

***DUKES COUNTY CONTRIBUTORY RETIREMENT SYSTEM***

***FINANCIAL STATEMENTS***

***YEAR ENDED DECEMBER 31, 2017***

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**TABLE OF CONTENTS**

<b>Financial Section .....</b>	<b>1</b>
Independent Auditor's Report .....	2
Management's Discussion and Analysis.....	4
Financial Statements.....	7
Statement of Fiduciary Net Position .....	7
Statement of Changes in Fiduciary Net Position.....	8
Notes to Financial Statements.....	9
Required Supplementary Information .....	19
Schedule of Changes in the Net Pension Liability and Related Ratios.....	20
Schedule of Contributions .....	21
Schedule of Investment Return .....	22
Notes to Required Supplementary Information .....	23
<b>Audit of Specific Elements, Accounts and Items of Financial Statements .....</b>	<b>24</b>
Independent Auditor's Report .....	26
Pension Plan Schedules .....	28
Schedule of Employer Allocations .....	28
Schedule of Pension Amounts by Employer .....	29
Notes to Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.....	33

# ***Financial Section***



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## **Independent Auditor's Report**

To the Honorable Dukes County Retirement Board  
Dukes County Contributory Retirement System  
Vineyard Haven, Massachusetts

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

We have audited the accompanying financial statements of Dukes County Contributory Retirement System (System) as of and for the year ended December 31, 2017, and the related notes to the financial statements, which collectively comprise the Dukes County Contributory 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 Dukes County Contributory Retirement System as of December 31, 2017, and the results of its operations and changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

## Other Matters

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, 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 17, 2018, on our consideration of the Dukes County Contributory 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 Dukes County Contributory Retirement System's internal control over financial reporting and compliance.

## Restriction on Use

This report is intended solely for the information and use of the Dukes County Contributory 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.



August 17, 2018

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

As management of the Dukes County Contributory Retirement System, we offer readers of these financial statements this narrative overview and analysis of the financial activities for the year ended December 31, 2017. 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 \$155.6 million (net position).
- The System's net position increased by \$23.4 million for the year ended December 31, 2017.
- Total investment income was \$23.2 million; investment expenses were \$733,000; and net investment income was \$22.4 million.
- Total contributions were \$10.6 million including \$6.3 million from employers and \$4.0 million from members.
- Retirement benefits, refunds and transfers amounted to \$9.1 million.
- Administrative expenses were \$439,000 or 4.6% of total deductions.
- The Total Pension Liability is \$188.8 million as of December 31, 2017, while the Net Pension Liability is \$33.2 million.
- The Plan fiduciary net position as a percentage of the total pension liability is 82.43%.

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

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

### **Fiduciary Financial Statements**

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

The *statement of changes in fiduciary net position* presents information showing how the 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 was \$155.6 million at the close of 2017.

The assets accumulated are held to provide pension benefits for qualified retirees along with active and inactive employees of the member units. At year-end, the system's net position includes investments of \$150.0 million, cash of \$5.2 million and accounts receivable of \$412,000.

In 2017, the System's contributions were \$10.6 million while deductions were \$9.6 million, which resulted in an increase of fiduciary net position of \$1.0 million. In 2016, the System's contributions were \$10.2 million while deductions were \$8.9 million, which resulted in a prior year increase of fiduciary net position of \$1.3 million. In both years the System was able to sustain operations independent of investment income.

The primary change in net position relates to each year's investment performance. Net investment income was \$22.4 million and \$9.0 million in 2017 and 2016 respectively. The annual money weighted rate of return was 17.29% and 7.30% in 2017 and 2016 respectively. The system's investment policy is designed to achieve a long-term rate of return of 7.75% and fluctuation in annual investment returns is expected.

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

	<u>2017</u>	<u>2016</u>
<b>Statement of Fiduciary Net Position</b>		
<b>Assets:</b>		
Cash.....	\$ 5,160,971	\$ 5,025,170
Investments.....	6,842,946	126,715,206
Receivables.....	150,217,763	502,836
<b>Total Assets.....</b>	<b><u>162,221,680</u></b>	<b><u>132,243,212</u></b>
<b>Liabilities:</b>		
Accounts payable.....	-	95,869
<b>Net Position Restricted for Pension Benefits.....</b>	<b><u>\$ 162,221,680</u></b>	<b><u>\$ 132,147,343</u></b>

<b>Statement of Changes in Fiduciary Net Position</b>	<u>2017</u>	<u>2016</u>
<b>Additions:</b>		
Contributions:		
Member contributions.....	\$ 3,954,421	\$ 3,828,857
Employer contributions.....	6,283,276	5,986,402
Other contributions.....	<u>347,211</u>	<u>373,596</u>
Total contributions.....	<u>10,584,908</u>	<u>10,188,855</u>
Net investment income (loss):		
Total investment income (loss).....	23,163,745	9,636,385
Less, investment expenses.....	<u>(732,502)</u>	<u>(646,234)</u>
Net investment income (loss).....	<u>22,431,243</u>	<u>8,990,151</u>
<b>Total additions.....</b>	<b><u>33,016,151</u></b>	<b><u>19,179,006</u></b>
<b>Deductions:</b>		
Administration.....	439,389	353,615
Retirement benefits, refunds and transfers.....	<u>9,137,996</u>	<u>8,522,558</u>
<b>Total deductions.....</b>	<b><u>9,577,385</u></b>	<b><u>8,876,173</u></b>
<b>Net increase (decrease) in fiduciary net position.....</b>	<b>23,438,766</b>	<b>10,302,833</b>
<b>Fiduciary net position at beginning of year.....</b>	<b><u>132,147,343</u></b>	<b><u>121,844,510</u></b>
<b>Fiduciary net position at end of year.....</b>	<b><u>\$ 155,586,109</u></b>	<b><u>\$ 132,147,343</u></b>

### ***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, 9 Airport Road, Suite 1, Vineyard Haven, Massachusetts, 02568.



## STATEMENT OF FIDUCIARY NET POSITION

DECEMBER 31, 2017

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<b>Assets</b>	
Cash and cash equivalents.....	\$ 5,160,971
Investments:	
Fixed income securities.....	13,947,194
Equities.....	38,055,637
Pooled domestic equity funds.....	19,018,574
PRIT pooled international equity funds.....	6,842,946
PRIT pooled real estate funds.....	12,179,800
PRIT core fund.....	59,981,693
Receivables, net of allowance for uncollectibles:	
Member deductions.....	191,919
Other accounts receivable.....	161,608
Interest and dividends.....	<u>58,902</u>
Total Assets.....	<u>155,599,244</u>
<b>Liabilities</b>	
Accounts payable.....	<u>13,135</u>
<b>Net Position Restricted for Pensions.....</b>	<b>\$ <u>155,586,109</u></b>

See notes to financial statements.

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

YEAR ENDED DECEMBER 31, 2017

### Additions:

#### Contributions:

Employer pension appropriation.....	\$	6,283,276
Member contributions.....		3,954,421
Transfers from other systems.....		130,872
3(8)c contributions from other systems.....		170,170
Workers compensation settlements.....		4,950
State COLA reimbursements.....		11,123
Member makeup payments and redeposits.....		30,096

Total contributions..... 10,584,908

#### Net investment income:

Investment income (loss)..... 23,163,745

Less: investment expense..... (732,502)

Net investment income (loss)..... 22,431,243

Total additions..... 33,016,151

### Deductions:

Administration.....	439,389
Retirement benefits and refunds.....	8,234,945
Transfers to other systems.....	340,714
3(8)c transfer to other systems.....	562,337

Total deductions..... 9,577,385

Net increase (decrease) in fiduciary net position..... 23,438,766

**Fiduciary net position at beginning of year..... 132,147,343**

**Fiduciary net position at end of year..... \$ 155,586,109**

See notes to financial statements.

**NOTE 1 – PLAN DESCRIPTION**

The Dukes County Contributory Retirement System (System) is a multiple-employer, cost-sharing, contributory defined benefit pension plan covering eligible employees of the 15 member units deemed eligible by the Dukes County Retirement Board (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 System is mandatory immediately upon the commencement of employment for all non-teaching, permanent, full-time employees. Part-time, provisional, temporary, seasonal or intermittent employees who are regularly employed for an average of at least 20 hours per week, minimum of 520 hours and have completed 6 months of service must also become members of the System.

Originally established in 1939, 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 Massachusetts General Laws (MGL) Ch. 32, Section 20 for terms not to exceed 3 years.

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

As of December 31, 2017, the System had 315 retirees and beneficiaries, 682 active participants and 197 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 MGL. 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 uniform from system to system, with certain exceptions such as cost of living adjustments which can be adopted by the Board from time to time. 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, veteran status, cost of living adjustments 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 normally become vested after ten years of creditable service. However, if hired prior to 1978 a superannuation retirement allowance may be received at age 55 with no vesting requirement. If hired after January 1, 1978 and before April 2, 2012 a superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching age 55 with ten years of service. A person who became a member after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching age 60 with ten years of service if in Group 1, 55 years of age with ten years of service if in Group 2 or age 55 in Group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions whose normal retirement age is 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 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 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. MGL Chapter 32 requires that systems be on an actuarially determined funding schedule to be fully funded by 2040. Under the current funding schedule, the System will be fully funded by 2030.

In the January 1, 2016, actuarial valuation, the administrative expenses were assumed to be \$350,000 and are anticipated to increase at 4% per year.

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 Dukes County Contributory 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.

The System 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.

### Fair Value Measurements

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

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

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

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

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

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

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

### Accounts Receivable

Accounts receivable consist of member deductions, pension fund appropriations, and amounts due from the Commonwealth for cost of living increases. 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 System 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 System 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 consisting of the County Treasurer, who shall be a member ex-officio, a second member appointed by the governing authority (the County Commission), a third and fourth member who shall be elected by the members in or retired from the service of such System, and a fifth member appointed by the Advisory Council.

Ex-Officio Member.....	Noreen Mavro Flanders, Chairperson	Term Expires: January 6, 2021
Elected Member.....	Jo Ann Murphy	Term Expires: December 31, 2019
Elected Member.....	David B. Rossi	Term Expires: December 31, 2019
Appointed Member.....	Roger Wey, appointed by County Commissioners	Term Expires: December 31, 2020
Appointed Member.....	Melanie Becker, appointed by Advisory Council	Term Expires: December 31, 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 the Executive Director of PERAC.

The Advisory Council consists of all the treasurers, elected or appointed, for each town, unit or district within the System. The members of the Advisory Council elect a Chairperson from among its members. The System Advisory Council is required by statute to meet twice per year, typically in the spring and fall. All System 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 warrants approved by the members of the Board.

System board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. The System has obtained bonding through the Massachusetts Association of Contributory Retirement Systems program that provides \$10,000,000 of fiduciary protection for Trustees and employees.

**NOTE 4 – CASH AND INVESTMENTS**

Custodial Credit Risk - Deposits

At December 31, 2017, the carrying amount of the System’s deposits totaled \$3,953,219 and the bank balance totaled \$4,060,675. The bank balance was covered by the Federal Deposit Insurance Corporation (FDIC) and none of the funds were exposed to custodial credit risk.

**Investments**

The System's investments are as follows:

<u>Investment Type</u>	<u>Fair Value</u>	<u>Less Than 1 Year</u>	<u>1 - 5 Years</u>	<u>6 - 10 Years</u>	<u>More Than 10 Years</u>
<b>Debt Securities</b>					
U.S Government agencies.....	\$ 3,142,155	\$ -	\$ -	\$ -	\$ 3,142,155
Government sponsored enterprises.....	5,896,763	2,292,511	2,087,757	649,911	866,584
Corporate bonds.....	<u>4,908,276</u>	<u>-</u>	<u>4,908,276</u>	<u>-</u>	<u>-</u>
Total debt securities.....	13,947,194	<u>\$ 2,292,511</u>	<u>\$ 6,996,033</u>	<u>\$ 649,911</u>	<u>\$ 4,008,739</u>
<b>Other Investments</b>					
Equities.....	57,074,211				
Money market mutual funds.....	1,207,752				
Pension Reserve Investment Trust (PRIT).....	<u>79,004,439</u>				
Total investments.....	<u>\$ 151,233,596</u>				

**Fair Value of Investments**

The System holds investments that are measured at fair value on a recurring basis. Because investing is not a core part of the System's mission, the System determines that the disclosures related to these investments only need to be disaggregated by major type. The System chooses a tabular format for disclosing the levels within the fair value hierarchy.

The following table presents financial assets at December 31, 2017, for which the System measures fair value on a recurring basis, by level, within the fair value hierarchy:

<u>Investment Type</u>	<u>12/31/17</u>	<u>Fair Value Measurements Using</u>		
		<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
<b>Investments by fair value level</b>				
<b>Debt Securities:</b>				
U.S. Government Treasuries.....	\$ 3,142,155	\$ 3,142,155	\$ -	\$ -
Government Sponsored Enterprises.....	5,896,763	5,896,763	-	-
Corporate bonds.....	<u>4,908,276</u>	<u>-</u>	<u>4,908,276</u>	<u>-</u>
Total debt securities.....	<u>13,947,194</u>	<u>9,038,918</u>	<u>4,908,276</u>	<u>-</u>
<b>Other investments:</b>				
Equities.....	57,074,211	57,074,211	-	-
Money market mutual funds.....	<u>1,207,752</u>	<u>1,207,752</u>	<u>-</u>	<u>-</u>
Total other investments.....	<u>58,281,963</u>	<u>58,281,963</u>	<u>-</u>	<u>-</u>
Total investments by fair value level.....	<u>72,229,157</u>	<u>\$ 67,320,881</u>	<u>\$ 4,908,276</u>	<u>\$ -</u>
<b>Investments measured at net asset value (NAV)</b>				
Pension Reserve Investment Trust (PRIT).....	<u>79,004,439</u>			
Total investments measured at NAV.....	<u>79,004,439</u>			
Total investments.....	<u>\$ 151,233,596</u>			

U.S. Government Treasuries and Government Sponsored Enterprises, equities, money market mutual funds, and pooled domestic equity funds classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

52% of the Retirement System's investments are in the Pension Reserve Investment Trust (PRIT). PRIT Investments are valued using the net asset value method. 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 (PRIM). The fair values of the positions in each investment Pool are the same as the value of each Pool's shares. The System does not have the ability to control any of the investment decisions relative to its funds in PRIT.

9% of the Retirement System's investments are in debt securities of which \$3,142,155 are invested in U.S. Government Securities and \$5,896,763 are invested in Government Sponsored Enterprises all of which are rated AA+. The remaining \$4,908,276 of debt securities are invested in corporate bonds of which \$715,184 was rated \$AA+, \$347,124 was rated AA, \$509,398 was rated AA-, \$1,817,801 was rated A+, \$256,852 was rated A, \$866,402 was rated A-, and \$395,515 was rated BBB+. 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 remaining 39% of the Retirement System's investments are in equities and money market mutual funds. 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 System's annual money-weighted rate of return on pension plan investments was 17.29%. 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, 2017, receivables for the System are as follows:

<u>Receivables:</u>	
Member deductions.....	\$ 191,919
Other receivables.....	161,608
Interest due and accrued.....	<u>58,902</u>
	<u>\$ 412,429</u>



**NOTE 6 – MEMBERSHIP**

At December 31, 2017, pension plan membership consisted of the following:

Retired plan members or beneficiaries currently receiving benefits.....	315
Inactive plan members entitled to but not yet receiving benefits.....	197
Active plan members.....	<u>682</u>
 Total.....	 <u><u>1,194</u></u>

**NOTE 7 – ACTUARIAL VALUATION**

The total pension liability was determined by an actuarial valuation as of January 1, 2016, using the following actuarial assumptions, applied to all periods included in the measurement that was updated to December 31, 2017:

Valuation date.....	January 1, 2016
Actuarial cost method.....	Entry age normal cost method.
Amortization method.....	<p>UAAL: Increasing dollar amount at 4.5% to reduce the unfunded actuarial accrued liability to zero on or before June 30, 2030. The annual increase in appropriation is further limited to 5% per year for FY2018 and FY2019 and 5.32% for FY2020 and beyond.</p> <p>2002 &amp; 2003 ERI's: Increasing dollar amount to reduce the unfunded actuarial accrued liability attributable to the ERI's to zero on or before June 30, 2028.</p>
Remaining amortization period.....	<p>13 years for the UAL as of December 31, 2017</p> <p>11 years for the 2002 and 2003 ERI's as of December 31, 2017</p>
Asset valuation method.....	<p>The actuarial value of assets is the market value of assets as of the valuation date reduced by the sum of:</p> <ul style="list-style-type: none"> <li>a) 80% of gains and losses of the prior year,</li> <li>b) 60% of gains and losses of the second prior year,</li> <li>c) 40% of gains and losses of the third prior year and</li> <li>d) 20% of gains and losses of the fourth prior year.</li> </ul> <p>Investment gains and losses are determined by the excess or deficiency of the expected return over the actual return on the market value. The actuarial valuation of assets is further constrained to be not less than 80% or more than 120% of market value.</p>
Inflation rate.....	3% per year
Projected salary increases.....	6% - 4.25% for general employees and 7% - 4.75% for public safety, depending on years of service

Payroll growth.....	4% per year
Cost of living allowances.....	Cost of living adjustments of 3% of the first \$14,000 of the annual retirement allowance are provided at the discretion of the System's Retirement Board.
Rates of retirement.....	Varies based upon age for general employees, police and fire employees.
Rates of disability.....	Varies based upon age for general employees, police and fire employees.
Mortality Rates.....	Mortality rates were based on the RP-2000 Mortality Table (base year 2009) with full generational mortality improvements using Scale BB. For disabled lives, the mortality rates were based on the RP-2000 Mortality Table (base year 2012) with full generational mortality improvement using Scale BB.
Investment rate of return/Discount rate.....	7.75%, net of pension plan investment expense, including inflation

The components of the net pension liability of the participating member units at December 31, 2017, were as follows:

Total pension liability.....	\$ 188,758,360
Plan fiduciary net position.....	<u>(155,586,109)</u>
Net pension liability.....	\$ <u>33,172,251</u>
Plan fiduciary net position as a percentage of the total pension liability.....	82.43%

*Investment policy:* The pension plan’s policy in regard to the allocation of invested assets in the PRIT is established by the PRIM. The policy with regard to the allocation of all other invested assets is established by the Retirement 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 December 31, 2017, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity.....	40.00%	6.00%
International equity.....	15.00%	4.90%
Alternatives - Private equity.....	5.00%	10.40%
Hedge funds.....	2.50%	1.60%
Real estate.....	10.00%	6.60%
Timber.....	2.50%	3.70%
Fixed income.....	25.00%	2.00%
	100.00%	

*Discount rate:* The discount rate used to measure the total pension liability was 7.75%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rates and that contributions from participating employers will be made in accordance with Sections 22D and 22F of Chapter 32 of the Massachusetts General Laws and at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

*Sensitivity of the net pension liability to changes in the discount rate:* The following presents the net pension liability, calculated using the discount rate of 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.75%) or 1-percentage-point higher (8.75% than the current rate:

	1% Decrease (6.75%)	Current Discount (7.75%)	1% Increase (8.75%)
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Dukes County Retirement System's net pension liability as of December 31, 2017.....	\$ 55,063,176	\$ 33,172,251	\$ 14,650,546

*Contributions:* Governmental employers are required to pay an annual appropriation as established by statute and approved 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”. Pension fund appropriations have been allocated among employers using an actuarial based methodology that allocates contributions to member units based on the member units actuarially determined total liability at the beginning of the measurement period.

**NOTE 8 – SUBSEQUENT EVENTS**

Management has evaluated subsequent events through August 17, 2018, which is the date the financial statements were available to be issued.

**NOTE 9 – IMPLEMENTATION OF NEW GASB PRONOUNCEMENTS**

During 2017, the following GASB pronouncements were implemented:

- GASB Statement #78, Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans. This pronouncement did not impact the basic financial statements.
- GASB Statement #82, Pension Issues – an amendment of GASB Statements #67, #68, and #73. The basic financial statements and related notes were updated to be in compliance with this pronouncement.

The following GASB pronouncements will be implemented in the future:

- The GASB issued Statement #83, *Certain Asset Retirement Obligations*, which is required to be implemented in 2019.
- The GASB issued Statement #84, *Fiduciary Activities*, which is required to be implemented in 2019.
- The GASB issued Statement #85, *Omnibus 2017*, which is required to be implemented in 2018.
- The GASB issued Statement #86, *Certain Debt Extinguishment Issues*, which is required to be implemented in 2018.
- The GASB issued Statement #87, *Leases*, which is required to be implemented in 2021.

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

# ***Required Supplementary Information***

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY  
AND RELATED RATIOS**

	December 31, 2014	December 31, 2015	December 31, 2016	December 31, 2017
<b>Total pension liability:</b>				
Service cost.....	\$ 5,025,980	\$ 5,025,980	\$ 5,415,494	\$ 5,411,256
Interest.....	10,735,538	11,840,742	12,602,395	13,886,266
Differences between expected and actual experience.....	-	-	743,316	-
Changes in assumptions.....	-	-	6,062,453	-
Benefit payments.....	<u>(6,091,596)</u>	<u>(6,961,135)</u>	<u>(7,895,706)</u>	<u>(8,611,039)</u>
Net change in total pension liability.....	<u>9,669,922</u>	<u>9,905,587</u>	<u>16,927,952</u>	<u>10,686,483</u>
Total pension liability - beginning.....	<u>141,568,416</u>	<u>151,238,338</u>	<u>161,143,925</u>	<u>178,071,877</u>
Total pension liability - ending (a).....	<u>\$ 151,238,338</u>	<u>\$ 161,143,925</u>	<u>\$ 178,071,877</u>	<u>\$ 188,758,360</u>
<b>Plan fiduciary net position:</b>				
Employer pension appropriation.....	\$ 5,601,553	\$ 5,777,664	\$ 5,986,402	\$ 6,283,276
Member contributions.....	3,745,783	3,545,293	3,575,601	3,774,675
Net investment income (loss).....	8,571,042	4,613,029	8,990,151	22,431,243
Administrative expenses.....	(322,018)	(323,866)	(353,615)	(439,389)
Retirement benefits and refunds.....	<u>(6,091,596)</u>	<u>(6,961,135)</u>	<u>(7,895,706)</u>	<u>(8,611,039)</u>
Net increase (decrease) in fiduciary net position.....	11,504,764	6,650,985	10,302,833	23,438,766
Fiduciary net position - beginning of year.....	<u>103,688,761</u>	<u>115,193,525</u>	<u>121,844,510</u>	<u>132,147,343</u>
Fiduciary net position - end of year (b).....	<u>\$ 115,193,525</u>	<u>\$ 121,844,510</u>	<u>\$ 132,147,343</u>	<u>\$ 155,586,109</u>
<b>Net pension liability - ending (a)-(b).....</b>	<u>\$ 36,044,813</u>	<u>\$ 39,299,415</u>	<u>\$ 45,924,534</u>	<u>\$ 33,172,251</u>
Plan fiduciary net position as a percentage of the total pension liability.....	76.17%	75.61%	74.21%	82.43%
Covered payroll.....	\$ 34,859,969	\$ 36,254,368	\$ 37,993,450	\$ 37,822,874
Net pension liability as a percentage of covered payroll.....	103.40%	108.40%	120.87%	87.70%

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**

	December 31, 2014	December 31, 2015	December 31, 2016	December 31, 2017
Actuarially determined contribution.....	\$ 5,601,553	\$ 5,777,664	\$ 5,986,402	\$ 6,283,276
Contributions in relation to the actuarially determined contribution.....	<u>(5,601,553)</u>	<u>(5,777,664)</u>	<u>(5,986,402)</u>	<u>(6,283,276)</u>
Contribution deficiency (excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll.....	\$ 34,859,969	\$ 36,254,368	\$ 37,993,450	\$ 37,822,874
Contributions as a percentage of covered payroll.....	16.07%	15.94%	15.76%	16.61%

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

See notes to required supplementary information.

**SCHEDULE OF INVESTMENT RETURNS**

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<u>Year</u>	<u>Annual money-weighted rate of return, net of investment expense</u>
December 31, 2017.....	17.29%
December 31, 2016.....	7.30%
December 31, 2015.....	4.95%
December 31, 2014.....	8.13%

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

**NOTE B – CONTRIBUTIONS**

Governmental employers are required to pay an annual appropriation as established by statute and approved 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". Pension fund appropriations have been allocated among employers using an actuarial based methodology that allocates contributions to member units based on the member units actuarially determined total liability at the beginning of the measurement period.

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

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

**NOTE D – CHANGES OF ASSUMPTIONS**

None.

**NOTE E – CHANGES IN PLAN PROVISIONS**

None.

# ***Audit of Specific Elements, Accounts and Items of Financial Statements***

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## **Independent Auditor's Report**

To the Honorable Dukes County Retirement Board  
Dukes County Contributory Retirement System  
Vineyard Haven, Massachusetts

We have audited the accompanying schedule of employer allocations of the Dukes County Contributory Retirement System (System) as of and for the year ended December 31, 2017, and the related notes. We have also audited the total for all entities of the rows titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, covered payroll and total employer pension expense and contributions included in the accompanying schedule of pension amounts by employer of the System Pension Plan as of and for the year ended December 31, 2017, and the beginning net pension liability as of and for the year ended December 31, 2016, and the related notes.

## **Management's Responsibility for the Schedules**

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

## **Auditor's Responsibility**

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of 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, covered payroll, employer pension expense and contributions for the total of all participating entities for the Dukes County Contributory Retirement System as of and for the year ended December 31, 2017, and the beginning net pension liability as of and for the year ended December 31, 2016, in accordance with accounting principles generally accepted in the United States of America.

## **Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Dukes County Contributory Retirement System as of and for the year ended December 31, 2017, and our report thereon, dated August 17, 2018, expressed an unmodified opinion on those financial statements.

## **Restriction on Use**

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

A handwritten signature in cursive script that reads "Ponce & Sullivan, LLC".

August 17, 2018

**SCHEDULE OF EMPLOYER ALLOCATIONS**

FOR THE YEAR ENDED DECEMBER 31, 2017

Employer	Total Pension Liability (*)	Proportionate Share of Total Pension Liability
Up-Island School.....	\$ 5,371,628	3.017%
Dukes County.....	13,448,205	7.552%
Tisbury.....	31,771,880	17.842%
Edgartown.....	44,046,831	24.735%
Oak Bluffs.....	30,679,977	17.229%
West Tisbury.....	12,657,240	7.108%
Chilmark.....	9,205,438	5.170%
Aquinnah.....	3,957,367	2.222%
Gosnold.....	769,834	0.432%
Martha's Vineyard Transit Authority.....	1,217,627	0.684%
Martha's Vineyard Regional School.....	14,268,447	8.013%
Martha's Vineyard Landbank.....	2,706,695	1.520%
Martha's Vineyard Refuse.....	2,248,549	1.263%
Martha's Vineyard Commission.....	3,656,905	2.054%
Oak Bluffs Water District.....	2,065,254	1.160%
<b>Total.....</b>	<b>\$ 178,071,877</b>	<b>100.000%</b>

\* Total pension liability as of 1/1/17.

**SCHEDULE OF PENSION AMOUNTS BY EMPLOYER**

FOR THE YEAR ENDED DECEMBER 31, 2017

	Up-Island School	Dukes County	Tisbury	Edgartown	Oak Bluffs
<b>Net Pension Liability</b>					
Beginning net pension liability.....	\$ 1,385,337	\$ 3,468,277	\$ 8,193,932	\$ 11,359,626	\$ 7,912,331
Ending net pension liability.....	\$ 1,000,658	\$ 2,505,209	\$ 5,918,648	\$ 8,205,296	\$ 5,715,242
<b>Deferred Outflows of Resources</b>					
Differences between expected and actual experience.....	\$ 14,998	\$ 37,548	\$ 88,708	\$ 122,981	\$ 85,660
Changes of assumptions.....	122,322	306,240	723,503	1,003,026	698,639
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	80,045	1,138	4,953	77,237	9,906
Total Deferred Outflows of Resources.....	\$ 217,365	\$ 344,926	\$ 817,164	\$ 1,203,244	\$ 794,205
<b>Deferred Inflows of Resources</b>					
Net difference between projected and actual investment earnings on pension plan investments.....	\$ 233,642	\$ 584,939	\$ 1,381,936	\$ 1,915,843	\$ 1,334,443
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	-	174,756	71,670	181,894	157,617
Total Deferred Inflows of Resources.....	\$ 233,642	\$ 759,695	\$ 1,453,606	\$ 2,097,737	\$ 1,492,060
<b>Pension Expense</b>					
Proportionate share of plan pension expense.....	\$ 159,078	\$ 398,268	\$ 940,913	\$ 1,304,431	\$ 908,576
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions.....	20,803	(46,008)	(17,872)	(26,084)	(34,793)
Total Employer Pension Expense.....	\$ 179,881	\$ 352,260	\$ 923,041	\$ 1,278,347	\$ 873,783
<b>Contributions</b>					
Statutory required contribution.....	\$ 203,507	\$ 475,890	\$ 1,123,192	\$ 1,470,470	\$ 1,041,850
Contribution in relation to statutory required contribution.....	(203,507)	(475,890)	(1,123,192)	(1,470,470)	(1,041,850)
Contribution deficiency/(excess).....	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a percentage of covered payroll.....	17.84%	16.66%	16.64%	15.72%	15.99%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>					
June 30, 2018.....	\$ 8,489	\$ (76,839)	\$ (90,710)	\$ (127,058)	\$ (105,126)
June 30, 2019.....	11,032	(70,472)	(75,673)	(106,216)	(90,610)
June 30, 2020.....	(15,473)	(136,832)	(232,450)	(323,556)	(241,996)
June 30, 2021.....	(24,543)	(132,959)	(245,522)	(334,567)	(259,741)
June 30, 2022.....	4,125	2,328	7,898	(2,542)	(113)
Thereafter.....	93	5	15	(554)	(269)
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ (16,277)	\$ (414,769)	\$ (636,442)	\$ (894,493)	\$ (697,855)
<b>Discount Rate Sensitivity</b>					
1% decrease (6.75%).....	\$ 1,661,008	\$ 4,158,440	\$ 9,824,463	\$ 13,620,109	\$ 9,486,826
Current discount rate (7.75%).....	\$ 1,000,658	\$ 2,505,209	\$ 5,918,648	\$ 8,205,296	\$ 5,715,242
1% increase (8.75%).....	\$ 441,941	\$ 1,106,428	\$ 2,613,975	\$ 3,623,874	\$ 2,524,140
Covered Payroll.....	\$ 1,140,946	\$ 2,856,428	\$ 6,748,420	\$ 9,355,648	\$ 6,516,497

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, 2017

	West Tisbury	Chilmark	Aquinnah	Gosnold
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 3,264,288	\$ 2,374,072	\$ 1,020,600	\$ 198,539
Ending net pension liability.....	\$ 2,357,863	\$ 1,714,842	\$ 737,201	\$ 143,409
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 35,340	\$ 25,702	\$ 11,049	\$ 2,149
Changes of assumptions.....	288,228	209,624	90,116	17,531
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>36,552</u>	<u>45,275</u>	<u>73,748</u>	<u>2,756</u>
Total Deferred Outflows of Resources.....	<u>\$ 360,120</u>	<u>\$ 280,601</u>	<u>\$ 174,913</u>	<u>\$ 22,436</u>
<b>Deferred Inflows of Resources</b>				
Net difference between projected and actual investment earnings on pension plan investments.....	\$ 550,534	\$ 400,396	\$ 172,128	\$ 33,484
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>17,774</u>	<u>25,911</u>	<u>-</u>	<u>4,485</u>
Total Deferred Inflows of Resources.....	<u>\$ 568,308</u>	<u>\$ 426,307</u>	<u>\$ 172,128</u>	<u>\$ 37,969</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 374,839	\$ 272,616	\$ 117,197	\$ 22,798
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions....	<u>2,341</u>	<u>4,882</u>	<u>17,421</u>	<u>(642)</u>
Total Employer Pension Expense.....	<u>\$ 377,180</u>	<u>\$ 277,498</u>	<u>\$ 134,618</u>	<u>\$ 22,156</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 477,434	\$ 342,051	\$ 173,828	\$ 30,013
Contribution in relation to statutory required contribution....	<u>(477,434)</u>	<u>(342,051)</u>	<u>(173,828)</u>	<u>(30,013)</u>
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	17.76%	17.49%	20.68%	18.35%
<b>Deferred Inflows/(Outflows) Recognized in Future Pension Expense</b>				
June 30, 2018.....	\$ (26,679)	\$ (16,222)	\$ 8,346	\$ (2,409)
June 30, 2019.....	(20,684)	(11,865)	10,221	(2,042)
June 30, 2020.....	(83,142)	(57,289)	(9,308)	(5,842)
June 30, 2021.....	(86,275)	(65,563)	(13,729)	(5,900)
June 30, 2022.....	8,388	5,119	7,029	641
Thereafter.....	<u>204</u>	<u>114</u>	<u>226</u>	<u>19</u>
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ (208,188)</u>	<u>\$ (145,706)</u>	<u>\$ 2,785</u>	<u>\$ (15,533)</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.75%).....	\$ 3,913,857	\$ 2,846,495	\$ 1,223,692	\$ 238,047
Current discount rate (7.75%).....	\$ 2,357,863	\$ 1,714,842	\$ 737,201	\$ 143,409
1% increase (8.75%).....	\$ 1,041,352	\$ 757,361	\$ 325,585	\$ 63,337
Covered Payroll.....	\$ 2,688,427	\$ 1,955,256	\$ 840,554	\$ 163,515
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, 2017

	Martha's Vineyard Transit Authority	Martha's Vineyard Regional School	Martha's Vineyard Landbank	Martha's Vineyard Refuse
<b>Net Pension Liability</b>				
Beginning net pension liability.....	\$ 314,025	\$ 3,679,816	\$ 698,054	\$ 579,898
Ending net pension liability.....	\$ 226,827	\$ 2,658,008	\$ 504,219	\$ 418,873
<b>Deferred Outflows of Resources</b>				
Differences between expected and actual experience.....	\$ 3,400	\$ 39,838	\$ 7,557	\$ 6,278
Changes of assumptions.....	27,728	324,918	61,634	51,204
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>22,760</u>	<u>188,993</u>	<u>31,647</u>	<u>26,600</u>
Total Deferred Outflows of Resources.....	\$ <u>53,888</u>	\$ <u>553,749</u>	\$ <u>100,838</u>	\$ <u>84,082</u>
<b>Deferred Inflows of Resources</b>				
Net difference between projected and actual investment earnings on pension plan investments.....	\$ 52,961	\$ 620,614	\$ 117,729	\$ 97,802
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>5,042</u>	<u>-</u>	<u>31,019</u>	<u>905</u>
Total Deferred Inflows of Resources.....	\$ <u>58,003</u>	\$ <u>620,614</u>	\$ <u>148,748</u>	\$ <u>98,707</u>
<b>Pension Expense</b>				
Proportionate share of plan pension expense.....	\$ 36,058	\$ 422,554	\$ 80,157	\$ 66,590
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions....	<u>5,630</u>	<u>48,343</u>	<u>1,491</u>	<u>6,793</u>
Total Employer Pension Expense.....	\$ <u>41,688</u>	\$ <u>470,897</u>	\$ <u>81,648</u>	\$ <u>73,383</u>
<b>Contributions</b>				
Statutory required contribution.....	\$ 36,922	\$ 561,650	\$ 69,474	\$ 78,255
Contribution in relation to statutory required contribution....	<u>(36,922)</u>	<u>(561,650)</u>	<u>(69,474)</u>	<u>(78,255)</u>
Contribution deficiency/(excess).....	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>	\$ <u>-</u>
Contributions as a percentage of covered payroll.....	14.28%	18.53%	12.08%	16.39%
<b>Deferred Inflows/(Outflows) Recognized in</b>				
<b>Future Pension Expense</b>				
June 30, 2018.....	\$ 2,836	\$ 15,630	\$ (4,712)	\$ 1,637
June 30, 2019.....	3,414	22,386	(3,432)	2,702
June 30, 2020.....	(2,594)	(48,024)	(16,789)	(8,394)
June 30, 2021.....	(7,121)	(71,311)	(19,361)	(11,161)
June 30, 2022.....	(610)	14,069	(3,443)	597
Thereafter.....	<u>(40)</u>	<u>385</u>	<u>(173)</u>	<u>(6)</u>
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	\$ <u>(4,115)</u>	\$ <u>(66,865)</u>	\$ <u>(47,910)</u>	\$ <u>(14,625)</u>
<b>Discount Rate Sensitivity</b>				
1% decrease (6.75%).....	\$ 376,513	\$ 4,412,072	\$ 836,961	\$ 695,294
Current discount rate (7.75%).....	\$ 226,827	\$ 2,658,008	\$ 504,219	\$ 418,873
1% increase (8.75%).....	\$ 100,178	\$ 1,173,911	\$ 222,689	\$ 184,995
Covered Payroll.....	\$ 258,627	\$ 3,030,651	\$ 574,908	\$ 477,597
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, 2017

	Martha's Vineyard Commission	Oak Bluffs Water District	Totals
<b>Net Pension Liability</b>			
Beginning net pension liability.....	\$ 943,112	\$ 532,627	\$ 45,924,534
Ending net pension liability.....	\$ 681,229	\$ 384,727	\$ 33,172,251
<b>Deferred Outflows of Resources</b>			
Differences between expected and actual experience.....	\$ 10,210	\$ 5,766	\$ 497,184
Changes of assumptions.....	83,274	47,030	4,055,017
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>4,404</u>	<u>93,898</u>	<u>699,912</u>
Total Deferred Outflows of Resources.....	<u>\$ 97,888</u>	<u>\$ 146,694</u>	<u>\$ 5,252,113</u>
<b>Deferred Inflows of Resources</b>			
Net difference between projected and actual investment earnings on pension plan investments.....	\$ 159,059	\$ 89,829	\$ 7,745,339
Changes in proportion and differences between employer contributions and proportionate share of contributions.....	<u>11,664</u>	<u>17,175</u>	<u>699,912</u>
Total Deferred Inflows of Resources.....	<u>\$ 170,723</u>	<u>\$ 107,004</u>	<u>\$ 8,445,251</u>
<b>Pension Expense</b>			
Proportionate share of plan pension expense.....	\$ 108,298	\$ 61,162	\$ 5,273,535
Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions....	<u>(1,715)</u>	<u>19,410</u>	<u>-</u>
Total Employer Pension Expense.....	<u>\$ 106,583</u>	<u>\$ 80,572</u>	<u>\$ 5,273,535</u>
<b>Contributions</b>			
Statutory required contribution.....	\$ 129,303	\$ 69,437	\$ 6,283,276
Contribution in relation to statutory required contribution....	<u>(129,303)</u>	<u>(69,437)</u>	<u>(6,283,276)</u>
Contribution deficiency/(excess).....	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Contributions as a percentage of covered payroll.....	16.65%	15.83%	16.61%
<b>Deferred Inflows/(Outflows) Recognized in</b>			
<b>Future Pension Expense</b>			
June 30, 2018.....	\$ (10,100)	\$ 14,675	\$ (408,242)
June 30, 2019.....	(8,366)	15,653	(323,952)
June 30, 2020.....	(26,414)	5,463	(1,202,640)
June 30, 2021.....	(28,840)	3,220	(1,303,373)
June 30, 2022.....	883	702	45,071
Thereafter.....	<u>2</u>	<u>(23)</u>	<u>(2)</u>
Total Deferred Inflows/(Outflows) Recognized in Future Pension Expense.....	<u>\$ (72,835)</u>	<u>\$ 39,690</u>	<u>\$ (3,193,138)</u>
<b>Discount Rate Sensitivity</b>			
1% decrease (6.75%).....	\$ 1,130,784	\$ 638,615	\$ 55,063,176
Current discount rate (7.75%).....	\$ 681,229	\$ 384,727	\$ 33,172,251
1% increase (8.75%).....	\$ 300,865	\$ 169,915	\$ 14,650,546
Covered Payroll.....	\$ 776,735	\$ 438,665	\$ 37,822,874
See notes to schedule of employer allocations and schedule of pension amounts by employer.			(concluded)

## **NOTE I – SCHEDULE OF EMPLOYER ALLOCATIONS**

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

GASB Statement #68 requires the allocation of the collective pension amounts to 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 Dukes County Contributory Retirement System's collective pension amounts.

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 unless another methodology is approved by the Board.

Pension fund appropriations have been allocated among employers using an actuarial based methodology that allocates contributions to member units based on the member units actuarially determined Total Pension Liability at the beginning of the measurement period. This is the long-term expected contribution rate that is the basis for preparing the schedule of employer allocations.

The System also uses the actuarially determined Total Pension Liability at the beginning of the measurement period as the method of allocation and roll forward measurements for each employer. Therefore, when the current Total Pension Liability has been rolled forward from the prior year the proportionate share will remain the same. A change in proportionate share by employer will only occur in the first measurement date after a new actuarial valuation. Based on the results of the January 1, 2016, valuation, changes in proportion and differences between employer contributions and the proportionate share of contributions have been reported for each employer because the proportionate share is developed from the Total Pension Liability not from actual employer contributions.

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 remaining 2002 and 2003 ERIP's are being amortized using an increasing dollar amount at 4.5% to reduce the unfunded actuarial accrued liability attributable to the ERIP's to zero on or before June 30, 2028.

## **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, pension expense, and contributions for all participating employers including differences between expected and actual economic experience; differences between projected and actual investment earnings, net; and changes of assumptions.

Under GASB 68, the difference between projected and actual investment earnings gains and losses on investments are deferred and amortized using a 5 year straight line method. Differences between expected and actual economic experience, changes of assumptions and proportionate share changes use a straight line amortization method over the average expected remaining service lives of active members compared to all active, inactive, and retired members.