734
Total Employer Pension Expense.....	<u>\$ 684,371</u>	<u>\$ 4,978,806</u>	<u>\$ 1,803,073</u>	<u>\$ 964,926</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 541,397	\$ 4,071,413	\$ 1,465,223	\$ 760,143
Contribution in relation to statutory required contribution.....	(541,397)	(4,100,517)	(1,465,223)	(760,143)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ (29,104)</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	23.33%	20.94%	21.83%	23.12%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 123,778	\$ 742,516	\$ 267,505	\$ 177,656
June 30, 2018.....	123,778	742,516	267,505	177,656
June 30, 2019.....	123,778	742,516	267,505	177,656
June 30, 2020.....	131,029	797,047	287,025	187,837
June 30, 2021.....	5,965	7,187	2,914	9,149
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ 508,328</u>	<u>\$ 3,031,782</u>	<u>\$ 1,092,454</u>	<u>\$ 729,954</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 8,802,552	\$ 66,196,746	\$ 23,717,045	\$ 12,359,097
Current discount rate (8%).....	\$ 7,160,105	\$ 53,845,435	\$ 19,295,790	\$ 10,053,076
1% increase (9%).....	\$ 5,890,719	\$ 44,299,393	\$ 15,878,705	\$ 8,270,807
Covered Payroll.....	\$ 2,320,540	\$ 19,581,065	\$ 6,712,792	\$ 3,287,547
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Town of Salisbury	Town of Topsfield	Town of Wenham	Town of West Newbury
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 12,408,280	\$ 11,477,481	\$ 6,750,090	\$ 6,466,276
Ending net pension liability.....	\$ 12,894,986	\$ 12,512,102	\$ 7,449,402	\$ 6,732,617
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	675,239	669,435	398,565	356,000
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	96,005	124,166	-
Total Deferred Outflows of Resources.....	\$ 675,239	\$ 765,440	\$ 522,731	\$ 356,000
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	573,157	-	-	241,005
Total Deferred Inflows of Resources.....	\$ 573,157	\$ -	\$ -	\$ 241,005
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,534,211	\$ 1,145,020	\$ 680,933	\$ 713,108
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(136,466)	22,858	29,563	(57,382)
Total Employer Pension Expense.....	\$ 1,397,745	\$ 1,167,878	\$ 710,496	\$ 655,726
<b>Contributions</b>				
Statutory required contribution.....	\$ 1,054,784	\$ 946,077	\$ 563,272	\$ 531,972
Contribution in relation to statutory required contribution.....	(1,065,237)	(948,614)	(563,272)	(531,972)
Contribution deficiency/(excess).....	\$ (10,453)	\$ (2,537)	\$ -	\$ -
Contributions as a percentage of covered payroll.....	22.40%	21.14%	21.84%	22.36%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 29,149	\$ 187,049	\$ 127,318	\$ 29,933
June 30, 2018.....	29,149	187,049	127,318	29,933
June 30, 2019.....	29,149	187,049	127,318	29,933
June 30, 2020.....	41,930	199,720	134,862	36,672
June 30, 2021.....	(27,295)	4,573	5,915	(11,476)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ 102,082	\$ 765,440	\$ 522,731	\$ 114,995
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 15,789,954	\$ 15,382,185	\$ 9,158,180	\$ 8,258,904
Current discount rate (8%).....	\$ 12,894,986	\$ 12,512,102	\$ 7,449,402	\$ 6,732,617
1% increase (9%).....	\$ 10,657,533	\$ 10,293,882	\$ 6,128,727	\$ 5,552,985
Covered Payroll.....	\$ 4,755,506	\$ 4,486,856	\$ 2,579,576	\$ 2,379,301
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	East Essex Veterans District	Byfield Water District	Lynnfield Center Water District	Lynnfield Water District
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 336,007	\$ 372,602	\$ 1,081,212	\$ 675,342
Ending net pension liability.....	\$ 253,135	\$ 397,784	\$ 1,229,513	\$ 795,567
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	13,543	21,283	65,783	42,565
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	46,935	49,884
Total Deferred Outflows of Resources.....	\$ 13,543	\$ 21,283	\$ 112,718	\$ 92,449
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	81,535	3,148	-	-
Total Deferred Inflows of Resources.....	\$ 81,535	\$ 3,148	\$ -	\$ -
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 22,212	\$ 36,255	\$ 112,673	\$ 73,117
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(19,413)	(750)	11,175	11,877
Total Employer Pension Expense.....	\$ 2,799	\$ 35,505	\$ 123,848	\$ 84,994
<b>Contributions</b>				
Statutory required contribution.....	\$ 19,140	\$ 30,078	\$ 92,967	\$ 60,155
Contribution in relation to statutory required contribution.....	(19,140)	(30,078)	(92,967)	(60,155)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	16.11%	22.29%	21.59%	23.50%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ (16,091)	\$ 4,470	\$ 27,310	\$ 22,317
June 30, 2018.....	(16,091)	4,470	27,310	22,317
June 30, 2019.....	(16,091)	4,470	27,310	22,317
June 30, 2020.....	(15,835)	4,873	28,555	23,123
June 30, 2021.....	(3,884)	(148)	2,233	2,375
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ (67,992)	\$ 18,135	\$ 112,718	\$ 92,449
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 311,200	\$ 489,029	\$ 1,511,544	\$ 978,058
Current discount rate (8%).....	\$ 253,135	\$ 397,784	\$ 1,229,513	\$ 795,567
1% increase (9%).....	\$ 208,258	\$ 327,262	\$ 1,011,538	\$ 654,524
Covered Payroll.....	\$ 118,812	\$ 134,914	\$ 430,641	\$ 255,996
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	NE MA Mosquito Control District	Hamilton- Wenham Regional School	Manchester- Essex Regional School	Masconomet Regional School
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 1,789,822	\$ 9,315,057	\$ 6,041,480	\$ 6,211,147
Ending net pension liability.....	\$ 1,988,918	\$ 10,306,211	\$ 6,545,348	\$ 6,617,673
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	106,413	551,413	350,196	354,065
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	43,112	190,810	20,175	-
Total Deferred Outflows of Resources.....	\$ 149,525	\$ 742,223	\$ 370,371	\$ 354,065
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	62,361
Total Deferred Inflows of Resources.....	\$ -	\$ -	\$ -	\$ 62,361
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 181,909	\$ 942,271	\$ 597,332	\$ 604,140
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	10,265	45,431	4,804	(14,848)
Total Employer Pension Expense.....	\$ 192,174	\$ 987,702	\$ 602,136	\$ 589,292
<b>Contributions</b>				
Statutory required contribution.....	\$ 150,387	\$ 779,283	\$ 494,914	\$ 500,382
Contribution in relation to statutory required contribution.....	(150,387)	(779,283)	(494,914)	(501,483)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ (1,101)
Contributions as a percentage of covered payroll.....	22.63%	21.31%	20.00%	21.35%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 36,365	\$ 180,675	\$ 90,695	\$ 71,993
June 30, 2018.....	36,365	180,675	90,695	71,993
June 30, 2019.....	36,365	180,675	90,695	71,993
June 30, 2020.....	38,379	191,112	97,324	78,695
June 30, 2021.....	2,051	9,086	962	(2,970)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ 149,525	\$ 742,223	\$ 370,371	\$ 291,704
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 2,445,145	\$ 12,670,297	\$ 8,046,750	\$ 8,135,665
Current discount rate (8%).....	\$ 1,988,918	\$ 10,306,211	\$ 6,545,348	\$ 6,617,673
1% increase (9%).....	\$ 1,636,311	\$ 8,479,065	\$ 5,384,950	\$ 5,444,452
Covered Payroll.....	\$ 664,693	\$ 3,656,348	\$ 2,474,424	\$ 2,349,100
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Pentucket Regional School	Triton Regional School	Essex Housing Authority	Georgetown Housing Authority
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 11,737,756	\$ 10,523,695	\$ 16,946	\$ 505,675
Ending net pension liability.....	\$ 13,268,746	\$ 12,088,079	\$ 119,424	\$ 542,432
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	704,261	642,348	5,804	29,022
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	371,299	485,221	67,174	-
Total Deferred Outflows of Resources.....	\$ 1,075,560	\$ 1,127,569	\$ 72,978	\$ 29,022
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	2,349
Total Deferred Inflows of Resources.....	\$ -	\$ -	\$ -	\$ 2,349
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 1,348,931	\$ 1,213,993	\$ 25,952	\$ 49,459
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	88,405	115,529	15,994	(559)
Total Employer Pension Expense.....	\$ 1,437,336	\$ 1,329,522	\$ 41,946	\$ 48,900
<b>Contributions</b>				
Statutory required contribution.....	\$ 1,032,257	\$ 937,921	\$ 12,446	\$ 41,015
Contribution in relation to statutory required contribution.....	(1,032,257)	(937,921)	(12,446)	(41,015)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	22.87%	21.63%	21.00%	19.48%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 261,137	\$ 273,076	\$ 17,417	\$ 6,559
June 30, 2018.....	261,137	273,076	17,417	6,559
June 30, 2019.....	261,137	273,076	17,417	6,559
June 30, 2020.....	274,468	285,235	17,527	7,108
June 30, 2021.....	17,681	23,106	3,200	(112)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ 1,075,560	\$ 1,127,569	\$ 72,978	\$ 26,673
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 16,288,139	\$ 14,842,032	\$ 144,309	\$ 666,858
Current discount rate (8%).....	\$ 13,268,746	\$ 12,088,079	\$ 119,424	\$ 542,432
1% increase (9%).....	\$ 10,935,126	\$ 9,959,614	\$ 100,191	\$ 446,267
Covered Payroll.....	\$ 4,514,109	\$ 4,336,928	\$ 59,280	\$ 210,544
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Groveland Housing Authority	Hamilton Housing Authority	Ipswich Housing Authority	Lynnfield Housing Authority
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 336,007	\$ 136,399	\$ 1,259,967	\$ 236,203
Ending net pension liability.....	\$ 361,621	\$ 144,649	\$ 1,301,945	\$ 253,135
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	19,348	7,739	65,783	13,543
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	-
Total Deferred Outflows of Resources.....	<u>\$ 19,348</u>	<u>\$ 7,739</u>	<u>\$ 65,783</u>	<u>\$ 13,543</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	674	1,875	97,210	1,274
Total Deferred Inflows of Resources.....	<u>\$ 674</u>	<u>\$ 1,875</u>	<u>\$ 97,210</u>	<u>\$ 1,274</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 32,983	\$ 13,390	\$ 213,376	\$ 23,079
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(161)	(447)	(23,145)	(303)
Total Employer Pension Expense.....	<u>\$ 32,822</u>	<u>\$ 12,943</u>	<u>\$ 190,231</u>	<u>\$ 22,776</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 27,343	\$ 11,150	\$ 121,818	\$ 19,140
Contribution in relation to statutory required contribution.....	(27,343)	(11,150)	(121,818)	(19,140)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	21.88%	22.23%	27.85%	20.67%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 4,585	\$ 1,452	\$ (7,010)	\$ 3,019
June 30, 2018.....	4,585	1,452	(7,010)	3,019
June 30, 2019.....	4,585	1,452	(7,010)	3,019
June 30, 2020.....	4,951	1,598	(5,765)	3,275
June 30, 2021.....	(32)	(90)	(4,632)	(63)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ 18,674</u>	<u>\$ 5,864</u>	<u>\$ (31,427)</u>	<u>\$ 12,269</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 444,572	\$ 177,829	\$ 1,583,976	\$ 311,200
Current discount rate (8%).....	\$ 361,621	\$ 144,649	\$ 1,301,945	\$ 253,135
1% increase (9%).....	\$ 297,511	\$ 119,004	\$ 1,083,969	\$ 208,258
Covered Payroll.....	\$ 124,981	\$ 50,153	\$ 437,357	\$ 92,607
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Manchester Housing Authority	Middleton Housing Authority	Nahant Housing Authority	North Andover Housing Authority
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 269,471	\$ 269,471	\$ 180,867	\$ 1,585,558
Ending net pension liability.....	\$ 289,297	\$ 216,973	\$ 222,884	\$ 1,674,016
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	15,478	11,609	7,739	87,065
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	-	-
Total Deferred Outflows of Resources.....	<u>\$ 15,478</u>	<u>\$ 11,609</u>	<u>\$ 7,739</u>	<u>\$ 87,065</u>
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	1,074	54,981	37,920	62,389
Total Deferred Inflows of Resources.....	<u>\$ 1,074</u>	<u>\$ 54,981</u>	<u>\$ 37,920</u>	<u>\$ 62,389</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 26,380	\$ 19,199	\$ 99,303	\$ 208,383
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(256)	(13,091)	(9,028)	(14,854)
Total Employer Pension Expense.....	<u>\$ 26,124</u>	<u>\$ 6,108</u>	<u>\$ 90,275</u>	<u>\$ 193,529</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 21,874	\$ 16,406	\$ 18,511	\$ 136,359
Contribution in relation to statutory required contribution.....	(21,874)	(16,406)	(18,511)	(136,359)
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	23.20%	19.78%	41.11%	23.45%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 3,540	\$ (10,244)	\$ (7,129)	\$ 6,500
June 30, 2018.....	3,540	(10,244)	(7,129)	6,500
June 30, 2019.....	3,540	(10,244)	(7,129)	6,500
June 30, 2020.....	3,833	(10,024)	(6,983)	8,148
June 30, 2021.....	(49)	(2,616)	(1,811)	(2,972)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ 14,404</u>	<u>\$ (43,372)</u>	<u>\$ (30,181)</u>	<u>\$ 24,676</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 355,657	\$ 266,743	\$ 256,063	\$ 2,047,292
Current discount rate (8%).....	\$ 289,297	\$ 216,973	\$ 222,884	\$ 1,674,016
1% increase (9%).....	\$ 238,009	\$ 178,507	\$ 197,239	\$ 1,385,519
Covered Payroll.....	\$ 94,290	\$ 82,948	\$ 45,027	\$ 581,402
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Rockport Housing Authority	Rowley Housing Authority	Salisbury Housing Authority	Topsfield Housing Authority
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 538,943	\$ 136,399	\$ 336,007	\$ 169,667
Ending net pension liability.....	\$ 650,919	\$ 144,649	\$ 397,784	\$ 180,811
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	34,826	7,739	21,283	9,674
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	51,759	-	26,280	-
Total Deferred Outflows of Resources.....	\$ 86,585	\$ 7,739	\$ 47,563	\$ 9,674
<b>Deferred Inflows of Resources</b>				
Differences between expected and actual experience.....	\$ -	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	1,875	-	1,674
Total Deferred Inflows of Resources.....	\$ -	\$ 1,875	\$ -	\$ 1,674
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 59,941	\$ 13,178	\$ 37,158	\$ 16,476
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	12,324	(447)	6,257	(399)
Total Employer Pension Expense.....	\$ 72,265	\$ 12,731	\$ 43,415	\$ 16,077
<b>Contributions</b>				
Statutory required contribution.....	\$ 49,218	\$ 10,938	\$ 30,662	\$ 13,671
Contribution in relation to statutory required contribution.....	(49,218)	(10,938)	(30,662)	(13,671)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	27.60%	21.32%	22.91%	22.84%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2017.....	\$ 20,866	\$ 1,452	\$ 11,477	\$ 1,974
June 30, 2018.....	20,866	1,452	11,477	1,974
June 30, 2019.....	20,866	1,452	11,477	1,974
June 30, 2020.....	21,525	1,598	11,880	2,157
June 30, 2021.....	2,462	(90)	1,252	(79)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ 86,585	\$ 5,864	\$ 47,563	\$ 8,000
<b>Discount Rate Sensitivity</b>				
1% decrease (7%).....	\$ 800,229	\$ 177,829	\$ 489,029	\$ 222,286
Current discount rate (8%).....	\$ 650,919	\$ 144,649	\$ 397,784	\$ 180,811
1% increase (9%).....	\$ 535,520	\$ 119,004	\$ 327,262	\$ 148,756
Covered Payroll.....	\$ 178,300	\$ 51,314	\$ 133,809	\$ 59,848
See notes to schedule of employer allocations and schedule of pension amounts by employer.				

(continued)

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2015

	Wenham Housing Authority	West Newbury Housing Authority	Totals
<b>Net Pension Liability</b>			
Beginning net pension liability.....	\$ 261,572	\$ 33,268	\$ 339,262,192
Ending net pension liability.....	\$ 269,510	\$ -	\$ 363,338,905
<b>Deferred Outflows of Resources</b>			
Differences between expected and actual experience.....	\$ -	\$ -	\$ -
Net difference between projected and actual investment earnings on pension plan investments.....	13,543	-	19,347,829
Changes of assumptions.....	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	-	2,764,335
Total Deferred Outflows of Resources.....	\$ 13,543	\$ -	\$ 22,112,164
<b>Deferred Inflows of Resources</b>			
Differences between expected and actual experience.....	\$ -	\$ -	\$ -
Changes of assumptions.....	-	-	-
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	21,765	26,753	2,764,335
Total Deferred Inflows of Resources.....	\$ 21,765	\$ 26,753	\$ 2,764,335
<b>Pension Expense</b>			
Proportionate share of plan pension expense.....	\$ 45,941	\$ (290)	\$ 35,387,549
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	(5,182)	(6,370)	-
Total Employer Pension Expense.....	\$ 40,759	\$ (6,660)	\$ 35,387,549
<b>Contributions</b>			
Statutory required contribution.....	\$ 25,626	\$ -	\$ 32,050,432
Contribution in relation to statutory required contribution.....	(25,626)	-	(32,123,557)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ (73,125)
Contributions as a percentage of covered payroll.....	26.55%	N/A	25.05%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>			
June 30, 2017.....	\$ (1,860)	\$ (6,370)	\$ 4,745,402
June 30, 2018.....	(1,860)	(6,370)	4,745,402
June 30, 2019.....	(1,860)	(6,370)	4,745,402
June 30, 2020.....	(1,605)	(6,370)	5,111,623
June 30, 2021.....	(1,037)	(1,273)	-
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ (8,222)	\$ (26,753)	\$ 19,347,829
<b>Discount Rate Sensitivity</b>			
1% decrease (7%).....	\$ 327,575	\$ -	\$ 446,289,310
Current discount rate (8%).....	\$ 269,510	\$ -	\$ 363,338,905
1% increase (9%).....	\$ 224,632	\$ -	\$ 299,228,489
Covered Payroll.....	\$ 96,519	\$ -	\$ 128,258,043
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. For the first time, 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 Essex Regional Retirement System'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 system 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 System's fiscal year 2016 pension fund appropriation by member unit.

The beginning net pension liability was updated to reflect the transfer of the active and inactive members of the Essex Agricultural and Technical School (the school) by excluding any members who were employed by the school at the end of the measurement period and were later transferred to the Salem Contributory Retirement System. The beginning net pension liability for the school's retired, disabled, or beneficiary members was allocated directly to the school, and the school's proportionate share of the total actuarial accrued liability was used to determine the school's portion of the fiduciary net position, net 3(8)c liability, administrative expense, and benefits paid during the prior measurement period. During fiscal year 2015, PERAC approved a funding schedule for Essex Tech, as the successor agency, to pay ERRS equal annual payments of \$421,947 from 2017 through 2033, which represents the actuarially determined net pension liability for the school's retired, disabled, or beneficiary members of ERRS. A receivable has been recorded for the present value of these future payments which offsets the future pension liability. Accordingly, there is no net pension liability reported for the Agricultural School Retirees as of December 31, 2015.

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 system's funding schedule. The 2002 ERIP amortization is straight line ending in fiscal 2019, except Nahant Housing which is increasing at 4.5% per year ending in 2028 and Essex Regional Retirement Board which was straight line and ended in fiscal 2012. The 2003 ERI amortization is straight line ending in fiscal 2020, except for Groveland which is increasing at 4.5% per year ending in 2028 and Essex Regional Retirement Board which was straight line and ended in fiscal 2012.

The allocation percentage of the total net pension liability is a blended rate of the following 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) Current Direct E.R.I. appropriation is a direct current charge

calculated by PERAC for only the employers that accepted the ERIP. This direct charge backed out of the total pension fund appropriation to calculate the percentage to be allocated (3) Remaining Direct E.R.I. liability is the future E.R.I. liability associated directly to those employers that accepted the ERIP. This direct liability is added back to those employers once the non-ERIP liability has been allocated.

**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 system 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.