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milliman.com

November 11, 2016

PERSONAL & CONFIDENTIAL

Ms. Julie R. Goucher, Treasurer
Town of Bristol
Town Hall
10 Court Street
Bristol, RI 02809

Re: July 1, 2016 GASB45 Valuation of Other Post-Employment Benefits

Dear Julie:

We are pleased to provide this actuarial report for the Town of Bristol Other Post-Employment Benefits Program. The report shows the financial status of the plan as of July 1, 2016 and presents the cost figures for the 2017-18 fiscal year.

We have included 10 bound copies of the report and one unbound copy in case you need to make additional copies.

Please let us know if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Rebecca".

Rebecca A. Sielman, FSA
Consulting Actuary

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**TOWN OF BRISTOL
OTHER POST-EMPLOYMENT BENEFITS PROGRAM**

July 1, 2016 Actuarial Valuation

Prepared by
Milliman, Inc.

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Certification

We have performed an actuarial valuation of the Town of Bristol Other Post-Employment Benefits Program as of July 1, 2016. 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 Bristol. 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.

Milliman's work is prepared solely for the internal business use of the Town of Bristol. 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 Bristol may provide a copy of Milliman's work, in its entirety, to the Town of Bristol'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 Bristol; and (b) The Town of Bristol may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

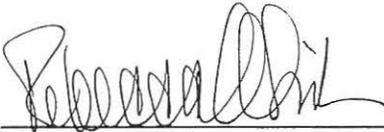
Certification

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 and health actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

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 11, 2016



Rebecca A. Sielman, FSA
Consulting Actuary



Jennifer M. Castelhana, FSA
Consulting Actuary

Discussion of Experience

This valuation reflects a number of changes relative to the July 1, 2014 valuation:

Demographic Changes from 2014 to 2016

From July 1, 2014 to July 1, 2016, the overall membership decreased from 257 to 255. The total number of active members increased from 133 to 138 and the total number of retirees and spouses of retirees decreased from 124 to 117.

The average age of active members increased slightly from 45.6 to 45.9 and the average age of retired members increased slightly from 65.4 to 65.9.

Assumption Changes

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.

All groups except Non-MERS Police: Certain actuarial demographic assumptions are based on the assumptions used in the valuation of the Municipal Employees' Retirement System State of Rhode Island by Gabriel, Roeder, Smith and Company (GRS). Our valuation reflects the applicable assumption changes made by GRS in their June 30, 2015 valuation.

The combined effect of the above changes reduced the Accrued Liability by about \$1.15 million and reduced the Annual Required Contribution by about \$102,000.

Plan Changes

Effective July 1, 2015 all groups except Police and Civilian Police switched to a High Deductible Health Plan.

The effect of the above change reduced the Accrued Liability by about \$82,000 and reduced the Annual Required Contribution by about \$9,000.

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.

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:

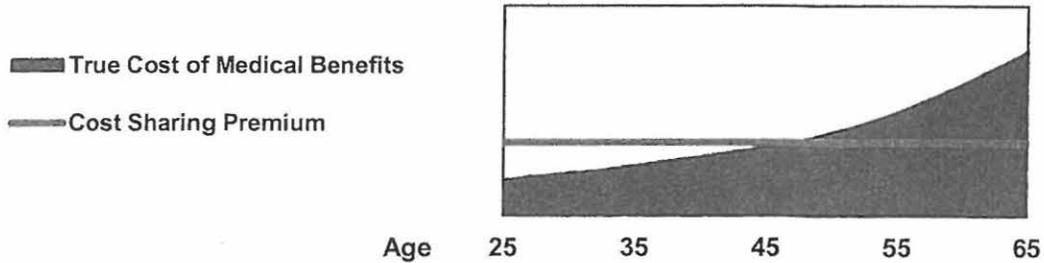
- Normal Cost – because the benefits earned each year should be paid for each year
- Past Service Cost – a catch-up payment to fund the Accrued Liability over time.

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.

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.

Summary of Assets

This valuation reflects assets that are managed through an irrevocable OPEB trust. While other assets may be used to meet future OPEB liabilities, only those funds that are contributed to an appropriate trust may be reflected in the determination of the Annual Required Contribution.

Assets in the OPEB Trust are allocated to the Town, Public Works, Sewer, and Police groups based on their respective ARC for FY 2016.

	Town	Public Works	Sewer	Police	Total
Market Value as of July 1, 2014	\$461,495	\$699,642	\$281,023	\$3,074,076	\$4,516,236
ARC for FY 2016	109,915	109,987	58,913	839,598	1,118,413
Allocation based on FY 2016 ARC	9.8%	9.8%	5.3%	75.1%	100.0%
Market Value as of July 1, 2016	563,391	801,604	335,638	3,852,418	5,553,051

Summary of Liabilities

We have calculated the Accrued Liability separately for four groups of Town employees, who are eligible for different OPEB benefits. We have broken the accrued liability 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.

	Town	Public Works	Sewer	Police	Total
Current active members					
Employees under age 65	\$173,460	\$305,068	\$56,448	\$1,542,003	\$2,076,979
Employees over age 65	398,536	265,987	55,405	264,566	984,494
Dependents under age 65	28,342	458,703	114,996	2,084,797	2,686,838
Dependents over age 65	<u>0</u>	<u>0</u>	<u>0</u>	<u>35,871</u>	<u>35,871</u>
Total	600,338	1,029,758	226,849	3,927,237	5,784,182
Current retired members					
Employees under age 65	185,448	42,329	139,936	3,041,639	3,409,352
Employees over age 65	802,701	347,493	182,952	790,198	2,123,344
Dependents under age 65	80,194	231,758	262,013	4,309,986	4,883,951
Dependents over age 65	<u>0</u>	<u>0</u>	<u>0</u>	<u>181,559</u>	<u>181,559</u>
Total	1,068,343	621,580	584,901	8,323,382	10,598,206
Total Accrued Liability	1,668,681	1,651,338	811,750	12,250,619	16,382,388

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 amortization period is 30 years starting for FYE 2008. The amortization method produces annual payments that will increase by 3.00% annually. On this basis, the ARC is determined as follows:

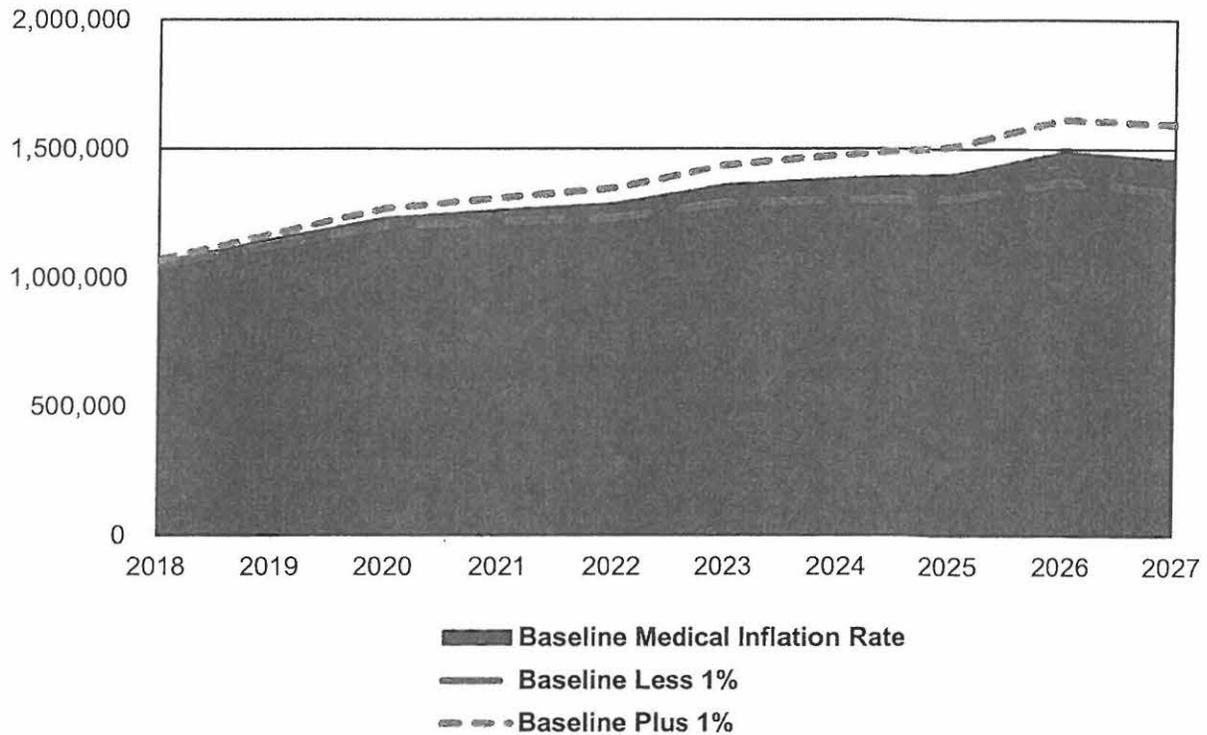
	Town	Public Works	Sewer	Police	Total
Accrued Liability	\$1,668,681	\$1,651,338	\$811,750	\$12,250,619	\$16,382,388
Assets	563,391	801,604	335,638	3,852,418	5,553,051
Unfunded Accrued Liability	1,105,290	849,734	476,112	8,398,201	10,829,337
Amortization Period	20	20	20	20	20
Amortization Growth Rate	3.00%	3.00%	3.00%	3.00%	3.00%
Past Service Cost	75,996	58,425	32,736	577,435	744,592
Total Normal Cost	32,948	32,142	12,931	261,642	339,663
Employee Contributions	20,363	18,096	6,560	40,550	85,569
Net Normal Cost	12,585	14,046	6,371	221,092	254,094
Interest	5,979	4,892	2,640	53,901	67,412
ARC for FY 2018	94,560	77,363	41,747	852,428	1,066,098
Expected Benefit Payouts	129,006	139,370	90,000	701,412	1,059,788
Net Budget Impact	(34,446)	(62,007)	(48,253)	151,016	6,310

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

Projected Payouts

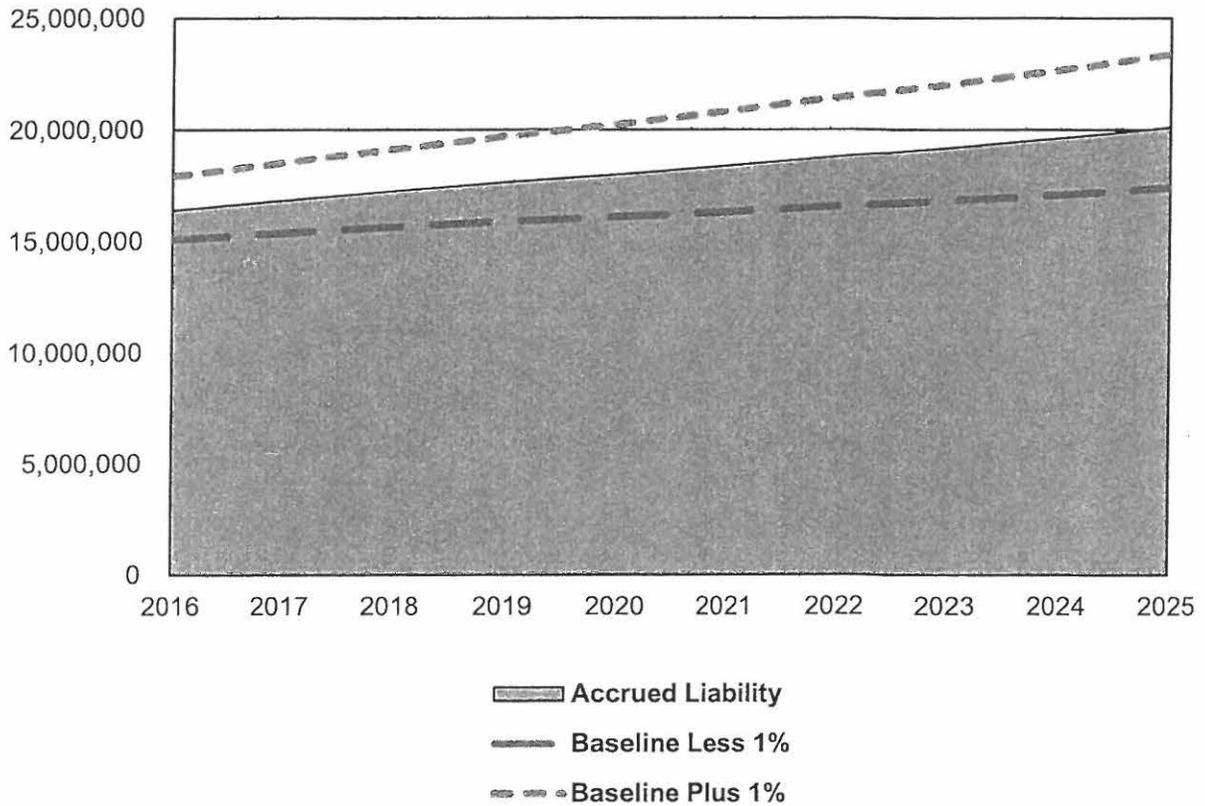
The table and graph below show the expected annual payments for OPEB benefits for the next 10 years.

Fiscal Year	Baseline Less 1%	Baseline Medical Inflation Rate	Baseline Plus 1%
2018	\$1,050,025	\$1,059,788	\$1,069,551
2019	1,128,057	1,149,096	1,170,336
2020	1,199,443	1,233,093	1,267,388
2021	1,216,989	1,262,556	1,309,440
2022	1,229,280	1,286,863	1,346,678
2023	1,287,393	1,359,932	1,435,998
2024	1,299,445	1,384,950	1,475,470
2025	1,303,489	1,401,573	1,506,402
2026	1,373,705	1,490,271	1,616,044
2027	1,333,513	1,458,968	1,595,625



Projected Liabilities

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



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)
7/1/2008	\$1,675	\$12,862	\$11,187	13%	N/A	N/A
7/1/2010	2,313	13,779	11,466	17%	5,042	227%
7/1/2012	3,428	16,712	13,284	21%	6,279	212%
7/1/2014	4,516	16,495	11,979	27%	6,777	177%
7/1/2016	5,553	16,382	10,829	34%	7,463	145%

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
2008	\$2,000	\$2,326	116.3%
2009	844	889	105.3%
2010	890	874	98.2%
2011	897	884	98.6%
2012	945	950	100.5%
2013	997	957	96.0%
2014	1,153	1,155	100.2%
2015	1,198	1,251	104.4%
2016	1,118	1,275	114.0%
2017	1,162	TBD	TBD
2018	1,066	TBD	TBD

Summary of Census Data

The following were included in our analysis based on information provided as of July 1, 2016 by the Town.

	Town	Public Works	Sewer	Police	Total
Number of members					
Active	42	34	12	50	138
Retired members	22	16	6	36	80
Spouses of retirees	3	3	4	27	37
Total	67	53	22	113	255
Average age					
Active	52.6	47.2	47.3	38.9	45.9
Retired members	71.6	74.0	64.0	59.1	65.9
Average retirement age					
Active	63.8	63.8	64.2	55.7	60.9
Retired members	61.5	62.1	58.3	46.0	54.4
Expected lifetime					
Active [to retirement]	11.2	16.6	16.8	16.8	15.0
Retired [lifetime]	17.0	12.6	20.2	25.7	20.3

The retiree census data excludes post 65 Medicare eligible 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.

Current Premiums

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

2016 - 2017 Monthly Premiums	Employee	Spouse
Medical - Pre 65	\$504.22	\$826.69
Post 65	178.69	178.69
Dental -	30.54	69.46

Health Cost Adjustment Factors

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.

Age	Police - Medical		Town - Medical HDHP	
	Employee	Spouse*	Employee	Spouse
40	\$474	\$786	\$442	\$503
45	551	847	514	560
50	662	953	618	658
55	829	1,083	773	780
60	1,053	1,249	982	934
65	147	142	147	142
70	167	161	167	161
75	186	177	186	177
80	201	191	201	191

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

Age	Town - Medical No HDHP	
	Employee	Spouse
40	\$474	\$539
45	551	601
50	662	706
55	829	837
60	1,053	1,002
65	147	142
70	167	161
75	186	177
80	201	191

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.

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.

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.

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 judgment 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	6.75%
Inflation Rate	2.75%
Medical Inflation Rate	5.30% - 4.40% over 75 years
Dental Inflation Rate	3.00%
Amortization Growth Rate	3.00%
Salary Scale	4.25%

Post-Retirement Mortality

Healthy

Police hired prior to March 22, 1998: RP-2000 Combined Healthy Table for males and females with generational projection per Scale AA. This assumption includes a margin for mortality improvement beyond the valuation date.

All Others[#]: 115% of the RP-2000 Combined Healthy for Males with White Collar adjustments, projected with Scale AA. 95% of the RP-2000 Combined Healthy for Females with White Collar adjustments, projected with Scale AA. This assumption includes a margin for mortality improvement beyond the valuation date.

Disabled

Police hired prior to March 22, 1998: RP-2000 Disabled Table. This assumption does not include a margin for mortality improvement beyond the valuation date.

All Others[#]: 60% of the PBGC Table Va for disabled males eligible for Social Security disability benefits. 60% of the PBGC Table VIa for disabled females eligible for Social Security disability benefits. This assumption does not include a margin for mortality improvement beyond the valuation date.

Pre-Retirement Mortality

Police hired prior to March 22, 1998: RP-2000 Combined Healthy Table for males and females with generational projection per Scale AA. This assumption includes a margin for mortality improvement beyond the valuation date.

Actuarial Assumptions

Pre-Retirement Mortality **All Others[#]:** 75% of RP-2000 Combined Healthy for Males with White Collar adjustments. 75% of RP-2000 Combined Healthy for Females with White Collar Adjustments. This assumption does not include a margin for mortality improvement beyond the valuation date.

Turnover **Police hired prior to March 22, 1998:** None.

Police hired on or after March 22, 1998[#]:

Prior: rates based on length of service

Service	Rate
0	10.00%
5	3.54%
10	1.91%
15	0.90%
20	0.00%

Current: rates based on length of service

Service	Rate
0	10.00%
5	2.32%
10	1.28%
15	0.67%
20	0.00%

All Others[#]:

Prior: rates based on gender and length of service

Service	Male Rate	Female Rate
0	17.50%	18.00%
5	5.52%	5.84%
10	2.60%	2.55%
15	2.01%	1.59%
20	1.75%	1.12%

Current: rates based on length of service

Service	Rate
0	17.50%
5	6.15%
10	2.71%
15	1.75%
20	1.49%

Retirement **Police hired prior to March 22, 1998:** 50% of members will retire at the completion of 20 years of service, 50% the year after, 40% the next year, and 5% at each year thereafter. 100% will have retired upon attaining 29 years of service.

Actuarial Assumptions

Retirement

Police hired on or after March 22, 1998[#]: rates are based on length of service. All members are assumed to retire upon reaching age 65 with at least 10 years of service.

Because of the enactment of the Rhode Island Retirement Security Act (RIRSA) in 2011, the retirement assumption was modified for members not eligible for retirement as of June 30, 2012. Members who would have been assumed to retire at an earlier age under the previous rules, are assumed to retire when first eligible for an unreduced benefit. This is recognized by adding 10% probability for every year the member has been deferred.

Service	Rate
20	12%
21-23	10%
24	12%
25	14%
26	16%
27	18%
28-29	20%
30+	35%

All Others[#]:

Prior: separate male and female rates. For members who reach 30 years of service before age 58, rates are based on length of service. For other members, rates are based on age.

Because of the enactment of the Rhode Island Retirement Security Act (RIRSA) in 2011, the retirement assumption was modified for members not eligible for retirement as of June 30, 2012. Members who would have been assumed to retire at an earlier age under the previous rules, are assumed to retire when first eligible for an unreduced benefit. This is recognized by adding 10% probability for every year the member has been deferred.

Male Rate				Female Rate			
<u>Service (0/30)</u>		<u>Age (58/10)</u>		<u>Service (0/30)</u>		<u>Age (58/10)</u>	
Service	Rate	Age	Rate	Service	Rate	Age	Rate
30	30%	58	12%	30	30%	58	12%
31	30%	59	10%	31	25%	59	10%
32	25%	60	10%	32	10%	60	10%
33	25%	61	10%	33	10%	61	10%
34	25%	62	30%	34	10%	62	20%
35	25%	63	20%	35	15%	63	15%
36	25%	64	20%	36	20%	64	15%
37	25%	65	20%	37	25%	65	20%
38	35%	66	25%	38	25%	66	25%
39	50%	67	25%	39	25%	67	25%
40	100%	68	25%	40	100%	68	25%
		69	30%			69	25%
		70-74	30%			70-74	20%
		75	100%			75	100%

Actuarial Assumptions

Retirement

Current: a flat 25% per year retirement probability for members eligible for unreduced retirement. A 50% retirement probability at first eligibility will be only applied if they have reached age 65 or with at least 25 years of service.

100% of members eligible to retire as of June 30, 2012 are assumed to retire once they reach 35 years of service. All members not eligible to retire as of June 30, 2012 are assumed to retire at SSNRA, if eligible.

Early retirement rates are based on years from normal retirement age:

Years from Normal Retirement Age	Rate
3-5	2%
2	3%
1	4%

Disability

Police hired prior to March 22, 1998: 50% of the 1985 Pension Disability Table (DP-85) Class 4 rates.

Police hired on or after March 22, 1998[#]:

Prior: sample rates shown below

Age	Service- Connected	Non Service- Connected
25	0.255%	0.043%
35	0.435%	0.073%
45	1.080%	0.180%
55	1.815%	0.303%
65	1.815%	0.303%

Current: sample rates shown below

Age	Service- Connected	Non Service- Connected
25	0.170%	0.026%
35	0.290%	0.044%
45	0.720%	0.108%
55	1.210%	0.182%
65	1.210%	0.182%

Actuarial Assumptions

Disability

All Others#:

Prior: sample rates are shown below:

Age	Service-Connected		Non Service-Connected	
	Male	Female	Male	Female
25	0.023%	0.008%	0.063%	0.027%
35	0.038%	0.012%	0.105%	0.045%
45	0.090%	0.029%	0.252%	0.108%
55	0.253%	0.081%	0.707%	0.303%
65	0.000%	0.000%	0.000%	0.000%

Current: sample rates are shown below:

Age	Service-Connected		Non Service-Connected	
	Male	Female	Male	Female
25	0.018%	0.006%	0.059%	0.027%
35	0.030%	0.011%	0.098%	0.045%
45	0.072%	0.025%	0.234%	0.108%
55	0.202%	0.071%	0.657%	0.303%
65	0.462%	0.162%	1.502%	0.693%

Future Retiree Coverage 100% of active members are assumed to elect coverage at retirement.

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
Police	95%	95%
Sewer and Public Works	80%	80%
Town	75%	25%

Future Post-65 Coverage 100% of current actives and pre-65 retirees are assumed to continue past age 65 based on current elections (if available).

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, as they were determined to be de minimis.

Certain actuarial demographic assumptions are based on the assumptions used in the June 30, 2015 valuations of the Employees Retirement System of Rhode Island and the Municipal Employees' Retirement System State of Rhode Island.

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

Members who have retired under the Town of Bristol Police Retirement Plan or the Municipal Employees Retirement System (MERS) for Police, shall be eligible to receive medical and dental benefits for self and spouse.

For all members hired prior to March 22, 1998, eligibility for retirement is completion of 20 years of service regardless of age.

For all members hired on or after March 22, 1998, eligibility for retirement is age 55 with 25 years of service.

Hired prior to May 1, 2002:

Medical Benefit - 100% Town-paid coverage for employee until age 75 and spouse until age 65.

Dental Benefit - 100% Town-paid coverage for employee and spouse until age 75.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Hired on or after May 1, 2002:

Medical and Dental Benefits – 100% Town-paid coverage for employee and spouse until age 65.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Employee Contributions: 1.5% of the salary of a second class patrol officer.

Summary of Plan Provisions

Civilian Police

For all members eligible to retire prior to July 1, 2012, eligibility for retirement is the earlier of completion of 30 years of service regardless of age, or age 58 with 10 years of service.

For all new hires or members with less than five years of service on June 30, 2012, the new retirement age will match their Social Security Retirement Age.

Members with five or more years of service on June 30, 2012, will be eligible to retire at their social security retirement age but will receive a proportional downward adjustment based on years of service prior to July 1, 2012, with a minimum retirement age of 59.

Transition Rules for Retirement Age:

Members with ten or more years of service by June 30, 2012 may retire at their retirement age under the previous rules.

Members who are within 5 years of reaching normal retirement age with at least 20 years of service.

Hired prior to May 1, 2002:

Medical Benefit - 100% Town-paid coverage for employee until age 75 and spouse until age 65.

Dental Benefit - 100% Town-paid coverage for employee and spouse until age 75.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Hired on or after May 1, 2002:

Medical and Dental Benefits – 100% Town-paid coverage for employee and spouse until age 65.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Employee Contributions:

Civilian Police - 1.5% of the salary of a dispatcher.

Secretaries - 1.5% of salary.

Summary of Plan Provisions

Sewer and Public Works For all members eligible to retire prior to July 1, 2012, eligibility for retirement is the earlier of completion of 30 years of service regardless of age, or age 58 with 10 years of service.

For all new hires or members with less than five years of service on June 30, 2012, the new retirement age will match their Social Security Retirement Age.

Members with five or more years of service on June 30, 2012, will be eligible to retire at their social security retirement age but will receive a proportional downward adjustment based on years of service prior to July 1, 2012, with a minimum retirement age of 59.

Transition Rules for Retirement Age:

Members with ten or more years of service by June 30, 2012 may retire at their retirement age under the previous rules.

Members who are within 5 years of reaching normal retirement age with at least 20 years of service.

Hired prior to September 1, 2002:

Medical Benefit - 100% Town-paid coverage for employee until age 75 and spouse until age 65.

Dental Benefit - retirees can elect coverage for self and spouse for a period of 10 years from the date of retirement at their own expense.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Hired on or after to September 1, 2002:

Medical Benefit – 100% Town-paid coverage for employee and spouse until age 65.

Dental Benefit - retirees can elect coverage for self and spouse for a period of 10 years from the date of retirement at their own expense.

Life Insurance Benefit – \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Employee Contributions: 1% of employee yearly salary.

Summary of Plan Provisions

Town (Town Hall, Senior Center, Recreation, Fire Management and Library) For all members eligible to retire prior to July 1, 2012, eligibility for retirement is the earlier of completion of 30 years of service regardless of age, or age 58 with 10 years of service.

For all new hires or members with less than five years of service on June 30, 2012, the new retirement age will match their Social Security Retirement Age.

Members with five or more years of service on June 30, 2012, will be eligible to retire at their social security retirement age but will receive a proportional downward adjustment based on years of service prior to July 1, 2012, with a minimum retirement age of 59.

Transition Rules for Retirement Age:

Members with ten or more years of service by June 30, 2012 may retire at their retirement age under the previous rules.

Members who are within 5 years of reaching normal retirement age with at least 20 years of service.

Medical Benefit:

Retirees who retired prior to, or eligible retirees, who had 25 years of service as of September 1, 2006 shall receive 100% Town-paid lifetime individual medical coverage. Spouse coverage is available until age 65 at their own expense.

Employees hired prior to September 1, 2004 and retiring after September 1, 2006 who did not have at least 25 years of service with the Town as of September 1, 2006 shall receive 100% Town-paid individual medical coverage until age 75. Spouse coverage is available until age 65 at their own expense.

Employees hired on or after September 1, 2004 can elect medical coverage at retirement for self and spouse until age 65 at their own expense.

Dental Benefit: retirees can elect coverage for a period of 10 years from the date of retirement at their own expense. Spouse coverage is not available.

Life Insurance Benefit: \$50,000 (\$10,000 in retirement; excess funds deposited into OPEB trust); 100% Town-paid.

Employee Contributions: 1% of employee yearly salary