

The experience and dedication you deserve



# GASB STATEMENT NO. 75 REPORT FOR THE CONNECTICUT STATE TEACHERS' RETIREMENT SYSTEM

# RETIREE HEALTH INSURANCE PLAN

PREPARED AS OF JUNE 30, 2017
FOR FINANCIAL REPORTING AS OF JUNE 30, 2018





The experience and dedication you deserve

November 27, 2018

Board of Directors Connecticut State Teachers' Retirement System 765 Asylum Avenue Hartford, CT 06105

#### Members of the Board:

Presented in this report is the information that the Connecticut State Teachers' Retirement System (System) should use to satisfy the requirements described in Governmental Accounting Standards Board (GASB) Statement No. 75 as of June 30, 2017 for the System's Retiree Health Insurance Plan (the Plan). This report has been prepared by the System's actuary, Cavanaugh Macdonald Consulting (CMC) as of June 30, 2017 (Measurement Date).

GASB Statement No. 75 (GASB 75) establishes accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB 75 rules that apply to postretirement benefit plans are designed to help plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan sponsor financial information by standardizing certain aspects of postretirement benefit plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their postretirement benefit plans.

#### **Additional Information and Disclosures**

The information contained in this report is intended to be used by the System for financial reporting purposes for the fiscal year ending on June 30, 2018 and its use for other purposes may not be appropriate. Calculations for purposes other than satisfying the requirements of GASB 75 may produce significantly different results. This report supersedes all June 30, 2018 financial reporting results issued prior to the date of this report. The System should rely only on the June 30, 2018 (as of FYE 2017) financial reporting information provided herein.

The results contained in this report were prepared by qualified actuaries according to generally accepted actuarial principles and practices, and in compliance with Actuarial Standards of Practice issued by the Actuarial Standards Board. The financial accounting information provided in this report reflects our current understanding of GASB Statement No. 75 (GASB accounting rules), including any applicable guidance provided by the System or its audit partners as of the date of this report.



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The biennial actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2016 (Valuation Date) based on a projection of Plan membership, expected claim, and contribution data from the Valuation Date to June 30, 2017 using generally accepted actuarial practices assuming no differences between actual outcomes and expected demographic experience (no demographic gains or losses).

The census data for active and retired members as of the Valuation Date, changes in plan provisions since the Valuation Date, the net contribution amount for the fiscal year beginning on July 1, 2016 and ending on June 30, 2017, and pertinent financial information was provided by the System for financial reporting purposes. We did not audit the supplied information, but it was reviewed for reasonableness and consistency. In certain situations, the supplied information was adjusted to account for normal differences in collection dates and/or methods. As a result, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it is reliable for the purposes stated herein. The results and conclusions contained in this report depend on the integrity of this information, and if any of the supplied information or analyses change, our results and conclusions may be different and this report may need to be revised. Likewise, this information may need to be revised to reflect any significant event that affects the Plan subsequent to the Valuation Date.

All assumptions used for GASB 75 purposes—including, but not limited to, discount rates, expected rates of return on assets, expected annual per capita claims, long-term health care cost trend rates, and expected retiree and spouse health care coverage election assumptions—have been selected by the System and should reflect best estimates of anticipated Plan experience. Other than the discount rate required under GASB 75, we believe that those assumptions selected by the System for financial accounting and reporting purposes as of June 30, 2017 and June 30, 2018, respectively, are internally consistent and individually reasonable for their intended purposes. Additionally, the actuarial cost method, the asset valuation method, and the amortization methods are prescribed under GASB accounting rules.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. Since the potential impact of such factors is outside the scope of financial reporting requirements, an analysis of the range of results is not presented herein. **This report does not consider all possible scenarios.** 

The funded status measurements included in this report are based on the assumptions and methods used to determine the Plan's obligations and asset values as of the Valuation Date and/or Measurement Date under GASB accounting rules. Funded status measurements for financial accounting purposes may not be appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. Likewise, funded status measurements for financial accounting purposes may not be appropriate for assessing the need for or the amount of future actuarially determined contributions.

CMC does not provide legal, investment, or accounting advice. Thus, the information in this report is not intended to supersede or supplant the advice and interpretations of the System, or its affiliated legal, investing, or accounting partners.



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The undersigned are familiar with the near-term and long-term aspects of other postemployment benefit plan valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained in this report. All sections of this report, including any appendices and attachments, are considered an integral part of the actuarial opinions.

Please call us at 678-388-1700 if you have any questions.

Respectfully submitted,

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Sellon Roun

Senior Actuary

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Misa Break

JG/AB



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## Section I — Summary of Principal Results

#### ANNUAL GASB STATEMENT NO. 75 REPORT SUMMARY OF COLLECTIVE AMOUNTS FOR THE CONNECTICUT STATE TEACHERS' RETIREMENT SYSTEM RETIREE HEALTH INSURANCE PLAN

#### PREPARED AS OF JUNE 30, 2017

(\$ Thousands)			
Valuation Date (VD):	June 30, 2016		
Prior Measurement Date:	June 30, 2016		
Measurement Date (MD):	June 30, 2017		
Employer Reporting Date (RD):	June 30, 2018		
Discount Rate:			
Long-Term Expected Rate of Return	2.75%		
Municipal Bond Index Rate at Prior Measurement Date	3.01%		
Municipal Bond Index Rate at Measurement Date	3.56%		
Year in which Fiduciary Net Position is Projected to be Depleted	2018		
Single Equivalent Interest Rate (SEIR) at Prior Measurement Date	3.01%		
Single Equivalent Interest Rate (SEIR) at Measurement Date 3.			
Collective Net OPEB Liability as of the MD:			
Collective Total OPEB Liability (TOL)	\$ 3,538,772		
Fiduciary Net Position (FNP)	63,428		
Collective Net OPEB Liability (NOL = TOL – FNP)	\$ 3,475,344		
FNP as a percentage of TOL	1.79%		
Collective OPEB Expense / (Income) for the Measurement Period:	\$ 161,065		
Collective Deferred (Inflow) / Outflow Balances as of the MD:			
Total Collective Deferred Inflow of Resources	\$ (324,172)		
Total Collective Deferred Outflow of Resources	\$ 1,210		



#### Section II — Introduction

The Governmental Accounting Standards Board issued Statement No. 75 (GASB 75), "Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions" in June 2015. GASB 75 is effective for employer fiscal years beginning after June 15, 2017. For the purposes of reporting under GASB 75, the Plan is assumed to be a cost-sharing, other than insured, defined benefit OPEB plan with a special funding situation where assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB 75. Additionally, we have assumed that the System will not restate results for any prior period based on the guidance in paragraph 244 of GASB 75.

This report, prepared as of June 30, 2017 (Measurement Date or MD), presents information to assist the System in meeting the requirements of GASB 75. Much of the material provided in this report is based on the data, assumptions, plan provisions, and results of the annual actuarial valuation of the Plan, as of June 30, 2016 (Valuation Date or VD).

GASB 75 establishes accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB 75 rules that apply to postretirement benefit plans are designed to help plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan sponsor financial information by standardizing certain aspects of postretirement benefit plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their postretirement benefit plans. GASB 75 replaces GASB 45 and also represents a significant departure from the requirements of the prior statement. GASB 45 required employers providing benefits through OPEB plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 75 create disclosures and reporting requirements that may or may not be consistent with the basis used for funding the Plan. In fact, GASB 75 paragraph B10 states:

"The Board concluded that it is not within the scope of its activities to set standards that establish a specific method of financing OPEB (that being a policy decision for government officials or other responsible authorities to make) or to regulate a government's compliance with the financing policy or method it adopts. Accordingly, the Board established standards in this Statement within the context of accounting and financial reporting, not within the context of the funding of OPEB."

GASB 75 requires the determination of the collective Total OPEB Liability (TOL) utilizing the Entry Age Normal (EAN) actuarial cost method. If the valuation date at which the TOL is determined is before the measurement date, as is the case here, the TOL must be rolled forward to the measurement date. The collective Net OPEB Liability (NOL) is then set equal to the rolled forward TOL minus the plan's Fiduciary Net Position (FNP) (basically the market value of assets as of the Measurement Date). The plan provisions recognized in the calculation of the TOL are summarized in Schedule B. The development of the roll-forward of the TOL is shown in the table on page 9.



#### Section II — Introduction (continued)

Among the items needed for the liability calculation is the discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan's provisions applicable to the membership and beneficiaries of the Plan on the Measurement Date. Future contributions are to be projected in accordance with a plan's funding policy and/or the application of professional judgment to consider the recent contribution history of the employers and non-employer contributing entities. If the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, at a future measurement date, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate (Municipal Bond Index Rate). The Municipal Bond Index Rates used for this purpose are the average of the Bond Buyer General Obligation 20-year Municipal Bond Rates during the month of June published at the end of each week by The Bond Buyer (www.bondbuyer.com). Our calculations indicated that the FNP is projected to be depleted in 2018, so the Municipal Bond Index Rate is used in the determination of the SEIR. On the Prior Measurement Date (PMD), the Municipal Bond Index Rate was 3.01%. Since the index rate changed during the Measurement Period, a 3.56% Municipal Bond Index Rate was used as of the MD.

Another major change in GASB 75 is the requirement to determine and disclose an OPEB Expense (OE) in the Notes to Financial Statements. The OE includes amounts for Service Cost (the Normal Cost under EAN for the year), interest on the TOL, benefit payments, administrative expenses, recognition of increases/decreases in the TOL due to changes in benefit structure, actuarial experience, and actuarial assumption changes, and increases/decreases in the FNP due to investment experience. Changes in benefit terms, including any assumption changes that might be needed to reflect those amendments, are recognized immediately. Differences resulting from actuarial experience and changes of assumptions and other inputs are recognized over the average expected remaining service lives of the plan membership at the beginning of the measurement period, and investment gains/losses are recognized over five years.

The unrecognized portions of each year's experience and assumption changes are used to develop the Deferred Outflows of Resources and Deferred Inflows of Resources that must be included on the Statement of Net Position in the employers' and non-employer contributing entity's financial statements.



#### Section II — Introduction (continued)

The State makes all contributions to the System on behalf of employees of the participating districts. Therefore, our understanding is that participating employers are considered to be in a special funding situation as defined by GASB 75 and the State is treated as a governmental non-employer contributing entity in the System. Since employers do not contribute directly to the System, we believe that the participating districts would not be required to report the Plan's NOL or deferred inflows or outflows in their financial statements. However, the notes to the financial statements must disclose the portion of the non-employer contributing entities' total proportionate share of the NOL that is associated with the employer. In addition, each district must recognize the total OE associated with the district as well as revenue in an amount equal to the non-employer contributing entities' total proportionate share of the collective OE associated with the district. The State, as a non-employer contributing entity, would report the entire collective amounts of the NOL, Deferred Inflows and Outflows and OE.

However, even though the participating districts will not be required to recognize proportionate shares of the NOL, these employers would be required to provide information about the Plan in their note disclosures and schedules of Required Supplementary Information (RSI). Section III provides the actuarial information for the Plan that must be disclosed for financial reporting purposes, presented in the order that appears in GASB 75. The development of the collective OE is shown in Section IV. Section V provides the RSI for the reporting entity's financial statements.

Section VI of this report shows the total amount of employer contributions from the State as support provided to the districts for the year ending June 30, 2017. Section VI also shows the proportionate share percentages that have been determined based on these contributions.

Based on these percentages we have determined the proportionate share amounts of the NOL associated with each participating employer and the employer OE and revenue for State support for each participating employer for the fiscal year ending June 30, 2017. These amounts are shown in Section VII.



#### Section III — Financial Statement Notes

As stated previously, the Plan is assumed to be cost-sharing, other than insured, defined benefit OPEB plan with a special funding situation where assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB 75. Additionally, we have assumed that the System will not restate results for any prior period based on the guidance in paragraph 244 of GASB 75. The material provided in this section should be used to satisfy the financial reporting requirements for both employers and governmental nonemployer contributing entities (GNCEs), and has been arranged to match the order of presentation that appears in GASB 75. Amounts are shown in aggregate. This report does not include any non-actuarial items that may need to be reported or disclosed. Relevant paragraph numbers are provided for the convenience of the reader (paragraphs applicable to GNCEs appear in brackets).

Paragraphs 91(a)-(d) [128(a)-(d)]: CMC was not expected to supply this information.

Paragraphs 92 and 93(a)-(d) [129 and 130(a)-(d)]: Listed below is the information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs utilized in developing the TOL are outlined in Schedule C. The TOL was determined by an actuarial valuation as of June 30, 2016, using the following key actuarial assumptions and other inputs:

Inflation	2.75%
Real Wage Growth	0.50%
Wage Inflation	3.25%
Salary increases, including wage inflation	3.25% - 6.50%
Long-term Investment Rate of Return, net of OPEB plan investment expense, including inflation	2.75%
Municipal Bond Index Rate	
Measurement Date	3.56%
Prior Measurement Date	3.01%
Year FNP is projected to be depleted	
Measurement Date	2018
Prior Measurement Date	2018
Single Equivalent Interest Rate, net of OPEB plan investment expense, including price inflation	
Measurement Date	3.56%
Prior Measurement Date	3.01%
Health Care Cost Trend Rates	
Pre-Medicare	7.25% for 2017 decreasing to an ultimate rate of 5.00% by 2022
Medicare	7.25% for 2017 decreasing to an ultimate rate of 5.00% by 2022



Mortality rates were based on the RPH-2014 White Collar table with employee and annuitant rates blended from ages 50 to 80, projected to the year 2020 using the BB improvement scale, and further adjusted to grade in increases (5% for females and 8% for males) to rates over age 80 for the period after service retirement and for dependent beneficiaries as well as for active members. The RPH-2014 Disabled Mortality Table projected to 2017 with Scale BB is used for the period after disability retirement. .

The demographic actuarial assumptions for retirement, disability incidence, and withdrawal used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2010 – June 30, 2015.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the June 30, 2016 valuation were based on a review of recent plan experience done concurrently with the June 30, 2016 valuation.

**Paragraph 93(e)** [130(e)]: This paragraph requires the disclosure of the sensitivity of the NOL to changes in healthcare cost trend rates. The following table presents the NOL of the Plan, calculated using current healthcare cost trend rates, as well as what the Plan's NOL would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than current healthcare cost trend rates:

(\$ in Thousands)	1% Lower Trend Rates	Current Trend Rates	1% Higher Trend Rates
Initial Healthcare Cost Trend Rate	6.25%	7.25%	8.25%
Ultimate Healthcare Cost Trend Rate	4.00%	5.00%	6.00%
NOL	\$ 2,861,462	\$ 3,475,344	\$ 4,301,861

Please keep in mind that the estimates provided in the table above were prepared using streamlined calculation techniques, and they are intended to provide an "order of magnitude" indication of the NOL's sensitivity to changes in these assumptions. Results based on more refined calculations may yield findings and conclusions different than those suggested by the methodology required under GASB 75 as shown above.



Paragraphs 94(a)-(f) [131(a)-(f)]: These paragraphs require information to be disclosed about the discount rate used to measure the TOL.

Discount rate (SEIR). The discount rate used to measure the TOL as of the Measurement Date was 3.56%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 75. The projection's basis was an actuarial valuation performed as of June 30, 2016. In addition to the actuarial methods and assumptions of the June 30, 2016 actuarial valuation, the following actuarial methods and assumptions were used in the projection of cash flows:

- Total payroll for the initial projection year consists of the payroll of the active membership present on the Valuation Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 3.25%.
- Employee contributions were assumed to be made at the current member contribution rate.
   Employee contributions for future plan members were used to reduce the estimated amount of total service costs for future plan members.
- No future employer contributions were assumed to be made.
- For future plan members, contribution inflows were further reduced by the estimated amount of total service costs for future plan members not financed by their member contributions.

Based on these assumptions, the Plan's FNP was projected to be depleted in 2018 and, as a result, the Municipal Bond Index Rate was used in the determination of the SEIR. Here, the long-term expected rate of return of 2.75% on Plan investments was applied to periods through 2018 and the Municipal Bond Index Rate at the Measurement Date (3.56%) was applied to periods on and after 2018, resulting in an SEIR at the Measurement Date (3.56%).

The FNP projections are based upon the Plan's financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements described in GASB 75. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan's ability to make benefit payments in future years.

The long-term expected return on plan assets is reviewed as part of the GASB 75 valuation process. Several factors are considered in evaluating the long-term rate of return assumption, including the Plan's current asset allocations and a log-normal distribution analysis using the best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) for each major asset class compiled by Horizon Actuarial Services, LLC in its "Survey of Capital Market Assumptions, 2017 Edition". The long-term expected rate of return was determined by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.



The target asset allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Expected 10-Year Geometric Real Rate of Return	Standard Deviation
U.S. Treasuries (Cash Equivalents)	100.00%*	0.04%	2.79%
Price Inflation		2.75%	
Expected Rate of Return 1.0004 x 1.0275 – 1 = 2.79%			9%
Expected Rate of Return (Rounded Nea	2.75%		

<sup>\*</sup>All of the Plan's assets are assumed to be invested in cash equivalents given the need for liquidity.

**Paragraph 94(g) [131(g)]:** This paragraph requires the disclosure of the sensitivity of the NOL to changes in the discount rate. The following table presents the NOL of the Plan, calculated using the discount rate of 7.25 percent, as well as what the Plan's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (2.56 percent) or 1-percentage-point higher (4.56 percent) than the current rate (3.56 percent):

(\$ in Thousands)	1%	Current	1%
	Decrease	Discount Rate	Increase
	(2.56%)	(3.56%)	(4.56%)
NOL	\$ 4,188,346	\$ 3,475,344	\$ 2,914,719

Please keep in mind that the estimates provided in the table above were prepared using streamlined calculation techniques, and they are intended to provide an "order of magnitude" indication of the NOL's sensitivity to changes in these assumptions. Results based on more refined calculations may yield findings and conclusions different than those suggested by the methodology required under GASB 75, as shown above. For example, one possible refinement would consider the impact of similar changes in bond yields on Plan assets, including (but not limited to) the valuations of certain fixed income investments held by the Plan. However, as required by GASB rules, we have not made any attempt to adjust the Plan's FNP to reflect a potentially related change in fixed income asset pricing.

Paragraph 95 [132]: CMC was not expected to supply this information.

**Paragraph 96(a):** Please see Schedule of Employer Allocations and Schedule of OPEB Amounts by Employer in Schedules VI and VII.

Paragraph 96(b): CMC was not expected to supply this information.



Paragraph 96(c) [133(b)]: The TOL is based upon an actuarial valuation performed as of the Valuation Date, June 30, 2016. An expected TOL is determined as of June 30, 2017 using standard roll-forward techniques. The roll-forward calculation begins with the TOL, as of June 30, 2016, subtracts the actual benefit payments (net of retiree contributions) for the year, applies interest at the discount rate for the year, and then adds the annual normal cost (also called the Service Cost). Actuarial gains and losses arising from the difference between estimates and actual experience (excluding amounts related to benefit changes and changes in assumptions or other inputs) are reconciled to the TOL as of the Measurement Date. Last, the changes of assumptions or other inputs include the change in the SEIR from 3.01 percent on the Prior Measurement Date to 3.56 percent on the Measurement Date. The procedure used to determine the TOL, as of June 30, 2017, is shown in the following table:

TOL Roll-Forward (\$ Thousands)	
(a) TOL as of June 30, 2016 *	\$ 3,734,043
(b) Actual Benefit Payments and Refunds for the Year July 1, 2016 – June 30, 2017	(84,071)
(c) Interest on TOL = $[(a) \times (0.03010)] + [(b) \times (0.01505)]$	111,129
(d) Service Cost for the Year ** July 1, 2016 – June 30, 2017 at the End of the Year	148,220
(e) Changes of Benefit Terms	0
(f) Differences Between Expected and Actual Experience at the End of the Year	0
(g) Changes of Assumptions or Other Inputs	(370,549)
(h) TOL Rolled Forward to June 30, 2017 = (a) + (b) + (c) + (d) + (e) + (f) + (g)	\$ 3,538,772

<sup>\*</sup> The TOL used in the roll-forward as of June 30, 2016 is calculated using the discount rate as of the Prior Measurement Date.

<sup>\*\*</sup> The Entry Age Normal Cost shown above includes interest during the projection period based on the discount rate as of the Prior Measurement Date.



**Paragraph 96(d) [133(c)]:** Since the Prior Measurement Date, the SEIR was increased from 3.01% to 3.56%. Additionally, changes were made to health care cost and inflation assumptions, along with participation assumptions. As a result of the Experience Study for the Five-Year Period ending June 30, 2015, the long-term rate of return and payroll growth assumptions were also updated. Finally, payroll and demographic assumptions were adjusted based upon the experience study. Please see Section V for more information.

Paragraph 96(e) [133(d)]: There are no changes in benefit terms since the Prior Measurement Date.

Paragraph 96(f) [133(e)]: CMC was not expected to supply this information.

**Paragraph 96(g) [133(f)]:** Please see Section IV for the development of the Collective OPEB Expense (OE). The OE for each employer is shown in Section VII.

Paragraphs 96(h)(1)-(3) [133(g)(1)-(3)]: Since certain expense items are recognized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts will increase collective OPEB Expense they are labeled Deferred Outflows of Resources. If they serve to reduce collective OPEB Expense they are labeled Deferred Inflows of Resources. The recognition of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions or other inputs, if any, are recognized over the average expected remaining service lives of the active and inactive Plan members at the beginning of the measurement period. Investment gains and losses are recognized over a fixed five year period.

The following table provides a summary of the collective Deferred Outflows of Resources and collective Deferred Inflows of Resources as of June 30, 2017:

(\$ Thousands)	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between expected and actual experience	\$	0	\$	0
Changes of assumptions or other inputs		0		(324,172)
Net difference between projected and actual earnings on plan investments		1,210		0
Total	\$	1,210	\$	(324,172)



Paragraphs 96(h)(4)-(5) [133(g)(4)-(5)]: CMC was not expected to supply this information.

Paragraphs 96(i)(1)-(2) [133(h)(1)-(2)]: Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB benefits will be recognized in OPEB Expense as follows:

(\$ Thousands)	
\$	(46,075)
\$	(46,075)
\$	(46,074)
\$	(46,074)
\$	(46,377)
\$	(92,287)
	\$ \$ \$ \$

**Paragraph 96(j):** The revenue recognized for the support provided by the GNCE is shown in Section VII for each employer.



#### Section IV — OPEB Expense

The collective OPEB Expense (OE) consists of a number of different items. GASB 75 refers to the first item as Service Cost, which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the TOL at 3.01%, the Discount Rate in effect as of the Prior Measurement Date.

The next three items refer to any changes that occurred in the TOL due to:

- · benefit changes, or
- actual versus expected experience, or
- changes in assumptions or other inputs.

Changes in benefit terms, including any assumption changes that might be needed to reflect those amendments, are recognized immediately. Benefit improvements for existing Plan members will increase collective OE, or decrease collective OE if the change reduces Plan benefits. For the fiscal year ending on June 30, 2017, there is no benefit change to be recognized.

The next item to be recognized is the portion of current year changes in TOL due to actual versus expected Plan experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service lives of the entire Plan membership at the beginning of the measurement period. The average expected remaining service lives of active members is the average number of years the active members are expected to remain in covered employment. The average expected remaining service lives of the inactive members is zero. The recognition period is the weighted average of these two amounts, or 7.99 years. The determination of the average expected remaining service lives for the entire Plan membership at the beginning of the year is provided in the following table:

Membership Category	(1) Number	(2) Average Remaining Service Lives (in Years)
(a) Active Members	50,877	12.64
<ul><li>(b) Inactive Members</li><li>(c) Total Membership</li><li>[((1a) x (2a)) + ((1b) x (2b))] / (1c)</li></ul>	<u>29,642</u> 80,519	<u>0.00</u> 7.99

The last item under changes in TOL is changes in assumptions or other inputs. There was a change in the TOL arising from the change in the Discount Rate from 3.01% on the Prior Measurement Date to 3.56% on the Measurement Date. Therefore, the change in TOL resulting from the change in the Discount Rate is to be recognized in the collective OPEB Expense (OE), beginning in the current measurement period, over a closed period equal to 7.99 years, using the same approach applied to Plan experience as described in the prior paragraph.



#### Section IV — OPEB Expense (continued)

Active member contributions for the year and projected earnings on FNP at the expected rate of return on assets serve to reduce the collective OE. One-fifth of current-period difference between actual and projected earnings on the FNP is recognized in the OE. The determination of the investment gain or loss is shown in the following table:

Investment Earnings (Gain) Loss For Year Ending June 30, 2017 (\$ Thousands)	
(a) Expected rate of return on assets	2.75%
(b) Beginning of year market value of assets	\$ 76,880
(c) End of year market value of assets	\$ 63,428
(d) Expected return on beginning assets for fiscal year [(b) x (a)]	\$ 2,114
(e) External cash flow (mid-year payments assumed):	
Contributions—employer	\$ 19,922
Contributions—active members	50,436
Refunds of contributions	0
Benefit payments	(84,071)
Administrative expenses	(150)
Other*	 N/A
Total external cash flow	\$ (13,863)
(f) Expected return on external cash flow [(e) x (a) / 2]	(191)
(g) Projected earnings on plan investments for fiscal year [(d) + (f)]	\$ 1,923
(h) Net investment income [(c) - (b) - (e)]	411
(i) Investment earnings (gain) loss [(g) – (h)]	\$ 1,512

<sup>\* &</sup>quot;Other" cash flows are included with net investment income for (gain) / loss purposes.

The current year portions of previously determined experience and assumption amounts, recognized as Deferred Outflows of Resources and Deferred Inflows of Resources (see Section III) are included on the following page. Deferred Outflows of Resources are added to the OE while Deferred Inflows of Resources are subtracted from the OE. Finally, other miscellaneous items are included.



# Section IV — OPEB Expense (continued)

The development of the collective OE for the year ended June 30, 2017 is shown in the following table:

Collective OPEB Expense For Year Ending June 30, 2017 (\$ Thousands)	
Service Cost at end of year*	\$ 148,220
Interest on the Total OPEB Liability and Cash Flow	111,129
Current-period benefit changes	0
Active member contributions	(50,436)
Projected earnings on plan investments	(1,923)
Administrative Costs**	150
Other	0
Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability	0
Expensed portion of current-period changes of assumptions or other inputs	(46,377)
Expensed portion of current-period differences between actual and projected earnings on plan investments	302
Recognition of beginning Deferred Outflows of Resources as OPEB Expense	0
Recognition of beginning Deferred Inflows of Resources as OPEB Expense	 0
Collective OPEB Expense / (Income)	\$ 161,065

<sup>\*</sup> The service cost includes interest for the year.

<sup>\*\*</sup> Administrative costs are based on the fees paid from the Plan's trust.



#### Section V — Required Supplementary Information

There are several tables of Required Supplementary Information (RSI) that may need to be included in the reporting entity's financial statements:

Paragraphs 97(a)–(b): CMC was not expected to supply this information.

**Paragraphs [134(a)–(b)]:** The required tables are provided in Schedule A and the information provided is as of the Measurement Dates. We have assumed that the System will not restate results for any period prior to the adoption of GASB 75 in accordance with paragraph 244, so only the initial year is displayed. Additional years will be added in the future.

Paragraph 98 [135]: In addition the following should be noted regarding the RSI:

#### Changes of benefit terms:

June 30, 2017 (Valuation Date: June 30, 2016)

None

#### Changes in actuarial assumptions and methods:

June 30, 2017 (Valuation Date: June 30, 2016)

- The SEIR was increased from 3.01% to 3.56% to reflect the change in the Municipal Bond Index Rate.
- Changes were made to the assumed initial per capita health care costs, rates of health care inflation
  used to project the per capita costs, and the rates of Plan participation based upon recent experience
  and current expectations,.
- As a result of the Experience Study for the Five-Year Period Ending June 30, 2015, the payroll growth
  rate assumption was decreased from 3.75% to 3.25% to reflect the decrease in the rate of inflation
  and the decrease in the rate of real wage increase. Last, the salary growth assumption, the payroll
  growth rate, the rates of withdrawal, the rates of retirement, the rates of mortality, and the rates of
  disability incidence were adjusted based upon the experience study's findings and their adoption by
  the Board.



#### Section V — Required Supplementary Information (continued)

Methods and assumptions used in calculations of Actuarially Determined Contributions. The Actuarially Determined Contribution rates, as a percentage of payroll, used to determine the Actuarially Determined Contribution amounts in the Schedule of Employer Contributions (Schedule A) are calculated as of the most recent Valuation Date. The following actuarial methods and assumptions (from the June 30, 2016 actuarial valuation) were used to determine contribution rates reported in that schedule for the year ending June 30, 2017:

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll
Amortization period	30 years, open
Asset valuation method	Market value of assets
Price inflation	2.75%
Real wage growth	0.50%
Wage inflation	3.25%
Salary increases, including wage inflation	3.25% to 6.50%
Initial health care cost trend rates	
Medicare Supplement Claims	7.75%
Retiree Contributions	7.75%
Ultimate health care cost trend rates	
Medicare Supplement Claims	5.00%
Retiree Contributions	5.00%
Year of ultimate trend rates	
Medicare Supplement Claims	2022
Retiree Contributions	2022
Long-term investment rate of return, net of pension plan investment expense, including price inflation	4.25%



<u>Employer</u>		2017 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
Andover	\$	Allocation Purposes 10,463	<u>Percentage</u> 0.052521%
Ansonia	Ψ	64,363	0.323077%
Ashford		15,267	0.076636%
Avon		133,860	0.671918%
Barkhamsted		8,158	0.040949%
Berlin		111,834	0.561359%
Bethany		16,429	0.082467%
Bethel		109,190	0.548087%
Highville Chtr		7,660	0.038450%
Bloomfield		87,962	0.441533%
Bolton		33,662	0.168967%
Bozrah		8,507	0.042702%
Branford		127,706	0.641029%
Bridgeport		606,323	3.043487%
Bristol		281,771	1.414373%
Brookfield		94,156	0.472625%
Brooklyn		1,530	0.007678%
Cldrn Ctr Com Prog		1,806	0.009064%
Canaan		4,206	0.021111%
Canterbury		17,112	0.085896%
Canton		55,311	0.277638%
Chaplin		8,413	0.042231%
Cheshire		162,467	0.815514%
Chester		6,228	0.031262%
Clinton		80,030	0.401716%
Colchester		93,033	0.466984%
Amistad Acd		16,466	0.082653%
Colebrook		4,420	0.022186%
Columbia		20,120	0.100995%
Cornwall		5,346	0.026837%
Coventry		60,743	0.304903%
Cromwell		67,785	0.340252%
Danbury		360,063	1.807366%
Darien		212,454	1.066431%
Deep River		8,316	0.041741%
Derby		43,920	0.220461%
Eastford		6,998	0.035126%
East Granby		38,960	0.195561%
East Haddam		45,872	0.230260%
East Hampton		72,018	0.361499%



<u>Employer</u>	2017 Expected Employer Contribution Effort for	Employer Allocation
	Allocation Purposes	<u>Percentage</u>
East Hartford	263,395	1.322134%
East Haven	109,190	0.548086%
East Lyme	103,017	0.517102%
Easton	33,228	0.166792%
East Windsor	50,583	0.253904%
Ellington	88,149	0.442472%
Enfield	187,336	0.940346%
Essex	11,230	0.056371%
Fairfield	420,340	2.109931%
Farmington	157,101	0.788579%
Franklin	6,621	0.033234%
Glastonbury	238,357	1.196449%
Granby	70,136	0.352052%
Greenwich	464,139	2.329783%
Griswold	60,817	0.305276%
Groton	185,876	0.933020%
Guilford	131,871	0.661939%
Hamden	224,101	1.124892%
Hampton	4,362	0.021897%
Hartford	780,467	3.917616%
Hartland	7,961	0.039963%
Hebron	27,286	0.136962%
Kent	9,559	0.047982%
Killingly	76,819	0.385598%
Lebanon	34,064	0.170988%
Ledyard	91,163	0.457598%
Lisbon	15,733	0.078973%
Litchfield	42,897	0.215326%
Madison	120,650	0.605612%
Manchester	257,043	1.290248%
Mansfield	55,338	0.277772%
Marlborough	19,985	0.100318%
Meriden	269,928	1.354922%
Middletown	173,830	0.872554%
Milford	252,904	1.269472%
Monroe	139,409	0.699773%
Montville	93,063	0.467135%
Naugatuck	130,900	0.657062%
New Britain	354,423	1.779052%
New Canaan	194,140	0.974500%



<u>Employer</u>	2017 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
New Fairfield	97,089	0.487344%
New Hartford	16,991	0.085289%
New Haven	742,051	3.724780%
Newington	157,965	0.792915%
New London	103,969	0.521881%
New Milford	117,235	0.588471%
Newtown	171,622	0.861471%
Norfolk	4,139	0.020778%
North Branford	67,017	0.336397%
North Canaan	9,228	0.046319%
North Haven	120,408	0.604397%
No.Stonington	31,018	0.155695%
Norwalk	442,544	2.221382%
Norwich	112,770	0.566056%
NFA	76,576	0.384380%
Old Saybrook	58,902	0.295662%
Orange	46,639	0.234109%
Oxford	61,318	0.307789%
Plainfield	72,776	0.365303%
Plainville	85,864	0.430998%
Plymouth	53,004	0.266055%
Pomfret	13,861	0.069575%
Portland	44,786	0.224806%
Preston	17,669	0.088691%
Putnam	3,072	0.015420%
Redding	47,463	0.238244%
RSD 1	34,438	0.172867%
RSD 4	33,301	0.167158%
RSD 5	94,426	0.473978%
RSD 6	34,684	0.174098%
RSD 7	39,132	0.196428%
RSD 8	58,125	0.291762%
Ridgefield	208,794	1.048058%
Rocky Hill	97,982	0.491830%
Salem	14,696	0.073765%
Salisbury	11,881	0.059636%
Scotland	5,163	0.025918%
Seymour	78,111	0.392083%
Sharon	8,798	0.044162%
Shelton	174,379	0.875311%



<u>Employer</u>	2017 Expected Employer Contribution Effort for	Employer Allocation
Sherman	Allocation Purposes 14,772	Percentage 0.074148%
Simsbury	164,416	0.825299%
Somers		0.263164%
Southington	52,428 211,927	1.063785%
S. Windsor	165,732	0.831906%
Sprague	10,207	0.051233%
Stafford	57,328	0.031233%
Stanford	662,722	3.326586%
SDE	178,064	0.893804%
DCF Recq Home	8,979	0.045069%
•	12,402	
Sterling		0.062251%
Stonington Stratford	82,695 250,465	0.415095% 1.257230%
Stratiord	•	0.444818%
	88,617	
Thomaston	31,294	0.157083%
Thompson	35,154	0.176457%
Tolland	87,430	0.438862%
Torrington	150,093	0.753405%
Trumbull	262,790	1.319093%
Union	2,784	0.013975%
Vernon	123,143	0.618127%
Voluntown	11,101	0.055724%
Wallingford	245,169	1.230646%
Waterfard	581,925	2.921015%
Waterford	111,078	0.557566%
Watertown	87,353	0.438475%
Westbrook	38,002	0.190752%
W.Hartford	367,503	1.844711%
West Haven	209,911	1.053665%
Weston	108,743	0.545843%
Westport	266,125	1.335836%
Wethersfield	129,563	0.650353%
Willington	18,033	0.090518%
Wilton	188,332	0.945349%
Winchester	21,783	0.109341%
Windham	115,127	0.577890%
Windsor	148,629	0.746057%
Windsor Locks	75,653	0.379744%
Winsted/Gilbert	20,829	0.104553%
Wolcott	80,795	0.405555%



Woodstock       24,793       0.1         Woodstock Ad       34,344       0.1         UCONN       6,959       0.0         RSD 9       45,303       0.2         CCI Somers       0,311       0.0         RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	156915% 124452% 172391% 034933% 227401% 001559% 425900% 081729% 007997% 005931% 006093% 014028%
Woodstock       24,793       0.1         Woodstock Ad       34,344       0.1         UCONN       6,959       0.0         RSD 9       45,303       0.2         CCI Somers       0,311       0.0         RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	124452% 172391% 034933% 227401% 001559% 425900% 081729% 007997% 005931%
Woodstock Ad       34,344       0.1         UCONN       6,959       0.0         RSD 9       45,303       0.2         CCI Somers       0,311       0.0         RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	172391% 034933% 227401% 001559% 425900% 081729% 007997% 005931% 006093%
UCONN       6,959       0.0         RSD 9       45,303       0.2         CCI Somers       0,311       0.0         RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	034933% 027401% 001559% 425900% 081729% 007997% 005931% 006093%
RSD 9       45,303       0.2         CCI Somers       0,311       0.0         RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	227401% 001559% 425900% 081729% 007997% 005931%
CCI Somers       0,311       0.0         RSD 10       84,848       0.2         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	001559% 425900% 081729% 007997% 005931% 006093%
RSD 10       84,848       0.4         Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	425900% 081729% 007997% 005931% 006093%
Supervison District       16,282       0.0         NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	081729% 007997% 005931% 006093%
NWCTC       1,593       0.0         MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	007997% 005931% 006093%
MCTC       1,182       0.0         Norwalk CTC       1,214       0.0         WCSU       2,795       0.0	005931% 006093%
Norwalk CTC 1,214 0.0 WCSU 2,795 0.0	006093%
WCSU 2,795 0.0	
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·	208287%
,	027552%
•	380574%
,	353627%
,	003841%
· ·	036373%
·	933442%
	712001%
,	369377%
·	003032%
	007079%
·	000000%
	045076%
	283477%
	568309%
·	386183%
·	397207%
·	005957%
·	006721%



<u>Employer</u>	Con	Expected Employer tribution Effort for ocation Purposes	Employer Allocation Percentage
RSD 18		60,612	0.304249%
DCF Mental Health		0,565	0.002836%
EASTCONN		33,266	0.166979%
BSBE		4,879	0.024489%
RSD 19		48,777	0.244840%
UCONN Health		3,700	0.018575%
CCI Suffield		0	0.000000%
CCI Niantic		0,328	0.001647%
Children's CTR		4,699	0.023585%
Bridges Academy		6,093	0.030583%
Common Ground		6,009	0.030161%
Explorations		4,027	0.020214%
Intergrated Day		9,396	0.047165%
Isaac		8,996	0.045158%
Jumoke Academy		14,369	0.072127%
Side by Side		7,097	0.035624%
Trailblazers Academy		4,048	0.020318%
New Beginnings		0	0.000000%
Elm City CP		7,597	0.038132%
Stamford Academy		3,112	0.015623%
Park City		6,655	0.033406%
AF Bridgeport Academy		5,472	0.027467%
SERC		1,023	0.005135%
AF Hartford Acad		18,272	0.091720%
Brass City		4,066	0.020408%
Path Academy		2,084	0.010460%
Booker T. Washington(BTW)		<u>3,951</u>	0.019831%
Total	\$	19,922,000	100.000000%



	S	tate's Proportionate Share	
<u>Employer</u>		of the Net OPEB Liability	Employer OPEB
	As	sociated with the Employer	Expense and Revenue
Andover	\$	1,825,285	\$ 84,593
Ansonia		11,228,037	520,364
Ashford		2,663,365	123,434
Avon		23,351,462	1,082,225
Barkhamsted		1,423,119	65,955
Berlin		19,509,156	904,153
Bethany		2,866,012	132,825
Bethel		19,047,909	882,776
Highville Chtr		1,336,270	61,929
Bloomfield		15,344,791	711,155
Bolton		5,872,184	272,147
Bozrah		1,484,041	68,778
Branford		22,277,963	1,032,473
Bridgeport		105,771,643	4,901,992
Bristol		49,154,327	2,278,060
Brookfield		16,425,345	761,233
Brooklyn		266,837	12,367
Cldrn Ctr Com Prog		315,005	14,599
Canaan		733,680	34,002
Canterbury		2,985,181	138,348
Canton		9,648,876	447,178
Chaplin		1,467,673	68,019
Cheshire		28,341,917	1,313,508
Chester		1,086,462	50,352
Clinton		13,961,013	647,024
Colchester		16,229,300	752,148
Amistad Acd		2,872,476	133,125
Colebrook		771,040	35,734
Columbia		3,509,924	162,668
Cornwall		932,678	43,225
Coventry		10,596,428	491,092
Cromwell		11,824,927	548,027
Danbury		62,812,186	2,911,034
Darien		37,062,146	1,717,647
Deep River		1,450,643	67,230
Derby		7,661,778	355,086
Eastford		1,220,749	56,576
East Granby		6,796,417	314,980
East Haddam		8,002,327	370,868
East Hampton		12,563,334	582,248



	State's Proportionate Share	
<u>Employer</u>	of the Net OPEB Liability	Employer OPEB
	Associated with the Employer	Expense and Revenue
East Hartford	45,948,705	2,129,495
East Haven	19,047,874	882,775
East Lyme	17,971,073	832,870
Easton	5,796,596	268,644
East Windsor	8,824,037	408,950
Ellington	15,377,424	712,668
Enfield	32,680,258	1,514,568
Essex	1,959,086	90,794
Fairfield	73,327,360	3,398,360
Farmington	27,405,833	1,270,125
Franklin	1,154,996	53,528
Glastonbury	41,580,719	1,927,061
Granby	12,235,018	567,033
Greenwich	80,967,974	3,752,465
Griswold	10,609,391	491,693
Groton	32,425,655	1,502,769
Guilford	23,004,657	1,066,152
Hamden	39,093,867	1,811,807
Hampton	760,996	35,268
Hartford	136,150,633	6,309,908
Hartland	1,388,852	64,366
Hebron	4,759,901	220,598
Kent	1,667,540	77,282
Killingly	13,400,857	621,063
Lebanon	5,942,421	275,402
Ledyard	15,903,105	737,030
Lisbon	2,744,583	127,198
Litchfield	7,483,319	346,815
Madison	21,047,100	975,429
Manchester	44,840,556	2,078,138
Mansfield	9,653,533	447,393
Marlborough	3,486,396	161,577
Meriden	47,088,200	2,182,305
Middletown	30,324,253	1,405,379
Milford	44,118,519	2,044,675
Monroe	24,319,519	1,127,089
Montville	16,234,548	752,391
Naugatuck	22,835,165	1,058,297
New Britain	61,828,177	2,865,430
New Canaan	33,867,227	1,569,578



	State's Proportionate Share	
<u>Employer</u>	of the Net OPEB Liability	Employer OPEB
	Associated with the Employer	Expense and Revenue
New Fairfield	16,936,880	784,941
New Hartford	2,964,086	137,371
New Haven	129,448,918	5,999,317
Newington	27,556,524	1,277,109
New London	18,137,160	840,568
New Milford	20,451,392	947,821
Newtown	29,939,081	1,387,528
Norfolk	722,107	33,466
North Branford	11,690,953	541,818
North Canaan	1,609,745	74,604
North Haven	21,004,875	973,472
No.Stonington	5,410,937	250,770
Norwalk	77,200,666	3,577,869
Norwich	19,672,393	911,718
NFA	13,358,527	619,102
Old Saybrook	10,275,272	476,208
Orange	8,136,093	377,068
Oxford	10,696,727	495,740
Plainfield	12,695,536	588,375
Plainville	14,978,663	694,187
Plymouth	9,246,326	428,521
Pomfret	2,417,971	112,061
Portland	7,812,782	362,084
Preston	3,082,317	142,850
Putnam	535,898	24,836
Redding	8,279,799	383,728
RSD 1	6,007,723	278,428
RSD 4	5,809,316	269,233
RSD 5	16,472,366	763,413
RSD 6	6,050,504	280,411
RSD 7	6,826,549	316,377
RSD 8	10,139,733	469,926
Ridgefield	36,423,621	1,688,055
Rocky Hill	17,092,784	792,166
Salem	2,563,588	118,810
Salisbury	2,072,556	96,053
Scotland	900,740	41,745
Seymour	13,626,233	631,508
Sharon	1,534,781	71,130
Shelton	30,420,068	1,409,820



	State's Proportionate Share	
<u>Employer</u>	of the Net OPEB Liability	Employer OPEB
	Associated with the Employer	<b>Expense and Revenue</b>
Sherman	2,576,898	119,426
Simsbury	28,681,978	1,329,268
Somers	9,145,854	423,865
Southington	36,970,188	1,713,385
S. Windsor	28,911,595	1,339,909
Sprague	1,780,523	82,518
Stafford	10,000,685	463,482
Stamford	115,610,306	5,357,966
SDE	31,062,764	1,439,605
DCF Recq Home	1,566,303	72,590
Sterling	2,163,436	100,265
Stonington	14,425,979	668,573
Stratford	43,693,067	2,024,957
Suffield	15,458,956	716,446
Thomaston	5,459,175	253,006
Thompson	6,132,488	284,210
Tolland	15,251,964	706,853
Torrington	26,183,415	1,213,472
Trumbull	45,843,019	2,124,597
Union	485,679	22,509
Vernon	21,482,040	995,586
Voluntown	1,936,601	89,752
Wallingford	42,769,182	1,982,140
Waterbury	101,515,320	4,704,733
Waterford	19,377,337	898,044
Watertown	15,238,515	706,230
Westbrook	6,629,288	307,235
W.Hartford	64,110,053	2,971,184
West Haven	36,618,483	1,697,086
Weston	18,969,922	879,162
Westport	46,424,896	2,151,564
Wethersfield	22,602,004	1,047,491
Willington	3,145,812	145,793
Wilton	32,854,130	1,522,626
Winchester	3,799,976	176,110
Windham	20,083,665	930,779
Windsor	25,928,047	1,201,637
Windsor Locks	13,197,410	611,635
Winsted/Gilbert	3,633,576	168,398
Wolcott	14,094,431	653,207



	State's Proportionate Share	
<u>Employer</u>	of the Net OPEB Liability	Employer OPEB
	Associated with the Employer	Expense and Revenue
Woodbridge	5,453,336	252,735
Woodstock	4,325,135	200,449
Woodstock Ad	5,991,180	277,662
UCONN	1,214,042	56,265
RSD 9	7,902,967	366,263
CCI Somers	54,181	2,511
RSD 10	14,801,490	685,976
Supervison District	2,840,364	131,637
NWCTC	277,923	12,880
MCTC	206,123	9,553
Norwalk CTC	211,753	9,814
WCSU	487,521	22,594
CCSU	1,105,889	51,252
ESCU	284,318	13,177
SCSU	1,290,534	59,810
RSD 11	2,043,989	94,729
ССТС	98,422	4,561
Hou CTC	136,963	6,348
Naug CTC	387,536	17,960
MCTC	287,550	13,327
Ed Connection	1,961,519	90,907
RSD 12	7,238,690	335,477
Gateway CTC	957,527	44,377
RSD 13	13,226,256	612,972
RSD 14	12,289,755	569,569
CCI Cheshire	133,488	6,187
Shared Svcs	1,264,087	58,584
CREC	67,193,761	3,114,098
RSD 15	24,744,484	1,146,784
RSD 16	12,837,121	594,937
TRCC (Mohegan)	105,372	4,883
Tunxis CTC	246,020	11,402
QVCC	0	0
Odyssey	1,566,546	72,602
CES	9,851,801	456,582
ACES	19,750,693	915,347
Project Learn	13,421,188	622,006
RSD 17	13,804,310	639,761
Asnun CTC	207,026	9,594
Project O	233,578	10,825



<u>Employer</u>	State's Proportionate Share of the Net OPEB Liability Associated with the Employer	Employer OPEB Expense and Revenue
RSD 18	10,573,699	490,039
DCF Mental Health	98,561	4,567
EASTCONN	5,803,095	268,945
BSBE	851,077	39,443
RSD 19	8,509,032	394,352
UCONN Health	645,545	29,918
CCI Suffield	0	0
CCI Niantic	57,239	2,653
Children's CTR	819,660	37,987
Bridges Academy	1,062,864	49,259
Common Ground	1,048,199	48,579
Explorations	702,506	32,558
Intergrated Day	1,639,146	75,966
Isaac	1,569,396	72,734
Jumoke Academy	2,506,661	116,171
Side by Side	1,238,057	57,378
Trailblazers Academy	706,120	32,725
New Beginnings	0	0
Elm City CP	1,325,218	61,417
Stamford Academy	542,953	25,163
Park City	1,160,973	53,805
AF Bridgeport Academy	954,573	44,240
SERC	178,459	8,271
AF Hartford Acad	3,187,586	147,729
Brass City	709,248	32,870
Path Academy	363,521	16,847
Booker T. Washington(BTW)	689,195	31,941
Total	\$ 3,475,344,000	\$ 161,065,000



# Schedule A — Required Supplementary Information

# SCHEDULE OF THE COLLECTIVE NET OPEB LIABILITY GASB 75 Paragraph 134(a) (\$ Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total OPEB Liability	\$3,538,772									
Plan Fiduciary Net Position	63,428									
Net OPEB Liability	\$3,475,344									
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	1.79%									
Covered payroll	\$4,279,755									
Net OPEB Liability as a percentage of covered payroll	81.20%									



# Schedule A — Required Supplementary Information (continued)

# SCHEDULE OF EMPLOYER AND OTHER CONTRIBUTING ENTITY CONTRIBUTIONS GASB 75 Paragraph 134(b) (\$ Thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially Determined Employer Contribution  Contributions in relation to the Actuarially	\$ 166,802	\$ 130,331	\$ 125,620	\$ 187,227	\$ 180,460	\$ 184,145	\$ 177,063	\$ 121,334	\$ 116,667	\$ 116,123
Determined Contribution	19,922	19,960	25,145	25,955	27,040	49,486	5,312	12,108	22,433	20,770
Annual contribution deficiency (excess)	\$ 146,880	\$ 110,371	\$ 100,475	\$ 161,272	\$ 153,420	\$ 134,659	\$ 171,751	\$ 109,226	\$ 94,234	\$ 95,353
Covered Payroll	\$ 4,279,755	\$ 4,125,066	\$ 4,078,367	\$ 3,930,957	\$ 4,101,750	\$ 3,943,990	\$ 3,823,754	\$ 3,676,686	\$ 3,529,470	\$ 3,393,717
Actual contributions as a percentage of covered payroll	0.47%	0.48%	0.62%	0.66%	0.66%	1.25%	0.14%	0.33%	0.64%	0.61%



#### Schedule B — Summary of Main Plan Provisions

Outlined below are the principal provisions of the System that were reflected in the results shown in this report.

#### **Covered Employees**

Any teacher, principal, superintendent or supervisor engaged in service of public schools, plus professional employees at State schools of higher education if they choose to be covered.

#### **Credited Service**

One month for each month of service as a teacher in Connecticut public schools, maximum 10 months for each school year. Ten months of credited service constitutes one year of Credited Service. Certain other types of teaching service, State employment, or wartime military service may be purchased prior to retirement, if the Member pays one-half the cost.

#### **Normal Retirement**

Eligibility - Age 60 with 20 years of Credited Service in Connecticut, or 35 years of Credited Service including at least 25 years of service in Connecticut.

#### **Early Retirement**

Eligibility - 25 years of Credited Service including 20 years of Connecticut service, or age 55 with 20 years of Credited Service including 15 years of Connecticut service.

#### **Proratable Retirement**

Eligibility - Age 60 with 10 years of Credited Service.

#### **Disability Retirement**

Eligibility - 5 years of Credited Service in Connecticut if not incurred in the performance of duty and no service requirement if incurred in the performance of duty.

#### **Termination of Employment**

Eligibility - 10 or more years of Credited Service.

#### **Teachers' Required Contribution**

1.25% of annual salaries in excess of \$500,000 is contributed for health insurance of retired teachers.

#### **State Contribution**

The State pays for one third of the costs through an annual appropriation in the General Fund. Administrative costs of the Plan are financed by the State. Based upon Chapter 167a, Subsection D of Section 10-183t of the Connecticut statutes, it is assumed the State will pay for any long-term shortfall arising from insufficient active member contributions.



#### Schedule B — Summary of Main Plan Provisions (continued)

#### **Retiree Health Care Coverage**

Any member that is currently receiving a retirement or disability benefit is eligible to participate in the Plan. There are two types of the health care benefits offered through the system. Subsidized Local School District Coverage provides a subsidy paid to members still receiving coverage through their former employer and the CTRB Sponsored Medicare Supplemental Plans provide coverage for those participating in Medicare, but not receiving Subsidized Local School District Coverage.

Any member that is not currently participating in Medicare Parts A & B is eligible to continue health care coverage with their former employer. A subsidy of up to \$110 per month for a retired member plus an additional \$110 per month for a spouse enrolled in a local school district plan is provided to the school district to first offset the retiree's share of the cost of coverage, any remaining portion is used to offset the district's cost. The subsidy amount is set by statute, and has not increased since July of 1996. A subsidy amount of \$220 per month may be paid for a retired member, spouse or the surviving spouse of a member who has attained the normal retirement age to participate in Medicare, is not eligible for Part A of Medicare without cost, and contributes at least \$220 per month towards coverage under a local school district plan.

Any member that is currently participating in Medicare Parts A & B is eligible to either continue health care coverage with their former employer, if offered, or enroll in the plan sponsored by the System. If they elect to remain in the plan with their former employer, the same subsidies as above will be paid to offset the cost of coverage.

If a member participating in Medicare Parts A & B so elects, they may enroll in one of the CTRB Sponsored Medicare Supplemental Plans. Active members, retirees, and the State pay equally toward the cost of the basic coverage (medical and prescription drug benefits). There are three choices for coverage under the CTRB Sponsored Medicare Supplemental Plans. The choices and calendar year premiums charged for each choice are shown in the table below:

Monthly Funding Rates for CTRB Sponsored Medicare Supplemental Plans										
Coverage	2012	2013	2014	2015	2016	2017				
Medicare Supplement with Prescriptions	\$124	\$117	\$97	\$91	\$95	\$92				
Medicare Supplement with Prescriptions and Dental	\$173	\$160	\$141	\$136	\$143	\$136				
Medicare Supplement with Prescriptions, Dental, Vision & Hearing	\$180	\$165	\$146	\$140	\$148	\$141				

Those participants electing vision, hearing, and/or dental are required by the System's funding policy to pay the full cost of coverage for these benefits, and no liability under GASB No. 74 and No. 75 is assumed by the Plan for these benefits.

#### **Survivor Health Care Coverage**

Survivors of former employees or retirees remain eligible to participate in the Plan and continue to be eligible to receive either the \$110 monthly subsidy or participate in the CTRB Sponsored Medicare Supplemental Plans, as long as they do not remarry.



#### **Investment Rate of Return**

Funding: Assumed annual rate of 4.25% net of investment and administrative expenses. Accounting: Assumed annual rate of 2.75% net of investment expenses.

#### **Health Care Cost Trend Rates**

Following is a chart detailing trend assumptions. Trend is applied to the CTRB Sponsored Medicare Supplemental Plans' premiums and claims.

Year of Increase	Claims Trend	Contributions Trend
2016	7.25%	7.25%
2017	7.00%	7.00%
2018	6.75%	6.75%
2019	6.25%	6.25%
2020	5.75%	5.75%
2021	5.25%	5.25%
2022 and beyond	5.00%	5.00%

No increases are assumed for the Subsidized Local School District Coverage's subsidy of \$110 per month for a retired member, plus an additional \$110 per month for a spouse, as the subsidy amount is set by statute and has not increased since July of 1996. The valuation assumes all future recipients of the subsidy receive an amount of \$110 per month.

#### **Anticipated Plan Participation**

The assumed annual rates of member participation and spouse coverage are as follows:

Participant	Subsidized Local School District Coverage	CTRB Sponsored Medicare Supplemental Plans
Member Pre 65	60%	N/A
Member Post 65	20%	60%
Spouse/Survivor Pre 65*	45%	N/A
Spouse/Survivor Post 65*	40%	45%

<sup>\*</sup>Percentage of participating members electing spouse coverage.



#### Age Related Morbidity

Per capita health care costs of the CTRB Sponsored Medicare Supplemental Plans are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
< 30	0.0%
30 – 34	1.0%
35 – 39	1.5%
40 – 44	2.0%
45 – 49	2.6%
50 – 54	3.3%
55 – 59	3.6%
60 – 64	4.2%
65 – 69	3.0%
70 – 74	2.5%
75 – 79	2.0%
80 – 84	1.0%
85 - 89	0.5%
90 and over	0.0%

#### Annual Expected Claims of the CTRB Sponsored Medicare Supplemental Plans

Assumed adult per capita health care costs were based on past experience and trended based on the assumptions. The expected value of medical and prescription drug claims of the CTRB Sponsored Medicare Supplemental Plans, age adjusted to age 65, for the year following the valuation date is \$2,513. This amount includes medical, drug, and third-party administrative costs, and represents the amount the System pays as the full contribution amount. The average medical, drug, and administrative costs shown are normalized to age 65 and then age adjusted in calculating liabilities.

For the June 30, 2016 valuation, the assumed health care claims costs are based on the premium equivalent rate provided by the System. CMC accepted all information without audit and has relied upon the sources for the accuracy of the data; however, CMC did review the information for reasonableness. On the basis of this review, CMC believes the data and information provided to be sufficiently complete and reliable, and that it is appropriate for the purposes intended.

The valuation reflects the Plan's January 1, 2015 transition to prescription drug benefits provided through a Medicare Prescription Drug Plan (PDP). As the Plan will no longer participate in the Centers for Medicare & Medicaid Services' (CMS) Retiree Drug Subsidy Program, the Medicare Part D subsidies implicit in the lower costs for PDPs are recognized in the liability under GASB Statements No. 74 and No. 75.



#### **Spouse Participation in Health Insurance Coverage**

Use of actual census data and current coverage elections for spouses of current retirees. For spouses of future retirees, it was assumed females were three years younger than their spouse.

#### **Rates of Annual Salary Increase**

Rates of Annual Salary Increase Assumption							
Years of Service	Annual Rate						
0 – 1	6.50%						
2 – 9	6.25						
10 – 11	5.50						
12 – 14	5.00						
15	4.75						
16	4.50						
17	4.25						
18	4.00						
19	3.75						
20	3.50						
21+	3.25						

#### **Active Member Decrement Rates**

a. Table below provides a summary of the assumed rates of service retirement.

	Annual Rates of Retirement										
Age Unreduced Proratable Reduced											
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>					
50	27.5%	27.5%			1.00%	1.00%					
55	38.5%	27.5%			4.00%	4.75%					
60	22.0%	27.5%	6.0%	5.5%							
65	36.3%	32.5%	13.0%	12.5%							
70	100.0%	32.5%	30.0%	14.5%							
75	100.0%	32.5%	30.0%	18.0%							
80	100.0%	100.0%	100.0%	100.0%							



b. Table below provides a summary of the assumed rates of mortality while actively employed and disability.

Age	Pre-Retireme	ent Mortality	Disab	oility
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	0.0377%	0.0147%	0.0341%	0.0500%
25	0.0412%	0.0162%	0.0341%	0.0500%
30	0.0404%	0.0205%	0.0341%	0.0410%
35	0.0448%	0.0272%	0.0341%	0.0410%
40	0.0539%	0.0375%	0.0536%	0.0720%
45	0.0818%	0.0622%	0.1219%	0.1200%
50	0.1476%	0.1116%	0.2438%	0.2630%
55	0.2800%	0.1927%	0.5363%	0.4380%
60	0.4557%	0.2914%	0.9604%	0.5000%
64	0.6572%	0.4272%		

c. Table below provides a summary of the assumed rates of withdrawal for active members prior to eligibility for retirement.

	А	nnual Rates of \	Withdrawal		
			10 or n	nore years of se	rvice
Years of Service	Male	Female	Age	Male	Female
0	14.00%	12.00%	25	1.50%	4.00%
1	11.00	10.50	30	1.50	4.00
2	8.00	8.75	35	1.50	3.50
3	6.50	7.50	40	1.50	2.30
4	4.50	6.75	45	1.59	1.50
5	3.50	6.00	50	2.04	2.00
6	3.00	5.25	55	3.44	2.50
7	2.75	4.75	59	4.00	2.90
8	2.50	4.25			
9	2.50	4.00			

#### **Withdrawal Assumptions**

It was assumed that 30% of the vested members who terminate elect to withdraw their contributions while the remaining 70% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date. It is assumed that eligible deferred vested participants will commence health care benefits at age 60.



#### **Post-Retirement Mortality**

For healthy retirees and beneficiaries, the RPH-2014 White Collar table with employee and annuitant rates blended from ages 50 to 80 projected to the year 2020 using the BB improvement scale and further adjusted to grade in increases (5% for females and 8% for males) to rates over age 80. For disabled retirees, the RPH-2014 Disabled Mortality table projected to 2017 using the BB improvement scale. The following are sample rates for the retirees, beneficiaries, and disabled:

		Annual Rates of D	Death	
	<u>Hea</u>	<u>lthy</u>	<u>Disab</u>	<u>led</u>
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	0.1476%	0.1116%	1.8406%	1.1487%
55	0.2800%	0.1927%	2.2661%	1.3727%
60	0.4557%	0.2914%	2.7070%	1.5886%
65	0.7214%	0.4747%	3.2573%	1.9356%
70	1.1906%	0.8584%	4.0909%	2.6165%
75	2.0499%	1.5897%	5.4230%	3.8159%
80	3.6764%	2.9756%	7.5768%	5.7047%
85	6.9254%	5.4419%	11.1066%	8.5219%

#### **Marriage Assumption**

For the purpose of valuing coverage under the in-service death benefit, 85% of males and 75% of females assumed to be married, with females being three years younger than their spouse.

#### **Asset Valuation Method**

Market Value of Assets

#### **Payroll Growth Rate**

The total annual payroll of active members is assumed to increase at an annual rate of 3.25%. This rate does not anticipate increases in the number of members.



#### **Changes from Prior Valuation**

As a result of the Experience Study for the Five-Year Period Ending June 30, 2015:

- The discount rate has been lowered from 4.50% to 4.25% to reflect the decrease in the rate of inflation.
- The payroll growth rate assumption was decreased from 3.75% to 3.25% to reflect the decrease in the rate of inflation and the decrease in the rate of real wage increase.
- The demographic assumptions of salary growth, payroll growth, the rates of withdrawal, the rates of retirement, the rates of mortality, and the rates of disability incidence were adjusted based upon the experience study's findings and their adoption by the Board.

Additionally, the assumed initial per capita health care costs, the assumed rates of health care inflation used to project the per capita costs, and the participation assumptions have been revised.

#### Affordable Care Act (ACA)

The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions such as the future implementation of the excise tax on high-value health insurance plans (if applicable), mandated benefits and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by amounts employers and retirees can afford (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, plan changes, government-mandated benefits, and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the Plan's liability will be required.



#### Schedule D — Actuarial Cost Method

The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future investment rate of return. The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an actuarial accrued liability contribution.

The actuarial accrued liability is determined using the "entry age normal" method. Under this method, the accrued liability is the difference between the present value of expected future benefits payable, as described above, and the present value of expected future normal cost, as described below.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for OPEB benefits to determine the uniform and constant percentage rate of employer contribution. This contribution will be applied to the compensation of the average new member during the entire period of his anticipated covered service, ceasing when both the member and spouse are no longer members of the plan. This contribution would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.



#### Schedule E — Balances of Deferred Outflows and Deferred Inflows of Resources

The following schedules provide the balances of Deferred Outflows of Resources and Deferred Inflows of Resources that are reported for differences between expected and actual experience, changes of assumptions or other inputs, and differences between projected and actual earnings on Plan investments. For the following exhibits:

- There are no differences between expected and actual experience, changes of assumptions or other inputs, or differences between projected and actual earnings on Plan investments to be recognized from periods prior to June 30, 2017. Experience Losses are presented as positive amounts. Experience Gains are presented as negative amounts.
- Positive amounts increase the OPEB Expense and increase the Deferred Outflows of Resources balances. Negative amounts decrease the OPEB Expense and decrease the Deferred Inflows of Resources balances.
- Deferred Outflows of Resources are presented as positive amounts. Deferred Inflows of Resources are presented as negative amounts.



# Schedule E — Balances of Deferred Outflows and Deferred Inflows of Resources (continued)

(\$ Thousands)					Recognition	Amounts Recognized in OPEB Expense through June 30, 2017 (d)		Balances as of June 30, 2017			
Measurement Period Ending	Experience Losses (a)		Experience Gains (b)		Period (Years) (c)			Deferred Outflows of Resources (a) – (d)		Deferred Inflows of Resources (b) – (d)	
Deferred Outflow	s and Ir	nflows of	Resou	ırces Arising	from Difference	es Betw	een Expected	and Actua	al Experience	:	
2017	\$	0	\$	0	7.99	\$	0	\$	0	\$	0
								\$	0	\$	0
Deferred Outflow	s and Ir	nflows of	Resou	ırces Arising	from Changes	in Assu	mptions:				
2017	\$	0	\$	(370,549)	7.99	\$	(46,377)	\$	0	\$	(324,172)
								\$	0	\$	(324,172)
Deferred Outflow	s and Ir	nflows of	Resou	ırces Arising	from Difference	es Betw	een Projected	and Actu	al Earnings o	n Plan Ir	vestments:
2017	\$	1,512	\$	0	5.0	\$	302	\$	1,210	\$	0
								\$	1,210	\$	0