



ACTUARIAL VALUATION REPORT
REPORTING AS OF JULY 1, 2024

TOWN OF WATERFORD OPEB PLAN

Table of Contents

Executive Summary	1
Valuation Results and Highlights	2
Purpose of the Valuation.....	2
Information Available in the Valuation Report	2
Changes Reflected in the Valuation	2
Cash Contribution for Fiscal Years Ending 2026 and 2027	2
Liability Experience During Period Under Review	2
Asset Experience During Period Under Review.....	3
Certification	4
Development of Unfunded Accrued Liability and Funded Ratio.....	5
Development of Unfunded Accrued Liability and Funded Ratio by Group.....	7
Determination of Normal Cost and Actuarially Determined Employer Contribution.....	8
Actuarially Determined Employer Contribution per Group	10
Development of Asset Values.....	11
Target Allocation and Expected Rate of Return	17
Amortization of Unfunded Liability	18
Member Data	19
Expected Benefit Payments from Trust Fund.....	21
Expected Per Capita Claims (without Medicare Integration).....	22
Description of Actuarial Methods	23
Description of Actuarial Assumptions	24
Summary of Plan Provisions	30

Report Prepared By:

Stephen Chykirda
Associate Vice President & Consulting Actuary
860.856.2047
stephen.chykirda@usi.com

Jonathan Plumb
Senior Actuarial Consultant
860.856.2103
jon.plumb@usi.com

Executive Summary

	July 1, 2024	July 1, 2022
Number of members		
Active members	414	368
Retired members and dependents	168	179
Total	582	547
Covered employee payroll	31,264,486	29,029,526
Average plan salary	75,518	78,885
Actuarial present value of future benefits	36,779,727	32,284,998
Actuarial accrued liability	34,097,347	30,074,765
Plan assets		
Market value of assets	13,311,529	8,465,847
Actuarial value of assets	13,194,398	9,206,097
Unfunded accrued liability	20,902,949	20,868,668
Funded ratio	38.7%	30.6%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2026	2024
ADEC	2,804,332	2,505,310
Fiscal year ending	2027	2025
ADEC	2,818,488	2,516,833

Valuation Results and Highlights

Purpose of the Valuation

The purpose of the valuation is to develop the Actuarially Determined Employer Contribution (ADEC). The ultimate cost of an OPEB plan is based primarily on the level of benefits promised by the plan. The OPEB fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

Ultimate cost = Benefits Paid + Expenses Incurred – Investment Return – Employee Contributions

The actuarial cost method distributes this ultimate cost over the working lifetime of current plan participants. By means of this budgeting process, costs are allocated to both past and future years, and a cost is assigned to the current year. The current year's allocated cost, or normal cost, is the building block upon which the actuarially determined employer contribution is developed. The July 1, 2024 valuation produces the contributions for the fiscal years ending 2026 and 2027.

Information Available in the Valuation Report

The Executive Summary is intended to emphasize the notable results of the valuation from the perspective of the Plan Sponsor. Supporting technical detail is documented in Results of the Valuation, Supporting Exhibits and Description of Actuarial Methods and Assumptions. A concise summary of the principal provisions of the Plan is outlined in Summary of Plan Provisions.

Changes Reflected in the Valuation

This valuation reflects changes in the medical trend rates, as well as the retirement/termination rates for the non-certified BOE group. These changes in assumptions increased the liability by 6.3%. Additionally, medical premiums increased more than expected resulting in a 6.2% increase in the total liability.

Cash Contribution for Fiscal Years Ending 2026 and 2027

The Town cost is:	2026 Fiscal Year	2027 Fiscal Year
Town	\$621,679	\$621,679
Police and Fire	698,089	698,089
BOE Certified	1,396,117	1,407,943
BOE Non-Certified	88,447	90,777
<hr/>		
Total	\$2,804,332	\$2,818,488

Liability Experience During Period Under Review

The accrued liability of \$34,097,347 is higher than expected primarily due to medical premiums that were higher than expected since the last valuation.

Asset Experience During Period Under Review

The plan's assets provided the following rates of return during the past two fiscal years:

	2023 Fiscal Year	2024 Fiscal Year
Market Value Basis	10.1%	10.9%
Actuarial Value Basis	5.6%	6.8%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility over 5 years, thereby smoothing out fluctuations that are inherent in the Market Value.

Certification

This report presents the results of the July 1, 2024 Actuarial Valuation for Town of Waterford OPEB Plan (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Employer Contribution (ADEC) for the fiscal years ending June 30, 2026 and June 30, 2027. This report is intended to satisfy the requirements of Connecticut General Statute 7-450a. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this valuation, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Trustee. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Summary of Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Description of Actuarial Methods and Assumptions* section of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, 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 this report, an analysis of the potential range of such future measurements has not been performed.

I have no relationship with the employer or the Plan that would impair, or appear to impair, my objectivity in performing the work presented in this report. I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.



Stephen Chykirda, ASA, FCA, MAAA
Enrolled Actuary 23-07517

January 3, 2025

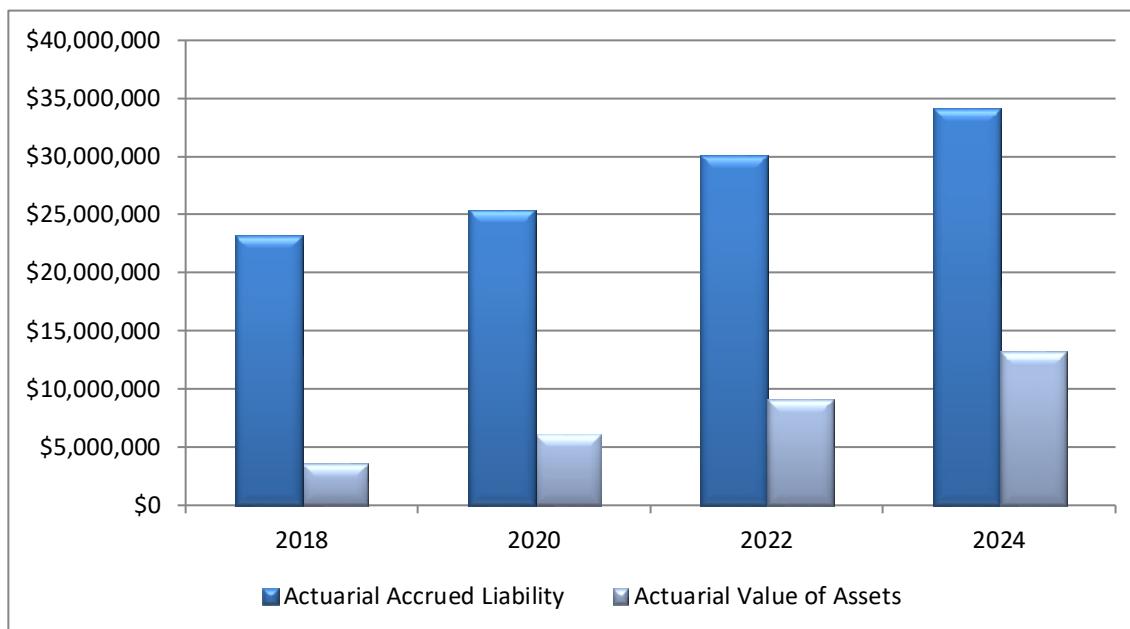
Development of Unfunded Accrued Liability and Funded Ratio

	July 1, 2024	July 1, 2022
Actuarial accrued liability for active members		
Members under age 65	\$6,561,835	\$5,220,130
Members over age 65	141,669	358,063
Dependents under age 65	2,471,831	1,889,341
Dependents over age 65	<u>65,410</u>	<u>167,335</u>
Total	9,240,745	7,634,869
Actuarial accrued liability for inactive members		
Members under age 65	2,917,185	3,610,009
Members over age 65	13,677,377	11,169,636
Dependents under age 65	2,071,899	2,310,403
Dependents over age 65	<u>6,190,141</u>	<u>5,349,848</u>
Total	24,856,602	22,439,896
Total actuarial accrued liability	34,097,347	30,074,765
Actuarial value of assets	<u>13,194,398</u>	<u>9,206,097</u>
Unfunded accrued liability	20,902,949	20,868,668
Funded ratio	38.7%	30.6%

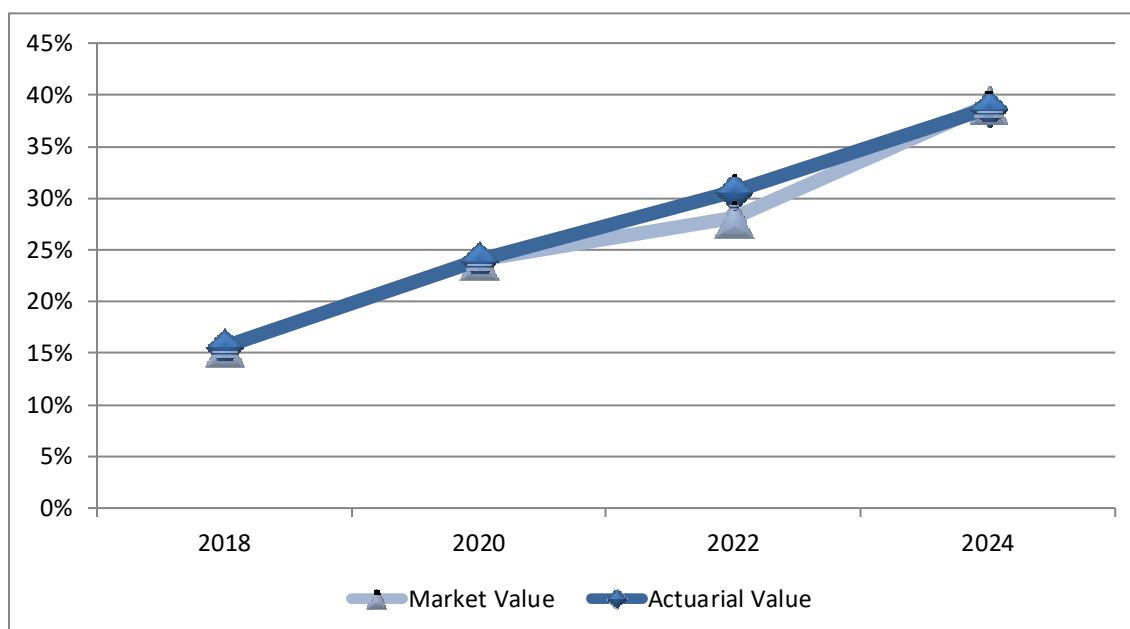
	Current Discount Rate (6.50%)	1% Decrease (5.50%)	1% Increase (7.50%)
Actuarial accrued liability for active members	9,240,745	10,082,239	8,468,000
Actuarial accrued liability for inactive members	<u>24,856,602</u>	<u>27,541,809</u>	<u>22,609,172</u>
Total actuarial accrued liability	34,097,347	37,624,048	31,077,172

	Healthcare Cost Trend Rates (7.00% decreasing to 4.40%)	1% Decrease (6.00% decreasing to 3.40%)	1% Increase (8.00% decreasing to 5.40%)
Actuarial accrued liability for active members	9,240,745	8,288,335	10,331,726
Actuarial accrued liability for inactive members	<u>24,856,602</u>	<u>22,960,626</u>	<u>27,093,261</u>
Total actuarial accrued liability	34,097,347	31,248,961	37,424,987

Actuarial Accrued Liability vs. Actuarial Value of Assets



Funded Ratio



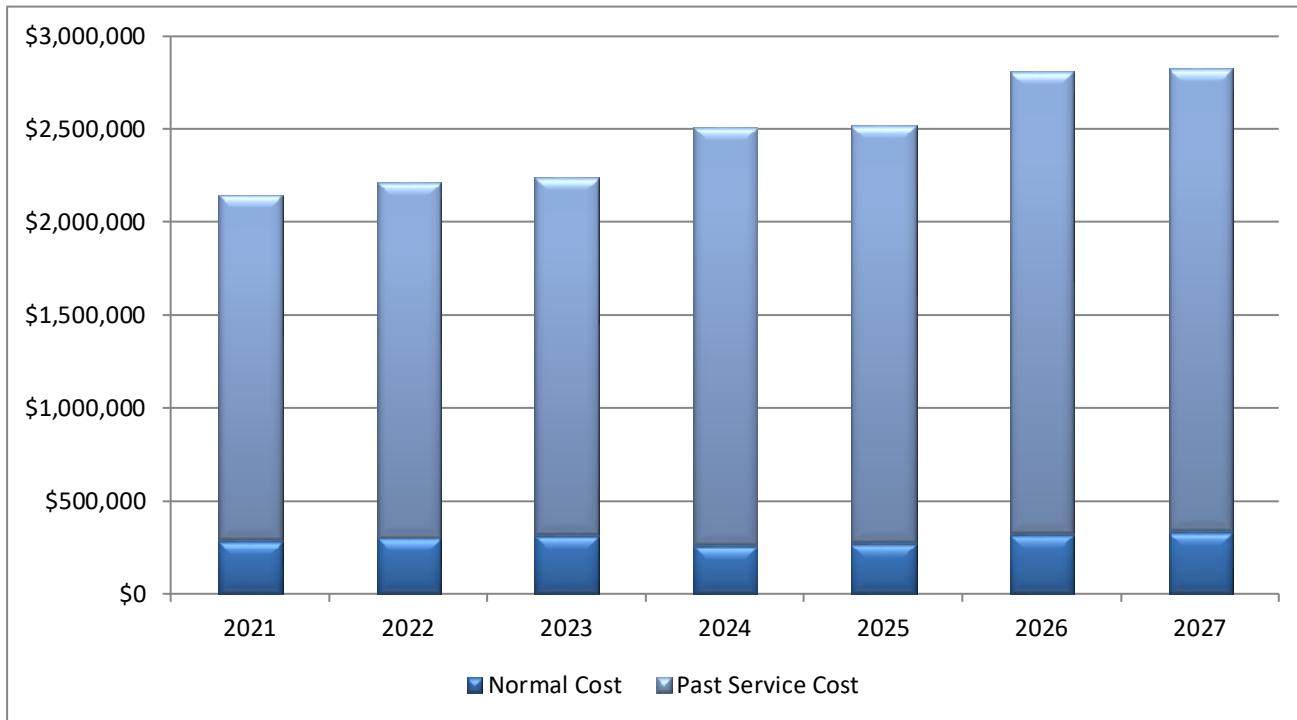
Development of Unfunded Accrued Liability and Funded Ratio by Group

	Town	Police and Fire	BOE Certified	BOE Non-Certified	Total
Actuarial accrued liability for active members					
Members under age 65	\$0	\$0	\$6,223,599	\$338,236	\$6,561,835
Members over age 65	0	0	141,669	0	141,669
Dependents under age 65	0	0	2,322,540	149,291	2,471,831
Dependents over age 65	0	0	65,410	0	65,410
Total	0	0	8,753,218	487,527	9,240,745
Actuarial accrued liability for inactive members					
Members under age 65	784,678	1,413,626	718,881	0	2,917,185
Members over age 65	5,391,224	4,556,402	3,729,751	0	13,677,377
Dependents under age 65	240,818	1,031,105	799,976	0	2,071,899
Dependents over age 65	2,121,674	2,586,707	1,481,760	0	6,190,141
Total	8,538,394	9,587,840	6,730,368	0	24,856,602
Total actuarial accrued liability	8,538,394	9,587,840	15,483,586	487,527	34,097,347
Actuarial value of assets	3,304,039	3,710,136	5,991,569	188,654	13,194,398
Unfunded accrued liability	5,234,355	5,877,704	9,492,017	298,873	20,902,949
Funded ratio	38.7%	38.7%	38.7%	38.7%	38.7%

Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2024		July 1, 2022	
	Cost	Percent of payroll	Cost	Percent of payroll
Town's normal cost	\$298,600	1.0%	\$243,080	0.8%
Amortization of unfunded accrued liability	2,405,668	7.6%	2,173,878	7.5%
Contribution before adjustment as of the valuation date	2,704,268	8.6%	2,416,958	8.3%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	31,264,487		29,029,526	
Fiscal year ending	2026		2024	
Adjustment for interest and inflation	100,064		88,352	
Actuarially determined employer contribution	2,804,332		2,505,310	
Expected benefit payments	2,142,851		2,126,970	
Fiscal year ending	2027		2025	
Adjustment for interest and inflation	14,156		11,523	
Actuarially determined employer contribution	2,818,488		2,516,833	
Expected benefit payments	2,377,112		2,075,404	

Actuarially Determined Employer Contribution



Actuarially Determined Employer Contribution per Group

	Town	Police and Fire	BOE Certified	BOE Non-Certified	Total
Town's normal cost	\$0	\$0	\$249,454	\$49,146	\$298,600
Actuarial accrued liability	8,538,394	9,587,840	15,483,586	487,527	34,097,347
Actuarial value of assets	3,304,039	3,710,136	5,991,569	188,654	13,194,398
Unfunded accrued liability	5,234,355	5,877,704	9,492,017	298,873	20,902,949
Amortization of unfunded accrued liability	602,409	676,450	1,092,412	34,397	2,405,668
Contribution before adjustment as of the valuation date	602,409	676,450	1,341,866	83,543	2,704,268
Fiscal year ending June 30, 2026					
Adjustment for interest and inflation	19,270	21,639	54,251	4,904	100,064
Actuarially determined employer contribution	621,679	698,089	1,396,117	88,447	2,804,332
Expected benefit payments	679,631	714,729	731,393	17,098	2,142,851
Fiscal year ending June 30, 2027					
Adjustment for interest and inflation	0	0	11,826	2,330	14,156
Actuarially determined employer contribution	621,679	698,089	1,407,943	90,777	2,818,488
Expected benefit payments	710,002	751,805	882,927	32,378	2,377,112

Development of Asset Values

Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets July 1, 2023		
Trust assets	\$10,561,097	\$10,914,288
2. Contributions		
Town contributions during year	1,458,305	1,458,305
Employee contributions during year	0	0
Total for plan year	1,458,305	1,458,305
3. Disbursements		
Benefit payments during year	0	0
Administrative expenses during year	10,564	10,564
Total for plan year	10,564	10,564
4. Net investment return		
Interest and dividends	0	N/A
Realized and unrealized gain / (loss)	1,302,691	N/A
Expected return	N/A	773,769
Recognized gain / (loss)	N/A	58,600
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	0	N/A
Total for plan year	1,302,691	832,369
5. Ending value of assets July 1, 2024		
Trust assets: (1) + (2) - (3) + (4)	13,311,529	13,194,398
6. Approximate rate of return	10.9%	6.8%

Relationship of Actuarial Value to Market Value					
1. Market value 7/1/2024					\$13,311,529
2. Gain / (loss) not recognized in actuarial value 7/1/2024					<u>117,131</u>
3. Preliminary actuarial value 7/1/2024: (1) - (2)					13,194,398
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)					99.1%
5. Gain / (loss) recognized for corridor minimum / maximum					N/A
6. Actuarial value 7/1/2024 after corridor minimum / maximum: (3) + (5)					13,194,398
7. Actuarial value as a percentage of market value: (6) ÷ (1)					99.1%
Development of Market Value Gain / Loss for 2023-2024 Plan Year					
1. Market value 7/1/2023					\$10,561,097
2. Town contributions					1,458,305
3. Employee contributions					0
4. TRB reimbursements					0
4. Benefit payments					0
5. Administrative expenses					10,564
6. Expected return at 6.50%					<u>773,769</u>
7. Expected value 7/1/2024: (1) + (2) + (3) - (4) - (5) + (6)					12,782,607
8. Market value 7/1/2024					<u>13,311,529</u>
9. Market value gain / (loss) for 2023-2024 plan year: (8) - (7)					528,922
Recognition of Gain / Loss in Actuarial Value					
Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2023	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2024: (b) + (c)	(e) Not recognized as of 7/1/2024: (a) - (d)
2019-2020	\$0	\$0	\$0	\$0	\$0
2020-2021	1,398,074	838,845	279,615	1,118,460	279,614
2021-2022	(1,973,868)	(789,548)	(394,774)	(1,184,322)	(789,546)
2022-2023	339,875	67,975	67,975	135,950	203,925
2023-2024	528,922	0	<u>105,784</u>	105,784	<u>423,138</u>
Total			58,600		117,131

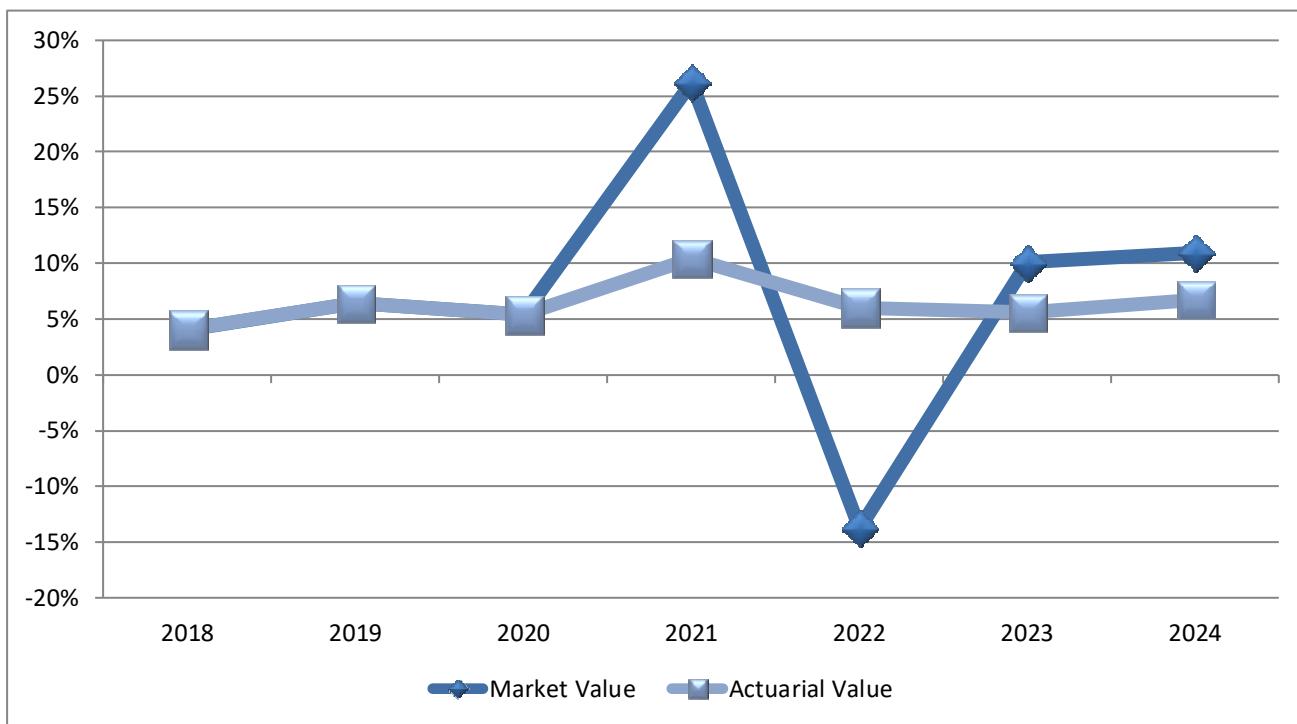
Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets July 1, 2022		
Trust assets	\$8,465,847	\$9,206,097
2. Contributions		
Town contributions during year	1,143,311	1,143,311
Employee contributions during year	0	0
Total for plan year	1,143,311	1,143,311
3. Disbursements		
Benefit payments during year	0	0
Administrative expenses during year	8,056	8,056
Total for plan year	8,056	8,056
4. Net investment return		
Interest and dividends	0	N/A
Realized and unrealized gain / (loss)	959,995	N/A
Expected return	N/A	620,120
Recognized gain / (loss)	N/A	(47,184)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	0	N/A
Total for plan year	959,995	572,936
5. Ending value of assets July 1, 2023		
Trust assets: (1) + (2) - (3) + (4)	10,561,097	10,914,288
6. Approximate rate of return	10.1%	5.6%

Relationship of Actuarial Value to Market Value					
1. Market value 7/1/2023					\$10,561,097
2. Gain / (loss) not recognized in actuarial value 7/1/2023					<u>(353,191)</u>
3. Preliminary actuarial value 7/1/2023: (1) - (2)					10,914,288
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)					103.3%
5. Gain / (loss) recognized for corridor minimum / maximum					N/A
6. Actuarial value 7/1/2023 after corridor minimum / maximum: (3) + (5)					10,914,288
7. Actuarial value as a percentage of market value: (6) ÷ (1)					103.3%
Development of Market Value Gain / Loss for 2022-2023 Plan Year					
1. Market value 7/1/2022					\$8,465,847
2. Town contributions					1,143,311
3. Employee contributions					0
4. TRB reimbursements					0
4. Benefit payments					0
5. Administrative expenses					8,056
6. Expected return at 6.50%					<u>620,120</u>
7. Expected value 7/1/2023: (1) + (2) + (3) - (4) - (5) + (6)					10,221,222
8. Market value 7/1/2023					<u>10,561,097</u>
9. Market value gain / (loss) for 2022-2023 plan year: (8) - (7)					339,875
Recognition of Gain / Loss in Actuarial Value					
Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2022	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2023: (b) + (c)	(e) Not recognized as of 7/1/2023: (a) - (d)
2018-2019	\$0	\$0	\$0	\$0	\$0
2019-2020	0	0	0	0	0
2020-2021	1,398,074	559,230	279,615	838,845	559,229
2021-2022	(1,973,868)	(394,774)	(394,774)	(789,548)	(1,184,320)
2022-2023	339,875	0	<u>67,975</u>	<u>67,975</u>	<u>271,900</u>
Total			(47,184)		(353,191)

Rate of Return on Market Value of Assets				
Period Ending June 30	Average Annual Effective Rate of Return			
	1 Year	3 Years	5 Years	10 Years
2015	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2017	2.1%	N/A	N/A	N/A
2018	4.1%	N/A	N/A	N/A
2019	6.4%	4.2%	N/A	N/A
2020	5.4%	5.3%	N/A	N/A
2021	26.2%	12.3%	8.5%	N/A
2022	-13.7%	4.7%	4.9%	N/A
2023	10.1%	6.2%	6.1%	N/A
2024	10.9%	1.8%	7.0%	N/A

Rate of Return on Actuarial Value of Assets				
Period Ending June 30	Average Annual Effective Rate of Return			
	1 Year	3 Years	5 Years	10 Years
2015	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2017	2.1%	N/A	N/A	N/A
2018	4.1%	N/A	N/A	N/A
2019	6.4%	4.2%	N/A	N/A
2020	5.4%	5.3%	N/A	N/A
2021	10.4%	7.4%	5.6%	N/A
2022	6.0%	7.2%	6.4%	N/A
2023	5.6%	7.3%	6.7%	N/A
2024	6.8%	6.1%	6.8%	N/A

Actual Rate of Return on Assets



**Target Allocation and Expected Rate of Return
July 1, 2024**

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
TIPS	1.00%	2.60%	0.03%
Core Fixed Income	24.00%	3.10%	0.74%
Dynamic Bonds	7.50%	3.90%	0.29%
High Yield Bonds	1.00%	5.10%	0.05%
Global Bonds	1.50%	3.00%	0.05%
US Large Cap	25.00%	3.90%	0.98%
US Mid Cap	7.50%	3.80%	0.29%
US Small Cap	5.00%	3.40%	0.17%
International Equity Developed	21.00%	5.60%	1.18%
Emerging Markets	2.00%	7.50%	0.15%
Broad Real Assets	4.50%	4.90%	0.22%
	100.00%		4.15%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.55%

**Long-Term Real Returns are provided by Fiducient Advisors. The returns are geometric means.*

The long-term expected rate of return on OPEB plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return are developed. Best estimates of the real rates of return for each major asset class are included in the OPEB plan's target asset allocation.

The information above is based on geometric means and does not reflect additional returns through investment selection, asset allocation and rebalancing. An expected rate of return of 6.50% was used.

Amortization of Unfunded Liability

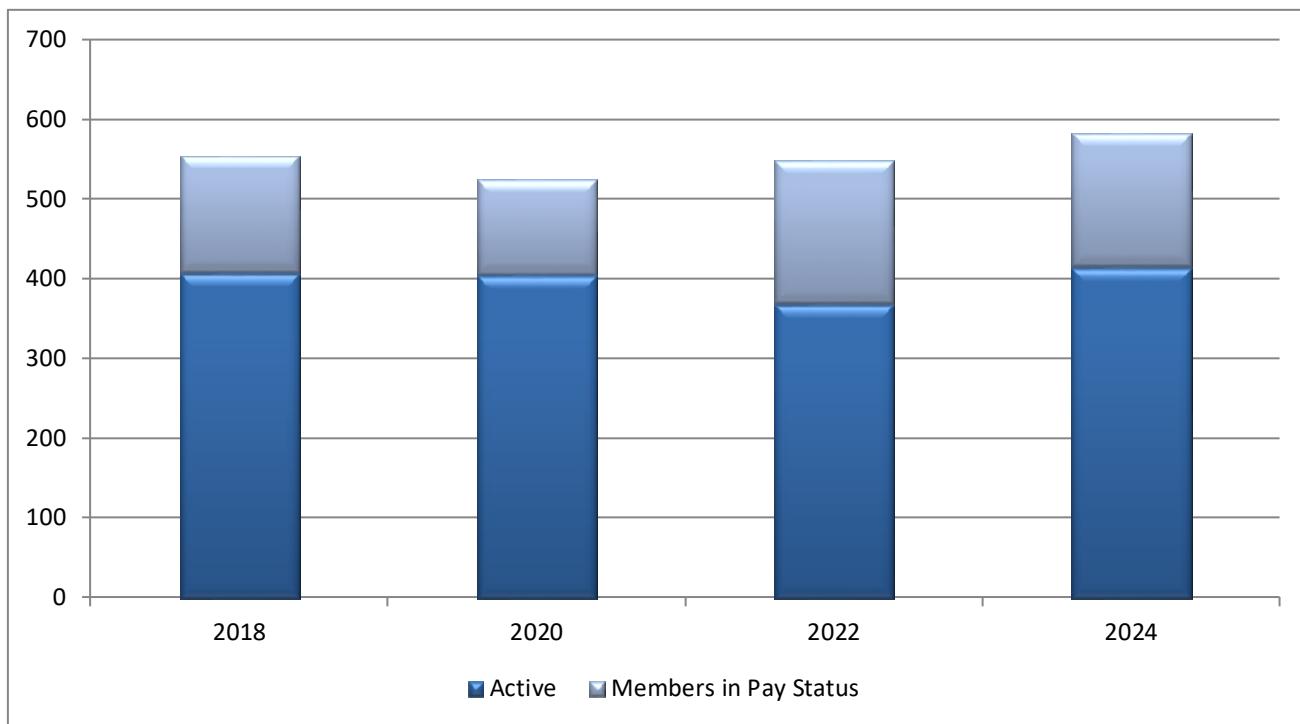
Schedule of Amortization Bases				
	Date established	Amortization installment	Years remaining	Present value of remaining installments as of July 1, 2024
2024 base	July 1, 2024	2,405,668	12	20,902,949

Member Data

The data reported by the Plan Sponsor for this valuation includes 414 active employees who met the Plan's minimum age and service requirements as of July 1, 2024.

	Town	Police and Fire	BOE Certified	BOE Non-Certified	Total
Total members July 1, 2024					
Active members	0	0	251	163	414
Retirees	47	46	20	0	113
Dependents of current retirees	<u>20</u>	<u>25</u>	<u>10</u>	<u>0</u>	<u>55</u>
Total	67	71	281	163	582
Average age July 1, 2024					
Active members	N/A	N/A	46.9	49.5	47.9
Retirees	73.6	69.6	70.3	N/A	71.4
Dependents of current retirees	69.6	65.6	61.9	N/A	66.4
Total members July 1, 2022					
Active members	0	1	241	126	368
Retirees	46	46	26	0	118
Dependents of current retirees	<u>20</u>	<u>24</u>	<u>17</u>	<u>0</u>	<u>61</u>
Total	66	71	284	126	547
Average age July 1, 2022					
Active members	N/A	53.1	46.4	50.8	47.9
Retirees	72.5	67.6	67.7	N/A	69.5
Dependents of current retirees	70.7	63.8	63.9	N/A	66.1

Member Counts by Status



Expected Benefit Payments from Trust Fund

An important consideration in formulating short-term or intermediate-term investment policy is the need for liquidity to meet the payment requirements of the Plan. The Plan's investment advisors may wish to compare expected benefit payments and expenses with anticipated cash income from investments and employer contributions.

The table below presents projected annual benefit payments for the next twenty plan years. The following assumptions are reflected in this table:

- Retirements among active participants will occur consistent with the Plan's retirement assumption.
- Benefits will continue to accrue according to the provisions of the Plan.

Differences between actual experience and that assumed will affect the pattern of benefit payments.

Participant categories reflect status as of July 1, 2024.

Year	Active as of July 1, 2024	Retired and Terminated as of July 1, 2024	Total Benefit Payments
2024	\$53,647	\$2,008,809	\$2,062,456
2025	161,375	1,981,476	2,142,851
2026	304,342	2,072,771	2,377,113
2027	450,199	2,034,678	2,484,877
2028	625,758	1,966,133	2,591,891
2029	754,483	1,927,150	2,681,633
2030	934,931	1,928,518	2,863,449
2031	1,116,140	1,868,423	2,984,563
2032	1,176,335	1,787,331	2,963,666
2033	1,382,175	1,723,814	3,105,989
2034	1,383,746	1,717,897	3,101,643
2035	1,366,770	1,672,677	3,039,447
2036	1,312,761	1,678,750	2,991,511
2037	1,259,417	1,686,436	2,945,853
2038	1,303,916	1,632,966	2,936,882
2039	1,279,337	1,630,665	2,910,002
2040	1,228,395	1,626,153	2,854,548
2041	1,138,258	1,618,818	2,757,076
2042	1,180,190	1,608,063	2,788,253
2043	1,118,192	1,584,102	2,702,294

Expected Per Capita Claims (without Medicare Integration)

Non-RIP Town/Police/Fire

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$16,208	\$22,591
50	21,166	26,323
55	27,774	30,665
60	35,780	35,766
64	43,695	41,871

RIP Town/Police/Fire

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$17,456	\$24,331
50	22,797	28,351
55	29,914	33,027
60	38,536	38,521
64	47,061	45,096

BOE

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$14,903	\$20,773
50	19,463	24,205
55	25,539	28,197
60	32,901	32,888
65	41,890	39,863
70	50,392	46,625
75	57,828	52,337

The sample per capita claim for plans not integrated with Medicare was developed as follows: Using the total count of active participants eligible for post-retirement medical benefits and retirees currently electing medical coverage in a non-Medicare supplement plan, we calculate the total projected claims by multiplying the total count by the average annual premium. Using the cost increases derived from a study sponsored by the Society of Actuaries prepared by Dale H. Yamamoto from May 2013: "Health Care Costs from Birth to Death", we allocate the total projected claims by age and gender.

Description of Actuarial Methods

Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in the recognition of differences between the actual return on Market Value and expected return on Market Value over a 5-year period at 20% per year. The Actuarial Value is adjusted, if necessary, to be within the range of 80% and 120% of the Market Value of assets.

Actuarial Cost Method

Change in Actuarial Method: None.

Entry Age Normal (level percentage of salary).

Normal Cost: Under this method, the total normal cost is the sum of amounts necessary to fund each active member's normal retirement benefit if paid annually from entry age to assumed retirement age. Entry age is the age at which the employee would have been first eligible for the plan, if it had always been in effect. The normal cost for each participant is expected to remain a level percentage of the employee's salary. The normal cost for the plan is the difference between the total normal cost for the year and the anticipated member contributions for that year.

Past Service Liability: The present value of future benefits that relates to service before the valuation date is the total past service liability. The unfunded past service liability is the difference between the total past service liability and any assets (including accumulated member contributions).

The Unfunded Accrued liability is amortized each year over 30 years on a closed basis, as a level dollar amount. The amortization began July 1, 2006 and as of July 1, 2024, 12 years remain.

Description of Actuarial Assumptions

The valuation reflects changes in the actuarial assumptions listed below. (The assumptions used before and after these changes are more fully described in the next section.)

- Retirement/Termination Rates
- Healthcare Cost Trend Rates

The assumptions indicated were changed to represent the Enrolled Actuary's current best estimate of anticipated experience of the plan.

Interest

6.50%.

Since the OPEB plan's fiduciary net position and future contributions are projected to be sufficient to cover expected benefit payments for current plan members, the long-term expected rate of return on OPEB plan investments was used to discount liabilities.

Rate of compensation increase (including inflation)

2.40%.

The plan does not have statistically credible data on which to form a rate of compensation increase assumption. This assumption is consistent with the inflation assumption.

Inflation

2.40%.

This assumption is consistent with the Social Security Administration's current best estimate for the ultimate long-term (75-year horizon) annual percentage increase in the CPI, as published in the 2024 OASDI Trustee Report.

Mortality

Pub-2010 Public Retirement Plans Mortality Tables (with separate tables for General employees, Public Safety employees and Teachers) and for non-annuitants and annuitants, projected to the valuation date with Scale MP-2021.

Mortality Improvement

Projected to date of decrement using Scale MP-2021 (generational).

We have selected this mortality assumption because it is based on the latest published public retirement plan mortality study released by the Society of Actuaries. The plan does not have sufficiently credible data on which to perform a mortality experience study.

Retirement

Town: Not applicable.

Police and Fire: Not applicable.

Retirement (cont.)

Non-Certified BOE:

Age	Years Of Service							
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	35 Years	40 Years
45					18.40%	17.60%	19.60%	19.60%
50					8.80%	17.60%	19.60%	19.60%
55	6.30%	6.30%	4.40%	9.90%	8.80%	12.80%	19.60%	19.60%
60	9.70%	9.70%	8.90%	10.40%	16.30%	11.40%	24.50%	24.50%
65	17.70%	17.70%	19.00%	25.60%	30.60%	26.10%	24.50%	24.50%
70	13.20%	13.20%	13.20%	15.80%	15.80%	17.60%	24.50%	24.50%
75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Prior:

Age	Rate
45	13.00%
50	13.00%
55	7.50%
60	9.50%
65	18.00%
70	18.00%
75	100.00%

The actuarial assumption in regards to rates of retirement shown above are based on the rates used by the state of Connecticut Municipal Employee Retirement System actuaries.

Certified BOE: Per table below (from Connecticut State TRS 2020 Pension Valuation):

Age	Eligible for Normal (Unreduced) Retirement (Age 60 and 20 Yrs. Serv. Or 35 Yrs. Serv.) Less than 35 years of Serv.		Eligible for Normal (Unreduced) Retirement (Age 60 and 20 Yrs. Serv. Or 35 Yrs. Serv.) 35 or more years of Serv.		Eligible for Early (Reduced) Retirement (Age 50 and 20 Yrs. Serv. Or 25 Yrs. Serv.)	
	Male	Female	Male	Female	Male	Female
50			35.0%	30.0%	1.50%	1.25%
51			35.0%	30.0%	1.50%	1.25%
52			35.0%	30.0%	1.50%	1.25%
53			35.0%	30.0%	1.50%	1.75%
54			35.0%	30.0%	2.00%	2.25%
55			35.0%	30.0%	3.00%	3.00%
56			35.0%	30.0%	4.00%	3.75%
57			35.0%	30.0%	5.00%	4.50%
58			35.0%	30.0%	6.50%	5.50%
59			35.0%	30.0%	8.00%	7.00%
60	20.0%	20.0%	30.0%	30.0%		
61	20.0%	20.0%	30.0%	30.0%		
62	22.5%	20.0%	30.0%	30.0%		
63	22.5%	20.0%	30.0%	30.0%		
64	25.0%	25.0%	30.0%	30.0%		
65	27.5%	32.5%	35.0%	37.5%		
66	27.5%	30.0%	35.0%	37.5%		
67-68	27.5%	30.0%	30.0%	32.5%		
69-74	27.5%	30.0%	30.0%	32.5%		
75-80	100.0%	100.0%	100.0%	100.0%		

Retirement (cont.)

The actuarial assumption in regards to rates of retirement shown above are based on the rates used by the Connecticut State Teachers' Retirement System actuaries.

Termination prior to retirement

Town: Not applicable.

Police and Fire: Not applicable.

Non-Certified BOE:

Age	Male Rate		Female Rate	
	0-4 Years	5-24 Years	0-4 Years	5-24 Years
20	14.00%	12.00%	30.00%	15.00%
25	14.00%	12.00%	20.00%	13.00%
30	11.00%	8.50%	15.00%	10.00%
35	8.50%	6.50%	12.50%	10.00%
40	7.50%	5.00%	10.00%	8.00%
45	6.75%	4.50%	9.00%	6.50%
50	6.75%	4.50%	8.50%	5.00%
55	6.50%	0.00%	8.00%	0.00%
60	7.00%	0.00%	9.00%	0.00%
65	9.50%	0.00%	9.00%	0.00%
70	13.00%	0.00%	9.00%	0.00%
75	0.00%	0.00%	0.00%	0.00%

Prior:

Age	Male Rate		Female Rate	
	0-4 Years	5-24 Years	0-4 Years	5-24 Years
20	16.00%	12.00%	24.00%	18.00%
25	16.00%	12.00%	19.00%	18.00%
30	12.50%	10.00%	16.00%	12.00%
35	10.00%	8.00%	12.00%	10.00%
40	9.50%	5.75%	10.00%	8.00%
45	8.50%	5.00%	9.00%	6.00%
50	8.50%	4.50%	9.00%	4.50%
55	6.50%	0.00%	8.00%	0.00%
60	6.50%	0.00%	8.00%	0.00%
65	6.00%	0.00%	8.00%	0.00%
70	6.00%	0.00%	8.00%	0.00%

The actuarial assumption in regards to rates of withdrawal shown above are based on the rates used by the State of Connecticut Municipal Employee Retirement System actuaries.

Termination prior to retirement (cont.)

Certified BOE: Rates based on gender and length of service for first Ten years and gender and age thereafter (Connecticut State TRS 2020 Pension Valuation):

Service	Male Rate	Female Rate
0-1	15.00%	12.00%
1-2	11.00	11.00
2-3	8.50	9.50
3-4	7.00	8.00
4-5	5.50	7.50
5-6	4.50	7.00
6-7	4.00	6.50
7-8	3.50	6.00
8-9	3.50	5.50
9-10	3.50	5.00
10 +	use age-related rates until eligible to retire	

Sample Age-Based Withdrawal Rates (until eligible to retire):

Age	Male Rate	Female Rate
25	1.80%	6.00%
30	1.80	6.00
35	1.80	4.25
40	1.80	2.50
45	1.80	2.00
50	2.25	2.40
55	4.00	3.90
59+	5.50	4.00

The actuarial assumption in regards to rates of withdrawal shown above are based on the rates used by the Connecticut State Teachers' Retirement System actuaries.

Utilization

Town/RIP eligible Police/RIP eligible Fire: Percentage of actives who continue with medical coverage: 100% if retirement during RIP period. Percentage of suspended retirees who may elect medical coverage at a future date: 20%.

Non-Certified BOE and Non-RIP eligible Fire: 50% of current active members will elect medical coverage at retirement.

Certified BOE: 100% of current active members will elect medical coverage at retirement.

Medicare Replacement

30%.

Medicare Eligibility

25% of current Certified BOE members hired prior to April 1, 1986 are assumed to continue coverage post-65, without Medicare coverage.

Spousal Coverage

50% of active members are assumed to be married and elect spousal benefits at retirement with wives 3 years younger than husbands.

Healthcare Cost Trend Rates

7.00% in 2024, reducing by 0.20% each year to an ultimate rate of 4.40% per year for 2037 and later.

(Prior: 6.50% in 2022, reducing by 0.20% each year to an ultimate rate of 4.40% per year for 2033 and later.)

Dental is assumed to increase by 4.00% per year.

The trend rates were changed to align with the inflation assumption change and better reflect actual experience.

Premiums/Allocation rates

Town/Non-RIP Police/Non-RIP Fire

Employee	Employee Plus Spouse
\$21,502.44	\$45,206.40

Town/RIP Police/RIP Fire

Employee	Employee Plus Spouse
\$23,500.08	\$49,406.16

BOE

Employee	Employee Plus Spouse
\$22,869.24	\$49,029.12

Post-65

Employee	Employee Plus Spouse
\$6,498.12	\$12,996.24

Premiums were used as the basis for per capita costs.

Dental Premiums

Non-RIP Town/Non-RIP Police/Non-RIP Fire

Employee	Employee Plus Spouse
\$440.76	\$1,146.36

RIP Town/RIP Police/ RIP Fire

Employee	Employee Plus Spouse
\$493.56	\$1,283.16

BOE

Employee	Employee Plus Spouse
\$431.04	\$1,118.28

Patient Protection and Affordable Care Act (PPACA)

For purposes of this valuation, extended coverage for adult children and 100% coverage of preventive care are assumed to be reflected in per capita costs.

For purposes of this valuation, elimination of lifetime maximum benefits and removal of the limits on essential healthcare are assumed to have no impact on plan liabilities.

Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

For Town Employees

Eligibility

Town - Current retirees with medical benefits (no future retirees). In addition, there is a group of current retirees who have currently suspended benefits. These individuals and their spouse may elect medical at a future date.

Police and Fire - RIP eligible employees may qualify for subsidized benefits if they retire within a specific date range. Fire employees who are either not RIP eligible or retire outside the eligibility period may continue medical after retirement.

Benefits

Medical and dental benefits pre-65.

Medical benefits post-65.

Dependent Coverage

Coverage available for spouses at retirement for the spouse's lifetime.

Retiree Contributions

Pre-65: RIP eligible employees who are eligible for subsidized benefits pay the contribution percentage at time of retirement times the premium rate at retirement. The premium rate at retirement becomes the Town's cap and the retiree pays any premium above the Town's cap. All other Fire employees can continue coverage by paying 100% of the cost.

Post 65: The Town's cap is 50% of the Medicare supplement rate at the time of retirement and the retiree pays any premium above the cap. Fire employees who do not retire under the RIP may continue coverage by paying 100% of the cost.

All others are not eligible for post-retirement medical benefits.

For existing retirees: Individual caps were provided by the Town. For pre-65 retirees, the post-65 cost is capped at 50% of the pre-65 cap. For two retirees, the Town pays 100% of the cost.

For Board of Education Employees

Eligibility for Medical and Dental

Non-Certified Administrators and Supervisors: 25 years of teaching/administrative experience (the last 10 years in Waterford) and be eligible to collect CT Teacher Retirement Benefits.

Teachers and Certified Administrators: Age 55 with 20 years of teaching/administrative experience (the last 10 years in Waterford) and be eligible to collect CT Teacher Retirement Benefits.

Paraprofessionals: Age 60 with 20 years of service.

Secretaries: 10 years of service.

Contract Workers: Age 55 with 5 years of service or 25 years of service.

Custodians: Age 55 with 5 years of service or 25 years of service.

Retiree/Spouse cost of medical coverage

Administrators: Administrators hired before 7/1/2004: Retirees and spouses pay 50% of the premium owed under age 65 and 100% on or after age 65. Administrators hired on or after 7/1/2004 but before July 1, 2014: Retirees and spouses pay 70% of the premium owed under age 65 and 100% on or after age 65. Administrators hired on or after 7/1/2014: Retirees and spouses pay 100% of the premium owed under age 65 and 100% on or after age 65.

Teachers: Teachers hired before 10/1/1993: Retirees and spouses pay 50% of the premium owed under age 65 and 100% on or after age 65. Teachers hired between October 1, 1993 and August 31, 2004: Retirees and spouses pay 60% of the premium under age 65 and 100% on or after age 65. Teachers hired between September 1, 2004 and June 30, 2012: Retirees and spouses pay 70% of the premium under age 65 and 100% on or after age 65. Teachers hired after July 1, 2012: Retirees and spouses pay 100% of the premium.

Non-Certified BOE: Retirees and spouses pay 100% of the premium owed for active employees while employee is under age 65. There are no benefits on or over 65. Food Service employees are not eligible for benefits.

Plan of Coverage: Assumed the same as Active's Plan. Assumed that retirees with current Medicare coverage are not participating in this plan.