TOWN OF BRANFORD POLICE RETIREMENT FUND

ACTUARIAL VALUATION REPORT

JULY 1, 2021

hooker & holcombe

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Executive Summary

	July 1, 2021	July 1, 2019
Number of members		
Active employees	48	46
Terminated vested members	4	3
Vested in employee contributions only	2	1
Employees in DROP	3	7
Retired, disabled and beneficiaries	52	49
Total	109	106
Covered employee payroll	4,437,542	4,260,576
Average plan salary	92,449	92,621
Actuarial present value of future benefits	45,711,251	42,386,030
Actuarial accrued liability	38,588,327	35,994,736
Plan assets		
Market value of assets	30,141,970	25,824,854
Actuarial value of assets	28,108,243	26,754,408
Unfunded accrued liability	10,480,084	9,240,328
Funded ratio	72.8%	74.3%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2023	2021
ADEC	1,424,960	1,178,950
Fiscal year ending	2024	2022
ADEC	1,434,980	1,187,630

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 a pension plan is based primarily on the level of benefits promised by the plan. The pension 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, 2021 valuation produces the contributions for the fiscal years ending 2023 and 2024.

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

The inflation and salary increase assumptions were reduced by 0.1%; this decreased the accrued liability by about 0.1%. The mortality assumption was updated to the Pub-2010 Public Retirement Plans Mortality Tables, which increased the accrued liability by about 5.0%. The mortality improvement scale assumption was updated to the latest annual scale (MP-2021) published by the Society of Actuaries, which decreased the accrued liability by about 0.1%.

Cash Contribution for Fiscal Years Ending 2023 and 2024

The Town cost is:	2023 Fiscal Year	2024 Fiscal Year
	$1,424,960	$1,434,980

Liability Experience During Period Under Review

The plan experienced a net actuarial gain on liabilities of approximately $412,000 since the prior valuation. This gain was largely driven by the combined effect of retirement and turnover patterns.

Asset Experience During Period Under Review

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

	2020 Fiscal Year	2021 Fiscal Year
Market Value Basis	-0.3%	23.4%
Actuarial Value Basis	3.2%	7.2%

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.

Assessment and Measurement of Risks

Financial Significance of Plan

It is important to understand the size of the pension plan compared to the size of the sponsor of that plan. Additional pension contributions may be required at inopportune times for the plan sponsor. In general, a plan sponsor with assets or revenue that are much larger than the liabilities in its pension plans will be better able to withstand increases in required pension contributions.

Plan Maturity Measurements

	July 1, 2021	July 1, 2019
Actuarial accrued liability for members currently in pay status as a percentage of the total actuarial accrued liability	57.2%	47.0%

• A lower percentage results in greater volatility as the investment return assumption changes.

• A higher percentage results in greater demand on cash due to a proportionately higher percentage of benefits being in pay status.

	July 1, 2021
Duration of benefit payments using an investment rate of return of 6.50%	14.0 years

• A higher duration will occur if the plan's percentage of members in pay status decreases. A plan with a higher duration will have a liability that is more sensitive to changes in the investment return assumption.

	July 1, 2021	July 1, 2019
Ratio of market value of assets to covered payroll	6.8	6.1

• A higher ratio is more typical of relatively mature plans with a larger percentage of inactive members and may cause more potential contribution volatility as pension fund assets fluctuate.

Risks to Assess

Overriding Minimum Contribution

	Fiscal Year Ending 2023
Actuarially determined employer contribution (ADEC)	1,424,960
Overriding minimum contribution (OMC)*	1,142,783
Surplus (deficit) - ADEC vs. OMC	282,177

• A deficit suggests that a plan's current funding policy contribution approach may result in little to no progress being made towards: (1) reducing the plan's unfunded liability; and (2) increasing the plan's funded ratio in the near-term.

** As defined in "Public Pension Plan Funding Policy" (Society of Actuaries, 2010).*

Estimated Impact of a 5% Reduction in Market Value of Assets

	Fiscal Year Ending 2023	Fiscal Year Ending 2024
Increase in actuarially determined employer contribution (ADEC)	28,980	28,980

• Plans would generally be subject to a larger amortization payment if the market value of assets were 5% smaller. As a result, the ADEC would generally be higher for up to 16 years.

Due to the asset smoothing method, the ADEC will additionally increase by the same amount in each of the next few years. Each of these additional contributions will continue for up to 16 years.

Estimated Impact of a 1 Year Increase in Life Expectancies

	Fiscal Year Ending 2023	Fiscal Year Ending 2024
Increase in actuarially determined employer contribution (ADEC)	68,380	68,630

• If members live longer than expected, it generally results in larger benefits and/or additional benefit payments made. As a result, the ADEC would generally be higher for up to 16 years.

Historical Results

Valuation Year Beginning	Investment Return Assumption	Annual Effective Rate of Return on Market Value of Assets	Market Value of Assets as a % of Actuarial Accrued Liability	Benefit Payments as a % of Market Value of Assets
2021	6.50%	N/A	78.1%	N/A
2020	N/A	23.4%	N/A	11.2%
2019	6.50%	-0.3%	71.7%	7.8%
2018	N/A	5.1%	N/A	7.3%
2017	6.50%	3.4%	66.9%	7.2%
2016	N/A	7.3%	N/A	7.7%
2015	7.00%	0.7%	75.1%	7.2%

Certification

This report presents the results of the July 1, 2021 Actuarial Valuation for Town of Branford Police Retirement Fund (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, 2023 and June 30, 2024. 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.

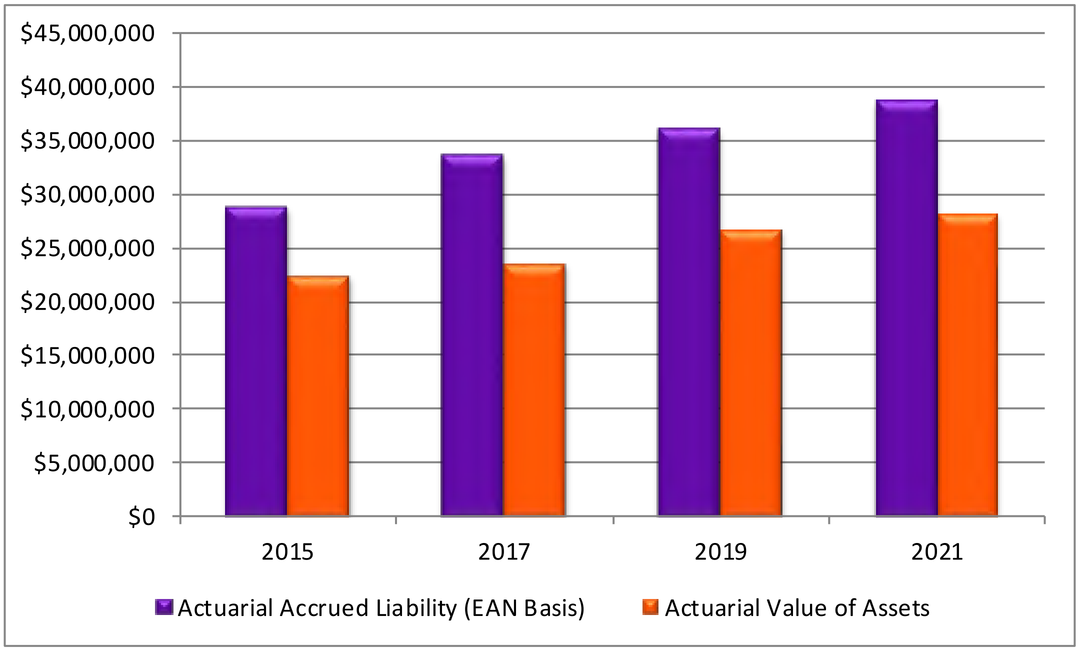
Steve A. Lemanski, FSA, FCA, MAAA
Enrolled Actuary 20-05506

January 26, 2022

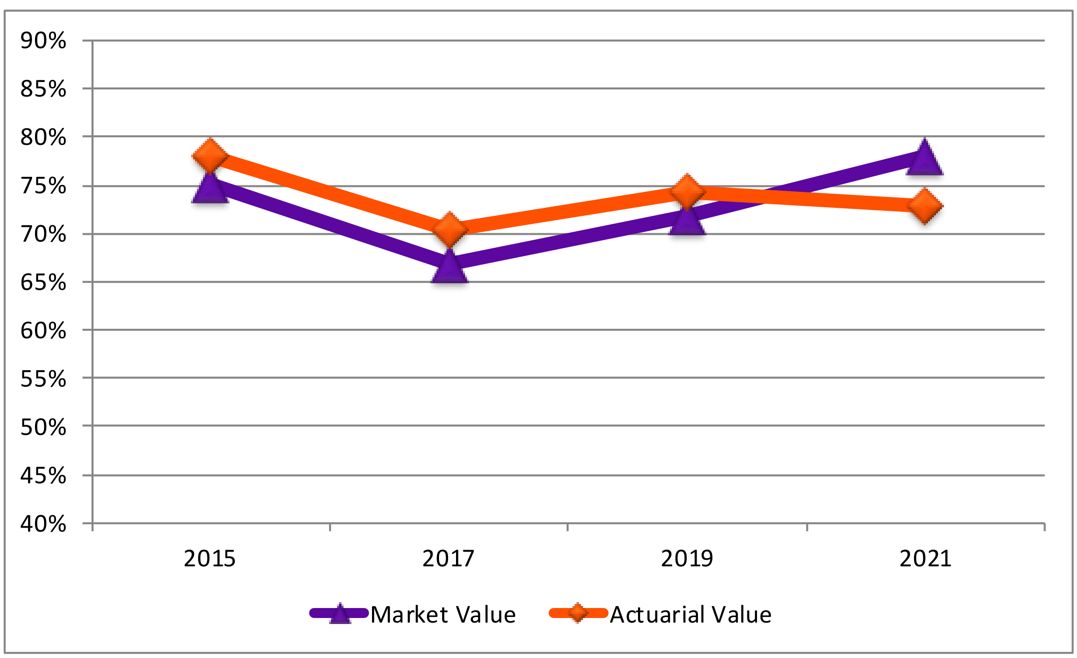
Development of Unfunded Accrued Liability and Funded Ratio

	July 1, 2021	July 1, 2019
Actuarial accrued liability for inactive members		
Retired, disabled and beneficiaries	$22,064,915	$16,935,489
Terminated vested members	1,260,241	562,062
Due refund of employee contributions only	72,557	1,050
Total	23,397,713	17,498,601
Actuarial accrued liability for employees in DROP	2,817,610	7,498,061
Actuarial accrued liability for active employees	12,373,004	10,998,074
Total actuarial accrued liability	38,588,327	35,994,736
Actuarial value of assets	28,108,243	26,754,408
Unfunded accrued liability	10,480,084	9,240,328
Funded ratio	72.8%	74.3%

Actuarial Accrued Liability vs. Actuarial Value of Assets



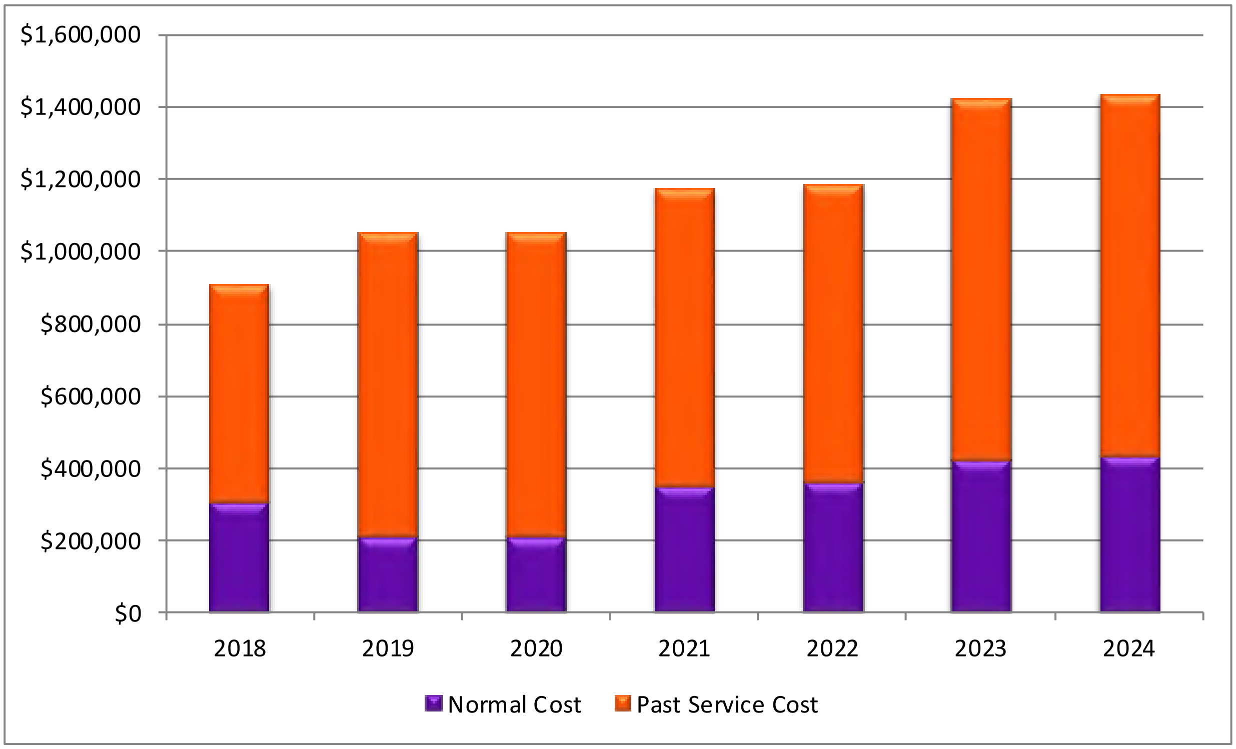
Funded Ratio



Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2021		July 1, 2019	
	Cost	Percent of payroll	Cost	Percent of payroll
Gross normal cost	$799,321	17.4%	$715,518	16.1%
Estimated employee contributions	(391,585)	-8.5%	(376,706)	-8.5%
Town's normal cost	407,736	8.9%	338,812	7.6%
Amortization of unfunded accrued liability	1,007,442	21.8%	831,670	18.8%
Contribution before adjustment as of the valuation date	1,415,178	30.7%	1,170,482	26.4%
Contribution rounded to nearest $10	1,415,180		1,170,480	
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	4,606,877		4,431,836	
Fiscal year ending	2023		2021	
Adjustment for interest and inflation	9,780		8,470	
Actuarially determined employer contribution	1,424,960		1,178,950	
Fiscal year ending	2024		2022	
Adjustment for interest and inflation	10,020		8,680	
Actuarially determined employer contribution	1,434,980		1,187,630	

Actuarially Determined Employer Contribution



Determination of Actuarial Gain/Loss

The Actuarial Gain/Loss is the difference between the expected unfunded accrued liability and the actual unfunded accrued liability, without regard to any changes in actuarial methods, actuarial assumptions or plan provisions. This can also be referred to an Experience Gain/Loss, since it reflects the difference between what was expected and what was actually experienced.

Actuarial Gain / Loss		
Expected unfunded accrued liability July 1, 2021		
Expected unfunded accrued liability July 1, 2020		
Unfunded accrued liability July 1, 2019	$9,240,328	
Gross normal cost July 1, 2019	715,518	
Town and employee contributions for 2019-2020	(1,494,582)	
Interest at 6.50% to July 1, 2020	599,586	
Expected unfunded accrued liability July 1, 2020	9,060,850	
Expected unfunded accrued liability July 1, 2021		
Expected unfunded accrued liability July 1, 2020	9,060,850	
Expected gross normal cost July 1, 2020	733,406	
Town and employee contributions for 2020-2021	(1,932,346)	
Interest at 6.50% to July 1, 2021	575,330	
Expected unfunded accrued liability July 1, 2021	8,437,240	
Actuarial (gain) / loss July 1, 2021	286,670	
Actual unfunded accrued liability July 1, 2021, prior to plan provision, assumption and method changes		8,723,910
Sources of (gain) / loss		
Assets	699,000	
Liabilities	(412,000)	
Total (gain) / loss (rounded to nearest $1,000)	287,000	
Assumption and method changes since prior valuation		1,756,174
Actual unfunded accrued liability July 1, 2021, after plan provision, assumption and method changes		10,480,084

Development of Asset Values

Summary of Fund Activity		
	Market Value	**Actuarial Value**
1. Beginning value of assets July 1, 2020		
Trust assets	$25,221,496	$27,083,137
2. Contributions		
Town contributions during year	1,560,019	1,560,019
Employee contributions during year	372,327	372,327
Total for plan year	1,932,346	1,932,346
3. Disbursements		
Benefit payments during year	2,814,444	2,814,444
Administrative expenses during year	0	0
Total for plan year	2,814,444	2,814,444
4. Net investment return		
Interest and dividends	0	N/A
Realized and unrealized gain / (loss)	5,938,727	N/A
Expected return	N/A	1,611,416
Recognized gain / (loss)	N/A	295,788
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(136,155)	N/A
Total for plan year	5,802,572	1,907,204
5. Ending value of assets July 1, 2021		
Trust assets: (1) + (2) - (3) + (4)	30,141,970	28,108,243
6. Approximate rate of return	23.4%	7.2%

Relationship of Actuarial Value to Market Value	
1. Market value 7/1/2021	$30,141,970
2. Gain / (loss) not recognized in actuarial value 7/1/2021	2,033,727
3. Preliminary actuarial value 7/1/2021: (1) - (2)	28,108,243
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	93.3%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2021 after corridor minimum / maximum: (3) + (5)	28,108,243
7. Actuarial value as a percentage of market value: (6) ÷ (1)	93.3%

Development of Market Value Gain / Loss for 2020-2021 Plan Year	
1. Market value 7/1/2020	$25,221,496
2. Town contributions	1,560,019
3. Employee contributions	372,327
4. Benefit payments	2,814,444
5. Administrative expenses	0
6. Expected return at 6.50%	1,611,416
7. Expected value 7/1/2021: (1) + (2) + (3) - (4) - (5) + (6)	25,950,814
8. Market value 7/1/2021	30,141,970
9. Market value gain / (loss) for 2020-2021 plan year: (8) - (7)	4,191,156

Recognition of Gain / Loss in Actuarial Value

Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2020	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2021: (b) + (c)	(e) Not recognized as of 7/1/2021: (a) - (d)
2016-2017	$62,425	$49,940	$12,485	$62,425	$0
2017-2018	(698,844)	(419,307)	(139,769)	(559,076)	(139,768)
2018-2019	(330,235)	(132,094)	(66,047)	(198,141)	(132,094)
2019-2020	(1,745,560)	(349,112)	(349,112)	(698,224)	(1,047,336)
2020-2021	4,191,156	0	838,231	838,231	3,352,925
Total			295,788		2,033,727

Summary of Fund Activity		
	Market Value	**Actuarial Value**
1. Beginning value of assets July 1, 2019		
Trust assets	$25,824,854	$26,754,408
2. Contributions		
Town contributions during year	1,095,000	1,095,000
Employee contributions during year	399,582	399,582
Total for plan year	1,494,582	1,494,582
3. Disbursements		
Benefit payments during year	2,014,458	2,014,458
Administrative expenses during year	0	0
Total for plan year	2,014,458	2,014,458
4. Net investment return		
Interest and dividends	0	N/A
Realized and unrealized gain / (loss)	10,736	N/A
Expected return	N/A	1,662,078
Recognized gain / (loss)	N/A	(813,473)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(94,218)	N/A
Total for plan year	(83,482)	848,605
5. Ending value of assets July 1, 2020		
Trust assets: (1) + (2) - (3) + (4)	25,221,496	27,083,137
6. Approximate rate of return	-0.3%	3.2%

Relationship of Actuarial Value to Market Value	
1. Market value 7/1/2020	$25,221,496
2. Gain / (loss) not recognized in actuarial value 7/1/2020	(1,861,641)
3. Preliminary actuarial value 7/1/2020: (1) - (2)	27,083,137
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	107.4%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2020 after corridor minimum / maximum: (3) + (5)	27,083,137
7. Actuarial value as a percentage of market value: (6) ÷ (1)	107.4%

Development of Market Value Gain / Loss for 2019-2020 Plan Year	
1. Market value 7/1/2019	$25,824,854
2. Town contributions	1,095,000
3. Employee contributions	399,582
4. Benefit payments	2,014,458
5. Administrative expenses	0
6. Expected return at 6.50%	1,662,078
7. Expected value 7/1/2020: (1) + (2) + (3) - (4) - (5) + (6)	26,967,056
8. Market value 7/1/2020	25,221,496
9. Market value gain / (loss) for 2019-2020 plan year: (8) - (7)	(1,745,560)

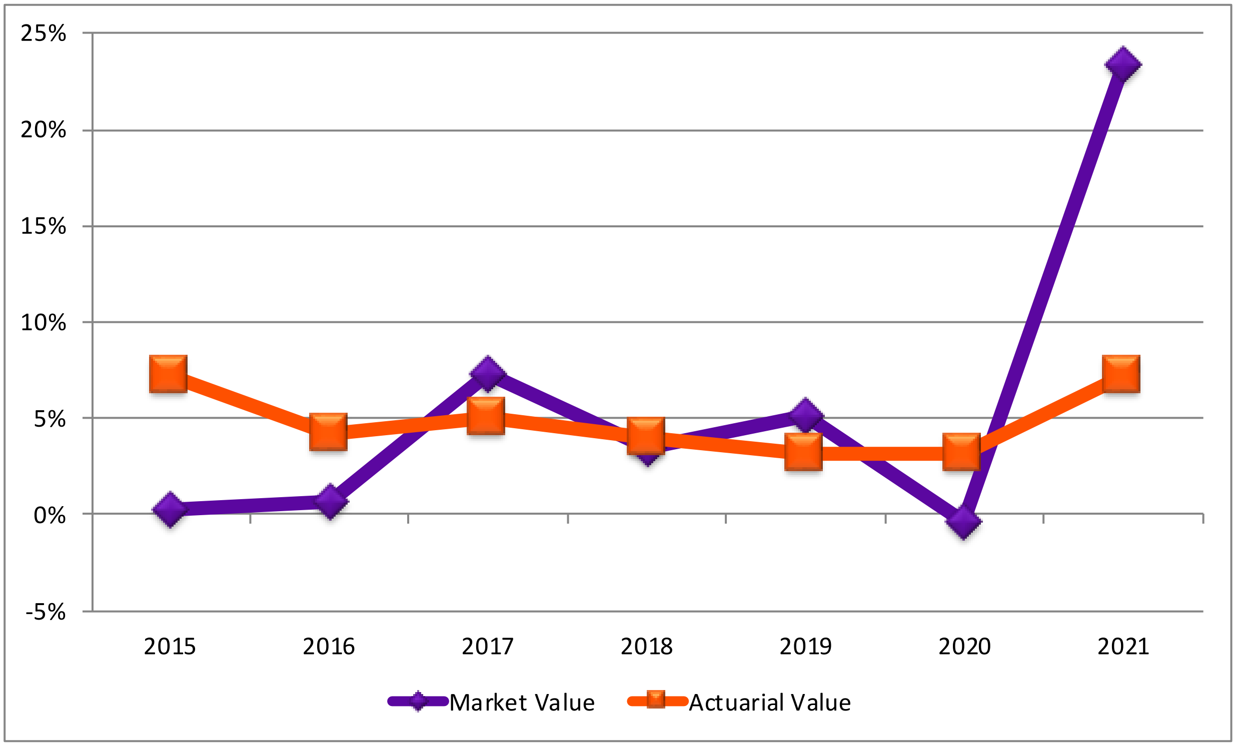
Recognition of Gain / Loss in Actuarial Value

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	($1,355,146)	($1,084,116)	($271,030)	($1,355,146)	$0
2016-2017	62,425	37,455	12,485	49,940	12,485
2017-2018	(698,844)	(279,538)	(139,769)	(419,307)	(279,537)
2018-2019	(330,235)	(66,047)	(66,047)	(132,094)	(198,141)
2019-2020	(1,745,560)	0	(349,112)	(349,112)	(1,396,448)
Total			(813,473)		(1,861,641)

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
2012	2.1%	9.7%	3.2%	1.0%
2013	7.7%	8.9%	5.2%	2.2%
2014	11.5%	7.0%	9.6%	4.2%
2015	0.2%	6.4%	7.6%	5.0%
2016	0.7%	4.0%	4.3%	4.9%
2017	7.3%	2.7%	5.4%	4.3%
2018	3.4%	3.8%	4.5%	4.9%
2019	5.1%	5.3%	3.3%	6.4%
2020	-0.3%	2.7%	3.2%	5.4%
2021	23.4%	8.9%	7.5%	5.9%

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
2012	4.0%	3.8%	3.8%	2.0%
2013	5.6%	5.0%	3.8%	3.1%
2014	8.9%	6.1%	5.1%	4.2%
2015	7.2%	7.2%	6.2%	4.8%
2016	4.2%	6.7%	6.0%	5.1%
2017	5.0%	5.5%	6.2%	5.0%
2018	4.0%	4.4%	5.8%	4.8%
2019	3.1%	4.0%	4.7%	4.9%
2020	3.2%	3.4%	3.9%	5.0%
2021	7.2%	4.5%	4.5%	5.2%

Actual Rate of Return on Assets



Target Allocation and Expected Rate of Return
July 1, 2021

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
Large Cap Domestic Equity	14.50%	4.50%	0.65%
Mid Cap Domestic Equity	5.50%	5.00%	0.28%
Small Cap Domestic Equity	5.50%	5.00%	0.28%
Developed International Equity	12.50%	5.25%	0.66%
Emerging Markets International Equity	8.50%	6.25%	0.53%
US Real Estate and MLP's	8.50%	4.50%	0.38%
US Investment Grade Bonds	35.50%	2.00%	0.71%
US High Yield Bonds	7.50%	3.25%	0.24%
Cash	2.00%	0.25%	0.01%
	100.00%		3.74%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.14%

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

The long-term expected rate of return on pension 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 pension 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 6.125% and 6.625%. 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, 2021
2021 base	July 1, 2021	1,007,442	16	10,480,084

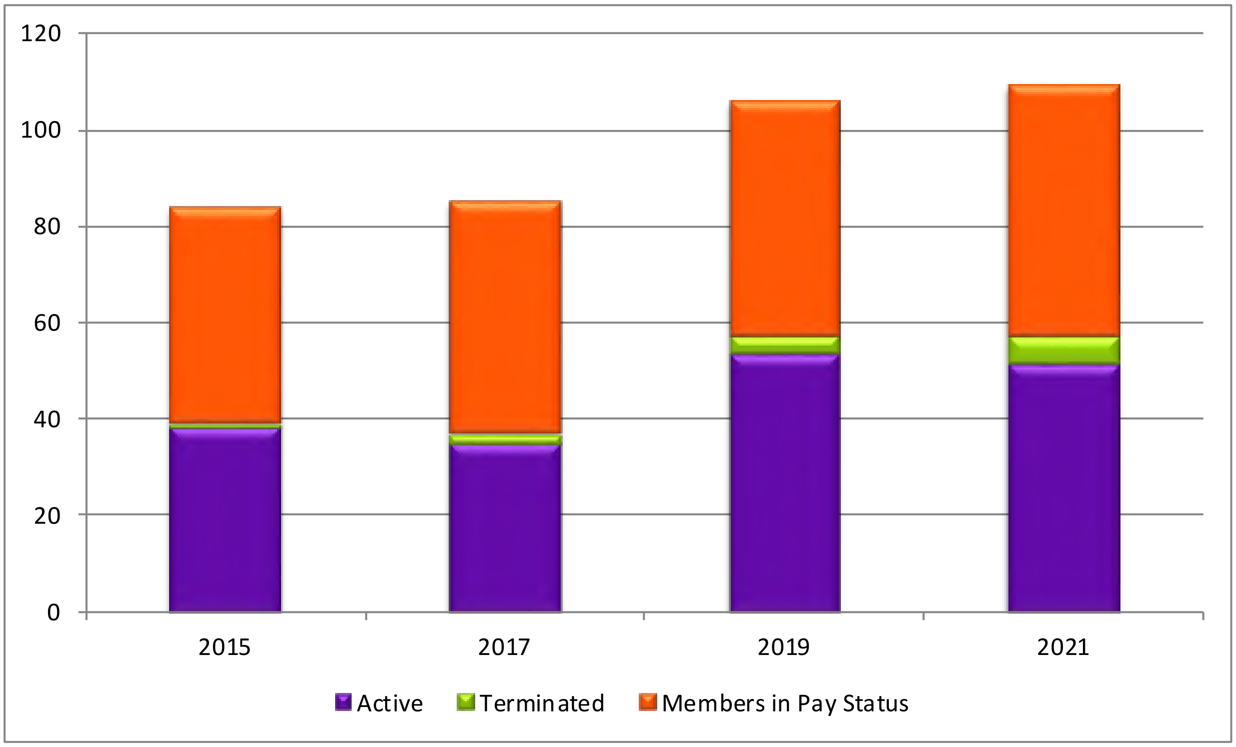
Member Data

The data reported by the Plan Sponsor for this valuation includes 48 active employees who met the Plan's minimum age and service requirements as of July 1, 2021.

Member Data						
	Active	Terminated vested	Due refund of contributions	Employees in DROP	Members in pay status	Total
Total members July 1, 2019	46	3	1	7	49	106
Adjustments	0	0	0	0	0	0
Retirements	-1	0	N/A	-5	+6	0
Disabilities	0	N/A	N/A	0	0	0
Entered DROP	-1	N/A	N/A	+1	N/A	0
Terminations						
Vested	-1	+1	N/A	N/A	N/A	0
Lump sum payments	-1	0	-1		N/A	-2
Due contributions only	-2	N/A	+2	N/A	N/A	0
Deaths						
With death benefit	0	0	0	0	-2	-2
Without death benefit	0	0	0	0	-3	-3
Transfers	0	0	0	N/A	N/A	0
Rehires	0	0	0	N/A	N/A	0
New beneficiaries	N/A	N/A	N/A	N/A	+2	+2
New entrants	+8	N/A	0	N/A	N/A	+8
Total members July 1, 2021	48	4	2	3	52*	109

** Includes 3 alternate payees receiving benefits*

Member Counts by Status



Member Data					
	Active	**Terminated vested**	**Due refund of contributions**	**Employees in DROP**	**Members in pay status**
Average age					
July 1, 2019	42.2	44.2	26.0	58.0	69.3
July 1, 2021	42.3	48.1	50.0	59.3	68.5
Average service					
July 1, 2019	11.2	N/A	N/A	N/A	N/A
July 1, 2021	10.9	N/A	N/A	N/A	N/A
Covered employee payroll					
July 1, 2019	$4,260,576	N/A	N/A	N/A	N/A
July 1, 2021	4,437,542	N/A	N/A	N/A	N/A
Total annual benefits					
July 1, 2019	N/A	$70,882	N/A	$275,195	$1,814,192
July 1, 2021	N/A	124,006	N/A	131,926	2,025,510

Active Member Count by Age and Years of Service

	Completed Years of Credited Service										
Attained age	**Under 1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 to 34**	**35 to 39**	**40 and over**	**All years**
Under 25			1								1
25 to 29	1	5									6
30 to 34	1	2	3								6
35 to 39		3	4	2							9
40 to 44				1	3	3					7
45 to 49			1		1	1					3
50 to 54	1	2			1	4	2				10
55 to 59				3	1	1					5
60 to 64											
65 to 69			1								1
70 & over											
All ages	**3**	**12**	**10**	**6**	**6**	**9**	**2**				**48**

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

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 16 years on a closed basis. Beginning with the July 1, 2023 actuarial valuation, future changes in the unfunded accrued liability will be amortized separately, assuming a new 15-year amortization each valuation.

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

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
- Inflation/Salary increases

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

Investment rate of return (net of investment-related and administrative expenses)

6.50%.

Salary increases (including inflation)

Current: According to the following service-based schedule:

Service	Rate of Increase
0	8.4%
1	7.4%
2	6.4%
3	5.4%
4	4.4%
5	3.4%
6-14	2.9%
15	2.4%

Prior: According to the following service-based schedule:

Service	Rate of Increase
0	8.5%
1	7.5%
2	6.5%
3	5.5%
4	4.5%
5	3.5%
6-14	3.0%
15	2.5%

The plan does not have statistically credible data on which to form this assumption. The assumption is based on input from the plan sponsor regarding future expectations and the comparable assumption used in the July 1, 2015 CT MERS Actuarial Valuation.

Inflation

2.4%. (Prior: 2.5%)

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.

The assumption was changed to better reflect expected experience.

Mortality

Current: Pub-2010 Public Retirement Plans Mortality Tables for Public Safety employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2021.

Prior: RP-2014 Adjusted to 2006 Blue Collar Mortality Table projected to the valuation date with Scale MP-2019.

Mortality Improvement

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

Prior: Projected to date of decrement using Scale MP-2019 (generational mortality).

We have selected this mortality assumption because it is based on a recently published retirement mortality study released by the Society of Actuaries. The mortality improvement assumption was updated to reflect the most recent annual update published by the Society of Actuaries.

Retirement age

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

Pre-Retirement Spouse Benefit and Disability Benefits

Costed explicitly.

Termination prior to retirement

Annual rates of withdrawal per table below (shown at sample ages) interpolated.

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

Service-connected disability

Annual rates of disability per table below (shown at sample ages) interpolated.

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

The plan does not have statistically credible data on which to form the termination, and disability assumptions. These assumptions are based on input from the plan sponsor regarding future expectations and the comparable assumptions used in the July 1, 2015 CT MERS Actuarial Valuation.

Expenses

None. Expenses are assumed to be paid directly by the Town.

Post-Retirement Death Benefit

Costed explicitly.

Benefits Attributed to Longevity Pay

Costed explicitly.

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 pension plan.

Eligibility

Immediately upon commencement of payment of employee contributions.

Effective May 24, 2019, the Police officers hired after August 10, 2011 transferred back into the DB plan from the DC plan.

Salary

Base salary plus longevity plus station overtime earned by a participant from the Town for a particular year.

Final Average Salary

The average of the three highest fiscal years of salary.

Normal Retirement Age

25 years as a member of the Police Department and contributing to the fund. Maximum retirement age is 65.

For the Police officers transferred from the DC Plan: earlier of (a) 25 years of service, or (b) Age 55 with 10 years of service.

Notwithstanding the above, for Police officers hired after July 1, 2005 and who make a one-time irrevocable election pursuant to Section 22 of the Fund: alternative Normal Retirement Age of Age 55 with 10 years.

Credited Service

Period of time served as a member of the Police Department and contributing to the fund.

For the Police officers transferred from the DC Plan: past service credit granted back to officer's date of hire.

Normal Retirement Benefit

2.5% of Final Average Salary times years of credited service to a maximum of 25 years, plus 2.5% times basic salary for each year of service beyond 25, maximum benefit 70% of basic salary at time of retirement. Maximum will be exceeded for service under age 55. Minimum annual benefit is $2,000.

For the Police officers transferred from the DC Plan: 2.0% x 3-Year Average Annual Earnings (AAE) multiplied by years of service; maximum benefit 70% AAE, minimum benefit $2,000 per year.

For the Police officers hired after July 1, 2005 and who make a one-time irrevocable election pursuant to Section 22 of the Fund: 2.0% x 3-Year Average Annual Earnings (AAE) multiplied by years of service; maximum benefit 70% AAE, minimum benefit $2,000 per year.

Early Retirement

Participant, or a participant's spouse upon the participant's death may elect early retirement. The participant must have attained age 50 and have at least 20 years of service. The benefit percent per year shall be reduced as follows:

Years of Service	% Per Year
25	2.50%
24	2.35%
23	2.20%
22	2.05%
21	1.90%
20	1.75%

Disability Retirement

During regular performance of duty and certified as disabled: Immediate annual pension of final average salary at time of disability times the greater of (a) 50% or (b) 2.50% multiplied by completed year of service as of the date of disability.

For the Police officers transferred from the DC Plan: Greater of (a) 40% AAE, or (b) 2.0% AAE multiplied by Years of Service.

For the Police officers hired after July 1, 2005 and who make a one-time irrevocable election pursuant to Section 22 of the Fund: Greater of (1) 40% AAE, or (b) 2.0% AAE multiplied by Years of Service.

Vesting

No vesting in employer contributions prior to 5 years' credited service; 100% after 5 years.

Employee Contributions

8.5% of salary.

Death Benefits

Surviving spouse of an active participant qualified to receive retirement benefits, shall, at the time of the participant's death receive, until death or remarriage, a pension equal to one-half of the pension for which the participant had qualified. If the participant is retired at time of death, the surviving spouse will receive one-half of the pension being paid to the participant. If not qualified to receive retirement benefits and death occurs while in active performance of duties, the greater of 50% of monthly salary, or accrued benefit. For officers hired after July 1, 1991, this death benefit is reduced by 10%.

Purchase of Military Service Credit

An active Participant may purchase service credit not to exceed 3 years, for a period of active duty military service in the armed forces of the United States (excluding reserve duty), provided that the Participant is not able to receive a retirement benefit for such service under any other retirement plan.

DROP Plan

Active members can elect a DROP (deferred retirement option plan) once they are eligible for retirement. The DROP period can be up to five years. During the DROP period, the participant remains in full time service with some limited benefits. No participant shall accrue additional pension benefits after the effective date of the DROP. Upon completion of the DROP period, the participant receives a lump sum payment equal to the retirement benefits during the DROP period.