



TOWN OF WEST HARTFORD PENSION PLAN

**Full Actuarial Valuation as of July 1, 2021
To Determine Funding for Fiscal Year 2022-23**

Prepared by

Rebecca A. Sielman, FSA
Consulting Actuary

Yelena Pelletier, ASA
Consulting Actuary

Table of Contents

	Page
CERTIFICATION	1
I EXECUTIVE SUMMARY	3
II PLAN ASSETS	
A. Summary of Fund Transactions	15
B. Development of Actuarial Value of Assets	16
III DEVELOPMENT OF CONTRIBUTION	
A. Past Service Cost	17
B. Actuarially Determined Contribution	18
C. Breakdown of Actuarially Determined Contribution by Town / BOE	19
D. Long Range Forecast	20
E. History of Funded Status	21
F. History of Town Contributions	22
G. Tread Water Amount	23
IV MEMBERSHIP DATA	
A. Reconciliation of Membership from Prior Valuation	24
B. Statistics of Active Membership	25
C. Distribution of Active Members	26
D. Statistics of Inactive Membership	27
E. Distribution of Inactive Members	28
V ANALYSIS OF RISK	
A. Introduction	29
B. Risk Identification and Assessment	30
C. Maturity Measures	34
APPENDICES	
A. Actuarial Funding Method	35
B. Actuarial Assumptions	36
C. Summary of Plan Provisions	39
D. Glossary	51

Certification

We have performed a full actuarial valuation of the Plan as of July 1, 2021 to determine funding for fiscal year 2022-23. This report presents the results of our valuation.

The ultimate cost of a pension plan is the total amount needed to provide benefits for plan members and beneficiaries and to pay the expenses of administering the plan. Pension costs are met by contributions and by investment return on plan assets. The principal purpose of this report is to calculate the Actuarially Determined Contribution based on the policies and assumptions adopted by the Town. In addition, this report provides:

- A valuation of plan assets and liabilities to review the year-to-year progress of funding.
- Review of plan experience for the previous year to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application.
- Assessment of the relative funded position of the plan, i.e., through a comparison of plan assets and projected plan liabilities.
- Comments on any other matters which may be of assistance in the funding and operation of the plan.

This report may not be used for purposes other than those listed above without Milliman's prior written consent. If this report is distributed to other parties, it must be copied in its entirety, including this certification section. Determinations for other purposes, such as for financial reporting in accordance with GASB standards, could be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the internal business use of the Town of West Hartford ("Town"). To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Town may provide a copy of Milliman's work, in its entirety, to the Town's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Town; and (b) the Town may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law. No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

In preparing this report, we relied on employee census data and financial information as of the valuation date, furnished by the Town. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have found them to be reasonably consistent and comparable with data used for other purposes. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete and our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Certification

Figures for periods prior to July 1, 2019 have been obtained from actuarial valuation reports prepared by Hooker & Holcombe and from the City's Comprehensive Annual Financial Reports.

The calculations reported herein have been made on a basis consistent with our understanding of the Town's funding policy. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. In addition to the models described previously, Milliman has developed certain models to develop the discount rate used in this analysis. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in compliance with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP). The models, including all input, calculations, and output may not be appropriate for any other purpose.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting recommendations of the American Academy of Actuaries and are based on actuarial assumptions and methods adopted by the Authority. We believe that the actuarial assumptions and methods used in this actuarial valuation are reasonable for valuing the benefits provided under the Plan.

This valuation is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Rebecca A. Sielman, FSA
Consulting Actuary



Yelena Pelletier, ASA
Consulting Actuary

Section I - Executive Summary

Changes Since the Prior Valuation

Pension Obligation Bond

The Town completed a Pension Obligation Bond sale in June 2021. We included the proceeds from the sale in the amount of \$322.9 million as a receivable contribution as of July 1, 2021. The proceeds are being gradually invested according to the Plan's investment policy over a period of six to eight quarters. As a part of the Pension Obligation Bond package, the Town diverted the Actuarially Determined Contribution for the 2021-22 fiscal year to establish a reserve fund that is designed to provide the Town with budgetary stability in the event of market volatility.

Changes in Actuarial Methods and Assumptions

We lowered the interest rate assumption from 6.99% to 6.25% to better reflect anticipated future asset returns.

In conjunction with the sale of the Pension Obligation Bonds, the Town adopted the following changes to the funding policy:

- The amortization period for the Unfunded Accrued Liability changed to a 25-year closed period starting on July 1, 2021. The amortization period will decrease by 1 every year. Once it reaches 10, the policy will shift to 10 year layered amortization bases.
- The Town will continue to fund the Net Normal Cost so long as the Plan's funded ratio is below 150%. Should the funded ratio be 150% or more as of the valuation date, surplus would be used to offset the Net Normal Cost.
- The Actuarial Value of Assets was reset to equal the Market Value of Assets as of July 1, 2021.

These changes, in conjunction with the Pension Obligation Bond Proceeds, increased the Accrued Liability by approximately \$45.3 million and decreased the Actuarially Determined Contribution by about \$20.1 million.

Plan Changes

The employee contribution rate was updated for several unions reflecting the latest changes in the collective bargaining agreements between the Town and those unions. This change lowered the Accrued Liability by about \$2,000 and decreased the Actuarially Determined Contribution by approximately \$311,000.

Other Significant Changes

Although it is possible that the COVID-19 pandemic could have a material impact on the projected mortality, liabilities, and contribution requirements, we have chosen not to make an adjustment in the projections at this time, given the substantial current uncertainty regarding the impact of COVID-19 on mortality and plan costs, including whether the pandemic will increase or decrease mortality during the term of our projections. We will be monitoring this development closely and may adjust future projections to reflect the impact of COVID-19, if and when it becomes appropriate.

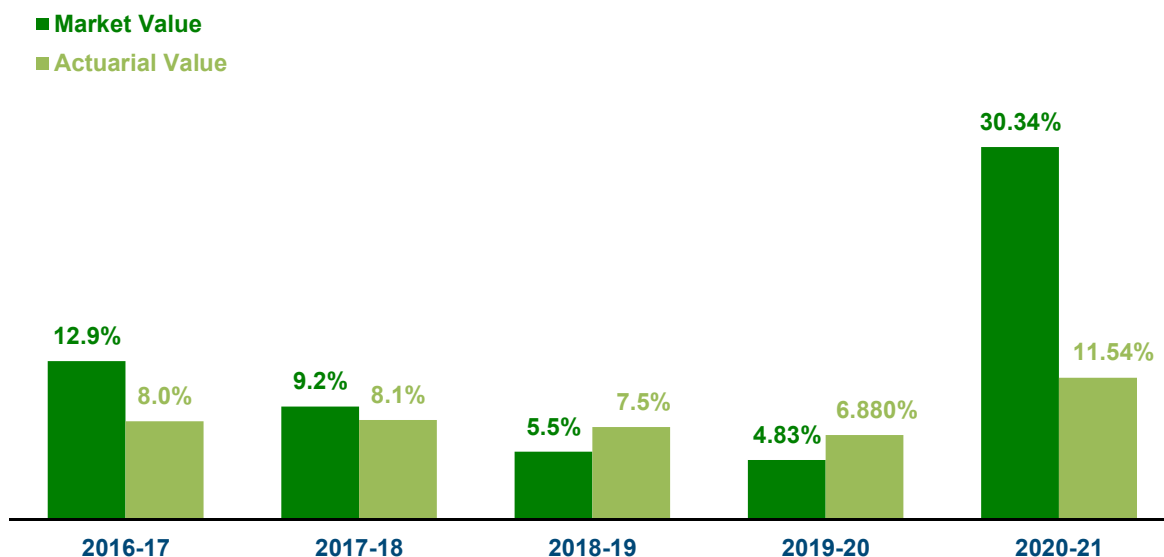
Section I - Executive Summary Assets

There are two different measures of the plan's assets that are used throughout this report. The Market Value is a snapshot of the plan's investments as of the valuation date. The Actuarial Value is a smoothed asset value designed to temper the volatile fluctuations in the market by recognizing investment gains or losses asymptotically over five years. The Actuarial Value of Assets has been reset to equal the Market Value of Assets as of July 1, 2021.

	Market	Actuarial
Value as of July 1, 2020	\$214,812,124	\$215,752,896
Town and Member Contributions*	351,642,498	351,642,498
Investment Income	63,829,773	24,393,052
Benefit Payments and Administrative Expenses	(37,671,314)	(37,671,314)
Reset Actuarial Value of Assets to Market Value of Assets	N/A	38,495,949
Value as of July 1, 2021	592,613,081	592,613,081

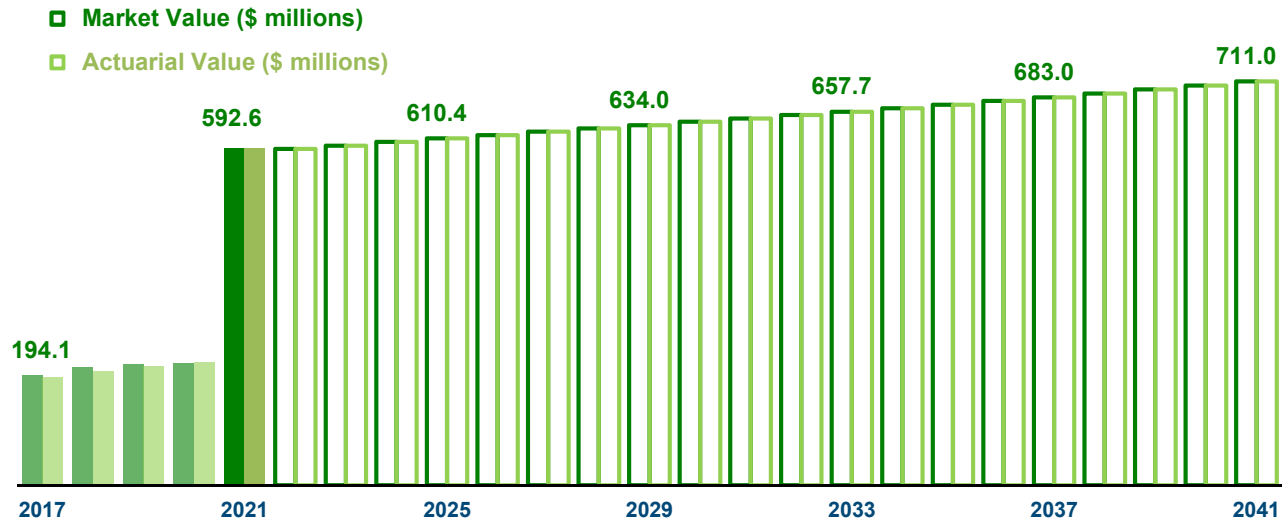
*Includes POB Proceeds equal to \$322.9 million.

For fiscal year 2020-21, the plan's assets earned 30.34% on a Market Value basis and 11.54% on an Actuarial Value basis. The actuarial assumption for this period was 6.99%; the result is an asset gain of about \$49.12 million on a Market Value basis and a gain of about 9.62 million on an Actuarial Value basis. Historical rates of return are shown in the graph below.



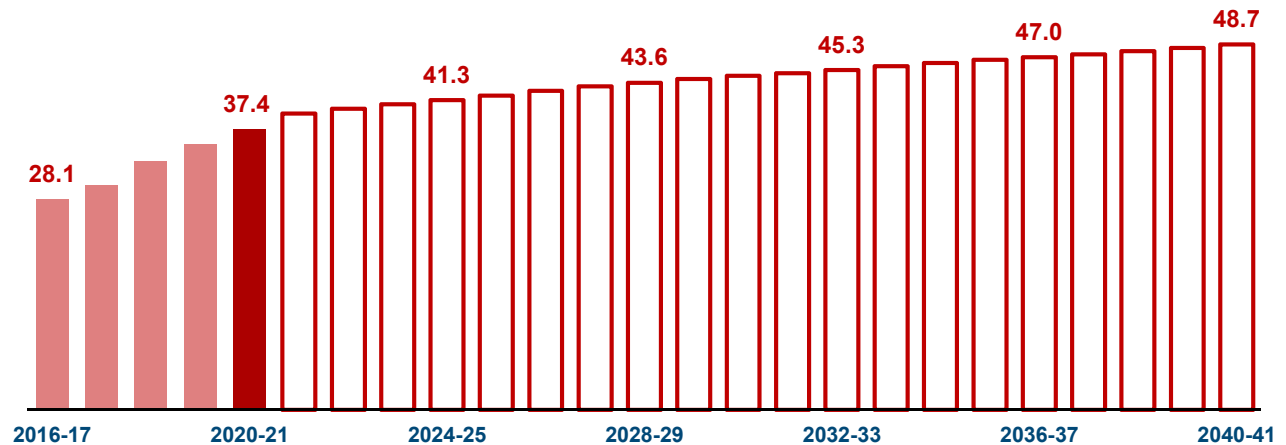
Section I - Executive Summary Assets (continued)

The graph below shows how this year's asset values compare to where the plan's assets have been over the past several years and how they are projected to change over the next 20 years. For purposes of this projection, we have assumed that the Town always contributes the Actuarially Determined Contribution, the investments always earn the assumed interest rate each year, and plan experience matches what is anticipated by the assumptions. Please note that the substantial increase in the assets as of July 1, 2021 is attributable to the Pension Obligation Bond (POB) issued by the Town.



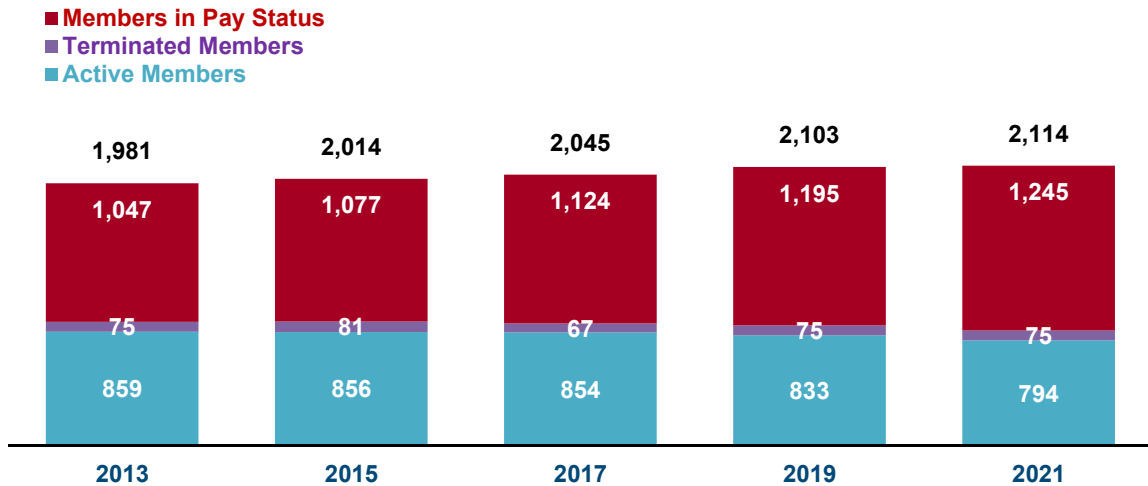
In 2020-21, the plan paid out \$37.4 million in benefits to members. Over the next 20 years, the plan is projected to pay out a total of \$889 million in benefits to members.

Benefit Payments (\$ millions)



Section I - Executive Summary Membership

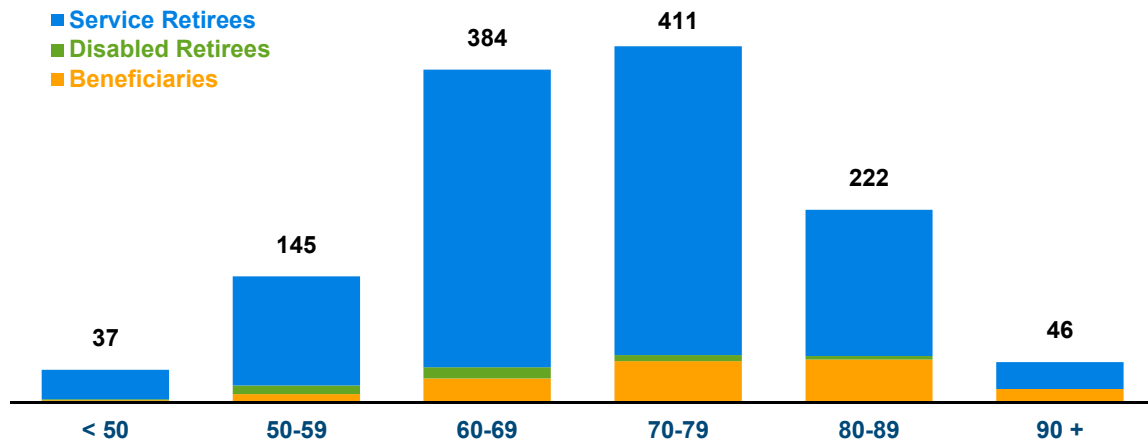
Full valuations, where complete membership data is collected and analyzed, are performed only in odd-numbered years so membership data in even-numbered years is not available. There are three basic categories of plan members included in the valuation: (1) members who are receiving monthly pension benefits, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) active employees who have met the eligibility requirements for membership.



Members in Pay Status on July 1, 2021

Service Retirees	1,061	Average Age	71.1
Disabled Retirees	35	Total Annual Benefit	\$38,375,653
Beneficiaries	149	Average Annual Benefit	30,824
Total	1,245		

The members in pay status fall across a wide distribution of ages:



Section I - Executive Summary Membership (continued)

Terminated Vested Members on July 1, 2021

Count	48
Average Age	51.8
Total Annual Benefit	\$509,543
Average Annual Benefit	10,615

Nonvested Members Due Refunds on July 1, 2021

Count	27
-------	----

Active Members on July 1, 2021

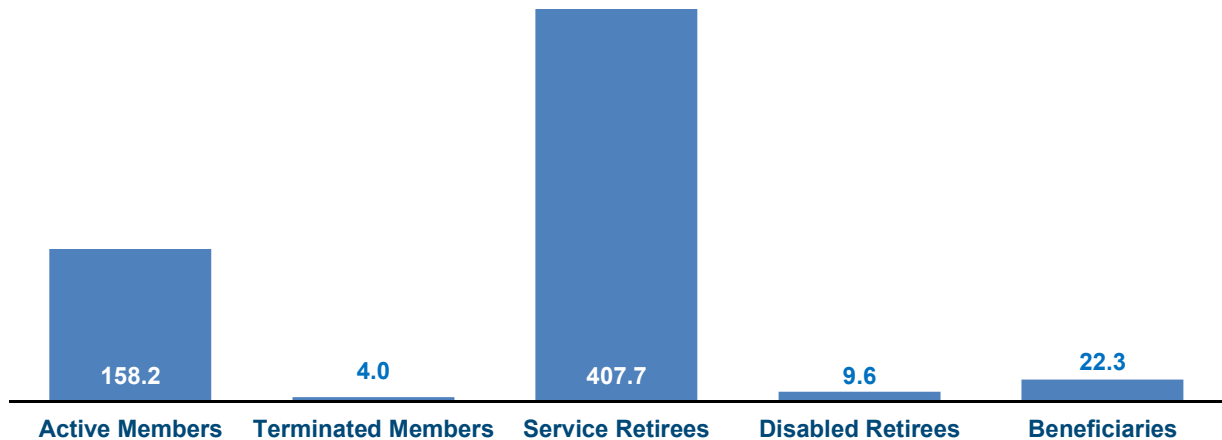
Count	794
Average Age	47.9
Average Service	11.0
Payroll	\$64,437,918
Average Payroll	81,156

The table below illustrates the age and years of service of the active membership:

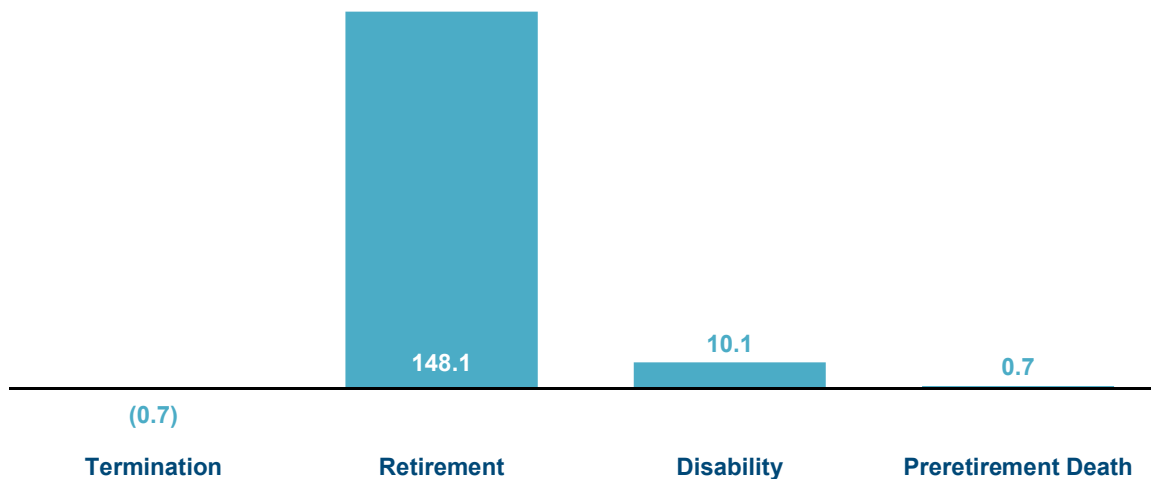
Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25	13							13
25-29	48	11						59
30-34	39	37	6					82
35-39	32	30	28	11				101
40-44	26	17	8	17	6			74
45-49	27	12	14	10	11	2		76
50-54	34	23	22	20	18	9	4	130
55-59	29	14	13	13	26	4	5	104
60-64	19	11	14	15	24	9	4	96
65+	1	7	11	13	16	5	6	59
Total	268	162	116	99	101	29	19	794

Section I - Executive Summary Accrued Liability

The Accrued Liability as of July 1, 2021 is \$601,847,298, which consists of the following pieces (in \$ millions):



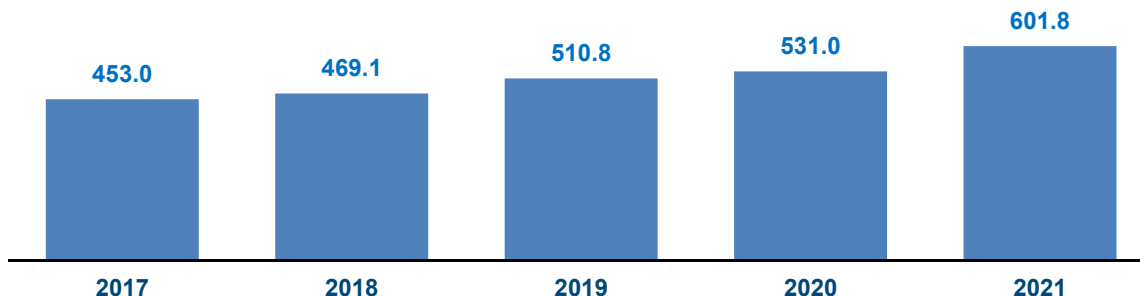
The Accrued Liability for active members can be broken down further by the different types of benefits provided by the plan:



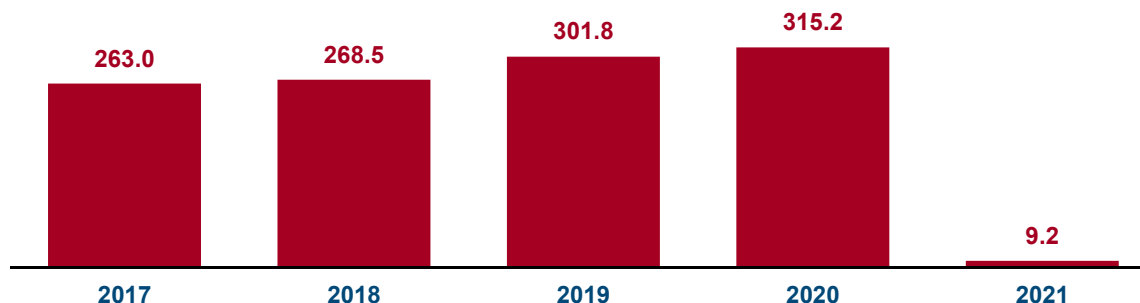
Section I - Executive Summary Funded Status

The Accrued Liability grows over time as active members earn additional benefits, and goes down over time as members receive benefits; it may also change when there are changes to the plan provisions or changes in the actuarial assumptions. The Unfunded Accrued Liability is the dollar difference between the Accrued Liability and the Actuarial Value of Assets; the Funded Ratio is the ratio of the two.

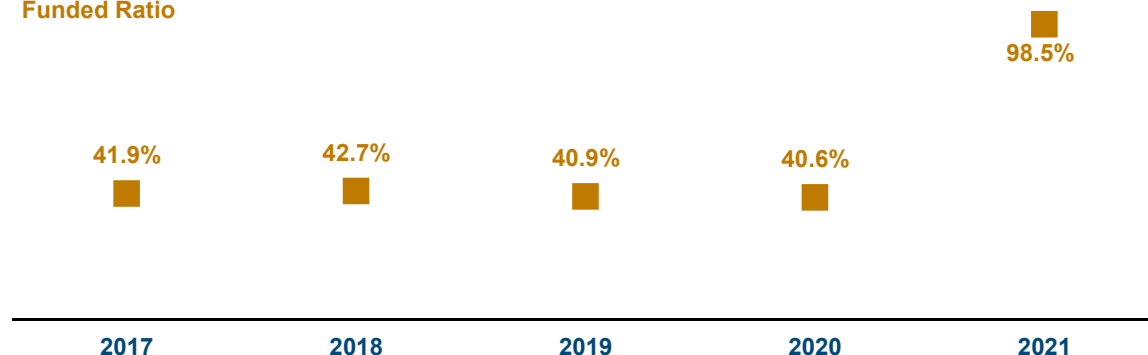
Accrued Liability (\$ millions)



Unfunded Accrued Liability (\$ millions)



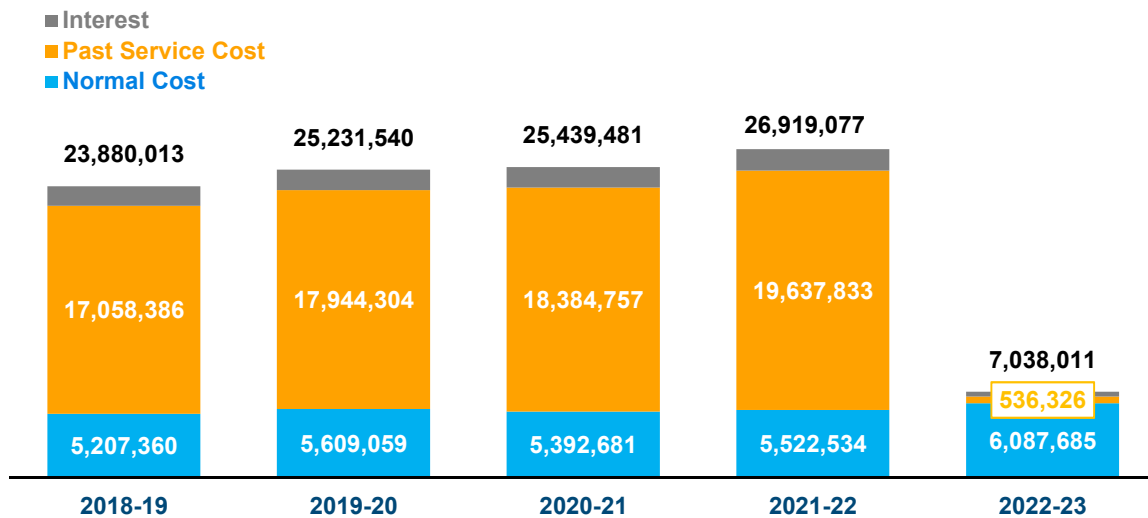
Funded Ratio



Section I - Executive Summary Actuarially Determined Contribution

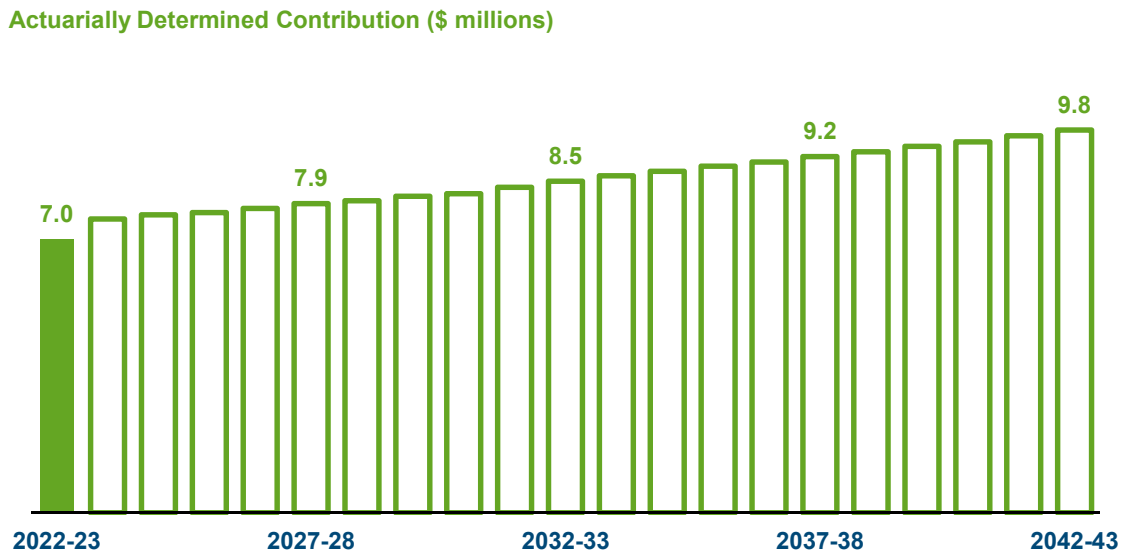
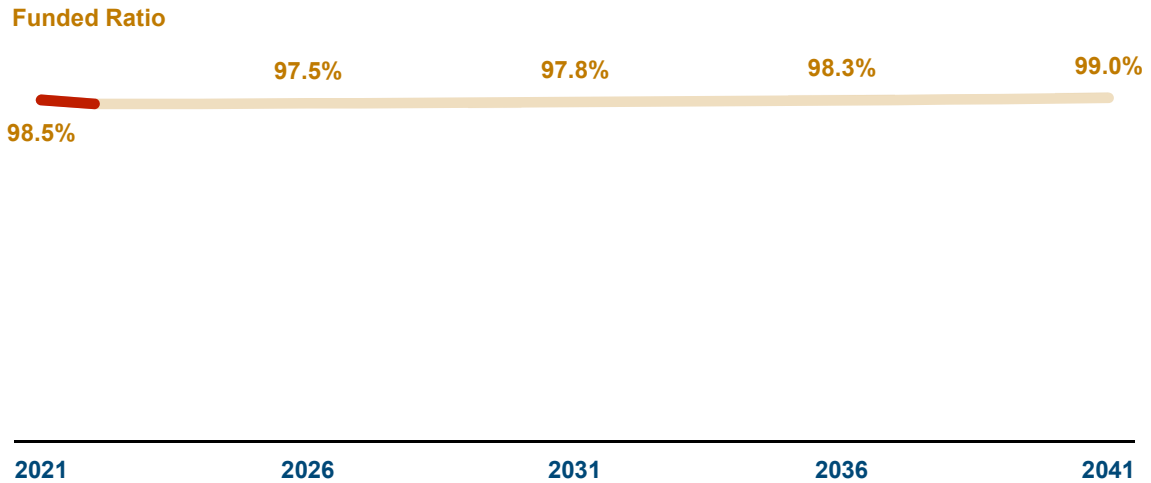
The Actuarially Determined Contribution consists of three pieces: a Normal Cost payment to fund the benefits earned each year, a Past Service Cost to gradually reduce any unfunded or surplus liability, and Interest to reflect the timing of the contribution relative to the valuation date. In addition to paying the Actuarially Determined Contribution, starting with the FYE 2023, the Town must pay debt service on the Pension Obligation Bond of \$17.7 million annually.

The Actuarially Determined Contribution for fiscal year 2022-23 is shown graphically below, along with the comparable figures for the preceding four fiscal years. Note that the Normal Cost is relatively consistent from year to year, whereas the Past Service Cost tends to be more volatile since it reflects the impact of asset performance.



Section I - Executive Summary Long-Range Forecast

If the Town pays the Actuarially Determined Contribution each year, the investments earn exactly the assumed interest rate each year, and there are no changes in the plan provisions or in the actuarial methods and assumptions, then we project the following changes in the plan's funded status and the long-range contribution levels:

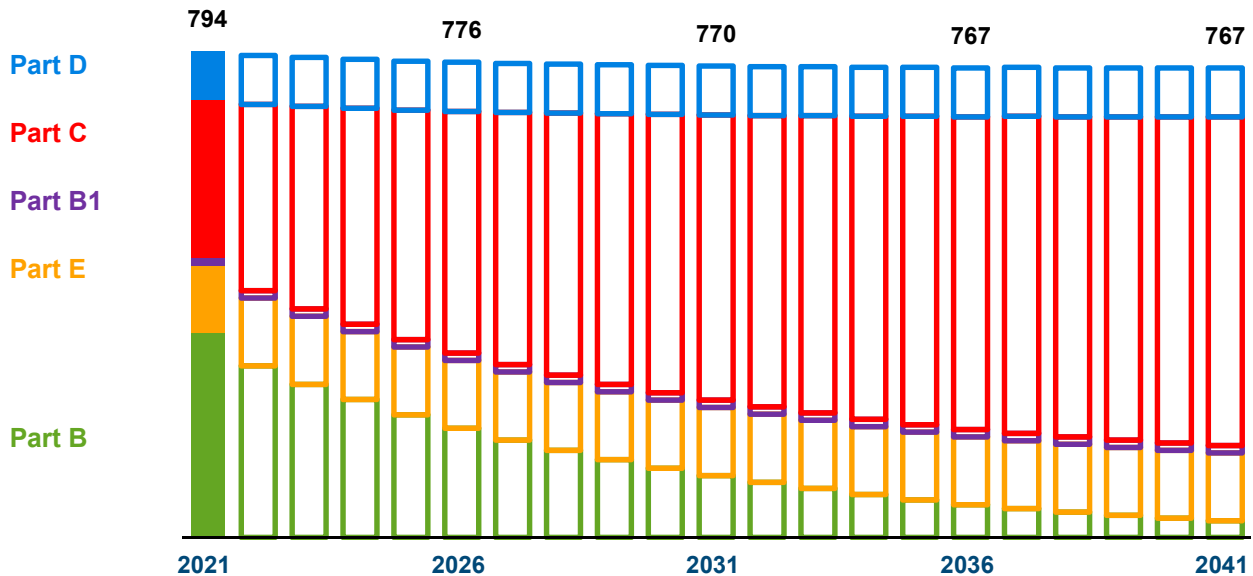


To the extent that there are future investment or liability gains or losses, changes in the actuarial assumptions or methods, or plan changes, the actual valuation results will differ from these forecasts. Please see Section III C for more details of the long range forecast.

Section I - Executive Summary Long-Range Forecast

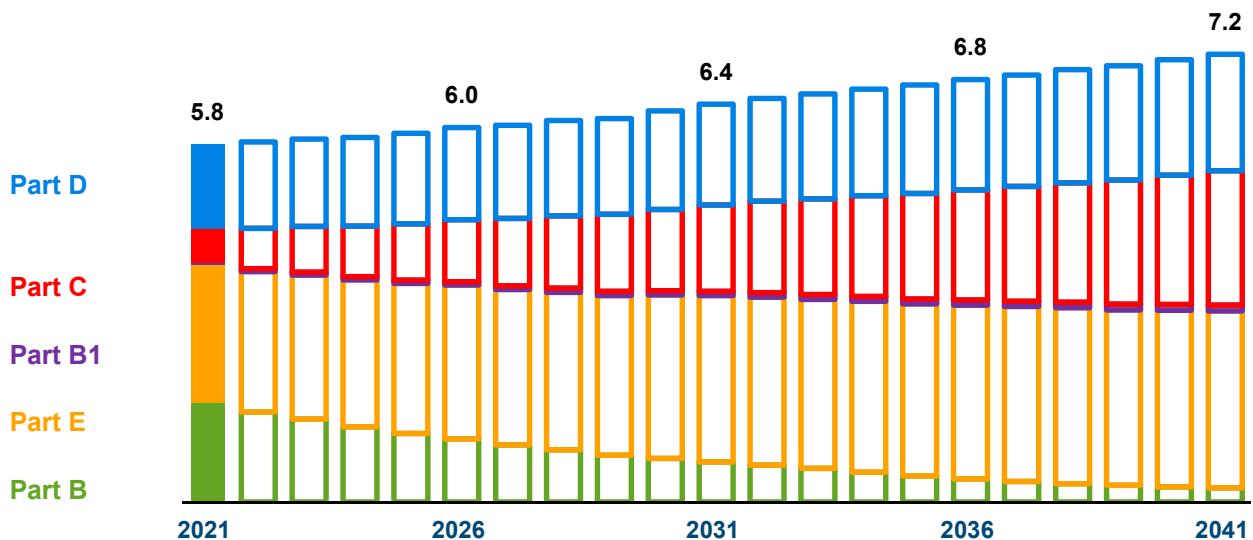
The Town's projected active member counts reflect the expected gradual replacement of terminating and retiring Part B members with replacement employees who are covered by the lower cost hybrid plan (Part E) or by the Town's defined contribution plan. This shift is illustrated in the graph below.

Projected Active Member Count



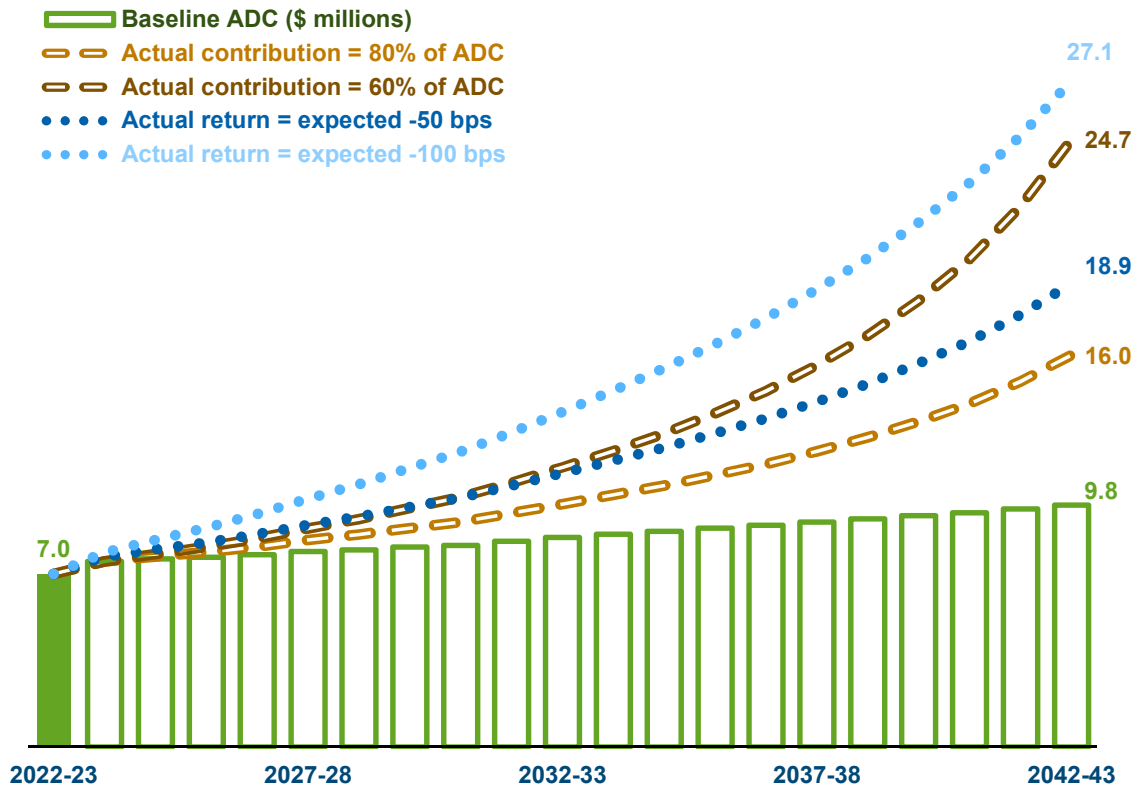
The Net Normal Cost component of the Actuarially Determined Contribution will likewise reflect this shift, as Part B active members with higher Net Normal Costs are gradually replaced by Part E active members with lower Net Normal Costs. Note that each individual active member's Net Normal Cost is expected to go up over time with salary growth, so for the plan as a whole the Net Normal Cost is projected to increase over time.

Projected Net Normal Cost (\$ millions)



Section I - Executive Summary Long-Range Forecast (continued)

Pension benefits are paid for through a combination of contributions from the Town and from employees, and from investment income. If the Town pays less than the Actuarially Determined Contribution each year, or if the investments persistently earn less than the assumed interest rate, then the plan's funded status would suffer, and to compensate, the Town's contribution levels would be pushed higher. The risks of underfunding and underearning are illustrated in the hypothetical scenarios below:



The scenarios illustrated above are based on deterministic projections that assume emerging plan experience always exactly matches the actuarial assumptions except for the return scenarios noted above; in particular that actual asset returns will be constant in every year of the projection period. Underfunding and underearning with both result in actuarial losses. For illustration purposes, we have amortized these losses over the remaining amortization period, even if that period is less than 10 years. Variation in asset returns, contribution amounts, and many other factors may have a significant impact on the long-term financial health of the plan, the liquidity constraints on plan assets, and the Town's future contribution levels. Stochastic projections could be prepared that would enable the Town to understand the potential range of future results based on the expected variability in asset returns and other factors. Such analysis was beyond the scope of this engagement.

Section I - Executive Summary Summary of Principal Results

Membership as of	July 1, 2020	July 1, 2021
Active Members	N/A	794
Terminated Members	N/A	75
Members in Pay Status	<u>N/A</u>	<u>1,245</u>
Total Count	N/A	2,114
 Payroll	 N/A	 64,437,918
Assets and Liabilities as of	July 1, 2020	July 1, 2021
Market Value of Assets	\$214,812,124	\$592,613,081
Actuarial Value of Assets	215,752,896	592,613,081
Accrued Liability for Active Members	156,259,911	158,174,509
Accrued Liability for Terminated Members	4,492,818	4,041,220
Accrued Liability for Members in Pay Status	<u>370,214,137</u>	<u>439,631,569</u>
Total Accrued Liability	530,966,866	601,847,298
Unfunded Accrued Liability	315,213,970	9,234,217
Funded Ratio	40.6%	98.5%
Actuarially Determined Contribution for Fiscal Year	2021-22	2022-23
Normal Cost	\$5,522,534	\$6,087,685
Past Service Cost	19,637,833	536,326
Interest	<u>1,758,710</u>	<u>414,000</u>
Actuarially Determined Contribution	26,919,077	7,038,011
Allocated to BOE	5,746,338	1,461,382
Allocated to Town	21,172,739	5,576,629
POB Debt Service Payment		17,661,915
Total Town Pension Cost		24,699,926

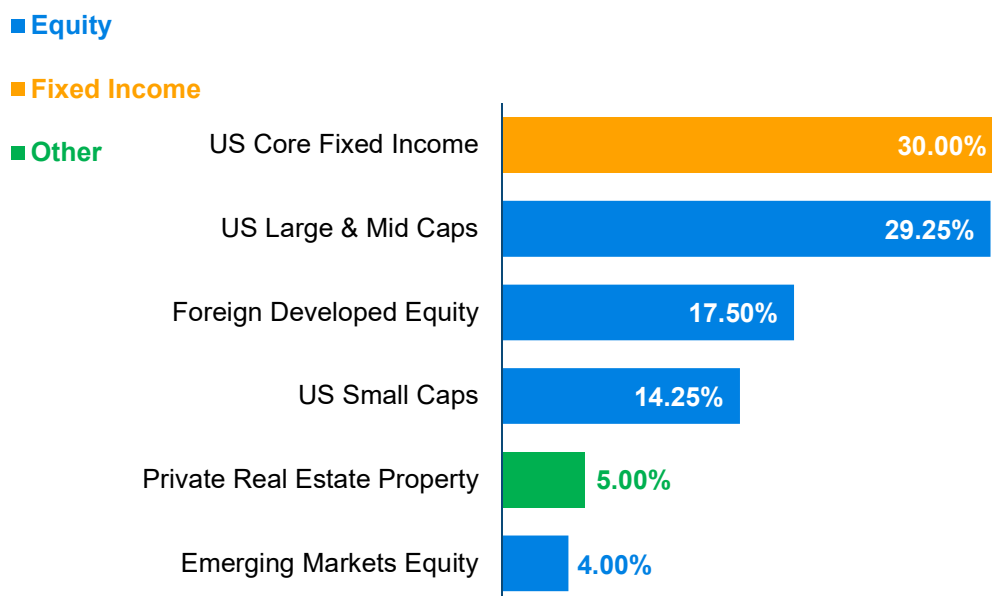
Section II - Plan Assets

A. Summary of Fund Transactions

Market Value as of July 1, 2020	\$214,812,124
Town Contributions	25,439,484
Receivable Town Contribution - (Pension Obligation Bond proceeds)	322,900,000
Member Contributions	3,303,014
Net Investment Income	63,829,773
Benefit Payments	(37,351,640)
Administrative Expenses	(319,674)
Market Value as of June 30, 2021	592,613,081
Expected Return on Market Value of Assets	14,705,673
Market Value (Gain)/Loss	(49,124,100)
Approximate Rate of Return *	30.34%

* The rate shown here is not the dollar or time weighted investment yield rate which measures investment performance. It is an approximate net return assuming all activity occurred on average midway through the fiscal year.

Target Asset Allocation as of June 30, 2021



Section II - Plan Assets

B. Development of Actuarial Value of Assets

As of July 1, 2021, the Actuarial Value of Assets has been reset to the Market Value of Assets.

Section III - Development of Contribution

A. Past Service Cost

In determining the Past Service Cost, the Unfunded Accrued Liability is amortized as a level percent over a closed 25 year period starting on July 1, 2021.

	Part A	Part B	Part B1	Part C	Part D	Part E	Total
1. Accrued Liability							
Active Members	\$0	\$86,338,754	\$1,959,787	\$24,708,663	\$40,693,395	\$4,473,910	\$158,174,509
Terminated Members	0	3,691,343	195,560	2,311	74,360	77,646	4,041,220
Service Retirees	876,672	179,648,018	1,282,038	98,981,636	126,958,811	0	407,747,175
Disabled Retirees	0	4,413,894	0	3,869,708	1,345,483	0	9,629,085
Beneficiaries	<u>526,389</u>	<u>6,875,905</u>	<u>0</u>	<u>5,564,346</u>	<u>9,288,669</u>	<u>0</u>	<u>22,255,309</u>
Total Accrued Liability	1,403,061	280,967,914	3,437,385	133,126,664	178,360,718	4,551,556	601,847,298
2. Actuarial Value of Assets (see Section IIB - allocated in proportion to Total Accrued Liability)	1,381,534	276,656,988	3,384,645	131,084,085	175,624,108	4,481,721	592,613,081
3. Unfunded Accrued Liability: (1) - (2)	21,527	4,310,926	52,740	2,042,579	2,736,610	69,835	9,234,217
4. Funded Ratio: (2) / (1)	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%
5. Amortization Period	25	25	25	25	25	25	25
6. Amortization Growth Rate	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
7. Past Service Cost: (3) amortized over (5)	1,250	250,380	3,063	118,634	158,943	4,056	536,326

Section III - Development of Contribution
B. Actuarially Determined Contribution for FY 2022-23

	Part A	Part B	Part B1	Part C	Part D	Part E	Total
1. Total Normal Cost	\$0	\$2,730,128	\$108,578	\$2,094,199	\$3,119,261	\$916,587	\$8,968,753
2. Expected Member Contributions	0	1,135,583	64,023	726,230	899,116	384,116	3,209,068
3. Expected Administrative Expenses (allocated in proportion to Total Normal Cost)	0	99,844	3,971	76,588	114,076	33,521	328,000
4. Net Normal Cost: (1) - (2) + (3)	0	1,694,389	48,526	1,444,557	2,334,221	565,992	6,087,685
5. Past Service Cost (see Section IIIA)	1,250	250,380	3,063	118,634	158,943	4,056	536,326
6. Interest on (4) + (5) to beginning of fiscal year	78	121,548	3,224	97,699	155,823	35,628	414,000
7. Actuarially Determined Contribution for FY 2022-23: (4) + (5) + (6)	1,328	2,066,317	54,813	1,660,890	2,648,987	605,676	7,038,011

Section III - Development of Contribution
C. Breakdown by Town / BOE

	BOE	Town	Total
1. Total Normal Cost	\$1,968,252	\$7,000,501	\$8,968,753
2. Expected Member Contributions	780,053	2,429,015	3,209,068
3. Expected Administrative Expenses	71,982	256,018	328,000
4. Net Normal Cost: (1) - (2) + (3)	1,260,181	4,827,504	6,087,685
5. Accrued Liability	129,315,032	472,532,266	601,847,298
6. Actuarial Value of Assets	127,330,936	465,282,145	592,613,081
7. Unfunded Accrued Liability	1,984,096	7,250,121	9,234,217
8. Past Service Cost	115,237	421,089	536,326
9. Interest on (4) + (8) to the start of the fiscal year	85,964	328,036	414,000
10. Actuarially Determined Contribution: (4) + (8) + (9)	1,461,382	5,576,629	7,038,011

Section III - Development of Contribution D. Long Range Forecast

This forecast is based on the results of the July 1, 2021 actuarial valuation and assumes that the Town will pay the Actuarially Determined Contribution each year, the assets will return the assumed interest rate on a market value basis each year, and there are no future changes in the actuarial methods or assumptions or in the plan provisions. For purposes of this forecast the amortization period declines to 1 year to illustrate the progress of the plan towards becoming fully funded; in actual practice the amortization period will not be less than 10 years in order to shield the Town from contribution volatility. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

Valuation Date	Values as of the Valuation Date				Fiscal Year	Cash Flows Projected to the Following Fiscal Year			
	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio		Town Contributions	Member Contributions	Benefit Payments	Net Cash Flows
7/1/2021	\$601,847,298	\$592,613,081	\$9,234,217	98.5%	2022-23	\$7,038,011	\$3,346,383	(\$40,132,308)	(\$29,747,914)
7/1/2022	608,291,000	591,987,000	16,304,000	97.3%	2023-24	7,550,000	3,369,000	(40,725,000)	(29,806,000)
7/1/2023	614,548,000	597,960,000	16,588,000	97.3%	2024-25	7,656,000	3,394,000	(41,309,000)	(30,259,000)
7/1/2024	620,664,000	604,238,000	16,426,000	97.4%	2025-26	7,718,000	3,430,000	(41,903,000)	(30,755,000)
7/1/2025	626,618,000	610,431,000	16,187,000	97.4%	2026-27	7,821,000	3,446,000	(42,525,000)	(31,258,000)
7/1/2026	632,441,000	616,489,000	15,952,000	97.5%	2027-28	7,950,000	3,472,000	(43,119,000)	(31,697,000)
7/1/2027	638,098,000	622,397,000	15,701,000	97.5%	2028-29	8,024,000	3,516,000	(43,593,000)	(32,053,000)
7/1/2028	643,564,000	628,211,000	15,353,000	97.6%	2029-30	8,135,000	3,545,000	(44,089,000)	(32,409,000)
7/1/2029	649,019,000	634,009,000	15,010,000	97.7%	2030-31	8,205,000	3,588,000	(44,521,000)	(32,728,000)
7/1/2030	654,371,000	639,792,000	14,579,000	97.8%	2031-32	8,368,000	3,626,000	(44,890,000)	(32,896,000)
7/1/2031	659,802,000	645,596,000	14,206,000	97.8%	2032-33	8,525,000	3,660,000	(45,301,000)	(33,116,000)
7/1/2032	665,360,000	651,578,000	13,782,000	97.9%	2033-34	8,663,000	3,701,000	(45,799,000)	(33,435,000)
7/1/2033	670,983,000	657,694,000	13,289,000	98.0%	2034-35	8,781,000	3,750,000	(46,244,000)	(33,713,000)
7/1/2034	676,576,000	663,851,000	12,725,000	98.1%	2035-36	8,908,000	3,801,000	(46,656,000)	(33,947,000)
7/1/2035	682,206,000	670,092,000	12,114,000	98.2%	2036-37	9,019,000	3,852,000	(47,018,000)	(34,147,000)
7/1/2036	687,883,000	676,469,000	11,414,000	98.3%	2037-38	9,156,000	3,908,000	(47,406,000)	(34,342,000)
7/1/2037	693,713,000	683,025,000	10,688,000	98.5%	2038-39	9,281,000	3,956,000	(47,803,000)	(34,566,000)
7/1/2038	699,638,000	689,777,000	9,861,000	98.6%	2039-40	9,416,000	4,004,000	(48,228,000)	(34,808,000)
7/1/2039	705,692,000	696,705,000	8,987,000	98.7%	2040-41	9,536,000	4,050,000	(48,703,000)	(35,117,000)
7/1/2040	711,798,000	703,802,000	7,996,000	98.9%	2041-42	9,689,000	4,092,000	(49,193,000)	(35,412,000)

Section III - Development of Contribution
E. History of Funded Status

Valuation Date	Actuarial Value of Assets	Accrued Liability	Unfunded Accrued Liability	Funded Ratio
July 1, 2013	\$145,028,432	\$350,769,991	\$205,741,559	41.3%
July 1, 2014	\$159,253,591	\$367,481,550	\$208,227,959	43.3%
July 1, 2015	173,140,717	403,746,402	230,605,685	42.9%
July 1, 2016	179,642,266	414,533,071	234,890,805	43.3%
July 1, 2017	189,993,169	452,993,244	263,000,075	41.9%
July 1, 2018	200,503,878	469,050,740	268,546,862	42.7%
July 1, 2019	209,053,093	510,843,434	301,790,341	40.9%
July 1, 2020	215,752,896	530,966,866	315,213,970	40.6%
July 1, 2021	592,613,081	601,847,298	9,234,217	98.5%

Section III - Development of Contribution

F. History of Town Contributions

Fiscal Year	Actuarially Determined Contribution	Actual Town Contribution	Payroll	Actual Contribution as a Percent of Payroll
2014-15	\$17,711,861	\$17,712,000	\$53,742,387	33.0%
2015-16	17,916,822	17,917,000	55,892,083	32.1%
2016-17	20,551,457	20,551,457	56,648,623	36.3%
2017-18	21,615,393	21,615,393	58,064,839	37.2%
2018-19	23,880,013	23,880,000	58,707,946	40.7%
2019-20	25,231,540	25,231,002	60,175,645	41.9%
2020-21*	25,439,481	348,339,484	63,885,033	545.3%
2021-22	26,919,077	TBD	65,110,045	TBD
2022-23	7,038,011	TBD	64,437,918	TBD

*The Town contribution for fiscal year 2020-21 includes Pension Obligation Bond proceeds of \$322.9 million.

Section III - Development of Contribution

G. Tread Water Amount

The **Tread Water Amount** is equal to the Town's net normal cost (see Section IIIB) plus one year's interest on the Accrued Liability less the Market Value of Assets. Below is a comparison of the Tread Water Amount to the Actuarially Determined Contribution based on the results of our long range forecast (shown in Section III D). We have included this metric at the Town's request.

Valuation Date	Net Normal Cost	Accrued Liability	Market Value of Assets	Tread Water Amount	Actuarially Determined Contribution (ADC)	ADC as a Percent of the Tread Water Amount
July 1, 2021	\$6,087,685	\$601,847,298	\$592,613,081	\$6,664,824	\$7,038,011	105.6%
July 1, 2022	6,133,000	608,291,000	591,987,000	7,152,000	7,550,000	105.6%
July 1, 2023	6,189,000	614,548,000	597,960,000	7,226,000	7,656,000	106.0%
July 1, 2024	6,226,000	620,664,000	604,238,000	7,252,000	7,718,000	106.4%
July 1, 2025	6,305,000	626,618,000	610,431,000	7,317,000	7,821,000	106.9%
July 1, 2026	6,406,000	632,441,000	616,489,000	7,403,000	7,950,000	107.4%
July 1, 2027	6,454,000	638,098,000	622,397,000	7,435,000	8,024,000	107.9%
July 1, 2028	6,540,000	643,564,000	628,211,000	7,499,000	8,135,000	108.5%
July 1, 2029	6,583,000	649,019,000	634,009,000	7,522,000	8,205,000	109.1%
July 1, 2030	6,719,000	654,371,000	639,792,000	7,630,000	8,368,000	109.7%

Note that the Actuarially Determined Contribution calculated as of each valuation date is for the fiscal year that starts one year after the valuation date.

Section IV - Membership Data

A. Reconciliation of Membership from Prior Full Valuation

Details of the changes in the Plan membership since the last full valuation are shown below. Additional details on the Plan membership are provided in the remainder of Section IV.

	Active Members	Terminated Vested Members	Nonvested Members Due Refunds	Service Retirees	Disabled Retirees	Beneficiaries	Total
Count July 1, 2019	833	52	23	1,022	36	137	2,103
Terminated							
- no benefits due	(12)	-	12	-	-	-	0
- paid refund	(33)	(1)	(9)	-	-	-	(43)
- vested benefits due	(7)	7	-	-	-	-	0
Retired	(101)	(9)	-	109	1	-	0
Died	-	-	-	-	-	-	0
- with beneficiary	(2)	(1)	1	(21)	-	23	0
- no beneficiary	(3)	-	-	(49)	(2)	(14)	(68)
Benefits expired	-	-	-	-	-	-	0
New member	118	-	1	-	-	-	119
Rehired	1	-	(1)	-	-	-	0
New Alternate Payee	-	-	-	-	-	1	1
Correction	-	-	-	-	-	2	2
Count July 1, 2021	794	48	27	1,061	35	149	2,114

Breakdown as of July 1, 2021 by plan

Part A	0	0	0	5	0	7	12
Part B	333	45	7	741	19	68	1,213
Part B1	12	1	0	3	0	0	16
Part C	80	0	1	132	12	32	257
Part D	111	1	1	180	4	42	339
Part E	<u>258</u>	<u>1</u>	<u>18</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>277</u>
Total	794	48	27	1,061	35	149	2,114

Section IV - Membership Data

B. Statistics of Active Membership

		As of July 1, 2019	As of July 1, 2021
Number of Active Members	Part B	409	333
	Part B1	12	12
	Part C	76	80
	Part D	123	111
	Part E	<u>213</u>	<u>258</u>
	Total	833	794
Average Age	Part B	55.3	55.8
	Part B1	41.0	38.2
	Part C	40.6	39.2
	Part D	37.0	35.3
	Part E	43.9	46.3
	Total	48.1	47.9
Average Service	Part B	16.2	17.7
	Part B1	12.4	10.0
	Part C	10.7	8.7
	Part D	11.5	9.4
	Part E	2.6	3.8
	Total	11.5	11.0
Total Payroll	Part B	\$26,341,965	\$22,793,642
	Part B1	862,328	979,567
	Part C	10,105,736	11,432,438
	Part D	14,690,234	14,512,474
	Part E	<u>11,884,770</u>	<u>14,719,797</u>
	Total	63,885,033	64,437,918
Average Payroll	Part B	\$64,406	\$68,449
	Part B1	71,861	81,631
	Part C	132,970	142,905
	Part D	119,433	130,743
	Part E	55,797	57,053
	Total	76,693	81,156

Section IV - Membership Data

C. Distribution of Active Members as of July 1, 2021

Part B

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25								0
25-29		1						1
30-34	2	1	2					5
35-39		9	7	4				20
40-44	1	7	7	7	2			24
45-49		6	11	6	7	2		32
50-54		8	21	14	11	9	4	67
55-59	1	4	13	11	22	4	5	60
60-64		6	13	15	24	9	4	71
65+		2	11	13	16	5	6	53
Total	4	44	85	70	82	29	19	333

Part B1

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25	1							1
25-29	1							1
30-34	1	2						3
35-39		1						1
40-44			1	3				4
45-49				1				1
50-54								0
55-59	1							1
60-64								0
65+								0
Total	4	3	1	4	0	0	0	12

Part C

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25	1							1
25-29	6	3						9
30-34	11	9						20
35-39	7	10	6					23
40-44	3	2			2			7
45-49		1	2	1	1			5
50-54		1		2	5			8
55-59	1	2		1	3			7
60-64								0
65+								0
Total	29	28	8	4	11	0	0	80

Section IV - Membership Data

C. Distribution of Active Members as of July 1, 2021

Part D

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25	4							4
25-29	21	6						27
30-34	7	17	4					28
35-39	1	4	15	7				27
40-44	2			7	2			11
45-49	1			2	3			6
50-54			1	3	2			6
55-59	1				1			2
60-64								0
65+								0
Total	37	27	20	19	8	0	0	111

Part E

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
< 25	7							7
25-29	20	1						21
30-34	18	8						26
35-39	24	6						30
40-44	20	8						28
45-49	26	5	1					32
50-54	34	14		1				49
55-59	25	8		1				34
60-64	19	5	1					25
65+	1	5						6
Total	194	60	2	2	0	0	0	258

Section IV - Membership Data

D. Statistics of Inactive Membership

	As of July 1, 2019	As of July 1, 2021
Terminated Vested Members		
Number	52	48
Total Annual Benefit	\$585,536	\$509,543
Average Annual Benefit	11,260	10,615
Average Age	50.5	51.8
Nonvested Members Due Refunds		
Number	23	27
Service Retirees		
Number	1,022	1,061
Total Annual Benefit	\$30,773,957	\$35,199,522
Average Annual Benefit	30,112	33,176
Average Age	70.5	70.5
Disabled Retirees		
Number	36	35
Total Annual Benefit	\$839,846	\$843,993
Average Annual Benefit	23,329	24,114
Average Age	64.4	65.7
Beneficiaries		
Number	137	149
Total Annual Benefit	\$1,886,499	\$2,332,138
Average Annual Benefit	13,770	15,652
Average Age	76.1	76.5

Section IV - Membership Data
E. Distribution of Inactive Members as of July 1, 2021

	Age	Number	Annual Benefits
Terminated Members*	< 50	32	\$151,576
	50 - 59	35	311,718
	60 - 69	8	46,249
	70 - 79	0	0
	80 - 89	0	0
	90 +	<u>0</u>	<u>0</u>
	Total	75	509,543
Service Retirees	< 50	34	\$2,322,178
	50 - 59	126	7,686,550
	60 - 69	344	12,763,879
	70 - 79	357	8,812,912
	80 - 89	169	3,255,890
	90 +	<u>31</u>	<u>358,113</u>
	Total	1,061	35,199,522
Disabled Retirees	< 50	1	\$23,733
	50 - 59	10	310,871
	60 - 69	13	230,809
	70 - 79	7	185,833
	80 - 89	4	92,748
	90 +	<u>0</u>	<u>0</u>
	Total	35	843,993
Beneficiaries	< 50	2	\$101,254
	50 - 59	9	248,619
	60 - 69	27	499,518
	70 - 79	47	718,885
	80 - 89	49	663,848
	90 +	<u>15</u>	<u>100,015</u>
	Total	149	2,332,138

*Count includes terminated vested members and non-vested members who are due a refund of contributions. Annual benefits represent future annuities for terminated vested members only.

Section V - Analysis of Risk

A. Introduction

The results of this actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match these assumptions. As an example, the plan's investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these likely differences when making decisions that may affect the future financial health of the plan, or of the plan's members.

In addition, as plans mature they accumulate larger pools of assets and liabilities. The increase in size in turn increases the potential magnitude of adverse experience. As an example, the dollar impact of a 10% investment loss on a plan with \$1 billion in assets and liabilities is much greater than the dollar impact for a plan with \$1 million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) directs actuaries to provide pension plan sponsors with information concerning the risks associated with the plan:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan. The assessment does not need to include numerical calculations.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

This section of the report uses the framework of ASOP 51 to communicate important information about significant risks to the plan, the plan's maturity, and relevant historical plan data.

Please see Section III D for more information on the basis for the projected results shown on the following pages.

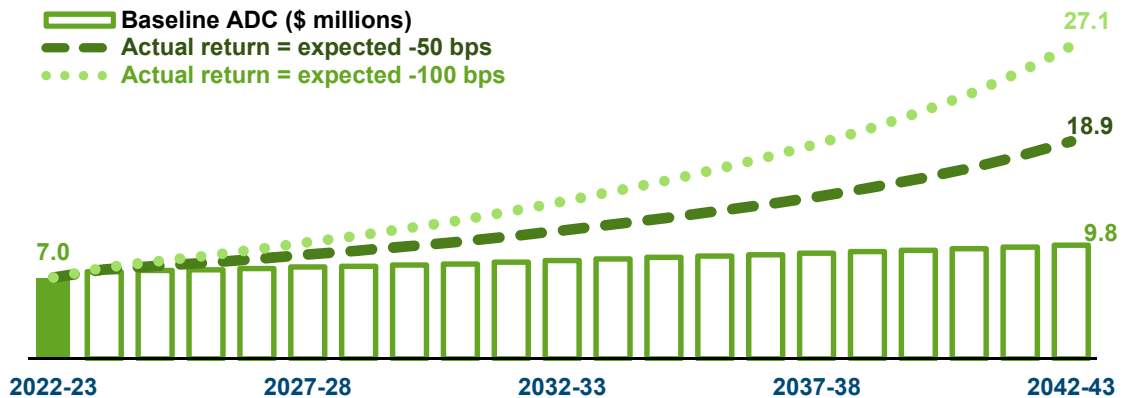
Section V - Analysis of Risk

B. Risk Identification and Assessment

Investment Risk

Definition: This is the potential that investment returns will be different than expected.

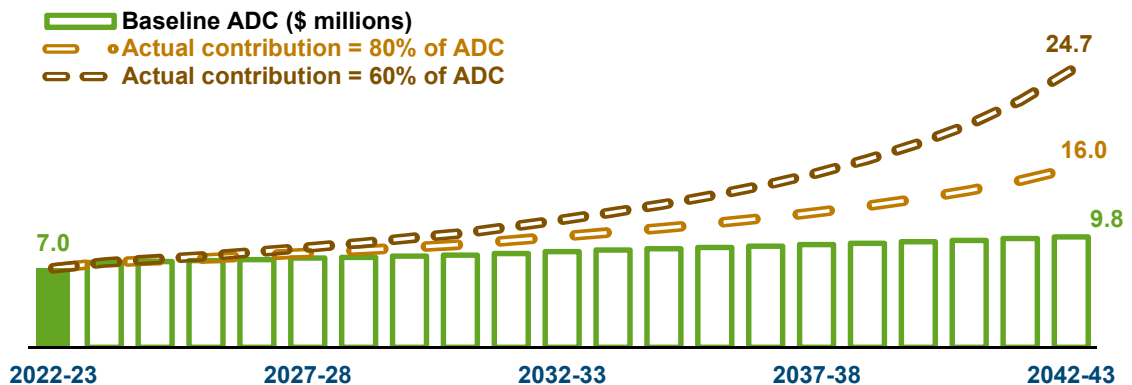
Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. The consequences of persistent underperformance on future Actuarially Determined Contribution levels are illustrated below:



Contribution Risk

Definition: This is the potential that actual future contributions will be less than the Actuarially Determined Contribution.

Identification: Over the past 6 years, actual contributions have been approximately 339.8% of the Actuarially Determined Contribution in total. The consequences of persistent underfunding on future Actuarially Determined Contribution levels are illustrated below:



Section V - Analysis of Risk

B. Risk Identification and Assessment

Liquidity Risk

Definition: This is the potential that assets must be liquidated at a loss earlier than planned in order to pay for the plan's benefits and operating costs. This risk is heightened for plans with negative cash flows, in which contributions are not sufficient to cover benefit payments plus expenses.

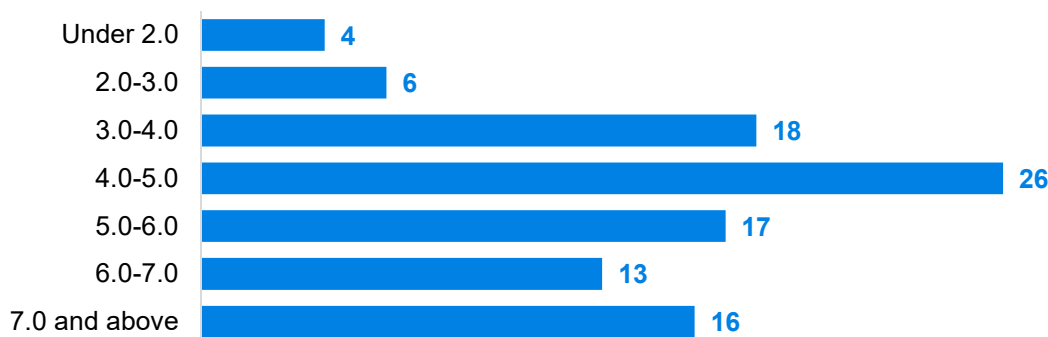
Identification: In 2020-21, the plan had positive cash flow, with town and member contributions* to the plan of \$351,642,498 compared to \$37,671,314 of benefit payments and administrative expenses paid out of the plan. We suggest that you consult with your investment advisors with respect to the liquidity characteristics of the plan's investment holdings.

Maturity Risk

Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time, and for plan assets and/or liabilities to become larger relative to the active member liability.

Identification: The plan is subject to maturity risk because as plan assets and liabilities continue to grow, the dollar impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: As of July 1, 2021, the plan's Asset Volatility Ratio (the ratio of the market value of plan assets to payroll) is 9.2. According to Milliman's 2021 Public Pension Funding Study, the 100 largest US public pension plans have the following range of Asset Volatility Ratios:



Inflation Risk

Definition: This is the potential for a pension to lose purchasing power over time due to inflation.

Identification: The members of pension plans without fully inflation-indexed benefits are subject to the risk that their purchasing power will be reduced over time due to inflation.

Assessment: This plan provides for limited postretirement benefit increases, but the increases are not directly tied to each year's rate of actual inflation; this leaves members bearing some inflation risk. In addition, not all members are eligible for these increases.

Section V - Analysis of Risk

B. Risk Identification and Assessment

Insolvency Risk

Definition: This is the potential that a plan will become insolvent; that is, assets will be fully depleted.

Identification: If a plan becomes insolvent, contractually required benefits must be paid from the plan sponsor's other remaining assets.

Assessment: Under the GASB 67/68 depletion date methodology, the plan is not projected to become insolvent. Please see the GASB 67/68 report for more details on the underlying analysis.

Demographic Risks

Definition: This is the potential that mortality, turnover, retirement, or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that members will follow patterns of demographic experience as described in Appendix B. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, Actuarially Determined Contributions, and funded status may differ significantly from those presented in this valuation. Formal Experience Studies performed on a regular basis are helpful in ensuring that the demographic assumptions reflect emerging plan experience.

Retirement Risk

Definition: This is the potential for members to retire and receive subsidized benefits that are more valuable than expected.

Identification: This plan has a range of retirement eligibility with varying retirement benefits. If members retire at different ages than are anticipated by the actuarial assumptions, this may put upward pressure on subsequent Actuarially Determined Contributions.

Pensionable Earnings Risk

Definition: This is the potential for active members to add items to their pensionable earnings and receive pension benefits that are higher than expected.

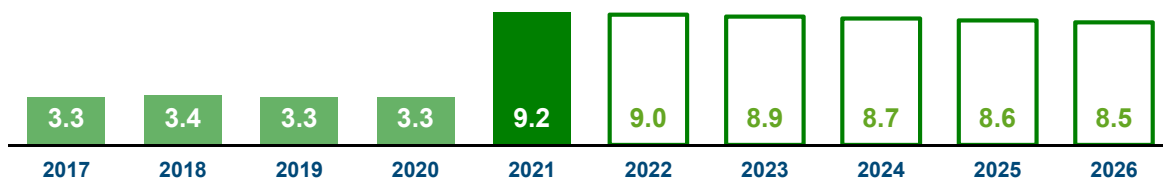
Identification: Unused sick pay is included in pension calculations for some groups of members (see Appendix C for more details). If members include more unused sick pay than is anticipated by the actuarial assumptions, this will put upward pressure on subsequent Actuarially Determined Contributions.

Section V - Analysis of Risk

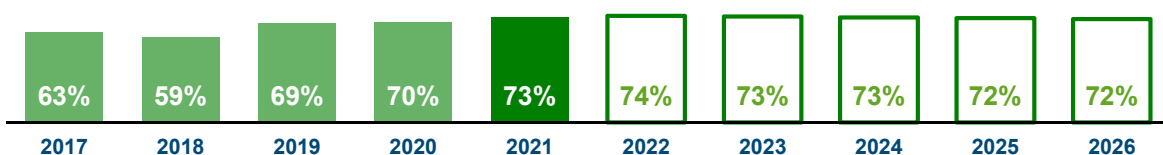
C. Maturity Measures

The metrics presented below are different ways of understanding the plan's maturity level, both in the past and as it is expected to change in the coming years.

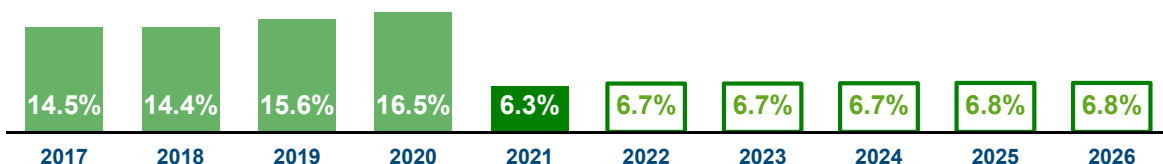
Asset Volatility Ratio: Market Value of Assets compared to Payroll



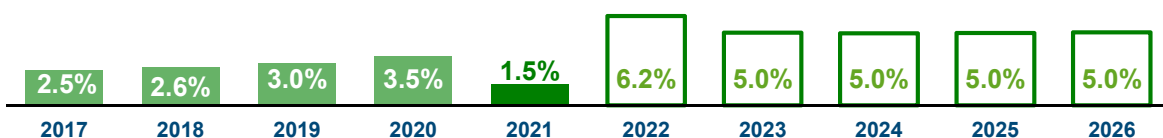
Accrued Liability for members in pay status compared to total Accrued Liability



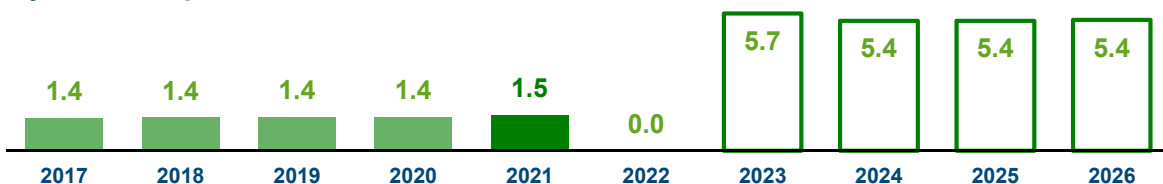
Benefit Payments compared to Market Value of Assets



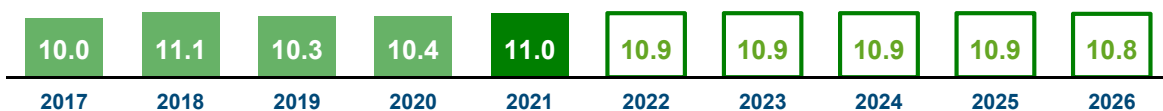
Net Cash Flows compared to Market Value of Assets*



Benefit Payments compared to Town Contributions*



Duration of Accrued Liability (based on GASB 68 sensitivity disclosures)



*The 2021 metrics exclude the Pension Obligation Bond proceeds.

Appendix A - Actuarial Funding Method

The actuarial funding method used in the valuation of this Plan is known as the Entry Age Normal Method. The Actuarially Determined Contribution consists of three pieces: Normal Cost plus a Past Service Cost payment to gradually eliminate the Unfunded Accrued Liability plus Interest to reflect the timing of the contribution relative to the valuation date.

The Normal Cost is determined by calculating the present value of future benefits for present active Members that will become payable as the result of death, disability, retirement or termination. This cost is then spread as a level percentage of earnings from entry age to termination as an Active Member. If Normal Costs had been paid at this level for all prior years, a fund would have accumulated. Because this fund represents the portion of benefits that would have been funded to date, it is termed the Accrued Liability. In fact, it is calculated by adding the present value of benefits for Retired Members and Terminated Vested Members to the present value of benefits for Active Members and subtracting the present value of future Normal Cost contributions.

The funding cost of the Plan is derived by making certain specific assumptions as to rates of interest, mortality, turnover, etc. which are assumed to hold for many years into the future. Since actual experience may differ somewhat from the assumptions, the costs determined by the valuation must be regarded as estimates of the true costs of the Plan.

The Unfunded Accrued Liability is the excess of the Accrued Liability over the Actuarial Value of Assets. This Unfunded Accrued Liability is amortized as a level percent over a closed 25 year period starting on July 1, 2021. The amortization period will decrease by 1 year every year. Once it reaches 10, the policy will shift to 10 year layered amortization bases. The Town will continue to fund the Net Normal Cost so long as the Plan's funded ratio is below 150%. Should the funded ratio be 150% or more as of the valuation date, surplus would be used to offset the Net Normal Cost.

The Actuarial Value of Assets is determined by recognizing market gains and losses asymptotically over a five year period. The Actuarial Value of Assets was set equal to the Market Value of Assets as of July 1, 2021.

The long-range forecasts included in this report have been developed by assuming that members will terminate, retire, become disabled, and die according to the actuarial assumptions with respect to these causes of decrement, and that pay increases, cost of living adjustments, and so forth will likewise occur according to the actuarial assumptions. For those unions whose new employees are eligible to participate in this plan, members who are projected to leave active employment are assumed to be replaced by new active members with the same age, service, gender, and pay characteristics as those hired in the past few years.

Appendix B - Actuarial Assumptions

Each of the assumptions used in this valuation was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

Interest Rate	6.25% (Prior: 6.99%)
Inflation	2.75%
Amortization Growth Rate	2.75%
Expenses	The prior year actual administrative expenses paid, increased with inflation and rounded to the nearest \$1,000.

Salary Scale	Age	Rate
	<25	6.00%
	25-29	5.85%
	30-34	4.65%
	35-39	4.35%
	40-49	3.65%
	50-59	3.50%
	60+	2.80%

Pay Adjustment for Unions With Open Contracts 2.00% per year back to July 1, 2018 for Town Streets.

Unused Sick Pay Including unused sick days in Average Final Compensation is assumed to increase benefits by:

Parts B & B1 & E	5.00%
Parts C & D	5.25%

Turnover	Parts B & B1 & E:	Service			
	Age	0-2	3-5	6-9	10+
	20	30%	12%	8%	6%
	25	25%	11%	7%	5%
	30	20%	10%	6%	4%
	35	15%	9%	5%	3%
	40+	10%	8%	4%	2%

Part C: None

Part D: Crocker-Sarasan Table T-1

Appendix B - Actuarial Assumptions

Retirement

Parts B & B1 & E:

Age	Rate
45-49	1%
50-54	3%
55-59	5%
60	15%
61-64	10%
65-69	40%
70	100%

Part C:

Age	Rate	
40-44	1%	In the year in which the member becomes eligible for both an unreduced pension and retiree medical benefits, the greater of the rate from the table and 25%
45-49	5%	
50-55	10%	
56-64	25%	
65	100%	

Part D:

Age	Rate	
30-39	1%	In the year in which the member becomes eligible for both an unreduced pension and retiree medical benefits, the greater of the rate from the table and 25%
40-44	2%	
45-54	10%	
55-61	20%	
62	100%	

Disability

Age	Rate
20	0.08%
30	0.09%
40	0.17%
50	0.51%
60	1.44%

Service-connected disabilities are assumed to comprise 20% of disabilities for Parts B & B1 & E and 50% of disabilities for Parts C & D.

The member's regular accrued benefit is assumed to be higher than the other disability benefits under the plan.

Appendix B - Actuarial Assumptions

Healthy Mortality

Pub-2010 Mortality Table with generational projection per the MP-2019 ultimate scale, with employee rates before commencement and healthy annuitant rates after benefit commencement. The Public Safety variant is used for Custodial (05), Maintenance (06), Grounds (70), Building Maintenance (71), Streets (62), Fire (61), and Police (60), and the General variant is used for all other groups. This assumption includes a margin for future improvements in longevity.

Disabled Mortality

Pub-2010 Mortality Table for disabled retirees with generational projection per the MP-2019 ultimate scale. The Public Safety variant is used for Custodial (05), Maintenance (06), Grounds (70), Building Maintenance (71), Streets (62), Fire (61), and Police (60), and the General variant is used for all other groups. This assumption includes a margin for future improvements in longevity.

Marital Status

80% of active participants are assumed to be married. Female spouses are assumed to be 3 years younger than male spouses.

Survivor Benefit

In order to approximate the additional death benefits for Parts C & D, the survivorship benefit is assumed to equal 25% of final pay and the normal form of the retirement benefit is valued as a 10% Joint & Survivor annuity.

Appendix C - 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. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Many plan provisions vary by union. We have shown the applicable union codes in parentheses where appropriate to indicate which union(s) are covered by which plan provisions.

Effective Date of Plan March 1, 1945

Covered Employees Employees working at least 1,000 hours, excluding those teachers eligible under the State Teachers Retirement System, may participate. Participation is compulsory for new employees hired under age 50.

Employees hired after the following dates are not covered by the Pension Plan:

Nurses (07)	June 1, 2010
Cafeteria (08)	June 1, 2011
Security (12)	June 1, 2010
Directors (59)	July 1, 2012 may opt out

Classes of Members

Part A Covered Employees on December 8, 1959 who did not elect coverage under Social Security plus certain police officers and firefighters not covered under Part C or Part D.

Part B All Covered Employees not in Parts A, B1, C, D, or E.

Board of Education Unions	Town Unions
Secretarial/Clerical (02)	Nurses (58)
Paraprofessional (03)	Directors (59)
Printers (04)	Streets (62)
Custodial (05)	Clerical (65)
Maintenance (06)	Non-Bargaining Clerical (66)
Nurses (07)	Non-Bargaining (68)
Cafeteria (08)	Grounds (70)
Non-Bargaining (09)	Building Maintenance (71)
Custodial III/Head Custodian (10)	Professional/Management (73)
Security (12)	Supervisor (74)
Professional/Technical (14)	Parking Monitors (81)
Cafeteria Managers (15)	Corporate Counsel (87)
Non-Union Plan B (16)	Town Manager (90)

Part B1 (64) All Covered Employees classified as public safety dispatchers.

Appendix C - Summary of Plan Provisions

Classes of Members (continued)

Part C (61)	All Covered Employees classified as firefighters except those covered in Part A.	
Part D (60)	All Covered Employees classified as police officers except those covered in Part A.	
Part E	Covered employees in the following unions who were hired on or after the dates indicated:	
	Secretarial/Clerical (02)	05/21/2013
	Paraprofessional (03)	05/21/2013
	Printers (04)	10/02/2012
	Custodial (05)	10/02/2012
	Maintenance (06)	10/02/2012
	Custodial III/Head Custodian (10)	07/01/2014
	Professional/Technical (14)	10/15/2013
	Cafeteria Managers (15)	07/01/2014
	Nurses (58)	11/10/2015
	Directors (59)	07/01/2012
	Streets (62)	08/01/2016
	Clerical (65)	05/24/2016
	Non-Bargaining (68)	11/10/2015
	Grounds (70)	09/24/2015
	Building Maintenance (71)	05/24/2016
	Professional/Management (73)	09/24/2015
	Supervisor (74)	05/24/2016
	Parking Monitors (81)	02/07/2017

Credited Service All service including completed months from date of hire to date of actual retirement, date of death, or date of termination of employment. Solely for the purpose of calculating amount of pension (see Normal Retirement Benefit) credited service includes any additional service credited in connection with the prior governmental service purchase provision of the plan.

Compensation All benefits except Service-Connected Disability: Gross wages including overtime and the value of maintenance.

Service-Connected Disability Benefits: Annual rate of basic pay excluding overtime and other supplemental compensation.

Compensation is limited to \$200,000, indexed in accordance with the Internal Revenue Code requirements for qualified plans.

Appendix C - Summary of Plan Provisions

Average Final Compensation Average of the three highest calendar years of compensation, prior to date of actual retirement. Unused sick pay is included in average final compensation to the extent allowed under the plan.

For Part B and Part E members who were hired on or after the dates shown below, Average Final Compensation is capped at the member's highest paid calendar year base wage, not including overtime, longevity, meal payments, or other forms of compensation.

Secretarial/Clerical (02)	05/01/2006
Paraprofessional (03)	05/01/2006
Printers (04)	07/01/2004
Custodial (05)	07/01/2006
Maintenance (06)	07/01/2004
Nurses (07)	07/01/2004
Cafeteria (08)	07/01/2004
Non-Bargaining (09)	05/01/2006
Custodial III/Head Custodian (10)	07/01/2006
Security (12)	05/01/2006
Professional/Technical (14)	07/01/2004
Cafeteria Managers (15)	07/01/2004
Non-Union Plan B (16)	05/01/2006
All Town Unions (58) - (90)	07/01/2013

For Part C members who were hired on or after 04/01/2014, final rate of compensation is used; defined as the member's highest bi-weekly rate of pay times 26.089 plus the member's highest holiday pay attained.

Covered Compensation Covered compensation, as defined under Revenue Ruling 71-446, for persons turning age 65 during later of the year the member turns age 65 or the year of actual retirement.

Vesting An active member will become vested after 5 years of service (10 years for Dispatchers (64) members hired on or after 06/30/2007). A vested member is eligible for a vested pension payable starting at the member's Normal Retirement Date. The monthly benefit is equal to the accrued pension at date of termination. A vested member may elect to retire early and receive a reduced monthly benefit if the member has met the eligibility criteria. In lieu of monthly benefits, a vested member may elect to receive a refund of member contributions with credited interest.

Normal Form Single life annuity.

Appendix C - Summary of Plan Provisions

Unused Sick Pay

Unused sick pay is included in pension calculations for members who were hired prior to the dates shown below:

Secretarial/Clerical (02)	07/01/2006
Paraprofessional (03)	07/01/2006
Printers (04)	07/01/2005
Custodial (05)	07/01/2005
Maintenance (06)	07/01/2004
Nurses (07)	07/01/2004
Cafeteria (08)	07/01/2005
Non-Bargaining (09)	07/01/2006
Custodial III/Head Custodian (10)	07/01/2005
Security (12)	07/01/2005
Professional/Technical (14)	07/01/2004
Cafeteria Managers (15)	07/01/2005
Non-Union Plan B (16)	07/01/2006
All Town Unions (58) - (90)	07/01/2003
Part C	07/01/2005
Part D	08/01/2006

Appendix C - Summary of Plan Provisions

Member Contributions

Part B

Members contribute at the Normal Rate. For certain unions, the Long Service Rate applies after 30 years of service for members hired prior to 07/01/2003, and after 35 years of service for members hired on or after 07/01/2003. (Custodial (05) date of demarkation is 01/01/2006.) For members in the Streets (62), Grounds (70), Building Maintenance (71), and Supervisor (74) unions, the contribution is based on base pay. For other members, the contribution is based on total compensation.

	Normal Rate	Long Service Rate
Secretarial/Clerical (02)	5.75%	
Paraprofessional (03)	5.00%	
Printers (04)	5.25%	2.00%
Custodial (05)	5.50%	2.00%
Maintenance (06)	5.25%	2.00%
Nurses (07)	5.50%	2.00%
Cafeteria (08)	4.50%	
Non-Bargaining (09)	5.75%	
Custodial III/Head Custodian (10)	7.00%	
Security (12)	5.75%	
Professional/Technical (14)	5.75%	
Cafeteria Managers (15)	7.00%	
Non-Union Plan B (16)	5.75%	
Nurses (58)	6.25%	2.00%
Directors (59)	6.25%	4.00%
Streets (62)	6.25%	2.00%
a - Includes 1.00% for COLA Clerical (65)	5.25% a	2.00% a
Non-Bargaining Clerical (66)	5.25%	2.00%
Non-Bargaining (68)	6.25%	2.00%
Grounds (70)	6.25%	2.00%
a - Includes 1.00% for COLA b - Includes 1.00% for COLA. Employees hired after 09/24/2015 contribute at the Normal Rate regardless of service. Building Maintenance (71)	6.25% a	2.00% a
Professional/Management (73)	6.25%	2.00% b
Supervisor (74)	6.25%	3.00%
Parking Monitors (81)	6.25%	2.00%
Corporate Counsel (87)	6.25%	4.00%
Town Manager (90)	5.00%	

Part B1 (64)

6% of compensation plus 1% COLA contribution.

Part C (61)

Members hired prior to 04/01/2014, 1% of base pay plus 7% of compensation. Members hired on or after 04/01/2014, 8% of base pay.

Part D (60)

1% of base pay plus 5% of compensation. Members hired on or after 06/26/2018, 6% of base pay.

Appendix C - Summary of Plan Provisions

Member Contributions cont.

Part E 3% of base compensation.

Interest 2% compounded annually.

Normal Retirement Date Earliest of the following age/service combinations, based on date of hire. For these purposes, "service" is calculated by assuming the member continues to work beyond date of termination.

	If hired prior to the applicable date				Applicable date	If hired on or after the applicable date		
Parts B & E								
Secretarial/Clerical (02)	55/25	60/10	70/0		05/01/2006	65/15	62/35	70/0
Paraprofessional (03)	55/25	60/10	70/0		05/01/2006	65/15	62/35	70/0
Printers (04)	55/25	60/10	70/0		07/01/2004	65/15	62/35	70/0
Custodial (05)	55/25	60/10	70/0	0/30	01/01/2006	65/15	0/35	70/0
Maintenance (06)	55/25	60/10	70/0	0/30	07/01/2004	65/15	62/35	70/0
Nurses (07)	55/25	60/10	70/0		07/01/2004	65/15	62/35	70/0
Cafeteria (08)	55/25	60/10	70/0		07/01/2004	65/15	62/35	70/0
Non-Bargaining (09)	55/25	60/10	70/0		07/01/2006	65/15	62/35	70/0
Custodial III/Head Custodian (10)	55/25	60/10	70/0		07/01/2005	65/15	62/35	70/0
Security (12)	55/25	60/10	70/0		05/01/2006	65/15	62/35	70/0
Professional/Technical (14)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Cafeteria Managers (15)	55/25	60/10	70/0		07/01/2004	65/15	62/35	70/0
Non-Union Plan B (16)	55/25	60/10	70/0		07/01/2006	65/15	62/35	70/0
Nurses (58)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Directors (59)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Streets (62)	55/25	60/10	70/0	0/30	07/01/2003	65/15	0/35	70/0
Clerical (65)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Non-Bargaining Clerical (66)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Non-Bargaining (68)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Grounds (70)	55/25	60/10	70/0	0/30	07/01/2003	65/15	62/35	70/0
Building Maintenance (71)	55/25	60/10	70/0	0/30	07/01/2003	65/15	62/35	70/0
Professional/Management (73)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Supervisor (74)	55/25	60/10	70/0	0/30	07/01/2003	65/15	62/35	70/0
Parking Monitors (81)	applies to all members regardless of hire					65/15	62/35	70/0
Corporate Counsel (87)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Town Manager (90)	55/25	60/10	70/0		07/01/2003	65/15	62/35	70/0
Part B1 (64)	55/25	60/10	70/0	0/20	07/01/2007	0/25		
Part C (61)	55/10	0/20	65/0		07/01/2005	50/25	65/0	
Part D (60)	applies to all members regardless of hire					55/10	0/20	65/0

Appendix C - Summary of Plan Provisions

Normal Retirement Benefit

Part B

For service prior to 01/01/1986:

(1) 2% times Average Final Compensation times Credited Service up to 33 years, plus 1% times Average Final Compensation times Credited Service in excess of 33 years; less

(2) 5/6% times Average Final Compensation not in excess of Covered Compensation times Credited Service; plus

(3) For Members who retire before age 62, a temporary allowance calculated as in (2) above. Such benefit shall terminate with the payment for the month the member attains Social Security Normal Retirement Age if in a Town union and age 62 otherwise.

For service after 01/01/1986: 2% times Average Final Compensation times Credited Service capped at 35 years (30 years for **Custodial (05)**).

For members of the following groups hired prior to the applicable date shown below, the benefit for a member who retires with 30 years of Credited Service is 70% of Average Final Compensation:

Custodial (05)	01/01/2006
Maintenance (06)	07/01/2004
Streets (62)	07/01/2003
Non-Bargaining Clerical (66)	07/01/2003
Non-Bargaining (68)	07/01/2003
Grounds (70)	07/01/2003
Building Maintenance (71)	07/01/2003
Professional/Management (73)	07/01/2003
Supervisor (74)	07/01/2003

For Clerical (65) members hired prior to 07/01/2003, the benefit for a member who retires at age 55 with 25 years of Credited Service is 60% of Average Final Compensation; the benefit for a member who retires at age 55 with 30 years of Credited Service is 70% of Average Final Compensation.

Part B1 (64)

The same as Part B. For members hired on or after 07/01/2007:

25-27 years of Credited Service	55% of Average Final Compensation
28+ years of Credited Service	56% of Average Final Compensation plus 2% for each additional year of Credited Service capped at 35 years

Appendix C - Summary of Plan Provisions

Part C (61) For members hired prior to 04/01/2014, 2.5% times Average Final Compensation times Credited Service, capped at 75% of Average Final Compensation (except as noted below under Maximum Benefit).

For members actively employed on 07/01/2014 who were hired prior to 04/01/2014 and retire with 30 years of Credited Service, 80% of Average Final Compensation.

For members hired on or after 04/01/2014, 2.0% times Average Final Compensation times Credited Service. For such members who retire with 30 years of Credited Service, 65% of Average Final Compensation. Maximum benefit is 65% of Average Final Compensation.

Part D (60) For members hired prior to 08/01/2006, 2.5% times Average Final Compensation times Credited Service.

For members hired on or after 08/01/2006 and prior to 06/26/2018, 2.5% times average base pay times Credited Service (average base pay is the highest three calendar years of base pay plus 50% of overtime pay determined without regard to private duty, sick leave, or any other compensation).

For members hired on or after 06/26/2018, 2.0% times average base pay times Credited Service (average base pay is the highest three calendar years determined without regard to overtime, private duty, sick leave, or any other compensation than base pay).

For members on payroll as of 07/01/2006 or hired thereafter but prior to 06/26/2018 who retire with 30 years of Credited service, 80% of Average Final Compensation (determined with buyback time excluded).

Part E 1.0% times Average Final Compensation times Credited Service capped at 35 years.

Minimum Benefit

Parts B & B1 & E \$360 per year. For terminated vested members, the benefit is reduced by \$24 per year for less than 15 years of continuous credited service.

Parts C & D \$1,000 per year. For Part C members, the benefit is reduced by \$67 per year for less than 15 years of continuous credited service.

Appendix C - Summary of Plan Provisions

Maximum Benefit

Parts B & E Except as noted below, the maximum benefit is 75% of Average Final Compensation for Part B and 35% of Average Final Compensation for Part E.

For all Board of Education unions except Printers (04) and Cafeteria (08), the maximum benefit (before the Supplemental Benefit) is 100% of the final year's base pay.

For members of Streets (62), Grounds (70), Building Maintenance (71), Professional/Management (73) who are eligible for normal retirement, and Supervisor (74) members who were hired prior to 07/01/2003 and retire with 30 years of service, the maximum benefit (before the Supplemental Benefit) is 70% of Average Final Compensation.

For all other Town union members, the maximum benefit (before the Supplemental Benefit) is 100% of the final year's base pay.

Part B1 75% of Average Final Compensation.

Part C For members hired prior to 07/01/2005, 95% of base pay. For members hired on or after 07/01/2005, 85% of base pay.

Part D For members hired prior to 08/01/2006, 95% of base pay (including education incentive and holiday pay only). For members hired on or after 08/01/2006, 85% of base pay (excluding overtime, holiday pay, sick pay, vacation time or other incentive or extra pay).

Supplemental Benefit

Applies to Secretarial/Clerical (02), Paraprofessional (03) and Security (12) hired prior to 05/01/2006; Printers (04), Maintenance (06), Nurses (07), Cafeteria (08), Professional/Technical (14), and Cafeteria Managers (15) hired prior to 07/01/2004; Custodial (05) hired prior to 01/01/2006; Non-Bargaining (09) hired prior to 07/01/2006; Custodian III/Head Custodian (10) hired prior to 07/01/2005; and all Town unions and Town non-bargaining hired prior to 07/01/2003.

Members who work past Normal Retirement Date by attaining age 55 with 25 years of service or age 60 with 10 years of service receive a supplemental annual benefit equal to \$600 times each full year of service worked beyond Normal Retirement Date. This supplemental benefit is not eligible for a COLA and will not be a survivor benefit. Payments are made as a single payment during the month of July, starting the first July after the member's retirement date.

Appendix C - Summary of Plan Provisions

Early Retirement

A member may retire and receive a reduced monthly benefit upon reaching the earliest of the following age/service combinations, based on date of hire.

	If hired prior to the applicable date	Applicable date	If hired on or after the applicable date			
Parts B & E						
Secretarial/Clerical (02)	45/15	50/10	05/01/2006	55/15	60/10	
Paraprofessional (03)	45/15	50/10	05/01/2006	55/15	60/10	
Printers (04)	45/15	50/10	07/01/2004	55/15	60/10	
Custodial (05)	45/15	50/10	01/01/2006	55/15	60/10	
Maintenance (06)	45/15	50/10	07/01/2004	55/15	60/10	
Nurses (07)	45/15	50/10	07/01/2004	55/15	60/10	
Cafeteria (08)	45/15	50/10	07/01/2004	55/15	60/10	
Non-Bargaining (09)	45/15	50/10	07/01/2006	55/15	60/10	
Custodial III/Head Custodian (10)	45/15	50/10	07/01/2005	55/15	60/10	
Security (12)	45/15	50/10	05/01/2006	55/15	60/10	
Professional/Technical (14)	45/15	50/10	07/01/2003	55/15	60/10	
Cafeteria Managers (15)	45/15	50/10	07/01/2004	55/15	60/10	
Non-Union Plan B (16)	45/15	50/10	07/01/2006	55/15	60/10	
Nurses (58)	45/15	50/10	07/01/2003	55/15	60/10	
Directors (59)	45/15	50/10	07/01/2003	55/15	60/10	
Streets (62)	45/15	50/10	07/01/2003	55/15	60/10	
Clerical (65)	45/15	50/10	07/01/2003	55/15	60/10	
Non-Bargaining Clerical (66)	45/15	50/10	07/01/2003	55/15	60/10	
Non-Bargaining (68)	45/15	50/10	07/01/2003	55/15	60/10	
Grounds (70)	45/15	50/10	07/01/2003	55/15	60/10	
Building Maintenance (71)	45/15	50/10	07/01/2003	55/15	60/10	
Professional/Management (73)	45/15	50/10	07/01/2003	55/15	60/10	
Supervisor (74)	45/15	50/10	07/01/2003	55/15	60/10	
Parking Monitors (81)	45/15	50/10	07/01/2003	55/15	60/10	
Corporate Counsel (87)	45/15	50/10	07/01/2003	55/15	60/10	
Town Manager (90)	45/15	50/10	07/01/2003	55/15	60/10	
Part B1 (64)	45/15	50/10	07/01/2007	45/15	50/10	0/20
Benefit reduction basis (for all listed above)	1971GAM Male-1, 6.5%			6% per year retiring prior to Normal Retirement		

Parts C & D

Any age with 10 years of Credited Service; benefit reduction basis is 1971GAM Male-1, 6.5%.

Appendix C - Summary of Plan Provisions

Deferred Retirement

Parts B, B1 & E Members may work beyond retirement at their own option, and will continue to accrue benefits under the plan.

Parts C & D Members may not work later than the December 31st nearest their 65th birthday.

Disability Retirement

A member regardless of age with 10 or more years of continuous service is eligible if he or she is totally and permanently disabled and unable thereby to engage in gainful occupation with the Town. The benefit amount is equal to the regular pension benefit without reduction for early commencement.

If the disability is Service-Connected, the 10-year service requirement is waived and the benefit is the greater of (a) the regular pension benefit without reduction for early commencement, or (b) 50% of base pay less any payments received on account of Social Security or Worker's Compensation.

Parts B, B1 & E: annual minimum benefit of \$360.

Parts C & D: annual minimum benefit of \$1,000.

Survivorship Benefit

Upon the death of a Part C (61) or Part D (60) member, either active or retired (including disability retirements), an annual benefit is paid to spouses who have not remarried, dependent minor children, or dependent parent(s). The benefit is equal to a percentage between 25% and 50% (depending on number and types of survivors) of final base rate of pay.

Preretirement Death

Return of member's contributions with regular interest. Part C (61) and Part D (60) members generally do not receive 1% of base wages contributed.

Alternatively, a surviving spouse may elect to receive a life annuity starting on or after the date the member would have been eligible for Early Retirement. The benefit is equal to what the spouse would have received had the member terminated employment on the date of death, elected a 50% Joint & Survivor annuity commencing on the death benefit start date, and then died.

Appendix C - Summary of Plan Provisions

Postretirement Death

Excess of member's contributions with regular interest to retirement date over pension payments received prior to death, unless optional form with 10-year certain period has been elected. Part C (61) and Part D (60) members generally do not receive 1% of base wages contributed.

For Part C (61) and Part D (60) members, the surviving spouse will receive a benefit (until remarriage) as follows:

Age/Service Criteria:

Part C hired prior to 07/01/2005: 0/10

Part C hired on or after 07/01/2005: 55/10 or 0/15

Part D: 55/10 or 0/15

Benefit: The benefit that would have been payable to the surviving spouse had the member elected a 50% Joint & Survivor annuity. The excess of actual benefit payments received over the payments that would have been received had the member actually elected a 50% Joint & Survivor annuity must be repaid; the repayment can be made as an offset to the surviving spouse's monthly benefit.

For all other members, postretirement death benefits are payable according to the form of annuity elected by the member at retirement.

Cost of Living Adjustments

The following groups receive a 1% annual COLA starting on the January 1 or July 1 following the third year of retirement if the member retires on or after Normal Retirement Date, or beginning three years after the member would have been eligible for a Normal Retirement benefit.

Nurses (07) hired prior to 06/30/2010

Security (12) hired prior to 06/30/2010

Dispatchers (64)

Clerical (65)

Grounds (70) who retire prior to 09/24/2015

Building Maintenance (71)

Professional Management (73)

Supervisor (74) who retire prior to 05/24/2016

Part C (61) members hired after 07/01/2005 receive a 2% COLA starting two years after retirement and payable each July 1.

Part D (60) members hired after 08/01/2006 receive a 2% COLA starting on the July 1 following the second year of retirement. Those hired on or after 06/26/2018 are only eligible for this COLA if they retire under normal retirement provisions with 25 years of Credited Service.

COLAs do not apply to Supplemental Benefits, pre-retirement death benefits, disability benefits, or benefits payable to members who terminate with a vested benefit.

Appendix D - Glossary

Actuarial Cost Method - This is a procedure for determining the Actuarial Present Value of Benefits and allocating it to time periods to produce the Actuarial Accrued Liability and the Normal Cost.

Accrued Liability - This is the portion of the Actuarial Present Value of Benefits attributable to periods prior to the valuation date by the Actuarial Cost Method (i.e., that portion not provided by future Normal Costs).

Actuarial Assumptions - With any valuation of future benefits, assumptions of anticipated future events are required. If actual events differ from the assumptions made, the actual cost of the plan will vary as well. Some examples of key assumptions include the interest rate, salary scale, and rates of mortality, turnover and retirement.

Actuarial Present Value of Benefits - This is the present value, as of the valuation date, of future payments for benefits and expenses under the Plan, where each payment is: a) multiplied by the probability of the event occurring on which the payment is conditioned, such as the probability of survival, death, disability, termination of employment, etc.; and b) discounted at the assumed interest rate.

Actuarial Value of Assets - This is the value of cash, investments and other property belonging to the plan, typically adjusted to recognize investment gains or losses over a period of years to dampen the impact of market volatility on the Actuarially Determined Contribution.

Actuarially Determined Contribution (“ADC”) - This is the employer’s periodic contributions to a defined benefit plan, calculated in accordance with actuarial standards of practice.

Attribution Period - The period of an employee’s service to which the expected benefit obligation for that employee is assigned. The beginning of the attribution period is the employee’s date of hire and costs are spread across all employment.

Interest Rate - This is the long-term expected rate of return on any investments set aside to pay for the benefits. In a financial reporting context (e.g., GASB 68) this is termed the Discount Rate.

Normal Cost - This is the portion of the Actuarial Present Value of Benefits allocated to a valuation year by the Actuarial Cost Method.

Past Service Cost - This is a catch-up payment to fund the Unfunded Accrued Liability over time (generally 10 to 30 years). A closed amortization period is a specific number of years counted from one date and reducing to zero with the passage of time; an open amortization period is one that begins again or is recalculated at each valuation date. Also known as the Amortization Payment.

Return on Plan Assets - This is the actual investment return on plan assets during the fiscal year.

Unfunded Accrued Liability - This is the excess of the Accrued Liability over the Actuarial Value of Assets.