

**TOWN OF LITTLETON, MASSACHUSETTS**  
**MUNICIPAL ELECTRIC LIGHT**  
**DEPARTMENT**

**Financial Statements**

**December 31, 2016**

**(With Accountants' Report Thereon)**

***Giusti, Hingston and Company***  
***Certified Public Accountants***  
***36 Jackman St., Unit 1 \* Georgetown, MA 01833 \* (Tel) 978-352-7470***

Town of Littleton, Massachusetts  
 Municipal Electric Light Department  
 FINANCIAL STATEMENTS AND AUDITORS' REPORT  
 For the Year Ended December 31, 2016

TABLE OF CONTENTS

	<b>Page</b>
<b>Independent Auditors' Report</b>	1,2
<b>Management's Discussion and Analysis (Required Supplementary Information)</b>	3-6
<b>Basic Financial Statements</b>	
• Statement of Net Position	7
• Statement of Revenues, Expenses and Changes in Net Position	8
• Statement of Cash Flows	9
• Statement of Fiduciary Net Position - Fiduciary Funds	10
• Statement of Changes in Fiduciary Net Position - Fiduciary Funds	11
<b>Notes to the Financial Statements</b>	12-34
<b>Required Supplementary Information</b>	
• Schedule of the Littleton Electric Light Department's Proportion Share of the Net Pension Liability - Middlesex County Retirement System	36
• Schedule of the Littleton Electric Light Department's Contributions - Middlesex County Retirement System	37
• Schedule of Funding Progress and Employers Contributions - Other Post Employment Benefits	38
• Valuation Details - Other Post Employment Benefits	39
• Notes to the Required Supplementary Information	40,41

INDEPENDENT AUDITORS' REPORT ON GENERAL PURPOSE FINANCIAL STATEMENTS –  
TOWN OF THE LITTLETON, MASSACHUSETTS, ELECTRIC LIGHT DEPARTMENT

Board of Commissioners and Board of Selectmen  
Town of Littleton, Massachusetts  
39 Ayer Road  
P.O. Box 2406  
Littleton, MA 01460

We have audited the accompanying financial statements of the business type activities and the aggregate remaining fund information of the Town of Littleton, Massachusetts, Electric Light Department ("the Department"), and the related notes to the financial statements, as of and for the year ended December 31, 2016.

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

Management is responsible for the preparation and fair presentation of these financial statements in accordance with 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 opinions 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. 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 business activities and the aggregate remaining fund information of the Town of Littleton, Massachusetts, Electric Light Department, as of December 31, 2016, and the results of the respective changes in financial position and, where applicable, cash flows thereof 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, the retirement system schedules and the other post employment benefit schedules

listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Sincerely,

*Giusti, Hingston and Company*

Giusti, Hingston and Company

Certified Public Accountants

Georgetown, Massachusetts

September 28, 2017

Littleton Municipal Electric Light Department  
Management's Discussion and Analysis  
Required Supplementary Information  
December 31, 2016

As management of the Littleton Municipal Electric Light Department, we offer readers of these financial statements this narrative overview and analysis of the financial activities of the Littleton Municipal Electric Light Department for the fiscal year ended December 31, 2016.

## **Financial Highlights**

- The assets and deferred outflows of resources of the Littleton Municipal Electric Light Department exceeded its liabilities and deferred inflows of resources at the close of the most recent fiscal year by \$35,024,459 (*net position*).
- Governmental Accounting Standards Board Statement #74 (GASB) required reporting the Department's Other Post Employment Benefit Trust fund as a fiduciary fund. As a result, a prior period adjustment in the amount of \$1,426,735 (debit) was made in the Department's enterprise fund. The entry was offset in the Department's fiduciary fund. In addition, GASB Statement #68 requires that the actuarial report utilized to calculate pension liabilities, pension expenses and deferred outflows/inflows of resources must be less than two years old. Therefore, the Department had to go from the December 31, 2014 Middlesex County Retirement System's GASB #68 report (utilized in the Department's prior audit) to the December 31, 2016 Middlesex County Retirement System's GASB #68 report (the December 31, 2015, Middlesex County Retirement System's GASB #68 report was based on a valuation date that was considered to be old). As a result, a prior period adjustment in the amount of \$165,595 (debit) was made. The effect of the prior period adjustments caused a reduction in the January 1, 2016 net position of the Department's enterprise fund.
- The Department's total net position increased by \$3,005,516 or 8.94% (excluding the effects of the prior period adjustment).
- At the end of the current fiscal year, the balance in the unrestricted net position account was \$13,161,802, or 45.0% of total expenses.
- During fiscal year 2016, the Department continued funding its Other Post Employment Benefits (OPEB) liability. The balance in the OPEB Trust Fund as of December 31, 2016 was \$1,767,767.

## **Overview of the Financial Statements**

The discussion and analysis are intended to serve as an introduction of the Littleton Municipal Electric Light Department's basic financial statements.

**Proprietary funds** - The Littleton Municipal Electric Light Department maintains one proprietary fund type. The Littleton Municipal Electric Light Department uses an enterprise fund to account for its electric operations.

**Fiduciary funds** - Fiduciary funds are used to account for resources held for the benefit of parties outside the government. Fiduciary funds are *not* reflected in the proprietary fund financial statements because the resources of those funds are *not* available to support the Department's own programs. The accounting used for fiduciary funds is much like that used for proprietary funds. The Department maintains fiduciary funds to account for activities related to its Other Post-Employment Benefits (OPEB) trust fund. The OPEB Trust Fund is used to accumulate resources to provide funding for future OPEB liabilities.

## Notes to the Financial Statements

The notes to the financial statements provide additional information that is necessary to acquire a full understanding of the data provided in the Department's basic financial statements.

### Other Information

In addition to the basic financial statements and the accompanying notes, this report also presents *required supplementary information* concerning the Littleton Electric Light Department's progress in funding its obligation to provide pension and other post employment benefits to its employees.

### Financial Analysis

#### Net Position

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

The following table reflects the condensed net position for the past two years. **Note, the prior year amounts reported in the Management's Discussion and Analysis (MD&A) have been adjusted to reflect the prior period adjustments. In addition, in accordance with Governmental Accounting Standards Board Statement # 74, the activity and financial position of the Other Post-Employment Benefits Trust fund is reported as a fiduciary fund and, therefore, not included in the financial data of the MD&A).**

	<b>Business-Type</b> <b>Activities</b>	<b>Business-Type</b> <b>Activities</b>
	<b>2016</b>	<b>2015</b>
Current Assets	\$ 12,219,917	\$ 10,325,597
Noncurrent Assets	9,796,125	11,587,216
Capital Assets	22,124,392	19,768,022
<b>Total Assets</b>	<b>44,140,434</b>	<b>41,680,835</b>
Deferred Outflows of Resources	1,187,710	605,735
Current Liabilities	2,769,218	2,920,684
Noncurrent Liabilities	7,534,467	7,346,943
<b>Total Liabilities</b>	<b>10,303,685</b>	<b>10,267,627</b>
Deferred Inflows of Resources	-	-
Net Position:		
Net Investment in Capital Assets	21,862,657	19,372,822
Restricted for Other Post Employment Benefits		
Unrestricted Net Position	13,161,802	12,646,121
<b>Total Net Position</b>	<b>\$ 35,024,459</b>	<b>\$ 32,018,943</b>

The net position of the Department increased by \$3,005,516 during fiscal year 2016.

## Changes in Net Position

The following condensed financial information was derived from the Department's Statement of Revenues, Expenses and Changes in Net Position. It reflects how the Departments net position has changed during the past two fiscal years.

	<b>Business-Type</b>	<b>Business-Type</b>
	<b>Activities</b>	<b>Activities</b>
	<b>2016</b>	<b>2015</b>
<b>Revenues:</b>		
Operating Revenues	\$ 31,460,945	\$ 30,265,607
Nonoperating Revenues	818,279	977,938
<b>Total Revenues</b>	<b><u>32,279,224</u></b>	<b><u>31,243,545</u></b>
<b>Expenses:</b>		
Purchase Power	22,376,126	23,410,323
Operating	1,034,166	1,109,800
Maintenance	853,405	818,019
General and Administrative	2,900,940	2,519,985
Depreciation	1,006,004	991,029
In Lieu of Tax Payments	760,000	760,000
Contribution of Services to Water Department	294,378	296,301
Contribution to Schools and Towns	27,117	43,411
Interest on Long Term Debt	21,572	27,575
<b>Total Expenses</b>	<b><u>29,273,708</u></b>	<b><u>29,976,443</u></b>
<b>Increase (Decrease) in Net Position</b>	<b><u>\$ 3,005,516</u></b>	<b><u>\$ 1,267,102</u></b>

Light rates are structured to cover substantially all operating costs related to the activity.

## Financial Analysis of the Department's Funds

### Proprietary Fund

**Electric Enterprise Fund** – The following table reflects the trend in all the components of net position for the past eight years.

<b>Fiscal Year</b>	<b>Invested in Capital Assets</b>			<b>Total</b>
	<b>Debt</b>	<b>Unrestricted</b>	<b>Net Positions</b>	
2009	\$ 15,530,464	\$ 18,092,553	\$ 33,623,017	
2010	16,530,904	18,173,104	34,704,008	
2011	16,777,309	19,215,636	35,992,945	
2012	18,552,786	16,993,631	35,546,417	
2013	18,704,430	16,019,621	34,724,051	
2014	19,123,640	12,008,598	31,132,238	
2015	19,372,822	12,811,716	32,184,538	
2016	21,862,657	13,161,802	35,024,459	

### Capital Asset and Debt Administration

#### Capital Assets

The Littleton Municipal Electric Light Department's investment in capital assets as of December 31, 2016, amounts to \$22,124,392 (net of accumulated depreciation). This investment in capital assets includes land, buildings, improvements, infrastructure, equipment and vehicles. A comparison of the past two years is as follows:

	<b>2016</b>	<b>2015</b>
Land	\$ 1,312,676	\$ 1,312,676
Work In Process	2,020,952	-
Distribution Plant	10,984,771	10,624,552
General Plant	7,805,993	7,830,794
<b>Total</b>	<b>\$ 22,124,392</b>	<b>\$ 19,768,022</b>

#### Debt

The Department's outstanding debt for the past two years is as follows.

<b>Business-Type Activities</b>	<b>2016</b>	<b>2015</b>	<b>Increase</b>
			<b>(Decrease)</b>
Electric Light Department	\$ 261,733	\$ 395,200	\$ (133,467)

The Department's long term debt decreased by \$133,467 or 34 % during fiscal year 2016.

#### Fiscal Year 2017 Budget

The Department's fiscal year 2017 budget will be funded primarily by electric rates. Fluctuations in power costs are anticipated. However, the Department has the ability to increase rates in order to offset any additional power costs.

Littleton Electric Light Department  
Statement of Net Position  
December 31, 2016

**Assets**

Current:

Unrestricted Cash and Investments	\$ 7,855,352
Accounts Receivable:	
Customer (Net of Allowance for Uncollectible Accounts)	3,057,680
Other	21,041
Prepaid Expenses	479,601
Plant Inventory	806,243
Total Current Assets	<u>12,219,917</u>

Noncurrent:

Restricted Cash	726,655
Restricted Investments	9,069,470
Fixed Assets:	
Non-Depreciable	3,333,628
Depreciable, Net of Accumulated Depreciation	<u>18,790,764</u>
Total Noncurrent Assets	<u>31,920,517</u>
Total Assets	<u>44,140,434</u>

**Deferred Outflows of Resources**

Debt Refunding	13,867
Pension	1,173,843
Total Deferred Outflows of Resources	<u>1,187,710</u>

**Liabilities**

Current:

Accrued Payroll Payable	94,288
Customer Deposits	101,000
Jobbing Deposits	46,772
Accrued Interest Payable	3,289
Accounts Payable & Other Accrued Liabilities	2,345,496
Bonds Payable	131,733
Accrued Compensated Absences Payable	46,640
Total Current Liabilities	<u>2,769,218</u>

Noncurrent:

Bonds Payable	130,000
Accrued Compensated Absences Payable	229,534
Net Pension Liability	7,122,564
Other Post Employment Benefits Payable	52,369
Total Noncurrent Liabilities	<u>7,534,467</u>
Total Liabilities	<u>10,303,685</u>

**Net Position**

Net Investment in Capital Assets	21,862,657
Unrestricted	13,161,802
Total Net Position	<u>\$ 35,024,459</u>

Littleton Electric Light Department  
 Statement of Revenues, Expenses and Changes in Net Position  
 For the Year Ended December 31, 2016

**Operating Revenues:**

Operating Revenue	\$ 31,460,945
Total Operating Revenues	<u>31,460,945</u>

**Operating Expenses:**

Purchase Power	22,376,126
Operating	1,034,166
Maintenance	853,405
General and Administrative	2,900,940
Depreciation	1,006,004
Total Operating Expenses	<u>28,170,641</u>
Operating Income (Loss)	<u>3,290,304</u>

**Nonoperating Revenues (Expenses):**

Merchandising and Jobbing Revenue	381,760
Intergovernmental	4,197
Earnings on Investments	421,322
Gain (Loss) on Disposition of Capital Assets	11,000
In Lieu of Tax Payments and Indirect Cost Reimbursement	(760,000)
Contribution of Services to Water Department	(294,378)
Contribution to Schools and Towns	(27,117)
Interest on Long Term Debt	(21,572)
Total Nonoperating Revenues (Expenses):	<u>(284,788)</u>

Net Increase (Decrease) in Net Position	<u>3,005,516</u>
---	------------------

Net Position, January 1, 2016	<u>33,611,273</u>
-------------------------------	-------------------

Prior Period Adjustment	<u>(1,592,330)</u>
-------------------------	--------------------

Adjusted Net Position, January 1, 2016	<u>32,018,943</u>
--	-------------------

Net Position, December 31, 2016	<u>\$ 35,024,459</u>
---------------------------------	----------------------

**Littleton Electric Light Department**  
**Statement of Cash Flows**  
**For the Year Ended December 31, 2016**

Cash Flows from Operating Activities:	
Receipts from Customers	\$ 31,267,001
Payments to Employees and Vendors	<u>(27,382,237)</u>
Net Cash Flows Provided (Used) by Operating Activities	<u>3,884,764</u>
Cash Flows from Non Capital Related Financing Activities:	
Intergovernmental Revenues	4,197
Merchandising and Jobbing	476,650
Payment In Lieu of Taxes	<u>(760,000)</u>
Contribution of Services to Water Department	<u>(294,378)</u>
Contribution to Schools and Towns	<u>(27,117)</u>
Net Cash Flows Provided (Used) by Non Capital Related Financing Activities	<u>(600,648)</u>
Cash Flows from Capital and Related Financing Activities:	
Acquisition and Construction of Capital Assets	<u>(3,351,374)</u>
Principal Payments on Bonds	<u>(133,467)</u>
Interest Expense	<u>(16,120)</u>
Net Cash Flows Provided (Used) by Capital and Related Financing Activities	<u>(3,500,961)</u>
Cash Flows from Investing Activities:	
Earnings on Investments	<u>421,322</u>
Net Cash Flows Provided (Used) by Investing Activities	<u>421,322</u>
Net Increase (Decrease) in Cash and Cash Equivalents	<u>204,477</u>
Cash and Cash Equivalents, January 1, 2016	18,873,735
Prior Period Adjustments	<u>(1,426,735)</u>
Cash and Cash Equivalents, December 31, 2016	<u>\$ 17,651,477</u>
Reconciliation of Net Income to Net Cash Provided (Used) by Operating Activities:	
Operating Income (Loss)	\$ 3,290,304
Adjustments to Reconcile Operating Income to Net Cash Provided (Used) by Operating Activities:	
Depreciation and Amortization Expense	1,006,004
(Increase) Decrease in Accounts Receivable	<u>(193,944)</u>
(Increase) Decrease in Prepayments	<u>123,258</u>
Increase (Decrease) in Payables	<u>(340,858)</u>
Net Cash Provided by Operating Activities	<u>\$ 3,884,764</u>

Littleton Electric Light Department  
Statement of Fiduciary Net Position  
Fiduciary Funds  
December 31, 2016

	Other Post Employment Benefits <u>Trust</u>
<b>Assets</b>	
Cash and Investments	<u>\$ 1,767,767</u>
Total Assets	<u><u>\$ 1,767,767</u></u>
<b>Liabilities</b>	<u>\$</u> <u>-</u>
Total Liabilities	<u><u>-</u></u>
<b>Net Position Restricted for Post Employment Benefits Other than Pensions</b>	<u><u>\$ 1,767,767</u></u>

Littleton Electric Light Department  
 Statement of Changes in Fiduciary Net Position  
 Fiduciary Funds  
 For the Year Ended December 31, 2016

	Other Post Employment Benefits <u>Trust</u>
<b>Additions:</b>	
Employer Contributions	\$ 465,102
Net Investment Income	<u>91,032</u>
Total Additions	<u><u>556,134</u></u>
<b>Deductions:</b>	
Trust Distributions - Premiums	<u>215,102</u>
Change in Net Position	<u><u>341,032</u></u>
<b>Net Position Restricted for Post Employment Benefits Other than Pensions</b>	
Beginning of the Year	-
Prior Period Adjustment	<u>1,426,735</u>
Beginning as Restated	<u>1,426,735</u>
End of the Year	<u><u>\$ 1,767,767</u></u>

Town of Littleton, Massachusetts  
Municipal Electric Light Department  
Notes to the Financial Statements  
December 31, 2016

**I. Summary of Significant Accounting Policies**

The significant accounting policies of the Electric Light Department are as follows:

**(a) Reporting Entity**

The Littleton Municipal Electric Light Department is an enterprise fund of the Town of Littleton, Massachusetts. The Light Department purchases power from various sources and sells it to customers in the Towns of Littleton and Boxborough at rates submitted to the Massachusetts Department of Telecommunications and Energy. The Board of Commissioners is an elected Board that has full charge of operations and management of the Plant. There are no entities which are component units of the Littleton Electric Light Department.

**(b) Measurement Focus and Basis of Accounting**

The Light Department maintains its books in accordance with the accounting practices prescribed by the Massachusetts Department of Telecommunications and Energy (DTE). The Department's policy is to prepare its financial statements in accordance with generally accepted accounting principles (GAAP) except that depreciation is charged at a fixed percentage rate (in accordance with practices approved by the DTE). Under the GAAP basis of accounting depreciation is charged over the useful life of the asset.

In accordance with Massachusetts law, the electric rates of the Light Department are set by the Municipal Light Board. Rate schedules are filed with the Massachusetts Department of Telecommunications and Energy. While the DTE exercises general supervisory authority over the Light Department, the Light Department's rates are not subject to DTE approval.

The Department utilizes a proprietary fund to account for its water operations. Proprietary fund financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded when the liabilities are incurred.

Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the proprietary funds principal ongoing operations. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

The Department utilizes a fiduciary fund to report the activity related to its Other Postemployment Benefits (OPEB) trust fund. The OPEB trust fund is used to accumulate resources for future other postemployment benefits liabilities.

Fiduciary fund financial statements are reported using the flow of economic resources measurement focus and use the accrual basis of accounting. Fiduciary funds are used to account for assets held in a trustee capacity for others that cannot be used to support the government's programs.

(c) Depreciation

The general laws of Massachusetts allow utility plants in service to be depreciated at an annual percentage rate. In order to change this rate, approval must be obtained from the Department of Telecommunications and Energy. Changes in annual depreciation rates may be made for financial factors relating to cash flow rather than for engineering factors relating to estimates of useful lives. The Light Department used a depreciation rate of 3.0% for fiscal year 2016.

(d) Revenues

Revenues from the sale of electricity are recorded on the accrual basis. Bills are prepared monthly (on a cycle basis) based on meter readings.

(e) Unbilled Revenue

Customers are billed monthly based on usage. As a result, some current fiscal year usage is not billed until the subsequent fiscal year. An accounting estimate is made to recognize revenues related to the unbilled usage.

(f) Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

II. Prepaid Expenses

The balance in this account represents various purchased power prepayments as of December 31, 2016. It also, includes prepayments related to insurance.

III. Deposits and Investments

a. Deposits

Custodial Credit Risk

Custodial credit risk is the risk that in the event of a bank failure, the Department's deposits may not be returned to it. The Department's deposits are pooled with the deposits of the Town of Littleton, Massachusetts. As a result, the custodial credit risk of the Department is intermingled with the custodial credit risk of the Town.

The Town has a formal investment policy that addresses custodial credit risk. Key sections of the policy are detailed below:

- Bank accounts or Certificate of Deposit accounts (CD's) with no limit to the length of maturity from the date of purchase may be made for unlimited amounts if the depository institution is a member of the Depository Insurance Fund (DIF) or the Share Insurance Fund (SIF). These funds insure all deposits held at a member Massachusetts state charted savings bank or co-operative bank respectively.

- Bank accounts, Certificate of Deposit accounts (CD's) and/or brokered CD's with no limit to the length of maturity from the date of purchase up to the FDIC coverage limits. All account balances in a single depository institution are considered in the aggregate to determine FDIC coverage limits.
- Bank accounts or Certificate of Deposit accounts (CD's) with no limit to the length of maturity from the date of purchase may be made for unlimited amounts if the deposit is fully collateralized by a third party agreement or securities owned by a depository institution that have been segregated from the day-to-day assets of the institution in order to provide collateralization.
- Uninsured or unsecured bank accounts or Certificate of Deposit accounts (CD's) with a final maturity no greater than one year from the date of purchase are allowed to be held by the Town subject to the following limitations:
  - The aggregate uninsured portion of deposits held at any one institution cannot exceed 5% of the institutions total deposits reflected on the bank's last filed FDIC Call Report.
  - No more than 10% of the Town's funds, applicable to this section, may be held in uninsured accounts.
  - The credit worthiness of the depository will be tracked by Treasurer utilizing the Veribanc rating report.

b. Investments

i) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Town's policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates is as follows:

- Short-term investments for funds covered in Section I are by statute limited to one year or less in maturity with all securities held to maturity.
- Longer term investments, other than trust funds under the direction of the Commissioners of Trust Funds, will be made for periods not longer than five years, maintaining an average maturity no greater than three years for the portfolio.

ii) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Town's policy relating to credit risk is as follows.

- Longer term investments in fixed income securities, other than trust funds under the direction of the Commissioners of Trust Funds, will be made principally for capital preservation and income potential. Corporate debt must be rated "A" or better by either S&P or Moody's rating services. If a security falls below the "A" rating, the security will be monitored by the Treasurer and advisor, if applicable. The security will be noted as an exception to policy if held in the portfolio. The Treasurer and/or advisor may sell the security if a further decline in value is expected.

iii.) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The Town's policy relating to concentration of credit risk is as follows:

- The Town will minimize any concentration of credit risk by diversifying the investment portfolio so that the impact of potential losses from any one type of security or issuer will be minimized. Specific investment amounts and/or issuer limitations are addressed in the policy.

iv) Foreign Currency Risk

Foreign currency risk is the risk that changes in foreign exchange rates will adversely affect the fair value of an investment or deposit. The Town's policy states that it will not invest in any instrument exposed to foreign currency risk.

v.) Fair Value Measurement

Statement #72 of the Government Accounting Standards Board ("GASB") Fair Value Measurements and Application, sets forth the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under GASB 72 are described as follows:

Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Department has the ability to access.

Level 2 - Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement. Unobservable inputs reflect the Departments' own assumptions about the inputs market participants would use in pricing the asset or liability (including assumptions about risk). Unobservable inputs are developed based on the best information available in the circumstances and may include the Department's own data.

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

The Department has the following recurring fair value measurements as of December 31, 2016:

	<u>Fair Value Measurements Using</u>			
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	
	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs	
	<u>Total</u>			
<b>Investment by Fair Value Level:</b>				
Debt:				
U. S. Treasuries	\$ 4,425,513	\$ 4,425,513	\$ -	\$ -
Corporate Bonds	1,059,864	-	1,059,864	-
Money Market Mutual Funds	75,557	75,557	-	-
Mutual Funds	434,129	434,129	-	-
Certificates of Deposit	538,315	538,315	-	-
Equities:				
Common Stock	4,303,859	4,303,859	-	-
Total Assets in the Fair Value Hierarchy	<u>\$ 10,837,237</u>	<u>\$ 9,777,373</u>	<u>\$ 1,059,864</u>	<u>\$ -</u>

The investments classified in Level 1 of the fair value hierarchy were valued using prices quoted in active markets for those securities.

#### IV. Restricted Cash and Investments

Restricted cash and investments as of December 31, 2016 consist of the following:

<u>Account</u>	<u>Cash</u>	<u>Investments</u>
Depreciation Fund	\$ -	\$ 2,460,207
Rate Stabilization	726,655	5,597,660
Pension Trust	-	1,011,603
Total	<u>\$ 726,655</u>	<u>\$ 9,069,470</u>

V. Debt

i Short Term Debt

The Department did not have any bond anticipation notes payable or other short term debt outstanding as of December 31, 2016.

ii Long Term Debt

Bonds payable outstanding at December 31, 2016, consist of general obligation bonds of the Town of Littleton, Massachusetts. The Electric Light Department submits payments to the Town for principal and interest payments as they become due. The bonds outstanding at year end are as follows:

(a) General Obligation Bonds Outstanding at December 31, 2016

<u>General Obligation Bond</u>	<u>Sale Date</u>	<u>Borrowing</u>	<u>to Maturities</u>	<u>Final Maturity January 1, 2016</u>	<u>Balance</u>		<u>December 31, 2016</u>
					<u>Issued</u>	<u>Redeemed</u>	
Building Renovation/Addition	12/15/2007	\$ 1,239,333	4.10%	2018	\$ 395,200	\$ -	\$ 133,467
							261,733

(b) Summary of Debt Service Requirements to Maturity

<u>Fiscal Year Ended</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 131,733	\$ 11,115	\$ 142,848
2018	<u>130,000</u>	<u>6.175</u>	<u>136,175</u>
Total	<u>\$ 261,733</u>	<u>\$ 17,290</u>	<u>\$ 279,023</u>

V. Debt (Continued)

(c) Bond Authorizations

The Department did not have any Loans Authorized but Unissued as of December 31, 2016.

iii Changes in the long-term liabilities for the year ended December 31, 2016 are as follows:

	<u>January 1, 2016</u>	<u>Additions</u>	<u>Deductions</u>	<u>December 31, 2016</u>	<u>Current</u>
Bonds Payable	\$ 395,200	\$ -	\$ (133,467)	\$ 261,733	\$ 131,733
Compensated Absences	260,489	42,254	(26,569)	276,174	46,640
Capital Leases Payable	-	-	-	-	-
Other Post Employment Benefits	281,024	292,704	(521,359)	52,369	-
Net Pension Liability	<u>6,581,814</u>	<u>1,306,327</u>	<u>(765,577)</u>	<u>7,122,564</u>	<u>-</u>
 Total	 \$ 7,518,527	 \$ 1,641,285	 \$ (1,446,972)	 \$ 7,712,840	 \$ 178,373

iv Refunding of Long Term Debt

On December 15, 2007, the Town issued \$4,670,000 of General Obligation Refunding Bonds with an average interest rate of 3.63% to 5.00% to advance refund \$4,420,000 of outstanding debts with interest rates from 4.80% to 7.00% (\$1,239,333 of the new bond was attributable to the Light Department). The net proceeds (after payment of underwriting fees, insurance and other issuance costs) were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for all future debt service payments on the refunded bonds. As a result, the refunded bonds are considered to be defeased. The refunded debt will be paid at the end of the Light Department's fiscal year 2018.

<u>Fiscal Year</u>	<u>Light Department</u>	<u>Light Department</u>
	<u>Old Debt</u>	<u>Refunding Bonds</u>
	<u>Principal</u>	<u>Principal</u>
	<u>&amp; Interest</u>	<u>&amp; Interest</u>
2017	\$141,245	\$142,848
2018	<u>133,770</u>	<u>136,175</u>
Total	<u>\$275,015</u>	<u>\$279,023</u>

The net savings for the Light Department as a result of the refunding issue was \$56,381.

## VI. Capital Assets

Capital asset activity for the year ended December 31, 2016 is as follows:

Assets	Cost			Accumulated			Accumulated			Net Book Value
	January 1, 2016	Additions	Dispositions	Cost December 31, 2016	Depreciation January 1, 2016	Depreciation	Reversed Depreciation	Depreciation December 31, 2016		
<b>Nondepreciable Assets</b>										
Land and Land Rights	\$ 1,312,676	\$ -	\$ -	\$ 1,312,676	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,312,676
Work in Process	-	2,020,952	-	2,020,952	-	-	-	-	-	2,020,952
<b>Total Nondepreciable Assets</b>	<b>1,312,676</b>	<b>2,020,952</b>	<b>-</b>	<b>3,333,628</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,333,628</b>
Distribution Plant:										
Structures and Improvements	411,839	-	-	411,839	285,156	10,452	-	295,608	116,231	
Station Equipment	4,757,994	53,768	(19,134)	4,792,628	2,256,839	120,749	(19,134)	2,358,454	2,434,174	
Storage Battery Equipment	12,026	-	-	12,026	1,562	305	-	1,867	10,159	
Poles, Towers and Fixtures	1,747,635	272,886	(29,307)	1,991,214	663,902	44,352	(29,307)	678,947	1,312,267	
Overhead Conductors and Equipment	3,353,309	22,196	(35,700)	3,339,805	1,917,008	85,101	(35,700)	1,966,409	1,373,396	
Underground Conduits	1,146,305	122,187	(10,906)	1,257,586	471,890	29,091	(10,906)	490,075	767,511	
Underground Conductors and Devices	2,520,862	13,917	(29,805)	2,504,974	965,464	63,975	(29,805)	999,634	1,505,340	
Line Transformers	3,703,173	172,733	(32,139)	3,843,767	1,476,034	93,980	(32,139)	1,537,875	2,305,892	
Services	888,846	42,212	(28,760)	902,298	637,667	22,557	(28,760)	631,464	270,834	
Meters	649,375	53,259	(15,161)	687,473	96,926	16,480	(15,161)	98,245	589,228	
Installations on Customers' Premises	212,897	3,088	(2,656)	213,329	141,186	5,403	(2,656)	143,933	69,396	
Street Lighting and Signal Systems	262,595	103,082	(3,644)	362,033	128,670	6,664	(3,644)	131,690	230,343	
<b>Total Distribution Plant</b>	<b>19,666,856</b>	<b>859,328</b>	<b>(207,212)</b>	<b>20,318,972</b>	<b>9,042,304</b>	<b>499,109</b>	<b>(207,212)</b>	<b>9,334,201</b>	<b>10,984,771</b>	
General Plant:										
Structures and Improvements	8,516,318	-	-	8,516,318	2,951,429	216,129	-	3,167,558	5,348,760	
Office Equipment	1,262,781	151,037	(130,063)	1,283,755	539,116	126,278	(130,063)	535,331	748,424	
Transportation Equipment	2,521,769	304,772	(166,404)	2,660,137	1,792,317	124,752	(166,404)	1,750,665	909,472	
Stores Equipment	22,915	-	(80)	22,835	7,745	582	(80)	8,247	14,588	
Tools, Shop and Garage Equipment	474,894	26,285	(10,347)	490,832	251,255	12,052	(10,347)	252,960	237,872	
Laboratory & Testing Equipment	340,969	-	(20,711)	320,258	110,686	8,653	(20,711)	98,628	221,630	
Power Operated Equipment	211,817	-	(6,165)	205,652	195,862	5,376	(6,165)	195,073	10,579	
Communications Equipment	414,883	-	(13,282)	401,601	153,301	10,529	(13,282)	150,548	251,053	
Miscellaneous Equipment	100,237	-	(226)	100,011	34,078	2,544	(226)	36,396	63,615	
<b>Total General Plant</b>	<b>13,866,583</b>	<b>482,094</b>	<b>(347,278)</b>	<b>14,001,399</b>	<b>6,035,789</b>	<b>506,895</b>	<b>(347,278)</b>	<b>6,195,406</b>	<b>7,805,993</b>	
<b>Total Depreciable Assets</b>	<b>33,533,439</b>	<b>1,341,422</b>	<b>(554,490)</b>	<b>34,320,371</b>	<b>15,078,093</b>	<b>1,006,004</b>	<b>(554,490)</b>	<b>15,529,607</b>	<b>18,790,764</b>	
<b>Total Capital Assets</b>	<b>\$ 34,846,115</b>	<b>\$ 3,362,374</b>	<b>\$ (554,490)</b>	<b>\$ 37,653,999</b>	<b>\$ 15,078,093</b>	<b>\$ 1,006,004</b>	<b>\$ (554,490)</b>	<b>\$ 15,529,607</b>	<b>\$ 22,124,392</b>	

VII. Accounts Receivable Customer - Reserve for Uncollectible Accounts

The accounts receivable on the statement of net position are as follows:

Customer Accounts Receivable	\$ 3,061,187
Allowance for Uncollectable	<u>(3,507)</u>
Total Customer Accounts Receivable - Net	<u><u>\$ 3,057,680</u></u>
Other:	
Jobbings Receivable	<u><u>\$ 21,041</u></u>

VIII. Retirement System

a. General Information about the Pension Plan

*Plan Description*

The Department provides pension benefits to eligible employees by contributing to the Middlesex County Retirement System, a cost sharing multiple-employer defined benefit pension plan administered by the Middlesex County Retirement System. The System is administered by a five member board on behalf of all eligible current employees and retirees. The system provides retirement benefits, cost of living adjustments, disability benefits and death benefits.

The system is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (M.G.L.). The authority to establish and amend benefit provisions requires a statutory change to Chapter 32. The Middlesex County Retirement System issues a stand-alone financial report that is available to the public at <https://middlesexretirement.org/wp-content/uploads/2017/07/FINAL-MCRS-Audit-Report-of-Financial-Statements-12-31-2016.pdf> or by writing to the Middlesex County Retirement System, 25 Linnell Circle, P.O. Box 160, Billerica, Massachusetts 01865.

*Benefits Provided*

The Middlesex County Retirement System provides retirement, disability and death benefits as detailed below:

*Retirement Benefits*

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and

full months of creditable service at the time of retirement and multiplied by a percentage according to the table below based on the age of the member at retirement.

<u>Benefit %</u>	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
<u><i>Hired on or before April 1 2012</i></u>			
2.50%	65+	60+	55+
2.40%	64	59	54
2.30%	63	58	53
2.20%	62	57	52
2.10%	61	56	51
2.00%	60	55	50
1.90%	59	N/A	49
1.80%	58	N/A	48
1.70%	57	N/A	47
1.60%	56	N/A	46
1.50%	55	N/A	45

For employees hired on April 2, 2012 or later, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the tables below based on the age and years of creditable service of the member at retirement:

<u>Benefit %</u>	<u>Group 1</u>	<u>Group 2</u>	<u>Group 4</u>
<u><i>Hired after April 1 2012</i></u>			
2.50%	67+	62+	57+
2.35%	66	61	56
2.20%	65	60	55
2.05%	64	59	54
1.90%	63	58	53
1.75%	62	57	52
1.60%	61	56	51
1.45%	60	55	50

For all employees, the maximum annual amount of the retirement allowance is 80 percent of the member's final average salary. Any member who is a veteran also receives an additional yearly retirement allowance of \$15 per year of creditable service, not exceeding \$300. The veteran allowance is paid in addition to the 80 percent maximum.

#### Retirement Benefits - Superannuation

Members of Group 1, 2 or 4 hired prior to April 2, 2012 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members hired prior to April 2, 2012 who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Members of Group 1 hired April 2, 2012 or later may retire upon the attainment of age 60. Members of Group 2 or 4 hired April 2, 2012 or later may retire upon the attainment of age 55. Members of Group 4 may retire upon attainment of age 50 with ten years of creditable service.

Members hired April 2, 2012 or later who terminate before age 55 (60 for members of Group 1) with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (60 for members of Group 1) provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System.

**Ordinary Disability Benefits**

A member who is unable to perform his or her job due to a non-occupational disability will receive a retirement allowance if he or she has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55 (age 60 for Group 1 members hired on or after April 2, 2012), based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his or her own contributions.

**Accidental Disability Benefit**

For a job-connected disability, the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his or her own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

**Death Benefits**

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of \$500 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay, in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer who is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held by the member at the time of death. Upon the death of a job-connected disability retiree who retired prior to November 7, 1996 and could not elect an Option C benefit, a surviving spouse will receive an allowance of \$9,000 per year if the member dies for a reason unrelated to cause of disability.

**Contributions**

Active members of the Middlesex County Retirement System contribute either 5%, 7%, 8% or 9% of their gross regular compensation depending on the date upon which their membership began. An additional 2% is required from employees for earnings in excess of \$30,000. The Department is required to pay an actuarially determined rate. The contribution requirement of plan members is determined by M.G.L. Chapter 32. The contribution requirements are established by and may be amended by the Middlesex County Retirement System with the approval of the Public Employee Retirement Administration Commission.

The Department's contractually required contribution rate for the year ended December 31, 2016 was 16.92% of covered payroll, actuarially determined as an amount that, when combined with employee contributions, is expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Required contributions to the pension plan from the Department were \$557,481 for the year ending December 31, 2016.

b. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At December 31, 2016, the Department reported a liability of \$7,122,564 for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. Accordingly, update procedures were utilized to roll forward the liability to the measurement date. The Department's proportion of the net pension liability was based on a projection of the Department's long-term share of contributions to the pension plan relative to the projected contributions of all participating members, actuarially determined. At December 31, 2016, the Department's proportion was 0.493093%.

For the year ended December 31, 2016 the Department recognized pension expense of \$717,419. At December 31, 2016, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows <u>of Resources</u>	Deferred Inflows <u>of Resources</u>
Differences between expected and actual experience	\$ 32,078	\$ -
Change in assumptions	295,714	-
Net differences between projected and actual earnings on pension plan investments	457,967	-
Changes in proportion and differences between contributions and proportionate share of contribution:	388,084	-
Contributions subsequent to the measurement date	<hr/> \$ 1,173,843	<hr/> \$ -

Contributions made subsequent to the measurement date (deferred outflows of resources) are recognized as a reduction of the net pension liability in the next fiscal year. The Department did not have any deferred outflows of resources for contributions made subsequent to the measurement date. Other amounts reported as deferred outflows and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	Amount
2017	\$ 330,782
2018	330,781
2019	325,682
2020	186,598

### Actuarial Assumptions

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

<b>Valuation date</b>	January 1, 2016																																												
<b>Actuarial Cost Method</b>	Entry age normal cost method																																												
<b>Amortization Method</b>	Prior year's total contribution increased by 6.5% for fiscal year 2018 through fiscal year 2024, and thereafter the remaining unfunded liability will be amortized on a 4.0% annual increasing basis; ERI Liability amortized in level payments.																																												
<b>Remaining Amortization Period</b>	As of July 1, 2016, 3 years remaining for the 2002 ERI liability; 4 years remaining for the 2003 ERI liability; 6 years remaining for the 2010 ERI liability and 19 years for the remaining unfunded liability.																																												
<b>Asset Valuation Method</b>	The difference between the expected return and the actual investment return on a market value basis is recognized over a five-year period. Asset value is adjusted, as necessary, to be within 20% of market value.																																												
<b>Investment Rate of Return/Discount Rate</b>	7.75% net of pension plan investment expense, including inflation (7.875% in previous valuation)																																												
<b>Inflation Rate</b>	3.50% (4.0% in previous valuation)																																												
<b>Projected Salary Increases</b> (The ultimate values in the previous valuation were 4.75% for Group 1 and 5.25% for Group 4)	<table> <thead> <tr> <th>Years of Service</th> <th>Group 1</th> <th>Group 2</th> <th>Group 4</th> </tr> </thead> <tbody> <tr><td>0</td><td>6.00%</td><td>6.00%</td><td>7.00%</td></tr> <tr><td>1</td><td>5.50%</td><td>5.50%</td><td>6.50%</td></tr> <tr><td>2</td><td>5.50%</td><td>5.50%</td><td>6.00%</td></tr> <tr><td>3</td><td>5.25%</td><td>5.25%</td><td>5.75%</td></tr> <tr><td>4</td><td>5.25%</td><td>5.25%</td><td>5.25%</td></tr> <tr><td>5</td><td>4.75%</td><td>4.75%</td><td>5.25%</td></tr> <tr><td>6</td><td>4.75%</td><td>4.75%</td><td>4.75%</td></tr> <tr><td>7</td><td>4.50%</td><td>4.50%</td><td>4.75%</td></tr> <tr><td>8</td><td>4.50%</td><td>4.50%</td><td>4.75%</td></tr> <tr><td>9+</td><td>4.25%</td><td>4.50%</td><td>4.75%</td></tr> </tbody> </table>	Years of Service	Group 1	Group 2	Group 4	0	6.00%	6.00%	7.00%	1	5.50%	5.50%	6.50%	2	5.50%	5.50%	6.00%	3	5.25%	5.25%	5.75%	4	5.25%	5.25%	5.25%	5	4.75%	4.75%	5.25%	6	4.75%	4.75%	4.75%	7	4.50%	4.50%	4.75%	8	4.50%	4.50%	4.75%	9+	4.25%	4.50%	4.75%
Years of Service	Group 1	Group 2	Group 4																																										
0	6.00%	6.00%	7.00%																																										
1	5.50%	5.50%	6.50%																																										
2	5.50%	5.50%	6.00%																																										
3	5.25%	5.25%	5.75%																																										
4	5.25%	5.25%	5.25%																																										
5	4.75%	4.75%	5.25%																																										
6	4.75%	4.75%	4.75%																																										
7	4.50%	4.50%	4.75%																																										
8	4.50%	4.50%	4.75%																																										
9+	4.25%	4.50%	4.75%																																										
<b>Cost of Living Adjustments</b>	3.00% of first \$14,000																																												
<b>Rates of Retirement</b>	Varies based upon age for general employees, police and fire employees.																																												
<b>Rates of Disability</b>	For general employees, it was assumed that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).																																												
<b>Mortality Rates were based on the tables noted below:</b>																																													
Healthy:																																													
Pre-Retirement	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D (previously, RP- Employee Mortality Table projected 22 years with scale AA)																																												
Health Retiree	RP-2000 Health Annuitant Mortality Table projected generationally from 2009 with Scale BB2D (previously, RP- Healthy Annuitant Mortality Table projected 17 years with scale AA)																																												
Disabled	RP-2000 Health Annuitant Mortality Table projected generationally from 2015 using Scale BB2D (previously Healthy Annuitant Mortality Table set forward 3 years projected 17 years with Scale AA)																																												

In performing the actuarial valuation, various assumptions are made regarding mortality, retirement, disability and withdrawal rates as well as salary increases and investment returns. A comparison of the results of the current valuation and the prior valuation is made to determine how closely actual experience relates to expected. The RP-2000 Employee Mortality Table projected 22 years with Scale AA and the RP-2000 Healthy Annuitant Mortality Table projected 17 years with Scale AA were determined to contain provisions appropriate to reasonably reflect future mortality improvement, based on a review of the mortality experience of the 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. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	<u>Target Allocation</u>	<u>Long Term Expected Rate of Return</u>
Domestic Equity	19.50%	7.50%
International Developed Markets Equity	16.80%	7.83%
Emerging Markets Equity	6.90%	9.61%
Core Fixed Income	12.30%	3.75%
Value Added Fixed Income	8.30%	7.26%
Private Equity	11.10%	9.50%
Real Estate	10.00%	6.50%
Timber/Natural Resources	3.60%	6.00%
Hedge Funds	9.00%	6.48%
Liquidating Portfolios	0.40%	6.48%
Portfolio Completion Strategies	1.10%	6.48%
Overlay	1.00%	6.48%
	<hr/> <hr/> 100.00%	

#### Rate of Return

The annual money-weighted rate of return on pension plan investments for December 31, 2016 (net of investment expenses) was 7.35%. (0.61% for December 31, 2015). The money-weighted rate of return expresses investment performance, net of pension plan investment expense, is adjusted for the changing amounts actually invested, measured monthly.

#### Discount Rate

The discount rate used to measure the total pension liability was 7.75% (7.875 % in the previous valuation). 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 the Middlesex County Retirement System contributions will be made 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 Department's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate*

The following presents the net pension liability of the Middlesex County Retirement System, calculated using the discount rate of 7.75%, as well as what the Middlesex County Retirement System's 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 <u>6.75%</u>	Discount Rate <u>7.75%</u>	1% Increase <u>8.75%</u>
Entire Town of Littleton's proportionate share of the Net Pension Liability	<u>\$28,932,804</u>	<u>\$23,959,114</u>	<u>\$19,755,664</u>
Electric Light Department's share based on the Net Pension Liability allocation percentage	<u>\$8,601,144</u>	<u>\$7,122,565</u>	<u>\$5,872,964</u>

*Pension Plan Fiduciary Net Position*

Detailed information about the pension plan's fiduciary net position is available in the separately issued Middlesex County Retirement System financial report. The System issues a stand-alone financial report is available that can be obtained through the System's website at <https://middlesexretirement.org/wp-content/uploads/2017/07/FINAL-MCRS-Audit-Report-of-Financial-Statements-12-31-2016.pdf>

**IX. Other Post-Employment Benefits (OPEB) Disclosures**

The Governmental Accounting Standards Board (GASB) issued Statement No. 45 (GASB 45), "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions". This statement requires the Department to account for and report the value of its future OPEB obligations currently rather than on a pay as you go basis. Certain information that is required to be disclosed by GASB 45 is noted below. In addition, other Required Supplementary Information (RSI) is presented following the notes to the financial statements.

- a. **Plan Description.** Employees are eligible for OPEB benefits upon meeting the following requirements:
  - Group 1 employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service;
  - Group 1 employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service;
  - Group 4 employees hired before April 2, 2012: retire after attaining age 55 or any age with 20 or more years of service;
  - Group 4 employees hired after April 1, 2012: retire after attaining age 55.
- b. **Funding Policy.** The Department pays 70% of the total premiums for health insurance and 70% of the premiums for a \$5,000 life insurance policy for employees hired prior to July 1, 2010 (50% for employees hired on or after July 1, 2010). The contribution requirements of plan members and the Department are established by contractual obligation and may be amended from time to time.
- c. **Annual OPEB Cost and OPEB Obligation.** The annual Other Postemployment Benefit (OPEB) cost is calculated based on the Annual Required Contribution (ARC) of the

Department, an amount that has been actuarially determined in accordance with the parameters of GASB 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and to amortize any unfunded actuarial liabilities over a period not to exceed thirty years. The following table shows the components of the Department's annual OPEB cost for the fiscal year ended December 31, 2016, the amount actually contributed to the plan, and the Department's Net OPEB Obligation (NOO):

Annual Required Contribution (ARC)	\$296,496
Interest on Net OPEB Obligation	21,077
Adjustment to Annual Required Contribution	(24,869)
Annual OPEB Cost (Expense)	<u>292,704</u>
Contributions Made:	
Expected Benefit Payments	271,359
Contributions to OPEB Trust	<u>250,000</u>
Total Contributions	<u>521,359</u>
Increase (Decrease) in Net OPEB Obligation	(228,655)
Net OPEB Obligation (NOO) - Beginning of Year	<u>281,024</u>
Net OPEB Obligation (NOO) - End of Year	<u><u>\$52,369</u></u>

The Department's annual required contribution, the percentage of the annual required contribution contributed to the plan and the net OPEB obligation for the past three years are as follows:

Fiscal Year <u>Ended December 31</u>	Annual Required Contribution (ARC)	Percentage of ARC <u>Contributed</u>	Net OPEB Obligation
2016	\$296,496	175.8%	\$ 52,369
2015	315,611	168.5%	281,024
2014	327,630	151.2%	503,056

a. **Funded Status and Funding Progress.** As of January 1, 2016, the most recent actuarial valuation date the Actuarial Accrued Liability (AAL) for benefits was \$4,222,174 and the actuarial value of assets was \$1,426,735, resulting in an Unfunded Actuarial Accrued Liability (UAAL) of \$2,795,439. The actuarial value of the assets as a percentage of the Actuarial Accrued Liability (funded ratio) was 33.79%. The covered payroll as of the valuation date was \$2,469,286 and the UAAL as a percentage of covered payroll was 113.2%. **Subsequent to the most recent valuation, the Light Department made contributions to and had earnings in the OPEB trust. The balance in the OPEB trust as of December 31, 2016, was \$1,767,767. The plan assets are recorded and reported in the Department's fiduciary fund financial statements.**

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as Required Supplementary Information (RSI) following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

b. **Actuarial Methods and Assumptions.** Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members). The projections consider the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the January 1, 2016, actuarial valuation, the projected unit credit method was used. The actuarial assumptions included a 7.5 percent investment rate of return (the same as the previous valuation) and an annual healthcare cost trend rate of 7 percent initially, reduced by 0.5 percent decrements to an ultimate rate of 5 percent in year five (previously 7 percent graded to 5 percent in year three). The actuarial value of assets was determined using market value. The UAAL is being amortized over a thirty year closed amortization period.

**X. Compensated Absences**

Vacation Leave - All permanent full time employees are granted vacation leave based on years of employment. Vacation leave may only be carried forward to the subsequent fiscal year with the approval of the supervisor and if appropriate within the terms of the employee's contract. The accumulated vacation leave liability is reflected in the compensated absences liability in the accompanying financial statements.

Sick Leave - Employees of the Department are allowed 120 hours of sick leave per year. Sick leave may be accumulated and bought back upon retirement or after 20 years of service. The buyback is limited to 50% of up to 1,160 hours of accumulated sick leave at the employee's current rate of pay. The accumulated sick leave liability is reflected in the compensated absences liability in the accompanying financial statements.

**XI. Risk Management**

The government is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; and natural disasters for which the government carries commercial insurance. There were no significant reductions in insurance coverage from the previous year.

## XII. Prior Period Adjustment

	Enterprise <u>Fund</u>	Fiduciary <u>Fund</u>
Prior period adjustments were made as follows:		
In accordance with Governmental Accounting Standards Board (GASB) statement #74, the Department's Other Post Employment Benefits trust fund is being reported as a fiduciary fund beginning in fiscal year 2016. As a result, a prior period adjustment was made to reduce the enterprise fund retained earnings by the amount now being reported as a fiduciary fund.		
	(\$1,426,735)	\$1,426,735
The Department implemented GASB Statement #68 in fiscal year 2016. As a result, the Department's fiscal year 2015 financial statements reported amounts related to its share of the net pension liability and deferred outflows/inflows of resources related to pensions. When preparing the Department's 2015 financial statements, the Department utilized the GASB 68 reports included in the Middlesex County Retirement System's December 31, 2014 audited financial statements. The GASB 68 reports in the Middlesex County Retirement System's December 31, 2014 and December 31, 2015 audited financial statements were based on an actuarial valuation dated January 1, 2014. The actuarial report is considered too old to be utilized for the Georgetown Electric Light Department's December 31, 2016 financial statements. As a result, the Department utilized the most recent GASB 68 report based on a January 1, 2016 valuation and included in the Middlesex County Retirement System's December 31, 2016 audited financial statements. The adjustment reflects the amount of the change in the net pension liability and deferred outflows/inflows that occurred in the retirement systems December 31, 2015 report.	(165,595)	-
	<u><u>Total</u></u>	<u><u>\$1,592,330</u></u>
	<u><u>\$1,426,735</u></u>	

The net position of the funds before and after the adjustments are as follows:

	Prior to <u>Adjustment</u>	After <u>Adjustment</u>
Proprietary Funds	<u><u>\$ 33,611,273</u></u>	<u><u>\$32,018,943</u></u>
Fiduciary Funds	<u><u>\$ -</u></u>	<u><u>\$ 1,426,735</u></u>

## XIII. Litigation

A claim was filed against the Littleton Electric Light Department seeking approximately \$444,000. The litigation is in its very early stages. The Littleton Electric Light Department intends to vigorously oppose the claim.

#### XIV. Contingent Liabilities

Town of Littleton acting through its Light Department is a Participant in certain Projects of the Massachusetts Municipal Wholesale Electric Company (MMWEC).

MMWEC is a public corporation and a political subdivision of the Commonwealth of Massachusetts, created as a means to develop a bulk power supply for its Members and other utilities. MMWEC is authorized to construct, own or purchase ownership interests in, and to issue revenue bonds to finance, electric facilities (Projects). MMWEC has acquired ownership interests in electric facilities operated by other entities and also owns and operates its own electric facilities. MMWEC sells all of the capability (Project Capability) of each of its Projects to its Members and other utilities (Project Participants) under Power Sales Agreements (PSAs). Among other things, the PSAs require each Project Participant to pay its *pro rata* share of MMWEC's costs related to the Project, which costs include debt service on the revenue bonds issued by MMWEC to finance the Project, plus 10% of MMWEC's debt service to be paid into a Reserve and Contingency Fund. In addition, should a Project Participant fail to make any payment when due, other Project Participants of that Project may be required to increase (step-up) their payments and correspondingly their Participant's share of that Project's Project Capability to an additional amount not to exceed 25% of their original Participant's share of that Project's Project Capability. Project Participants have covenanted to fix, revise and collect rates at least sufficient to meet their obligations under the PSAs.

MMWEC has issued separate issues of revenue bonds for each of its eight Projects, which are payable solely from, and secured solely by, the revenues derived from the Project to which the bonds relate, plus available funds pledged under MMWEC's Amended and Restated General Bond Resolution (GBR) with respect to the bonds of that Project. The MMWEC revenues derived from each Project are used solely to provide for the payment of the bonds of any bond issue relating to such Project and to pay MMWEC's cost of owning and operating such Project and are not used to provide for the payment of the bonds of any bond issue relating to any other Project.

MMWEC operates the Stony Brook Intermediate Project and the Stony Brook Peaking Project, both fossil-fueled power plants. MMWEC has a 3.7% interest in the W.F. Wyman Unit No. 4 plant, which is operated and owned by its majority owner, FPL Energy Wyman IV, LLC, a subsidiary of NextEra Energy Resources LLC, and a 4.8% ownership interest in the Millstone Unit 3 nuclear unit, operated by Dominion Nuclear Connecticut, Inc. (DNCI), the majority owner and an indirect subsidiary of Dominion Resources, Inc. DNCI also owns and operates the Millstone Unit 2 nuclear unit. The operating license for the Millstone Unit 3 nuclear unit extends to November 25, 2045.

A substantial portion of MMWEC's plant investment and financing program is an 11.6% ownership interest in the Seabrook Station nuclear generating unit operated by NextEra Energy Seabrook, LLC (NextEra Seabrook) the majority owner and an indirect subsidiary of NextEra Energy Resources LLC. The operating license for Seabrook Station extends to March 15, 2030. NextEra Seabrook has submitted an application to extend the Seabrook Station operating license for an additional 20 years.

Pursuant to the PSAs, the MMWEC Seabrook and Millstone Project Participants are liable for their proportionate share of the costs associated with decommissioning the plants, which costs are being funded through monthly Project billings. Also, the Project Participants are liable for their proportionate share of the uninsured costs of a nuclear incident that might be imposed under the Price-Anderson Act (Act). Originally enacted in 1957, the Act has been

renewed several times. In July 2005, as part of the Energy Policy Act of 2005, Congress extended the Act until the end of 2025.

Littleton Electric Light & Water has entered into PSAs and PPAs with MMWEC. Under both the PSAs and PPAs, the Department is required to make certain payments to MMWEC payable solely from Municipal Light Department revenues. Under the PSAs, each Participant is unconditionally obligated to make payments due to MMWEC whether or not the Project(s) is completed or operating and notwithstanding the suspension or interruption of the output of the Project(s).

MMWEC is involved in various legal actions. In the opinion of management, the outcome of such litigation or claims will not have a material adverse effect on the financial position of the company.

As of December 31, 2016, total capital expenditures amounted to \$1,636,374,000, of which \$17,400,000 represents the amount associated with the Department's Project Capability. MMWEC's debt outstanding for the Projects from Power Supply System Revenue Bonds totals \$55,795,000, of which \$268,000 is associated with the Department's share of Project Capability. As of December 31, 2016, MMWEC's total future debt service requirement on outstanding bonds issued for the Projects is \$59,281,000, of which \$281,000 is anticipated to be billed to the Department in the future.

The aggregate amount of Littleton Electric Light & Water's required payments under the PSAs and PPAs, exclusive of the Reserve and Contingency Fund billings, to MMWEC at December 31, 2016 and estimated for future years is shown below.

<u>Annual Costs</u>	
For years ended December 31,	
2017	\$ 252,000
2018	29,000
2019	-
2020	-
<b>TOTAL</b>	<b><u>\$281,000</u></b>

In addition, under the PSAs, the Department is required to pay to MMWEC its share of the Operation and Maintenance (O&M) costs of the Projects in which it participates. The Department's total O&M costs including debt service under the PSAs were \$1,624,000 and \$1,934,000 for the years ended December 31, 2016 and 2015, respectively..

LITTLETON ELECTRIC LIGHT DEPARTMENT  
AS OF DECEMBER 31, 2016  
(\$000)

<u>PROJECTS</u>	<u>PERCENTAGE</u>	TOTAL PROJECT		DEBT ISSUED & OUTSTANDING			TOTAL DEBT SERVICE ON			<u>BONDS</u>	<u>OUTSTANDING</u>	<u>PARTICIPANT'S</u>
		<u>SHARE</u>	<u>EXPENDITURES</u> <u>TO DATE</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>	<u>12/31/2016</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>	<u>12/31/2016</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>	<u>12/31/2016</u>			
Stony Brook Peaking Project	3.0607	\$ 59,762	\$ 1,829	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Stony Brook Intermediate Project	1.6654	174,182	2,901	-	-	-	-	-	-	-	-	-
Nuclear Mix No. 1 -SBK	1.7544	14,443	253	-	-	-	-	-	-	-	-	-
Nuclear Mix No. 1 -MLS	1.7544	120,538	2,115	-	-	-	-	-	-	-	-	-
Nuclear Project No.3 - MLS	0.7972	152,231	1,214	6,540	52	52	6,984	52	6,984	56	56	56
Nuclear Project No. 4-SBK	2.2220	351,298	7,806	8,455	188	188	8,802	188	8,802	196	196	196
Nuclear Project No. 5-SBK	0.9262	95,231	882	2,970	28	28	3,119	28	3,119	29	29	29
Wyman Project	4.5428	8,805	400	-	-	-	-	-	-	-	-	-
Project No. 6-SBK	-	659,884	-	37,830	-	-	40,376	-	40,376	-	-	-
<b>TOTAL</b>		<b>\$ 1,636,374</b>	<b>\$ 17,400</b>	<b>\$ 55,795</b>	<b>\$ 268</b>	<b>\$ 268</b>	<b>\$ 59,281</b>	<b>\$ 281</b>	<b>\$ 59,281</b>	<b>\$ 281</b>	<b>\$ 281</b>	<b>\$ 281</b>
<u>PROJECTS</u>	<u>PERCENTAGE</u>	OPERATION & MAINTENANCE		OPERATION & MAINTENANCE			OPERATION & MAINTENANCE			<u>1/1/2016</u>	<u>12/31/2016</u>	<u>PARTICIPANT'S</u>
		<u>SHARE</u>	<u>1/1/2016</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>	<u>12/31/2016</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>	<u>1/1/2016</u>	<u>12/31/2016</u>	<u>PARTICIPANT'S</u> <u>SHARE</u>			
Stony Brook Peaking Project	3.0607	\$ 3,730	\$ 114	\$ 4,008	\$ 123	\$ 123	\$ 4,008	\$ 4,008	\$ 123	\$ 3,730	\$ 4,008	\$ 123
Stony Brook Intermediate Project	1.6654	40,083	668	28,039	467	467	28,039	28,039	467	40,083	28,039	467
Nuclear Mix No. 1 -SBK	1.7544	576	10	723	13	13	723	723	13	576	723	13
Nuclear Mix No. 1 -MLS	1.7544	6,369	112	6,038	106	106	6,038	6,038	106	6,369	6,038	106
Nuclear Project No.3 - MLS	0.7972	27,329	218	22,939	183	183	22,939	22,939	183	27,329	22,939	183
Nuclear Project No.4 - SBK	2.2220	28,086	624	27,748	617	617	27,748	27,748	617	28,086	27,748	617
Nuclear Project No.5 - SBK	0.9262	7,530	70	7,615	71	71	7,615	7,615	71	7,530	7,615	71
Wyman Project	4.5428	2,591	118	961	44	44	961	961	44	2,591	961	44
Project No. 6 - SBK	-	52,773	-	55,538	-	-	55,538	55,538	-	52,773	55,538	-
<b>TOTAL</b>		<b>\$ 169,067</b>	<b>\$ 1,934</b>	<b>\$ 153,609</b>	<b>\$ 1,624</b>	<b>\$ 1,624</b>	<b>\$ 153,609</b>	<b>\$ 153,609</b>	<b>\$ 1,624</b>	<b>\$ 169,067</b>	<b>\$ 153,609</b>	<b>\$ 1,624</b>

LITTLETON ELECTRIC LIGHT DEPARTMENT  
AS OF DECEMBER 31, 2016  
(\$000)

PROJECTS	PERCENTAGE <u>SHARE</u>	2017		2018		2019	
		ANNUAL <u>COST</u>	PARTICIPANT'S <u>SHARE</u>	ANNUAL <u>COST</u>	PARTICIPANT'S <u>SHARE</u>	ANNUAL <u>COST</u>	PARTICIPANT'S <u>SHARE</u>
Stony Brook Peaking Project	3.0607	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stony Brook Intermediate Project	1.6654	-	-	-	-	-	-
Nuclear Mix No. 1 -SBK	1.7544	-	-	-	-	-	-
Nuclear Mix No. 1 -MLS	1.7544	-	-	-	-	-	-
Nuclear Project No.3 - MLS	0.7972	3,639	29	3,345	27	-	-
Nuclear Project No. 4-SBK	2.2220	8,802	196	-	-	-	-
Nuclear Project No. 5-SBK	0.9262	2,884	27	235	2	-	-
Wyman Project	4.5428	-	-	-	-	-	-
Project No. 6-SBK	-	<u>32,417</u>	<u>-</u>	<u>503</u>	<u>-</u>	<u>7,456</u>	<u>-</u>
<b>TOTAL</b>		<b><u>\$ 47,742</u></b>	<b><u>\$ 252</u></b>	<b><u>\$ 4,083</u></b>	<b><u>\$ 29</u></b>	<b><u>\$ 7,456</u></b>	<b><u>\$ -</u></b>

## **REQUIRED SUPPLEMENTARY INFORMATION**

Required Supplementary Information  
 Schedule of the Littleton Electric Light Departments' Proportionate Share of the Net Pension Liability  
 Middlesex County Retirement System  
 Last Ten Fiscal Years\*\*

<b><u>Electric Light Department</u></b>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Department's proportionate share of net pension liability (asset) (%)	0.493093%	0.487053%	<i>(Historical information prior to implementation of GASB 67/68 is not required)</i>							
Department's proportionate share of net pension liability (asset) (\$)	7,122,564	5,851,043								
Department's covered-employee payroll	3,294,436	3,189,161								
Department's proportionate share of net pension liability (asset) as a percentage of its covered-employee payroll	216.20%	183.47%								
Plan fiduciary net position as a percentage of the pension liability	45.49%	47.65%								

The amounts reported above were based on an allocation of the Middlesex Count Retirement System's actuarial report (Town total) to the Town's enterprise funds

\*\* The amounts presented for each fiscal year were determined as of December 31.

**See Notes to the Required Supplementary Information**

Schedule of the Littleton Electric Light Departments' Contributions

Middlesex County Retirement System

Last Ten Fiscal Years

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Contractually required contribution	\$ 557,481	\$ 541,928	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>(Historical information prior to implementation of GASB 67/68 is not required)</i>										
Contributions in relation to the contractually required contribution	<u>(557,481)</u>	<u>(541,928)</u>	<u>-</u>							
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Department's covered-employee payroll	\$ 3,294,436	\$ 3,189,161								
Contributions as a percentage of covered-employee payroll	16.92%	16.99%								

**See Notes to the Required Supplementary Information**

Littleton Electric Light Department  
 Required Supplementary Information  
 Schedules of Funding Progress and Employer's Contributions - Other Post Employment Benefits  
 Fiscal Year Ended December 31, 2016

**Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Assets <u>(a)</u>	Actuarial Accrued Liability (AAL) <u>(b)</u>	Unfunded AAL (UAAL) <u>(b) - (a)</u>	Funded Ratio <u>(a) / (b)</u>	Covered Payroll <u>(c)</u>	UAAL as a Percentage of Covered Payroll <u>[(b) - (a) / (c)]</u>
01/01/2016	\$1,426,735	\$4,222,174	\$2,795,439	33.79%	\$2,469,286	113.2%
01/01/2014	\$886,735	\$4,187,388	\$3,300,653	21.18%	\$2,729,436	120.9%
01/01/2012	\$370,151	\$4,287,032	\$3,916,881	8.63%	\$2,428,997	161.3%

This schedule of funding progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

**Since the valuation date, the Light Department made contributions to and had earnings in the Other Post Employment Benefits Trust Fund. The balance in the fund as of December 31, 2016 is \$1,767,767.**

**Schedule of Employer's Contributions**

Fiscal Year Ended December 31	Annual Required Contribution (ARC)	Percentage Contributed	Net OPEB Obligation
2016	\$296,496	175.8%	\$52,369
2015	\$315,611	168.5%	\$281,024
2014	\$327,630	151.2%	\$503,056

**See Notes to the Required Supplementary Information**

Littleton Electric Light Department  
Required Supplementary Information - Other Post Employment Benefits  
Valuation Details  
December 31, 2016

---

Valuation Date	January 1, 2016
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Dollar amount per year over 26 years on a closed amortization period for full pre-funding
Asset Valuation Method	Market Value

---

**Actuarial Assumptions:**

Investment Rate of Return 7.5%, pre-funding; (the same as in the previous report).

Medical/Drug Cost Trend Rate 7.0% graded to 5.0% in year 5; previous report utilized 7.0% graded to 5.0% in year 3.

**Plan Membership:**

Current retirees, beneficiaries, and dependents	38
Current active members	<u>26</u>
Total	64

---

Littleton Municipal Electric Light Department  
Notes to the Required Supplementary Information  
December 31, 2016

I Pension Plans

i. Plan Description

The Department provides pension benefits to eligible employees by contributing to the Middlesex County Retirement System, a cost sharing multiple-employer defined benefit pension plan administered by the Middlesex County Retirement System. The System is administered by a five member board on behalf of all eligible current employees and retirees. The system provides retirement benefits, cost of living adjustments, disability benefits and death benefits.

The Department is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws (MGL). The authority to establish and amend benefit provisions requires a statutory change to Chapter 32. The Middlesex County Retirement System issues a stand-alone financial report that is available to the public at <https://middlesexretirement.org/wp-content/uploads/2017/07/FINAL-MCRS-Audit-Report-of-Financial-Statements-12-31-2016.pdf> or by writing to the Middlesex County Retirement System, 25 Linnell Circle, P.O. Box 160, Billerica, Massachusetts 01865.

ii. Funding Plan

Active members of the Middlesex County Retirement System contribute either 5%, 7%, 8% or 9% of their gross regular compensation depending on the date upon which their membership began. An additional 2% is required from employees for earnings in excess of \$30,000. The Department is required to pay an actuarially determined rate. The contribution requirements of plan members are determined by M.G.L. Chapter 32. The Department's contribution requirement is established and may be amended by the Middlesex County Retirement System with the approval of the Public Employee Retirement Administration Commission.

iii. Change in Assumptions

The following changes were effective January 1, 2016:

- The pre-retirement mortality assumption was changed from the RP-2000 Employee Mortality Table projected 22 years with Scale AA to the RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D.
- The mortality assumption for non-disabled retirees was changed from the RP-2000 Healthy Annuitant Mortality Table projected 17 years with Scale AA to the RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D.
- The mortality assumption for disabled participants was changed from the RP-2000 Healthy Annuitant Mortality Table set forward three years projected 17 years with Scale AA to the RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D.
- The investment return assumption was lowered from 7.875% to 7.75%.
- The administrative expense assumption was increased from \$3,400,000 for calendar 2014, increasing 4% per year, to \$3,500,000 for calendar 2016, and increasing 3.5%.

iv. Schedule of Department's Proportionate Share of the Net Pension Liability - Middlesex County Retirement System

The schedule details the Department's percentage of the collective net pension liability, the proportionate amount of the collective net pension liability, the Department's covered-employee payroll, the Department's proportionate share of the collective net pension liability as a percentage of the Department's covered-employee payroll and the fiduciary net position of the plan as a percentage of the total pension liability. As more information becomes available, this will be a ten year schedule.

v. Schedule of the Department's Contributions

The schedule details the Department's contractually required contributions, the contributions made by the Department, the deficiency/(excess) of contributions made by the Department, the Department's covered-employee payroll and the Department's contributions as a percentage of covered-employee payroll. As more information becomes available, this will be a ten year schedule.

## II Other Postemployment Benefits (OPEB) Disclosures – GASB 43 and 45

The Governmental Accounting Standards Board (GASB) issued Statement No. 43 (GASB 43) – “Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans” and Statement No. 45 (GASB 45), “Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions”. These statements require the Department to account for and report the value of its future OPEB obligations currently rather than on a pay as you go basis.

i. Plan Description

In addition to providing pension benefits described above, the Department provides the majority of retired employees with payments for a portion of their health care and life insurance benefits. Currently there are 26 active employees and 38 retired employees (including beneficiaries and dependents) who are eligible to participate in the plan.

ii. Funding Policy

For employees hired prior to July 1, 2010, the Department will contribute 70% of the premium. The retiree or surviving spouse will be responsible for the remaining 30%. For employees hired after July 1, 2010, the Department will contribute 50% of the premium. The retiree or surviving spouse will be responsible for the remaining 50%. Benefits paid by the Department are on a pay-as-you-go basis. However, contributions are made to an OPEB Trust. The contribution requirements of plan members and the Department are established by contractual negotiations and may be amended from time to time.

iii. Annual OPEB Cost and OPEB Obligation

The annual Other Postemployment Benefit (OPEB) cost is calculated based on the Annual Required Contribution (ARC) of the Department, an amount that has been actuarially determined in accordance with the parameters of GASB 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs each year and to amortize any unfunded actuarial liabilities over a period not to exceed thirty years.