Milliman

TOWN OF STRATFORD
OTHER POST-EMPLOYMENT BENEFITS PROGRAM

July 1, 2014 Actuarial Valuation

Prepared by
Milliman, Inc.

Rebecca A. Sielman, FSA
Consulting Actuary

Samuel Boustani, ASA
Actuary

80 Lamberton Road
Windsor, CT 06095 USA
Tel +1 860.687.2110
Fax +1 860.687.2111
milliman.com

November 19, 2015

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Certification

We have performed an actuarial valuation of the Town of Stratford Other Post-Employment Benefits Program as of July 1, 2014. The results of this valuation, along with supporting data, are set forth in the following report.

Milliman has prepared this report in compliance with Government Accounting Standard No. 45. No attempt is being made to offer any accounting opinion or advice. The calculations reported herein have been made on a basis consistent with our understanding of the plan provisions. Additional determinations may be needed for purposes other than meeting accounting requirements.

In preparing this report, we relied on employee census data, asset information, claims and premium information as of the valuation date, furnished by the Town of Stratford. We performed a limited review of the information used directly in our analysis for reasonableness and consistency and have found them to be reasonably consistent and comparable with data used for other purposes. If the information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete and our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate, all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices, and the methods and assumptions produced results which are reasonable. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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 plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

The actuarial method and assumptions used in this valuation are discussed on pages 18-23 of this report. A summary of the plan provisions starts on page 24 of this report.

Milliman's work is prepared solely for the internal business use of the Town of Stratford. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s): (a) The Town of Stratford may provide a copy of Milliman's work, in its entirety, to the Town of Stratford's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Town of Stratford; and (b) The Town of Stratford may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

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Certification

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

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.

November 19, 2015

Rebecca A. Sielman, FSA
Consulting Actuary

S. Boustany

Samuel Boustani, ASA
Actuary

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Discussion of Experience

This valuation reflects a number of changes relative to the July 1, 2012 valuation:

Demographic Changes from 2012 to 2014

From July 1, 2012 to July 1, 2014, the overall membership decreased from 2,395 to 2,222. The total number of active members increased from 1,040 to 1,096 and the total number of retirees and spouses of retirees decreased from 1,355 to 1,126.

The average age of active members decreased slightly from 45.2 to 45.0 and the average age of retired members increased from 67.7 to 68.6.

Assumption Changes

Discount Rate: We reduced the discount rate to 4.00% to reflect the Town's current funding policy (Prior: 6.75%).

Medical age curves: We updated the age curves with respect to expected claims costs, based on our analysis of the claims experience and premium information provided to us for this valuation.

Medical inflation: The medical cost inflation trend used in this valuation was derived from the "Getzen Model" established by the Society of Actuaries for developing long term medical cost trends. The Getzen version used in the 2012 valuation didn't incorporate the Affordable Care Act fees starting in 2014. The current Getzen version was subsequently updated to reflect these fees in the development of the medical trend. This assumption was revised to an initial inflation rate of 5.60%, grading down to an ultimate inflation rate of 4.60% over a period of 62 years (Prior valuation: an initial inflation rate of 7.20% graded down to an ultimate inflation rate of 4.70% over a period of 70 years for pre-65 and an initial inflation rate of 7.20% graded down to an ultimate inflation rate of 5.00% over a period of 87 years for post-65).

The effect of the above changes was as follows: (1) reducing the discount rate from 6.75% to 4.00% increased the Accrued Liability by about $82 million and increased the Annual Required Contribution by about $5.5 million; and (2) updating the other changes reduced the Accrued Liability by about $28 million and reduced the Annual Required Contribution by about $2 million.

Changes in Plan Provisions

BOE Nurses hired on or after July 1, 2012: Employees hired on or after July 1, 2012 are no longer eligible for OPEB benefits (Prior: Board pays 50% of the cost for medical and dental coverage for retiree only (Board contribution for dental is pre-65 only), spouse coverage is 100% retiree-paid).

The above change had no material impact on the results of this valuation. Longer term, the elimination of Town-paid OPEB benefits will reduce the Town's liability.

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Overview of GASB 43 and GASB 45

GASB 43 requires OPEB plans to disclose information about asset and liability levels and show historical contribution information. GASB 43 only applies in situations where a separate trust is established to prefund these benefits. GASB 45 requires employers to perform periodic actuarial valuations to determine annual accounting costs, and to keep a running tally of the extent to which these amounts are over or under funded. GASB 43 was effective starting in FY 2006-07 for a Phase I government, FY 2007-08 for a Phase II government, and FY 2008-09 for a Phase III government. GASB 45 was effective for the fiscal year following implementation of GASB 43.

GASB 43 and 45 apply to just about any benefit that is provided after retirement except for pension benefits: medical insurance, dental, vision, and hearing benefits plus life insurance and long term care insurance. The benefits provided by the Town to retirees include medical and dental insurance plus life insurance. The philosophy driving the accounting standard is that these post-employment benefits are part of the compensation that is paid to employees in return for their services, and the cost of these benefits should be recognized while the employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 43 and 45 extend the same thinking to all other post-employment benefits.

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The Valuation Process

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

Turnover and retirement rates: How likely is it that an employee will qualify for post-employment benefits and when will they start?

Medical inflation and claims costs assumptions: When an employee starts receiving post-employment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption: How long is a retiree likely to receive the benefits?

Discount rate assumption: What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Town, the present value is divided into three pieces: the part that is attributed to past years (the "Accrued Liability" or "Past Service Liability"), the part that is being earned this year (the "Normal Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Normal Cost have been calculated, the next step is to determine an annual contribution. This consists of two pieces:

- Normal Cost – because the benefits earned each year should be paid for each year
- Past Service Cost – a catch-up payment to fund the Accrued Liability over time.

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Town's financial statements. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.

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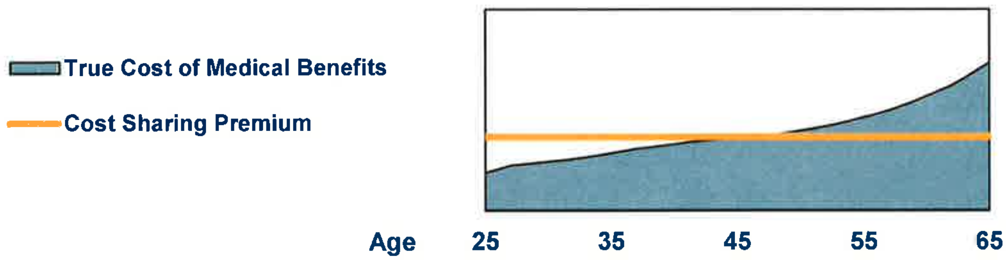
Implicit Rate Subsidies

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely by retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- The cost sharing premium is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:



- The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an "implicit rate subsidy". GASB 43 and 45 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based on factors developed by Milliman's health actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page. We term this amount the "gross liability".

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents' coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program – different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors. We term this amount the "offset liability".

Finally, the net liability for the Town is calculated as the difference between the gross liability and the offset liability.

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Summary of Liabilities as of July 1, 2014

We have calculated the Accrued Liability separately for five groups of Town employees, who are eligible for different OPEB benefits. We have broken the accrued liability for each group into several pieces: benefits that are expected to be paid prior to age 65 (i.e. prior to Medicare) and after age 65 (i.e. after Medicare) to current active members and their covered dependents after retirement, and the same figures for members who have already retired and are currently receiving benefits. In all cases, the Accrued Liability only reflects benefits that are paid for by the Town, taking into account any implicit rate subsidies.

	Fire	Police	Town	BOE Certified	BOE Non-Certified	Total
Current active members						
Employees under age 65	$4,589,488	$4,519,541	$5,278,809	$8,181,427	$2,645,113	$25,214,378
Employees over age 65	5,435,274	5,366,278	11,947,406	14,782,629	7,614,866	45,146,453
Dependents under age 65	3,086,963	3,097,518	3,053,185	1,584,137	738,382	11,560,185
Dependents over age 65	2,176,472	2,231,803	3,351,383	0	1,710,069	9,469,727
Total	15,288,197	15,215,140	23,630,783	24,548,193	12,708,430	91,390,743
Current retired members						
Employees under age 65	6,783,093	6,415,397	6,582,455	1,520,873	1,121,509	22,423,327
Employees over age 65	9,708,541	9,993,104	19,442,168	47,990,468	9,175,560	96,309,841
Dependents under age 65	4,187,458	3,715,661	2,860,850	441,646	166,412	11,372,027
Dependents over age 65	4,612,450	3,793,407	5,780,620	2,224,795	1,919,915	18,331,187
Total	25,291,542	23,917,569	34,666,093	52,177,782	12,383,396	148,436,382
Total Accrued Liability	40,579,739	39,132,709	58,296,876	76,725,975	25,091,826	239,827,125

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Annual Required Contribution

The Annual Required Contribution (ARC) for the OPEB program consists of two pieces: a **Normal Cost** (the cost of benefits earned each year should be accrued in that year) plus a **Past Service Cost** (a catch-up accrual to amortize the Unfunded Accrued Liability).

The initial amortization period was 30 years. The amortization method produces annual payments that will increase by 4.00% annually. On this basis, the ARC is determined as follows:

	Fire	Police	Town	BOE Certified	BOE Non-Certified	Total
At 4.00% Discount Rate:						
Accrued Liability	$40,579,739	$39,132,709	$58,296,876	$76,725,975	$25,091,826	$239,827,125
Assets*	603,984	582,447	867,684	1,008,074	329,672	3,391,861
Unfunded Accrued Liability	39,975,755	38,550,262	57,429,192	75,717,901	24,762,154	236,435,264
Amortization Period	23	23	23	23	23	23
Amortization Growth Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Past Service Cost	1,738,076	1,676,098	2,496,921	3,292,083	1,076,615	10,279,793
Net Normal Cost	1,543,527	1,408,069	2,161,315	2,277,985	1,271,256	8,662,152
Interest	131,264	123,367	186,329	222,803	93,915	757,678
ARC for FY 2016	3,412,867	3,207,534	4,844,565	5,792,871	2,441,786	19,699,623

We also looked at a prefunding scenario that assumes annual contributions to fully prefund the OPEB benefits are paid to an OPEB trust that is expected to earn 6.75% over the long term:

	Fire	Police	Town	BOE Certified	BOE Non-Certified	Total
At 6.75% Discount Rate:						
Accrued Liability	$25,364,267	$24,837,678	$39,378,681	$51,342,697	$17,164,589	$158,087,912
Assets*	581,611	569,537	902,967	1,002,572	335,174	3,391,861
Unfunded Accrued Liability	24,782,656	24,268,141	38,475,714	50,340,125	16,829,415	154,696,051
Amortization Period	23	23	23	23	23	23
Amortization Growth Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Past Service Cost	1,414,528	1,385,161	2,196,091	2,873,280	960,578	8,829,638
Net Normal Cost	700,834	662,274	1,245,077	1,132,347	759,809	4,500,341
Interest	142,787	138,202	232,279	270,380	116,126	899,774
ARC for FY 2016	2,258,149	2,185,637	3,673,447	4,276,007	1,836,513	14,229,753
Expected Benefit Payouts	1,152,827	1,084,784	2,304,081	2,629,145	918,373	8,089,210
Net Budget Impact	1,105,322	1,100,853	1,369,366	1,646,862	918,140	6,140,543

The ARC is assumed to be paid at the beginning of the Fiscal Year.

* At the direction of the Town, the June 30, 2014 assets were allocated based on actual contributions by the Town and BOE. Within these two groups, assets were allocated to the subgroups based on Accrued Liability.

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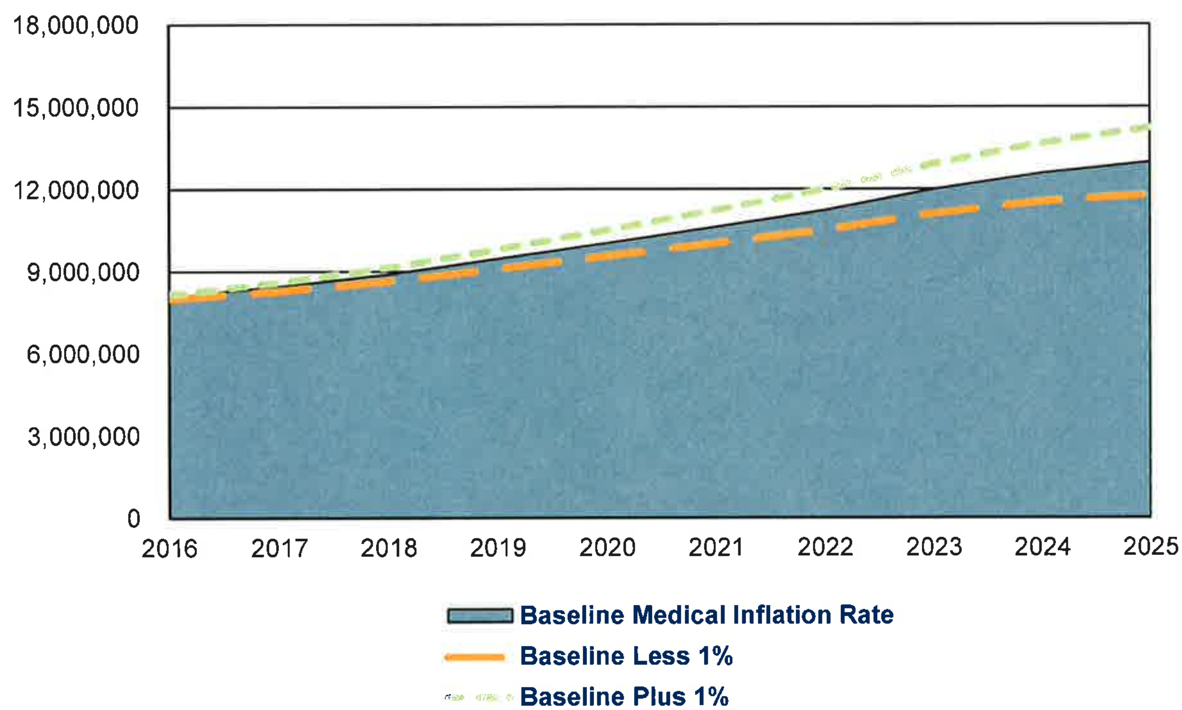
Projected Payouts

The table and graph below show the expected annual payments for OPEB benefits for the next 10 years.

Fiscal Year	Baseline Less 1%	Baseline Medical Inflation Rate	Baseline Plus 1%
2016	$8,013,919	$8,089,210	$8,164,501
2017	8,289,613	8,446,506	8,604,894
2018	8,651,267	8,898,378	9,150,223
2019	9,100,079	9,448,392	9,806,768
2020	9,565,441	10,025,331	10,503,014
2021	10,035,861	10,617,859	11,228,134
2022	10,513,999	11,229,124	11,986,136
2023	11,117,701	11,986,063	12,914,019
2024	11,557,399	12,577,999	13,678,994
2025	11,809,553	12,973,715	14,241,488



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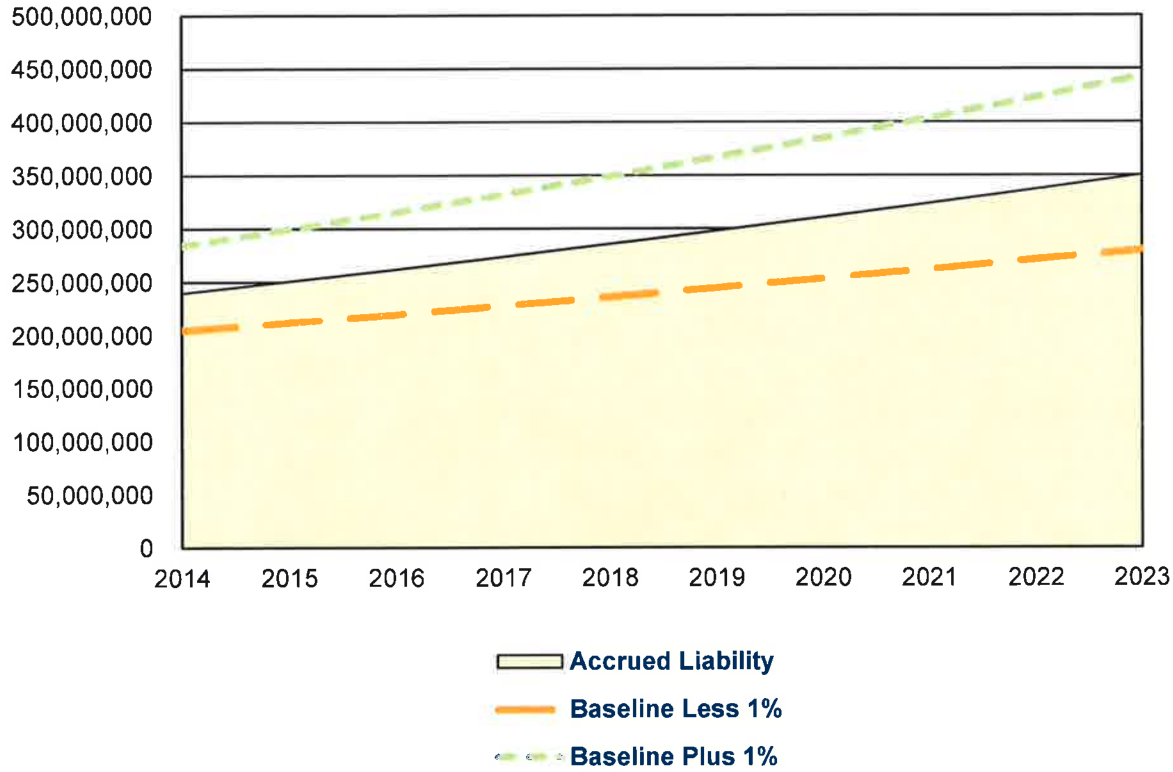
Projected Liabilities

The graph below shows how the Town's accrued liability for OPEB benefits is expected to grow over the next 10 years.



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GASB 45 Schedule of Funding Progress

The following information is required to be disclosed in the Town's financial statement.

($ 000s)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Accrued Liability (b)	Unfunded Accrued Liability (UAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAL as a Percentage of Covered Payroll ((b - a) / c)
Town Groups						
7/1/2007	$0	$55,487	$55,487	0.00%	N/A	N/A
7/1/2008	0	58,760	58,760	0.00%	N/A	N/A
7/1/2010	630	67,290	66,660	0.94%	N/A	N/A
7/1/2012	1,209	98,330	97,121	1.23%	N/A	N/A
7/1/2014	2,054	138,009	135,955	1.49%	26,923	505.0%
BOE Groups						
7/1/2007	0	42,562	42,562	0.00%	N/A	N/A
7/1/2008	0	63,155	63,155	0.00%	N/A	N/A
7/1/2010	287	44,046	43,759	0.65%	N/A	N/A
7/1/2012	862	56,343	55,481	1.53%	N/A	N/A
7/1/2014	1,338	101,818	100,480	1.31%	49,062	204.8%

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GASB 45 Schedule of Employer Contributions

The following information is required to be disclosed in the Town's financial statement.

($ 000s)

Year Ended June 30	Annual Required Contribution	Actual Contribution Made	Percentage Contributed
Town Groups			
2008	$4,811	$2,695	56.0%
2009	5,164	2,875	55.7%
2010	8,617	3,113	36.1%
2011	9,172	3,266	35.6%
2012	6,511	3,516	54.0%
2013	6,965	3,927	56.4%
2014	8,203	4,447	54.2%
2015	12,566	4,862	38.7%
2016	11,465	N/A	N/A
BOE Groups			
2008	3,972	1,960	49.3%
2009	5,084	1,883	37.0%
2010	5,404	2,019	37.4%
2011	5,749	2,074	36.1%
2012	4,390	3,002	68.4%
2013	4,678	3,085	65.9%
2014	5,127	2,630	51.3%
2015	7,917	2,773	35.0%
2016	8,235	N/A	N/A

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Summary of Census Data

The following were included in our analysis based on information provided as of July 1, 2014 by the Town.

	Fire	Police	Town	BOE Certified	BOE Non-Certified	Total
Number of members						
Active	96	96	221	540	143	1,096
Retired members	88	89	198	359	110	844
Spouses of retirees	61	50	100	25	46	282
Total	245	235	519	924	299	2,222
Average age						
Active	39.8	40.4	47.0	44.5	50.8	45.0
Retired members	62.6	62.2	68.0	71.3	71.1	68.6
Average retirement age						
Active	56.7	56.3	56.9	60.5	58.8	58.9
Retired members	52.1	51.0	56.0	N/A	N/A	N/A
Expected lifetime						
Active [to retirement]	16.9	15.9	9.9	16.0	8.0	13.8
Retired [lifetime]	22.5	22.9	18.4	17.4	16.4	18.6

The retiree census data excludes post 65 Medicare eligible and dental only retired members who are paying 100% of the premium. It is assumed that there is no implicit rate subsidy associated with these benefits.

Where complete census data was not available, we have made assumptions which we believe to be reasonable.

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Current Premiums

Based on information provided by the Town regarding current plan elections, the following weighted average blended actual premiums were used:

2014 - 2015 Monthly Premiums		Employee	Spouse
Medical - Police and Fire	Pre-65	$734.90	$1,133.16 *
	Post-65	393.00	393.00
Medical - Town	Pre-65	734.90	915.91
	Post-65	393.00	393.00
Medical - BOE	Pre-65	657.83	723.62
	Post-65	320.91	320.91
Dental - BOE		31.81	48.93
Medicare Part B		104.90	104.90

* Includes child dependent costs.

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Expected Healthcare Costs

Milliman's Health Cost Guidelines were used to develop the expected true cost of health care benefits by age. Representative health care costs (per person per month) are shown below.

	Police and Fire		Town	
Age	**Employee**	**Spouse***	**Employee**	**Spouse**
40	$661	$782	$661	$693
45	719	890	719	789
50	795	1,054	795	934
55	928	1,255	928	1,113
60	1,139	1,519	1,139	1,346
65	314	314	314	314
70	362	362	362	362
75	407	407	407	407
80	442	442	442	442

	BOE Medicare		BOE Non-Medicare	
Age	**Employee**	**Spouse**	**Employee**	**Spouse**
40	$705	$463	$705	$463
45	743	544	743	544
50	792	668	792	668
55	890	822	890	822
60	1,059	1,023	1,059	1,023
65	257	257	1,395	1,527
70	295	295	1,679	1,850
75	333	332	2,007	2,227
80	361	361	2,334	2,599

It is assumed that there is no implicit rate subsidy associated with dental benefits. Unadjusted age premium rates were used to value these benefits.

* Child dependent claim costs are included with pre-65 spouse claim costs.

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Glossary

The following is an explanation of many of the terms referenced by the Statement of the Governmental Accounting Standards Board, "Accounting and Financial Reporting by Employers for Postemployment Benefits Other than Pensions".

Actuarial Cost Method - This is a procedure for determining the Actuarial Present Value of Benefits and allocating it to time periods to produce the Actuarial Accrued Liability and the Normal Cost. The Statement assumes a closed group of employees and other participants unless otherwise stated; that is, no new entrants are assumed. Six methods are permitted – Unit Credit, Entry Age Normal, Attained Age, Aggregate, Frozen Entry Age, and Frozen Attained Age.

Accrued Liability - This is the portion of the Actuarial Present Value of Benefits attributable to periods prior to the valuation date by the Actuarial Cost Method (i.e., that portion not provided by future Normal Costs).

Actuarial Assumptions - With any valuation of future benefits, assumptions of anticipated future events are required. If actual events differ from the assumptions made, the actual cost of the plan will vary as well. Some examples of key assumptions include the discount rate, medical cost inflation, and rates of mortality, turnover and retirement.

Actuarial Present Value of Benefits - This is the value, as of the applicable date, of future payments for benefits and expenses under the Plan, where each payment is: a) Multiplied by the probability of the event occurring on which the payment is conditioned, such as the probability of survival, death, disability, termination of employment, etc.; and b) Discounted at the assumed discount rate.

Actuarial Value of Assets - This is the value of cash, investments and other property belonging to the Plan, as used by the actuary for the purpose of an Actuarial Valuation.

Amortization Payment - This is the amount of the contribution required to pay interest on and to amortize over a given period the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability. A closed amortization period is a specific number of years counted from one date and reducing to zero with the passage of time; an open amortization period is one that begins again or is recalculated at each actuarial valuation date.

Annual Required Contribution ("ARC") - This is the employer's periodic required contribution to a defined benefit OPEB plan, calculated in accordance with the set of requirements for calculating actuarially determined OPEB information included in financial reports.

Attribution Period - The period of an employee's service to which the expected postretirement benefit obligation for that employee is assigned. The beginning of the attribution period is the employee's date of hire and costs are spread across all employment.

Benefit Payments - The monetary or in-kind benefits or benefit coverage to which participants may be entitled under a post employment benefit plan, including health care benefits and life insurance not provided through a pension plan.

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Glossary

Discount Rate - GASB 45 requires that the interest rate used to discount future benefit payments back to the present day be based on the expected rate of return on any investments set aside to pay for these benefits. If no funds are set aside for this purpose, the discount rate would be based on the expected return of the employer's general funds.

Funding Excess - This is the excess of the Actuarial Value of Assets over the Actuarial Accrued Liability.

Health Cost Trend - This is the rate at which health costs are assumed to increase over time.

Implicit Rate Subsidy - This is the excess of the expected health care cost per retired member over the gross premium charged for that coverage. In most cases, the gross premium charged to a retiree is less than the expected health care cost, since the premium is a blended average rate that does not fully reflect the above-average, increasing costs by age that apply during retirement.

Normal Cost - This is the portion of the Actuarial Present Value of Benefits allocated to a valuation year by the Actuarial Cost Method.

Net OPEB Obligation - This is the cumulative difference since the effective date of this statement between the annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

Other Post-employment Benefits ("OPEB") - This refers to post-employment benefits other than pension benefits, including healthcare benefits regardless of the type of plan that provides them, and all other post-employment benefits provided separately from a pension plan, excluding benefits defined as termination benefits or offers.

Past Service Cost - This is a catch-up payment to fund the Unfunded Actuarial Accrued Liability over time (generally 10 to 30 years). Also known as the **Amortization Payment**.

Return on Plan Assets - This is the actual investment return on plan assets during the fiscal year.

Substantive Plan - The terms of the postretirement benefit plan as understood by an employer that provides postretirement benefits and the employees who render services in exchange for those benefits. The substantive plan is the basis for the accounting for the plan.

Unfunded Actuarial Accrued Liability - This is the excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

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Actuarial Method

The actuarial funding method used is the **Projected Unit Credit Cost Method**. Recommended annual contributions consist of two pieces: Normal Cost plus a payment towards the Unfunded Accrued Liability.

The **Accrued Liability** is determined directly as the present value of benefits accrued to date, where the accrued benefit for each Member is the pro-rata portion (based on service to date) of the **projected** benefit payable at death, disability, retirement or termination.

The **Normal Cost** is similarly determined as the present value of the portion of the **projected** benefit attributable to the current year.

The **Unfunded Accrued Liability** is the Accrued Liability less the value of any plan assets.

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Actuarial Assumptions

Each of the assumptions used in this valuation was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgement regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Discount Rate
4.00% (Prior: 6.75%)

Inflation Rate
2.70%

Medical Inflation Rate
5.60% - 4.60% over 62 years (Prior: Pre-65: 7.20% - 4.70% over 70 years and Post-65: 7.20% - 5.00% over 87 years)

Dental Inflation Rate
3.00%

Amortization Growth Rate
4.00%

Healthy Mortality

Teachers and **Administrators**#: RP-2000 Combined Healthy Mortality Table for males and females projected forward 19 years using Scale AA, with a two-year age setback. This assumption includes a margin for mortality improvement beyond the valuation date.

All Others:

Pre-Retirement: 1994 Group Annuity Mortality. 80% of deaths among active Firefighters and Police are assumed to occur in the line of duty. 5% of deaths among all others are assumed to occur in the line of duty. This assumption does not include a margin for mortality improvement beyond the valuation date.

Post-Retirement: RP-2000 Combined Healthy Mortality Table with generational projection per Scale AA, with separate tables for males and females. This assumption includes a margin for mortality improvement beyond the valuation date.

Disabled Mortality

Teachers and **Administrators**#: RP-2000 Combined Healthy Mortality Table for males and females projected forward 19 years using scale AA, with an eight-year age set forward. This assumption includes a margin for mortality improvement beyond the valuation date.

All Others: 1983 Railroad Retirement Board Disabled Mortality Table. This assumption does not include a margin for mortality improvement beyond the valuation date.

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Actuarial Assumptions

Turnover

Teachers and **Administrators**[#]: rates based on gender and length of service for the first ten years and gender and age thereafter:

Service	Male	Female
0-1	14.00%	12.00%
1-2	8.50%	9.00%
2-3	5.50%	7.00%
3-4	4.50%	6.00%
4-5	3.50%	5.50%
5-6	2.50%	5.00%
6-7	2.40%	4.50%
7-8	2.30%	3.50%
8-9	2.20%	3.00%
10+	2.10%	2.50%

Age	Male	Female
25	1.20%	3.50%
35	1.20%	3.50%
45	1.26%	1.30%
55	2.76%	1.60%

Police and **Firefighters**: 10% in first five years of service, none thereafter.

All Others: Rates based on age per Crocker-Sarason T7 Table:

Age	Rate
20	9.94%
25	9.68%
30	9.31%
35	8.72%
40	7.77%
45	6.38%
50	4.25%
55	1.57%
60	0.15%

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Actuarial Assumptions

Retirement

Teachers and **Administrators**[#]: rates based on age, eligibility for pension benefits, and gender:

	Unreduced		Proratable		Reduced	
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
50 – 51	27.50%	15.00%			2.00%	2.00%
52	27.50%	15.00%			2.50%	3.00%
53	27.50%	15.00%			3.00%	3.50%
54	27.50%	15.00%			4.00%	4.00%
55	38.50%	30.00%			4.50%	6.00%
56	38.50%	30.00%			6.00%	7.00%
57	38.50%	30.00%			9.00%	7.50%
58	38.50%	30.00%			10.00%	8.00%
59	38.50%	30.00%			11.00%	8.50%
60	22.00%	20.00%	6.00%	5.40%		
61	25.30%	22.50%	6.00%	7.20%		
62	25.30%	22.50%	15.00%	9.90%		
63-64	27.50%	22.50%	10.00%	7.20%		
65	36.30%	30.00%	20.00%	13.50%		
66	27.50%	30.00%	20.00%	10.80%		
67	27.50%	30.00%	20.00%	13.50%		
68	27.50%	30.00%	20.00%	10.80%		
69	27.50%	30.00%	35.00%	10.80%		
70-73	100.00%	40.00%	35.00%	10.80%		
74	100.00%	40.00%	35.00%	18.00%		
75 – 79	100.00%	40.00%	40.00%	18.00%		
80	100.00%	100.00%	40.00%	18.00%		

Police and **Firefighters:** rates based on service. 100% are assumed to retire at age 65.

Service	Rate
25	20%
26	20%
27-29	10%
30	20%
31	10%
32	35%
33+	30%

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Actuarial Assumptions

Retirement

All Others: rates based on age:

Age	Rate
<55	2%
55	15%
56-57	2%
58-59	10%
60	10%
61	10%
62-64	35%
65	35%
66-69	35%
70	100%

Disability

Teachers and **Administrators**#: rates based on age and gender:

Age	Male	Female
20	0.0455%	0.0500%
30	0.0455%	0.0410%
40	0.0715%	0.0720%
50	0.3250%	0.2630%
60	1.2805%	0.5000%

Police, Fire and **Public Works In Line of Service:** rates based on age and gender:

Age	Male	Female
20	0.0068%	0.0086%
30	0.0085%	0.0119%
40	0.0148%	0.0237%
50	0.0453%	0.0536%
60	0.1313%	0.1059%

Police, Fire and **Public Works Not In Line of Service:** rates based on age and gender:

Age	Male	Female
20	0.0068%	0.0086%
30	0.0085%	0.0119%
40	0.0148%	0.0237%
50	0.0453%	0.0536%
60	0.1313%	0.1059%

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Actuarial Assumptions

Disability

All Others: rates based on age.

Age	Service Rate	Non-Service Rate
20	0.0035%	0.0665%
30	0.0042%	0.0798%
40	0.0058%	0.1096%
50	0.0120%	0.2280%
60	0.0423%	0.8010%

Future Retiree Coverage

All current active members are assumed to elect coverage at retirement. 15% of **Teachers** are assumed to drop retiree coverage at age 65.

Future Dependent Coverage

Current active members are assumed to elect dependent coverage at retirement as follows. All female spouses are assumed to be 3 years younger than males.

	Male	Female
Teachers and **Administrators**	80%	40%
Police and **Fire**	60%	50%
Town Others	60%	15%
BOE Non-Certified	80%	40%

Valuation of Dental and Post-65 Medicare Eligible Medical Benefits

It is assumed that there is no implicit rate subsidy associated with these benefits.

Valuation of Benefits for Children

Benefits attributed to children have been excluded from this valuation for all groups except Police and Fire, as they were determined to be de minimis.

Certain actuarial demographic assumptions for Teachers and Administrators are based on the assumptions used in the June 30, 2012 valuation of the Connecticut State Teachers Retirement System.

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Summary of Plan Provisions

This summary is intended only to describe our understanding of the essential features of the benefits that will be provided to future retirees based on copies of bargaining agreements, applicable personnel rules and the benefits being currently provided to retired members. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant plan documents. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Police

Eligibility - Retire with 25 years of service.

Medical Benefit -

Plan A Members (hired prior to October 17, 1996): Town pays 100% of the cost for the retiree and 50% of the cost for the dependents.

Plan B Members (hired on or after October 17, 1996 and prior to July 1, 2010): Retiree pays same contribution percentage as active employees for self (capped at 22.5%) and pays 50% of the cost for dependents.

Plan C Members (hired after July 1, 2010): Retiree pays same contribution percentage as active employees for self and pays 50% of the cost for dependents.

Life Insurance - $5,000 until age 65.

Firefighters

Eligibility - Retire with 25 years of service.

Medical Benefit -

- Retire prior to July 1, 1987: Benevolent Society pays 100% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after July 1, 1987 and prior to July 1, 1989: Town pays 50% of the cost for the retiree and 50% of the cost for the dependents.
- Retire on or after July 1, 1989: Town pays 100% of the cost for the retiree and 50% of cost for the dependents.

Life Insurance - Retire after July 1, 1989: $5,000 until age 65.

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Summary of Plan Provisions

Town Hall

Eligibility - 23 years of Continuous Service and, if hired after 7/1/1977, age 50, or 5 years of service and age 55.

Medical Benefit -

- Retire prior to July 1, 1986: Town pays 100% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after July 1, 1986 and prior to signing of 1987-1990 collective bargaining agreement: Town pays 75% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after signing of 1987-1990 collective bargaining agreement: Town pays 100% of the cost for the retiree and 50% of the cost for the dependents.

Life Insurance - Retire before September 1, 1999: $5,000 until age 65. Retire after September 1, 1999: $25,000 until age 65, $5,000 thereafter.

Public Works

Eligibility - 23 years of Continuous Service and, if hired after 7/1/1985, age 50, or 5 years of service and age 55.

Medical Benefit -

- Retire prior to July 1, 1985: Town pays 50% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after July 1, 1985 and prior to July 1, 1986: Town pays 100% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after July 1, 1986 and prior to July 1, 1987: Town pays 75% of the cost for the retiree and 50% of the cost for the dependents.
- Retire on or after July 1, 1987: Town pays 100% of the cost for the retiree and 50% of cost for the dependents.

Life Insurance - $5,000 until age 65.

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Summary of Plan Provisions

Supervisors

Eligibility - 23 years of Continuous Service and, if hired after 4/1/1985, age 50, or 5 years of service and age 55.

Medical Benefit -

- Retire prior to July 2, 1985: Town pays 50% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after July 2, 1985 and prior to March 31, 1986: Town pays 100% of the cost for the retiree and 50% of the cost for the dependents.
- Retire after April 1, 1986 and prior to September 4, 1987: Town pays 75% of the cost for the retiree and 50% of the cost for the dependents.
- Hired prior to July 1, 2012 and retire on or after September 4, 1987: Town pays 100% of the cost for the retiree and 50% of cost for the dependents.
- Hired after July 1, 2012: Retiree pays the same contribution percentage as active employees for coverage for self and spouse.

Life Insurance - $25,000 until age 70, $5,000 thereafter.

Teachers and Administrators

Eligibility - A Teacher or Administrator retiring under the Connecticut State Teachers Retirement System shall be eligible to receive health benefits for self and spouse.

Normal Retirement for Teachers and Administrators is the earliest of age 60 with 20 years of service, or completion of 35 years of service regardless of age. Early Retirement is the earliest of age 60 with 10 years of service, any age with 25 years of service, or age 55 with 20 years of service.

Medical Benefit – Board pays 50% of the cost for the retiree only. The Board will pay 50% of the Medicare Part B premiums for the retiree only. Spouse coverage is 100% retiree-paid.

Dental Benefit - Board pays 50% of the cost for retiree only for pre-65 coverage, post-65 coverage is 100% retiree paid. Spouse coverage is 100% retiree-paid.

BOE Custodians

Eligibility – 23 years of Continuous Service and, if hired after 4/1/1985, age 50, or 5 years of service and age 55.

Medical Benefit – Board pays 100% of the cost for the retiree and 50% of the cost for the dependents.

Dental Benefit - 100% retiree-paid.

Life insurance - $15,000.

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Summary of Plan Provisions

BOE Nurses

Eligibility – 23 years of Continuous Service and, if hired after 7/1/1977, age 50, or 5 years of service and age 55. No benefits if hired on or after July 1, 2012.

Medical Benefit – Board pays 50% of the cost for the retiree only. Spouse coverage is 100% retiree-paid.

Dental Benefit - Board pays 50% of the cost for retiree only for pre-65 coverage, post-65 coverage is 100% retiree paid. Spouse coverage is 100% retiree-paid.

BOE Paraprofessionals & Cafeteria Workers

Eligibility – 23 years of Continuous Service and, if hired after 4/1/1985, age 50, or 5 years of service and age 55. No benefits if hired after July 1, 2010.

Medical Benefit – Board pays 100% of the cost for the retiree and 50% of the cost for the dependents.

Dental Benefit - 100% retiree-paid.

Life insurance - $7,000.

BOE Secretaries

Eligibility – 23 years of Continuous Service and, if hired after 4/1/1985, age 50, or 5 years of service and age 55.

Medical Benefit – Board pays 100% of the cost for the retiree and 50% of the cost for the dependents.

Dental Benefit - 100% retiree-paid.

Life insurance - $15,000.

All BOE Groups

For retirees electing coverage under the High Deductible Health Plan, the BOE funds the annual deductible in addition to the cost sharing described above.

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