

TOWN OF LITTLETON, MASSACHUSETTS
LITTLETON MUNICIPAL WATER
DEPARTMENT

Financial Statements

June 30, 2017

(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
Littleton Municipal Water Department
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INDEPENDENT AUDITORS' REPORT ON BASIC FINANCIAL STATEMENTS

Board of Water Commissioners
Town of Littleton, Massachusetts
Littleton Municipal Water Department
39 Ayer Road
P.O. Box 2406
Littleton, Massachusetts 01460

Report on the Financial Statements

We have audited the accompanying basic financial statements and the related notes to the financial statements of the Littleton Municipal Water Department, an enterprise fund of the Town of Littleton, Massachusetts, as of and for the year ended June 30, 2017.

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 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 Littleton Municipal Water Department, an enterprise fund of the Town of Littleton, Massachusetts, as of June 30, 2017, and the respective changes in financial position and 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.

Emphasis of Matter

The financial statements present only the Littleton Municipal Water Department and do not purport to, and do not present fairly the financial position of the Town of Littleton, Massachusetts, as of June 30, 2017, the changes in its financial position, or, where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Giusti, Hingston and Company

Giusti, Hingston and Company

Certified Public Accountants

February 5, 2018

***Town of Littleton, Massachusetts Municipal Water Department
Management's Discussion and Analysis
Required Supplementary Information
June 30, 2017***

As management of the Littleton, Massachusetts Municipal Water Department, we offer readers of these financial statements this narrative overview and analysis of the financial activities of the Town of Littleton, Massachusetts Municipal Water Department for the fiscal year ended June 30, 2017.

Financial Highlights

- The assets and deferred outflows of resources of the Littleton, Massachusetts Municipal Water Department exceeded its liabilities and deferred inflows of resources at the close of the most recent fiscal year by \$7,915,216 (*net position*).
- The Department's total net position increased by \$483,000 or 6.28% (not including the prior period adjustment).
- At the end of the current fiscal year, the balance in the unrestricted net asset account was \$243,530 or 8.1% of total expenses.

Overview of the Financial Statements

The discussion and analysis is intended to serve as an introduction to the Littleton Water Department's basic financial statements.

Proprietary fund. The Town of Littleton, Massachusetts Municipal Water Department maintains one proprietary fund type. The Department uses an enterprise fund to account for its water operations.

Water rates are structured to cover most of the operating costs related to the Department.

Financial Analysis

Net Position

Net position may serve over time as a useful indicator of a government's financial position. The following table reflects the condensed net position for the past two fiscal years.

	<u>2017</u>	<u>2016</u>
Current Assets	\$ 1,758,508	\$ 2,189,004
Capital Assets	13,230,936	12,825,882
Total Assets	14,989,444	15,014,886

	<u>2017</u>	<u>2016</u>
Deferred Outflows of Resources	204,933	91,658
Current Liabilities	1,336,108	1,351,582
Long Term Liabilities	5,943,053	6,061,259
Total Liabilities	<u>7,279,161</u>	<u>7,412,841</u>
Net Position:		
Net Investment in Capital Assets	7,671,686	7,124,501
Unrestricted	243,530	307,715
Total Net Position	<u>\$ 7,915,216</u>	<u>\$ 7,432,216</u>

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 Department's Net Position has changed during the last two fiscal years.

Revenues	<u>2017</u>	<u>2016</u>
Operating:		
Metered Sales	\$ 1,865,871	\$ 1,801,470
Debt Service Fee	513,176	519,551
Non-Operating:		
Merchandising and Jobbing Revenue	600,997	564,352
Earnings on Investments	4,275	7,787
Intergovernmental	86,330	-
Contribution of Services by Light Department	269,350	294,407
Miscellaneous	27,681	-
Rental Revenue	116,041	109,107
Total Revenues	<u>3,483,721</u>	<u>3,296,674</u>

Expenses

Operating Expenses:		
Operating	298,327	201,823
Maintenance	1,010,506	900,651
General and Administrative	990,482	932,477
Depreciation	557,156	558,279
Non-Operating:		
Interest Expense	144,250	149,693
Total Expenses	<u>3,000,721</u>	<u>2,742,923</u>
Increase (Decrease) in Net Position	<u>\$ 483,000</u>	<u>\$ 553,751</u>

Financial Analysis of the Department's Funds

Components of Net Position

The following table reflects the trend in all components of net position for the past ten years (after adjusting for prior period adjustments).

Fiscal Year	Invested in Capital Assets Net of Related			Total
	Debt	Unrestricted	Net Position	
2008	\$ 6,040,655	\$ 601,297	\$ 6,641,952	
2009	6,015,610	619,094	6,634,704	
2010	6,062,417	442,798	6,505,215	
2011	7,247,071	385,482	7,632,553	
2012	7,277,850	371,684	7,649,534	
2013	7,191,497	599,907	7,791,404	
2014	7,161,139	(461,403)	6,699,736	
2015	6,930,804	3,562	6,934,366	
2016	7,124,501	307,715	7,432,216	
2017	7,671,686	243,530	7,915,216	

Capital Asset and Debt Administration

Capital assets. The Town of Littleton, Massachusetts Municipal Water Department's investment in capital assets (net of accumulated depreciation) as of June 30, 2017, amounts to \$13,230,936. This investment in capital assets includes land, buildings and improvements, infrastructure and machinery and equipment.

Major capital asset acquisitions during the year included the following:

Construction in Process (Route 119)	\$270,971
Land	\$211,481
Wells	\$236,076

Capital Assets at June 30, 2017 and June 30, 2016
(Net of Accumulated Depreciation)

	Business-Type Activities	
	2017	2016
Land	\$ 934,228	\$ 722,747
Construction Work in Process	850,308	579,337
Maintenance Facilities	18,008	19,721
Pump Facilities	188,523	195,513
Treatment Facilities	4,467,033	4,625,946
Standpipes	1,005,409	1,072,119
Pumping Plant	683,231	715,899
Wells	605,423	395,570
Water Quality Equipment	609,036	651,467
Transmission and Distribution	2,563,079	2,663,116
Services	297,170	304,813
Customer Meters	685,384	614,412
Hydrants and Gates	118,568	119,681
SCADA & Communication Equipment	18,335	27,003
Vehicles	127,594	101,904
Laboratory Equipment	9,607	16,634
Miscellaneous Equipment	50,000	-
Total Capital Assets	<hr/> <hr/> \$ 13,230,936	<hr/> <hr/> \$ 12,825,882

Debt

The Department's long term debt decreased by (\$396,052) or (7.76%). The Department paid long term debt principal of \$390,000 and amortized \$6,052 of premium during fiscal year 2017. The outstanding balances for the past two years are noted below:

	2017	2016	Change
General Obligation Bonds	\$ 4,600,000	\$ 4,990,000	\$ (390,000)
Premiums	108,941	114,993	(6,052)
Total Bonds Payable	<hr/> <hr/> \$ 4,708,941	<hr/> <hr/> \$ 5,104,993	<hr/> <hr/> \$ (396,052)

Fiscal Year 2018 Budget

For the fiscal year 2018, the Water Department has a total budget of \$3,464,735 consisting of:

Salaries and Wages	\$862,050
General Operating Expenses	1,277,950
Debt-Principal and Interest	507,205
Reserve	160,000
Capital	612,000
Budgeted Surplus	45,530
Total	<hr/> <hr/> \$3,464,735

Request for Information

This financial report is designed to provide a general overview of the Littleton Municipal Water Department's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Accounting/Business Manager
Littleton Municipal Water Department
39 Ayer Road
Littleton, Massachusetts 01460-3406

Littleton Municipal Water Department
 Statement of Net Position
 Proprietary Fund Type
 June 30, 2017

Proprietary
 Fund Type
Enterprise

Assets

Current:

Cash and Cash Investments	\$ 1,097,360
Accounts Receivable:	
User Charges (Net of Allowance for Uncollectable)	257,451
Unbilled User Charges	283,166
Merchandising and Jobbing	10,842
Intergovernmental	40,000
Inventory	69,689
Noncurrent:	
Capital Assets Not Being Depreciated	1,784,536
Capital Assets Being Depreciated, Net	<u>11,446,400</u>
Total Assets	<u>14,989,444</u>

Deferred Outflows of Resources

Pensions	<u>204,933</u>
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Liabilities

Current:

Wages Payable	\$ 396
Accounts Payable	1,494
Accrued Interest Payable	49,547
Bond Anticipation Notes Payable	870,000
Compensated Absences Payable	23,619
Due to Municipal Light Department	50,000
Bonds Payable	341,052

Noncurrent:

Compensated Absences Payable	55,111
Other Post Employment Benefits Payable	276,575
Net Pension Liability	1,243,478
Bonds Payable	4,367,889
Total Liabilities	<u>7,279,161</u>

Net Position

Net Investment in Capital Assets	7,671,686
Unrestricted	243,530
Total Net Position	<u>\$ 7,915,216</u>

Littleton Municipal Water Department
 Statement of Revenues, Expenses and
 Changes in Net Position
 Proprietary Fund Type
 For the Year Ended June 30, 2017

	Proprietary Fund Type <u>Enterprise</u>
Operating Revenues:	
Metered Sales	\$ 1,865,871
Debt Service Fee	513,176
Total Operating Revenues	<u>2,379,047</u>
Operating Expenses:	
Operating	298,327
Maintenance	1,010,506
General and Administrative	990,482
Depreciation	557,156
Total Operating Expenses	<u>2,856,471</u>
 Operating Income	 <u>(477,424)</u>
 Non-operating Revenues (Expenses):	
Merchandising and Jobbing Revenue	600,997
Earnings on Investments	4,275
Intergovernmental	86,330
Cell Tower Leasing	116,041
Contribution of Services by Light Department	269,350
Miscellaneous	27,681
Interest Expense	(144,250)
Total Non-Operating Revenues (Expenses)	<u>960,424</u>
 Change in Net Position	 <u>483,000</u>
 Total Net Position July 1, 2016	 <u>7,693,703</u>
 Prior Period Adjustment	 <u>(261,487)</u>
 Total Net Position July 1, 2016, as Restated	 <u>7,432,216</u>
 Total Net Position June 30, 2017	 <u>\$ 7,915,216</u>

Littleton Municipal Water Department
 Statement of Cash Flows
 Proprietary Fund Type
 For the Year Ended June 30, 2017

Proprietary
 Fund Type
Enterprise

Cash Flows from Operating Activities:

Receipts from Customers	\$ 2,378,430
Payments to Vendors and Employees	(1,865,903)
Net Cash Flow from Operating Activities	<u>512,527</u>

Cash Flows from Non Capital Related Financing Activities:

Merchandising and Jobbing	617,629
Grant	46,330
Rental Income	116,041
Miscellaneous	27,681
Net Cash Flow from Non Capital Related Financing Activities	<u>807,681</u>

Cash Flows from Capital and Related Financing Activities:

Acquisition of Fixed Assets	(962,209)
Interest Expense	(152,975)
Capital Lease Payments	(17,060)
Proceeds from Bond Anticipation Notes	870,000
Payments of Bond Anticipation Notes	(870,000)
Principal Payments on Long Term Debt	(390,000)
Net Cash Flow from Capital and Related Financing Activities	<u>(1,522,244)</u>

Cash Flows from Investing Activities:

Investment Income	4,275
Net Cash Flows from Investing Activities	<u>4,275</u>
Net Increase (Decrease) in Cash and Cash Equivalents	(197,761)
Cash and Cash Equivalents, July 1, 2016	<u>1,556,608</u>
Prior Period Adjustment	(261,487)
Cash and Cash Equivalents, July 1, 2016, as Restated	<u>1,295,121</u>
Cash and Cash Equivalents, June 30, 2017	<u>\$ 1,097,360</u>

Reconciliation of Operating Income to Net Cash Provided (Used)

by Operating Activities:

Operating Income (Loss)	\$ (477,424)
Adjustments to Reconcile Operating Income to Net Cash	
Provided (Used) by Operating Activities:	
Depreciation Expense	557,156
Contribution of Services by Light Department	269,350
(Increase) Decrease in Assets:	
Accounts Receivable	(617)
Deferred Outflows of Resources	(113,275)
Increase (Decrease) in Liabilities:	
Payroll and Vendor Payables	(2,878)
Due to Municipal Light Department	50,000
Other Post Employment Benefits Payable	(2,196)
Compensated Absences Payable	20,283
Net Pension Liability	212,128
Net Cash Provided by Operating Activities	<u>\$ 512,527</u>

Schedule of Noncash Capital and Related Financing Activities

\$ -

Town of Littleton, Massachusetts Municipal Water Department
Notes to Financial Statements
June 30, 2017

I. Summary of Significant Accounting Policies

The accounting policies for financial reporting purposes of the Town of Littleton, Massachusetts Municipal Water Department conform to accounting principles generally accepted in the United States of America for local governmental units. The Department applies all relevant Governmental Accounting Standards Board (GASB) pronouncements.

The following is a summary of the more significant accounting policies:

A. Reporting Entity

The Department's financial statements include the operations of the Water Department only. The Water Department is an enterprise fund of the Town of Littleton, Massachusetts.

B. Measurement Focus and Basis of Accounting

i. Fund Accounting

The Department reports its financial activities in one proprietary fund type in order to comply with the limitations and restrictions placed on both the resources available and the services provided.

This fund is used to account for water operations that are financed and operated in a manner similar to private business enterprises where the costs of providing goods or services to the general public on a continuing basis are financed or recovered primarily through user charges.

ii. Basis of Accounting

The accompanying financial statements have been prepared and presented on the accrual basis of accounting. Under this method, revenues are recognized in the accounting period in which they are earned and expenses are recognized when the related liability is incurred.

Revenue Recognition

Water user charges as presented are considered as revenue when they are committed for collection. Recognition has also been applied to used, but unbilled usage.

Expenses

Expenses are recorded during the year on an accrual basis.

C. Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position

i. Deposits and Investments

The Department's cash and cash equivalents are considered to be demand deposits and short term investments with original maturities of three months or less from the date of acquisition.

State and local statutes place certain limitations on the nature of deposits and investments available to the Department. Deposits allowed include demand deposits, term deposits and certificates of deposit. Investments can also be made in securities issued by or unconditionally guaranteed by the U.S. government or agencies that have a maturity of less than one year from the date of purchase, repurchase agreements guaranteed by such securities with maturity dates or no more than 90 days from the date of purchase, and units in the Massachusetts Municipal Depository Trust ("MMDT").

ii. Capital Assets

Capital assets including land, buildings and improvements, machinery and equipment and infrastructure assets are reported. Capital assets are currently defined by the Department as assets that have an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at estimated acquisition value at the date of the donation.

The cost of normal maintenance and repairs that does not add to the value of the asset or materially extend assets lives is not capitalized.

Major outlays for capital assets and improvements are capitalized as projects are constructed.

iii. 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 benefit liability as of June 30, 2017 is reflected in the financial statements.

Sick Leave

All permanent full time employees are granted sick leave based on length of service. Employees with five or more years of service for the Department and five or fewer sick days used in the immediate prior year must elect to either accumulate unused sick time for future use or have any portion of the immediate prior year's unused sick days redeemed at the rate of one day's salary for every two days redeemed. The accumulated sick leave benefit liability as of June 30, 2017 is reflected in the financial statements.

iv. Deferred Outflows/Inflows of Resources

In addition to assets, the statement of 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 net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/ expenditure) until then. The Department's financial statements include deferred outflows of resources related to pensions.

In addition to liabilities, the statement of 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 (revenue) until that time.

Currently, the Department's financial statements do not include any deferred inflows of resources.

v. Net Position

Net position is reported in two accounts. "Net Investment in Capital Assets" is used as an offset account to capital assets net of accumulated depreciation and any related outstanding debt. Unrestricted net position is used to account for the residual portion of net position that is not externally restricted.

v. 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 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.

vi. Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Middlesex County Retirement System and additions to/deductions from the System's fiduciary net position have been determined on the same basis as they are reported by the System. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

II. Stewardship, Compliance and Accountability

A. Budgetary Information

i. General Budget Policies

Budget requests are submitted to the Commissioners for review during January, February and March of each year. The Commissioners have until May (which is when the annual Town meeting is held) to make any changes to the budget. The Water Department's budget must be approved at the annual Town meeting.

III. Detailed Notes

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. 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 deposit 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 Veribac 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.

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 determined that the disclosures related to those investments only need to be disaggregated by major type. Since the Department's investments are pooled with the Town and Light Department's investments, the exact amount of each type of investment cannot be determined. However, all of the Town's (and therefore the Department's) investments are considered Level 1.

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

C. Capital Assets

Capital asset activity for the year ended June 30, 2017 was as follows:

Assets	Cost			Cost	Accumulated		Depreciation on		Contributed Assets	Accumulated	Net Book
	July 1, 2016	Additions	Dispositions		July 1, 2016	Depreciation	or (Reversed)	Depreciation			
Capital Assets Not Being Depreciated:											
Land	\$ 722,747	\$ 211,481	\$ -	\$ 934,228	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 934,228
Construction Work in Process	579,337	270,971	-	850,308	-	-	-	-	-	-	850,308
Total Capital Assets Not Being Depreciated	1,302,084	482,452	-	1,784,536	-	-	-	-	-	-	1,784,536
Capital Assets Being Depreciated:											
Maintenance Facilities	60,896	-	-	60,896	41,175	1,713	-	42,888	18,008		
Pump Facilities	248,549	-	-	248,549	53,036	6,990	-	60,026	188,523		
Treatment Facilities	5,843,985	5,450	-	5,849,435	1,218,039	164,363	-	1,382,402	4,467,033		
Standpipes	2,371,906	-	-	2,371,906	1,299,787	66,710	-	1,366,497	1,005,409		
Pumping Plant	1,161,528	-	-	1,161,528	445,629	32,668	-	478,297	683,231		
Wells	932,363	236,076	-	1,168,439	536,793	26,223	-	563,016	605,423		
Water Quality Equipment	1,845,705	9,480	-	1,855,185	1,194,238	51,911	-	1,246,149	609,036		
Transmission and Distribution	4,189,979	17,806	-	4,207,785	1,526,863	117,843	-	1,644,706	2,563,079		
Services	470,709	5,596	-	476,305	165,896	13,239	-	179,135	297,170		
Customer Meters	776,174	92,802	-	868,976	161,762	21,830	-	183,592	685,384		
Hydrants and Gates	223,926	5,185	-	229,111	104,245	6,298	-	110,543	118,568		
Office Equipment	17,907	-	-	17,907	17,907	-	-	17,907	-		
SCADA & Communication Equipment	86,684	-	-	86,684	59,681	8,668	-	68,349	18,335		
Tools	63,782	-	-	63,782	63,782	-	-	63,782	-		
Vehicles	316,722	57,362	(41,213)	332,871	214,818	31,672	(41,213)	205,277	127,594		
Laboratory Equipment	140,516	-	-	140,516	123,881	7,028	-	130,909	9,607		
Miscellaneous Equipment	164,114	50,000	(39,374)	174,740	164,114	-	(39,374)	124,740	50,000		
Total Capital Assets Being Depreciated:	18,915,445	479,757	(80,587)	19,314,615	7,391,646	557,156	(80,587)	7,868,215	11,446,400		
Total Capital Assets	\$ 20,217,529	\$ 962,209	\$ (80,587)	\$ 21,099,151	\$ 7,391,646	\$ 557,156	\$ (80,587)	\$ 7,868,215	\$ 13,230,936		

D. Accounts Receivable

The accounts receivable on the balance sheet are listed below:

User Charges:

Water Rates \$ 257,451

Unbilled Water Rates \$ 283,166

Intergovernmental
Due from Commonwealth of Massachusetts \$ 40,000

E. Debt

i Bond Anticipation Notes Payable

The Department has notes payable outstanding as of June 30, 2017 as follows:

<u>Purpose</u>	Balance			Balance			
	Beginning	of Year	Issued	Redeemed	End	Interest Rate	Maturity Date
<u>Bond Anticipation Notes</u>							
Route 119 Project	\$ 870,000	\$ 870,000	\$ (870,000)	\$ 870,000		1.25%	9/1/2017

E. Debt (Continued)

ii Long Term Debt

General obligation bonds outstanding at June 30, 2017, bear interest at various rates.

(a) Changes in Long Term Debt - the following is a summary of bond transactions for the year ended June 30, 2017:

<u>General Obligation Bond</u>	<u>Sale Date</u>	<u>Borrowing</u>	<u>Original</u>	<u>Interest Rates</u>	Balance			Balance	
					<u>Final Maturity</u>	<u>Beginning</u>	<u>of Year</u>	<u>Issued</u>	<u>Redeemed</u>
Land Acquisition - Nashoba Rd - Water	2005	\$ 350,000	350,000	3.98%	2023	\$ 130,000	\$ -	\$ (20,000)	\$ 110,000
Water - Ultrafiltration #2 - Refunding	2007	414,225	414,225	3.49%	2017	45,000	-	(45,000)	-
Water Mains - Capital	2010	191,088	191,088	3.49%	2029	130,000	-	(10,000)	120,000
Water Equipment - Ozone Generator	2010	86,099	86,099	1.82%	2018	10,000	-	(5,000)	5,000
Water Tank-Refunding	2013	652,000	652,000	1.31%	2023	430,000	-	(70,000)	360,000
Water Capital Improvement	2015	274,200	274,200	3.00%-3.25%	2035	260,000	-	(15,000)	245,000
Well Redevelopment	2015	3,720,000	3,720,000	3.00%-3.25%	2035	3,530,000	-	(190,000)	3,340,000
Water Cobbs Well	2015	178,800	178,800	3.00%	2032	165,000	-	(15,000)	150,000
Water Capital Improvement Well #2	2015	118,300	118,300	3.00%	2027	110,000	-	(10,000)	100,000
Well #2 Design	2015	194,700	194,700	3.00%-3.25%	2034	180,000	-	(10,000)	170,000
					Total	\$ 4,990,000	\$ -	\$ (390,000)	4,600,000

E. Debt (Continued)

(b) Summary of Debt Service Requirements to Maturity

	<u>Long Term Debt</u>	
	<u>Principal</u>	<u>Interest</u>
2018	\$335,000	\$133,330
2019	330,000	124,342
2020	320,000	115,330
2021	320,000	106,305
2022	310,000	96,980
2023	310,000	87,950
2024	240,000	78,912
2025	240,000	71,612
2026	240,000	64,313
2027	240,000	57,013
2028	230,000	49,862
2029	230,000	42,863
2030	220,000	35,862
2031	215,000	29,338
2032	215,000	22,888
2033	205,000	16,331
2034	205,000	9,669
2035	<u>195,000</u>	<u>3,169</u>
Total	<u>\$4,600,000</u>	<u>\$1,146,069</u>

(c) Bond Authorizations

Long-term debt authorizations voted by the Department/Town which were not issued or rescinded as of June 30, 2017 are as follows:

5/5/2014 Water Betterment Rt 119 \$870,000

E. Debt (Continued)

iii Refunding of Long Term Debt

On December 15, 2007, the Town of Littleton issued general obligation bonds in the amount of \$4,670,000 with a variable interest rate ranging from 3.63% to 5.00%, of which \$414,225 related to the Department. All of the Department's portion was issued to advance refund \$405,000 of term bonds with a variable interest rate range from 4.17% to 7.00%. The term bonds had a maturity date of January 1, 2019 and were callable on January 1, 2010. The general obligation bonds were issued at 4.00% and, after paying issuance costs, and additional costs totaling \$25,806, the net proceeds for the Department were \$415,905. The net proceeds from the issuance of the general obligation bonds were used to purchase U.S. government securities and those securities were deposited in an irrevocable trust (co-mingled with the Town's obligation) with an escrow agent to provide debt service payments until the term bonds are matured in September of 2017. The advance refunding met the requirements of an in-substance debt defeasance and the refunded term bonds were removed from the Department's

As a result of the advance refunding, the Department reduced its total debt service cash flow requirements by \$16,239 which resulted in an economic gain (difference between the present value of the debt service payment on the old and new debt) of \$15,269.

On December 7, 2012, the Town of Littleton issued general obligation bonds in the amount of \$5,437,000 with an average interest rate of 1.43%, of which \$652,000 related to the Water Department. All of the Department's portion was issued to advance refund \$650,000 of term bonds with an average interest rate of 4.91%. The term bonds had a maturity date of January 15, 2023. The Water portion of the general obligation bonds were issued with a premium of \$18,429. After paying issuance costs and other costs, the net proceeds of the Department were used to purchase U.S. government securities and those securities were deposited in an irrevocable trust (co-mingled with the Town's obligation) with an escrow agent to provide debt service payments until the term bonds are matured in January of 2023. The advance refunding met the requirements of an in-substance debt defeasance and the refunded term bonds were removed from the Department's financial statements.

As a result of the advance refunding, the Department reduced its total debt service cash flow requirements by \$95,733 which resulted in an economic gain (difference between the present value of the debt service payment on the old and new debt) of \$92,473.

E. Debt (Continued)

iv Changes in Long Term Debt

Changes in the government's long-term liabilities for the year ended June 30, 2017 are as follows:

<u>Long Term Obligations</u>	Balance			Balance	
	Beginning of Year	Additions	Reductions	End of Year	Current Portion
General Obligation Bonds	\$ 4,990,000	\$ -	\$ (390,000)	\$ 4,600,000	\$ 335,000
Premium	<u>114,993</u>	<u>-</u>	<u>(6,052)</u>	<u>108,941</u>	<u>6,052</u>
Total Bonds Payable	5,104,993	-	(396,052)	4,708,941	341,052
Compensated Absences	58,447	64,118	(43,835)	78,730	23,619
Lease Payable	17,060	-	(17,060)	-	-
Other Post Employment Benefits	278,771	98,145	(100,341)	276,575	-
Net Pension Liability	<u>1,031,350</u>	<u>345,785</u>	<u>(133,657)</u>	<u>1,243,478</u>	<u>-</u>
Total Long Term Obligations	<u>\$ 6,490,621</u>	<u>\$ 508,048</u>	<u>\$ (690,945)</u>	<u>\$ 6,307,724</u>	<u>\$ 364,671</u>

IV. Other Information

A. Pension Plans

a. General Information about the Pension Plan

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 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 on 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 Town's contractually required contribution rate for the year ended June 30, 2017 was 23.24% 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. Contributions to the pension plan from the Town were \$2,575,221 (the Water Department contributed (\$133,657) for the year ending June 30, 2017.

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

At June 30, 2017, the Town reported a liability of \$23,959,114 for its proportionate share of the net pension liability (**the Water Department's share was \$1,243,478**). 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 Town's proportion of the net pension liability was based on a projection of the Town'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 Town's proportion was 1.690981% (the Water Department is 5.19% of that percentage).

For the year ended June 30, 2017, the Town recognized pension expense of \$3,090,074 (the Water Department recognized \$98,853). At June 30, 2017, the Town and Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

Town of Littleton, Massachusetts

	Deferred Outflows <u>of Resources</u>	Deferred Inflows <u>of Resources</u>
Differences between expected and actual experience	\$ 107,904	\$ -
Change in assumptions	1,305,448	-
Net differences between projected and actual earnings on pension plan investments	994,732	-
Changes in proportion and differences between contributions and proportionate share of contributions	1,540,528	-
Contributions subsequent to the measurement date	-	-
	<hr/>	<hr/>
	\$ 3,948,612	\$ -

Littleton Water Department

	Deferred Outflows <u>of Resources</u>	Deferred Inflows <u>of Resources</u>
Differences between expected and actual experience	\$ 5,600	\$ -
Change in assumptions	67,753	-
Net differences between projected and actual earnings on pension plan investments	51,627	-
Changes in proportion and differences between contributions and proportionate share of contributions	79,953	-
Contributions subsequent to the measurement date	-	-
	<hr/> <u>\$ 204,933</u>	<hr/> <u>\$ -</u>

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 Town/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:

Town of Littleton, Massachusetts	Year ended June 30:	Amount
2018	\$ 1,112,694	
2019	\$ 1,112,693	
2020	\$ 1,095,538	
2021	\$ 627,687	

Littleton Water Department	Year ended June 30:	Amount
2018	\$ 57,749	
2019	\$ 57,749	
2020	\$ 56,858	
2021	\$ 32,577	

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:

Valuation date	January 1, 2016																																												
Actuarial Cost Method	Entry age normal cost method																																												
Amortization Method	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.																																												
Remaining Amortization Period	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.																																												
Asset Valuation Method	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.																																												
Investment Rate of Return/Discount Rate	7.75% net of pension plan investment expense, including inflation (7.875% in previous valuation)																																												
Inflation Rate	3.50% (4.0% in previous valuation)																																												
Projected Salary Increases (The ultimate values in the previous valuation were)	<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%																																										
Cost of Living Adjustments	3.00% of first \$14,000																																												
Rates of Retirement	Varies based upon age for general employees, police and fire employees.																																												
Rates of Disability	For general employees, it was assumed that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).																																												
Mortality Rates were based on the tables noted below:																																													
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 Scale BB2D (previously, RP- Healthy Annuitant Mortality Table projected 17 with scale AA)																																												
Disabled	RP-2000 Health Annuitant Mortality Table projected generationally from 2015 Scale BB2D (previously Healthy Annuitant Mortality Table set forward 3 year 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%
	<u><u>100.00%</u></u>	

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 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>
Town's proportionate share of the Net Pension Liability	\$ 28,932,804	\$ 23,959,114	\$ 19,755,664
Department's proportionate share of the Net Pension Liability (5.190%)	\$ 1,501,613	\$ 1,243,478	\$ 1,025,319

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>

B. Other Postemployment Benefits (OPEB) Disclosures

The Governmental Accounting Standards Board (GASB) issued Statement #74 *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* which became effective for the current reporting period. GASB Statement #74 relates to reporting requirements for OPEB Trust funds. The Department's contributions to the OPEB trust fund are considered and reported as a fiduciary fund of the Town. The reporting requirements related to the Department's statement of net position are currently guided by GASB Statement #45 *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Under GASB Statement #45, the reporting of the Department's net other post-employment benefits liability is being "phased in" over a thirty year period. Concurrent with GASB Statement #74, the GASB issued Statement #75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Statement #75 (which becomes effective for the June 30, 2018 reporting period) eliminates the thirty year phase in of the other post-employment benefits liability.

Plan Description.

Plan Administration: The Town administers all activity related to the other post-employment benefits plan - a single employer defined benefit plan that is used to provide

postemployment benefits other than pensions (OPEB) for all eligible employees of the Department. Management of the plan is vested in the Town's Treasurer.

Plan Membership: At June 30, 2017, the plans membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments	7
Active Plan Members	<u>10</u>
Total	<u><u>17</u></u>

Benefits Provided: The Department provides retired employees and their spouses and dependents with payments for a portion of their health care, dental care and life insurance benefits. Benefits are provided through a third party insurer.

- a. *Contributions.* 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.

Employer's Reporting (GASB Statement #45)

- b. **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 43 and 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 June 30, 2017, the amount actually contributed to the plan, and the Department's Net OPEB Obligation (NOO):

Annual Required Contribution (ARC)	\$101,999
Interest on Net OPEB Obligation	15,332
Adjustment to Annual Required Contribution	<u>(19,186)</u>
Annual OPEB Cost (Expense)	<u><u>98,145</u></u>
Contributions Made:	
Employer Benefit Payments Including Subsidy	(50,341)
Implicit Subsidy	-
Contributions to OPEB Trust	<u>(50,000)</u>
Total Contributions	<u><u>(100,341)</u></u>
Increase in Net OPEB Obligation	<u>(2,196)</u>
Net OPEB Obligation (NOO)- Beginning of Year	278,771
Net OPEB Obligation (NOO)- End of Year	<u><u>\$276,575</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:

<u>Fiscal Year Ended June 30</u>	<u>Annual Required Contribution (ARC)</u>	<u>Percentage of ARC Contributed</u>	<u>Net OPEB Obligation</u>
2015	\$108,562	75%	\$257,978
2016	\$110,136	78%	\$278,771
2017	\$101,999	98%	\$276,575

c. **Funded Status and Funding Progress.** As of July 1, 2016 the most recent actuarial valuation date, the Actuarial Accrued Liability (AAL) for benefits was \$1,263,131 and the actuarial value of assets was \$261,495, resulting in an Unfunded Actuarial Accrued Liability (UAAL) of \$1,001,636. The actual value of the assets as a percentage of the Actuarial Accrued Liability (funded ratio) was 20.7%. The covered payroll as of the valuation date was \$867,826 and the UAAL as a percentage of covered payroll was 115.5%.

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 liabilities for benefits.

d. **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) and considers 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 July 1, 2016, actuarial valuation, the entry age normal method was used (the projected unit credit method was used in the prior valuation). The actuarial assumptions included a 6.7% (previously 5.5%) investment rate of return (net of administrative expenses) and an annual healthcare cost trend rate of 8% initially, reduced by decrements of 1% to an ultimate rate of 5% (same as the previous valuation). The actuarial value of assets is determined using market value. The UAAL is being amortized over a thirty year closed (previously open) amortization period.

C. Subsequent Year's Authorization

At the May 1, 2017 annual Town meeting, the Town adopted the fiscal year 2018 budget for the Water Department. The \$3,464,735 budget will be funded by water user charges and other revenues generated by the Department.

D. Prior Period Adjustment

In accordance with Governmental Accounting Standards Board Statement #74 – *Financial Reporting for Postemployment Benefit Plans Other Than Pensions*, the Other Post Employment Benefits Trust Fund is now reported as a fiduciary fund in the Town's financial statements. As a result, a prior period adjustment (\$261,487) was made in the Departments financial statements. In the past the Other Post Employment Benefits Trust was reported as a component of retained earnings in the Water Department's statement of net position.

The net position of the Water Department before the adjustment was \$7,693,703. The net position after the entry was \$7,432,216.

Required Supplementary Information

Required Supplementary Information

Schedule of the Town of Littleton Massachusetts' Proportionate Share of the Net Pension Liability
 Middlesex County Retirement System
 Last Ten Fiscal Years**

	<u>2017</u>	<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>
Town's proportionate share of net pension liability (asset) (%)	1.690981%	1.658682%	1.583397%	<i>This schedule is intended to show information for 10 years, Additional year's information will be displayed as it becomes available.</i>						
Town's proportionate share of net pension liability (asset) (\$)	\$23,959,114	\$21,397,309	\$19,021,595							
Town's covered-employee payroll	\$11,081,928	\$10,782,598	\$10,367,883							
Town's proportionate share of net pension liability (asset) as a percentage of its covered-employee payroll	216.20%	198.44%	183.47%							
Plan fiduciary net position as a percentage of the pension liability	45.49%	46.13%	47.65%							
Littleton Water Department's proportionate share of net pension liability (asset) (\$)	\$1,243,478	1,031,350	\$913,744							

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

See Notes to the Required Supplementary Information

Required Supplementary Information

Schedule of the Town of Littleton, Massachusetts' Contributions
 Middlesex County Retirement System
 Last Ten Fiscal Years

	<u>2017</u>	<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>
Contractually required contribution	\$ 1,875,271	\$ 1,762,316	\$ 1,711,410	<i>This schedule is intended to show information for 10 years, Additional year's information will be displayed as it becomes available.</i>						
Contributions in relation to the contractually required contribution	<u>(2,575,271)</u>	<u>(1,762,316)</u>	<u>(1,711,410)</u>							
Contribution deficiency (excess)	\$ <u>(700,000)</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>	\$ <u> -</u>
Town's covered-employee payroll	11,081,928	10,782,598	10,367,883							
Contributions as a percentage of covered-employee payroll	23.24%	16.34%	16.51%							
Littleton Water Department's Contributions	<u>\$ 133,657</u>	<u>\$ 84,751</u>	<u>\$ 101,662</u>							

See Notes to the Required Supplementary Information

Littleton Municipal Water Department
 Required Supplementary Information
 Schedule of Funding Progress & Employer's Contributions - Other Post Employment Benefits (GASB 45)
 Fiscal Year Ended June 30, 2017

Schedule of Funding Progress

Actuarial Valuation <u>Date</u>	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>
7/1/2012	\$54,027	\$1,249,002	\$1,194,975	4.3%	\$677,808	176.3%
7/1/2014	\$152,051	\$1,191,115	\$1,039,064	12.8%	\$879,002	118.2%
7/1/2016	\$261,495	\$1,263,131	\$1,001,636	20.7%	\$867,286	115.5%

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.

Schedule of Employers Contributions

Fiscal Year <u>Ended June 30</u>	Annual Required Contribution (ARC)	Percentage of ARC <u>Contributed</u>	Net OPEB Obligation
2015	\$108,562	75%	\$257,978
2016	\$110,136	78%	\$278,771
2017	\$101,999	98%	\$276,575

See Notes to the Required Supplementary Information

Littleton Municipal Water Department
 Required Supplementary Information
 Valuation Details - Other Post Employment Benefits (GASB 45)
 Fiscal Year Ended June 30, 2017

Valuation Date	July 1, 2016
Actuarial Cost Method	Entry Age Normal (Projected Unit Credit in the previous report)
Amortization Method	Level Dollar
Remaining Amortization Period	30 years on a closed (previously open) amortization period for partial pre-funding
Asset Valuation Method	Market Value

Actuarial Assumptions:

Discount Rate	6.7%, (5.5% in previous report)
Medical/Drug Cost Trend Rate	8.0% graded to an ultimate rate of 5.0% in year 4 (same as in previous report)

Plan Membership:

	<u>Entire</u> <u>Town</u>	<u>Water</u> <u>Department</u>
Current retirees, beneficiaries, and dependents	208	7
Current active members	<u>356</u>	<u>10</u>
Total	564	17

Littleton Municipal Water Department
Notes to the Required Supplementary Information
June 30, 2017

I Pension Plans

a. 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.

b. 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.

c. 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%.

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

The schedule details the Town's percentage of the collective net pension liability, the proportionate amount of the collective net pension liability, the Town's covered-employee payroll, the Town's proportionate share of the collective net pension liability as a percentage of the Town'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.

e. Schedule of the Town's Contributions

The schedule details the Town's contractually required contributions, the contributions made by the Town, the deficiency/(excess) of contributions made by the Town, the Town's covered-employee payroll and the Town'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.

- a. **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 10 active employees and 7 retired employees (including beneficiaries and dependents) who are eligible to participate in the plan.
- b. **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 (a fiduciary fund of the Town). The contribution requirements of plan members and the Department are established by contractual negotiations and may be amended from time to time.