



TOWN OF WILTON OPEB PLAN

ACTUARIAL VALUATION REPORT

JULY 1, 2020



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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 2022 and 2023	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	32

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Executive Summary

	July 1, 2020	July 1, 2018
Number of members		
Active members	745	771
Retired members and dependents	26	40
Total	771	811
Covered employee payroll	65,757,858	60,243,645
Average plan salary	88,266	78,137
Actuarial present value of future benefits	8,433,289	9,387,082
Actuarial accrued liability	6,208,431	6,601,042
Plan assets		
Market value of assets	8,673,596	7,475,677
Actuarial value of assets	8,601,058	7,195,568
Unfunded accrued liability	(2,392,627)	(594,526)
Funded ratio	138.5%	109.0%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2022	2020
ADEC	38,700	208,846
Underfunding "load"	0%	0%
Total Contribution with "load"	38,700	208,846
Fiscal year ending	2023	2021
ADEC	43,811	220,726
Underfunding "load"	0%	0%
Total Contribution with "load"	43,811	220,726



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,

$$\text{Ultimate cost} = \text{Benefits Paid} + \text{Expenses Incurred} - \text{Investment Return} - \text{Employee Contributions}$$

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, 2020 valuation produces the contributions for the fiscal years ending 2022 and 2023.

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

Various assumption changes were reflected in this valuation. See the Description of Actuarial Assumptions section for more details. These changes decreased the actuarial accrued liability by approximately 10.5%.

Cash Contribution for Fiscal Years Ending 2022 and 2023

The Town cost is:	2022 Fiscal Year	2023 Fiscal Year
Police	\$34,962	\$38,866
Fire	1,712	2,757
Town	1,339	1,428
BOE Certified	0	0
BOE Non-Certified	687	760
Total	\$38,700	\$43,811

Liability Experience During Period Under Review

Plan experience resulted in a liability gain of approximately \$0.3 million. The main driver of this gain was an increase in premiums that were lower than assumed. This gain includes the impact of changing to the State Partnership 2.0 plan for the Town groups.



Asset Experience During Period Under Review

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

	2019 Fiscal Year	2020 Fiscal Year
Market Value Basis	6.4%	4.5%
Actuarial Value Basis	11.4%	9.5%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility by recognizing 20% of the difference each year, thereby smoothing out fluctuations that are inherent in the Market Value.



Certification

This report presents the results of the July 1, 2020 Actuarial Valuation for Town of Wilton 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, 2022 and June 30, 2023. 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.

Steve A. Lemanski, FSA, FCA, MAAA
Enrolled Actuary 20-05506

May 6, 2021



Development of Unfunded Accrued Liability and Funded Ratio

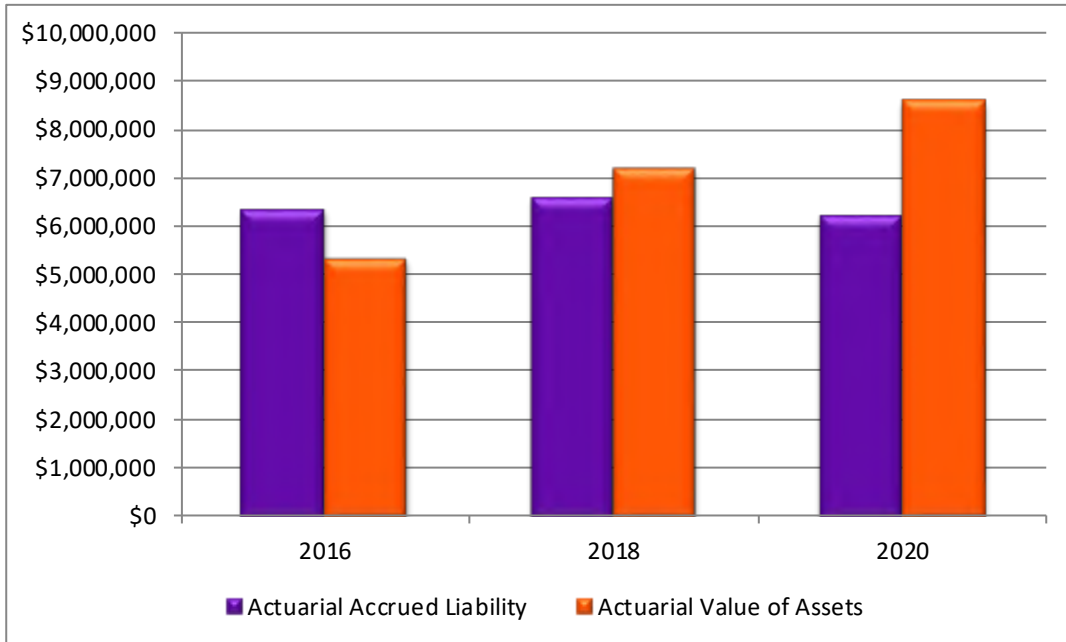
	July 1, 2020	July 1, 2018
Actuarial accrued liability for active members		
Members under age 65	\$2,384,771	\$2,536,794
Members over age 65	94,370	151,574
Dependents under age 65	1,159,623	1,159,986
Dependents over age 65	40,313	67,303
Total	3,679,077	3,915,657
Actuarial accrued liability for inactive members		
Members under age 65	355,952	577,434
Members over age 65	1,770,513	1,638,491
Dependents under age 65	117,271	136,842
Dependents over age 65	285,618	332,618
Total	2,529,354	2,685,385
Total actuarial accrued liability	6,208,431	6,601,042
Actuarial value of assets	8,601,058	7,195,568
Unfunded accrued liability	(2,392,627)	(594,526)
Funded ratio	138.5%	109.0%

	Discount Rate (5.75%)	1% Decrease (4.75%)	1% Increase (6.75%)
Actuarial accrued liability for active members	3,679,077	4,073,079	3,320,273
Actuarial accrued liability for inactive members	2,529,354	2,763,597	2,328,910
Total actuarial accrued liability	6,208,431	6,836,676	5,649,183

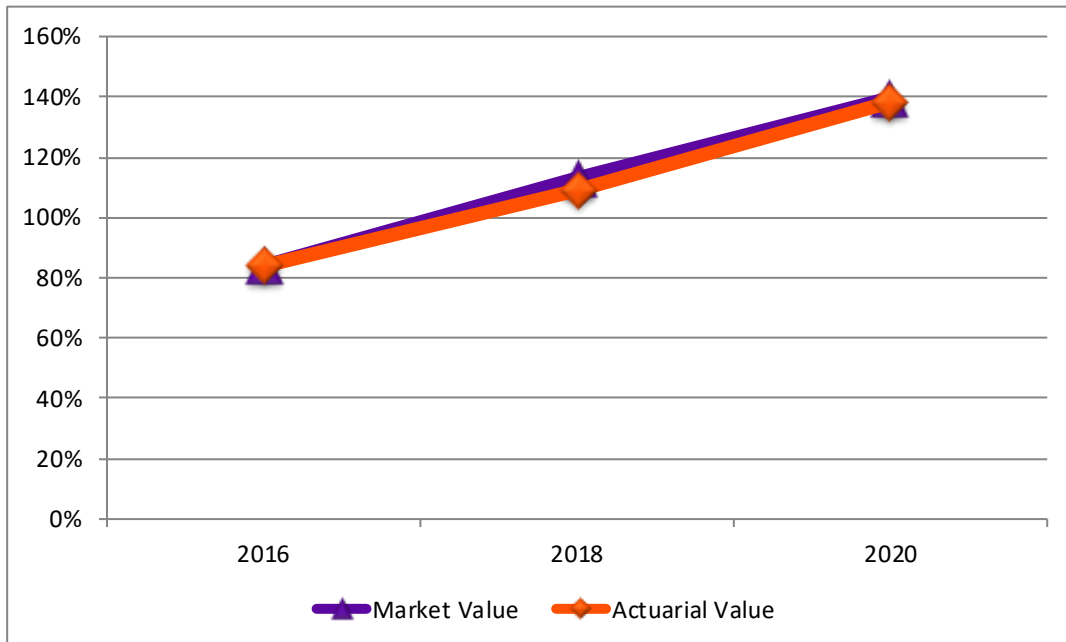
	Healthcare Cost Trend Rates (6.50% decreasing to 4.40%)	1% Decrease (5.50% decreasing to 3.40%)	1% Increase (7.50% decreasing to 5.40%)
Actuarial accrued liability for active members	3,679,077	3,219,193	4,222,450
Actuarial accrued liability for inactive members	2,529,354	2,338,056	2,748,758
Total actuarial accrued liability	6,208,431	5,557,249	6,971,208



Actuarial Accrued Liability vs. Actuarial Value of Assets



Funded Ratio





Development of Unfunded Accrued Liability and Funded Ratio by Group

	Police	Fire	Town	BOE Certified	BOE Non-Certified	Total
Actuarial accrued liability for active members						
Members under age 65	\$952,884	\$275,222	\$9,437	\$1,135,686	\$11,542	\$2,384,771
Members over age 65	0	0	0	84,014	10,356	94,370
Dependents under age 65	536,867	205,474	5,584	405,750	5,948	1,159,623
Dependents over age 65	0	0	0	40,313	0	40,313
Total	1,489,751	480,696	15,021	1,665,763	27,846	3,679,077
Actuarial accrued liability for inactive members						
Members under age 65	134,788	144,816	6,593	69,755	0	355,952
Members over age 65	0	0	0	1,768,049	2,464	1,770,513
Dependents under age 65	54,704	62,567	0	0	0	117,271
Dependents over age 65	0	0	0	285,618	0	285,618
Total	189,492	207,383	6,593	2,123,422	2,464	2,529,354
Total actuarial accrued liability	1,679,243	688,079	21,614	3,789,185	30,310	6,208,431
Actuarial value of assets	2,326,396	953,254	29,943	5,249,474	41,991	8,601,058
Unfunded accrued liability	(647,153)	(265,175)	(8,329)	(1,460,289)	(11,681)	(2,392,627)
Funded ratio	138.5%	138.5%	138.5%	138.5%	138.5%	138.5%



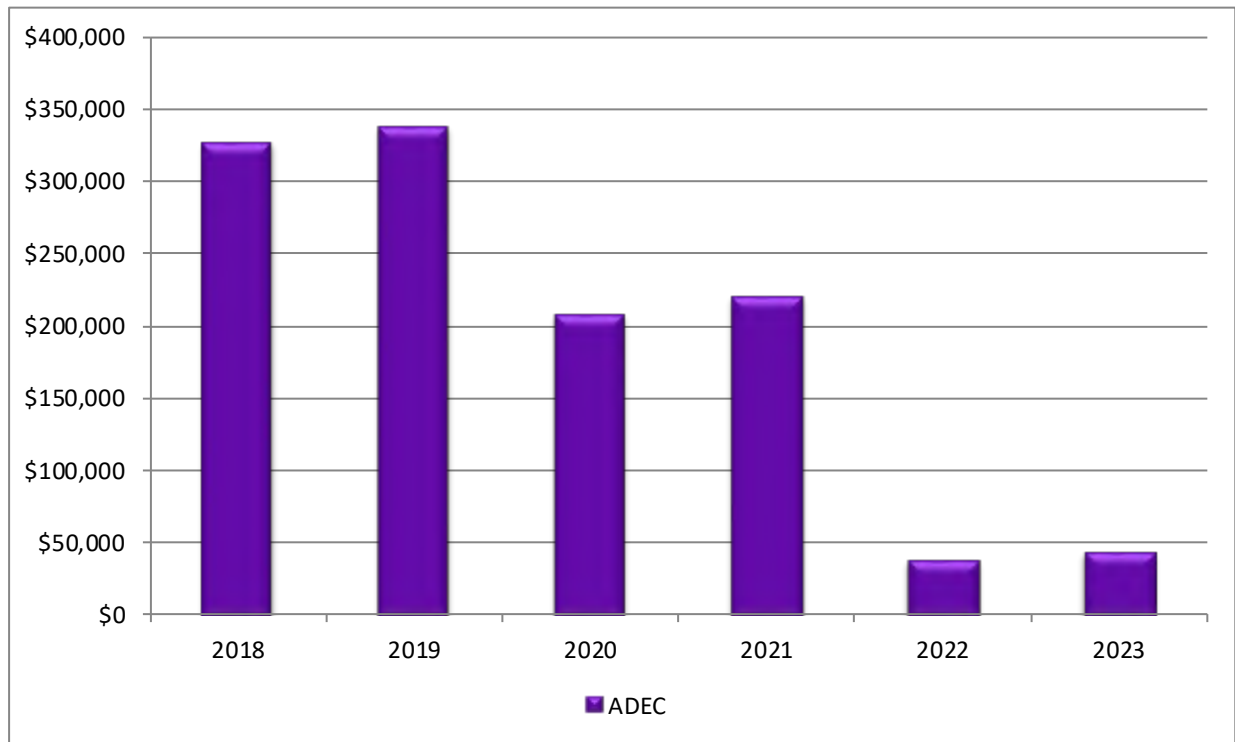
Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2020		July 1, 2018	
	Cost	Percent of payroll	Cost	Percent of payroll
Town's normal cost	\$198,233	0.3%	\$240,071	0.4%
Amortization of unfunded accrued liability*	(165,360)	-0.2%	(48,025)	-0.1%
Contribution before adjustment as of the valuation date	32,873	0.1%	192,046	0.3%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	65,716,165		59,895,221	
Fiscal year ending	2022		2020	
Adjustment for interest and inflation	5,827		16,800	
Actuarially determined employer contribution	38,700		208,846	
Underfunding "load"	0%		0%	
Total Contribution with "load"	38,700		208,846	
Fiscal year ending	2023		2021	
Adjustment for interest and inflation	5,111		11,880	
Actuarially determined employer contribution	43,811		220,726	
Underfunding "load"	0%		0%	
Total Contribution with "load"	43,811		220,726	

**The negative amortization installment cannot exceed the Town's normal cost*



Actuarially Determined Employer Contribution





Actuarially Determined Employer Contribution per Group

	Police	Fire	Town	BOE Certified	BOE Non-Certified	Total
Town's normal cost	\$82,638	\$22,112	\$1,892	\$90,047	\$1,544	\$198,233
Actuarial accrued liability	1,679,243	688,079	21,614	3,789,185	30,310	6,208,431
Actuarial value of assets	2,326,396	953,254	29,943	5,249,474	41,991	8,601,058
Unfunded accrued liability	(647,153)	(265,175)	(8,329)	(1,460,289)	(11,681)	(2,392,627)
Amortization of unfunded accrued liability*	(52,276)	(21,420)	(673)	(90,047)	(944)	(165,360)
Contribution before adjustment as of the valuation date	30,362	692	1,219	0	600	32,873
Fiscal year ending June 30, 2022						
Adjustment for interest and inflation	4,600	1,020	120	0	87	5,827
Actuarially determined employer contribution	34,962	1,712	1,339	0	687	38,700
Underfunding "load"	0%	0%	0%	0%	0%	0%
Total Contribution with "load"	34,962	1,712	1,339	0	687	38,700
Fiscal year ending June 30, 2023						
Adjustment for interest and inflation	3,904	1,045	89	0	73	5,111
Actuarially determined employer contribution	38,866	2,757	1,428	0	760	43,811
Underfunding "load"	0%	0%	0%	0%	0%	0%
Total Contribution with "load"	38,866	2,757	1,428	0	760	43,811

*The negative amortization installment cannot exceed the Town's normal cost



Development of Asset Values

Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets July 1, 2019		
Trust assets	\$8,365,720	\$8,121,181
Accrued contribution	0	0
Benefits payable	(193,942)	(193,942)
Administrative expenses payable	0	0
Net total	8,171,778	7,927,239
2. Contributions		
Town contributions during year	429,572	429,572
Employee contributions during year	0	0
TRB reimbursements during year	27,940	27,940
Change in accrued contribution	0	0
Total for plan year	457,512	457,512
3. Disbursements		
Benefit payments during year	551,202	551,202
Administrative expenses during year	12,075	12,075
Change in benefits payable	(235,673)	(235,673)
Change in administrative expenses payable	0	0
Total for plan year	327,604	327,604
4. Net investment return		
Interest and dividends	0	N/A
Change in accrued income	0	N/A
Realized and unrealized gain / (loss)	371,910	N/A
Expected return	N/A	460,793
Recognized gain / (loss)	N/A	83,118
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	371,910	543,911
5. Ending value of assets July 1, 2020		
Trust assets	8,631,865	8,559,327
Accrued contribution	0	0
Benefits payable	41,731	41,731
Administrative expenses payable	0	0
Net total: (1) + (2) - (3) + (4)	8,673,596	8,601,058
6. Approximate rate of return		
	4.5%	9.5%



Relationship of Actuarial Value to Market Value	
1. Market value 7/1/2020	\$8,673,596
2. Gain / (loss) not recognized in actuarial value 7/1/2020	<u>72,538</u>
3. Preliminary actuarial value 7/1/2020: (1) - (2)	8,601,058
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	99.2%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2020 after corridor minimum / maximum: (3) + (5)	8,601,058
7. Actuarial value as a percentage of market value: (6) ÷ (1)	99.2%

Development of Market Value Gain / Loss for 2019-2020 Plan Year	
1. Market value 7/1/2019	\$8,171,778
2. Town contributions	429,572
3. Employee contributions	0
4. TRB reimbursements	27,940
5. Benefit payments	315,529
6. Administrative expenses	12,075
7. Expected return at 5.75%	<u>460,793</u>
8. Expected value 7/1/2020: (1) + (2) + (3) + (4) - (5) - (6) + (7)	8,762,479
9. Market value 7/1/2020	<u>8,673,596</u>
10. Market value gain / (loss) for 2019-2020 plan year: (9) - (8)	(88,883)

Recognition of Gain / Loss in Actuarial Value					
Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2019	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2020: (b) + (c)	(e) Not recognized as of 7/1/2020: (a) - (d)
2015-2016	\$0	\$0	\$0	\$0	\$0
2016-2017	356,048	213,630	71,210	284,840	71,208
2017-2018	83,101	33,240	16,620	49,860	33,241
2018-2019	65,325	13,065	13,065	26,130	39,195
2019-2020	(88,883)	0	<u>(17,777)</u>	(17,777)	<u>(71,106)</u>
Total			83,118		72,538



Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets July 1, 2018		
Trust assets	\$7,768,718	\$7,488,609
Accrued contribution	0	0
Benefits payable	(293,041)	(293,041)
Administrative expenses payable	0	0
Net total	7,475,677	7,195,568
2. Contributions		
Town contributions during year	337,749	337,749
Employee contributions during year	0	0
TRB reimbursements during year	33,880	33,880
Change in accrued contribution	0	0
Total for plan year	371,629	371,629
3. Disbursements		
Benefit payments during year	259,932	259,932
Administrative expenses during year	10,600	10,600
Change in benefits payable	(99,099)	(99,099)
Change in administrative expenses payable	0	0
Total for plan year	171,433	171,433
4. Net investment return		
Interest and dividends	0	N/A
Change in accrued income	0	N/A
Realized and unrealized gain / (loss)	495,905	N/A
Expected return	N/A	430,580
Recognized gain / (loss)	N/A	100,895
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	495,905	531,475
5. Ending value of assets July 1, 2019		
Trust assets	8,365,720	8,121,181
Accrued contribution	0	0
Benefits payable	(193,942)	(193,942)
Administrative expenses payable	0	0
Net total: (1) + (2) - (3) + (4)	8,171,778	7,927,239
6. Approximate rate of return		
	6.4%	11.4%



Relationship of Actuarial Value to Market Value	
1. Market value 7/1/2019	\$8,171,778
2. Gain / (loss) not recognized in actuarial value 7/1/2019	<u>244,539</u>
3. Preliminary actuarial value 7/1/2019: (1) - (2)	7,927,239
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	97.0%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2019 after corridor minimum / maximum: (3) + (5)	7,927,239
7. Actuarial value as a percentage of market value: (6) ÷ (1)	97.0%

Development of Market Value Gain / Loss for 2018-2019 Plan Year	
1. Market value 7/1/2018	\$7,475,677
2. Town contributions	337,749
3. Employee contributions	0
4. TRB reimbursements	33,880
5. Benefit payments	160,833
6. Administrative expenses	10,600
7. Expected return at 5.75%	<u>430,580</u>
8. Expected value 7/1/2019: (1) + (2) + (3) + (4) - (5) - (6) + (7)	8,106,453
9. Market value 7/1/2019	<u>8,171,778</u>
10. Market value gain / (loss) for 2018-2019 plan year: (9) - (8)	65,325

Recognition of Gain / Loss in Actuarial Value					
Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2018	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2019: (b) + (c)	(e) Not recognized as of 7/1/2019: (a) - (d)
2014-2015	\$0	\$0	\$0	\$0	\$0
2015-2016	0	0	0	0	0
2016-2017	356,048	142,420	71,210	213,630	142,418
2017-2018	83,101	16,620	16,620	33,240	49,861
2018-2019	65,325	0	<u>13,065</u>	13,065	<u>52,260</u>
Total			100,895		244,539

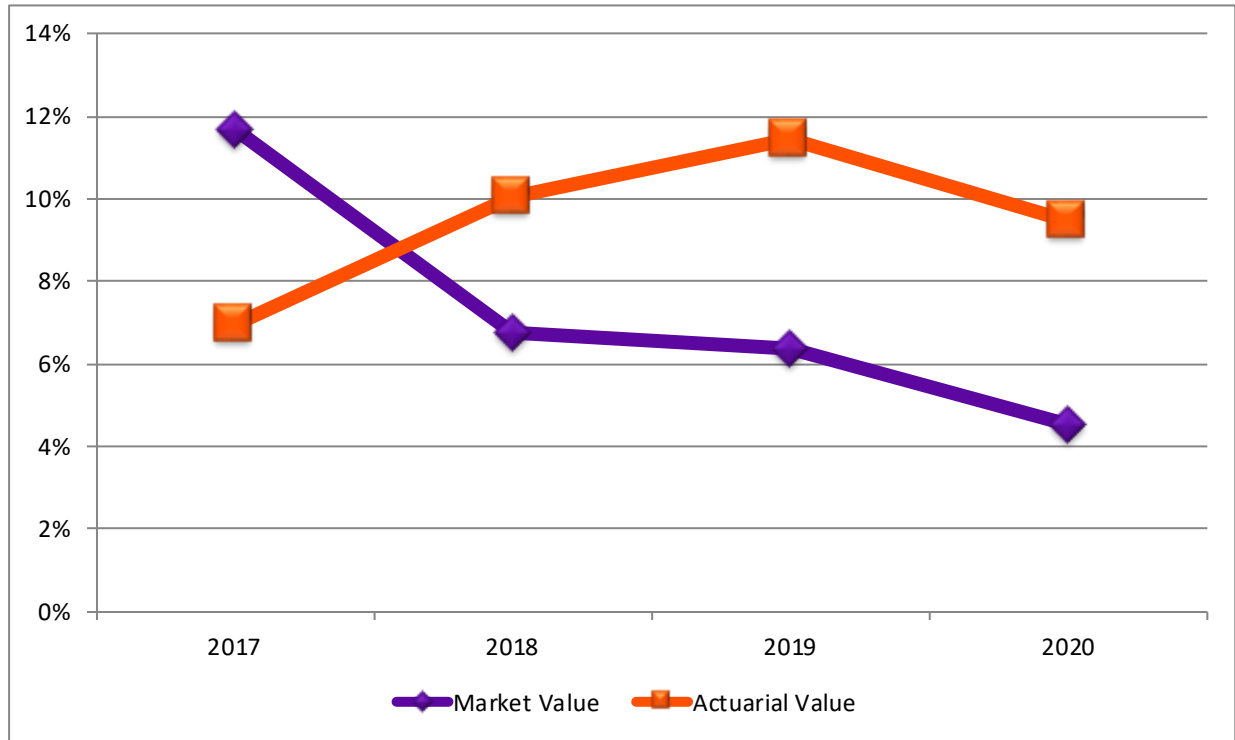


Rate of Return on Market Value of Assets				
Period Ending	Average Annual Effective Rate of Return			
June 30	1 Year	3 Years	5 Years	10 Years
2011	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2017	11.7%	N/A	N/A	N/A
2018	6.8%	N/A	N/A	N/A
2019	6.4%	8.3%	N/A	N/A
2020	4.5%	5.9%	N/A	N/A

Rate of Return on Actuarial Value of Assets				
Period Ending	Average Annual Effective Rate of Return			
June 30	1 Year	3 Years	5 Years	10 Years
2011	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A
2017	6.9%	N/A	N/A	N/A
2018	10.0%	N/A	N/A	N/A
2019	11.4%	9.5%	N/A	N/A
2020	9.5%	10.3%	N/A	N/A



Actual Rate of Return on Assets





Target Allocation and Expected Rate of Return July 1, 2020

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
Cash	5.00%	-0.25%	-0.01%
Core Fixed Income	30.00%	1.25%	0.38%
Global Fixed Income	5.00%	2.00%	0.10%
High Yield Fixed Income	5.00%	4.00%	0.20%
U.S. Large Cap Equity	24.00%	5.25%	1.26%
U.S. Small Cap Equity	6.00%	5.75%	0.35%
International Developed Equity	16.00%	5.75%	0.92%
Emerging Markets Equity	4.00%	7.75%	0.31%
REITs	5.00%	5.75%	0.29%
	100.00%		3.80%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.20%

**Long-Term Real Returns are provided by HHIA. 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 5.75% 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, 2020
2020 base	July 1, 2020	(193,273)	20	(2,392,627)
Amortization adjustment*		<u>27,913</u>		
Total		(165,360)		



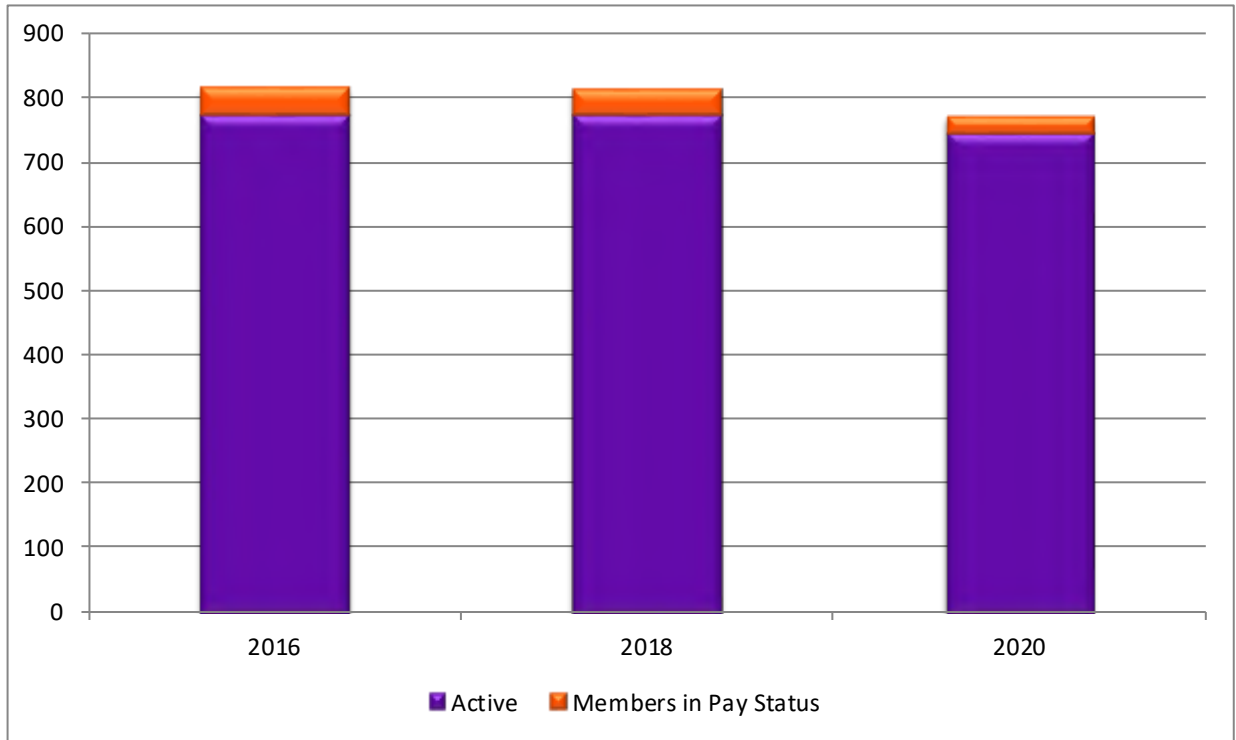
Member Data

The data reported by the Plan Sponsor for this valuation includes 745 active employees who met the Plan's minimum age and service requirements as of July 1, 2020.

	Police	Fire	Town	BOE Certified	BOE Non-Certified	Total
Total members July 1, 2020						
Active members	43	26	77	413	186	745
Retirees	4	3	1	13	1	22
Dependents of current retirees	1	1	0	2	0	4
Total	48	30	78	428	187	771
Average age July 1, 2020						
Active members	41.2	50.9	57.5	46.1	54.7	49.3
Retirees	61.4	60.0	63.6	72.5	64.7	68.0
Dependents of current retirees	58.8	58.5	N/A	68.2	N/A	63.5
Total members July 1, 2018						
Active members	42	28	77	412	212	771
Retirees	5	5	2	19	1	32
Dependents of current retirees	1	1	0	6	0	8
Total	48	34	79	437	213	811
Average age July 1, 2018						
Active members	41.4	50.1	57.3	46.4	54.0	49.4
Retirees	60.5	59.4	63.0	68.7	63.6	65.4
Dependents of current retirees	56.8	56.5	N/A	66.0	N/A	63.7



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, 2020.

Year	Active as of July 1, 2020	Retired and Terminated as of July 1, 2020	Total Benefit Payments
2020	\$13,211	\$233,621	\$246,832
2021	41,814	226,235	268,049
2022	70,432	229,855	300,287
2023	99,033	245,518	344,551
2024	137,405	209,975	347,380
2025	186,562	214,453	401,015
2026	204,887	189,906	394,793
2027	253,938	164,234	418,172
2028	301,820	166,209	468,029
2029	367,506	167,115	534,621
2030	382,786	166,888	549,674
2031	451,069	165,459	616,528
2032	492,842	162,961	655,803
2033	532,172	159,725	691,897
2034	610,509	155,794	766,303
2035	596,732	151,304	748,036
2036	627,953	146,238	774,191
2037	711,088	140,593	851,681
2038	725,978	134,387	860,365
2039	785,312	127,643	912,955



Expected Per Capita Claims (without Medicare Integration)

Town SPP

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$7,707	\$10,742
50	10,065	12,517
55	13,207	14,581
60	17,013	17,007
64	20,777	19,910

BOE Non-Certified

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$6,562	\$9,146
50	8,569	10,657
55	11,244	12,415
60	14,485	14,480
64	17,690	16,951

BOE Certified

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$6,562	\$9,146
50	8,569	10,657
55	11,244	12,415
60	14,485	14,480
65	18,443	17,551
70	22,187	20,528
75	25,460	23,043



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 Market Value and Expected Actuarial Value by recognizing 20% of the difference each year.

Actuarial Cost Method

Changes in Actuarial Cost Method: None.

Description of Current Actuarial Cost Method: 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). This amount is amortized over 20 years on an open basis.

Experience Gains and Losses: All experience gains and losses (the financial effect of the difference between the actual experience during the prior period and the result expected by the actuarial assumptions for that prior period) appear directly in the past service liability and are amortized at the same rate the plan is amortizing the remaining unfunded past service liability.



Description of Actuarial Assumptions

Changes in Actuarial Assumptions as of July 1, 2018

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.)

- Inflation
- BOE Certified Medical Utilization
- BOE Certified Retirement Table
- BOE Certified Withdrawal Table
- 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

5.75%.

Rate of compensation increase (including inflation)

3.30%. (Prior: 3.50%)

The assumption is based on historical national wage increases and input from the plan sponsor regarding future expectations.

Inflation

2.40%. (Prior: 2.60%)

This assumption is consistent with the Social Security Administration's current best estimate of the ultimate long-term (75-year horizon) annual percentage increase in CPI, as published in the 2020 OASDI Trustees Report.

Mortality

RP-2014 Adjusted to 2006 Total Dataset Mortality Table projected to valuation date with Scale MP-2018.

Mortality Improvement

Projected to date of decrement using Scale MP-2018 (generational).

We have selected this mortality assumption because it is based on one of the latest published retirement mortality studies released by the Society of Actuaries.



Retirement

Police

Age	Rate of Retirement	
	<30 Yrs. Svc.	>30 Yrs. Svc.
<45	2.5%	0.0%
45-49	15.0%	5.0%
50-54	10.0%	25.0%
55-59	5.0%	10.0%
60-64	10.0%	10.0%
65	100.0%	100.0%

Fire

Age	Rate of Retirement
<50	5.0%
50-54	10.0%
55-59	10.0%
60-61	20.0%
62-64	10.0%
65	100.0%

Town and BOE Non-Certified

Age	Rate of Retirement
<55	0.0%
55-64	6.0%
65	30.0%
66-74	15.0%
75-79	33.3%
80	100.0%

The actuarial assumption in regards to rates of retirement shown above are based on the results of an actuarial experience study for the period July 1, 2009 through June 30, 2014.



Retirement (cont.)

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 - 79	100.0%	100.0%	100.0%	100.0%		
80	100.0%	100.0%	100.0%	100.0%		



Retirement (cont.)

Prior: Per table below (from Connecticut State TRS 2016 Pension Valuation):

Age	Eligible for Normal (Unreduced) Retirement (Age 60 and 20 Yrs. Serv. or 35 yrs. Serv.)		Eligible for Early (Reduced) Retirement (Age 55 and 20 Yrs. Serv. or 25 yrs. Serv.)	
	Male	Female	Male	Female
50	27.5%	27.5%	1.00%	1.00
51	27.5	27.5	1.00	1.25
52	27.5	27.5	1.00	1.75
53	27.5	27.5	2.00	2.25
54	27.5	27.5	3.00	2.75
55	38.5	27.5	4.00	4.75
56	38.5	27.5	6.00	6.25
57	38.5	27.5	7.00	6.75
58	38.5	27.5	8.00	7.25
59	38.5	27.5	11.00	8.50
60	22.0	27.5		
61-62	25.3	27.5		
63-64	27.5	27.5		
65	36.3	32.5		
66-69	27.5	32.5		
70-79	100.0	32.5		
80	100.0	100.0		

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.

Withdrawal Rates

Police and Fire

Participants are assumed to terminate at the following rates:

Age	Male and Female
<30	5.00%
30-34	3.75%
35-39	2.50%
40-44	1.50%
45-49	0.75%
50+	0.00%

Town

Participants are assumed to terminate at the following rates:

Service	Male and Female
≤4	0.00%
5+	1.50%



Withdrawal Rates (cont.)

BOE Non-Certified

Participants are assumed to terminate at the following rates:

Service	Male and Female
≤1	13.00%
2	12.00%
3	8.00%
4	7.00%
5-9	5.00%
10+	2.50%

The actuarial assumption in regards to rates of withdrawal shown above are based on the results of an actuarial experience study for the period July 1, 2009 through June 30, 2014.

BOE Certified

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

Rates for first ten years of service

Service	Male	Female
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 rates of withdrawal

Age	Male	Female
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



Withdrawal Rates (cont.)

Prior: Rates based on gender and length of service for first ten years and gender and age thereafter (Connecticut State TRS 2016 Pension Valuation):

Service	Male Rate	Female Rate
0-1	14.00%	12.00%
1-2	11.00	10.50
2-3	8.00	8.75
3-4	6.50	7.50
4-5	4.50	6.75
5-6	3.50	6.00
6-7	3.00	5.25
7-8	2.75	4.75
8-9	2.50	4.25
9-10	2.50	4.00
10 +	use age-related rates until eligible to retire	

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

Age	Male Rate	Female Rate
25	1.50%	4.00%
30	1.50	4.00
35	1.50	3.50
40	1.50	2.30
45	1.59	1.50
50	2.04	2.00
55	3.44	2.50
59+	4.00	2.90

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.

Disability

None.

Medical Utilization

Police and Fire

80% of current active members will elect medical coverage at retirement.

Town and BOE Non-Certified

10% of current active members will elect medical coverage at retirement.

BOE Certified

60% of current active members will elect medical coverage at retirement.

Prior: 80% of current active members will elect medical coverage at retirement.



Medicare Eligibility

80% of current Certified BOE members hired prior to April 1, 1986 and 100% of All Others are assumed to be Medicare Eligible.

Spousal Benefits

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

Healthcare Cost Trend Rates

6.50% in 2020, reducing by 0.2% each year to an ultimate rate of 4.40% per year for 2031 and later.

Prior: 6.50% in 2018, reducing by 0.2% each year to an ultimate rate of 4.60% per year for 2028 and later.

Dental is assumed to increase by 3.40% per year. (Prior: 4.60%)

Health care trend rates reflect both the current and long-term outlook for increases in health care costs. The short term rates are based on recent industry surveys, plan experience and near-term expectations. The long term trend rate is based on our general inflation assumption plus an adjustment to reflect expectations for long-term medical inflation.

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

Medical Premiums (Monthly)

	Employee	Employee Plus Spouse
Town SSP	\$1,015.98	\$2,188.49
BOE	824.85	1,863.31
Town Dental	34.02	71.76

Allocation rates were used as the basis for per capita costs. The average rate was derived by reflecting participation among the various plans offered by the employer.

Expected Claim Costs

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.

For plans integrated with Medicare, the post Medicare eligible premium is assumed to be unaffected by age.

The per capita claims method was changed to reflect a more recent study and to better reflect anticipated experience.



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.

Plan identification

Single-employer OPEB plan

Police

Eligibility for Medical and Dental Coverage

Age 48 and 20 years of service.

Retiree/Spouse Cost of Coverage

The Town shall pay 50% of the lesser of: (a) The actual health insurance premium cost or payment to a self-insurance fund during such period of retiree health insurance coverage or (b) The health insurance premium cost or payment to a self-insurance fund at the time of retirement increased by 5% on July 1 of each year following the year of retirement (the 5% increase is based on a compounded basis).

This benefit will terminate at the lesser of 144 months from the date of retirement or at the time the retiree becomes eligible for Medicare. Retiree and spouse may continue coverage until reaching Medicare eligibility by paying the full cost of the premium.

Plan of Coverage

Effective July 1, 2020, the Town negotiated a change in insurance carrier to the State Partnership Plan. The Town reduces the cost-share paid by the retiree in the amount of 50% of the High Deductible plan annual deductible that the Town then pays for active employees in equal annual installments.

Prior to the carrier change, the retiree had the option of electing either the Century Preferred PPO or the High Deductible plan with HSA.

Life Insurance

None.

Fire

Eligibility for Medical and Dental Coverage

Hired prior to July 1, 2015: Age 50 and 25 years of service.

Hired on or after July 1, 2015: Age 52 and 25 years of service.

Retiree/Spouse Cost of Coverage

The Town shall pay 50% of the lesser of: (a) The actual health insurance premium cost or payment to a self-insurance fund during such period of retiree health insurance coverage or (b) The health insurance premium cost or payment to a self-insurance fund at the time of retirement increased by 5% on July 1 of each year following the year of retirement (the 5% increase is based on a compounded basis).

Hired prior to July 1, 2007: This benefit will terminate at the time the retiree becomes eligible for Medicare, spouse may continue coverage until they reach Medicare eligibility by paying the full cost of the premium.



Fire (cont.)

Hired on or after July 1, 2007: This benefit will terminate at the lesser of 144 months from the date of retirement or at the time the retiree becomes eligible for Medicare. Retiree and spouse may continue coverage until reaching Medicare eligibility by paying the full cost of the premium.

Plan of Coverage

Effective July 1, 2020, the Town negotiated a change in insurance carrier to the State Partnership Plan. The Town reduces the cost-share paid by the retiree in the amount of 50% of the High Deductible plan annual deductible that the Town then pays for active employees in equal annual installments.

Prior to the carrier change, the retiree had the option of electing either the Century Preferred PPO or the High Deductible plan with HSA.

Life Insurance

None.

Town

Eligibility for Medical and Dental Coverage

Defined Benefit Plan participants: Age 55 with 10 years of service or Rule of 80.

Defined Contribution Plan participants: Age 65

Retiree/Spouse Cost of Coverage

100% retiree-paid at all ages.

Plan of Coverage

Effective July 1, 2020, the Town negotiated a change in insurance carrier to the State Partnership Plan.

Post-65: Medicare Coordinated or Medicare Supplement Plans.

Life Insurance

None.

BOE Non-Certified

Eligibility for Medical and Dental Coverage

Participants in either the Defined Benefit Plan or Defined Contribution Plan may continue health coverage if retirement from the board occurs at age 62 or older.

Retiree/Spouse Cost of Coverage

100% retiree-paid, coverage is pre-65 only.

Secretaries eligible for retirement who were employed by the Board for at least 15 years shall receive from the Board \$900 annually for the purpose of purchasing medical insurance for a period not to exceed 5 years from the date of retirement. To be eligible for this benefit, the retired employee must provide annual satisfactory proof to the Board of his or her purchase of qualifying insurance benefits.



BOE Non-Certified (cont.)

Plan of Coverage

High Deductible plan w/HSA.

Life Insurance

None.

BOE Certified (Teachers and Administrators)

Eligibility for Medical and Dental Coverage

Age 50 with 25 years of service, age 55 with 20 years of service or age 60 with 10 years of service.

Retiree/Spouse Benefit

100% retiree-paid at all ages.

Teachers hired prior to July 1, 2017 who retire from the Board with at least 15 years of service shall receive from the Board \$1,300 annually for the purchase of health insurance from the time the retired employee attains age 60 or retires, whichever is later, for the lesser of 5 years or age 65. To be eligible for this benefit the retiree must provide annually satisfactory proof of their purchase of insurance benefits.

Administrators hired prior to July 1, 2013 who retire from the Board with at least 15 years of service shall receive from the Board \$5,000 annually for the purchase of health insurance, \$1,000 annually to reimburse the retiree for the purchase of individual life insurance, \$500 every two years to reimburse the retiree for a medical exam or physical not covered by insurance and \$250 every two years to reimburse the retiree for vision care expenses. These benefits are for lesser of any 5 year period from the time the employee retires or until they attain age 65. To be eligible for this benefit the retiree must provide annually satisfactory proof of their purchase of insurance benefits or expenses incurred.

Plan of Coverage

High Deductible plan w/HSA. If hired prior to April 1, 1986 and not eligible for Medicare, the retiree may continue to elect coverage in a pre-65 medical plan.

Life Insurance

None.