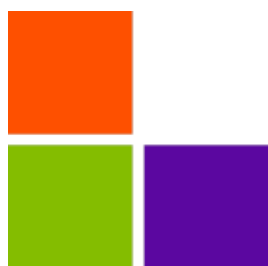




TOWN AND BOARD OF EDUCATION - BRANFORD OPEB

ACTUARIAL VALUATION REPORT - **REVISED**

JULY 1, 2020



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Executive Summary

	July 1, 2020	July 1, 2018
Number of members		
Active members	575	586
Retired members and dependents	<u>86</u>	<u>79</u>
Total	661	665
Covered employee payroll	44,639,368	43,058,854
Average plan salary	77,634	73,479
Actuarial present value of future benefits	33,153,155	36,815,731
Actuarial accrued liability	25,885,442	28,287,517
Plan assets		
Market value of assets	31,913,829	16,106,492
Actuarial value of assets	31,913,829	16,106,492
Unfunded accrued liability	(6,028,387)	12,181,025
Funded ratio	123.3%	56.9%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2022	2020
ADEC	298,455	1,970,411
Fiscal year ending	2023	2021
ADEC	326,473	2,018,432



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 11.7%.

Cash Contribution for Fiscal Years Ending 2022 and 2023

The Town cost is:	2022 Fiscal Year	2023 Fiscal Year
Police	\$156,589	\$175,979
Fire	0	1,594
Town	47,870	50,770
BOE Certified	84,651	88,375
BOE Non-Certified	9,345	9,755
Total	\$298,455	\$326,473

Liability Experience During Period Under Review

Plan experience resulted in a liability gain of approximately \$2.9 million. The main driver of this gain was that medical premiums increased less than assumed. Population changes and the elimination of the Cadillac Tax also contributed to the gain.



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	4.7%	-0.6%

The Market Value of assets is used to determine plan contributions.



Certification

This report presents the results of the July 1, 2020 Actuarial Valuation for Town and Board of Education - Branford OPEB (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

April 8, 2022



Development of Unfunded Accrued Liability and Funded Ratio

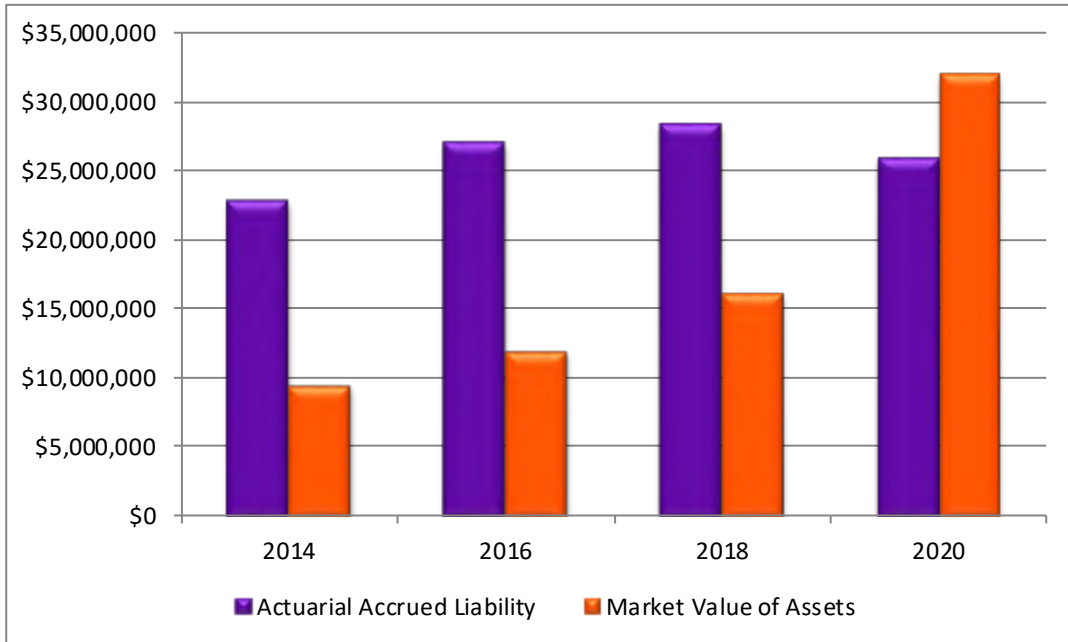
	July 1, 2020	July 1, 2018
Actuarial accrued liability for active members		
Members under age 65	\$4,409,292	\$6,418,942
Members over age 65	4,785,225	6,105,945
Dependents under age 65	1,668,257	2,970,713
Dependents over age 65	805,397	1,312,334
Total	11,668,171	16,807,934
Actuarial accrued liability for inactive members		
Members under age 65	2,958,658	2,341,135
Members over age 65	8,893,663	8,317,710
Dependents under age 65	1,203,671	33,984
Dependents over age 65	1,161,279	786,754
Total	14,217,271	11,479,583
Total actuarial accrued liability	25,885,442	28,287,517
Actuarial value of assets	31,913,829	16,106,492
Unfunded accrued liability	(6,028,387)	12,181,025
Funded ratio	123.3%	56.9%

	Discount Rate (6.50%)	1% Decrease (5.50%)	1% Increase (7.50%)
Actuarial accrued liability for active members	11,668,171	13,619,656	10,071,614
Actuarial accrued liability for inactive members	14,217,271	15,710,257	12,958,484
Total actuarial accrued liability	25,885,442	29,329,913	23,030,098

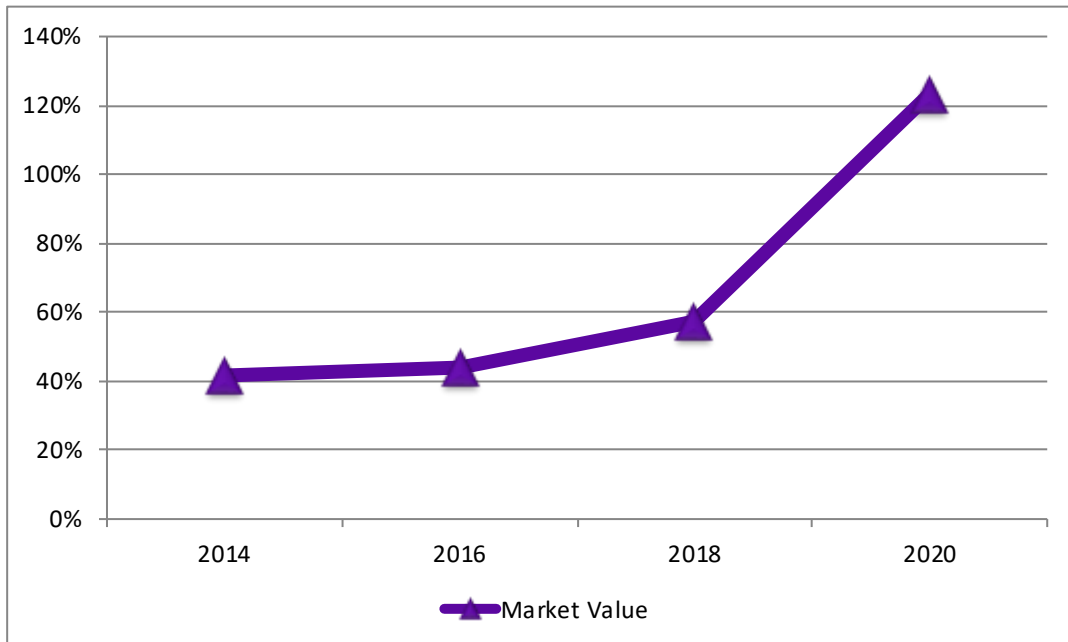
	Healthcare Cost Trend Rates (6.50% decreasing to 4.40%)	1% Decrease (5.50% decreasing to 3.40%)	1% Increase (7.50% decreasing to 5.40%)
Actuarial accrued liability for active members	11,668,171	9,718,963	14,146,693
Actuarial accrued liability for inactive members	14,217,271	12,996,120	15,640,083
Total actuarial accrued liability	25,885,442	22,715,083	29,786,776



Actuarial Accrued Liability vs. Market 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	\$2,456,985	\$366,673	\$412,006	\$1,118,117	\$55,511	\$4,409,292
Members over age 65	2,595,382	1,677,577	130,215	382,051	0	4,785,225
Dependents under age 65	804,369	245,329	235,271	350,102	33,186	1,668,257
Dependents over age 65	389,433	255,725	24,471	135,768	0	805,397
Total	6,246,169	2,545,304	801,963	1,986,038	88,697	11,668,171
Actuarial accrued liability for inactive members						
Members under age 65	1,691,187	1,036,383	47,515	183,573	0	2,958,658
Members over age 65	3,779,792	1,994,792	0	3,119,079	0	8,893,663
Dependents under age 65	1,004,810	108,150	0	90,711	0	1,203,671
Dependents over age 65	661,647	64,919	0	434,713	0	1,161,279
Total	7,137,436	3,204,244	47,515	3,828,076	0	14,217,271
Total actuarial accrued liability	13,383,605	5,749,548	849,478	5,814,114	88,697	25,885,442
Actuarial value of assets	17,016,614	7,914,332	1,080,072	5,814,114	88,697	31,913,829
Unfunded accrued liability	(3,633,009)	(2,164,784)	(230,594)	0	0	(6,028,387)
Funded ratio	127.1%	137.7%	127.1%	100.0%	100.0%	123.3%



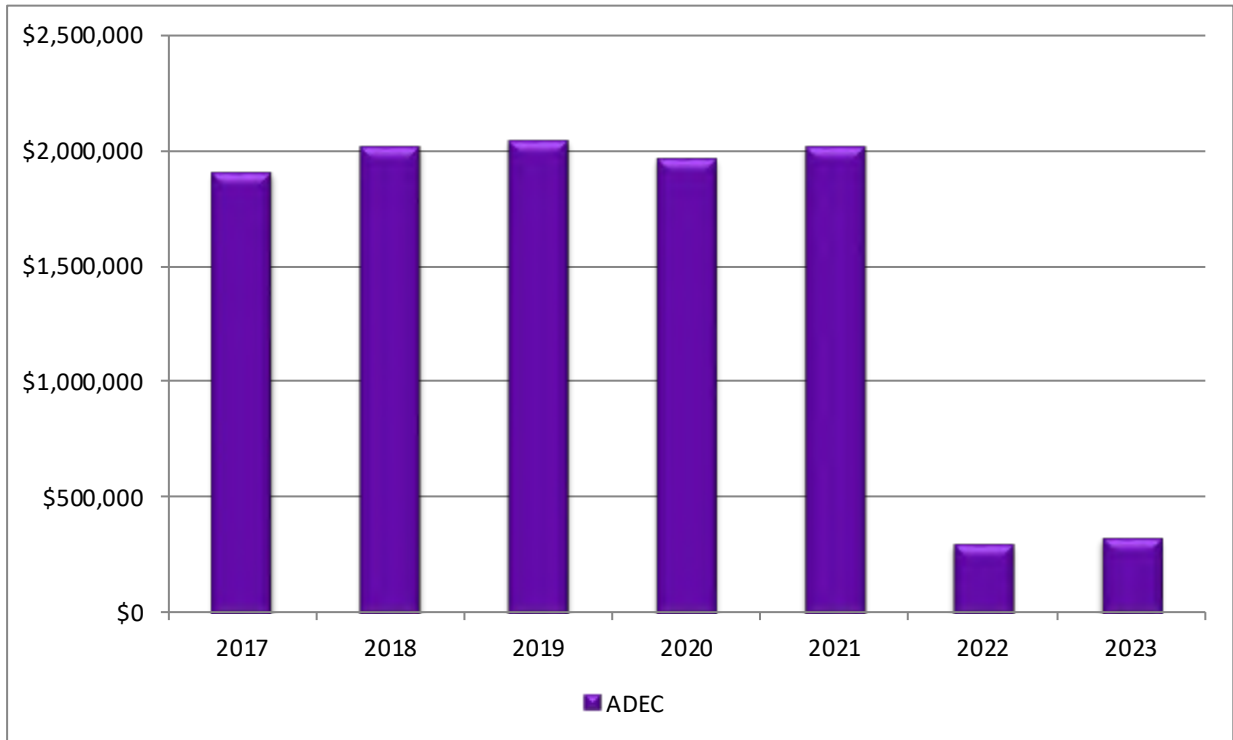
Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2020		July 1, 2018	
	Cost	Percent of payroll	Cost	Percent of payroll
Town's normal cost	\$709,329	1.6%	\$966,613	2.2%
Amortization of unfunded accrued liability*	(444,652)	-1.0%	897,312	2.1%
Contribution before adjustment as of the valuation date	264,677	0.6%	1,863,925	4.3%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	44,639,368		43,058,854	
Fiscal year ending	2022		2020	
Adjustment for interest and inflation	33,778		106,486	
Actuarially determined employer contribution	298,455		1,970,411	
Fiscal year ending	2023		2021	
Adjustment for interest and inflation	28,018		48,021	
Actuarially determined employer contribution	326,473		2,018,432	

**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	\$409,011	\$151,908	\$61,167	\$78,570	\$8,673	\$709,329
Actuarial accrued liability	13,383,605	5,749,548	849,478	5,814,114	88,697	25,885,442
Actuarial value of assets	17,016,614	7,914,332	1,080,072	5,814,114	88,697	31,913,829
Unfunded accrued liability	(3,633,009)	(2,164,784)	(230,594)	0	0	(6,028,387)
Amortization of unfunded accrued liability*	(275,272)	(151,908)	(17,472)	0	0	(444,652)
Contribution before adjustment as of the valuation date	133,739	0	43,695	78,570	8,673	264,677
Fiscal year ending June 30, 2022						
Adjustment for interest and inflation	22,850	0	4,175	6,081	672	33,778
Actuarially determined employer contribution	156,589	0	47,870	84,651	9,345	298,455
Fiscal year ending June 30, 2023						
Adjustment for interest and inflation	19,390	1,594	2,900	3,724	410	28,018
Actuarially determined employer contribution	175,979	1,594	50,770	88,375	9,755	326,473

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



Development of Asset Values

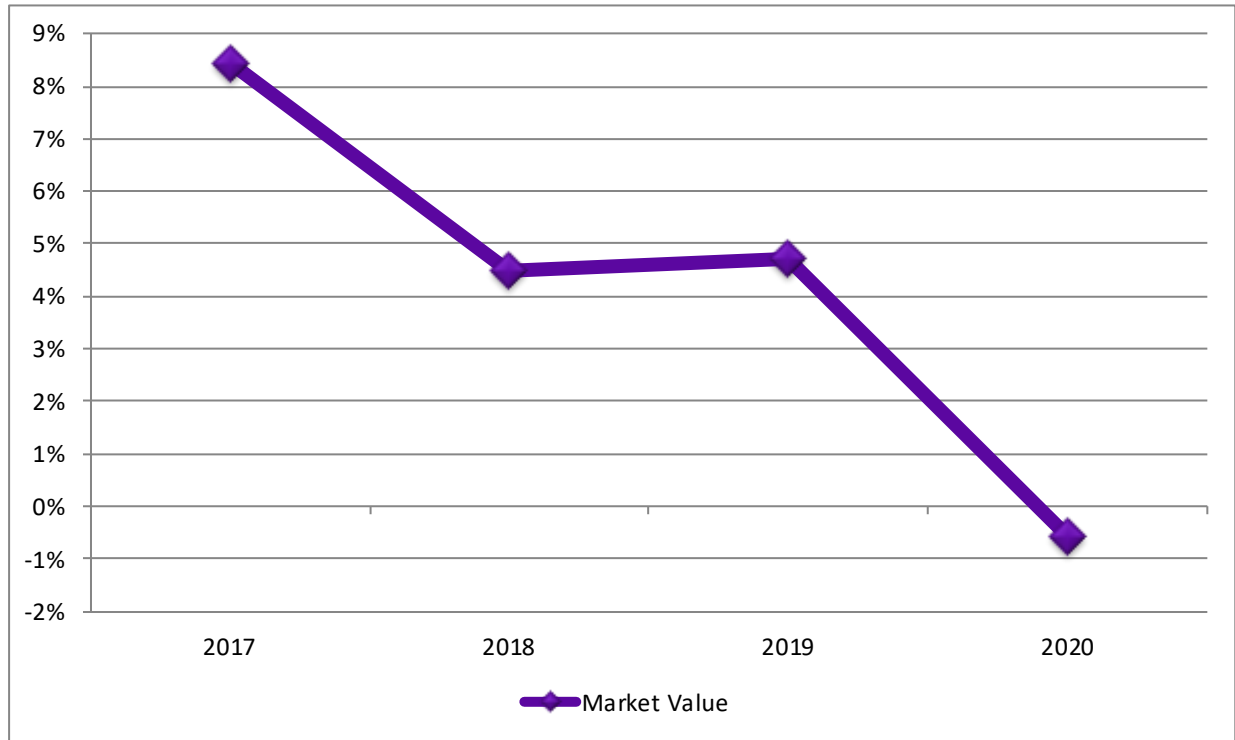
Summary of Fund Activity		
	July 1, 2018 - June 30, 2019	July 1, 2019 - June 30, 2020
1. Beginning market value of assets		
Trust assets	\$16,106,492	\$23,488,580
2. Contributions		
Town contributions during year	6,540,551	8,565,421
Employee contributions during year	0	0
Total for plan year	6,540,551	8,565,421
3. Disbursements		
Benefit payments during year	0	0
Administrative expenses during year	0	0
Total for plan year	0	0
4. Net investment return		
Interest and dividends	0	0
Realized and unrealized gain / (loss)	841,537	(140,172)
Investment-related expenses	0	0
Total for plan year	841,537	(140,172)
5. Ending market value of assets		
Trust assets: (1) + (2) - (3) + (4)	23,488,580	31,913,829
6. Approximate rate of return	4.7%	-0.6%



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	8.4%	N/A	N/A	N/A
2018	4.5%	N/A	N/A	N/A
2019	4.7%	5.9%	N/A	N/A
2020	-0.6%	2.9%	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
US Large Cap Equity	14.50%	5.25%	0.76%
US Mid/Small Cap Equity	11.00%	5.75%	0.63%
Developed International Equity	12.50%	5.75%	0.72%
Emerging Markets Equity	8.50%	7.75%	0.66%
Intermediate Corp Fixed Income	18.00%	1.75%	0.32%
Intermediate Govt Fixed Income	18.00%	0.75%	0.14%
High Yield Fixed Income	8.00%	4.00%	0.32%
Cash	1.00%	0.00%	0.00%
REITs	3.25%	5.75%	0.19%
Commodities (MLP's)	5.25%	3.75%	0.20%
	100.00%		3.94%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.34%

**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. The results support a rate between 6.25% and 6.75%. 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, 2020
2020 base	July 1, 2020	(456,769)	26	(6,028,387)
Amortization adjustment*		<u>12,117</u>		
Total		(444,652)		



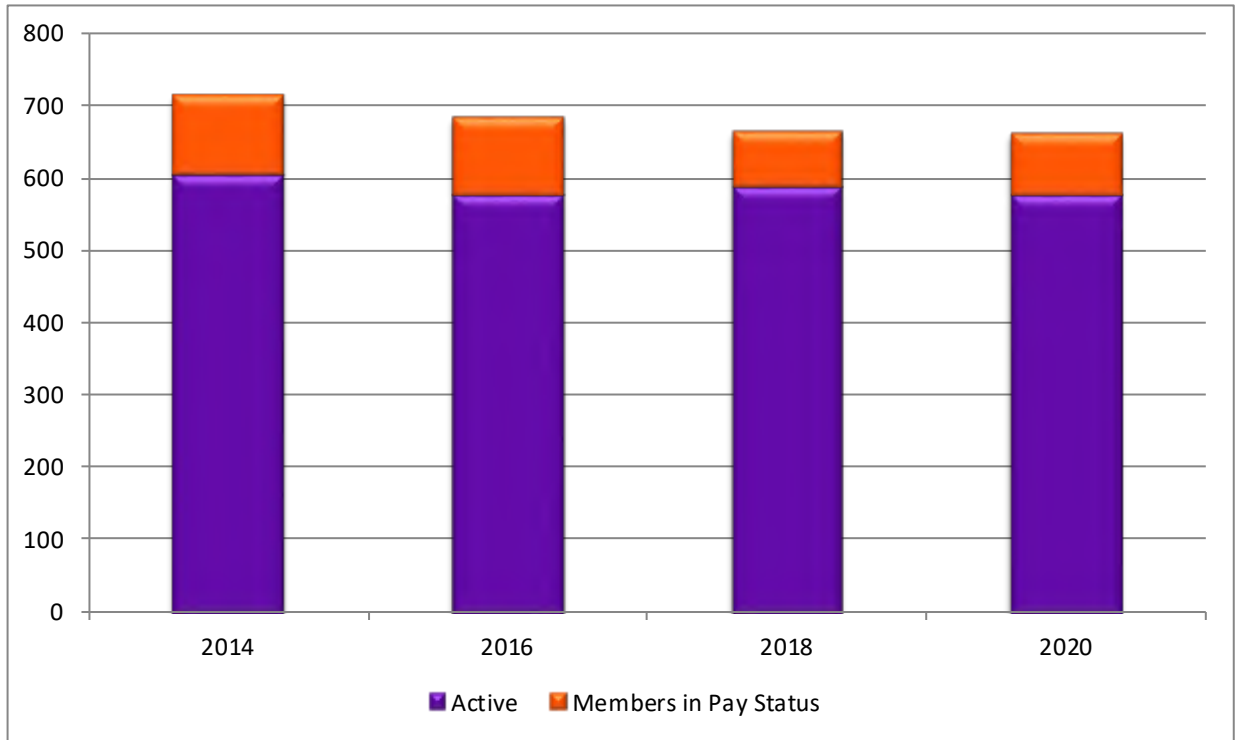
Member Data

The data reported by the Plan Sponsor for this valuation includes 575 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	51	40	134	312	38	575
Retirees	28	12	2	25	0	67
Dependents of current retirees	10	1	1	7	0	19
Total	89	53	137	344	38	661
Average age July 1, 2020						
Active members	42.3	39.7	51.3	47.0	52.6	47.4
Retirees	69.6	61.7	62.5	70.5	N/A	68.3
Dependents of current retirees	62.6	56.0	67.0	65.0	N/A	63.4
Total members July 1, 2018						
Active members	50	33	124	313	66	586
Retirees	28	10	1	24	4	67
Dependents of current retirees	7	0	0	4	1	12
Total	85	43	125	341	71	665
Average age July 1, 2018						
Active members	44.0	42.6	52.2	46.2	54.2	48.0
Retirees	69.5	60.2	59.0	68.9	62.0	67.3
Dependents of current retirees	67.9	N/A	N/A	69.0	63.0	67.8



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	\$41,145	\$1,074,532	\$1,115,677
2021	118,596	1,116,716	1,235,312
2022	202,091	1,136,170	1,338,261
2023	303,909	1,176,615	1,480,524
2024	381,019	1,135,043	1,516,062
2025	497,961	1,143,344	1,641,305
2026	616,079	1,099,794	1,715,873
2027	725,754	1,139,256	1,865,010
2028	850,917	1,189,824	2,040,741
2029	979,729	1,130,086	2,109,815
2030	1,123,100	1,024,998	2,148,098
2031	1,252,733	985,253	2,237,986
2032	1,339,724	959,527	2,299,251
2033	1,469,945	965,486	2,435,431
2034	1,505,821	969,013	2,474,834
2035	1,599,378	969,863	2,569,241
2036	1,598,511	967,737	2,566,248
2037	1,620,440	962,242	2,582,682
2038	1,746,029	915,041	2,661,070
2039	1,875,431	898,914	2,774,345



Expected Per Capita Claims (without Medicare Integration)

Town H S A

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$8,958	\$12,486
50	11,698	14,549
55	15,351	16,948
60	19,775	19,768
64	24,150	23,142

Town PPO

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$10,960	\$15,277
50	14,313	17,801
55	18,782	20,737
60	24,196	24,186
64	29,548	28,315

BOE H S A

Sample Age	Expected Claim (Male)	Expected Claim (Female)
45	\$7,106	\$9,905
50	9,280	11,541
55	12,177	13,444
60	15,687	15,681
65	19,973	19,007
70	24,027	22,231
75	27,572	24,955



Description of Actuarial Methods

Asset Valuation Method

Plan assets equal the Market Value of assets for the 2020 valuation. For future valuations, the Actuarial value of assets will be used in the development of plan contributions. The difference between the actual return on Market Value and the expected return on Market Value will be phased in over a 5-year period at 20% per year.

The allocation among location was changed this year to that the Board of Education Unfunded Accrued Liability was \$0.

Actuarial Cost Method

Basic Cost Method: Entry Age Normal Actuarial Cost Method (level percentage of salary).

Change in Actuarial Cost Method: None.

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).

Amortization Method

This amount is amortized over 30 years on a closed basis as of July 1, 2016. There are 26 years remaining as of July 1, 2020.



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.

- Mortality
- Withdrawal and retirement rates
- Inflation
- Compensation increase
- Healthcare cost trend rates
- Percentage of actives who elect medical at retirement
- Spouse election rate

Interest (net of investment-related expenses)

6.50%

Rate of compensation increase (including inflation)

Town, Non-Certified BOE, Police and Fire:

3.40%.

Prior: 3.60%.

The plan does not have statistically credible data on which to form a rate of compensation increase assumption. The assumption is based on historical national wage increases and input from the plan sponsor regarding future expectations.

BOE Certified:

According to the following service – based schedule (including inflation) (From Connecticut State TRS 2020 Pension Valuation):

Service	Rate of Increase
0	6.50%
1	6.25
2-9	6.00
10-11	5.50
12	5.25
13	5.00
14	4.75
15	4.50
16	4.00
17	3.75
18	3.50
19	3.25
20+	3.00



Rate of compensation increase (including inflation) (cont.)

Prior: According to the following service – based schedule (including inflation) (From Connecticut State TRS 2016 Pension Valuation):

Service	Rate of Increase
0-1	6.50%
2-9	6.25
10-11	5.50
12-14	5.00
15	4.75
16	4.50
17	4.25
18	4.00
19	3.75
20	3.50
21+	3.25

The actuarial assumption in regards to rates of compensation increase is based on the rates used by the Connecticut State Teachers' Retirement System actuaries.

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 2021 OASDI Trustees Report.

Mortality

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

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

Disabled Mortality (Police and Fire only)

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

Prior: 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-2021 (generational).

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

We have selected this mortality assumption because it is based on the latest published public retirement mortality study recently published by the Society of Actuaries.



Retirement

Town and Non-Certified BOE:

Age	Rate
45	13.00%
50	13.00%
55	7.50%
60	9.00%
65	18.00%
70	18.00%
75	100.00%

Prior:

Age	Rate of Retirement
45-53	15%
54	10
55	7
56	6
57-59	5
60-62	10
63-64	15
65	20
66-74	15
75+	100

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.

Police:

Service	Rate of Retirement
25	25%
26-28	30
29	40
30	60
31-39	50
40+	100

Fire:

Per table below:

Age	Rate
65	50%
66	25%
67	25%
68	25%
69	25%
70	100%

The actuarial assumption in regards to rates of retirement for Police and Fire are based on the rates used by the Town of Branford pension plans.



Retirement (cont.)

Certified BOE:

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.)

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

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

Town and Non-Certified BOE:

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%



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

Prior:

Age	Male Rate	Female Rate
20	18.0%	20.0%
30	12.0	15.0
40	7.5	10.0
50	5.0	5.0
60	5.0	5.0

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

Police:

Withdrawal and Vesting		
Age	0-4 Years	5-24 Years
20	6.50%	5.00%
25	6.50%	5.00%
30	5.75%	4.00%
35	3.50%	2.50%
40	3.50%	2.00%
45	3.50%	1.50%
50	3.50%	0.00%
55	3.50%	0.00%
60	3.50%	0.00%
65	0.00%	0.00%

Prior:

Annual rates of withdrawal per table below (per MERS Valuation):

Age	Rate of Withdrawal
20	7.00%
30	5.00
40	2.00
50	0.00

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



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

Fire:

Sample termination rates are as follows:

Table T-3

Age	Rate
20	6.6%
25	5.3%
30	4.8%
35	4.5%
40	3.8%
45	3.2%
50	1.5%

Prior:

Annual rates of withdrawal per table below (per MERS Valuation):

Age	Rate of Withdrawal
20	7.00%
30	5.00
40	2.00
50	0.00

Certified BOE:

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) (cont.)

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

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.



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

Service - Connected Disability (Police and Fire)

Age	Rate of Disability
20	0.10%
25	0.10
30	0.10
35	0.14
40	0.22
45	0.30
50	0.64
55	2.40
60	4.80
65	0.00

Prior:

Age	Rate of Disability
20	.11%
30	.15
40	.32
50	1.11
60	6.88

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

Additional Assumptions

Town, Police and Fire:

50% assumed married with wives assumed to be three years younger than their husbands.

Prior: 70% of males and 60% of females assumed married with wives assumed to be three years younger than their husbands.

Certified BOE and Non-Certified:

40% assumed married with wives assumed to be three years younger than their husbands.

Prior for Certified: 50% of males and 50% of females assumed married with wives assumed to be three years younger than their husbands.

Prior for Non-Certified BOE: 70% of males and 60% of females assumed married with wives assumed to be three years younger than their husbands.

The actuarial assumptions in regards to utilization shown above are based on standard assumptions modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.



Medical inflation

6.50% for 2020, decreasing 0.2% per year, to an ultimate rate of 4.40% for 2031 and later.

Prior: 7.00% for 2018, decreasing 0.5% per year, to an ultimate rate of 4.60% for 2023 and later.

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 of 2.60% plus 2.00% to reflect expectations for long-term medical inflation.

Dental inflation

3.40%.

Prior: 4.60%.

Expected per Capita claims (without Medicare Coordination)

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.

Medical Premiums

	Employee	Employee Plus Spouse
Town		
Century Preferred	\$17,134	\$34,268
H.S.A.	14,004	28,008
H.R.A.	14,312	28,628
BOE		
H.S.A.	12,321	24,643
H.R.A.	12,985	25,979
Town Over 65	9,944	19,888
Town Dental	396	793
BOE Dental	439	879



Percentage of Actives Eligible at Retirement who continue with Medical Coverage

100% for Town Finance Director.

50% for all other Town employees.

90% for Police.

90% for Fire with a date of hire prior to 1/26/2017.

80% for Fire with a date of hire on or after 1/26/2017.

65% for Certified BOE.

50% for Non-Certified BOE.

Prior: 100% for Police, Fire and Town Finance Director. 85% for all other groups.

The actuarial assumptions in regards to utilization shown above are based on standard assumptions modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.

Percentage of non-Medicare eligible Continuing after 65 (Certified BOE only)

20%.

The actuarial assumptions in regards to utilization shown above are based on standard assumptions modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.

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.

Town Employees

Eligibility for Retiree Medical Coverage

Age 55 with 5 years of service or 25 years of service with no age requirement.

Retiree/Spouse Cost of Medical Coverage

The retiree must pay 100% of the premium for medical coverage until age 65. No coverage after age 65.

Retiree/Spouse Dental Coverage

None.

Life Insurance Benefit

None.

Finance Director

Eligibility for Retiree Medical Coverage

Age 50 with 15 years of service or 25 years of service with no age requirement.

Retiree/Spouse Cost of Medical Coverage

The retiree pays 0% of the premium for their coverage and 50% of the premium for the spouse. Spouse coverage ends on the death of the retiree. If the retiree or spouse is offered comparable insurance coverage, they will not receive insurance through the Town. If there is a premium share, however, the Town will reimburse the retiree. When the retiree or spouse is eligible for Medicare, the Town shall provide a Plan F supplement to Medicare.

Retiree/Spouse Cost of Dental Coverage

Same as Medical.

Life Insurance Benefit

None.



Police (including Chief of Police)

Eligibility for Medical and Dental Coverage

25 years of service with no age requirement.

Retiree/Spouse Cost of Medical Coverage

The retiree pays 0% of the premium for their coverage and 50% of the premium for the spouse. Spouse coverage ends on the death of the retiree. If an employee retires prior to age 50, the Town will not contribute toward spouse coverage until the retiree attains age 50. If the retiree or spouse is offered comparable insurance coverage, they will not receive insurance through the Town. If there is a premium share, however, the Town will reimburse the retiree. When the retiree or spouse is eligible for Medicare, the Town shall provide a Plan F supplement to Medicare.

For Police hired after January 15, 2010, the spouse does not have access to medical benefits after retirement.

Retiree/Spouse Cost of Dental Coverage

Same as Medical.

Life Insurance Benefit

None.

Fire (including Fire Chief/Deputy Fire Marshal and Assistant Fire Chief)

Eligibility for Medical and Dental Coverage

Age 55 with either 10 years of continuous service or 15 years of aggregate service or 25 years of service with no age requirement.

Retiree/Spouse Cost of Medical Coverage

For Fire employees hired prior to January 25, 2017, the retiree pays 0% of the premium for their coverage and 50% of the premium for the spouse. Spouse coverage ends on the death of the retiree. If the retiree or spouse is offered comparable insurance coverage, they will not receive insurance through the Town. If there is a premium share, however, the Town will reimburse the retiree. For Fire employees hired on or after January 25, 2017, the retiree pays 25% of the premium for coverage prior to age 65. When the retiree or spouse is eligible for Medicare, the Town shall provide a Plan F supplement to Medicare.

For Fire employees hired after July 1, 2004, the spouse does not have access to medical benefits after retirement.

Retiree/Spouse Cost of Dental Coverage

Same as Medical.

Life Insurance Benefit

None.



Board of Education Employees (Other than Certified Staff and Administrators)*

Eligibility for Retiree Medical Coverage

Age 55 with 5 years of service or 25 years of service with no age requirement.

Retiree/Spouse Cost of Medical Coverage

The retiree must pay 100% of the premium for medical coverage until age 65. No coverage after age 65.

Retiree/Spouse Dental Coverage

None.

Life Insurance Benefit

None.

** BASS, Professional, Technical Staff and Nurses (those hired after October 1, 2011) do not have access to medical insurance after retirement.*

Board of Education Certified Staff and Administrators

Eligibility for Medical, Dental and Life 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 Cost of Medical Coverage

The retiree must pay 100% of the premium for medical coverage for themselves or their spouse.

Retiree/Spouse Dental Coverage

None.

Life Insurance Benefit

None.