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GASB STATEMENT NO. 68 REPORT

FOR THE

CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2017





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

March 9, 2018

State of Connecticut
State Employees' Retirement Commission
55 Elm Street
Hartford, CT 06106

Members of the Commission:

Presented in this report is information to assist the Connecticut Municipal Employees' Retirement System in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 68 and to identify the information to be provided by the actuary, Cavanaugh Macdonald Consulting (CMC). The information is presented for the period ending June 30, 2017 (the Measurement Date).

GASB Statement No. 68 establishes accounting and financial reporting requirements for governmental employers who provide pension benefits to their employees through a trust.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2016. The valuation was based on data, provided by the Retirement System staff, for active, inactive and retired members along with pertinent financial information.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 68. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Members of the Commission
March 9, 2018
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These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 and GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Sincerely yours,

A handwritten signature in blue ink that reads 'John J. Garrett'.

John J. Garrett ASA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA
Principal and Consulting Actuary



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 68
REQUIRED INFORMATION FOR THE
EMPLOYERS PARTICIPATING IN THE
CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM**

PREPARED AS OF JUNE 30, 2017

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), *“Accounting and Financial Reporting For Pensions”* in June 2012. This report, prepared as of June 30, 2017 (the Measurement Date), presents information to assist the employers participating in the System in meeting the requirements of GASB 68 for the fiscal year ending June 30, 2018 (Reporting Date). Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the System as of June 30, 2016. The results of that valuation were detailed in a report dated January 19, 2017. The Connecticut Municipal Employees’ Retirement System (System) is a cost-sharing multiple employer defined benefit pension plan.

GASB 68 replaced GASB 27 and represents a significant departure from the requirements of that prior statement. GASB 68 created disclosure and reporting requirements that may or may not be consistent with the basis used for funding the Plan.

Two major changes in GASB 68 are the requirements to include a proportionate share of a Net Pension Liability (NPL) and to recognize a proportionate share of a Pension Expense (PE) in the financial statements of each of the participating employers and non-employer contributing entities.

The NPL shown in the GASB Statement No. 67 Report for the Connecticut Municipal Employees’ Retirement System prepared as of June 30, 2017 and submitted March 9, 2018, is the collective NPL used for purposes of GASB 68. Please refer to that report for the derivation of the collective NPL.

Pension Expense includes amounts for service cost (the normal cost under the Entry Age Normal actuarial cost method for the year), interest on the Total Pension Liability (TPL), changes in benefit structure, amortization of increases/decreases in liability due to actuarial experience and actuarial assumption changes, and amortization of investment gains/losses. The actuarial experience and assumption change impacts are amortized over the average expected remaining service life of the Plan membership as of the beginning of the year ending on the Measurement Date (4.97 years), and investment gains/losses are amortized over five years.



Section II of this report is a summary of the principal results of the collective amounts under GASB 68. Section III provides the results of all the necessary calculations, presented in the order laid out in GASB 68 for note disclosure. The unamortized portions of each year's experience, assumption changes and investment gains/losses are used to develop deferred inflows and outflows, which also must be included in the employer's financial statements. The development of the collective deferred inflows and outflows is shown in Section III. The development of the collective PE is shown in Section IV and Section V shows the Required Supplementary Information (RSI).

This report provides the determination of the collective measures of the net pension liability, deferred amounts and pension expense. The information contained herein will be the subject of an independent auditor's review along with the related information for the System provided under GASB Statement No. 67 as of the same measurement date which is contained in a separate report. The auditor's report will also contain the schedules of each participating share of the collective amounts and other disclosure information.



SECTION II - SUMMARY OF COLLECTIVE AMOUNTS
(\$ IN THOUSANDS)

	2017
Valuation Date (VD):	June 30, 2017
Measurement Date (MD):	June 30, 2017
Reporting Date (RD):	June 30, 2018
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	8.00%
Municipal Bond Index Rate at Measurement Date	3.56%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A
Single Equivalent Interest Rate	8.00%
Collective Net Pension Liability:	
Total Pension Liability (TPL)	\$ 2,981,984
Fiduciary Net Position (FNP)	<u>2,733,784</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 248,200
FNP as a percentage of TPL	91.68%
Collective Pension Expense (PE):	\$116,216
Collective Deferred Outflows of Resources:	\$66,307
Collective Deferred Inflows of Resources:	\$0



SECTION III –NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference. Amounts are shown in aggregate. Please refer to Schedule B of this report for the proportionate share of certain pension amounts as required by GASB 68.

Paragraphs 77 and 78(a)-(f): These paragraphs require information to be disclosed regarding the actuarial assumptions used to measure the TPL. The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2007 – June 30, 2012. The complete set of actuarial assumptions utilized in developing the TPL are outlined in Schedule E. The TPL was determined by an actuarial valuation as of June 30, 2016, using the following key actuarial assumptions:

Inflation	3.25 percent
Salary increases, including inflation	4.25 – 11.00 percent
Long-Term Investment Rate of Return, net of pension plan investment expense, including inflation	8.00 percent

Mortality rates were based on the RP-2000 Mortality Table for Annuitants and Non-Annuitants (set forward one year for males and set back one year for females) for the period after service retirement and for dependent beneficiaries. The same table is used for disabled retirements but it is adjusted with a set forward of five years for males and set forward one year for females.

The long-term expected rate of return on pension plan investments was determined using statistical analysis 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 asset allocation and most recent best estimates of arithmetic real rates of return for each major asset class are to be provided by the Fiduciary of the Plan.



Discount rate. The discount rate used to measure the total pension liability was 8.00 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at the actuarially determined rates in future years. 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.

Paragraph 78 (g): This paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of 8.00 percent, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00 percent) or 1-percentage-point higher (9.00 percent) than the current rate (\$ thousands):

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Collective net pension liability	\$611,721	\$248,200	(\$57,803)



Paragraph 80(a): This paragraph requires disclosure of the employer's proportionate share of the collective NPL and if an employer has a special funding situation the portion of the non-employer contributing entities' proportional share of the collective NPL that is associated with the employer.

Paragraph 80(b): This paragraph requires disclosure of the employer's proportion (percentage) of the collective NPL and the changes in proportion since the prior measurement date. The System has hired an outside independent auditor to report the amounts each employer will need to maintain schedules for amortizing deferred amounts and pension expenses.

Paragraph 80(c): June 30, 2016 is the actuarial valuation date upon which the TPL is based.

Paragraph 80(d) and (e): There were no changes in assumptions or benefits that affected the measurement of the TPL since the prior measurement date.

Paragraph 80(f): Not applicable.

Paragraph 80(g): Please see Section IV of this report for the development of the collective pension expense.

Paragraph 80(h): Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce collective pension expense they are labeled deferred inflows. If they will increase collective pension expense they are labeled deferred outflows. The amortization 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, if any, are amortized over the average expected remaining service life of the active and inactive Plan members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.



The table below provides a summary in the difference between projected and actual earnings on plan investments.

Investment Earnings (Gain)/Loss as of June 30, 2017		
(\$ thousands)		
a	Expected asset return rate	8.00%
b	Beginning of year market value assets (BOY)	2,228,478
c	End of year market value assets (EOY)	2,459,909
d	Expected return on BOY for plan year (a x b)	178,278
	External Cash Flow	
	Contributions – employer*	72,798
	Contributions - IAL	2,313
	Contributions - member	27,377
	Refunds of contributions	(1,228)
	Benefits paid	(154,179)
	Admin expenses	0
	Other changes	<u>524</u>
e	Net cash flow	(52,395)
f	Expected return on net cash flow (a x 0.5 x e)	(2,096)
g	Projected earnings for plan year (d + f)	176,182
h	Net investment income (c - b - e)	283,827
	Investment earnings (gain)/loss (g -h)	(107,645)

* Includes Receivable of \$5,304

Gains and losses due to investment earnings are recognized over a five-year period.

Deferred Outflows and Inflows for Differences in Investment Experience						
(\$ in thousands)						
				Balances as of June 30, 2018 (Reporting Date)		
	Investment Losses	Investment Gains	Amounts Recognized in Pension Expense through 2017	Deferred Outflows	Deferred Inflows	
Year	(a)	(b)	(c)	(a) – (c)	(b) – (c)	
2017	\$0	\$107,645	\$21,529	\$0	\$86,116	
2016	161,524	0	64,610	96,914	0	
2015	118,004	0	70,803	47,201	0	
2014	0	107,179	85,744	0	21,435	
Total				<u>\$144,115</u>	<u>\$107,551</u>	
Net difference between projected and actual earnings on investments				\$36,564		



Unexpected changes to the measurement of the total pension liability (TPL) is recognized over the 4.89 years of weighted average remaining service.

Deferred Outflows and Inflows for Differences between Expected and Actual Experience (\$ in thousands)					
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through 2017 (c)	Balances as of June 30, 2018 (Reporting Date)	
				Deferred Outflows (a) – (c)	Deferred Inflows (b) – (c)
2017	\$0	\$0	\$0	\$0	\$0
2016	50,327	0	20,584	29,743	0
2015	0	0	0	0	0
2014	0	0	0	0	0
Total				\$29,743	\$0

The table below provides a summary of the collective deferred inflows and outflows as of the Measurement Date.

	Collective Deferred Outflows of Resources (\$ thousands)	Collective Deferred Inflows of Resources (\$ thousands)
Differences between expected and actual experience	\$29,743	\$0
Changes of actuarial assumptions	0	0
Net difference between projected and actual earnings on plan investments	<u>36,564</u>	<u>0</u>
Total	<u>\$66,307</u>	<u>\$0</u>



Paragraph 80(i): Collective amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the collective pension expense as follows.

Deferred Amounts to be Recognized in Fiscal Years Following the Reporting Date: (\$ in thousands)	
Year 1	\$23,232
Year 2	44,669
Year 3	19,935
Year 4	(21,529)
Thereafter	0



SECTION IV – COLLECTIVE PENSION EXPENSE

As noted earlier, the collective Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the beginning Total Pension Liability (TPL) and the cash flow during the year at the 8.00% rate of return in effect as of the previous measurement date. The next three items refer to any changes that occurred in the TPL due to:

- benefit changes, or
- actual versus expected experience, or
- changes in actuarial assumptions.

Benefit changes, which are reflected immediately in PE, can be positive, if there is a benefit improvement for existing Plan members, or negative if there is a benefit reduction. For the year ended June 30, 2016, there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected 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 life of the entire Plan membership. The remaining service life of active members is the average number of years they are expected to remain active. As of the valuation dated June 30, 2016 (for beginning of year measure), the number of years for the active members is 9.45. The average expected remaining service life of the inactive members is, of course, zero. Therefore, the number of years to use for the amortization is the weighted average for all active and inactive members, or 4.97 years.

The table below provides a summary of the determination of the average expected remaining service life for the entire Plan membership determined at the prior measurement date.

Category	Number (1)	Average Years of Working Lifetime (2)
a. Active Members	9,373	9.45
b. Inactive Members	8,437	0.00
c. Total	17,810	
Weighted Average Years of Working Lifetime [(a1 * a2) + (b1 * b2)]/c1		4.97



The last item under changes in TPL are changes in actuarial assumptions. There were no changes in assumptions since the last measurement date. If there was a change in TPL due to changes in actuarial assumptions, recognition of the change would also be spread over the average expected remaining service life of the plan membership.

Member contributions for the year and projected earnings on the Fiduciary Net Position (FNP), again at the discount rate used to calculate the liabilities, are subtracted from the amount determined thus far. One-fifth of current period differences between projected and actual investment earnings on the FNP are recognized in the pension expense.

The current year portions of previously determined experience, assumption and earnings amounts, recognized as deferred outflows and inflows (see Section V) are included also. Deferred outflows are added to the PE while deferred inflows are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included where applicable.



The calculation of the Collective Pension Expense determined as of the measurement date is shown in the following table:

Collective Pension Expense Determined as of the Measurement Date (\$ thousands)	
Service Cost at end of year	\$ 76,056
Interest on the TPL and net cash flow	221,010
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the total pension liability	0
Expensed portion of current-period changes of assumptions	0
Member contributions	(27,377)
Projected earnings on plan investments	(176,182)
Expensed portion of current-period differences between projected and actual earnings on plan investments	(21,529)
Administrative expense	0
Other	(524)
Recognition of beginning deferred outflows of resources as pension expense	44,762
Recognition of beginning deferred inflows of resources as pension expense	0
Collective Pension Expense	116,216



SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

Paragraphs 81(a)-(b): CMC was not required to supply this information.

Paragraph 82:

Changes of assumptions. In 2013, rates of mortality, withdrawal, retirement and assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience. These assumptions were recommended as part of the Experience Study for the System for the five-year period ended June 30, 2012.

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contributions in the schedule of employer contributions are calculated as of June 30 each biennium for the fiscal years ending two and three years after the valuation date. The following actuarial methods and assumptions were used to determine the most recent contributions reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Single equivalent amortization period	24 years
Asset valuation method	5-year smoothed market (20% write up)
Inflation	3.25 percent
Salary increase	4.25-11.00 percent, including inflation
Investment rate of return	8.00 percent, net of investment related expense



SCHEDULE A

CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
Schedule of Employer Allocations as of June 30, 2016

GENERAL EMPLOYEES WITH SOCIAL SECURITY

Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
001E	Andover Education	0.183542%	0.204251%	-0.020709%
001T	Andover Selectmen	0.183667%	0.202144%	-0.018477%
002A	Ansonia Housing	0.295843%	0.343447%	-0.047604%
002B	Ansonia Clerical	1.071606%	1.016066%	0.055540%
002T	Ansonia Town	0.813689%	0.894100%	-0.080411%
006S	Beacon Falls Supervisors	0.191770%	0.197841%	-0.006071%
006T	Beacon Falls Town	0.263975%	0.218936%	0.045039%
008T	Bethany Public Works	0.158736%	0.176356%	-0.017620%
010T	Bethlehem Public Works	0.091411%	0.000000%	0.091411%
013E	Bozrah Education	0.178762%	0.119300%	0.059462%
013T	Bozrah Town	0.149448%	0.176760%	-0.027312%
014E	Branford Education	2.859967%	2.903448%	-0.043481%
014T	Branford Selectman	3.307916%	3.259129%	0.048787%
015A	Bridgeport Housing	2.359047%	3.068537%	-0.709490%
015B	Bridgeport Port Authority	0.049255%	0.052838%	-0.003583%
017A	Bristol Housing	0.629113%	0.647975%	-0.018862%
023A	Canton Housing	0.197717%	0.000000%	0.197717%
022T	Canterbury Town	0.000000%	0.192019%	-0.192019%
026L	Chester Board of Education	0.013732%	0.014771%	-0.001039%
027B	Clinton Secretarial	0.568954%	0.558636%	0.010318%
027S	Clinton Supervisory	0.349874%	0.279507%	0.070367%
027T	Clinton Town	0.355452%	0.371186%	-0.015734%
028A	Colchester Housing	0.027512%	0.029294%	-0.001782%
032A	Coventry Housing	0.047195%	0.046050%	0.001145%
034A	Danbury Housing	0.842058%	0.790230%	0.051828%
035A	Darien Housing	0.021931%	0.042623%	-0.020692%
036L	Deep River BOE	0.020163%	0.021521%	-0.001358%
037A	Derby Housing	0.105638%	0.130697%	-0.025059%
041T	East Haddam Town	0.200009%	0.237457%	-0.037448%
042A	East Hampton Housing	0.043493%	0.039012%	0.004481%
043A	East Hartford Housing	0.660590%	0.686378%	-0.025788%
048E	Ellington Education	1.466752%	1.516922%	-0.050170%
048L	Ellington Lunch	0.088462%	0.095638%	-0.007176%
048T	Ellington Town	0.376434%	0.435269%	-0.058835%
048V	Ellington Van Drivers	0.043780%	0.036247%	0.007533%
049A	Enfield Housing	0.327431%	0.304249%	0.023182%
050L	Essex BOE	0.024234%	0.025238%	-0.001004%



Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
057A	Greenwich Housing	1.216871%	1.147312%	0.069559%
058E	Griswold Education	1.740218%	1.620746%	0.119472%
058T	Griswold Selectmen	0.479684%	0.459628%	0.020056%
059A	Groton Housing	0.041865%	0.100683%	-0.058818%
062B	Hamden Education	0.519234%	0.390057%	0.129177%
062E	Hamden BOE	1.494257%	0.979153%	0.515104%
062S	Hamden Schools	0.500260%	0.377646%	0.122614%
062T	Hamden Town	2.137889%	1.620173%	0.517716%
064A	Hartford Housing	1.104519%	1.320543%	-0.216024%
064E	Hartford Edu.(Local 566)	4.534086%	4.725159%	-0.191073%
064S	Hartford Union (Local 818)	0.016128%	0.048256%	-0.032128%
064T	Hartford City (1716)	6.017268%	6.227487%	-0.210219%
071B	Lebanon Town Hall	0.297630%	0.269041%	0.028589%
071T	Lebanon Highway	0.215621%	0.210798%	0.004823%
073S	Lisbon School Dist.	0.068336%	0.058424%	0.009912%
073T	Lisbon Town	0.182645%	0.138681%	0.043964%
077A	Manchester Housing	0.529492%	0.527852%	0.001640%
078E	Mansfield Education	1.506483%	1.445917%	0.060566%
078T	Mansfield Town	2.778667%	2.537214%	0.241453%
080A	Meriden Housing	0.437325%	0.532703%	-0.095378%
082T	Middlefield Town	0.215661%	0.248455%	-0.032794%
083A	Middletown Housing	0.425774%	0.434003%	-0.008229%
084A	Milford Housing	0.199714%	0.202273%	-0.002559%
086A	Montville Housing	0.022488%	0.021673%	0.000815%
086E	Montville Education	1.863730%	1.887907%	-0.024177%
086T	Montville Town	1.810565%	1.839994%	-0.029429%
088A	Naugatuck Housing	0.213468%	0.204737%	0.008731%
089A	New Britain Housing	0.701923%	0.787082%	-0.085159%
095A	New London Housing	0.295795%	0.311534%	-0.015739%
095T	New London Public Works	1.770495%	0.000000%	1.770495%
103A	Norwalk Housing	0.781441%	0.602054%	0.179387%
108E	Oxford Education	1.467232%	1.535555%	-0.068323%
108T	Oxford Town	0.997128%	1.034770%	-0.037642%
110H	Southington Health District	0.109200%	0.137520%	-0.028320%
113A	Portland Housing	0.060252%	0.079000%	-0.018748%
114T	Preston Town	0.333990%	0.353618%	-0.019628%
115T	Prospect Public Works	0.166945%	0.207775%	-0.040830%
116A	Putnam Housing	0.219035%	0.274324%	-0.055289%
117E	Redding Education	1.043791%	1.116754%	-0.072963%
117T	Redding Town	1.047793%	1.245789%	-0.197996%
118A	Ridgefield Housing	0.000000%	0.000000%	0.000000%
124A	Seymour Housing	0.266027%	0.269705%	-0.003678%
124E	Seymour Education	1.486727%	1.449791%	0.036936%
124H	Seymour Education	0.000000%	0.000000%	0.000000%



Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
124L	Seymour Education	0.000000%	0.000000%	0.000000%
124T	Seymour Town	1.338800%	1.306708%	0.032092%
126A	Shelton Housing	0.027147%	0.026519%	0.000628%
131A	Southington Housing	0.099100%	0.100005%	-0.000905%
131D	Southington Dog	0.043541%	0.074733%	-0.031192%
131E	Southington Education	4.735403%	4.688034%	0.047369%
131L	Southington Lunch	0.191870%	0.221207%	-0.029337%
131S	Southington Sewer	0.354969%	0.405986%	-0.051017%
131T	Southington Town	3.703247%	3.771609%	-0.068362%
131W	Southington Water	0.710546%	0.711024%	-0.000478%
135A	Stamford Housing	1.581752%	1.686836%	-0.105084%
138A	Stratford Housing	0.537123%	0.613078%	-0.075955%
141T	Thompson Town	0.430008%	0.690680%	-0.260672%
142M	Tolland Cnty Mutual Aid	0.263772%	0.269867%	-0.006095%
143A	Torrington Housing	0.264495%	0.235724%	0.028771%
144D	Trumbull Monroe Health	0.000000%	0.167658%	-0.167658%
146A	Rockville (Vernon) Hsg.	0.354865%	0.366660%	-0.011795%
148A	Wallingford HA	0.162589%	0.128151%	0.034438%
152B	Waterford LC1303	1.457184%	1.532060%	-0.074876%
152E	Waterford Custodial	0.769783%	0.823808%	-0.054025%
152H	Waterford Local 161	0.305345%	0.333372%	-0.028027%
152L	Waterford Cafe 224	0.148407%	0.154936%	-0.006529%
152N	Waterford Para-Pro's	0.575359%	0.581431%	-0.006072%
152S	Waterford Non-union	0.690088%	0.742159%	-0.052071%
152T	Waterford Government	0.694289%	0.675930%	0.018359%
152W	Waterford Town	1.095242%	1.194472%	-0.099230%
153R	Watertown Golf	0.000000%	0.038351%	-0.038351%
153S	Watertown Town Supv.	0.203985%	0.214973%	-0.010988%
153T	Watertown Town	0.234650%	0.357641%	-0.122991%
155A	West Hartford Housing	0.496151%	0.484537%	0.011614%
156A	West Haven Housing	0.742928%	0.749431%	-0.006503%
157E	Weston Education	2.100945%	2.232964%	-0.132019%
157L	Weston Lunch	0.488052%	0.000000%	0.488052%
157H	Weston Highway	0.000000%	0.439241%	-0.439241%
157S	Weston Salary	0.717066%	0.592751%	0.124315%
157T	Weston Town	1.107553%	1.157026%	-0.049473%
159A	Wethersfield Housing	0.193494%	0.202344%	-0.008850%
162A	Winchester Housing	0.029406%	0.050067%	-0.020661%
165A	Windsor Locks Housing	0.092552%	0.099153%	-0.006601%
165E	Windsor Locks Edu.	1.101669%	0.999179%	0.102490%
165N	Windsor Locks Para's	0.476114%	0.450660%	0.025454%
165T	Windsor Locks Town	1.344946%	1.352572%	-0.007626%
167E	Woodbridge Education	0.835070%	0.818540%	0.016530%
167T	Woodbridge Town	1.362085%	1.509009%	-0.146924%



Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
169E	Woodstock Education	0.258035%	0.262013%	-0.003978%
169T	Woodstock Town	0.514000%	0.502526%	0.011474%
170A	Norwich Housing	0.486646%	0.497916%	-0.011270%
204E	District #4 – Custodians	0.247145%	0.247128%	0.000017%
204L	District #4 - B. of Ed	0.086963%	0.086798%	0.000165%
204N	District #4 - Non-Cert.	0.324075%	0.306074%	0.018001%
204S	District #4 –Secretarial	0.213454%	0.249103%	-0.035649%
216B	Regional District 16	0.055774%	0.028269%	0.027505%
219E	Regional District 19	0.793028%	0.760762%	0.032266%
368D	Watertown Fire District	0.162571%	0.147219%	0.015352%
401D	Westport Health Dept.	0.315633%	0.310232%	0.005401%
403D	East Shore Health District	0.206669%	0.228353%	-0.021684%
405D	L. Naugatuck Valley Health	0.413290%	0.474271%	-0.060981%
410D	Quinnipiack Valley Health	0.251826%	0.248978%	0.002848%
413D	Uncas Health District	0.235034%	0.228769%	0.006265%
503A	Willimantic Housing	0.514487%	0.475026%	0.039461%
606W	Jewett City Street	0.108938%	0.081853%	0.027085%
715D	Southeast Ct. Planning	0.224384%	0.175363%	0.049021%
750D	Southeast Ct Water	0.185240%	0.184747%	0.000493%
751D	South Norwalk Electric	0.389812%	0.555243%	-0.165431%
752D	Watertown Water & Sewer	0.000000%	0.000000%	0.000000%
755D	Norwalk 1st Tax Dist.	0.761710%	0.814639%	-0.052929%
756D	Norwalk 2nd Tax Dist.	1.175933%	1.382913%	-0.206980%
757A	Connecticut Housing	0.049425%	0.129447%	-0.080022%
799M	Southeast Ct Tourism	0.077528%	0.055414%	0.022114%
	Total	100.000000%	100.000000%	0.000000%



SCHEDULE A (continued)

**CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
Schedule of Employer Allocations as of June 30, 2016**

GENERAL EMPLOYEES WITHOUT SOCIAL SECURITY

Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
015E	Bridgeport Education	33.988657%	33.361593%	0.627064%
015H	Bridgeport Grants	0.392721%	1.122313%	-0.729592%
015T	Bridgeport City	25.088486%	27.723144%	-2.634658%
044E	East Haven Education	2.671779%	2.447865%	0.223914%
044T	East Haven Town	3.933359%	3.812458%	0.120901%
089E	New Britain Education	13.912868%	13.776241%	0.136627%
089T	New Britain City	13.990467%	13.173813%	0.816654%
093W	GNH WPCA	4.075540%	3.011707%	1.063833%
753D	Mattabassett District	1.946123%	1.570866%	0.375257%
	Total	100.000000%	100.000000%	0.000000%



SCHEDULE A (continued)

CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
Schedule of Employer Allocations as of June 30, 2016

POLICEMEN AND FIREMEN WITH SOCIAL SECURITY

Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
006P	Beacon Falls Police	0.738958%	0.592330%	0.146628%
033P	Cromwell Police	6.194468%	6.067925%	0.126543%
037P	Derby Police	7.394109%	7.904511%	-0.510402%
046P	Easton Police	3.352855%	3.420806%	-0.067951%
062P	Hamden Police	13.434977%	9.913096%	3.521881%
078F	Mansfield Fire	2.603791%	2.241412%	0.362379%
082P	Middlefield Police	0.000000%	0.400432%	-0.400432%
085P	Monroe Police	8.332825%	8.754860%	-0.422035%
086P	Montville Police	4.923989%	4.779473%	0.144516%
091P	New Fairfield Police	1.243463%	1.190777%	0.052686%
108P	Oxford Police	1.272660%	1.250331%	0.022329%
111P	Plymouth Police	5.295908%	5.644015%	-0.348107%
116P	Putnam Police	2.717016%	3.085286%	-0.368270%
117P	Redding Police	3.754616%	4.035369%	-0.280753%
131F	Southington Fire	7.027263%	7.308961%	-0.281698%
152F	Waterford Fire	1.592948%	1.367071%	0.225877%
152P	Waterford Police	9.055738%	9.978968%	-0.923230%
157P	Weston Police	4.381923%	4.656128%	-0.274205%
162P	Winchester Police	3.451482%	3.076929%	0.374553%
164F	Windsor Dog	0.169218%	0.190184%	-0.020966%
165P	Windsor Locks Police	5.919704%	6.294727%	-0.375023%
167P	Woodbridge Police	4.781193%	5.404629%	-0.623436%
309F	Cromwell Fire	0.895978%	0.827991%	0.067987%
312F	Easton Firefighters	1.464918%	1.613789%	-0.148871%
	Total	100.000000%	100.000000%	0.000000%



SCHEDULE A (continued)

**CONNECTICUT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
Schedule of Employer Allocations as of June 30, 2016**

POLICEMEN AND FIREMEN WITHOUT SOCIAL SECURITY

Code	Municipality	2016 Employer Allocation Percentage	2015 Employer Allocation Percentage	2016 Change in Allocation Percentage
002P	Ansonia Police	2.881177%	2.928471%	-0.047294%
014F	Branford Fire	2.450383%	2.485673%	-0.035290%
015F	Bridgeport Fire	16.378437%	16.617702%	-0.239265%
015P	Bridgeport Police	27.378546%	27.118315%	0.260231%
044F	East Haven Fire	2.935823%	3.018524%	-0.082701%
044P	East Haven Police	3.028705%	3.151847%	-0.123142%
077F	Manchester Fire	5.072153%	5.517035%	-0.444882%
089F	New Britain Fire	5.282993%	4.710553%	0.572440%
089P	New Britain Police	7.719649%	6.859453%	0.860196%
095F	New London Fire	3.384135%	3.587174%	-0.203039%
095S	New London Fire Chief	0.056296%	0.000000%	0.056296%
095P	New London Police	4.366642%	4.467847%	-0.101205%
124P	Seymour Police	2.615058%	2.487066%	0.127992%
126P	Shelton Police	3.481790%	3.753945%	-0.272155%
131P	Southington Police	4.774220%	4.699137%	0.075083%
137P	Stonington Police	2.242232%	2.376509%	-0.134277%
164P	Windsor Police	3.568066%	4.029771%	-0.461705%
370F	West Haven Fire	0.944082%	0.666217%	0.277865%
371F	West Shore Fire District	1.439613%	1.524759%	-0.085146%
	Total	100.000000%	100.000000%	0.000000%



SCHEDULE B

BENEFIT AND CONTRIBUTION PROVISIONS

MEMBERSHIP

Municipalities may designate which departments (including elective officers if so specified) are to be covered under the Municipal Employees Retirement System. This designation may be the result of collective bargaining. Only employees covered under the State Teachers Retirement System may not be included. There are no minimum age or service requirements. Membership is mandatory for all regular full time employees of participating departments except Police and Fire hired after age 60.

DEFINITIONS

Average Final Compensation	Average of the three highest paid years of service.
Normal Form of Benefit	Life annuity.
Year's Breakpoint	With respect to the calendar year in which a member terminates service, \$10,700 increased by 6.0% each year after 1982, rounded to the nearest multiple of \$100.

BENEFITS

Service Retirement Allowance

Condition for Allowance	Age 55 and 5 years of continuous service, or 15 years of active aggregate service, or 25 years of aggregate service. Compulsory retirement at age 65 for police and fire members.
Amount of Allowance	For members not covered by Social Security: 2% of average final compensation times years of service. For members covered by Social Security: 1-1/2% of the average final compensation not in excess of the year's breakpoint plus 2% of average final compensation in excess of the year's breakpoint, times years of service. The maximum benefit is 100% of average final compensation and the minimum benefit is \$1,000 annually. Both the minimum and the maximum include Workers Compensation and Social Security benefits.



If any member covered by Social Security retires before age 62, his/her benefit until he/she reaches age 62 or receives a Social Security disability award is computed as if he/she were not under Social Security.

Non-Service Connected
Disability Retirement Allowance

Condition for Allowance 10 years of service and permanently and totally disabled from engaging in any gainful employment in the service of the Municipality.

Amount of Allowance Calculated as a service retirement allowance based on compensation and service to the date of the disability.

Service Connected Disability

Condition for Allowance Totally and permanently disabled from engaging in any gainful employment in the service of the Municipality provided such disability has arisen out of and in the course of his/her employment with the Municipality. Disability due to hypertension or heart disease, in the case of firemen and policemen, is presumed to have been suffered in the line of duty.

Amount of Allowance Calculated as a service retirement allowance based on compensation and service to the date of the disability with a minimum benefit (including Worker's Compensation benefits) of 50% of compensation at the time of the disability.

Vesting Retirement Allowance

Condition for Allowance 5 years of continuous or 15 years of active aggregate service.

Amount of Allowance Calculated as a service retirement allowance on the basis of average final compensation and service to the date of termination. Deferred to normal retirement age, or an actuarially reduced allowance may begin at the time of separation.

Death Benefit

Condition for Benefit Eligible for service, disability retirement, or vested allowance, and married for at least 12 months preceding death.

Amount of Benefit Computed on the basis of the member's average final compensation and creditable service at date of death, payable to the spouse. Benefit is equal to 50% of the average of the life annuity allowance and the reduced 50% joint and survivor allowance.



Return of Deductions

Upon the withdrawal of a member the amount of his accumulated deductions is payable to him/her on demand, with 5% interest from July 1, 1983.

Optional Benefits

Prior to the retirement, a member may elect to convert his retirement allowance into a benefit of equivalent actuarial value in accordance with one of the optional forms described below:

1. A reduced retirement allowance payable during his life with the provision that after his death the beneficiary designated by him at the time of his retirement; or
2. A reduced retirement allowance payable during his life with the provision that after his death an allowance of one half of his reduced allowance will be continued for life to the beneficiary designated by him at the time of his retirement;
3. A reduced retirement allowance payable during his life with a guarantee of 120 or 240 monthly payments to the member or his designated beneficiary.

Cost-of-Living Adjustment

For those retired prior to January 1, 2002:

- (i) The benefits of disabled retirees, service retirees who have reached age 65, and beneficiaries of deceased retirees who would have reached age 65 are adjusted each July 1. The difference between the actual annual yield of the actuarial value of assets on a calendar year basis to a 6% yield is calculated. This difference is the adjustment applied the following July 1. The minimum adjustment is 3% and the maximum is 5%.
- (ii) The benefits for all others on the roll are adjusted on January 1, 2002 and on each subsequent July 1. The amount of each adjustment is 2.5%.

For those retiring in or after January 1, 2002, benefits are adjusted each July 1. The adjustment is 60% of the annual increase in the CPI up to 6%. The minimum annual COLA is 2.5%; the maximum is 6%.



CONTRIBUTIONS

By Members

For members not covered by Social Security: 5% of compensation.

For members covered by the Social Security: 2-1/4% of compensation up to the Social Security taxable wage base plus 5% of compensation, if any, in excess of such base.

By Municipalities

Participating Municipalities make annual contributions consisting of a normal cost contribution, a contribution for the amortization of the net unfunded accrued liability and a prior service amortization payment which covers the liabilities of the System not met by member contributions.



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted or reaffirmed by the Commission for the June 30, 2012 and later valuations.

VALUATION INTEREST RATE: 8.00% per annum, compounded annually, net of investment expenses.

SALARY INCREASES: Representative values of assumed annual rates of salary increase are as follows:

Age	Annual Rates of				
	Merit & Seniority		Base (Economy)	Increase Next Year	
	General Employees	Firemen & Policemen		General Employees	Firemen & Policemen
20	7.50%	7.50%	3.50%	11.00%	11.00%
25	5.50%	7.50%	3.50%	9.00%	11.00%
30	4.50%	3.50%	3.50%	8.00%	7.00%
35	3.50%	2.50%	3.50%	7.00%	6.00%
40	2.50%	1.50%	3.50%	6.00%	5.00%
45	2.50%	1.00%	3.50%	6.00%	4.50%
50	2.00%	0.75%	3.50%	5.50%	4.25%
55	1.00%	0.75%	3.50%	4.50%	4.25%
60	0.75%	0.75%	3.50%	4.25%	4.25%
65	0.75%		3.50%	4.25%	
70	0.75%		3.50%	4.25%	

COST OF LIVING ADJUSTMENTS: Annually compounded increases are applied to disabled and non-disabled retirement benefits and vary based upon member age and date of retirement. For members that retired prior to January 1, 2002, increases of 3.25% are assumed for those who have reached age 65 and (effective January 1, 2002) increases of 2.50% are assumed for those who have not yet reached age 65. For members that retire after December 31, 2001, increases of 2.50% are assumed, regardless of age.

SOCIAL SECURITY WAGE BASE INCREASES: 3.50% per annum.



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of separation before service retirement are as follows:

GENERAL EMPLOYEES

Age	Withdrawal and Vesting - Male	Withdrawal and Vesting - Female	Non-Service Related Disability*	Death	Service Retirement
20	18.00%	20.00%	0.02%	0.01%	
25	18.00	20.00	0.02	0.01	
30	12.00	15.00	0.03	0.01	
35	10.00	12.00	0.04	0.02	
40	7.50	10.00	0.05	0.02	
45	5.00	7.50	0.07	0.03	15.00%
50	5.00	5.00	0.12	0.05	15.00
55	5.00	5.00	0.44	0.08	7.00
60	5.00	5.00	0.86	0.12	10.00
65	5.00	5.00	1.84	0.20	20.00
70	5.00	5.00	2.99	0.31	15.00
75					100.00

POLICEMEN AND FIREMEN

Age	Withdrawal and Vesting	Service Related Disability*	Death	Service Retirement
20	7.00%	0.11%	0.01%	
25	7.00	0.14	0.01	
30	5.00	0.15	0.01	
35	4.00	0.22	0.02	
40	2.00	0.32	0.02	
45	1.00	0.49	0.03	25.00%
50	0.00	1.11	0.05	20.00
55	0.00	3.03	0.08	12.00
60	0.00	6.88	0.12	20.00
65				100.00

*Service related disability rates for General Employees and Non-Service related disability rates for Policemen and Firemen are assumed to be zero at all ages.



DEATHS AFTER RETIREMENT: The RP2000 Mortality Table for Annuitants and Non-Annuitants (set forward one year for males and set back one year for females) is used for the period after retirement and for dependent beneficiaries. Representative values of the assumed annual rates of mortality are as follows:

Age	Men	Women	Age	Men	Women
40	0.114%	0.065%	65	1.441%	0.862%
45	0.162	0.103	70	2.457	1.486
50	0.245	0.155	75	4.217	2.546
55	0.420	0.242	80	7.204	4.151
60	0.768	0.444	85	12.280	6.952

For disabled retirees, the same table is used, adjusted with the male table set forward five years and the female table set forward one year.

ASSET METHOD: Market Value.

VALUATION METHOD: Entry Age Normal Cost method. See Schedule E for a brief description of this method.

SPOUSES: For members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

PERCENT MARRIED: 80% of active members are assumed to be married.

LOAD: For those members who retired under and joint & survivor option and have no reported information for a prospective beneficiary, a probabilistic factor was applied to the reversionary portion of the liability. The factor measures the survivorship of the assumed spouse (with men three years older than women) from the date of retirement to the valuation date, based on the assumptions for death after retirement.