Town of East Hartford Pension Plan

Actuarial Valuation and Review as of July 1, 2022

This report has been prepared at the request of the Pension Board to assist in administering the Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes

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Segal

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April 19, 2023

Mr. John Murphy
Town of East Hartford Pension Plan
740 Main Street
East Hartford, CT 06108

Dear John:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2022. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal year ending June 30, 2024.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Town of East Hartford Pension Plan. The census information and financial information on which our calculations were based was prepared by the staff of the Town of East Hartford. That assistance is gratefully acknowledged.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The actuarial calculations were directed under Henry Nearing's supervision. He is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of his knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in his opinion, the assumptions as approved by the Pension Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,
Segal

Henry P. Nearing

Henry P. Nearing, FCA, MAAA, EA
Vice President and Consulting Actuary

Sara Monde

Sara Monde
Senior Consultant

Table of Contents

Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a valuation of the Plan as of July 1, 2022. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligations. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as 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; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Town;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of July 1, 2022, provided by the Town;
- The assets of the Plan as of June 30, 2022, provided by the Town;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. and

Certain disclosure information required by GASB Statements No. 67 and 68 as of June 30, 2022 for the Plan is provided in a separate report.

Valuation highlights

1. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. In the short term, the funding policy adopted by the Town does not meet this standard, as the amortization does not cover the interest on the unfunded liability.
2. The rate of return on the market value of assets was -10.35% for the year ending June 30, 2022. The return on the actuarial value of assets was 4.77% for the same period due to the recognition of prior years' investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 7.25%. Given the target asset allocation and expectations of future investment returns for various asset classes, we advise the Board to continue to monitor actual and anticipated investment returns relative to the assumed long-term rate of return on investments. The assumed rate of return was lowered from 7.25% to 7.20% for the 2023/2024 fiscal year. A rate of 6.50% - 7.0% may be more appropriate.
3. The actuarial value of assets is 109.54% of the market value of assets. The investment experience in the past years has only been partially recognized in the actuarial value of assets. As the deferred net loss is recognized in future years, the cost of the Plan is likely to increase unless the net loss is offset by future experience gains. The recognition of the market losses of $20,953,744 will also have an impact on the future funded ratio. If the net deferred losses were recognized immediately in the actuarial value of assets, the ADC would increase from 71.8% to about 76.3% of projected pay, or about $1.4 million.
4. The following actuarial assumptions were changed with this valuation, which is used to develop the next fiscal year ADC:
   - The net investment return assumption was lowered from 7.25% to 7.20% to better reflect future expectations.
   - Mortality for males was projected an additional year using Scale BB.
   - The interest crediting rate on employee money assumption increased from 2.00% per year to 3.00% per year to better reflect future expectations.

   As a result of these assumption changes, the Town normal cost increased by about $84,000 and the actuarial accrued liability increased by approximately $3,511,000. The total impact was an increase in the ADC of $255,000, or 0.8% of projected pay.

Changes from prior valuation

5. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 46.61%, compared to the prior year funded ratio of 47.85%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 42.55%, compared to 51.08% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of the plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.
6. The ADC for the fiscal year beginning July 1, 2023 is $22,901,528, an increase of $1,437,089 from the fiscal year beginning July 1, 2022. The contribution as a percentage of projected pay increased from 63.9% of projected pay to 71.8% of pay, based on a 21-year level amortization of the unfunded actuarial accrued liability. The causes of this increase are shown on page 23. The 2023/2024 ADC is based on the assumed long-term rate of return of 7.20% as selected by the Town.
7. The unfunded actuarial accrued liability is $275,598,507, which is an increase of $15,037,313 since the prior valuation.

Risk

8. It is important to note that this actuarial valuation is based on plan assets as of June 30, 2022. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after June 30, 2022 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
9. Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan in *Section 2*. A more detailed assessment would provide the Board with a better understanding of the inherent risks.

Summary of key valuation results

		2023	2022	2021
Contributions for fiscal year beginning July 1[1]	• Actuarially determined contributions	$22,901,528	$21,464,439	$18,964,310
	• Actuarially determined contributions as a percent of pay	69.50%	61.89%	54.59%
Actuarial accrued liability for plan year beginning July 1:	• Retired participants and beneficiaries		$377,320,167	$352,986,473
	• Inactive vested participants		5,501,804	3,938,893
	• Inactive participants due a refund of employee contributions		470,045	382,600
	• Active participants		132,891,839	142,317,079
	• Total		516,183,855	499,625,045
	• Normal cost including administrative expenses for plan year beginning July 1		6,058,848	6,235,304
Assets for plan year beginning July 1:	• Market value of assets (MVA)[2]		$219,631,604	$255,193,345
	• Actuarial value of assets (AVA)[2]		240,585,348	239,063,851
	• Actuarial value of assets as a percentage of market value of assets		109.54%	93.68%
Funded status for plan year beginning July 1:	• Unfunded/(overfunded) actuarial accrued liability on market value of assets		$296,552,251	$244,431,700
	• Funded percentage on MVA basis		42.55%	51.08%
	• Unfunded/(overfunded) actuarial accrued liability on actuarial value of assets		$275,598,507	$260,561,194
	• Funded percentage on AVA basis		46.61%	47.85%
	• Amortization period on an AVA basis		21	22
Key assumptions	• Net investment return		7.20%	7.25%
	• Inflation rate		3.25%	3.25%
Demographic data for plan year beginning July 1:	• Number of retired participants and beneficiaries		780	758
	• Number of inactive vested participants		43	36
	• Number of active participants		356	393
	• Number of inactive participants due a refund of employee contributions		67	62
	• Projected total pay		$31,913,351	$33,587,358
	• Projected average pay		89,644	85,464

[1] ADC is based on prior year valuation

[2] Does not include DROP assets, which are held in a separate account. This amount was also excluded from the liabilities. As of July 1, 2022, the DROP account assets are $12,486,348. As of July 1, 2021, the DROP account assets were $12,684,689.

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant information	An actuarial valuation for a plan is based on data provided to the actuary by the Town. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the Town. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

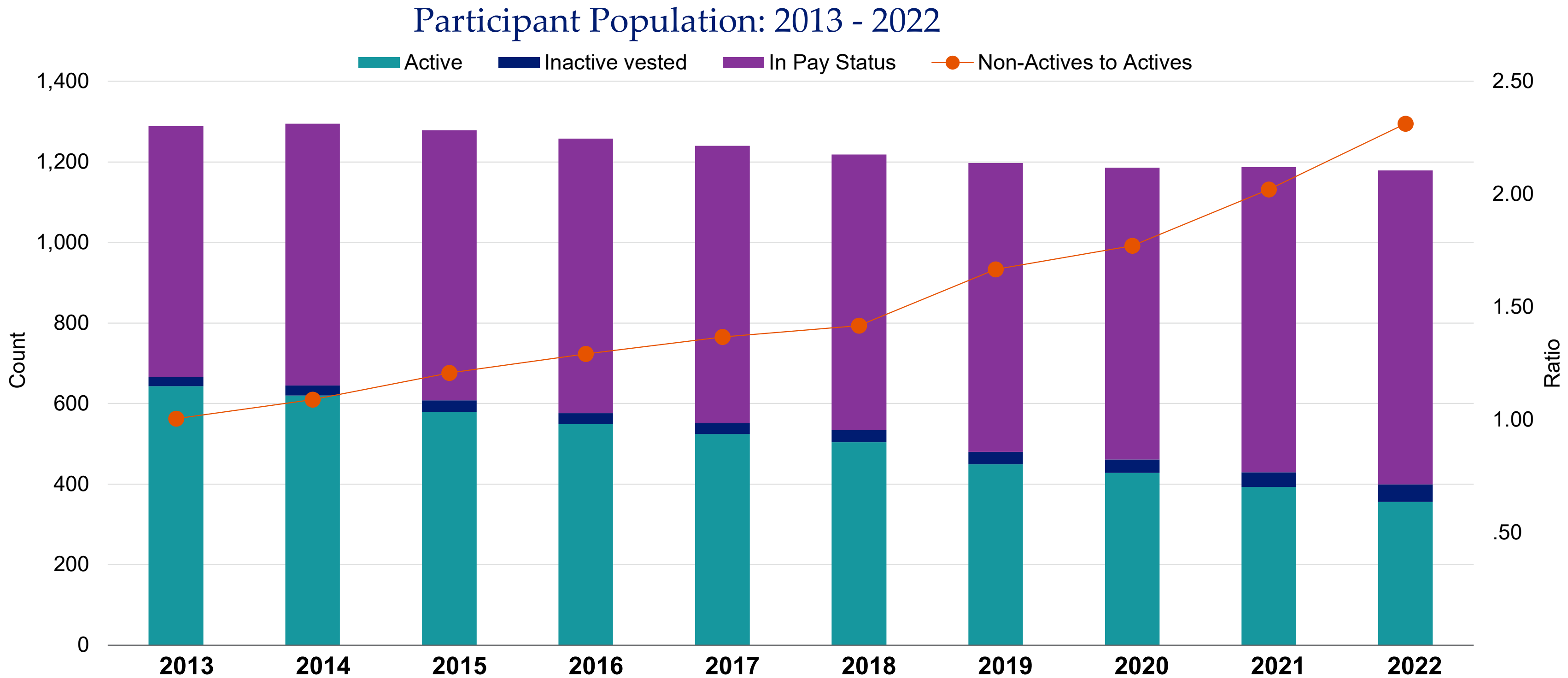
The actuarial valuation is prepared at the request of the Town. Segal is not responsible for the use or misuse of its report, particularly by any other party.
An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
If the Town is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan provisions, but they may be subject to alternative interpretations. The Town should look to their other advisors for expertise in these areas.
While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
Segal's report shall be deemed to be final and accepted by the Town upon delivery and review. The Town should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: Actuarial Valuation Results

Participant information

This section presents a summary of significant statistical data on covered participants.



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
In Pay Status[1]	623	650	670	682	689	684	717	725	758	780
Inactive Vested[2]	23	25	29	27	27	30	31	33	36	43
Active	643	620	579	549	524	504	449	428	393	356
Ratio	1.00	1.09	1.21	1.29	1.37	1.42	1.67	1.77	2.02	2.31

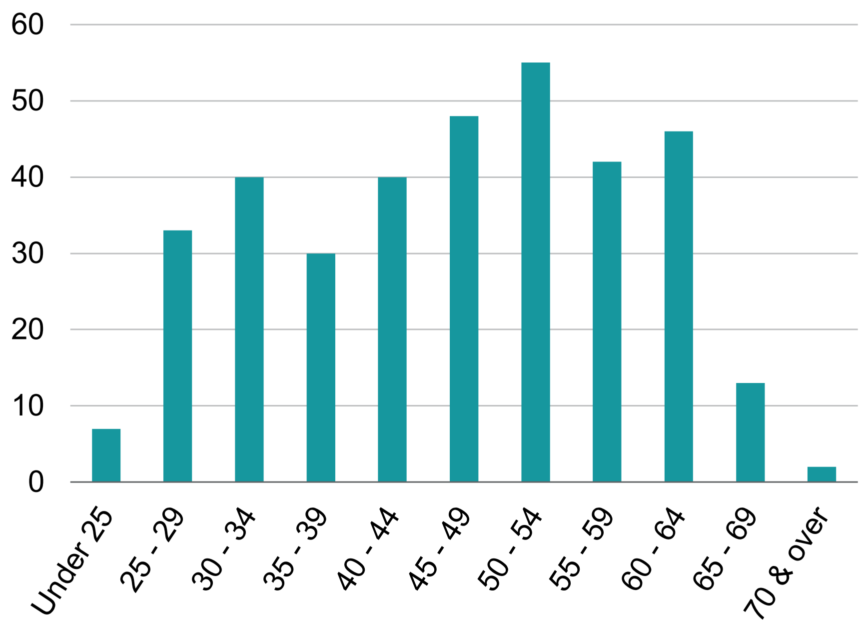
[1] Includes disabled participants (27 as of June 30, 2022)
[2] Excluding terminated non-vested participants due a refund of employee contributions

Active participants

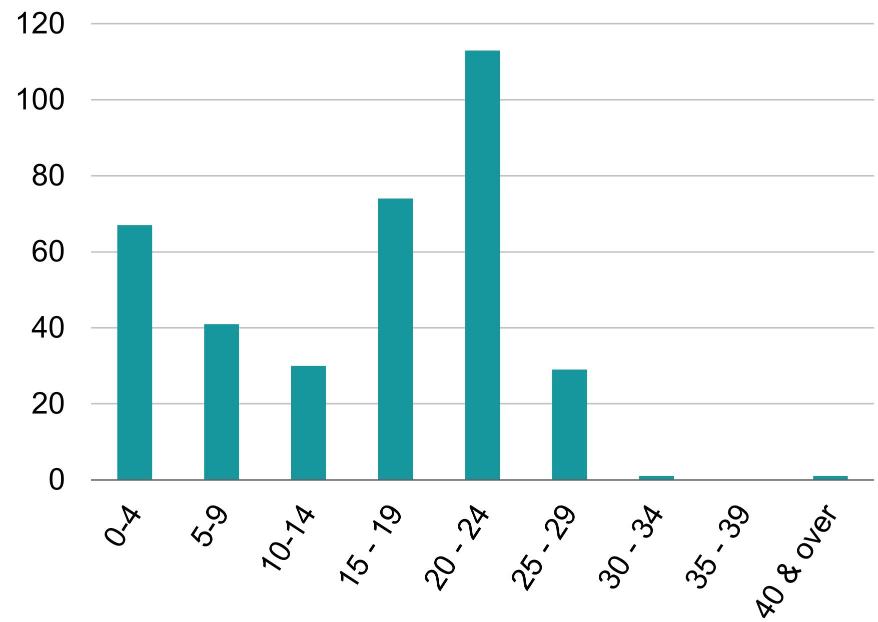
As of June 30,	2022	2021	Change
Active participants	356	393	-9.4%
Average age	46.8	48.3	-1.5
Average years of benefit service	15.0	15.5	-0.5
Average compensation	$89,644	$85,464	4.9%

Distribution of Active Participants as of June 30, 2022

Actives by Age



Actives by Years of Benefit Service



Inactive participants

In this year's valuation, there were 43 inactive participants with a vested right to a deferred or immediate vested benefit.

In addition, there were 67 inactive non-vested participants entitled to a return of their employee contributions.

Retired participants and beneficiaries

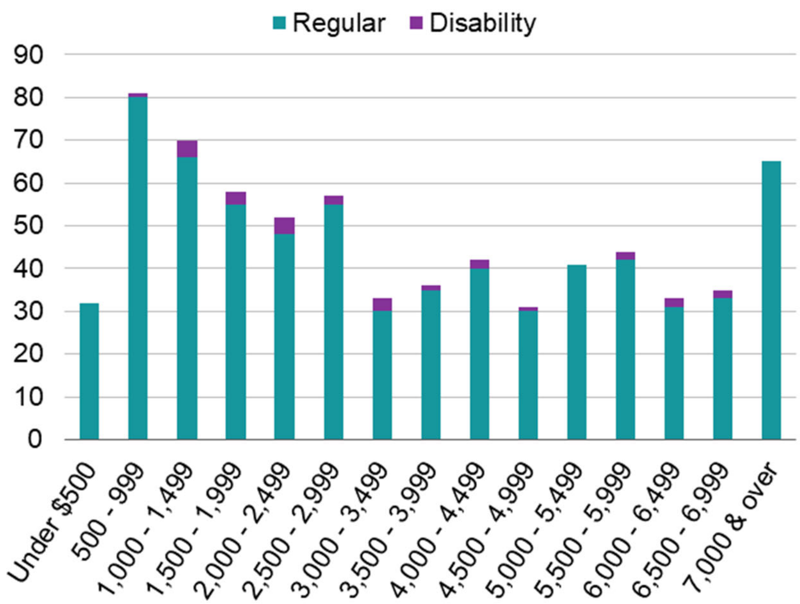
As of June 30,	2022	2021	Change
Retired participants (including disabled participants)	710	691	2.7%
Beneficiaries	70	67	4.5%
Average age	70.6	70.7	0.1
Average amount	$3,430	$3,328	3.1%
Total monthly amount	$2,675,475	$2,522,935	6.0%

As of June 30,	2022	2021	Change
DROP retirees	36	35	2.9%
Average age	53.9	54.3	-0.4
Average amount	$6,251	$6,346	-1.5%

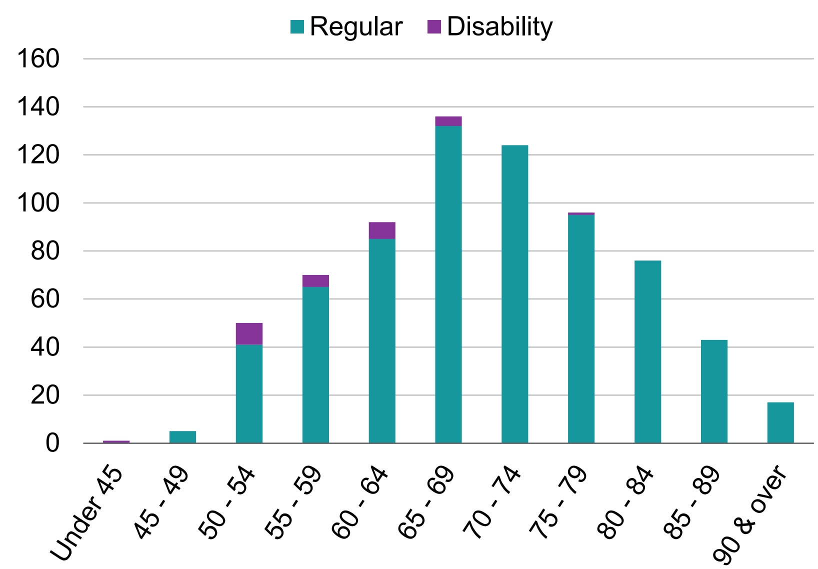
Note: Drop retirees are included in retired participant counts

Distribution of Retired Participants and Beneficiaries as of June 30, 2022

Retired Participants and Beneficiaries by Type and Monthly Amount



Retired Participants and Beneficiaries by Type and Age

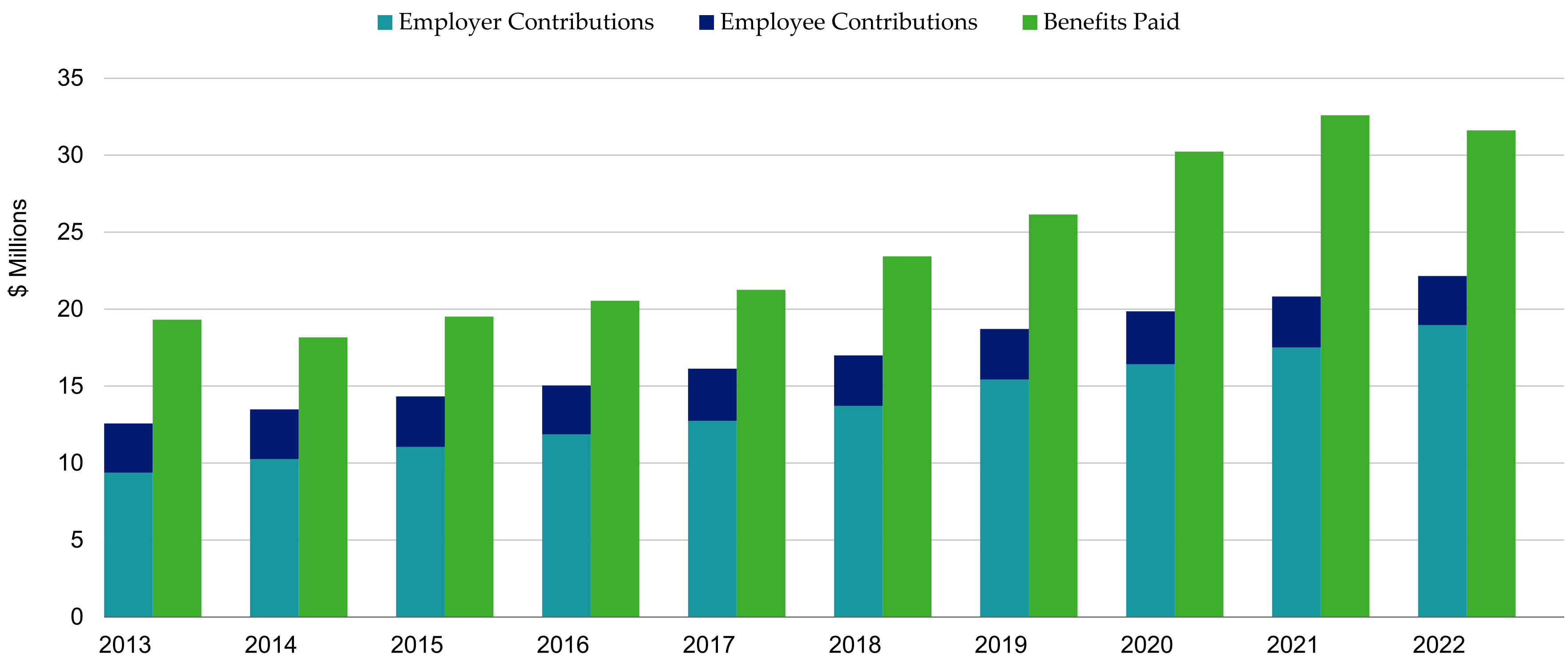


Financial information

Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and investment earnings (less investment fees) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.

Additional financial information, including a summary of transactions for the valuation year, is presented in *Section 3, Exhibits C* and *D*.

Comparison of Contributions Made with Benefits Paid
for Years Ended June 30, 2013 - 2022



Section 2: Actuarial Valuation Results

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Pension Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Determination of Actuarial Value of Assets for Year Ended June 30, 2022

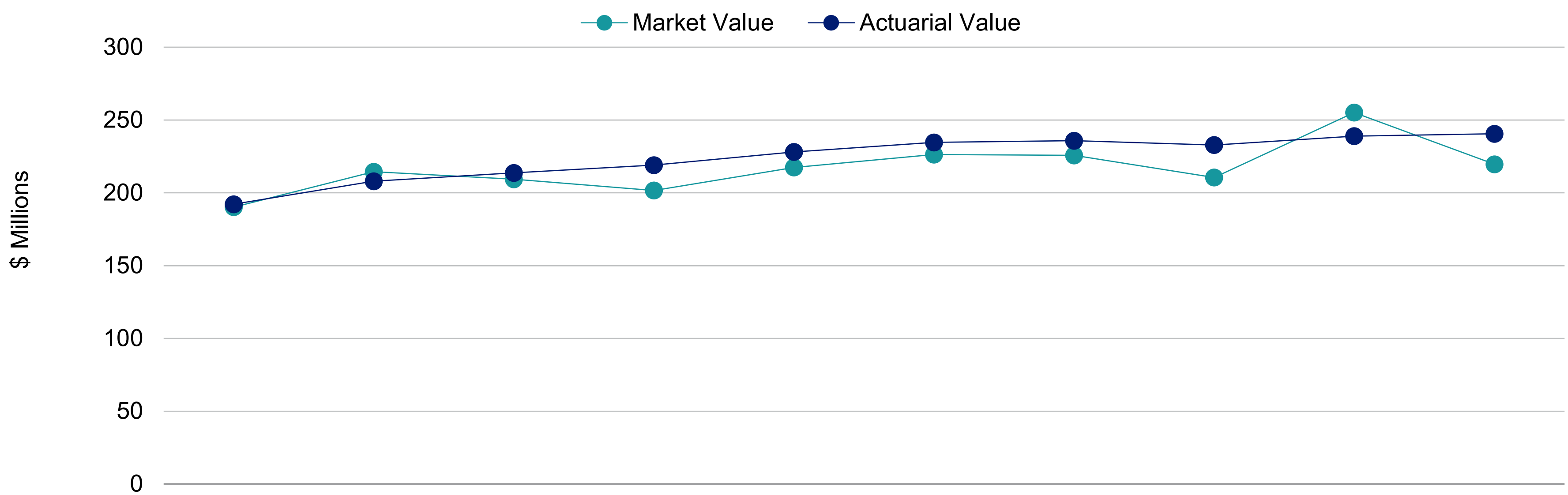
			Original Amount[1]	Percent Deferred[2]	Unrecognized Amount[3]	
1	Market value of assets, June 30, 2022					$219,631,604
2	Calculation of unrecognized return					
	(a)	Year ended June 30, 2022	-$44,061,969	80%	-$35,249,575	
	(b)	Year ended June 30, 2021	41,351,663	60%	24,810,999	
	(c)	Year ended June 30, 2020	-21,349,837	40%	-8,539,934	
	(d)	Year ended June 30, 2019	-9,876,170	20%	-1,975,234	
	(e)	Year ended June 30, 2018	-957,333	0%	0	
	(f)	Total unrecognized return				-$20,953,744
3	Preliminary actuarial value: (1) - (2f)					240,585,348
4	Adjustment to be within 20% corridor					0
5	Final actuarial value of assets as of June 30, 2022: (3) + (4)					$240,585,348
6	Actuarial value as a percentage of market value: (5) ÷ (1)					109.5%
7	Amount deferred for future recognition: (1) - (5)					-$20,953,744

[1] Total return minus expected return on a market value basis
[2] Percent deferred applies to the current valuation year
[3] Recognition at 20% per year over five years

Section 2: Actuarial Valuation Results

Both the actuarial value and market value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Actuarial Value of Assets vs Market Value of Assets



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Market Value[1]	$190.16	$214.46	$209.40	$201.76	$217.55	$226.33	$225.75	$210.49	$255.19	$219.63
Actuarial Value[1]	192.20	208.02	213.70	219.06	228.14	234.58	235.76	232.80	239.06	240.59
Ratio	1.01	0.97	1.02	1.09	1.05	1.04	1.04	1.11	0.94	1.10

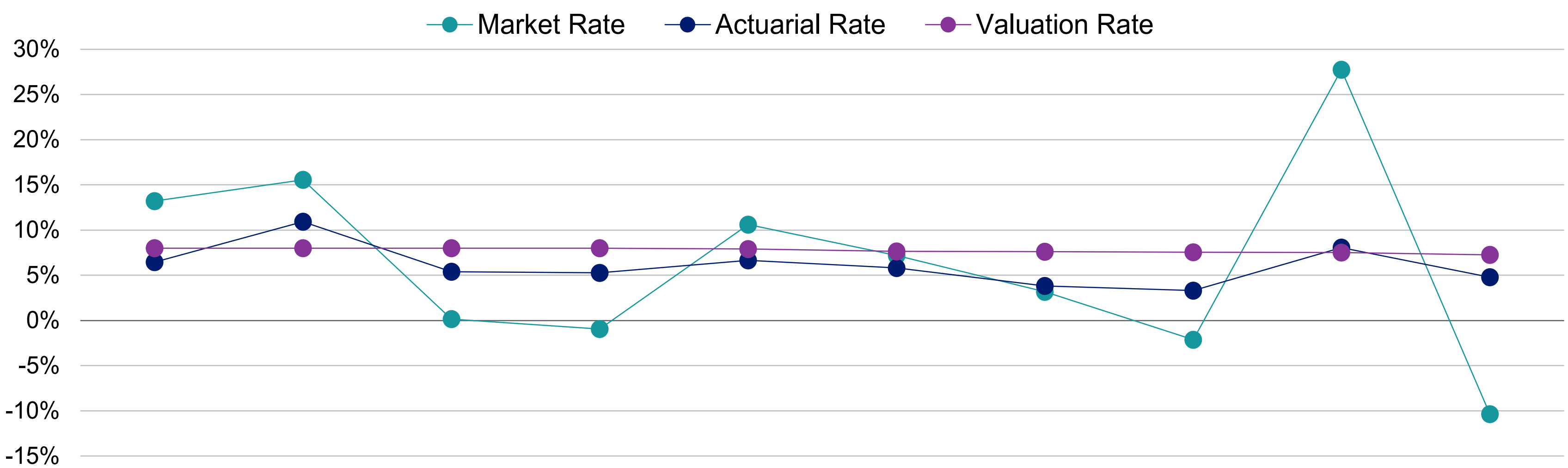
[1] In $ millions

Section 2: Actuarial Valuation Results

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the actual market value investment return for the last 10 years, including averages over select time periods.

As described earlier in this section, the actuarial asset valuation method gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

Market and Actuarial Rates of Return for Years Ended June 30, 2013 -2022



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Market rate	13.20%	15.55%	0.14%	-0.94%	10.60%	7.20%	3.16%	-2.13%	27.72%	-10.35%
Actuarial rate	6.45%	10.91%	5.38%	5.25%	6.65%	5.82%	3.81%	3.29%	8.05%	4.77%
Assumed rate	8.00%	8.00%	8.00%	8.00%	7.90%	7.65%	7.60%	7.55%	7.50%	7.25%

Average Rates of Return	Actuarial Value	Market Value
Most recent five-year average return:	5.14%	4.36%
Most recent ten-year average return:	6.05%	5.74%

Actuarial experience

To calculate any actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), any contribution requirement will decrease from the previous year. On the other hand, any contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience. If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

Actuarial Experience for Year Ended June 30,

		2018	2019	2020	2021	2022
1	Gain/(loss) from investments[1]	($4,110,317)	($8,735,160)	($9,807,260)	$1,237,158	($5,809,343)
2	Gain/(loss) from administrative expenses	(11,865)	7,380	20,201	(16,672)	13,611
3	Net gain/(loss) from other experience	1,099,912	(4,242,118)	(3,225,158)	(9,090,692)	(3,104,235)
4	Net experience gain/(loss): **1 + 2 + 3**	($3,022,270)	($12,969,898)	($13,012,217)	($7,870,206)	($8,899,967)

[1] Details for June 30, 2022 on next page

Investment experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. The rate of return on the market value of assets was -10.35% for the year ended June 30, 2022.

For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.25% based on the prior year's assumption. The actual rate of return on an actuarial basis for the 2022 Plan Year was 4.77%. Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended June 30, 2022 with regard to its investments.

Investment Experience

		Year Ended June 30, 2022 Actuarial Value
1	Net investment income	$11,172,922
2	Average value of assets	234,238,139
3	Rate of return: **1 ÷ 2**	4.77%
4	Assumed rate of return	7.25%
5	Expected investment income: **2 x 4**	16,982,265
6	Investment gain/(loss): **1 - 5**	-$5,809,343

Non-investment experience

Administrative expenses

Administrative expenses for the year ended June 30, 2022 totaled $187,309, as compared to the assumption of $200,000. This resulted in an experience gain of $13,611 for the year, including an adjustment for interest. Because it is expected that expenses will remain level, we have maintained the assumption of $200,000 for the current year.

Other experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- cost-of-living adjustment (higher or lower than projected),
- the number of disability retirements (more or fewer than projected), and
- salary increases (greater or smaller than projected).

The net loss from this other experience for the year ended June 30, 2022 amounted to $3,104,235, which is 0.6% of the actuarial accrued liability.

Actuarial assumptions

The assumption changes reflected in this report are:

- The net investment return assumption was lowered from 7.25% to 7.20% to better reflect future expectations.
- Mortality for males was projected an additional year using Scale BB.
- The interest crediting rate on employee money assumption increased from 2.00% per year to 3.00% per year to better reflect future expectations.

These changes increased the actuarial accrued liability by approximately $3,511,000 and the increased the Town normal cost by approximately $84,000.

Details on actuarial assumptions and methods are in *Section 4, Exhibit I*.

Plan provisions

There were no changes in plan provisions since the prior valuation.

A summary of plan provisions is in *Section 4, Exhibit II*.

Section 2: Actuarial Valuation Results

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2022

1	Unfunded/(overfunded) actuarial accrued liability at beginning of year		$260,561,194
2	Normal cost at beginning of year		6,235,304
3	Total contributions		-22,149,031
4	Interest on 1, 2 & 3		18,539,844
5	Expected unfunded/(overfunded) actuarial accrued liability		$263,187,311
6	Changes due to:		
	(a) Net experience (gain)/loss	$8,899,967	
	(b) Assumptions	3,511,229	
	(c) Funding method	0	
	(d) Plan provisions	0	
	Total changes		$12,411,196
7	Unfunded/(overfunded) actuarial accrued liability at end of year		$275,598,507

Actuarially determined contribution

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded/(overfunded) actuarial accrued liability, including added interest to the next fiscal year. The actuarially determined contribution for the fiscal year ending June 30, 2024 is $22,901,528, or 69.50% of projected pay.

The unfunded actuarial accrued liability is amortized with 3.25% annual increases in the payments. This methodology is generally tied to payroll with the contribution expected to remain constant as a percentage of pay. However, payroll is decreasing since the Plan is partially closed to new entrants. Thus the actuarially determined contribution will continue to increase as a result of this methodology chosen by the Town.

The contribution requirement as of the fiscal year beginning July 1, 2023 is based on the data previously described, the actuarial assumptions and plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

Actuarially Determined Contribution for Fiscal Year Beginning July 1

		2023		2022	
		Amount	% of Projected Pay	Amount	% of Projected Pay
1	Total normal cost	$5,858,848	18.36%	$6,035,304	17.40%
2	Administrative expenses	200,000	0.63%	200,000	0.60%
3	Expected employee contributions	-2,496,497	(7.82%)	-2,596,298	-7.73%
4	Employer normal cost: (1) + (2) + (3)	$3,562,351	11.16%	$3,639,006	10.83%
5	Actuarial accrued liability	$516,183,855		$499,625,045	
6	Actuarial value of assets	240,585,348		239,063,851	
7	Unfunded/(overfunded) actuarial accrued liability: (5) - (6)	$275,598,507		$260,561,194	
8	Payment on unfunded/(overfunded) actuarial accrued liability	18,618,306	58.34%	17,149,797	51.06%
9	Total Town cost: (4) + (8)	$22,180,657	69.50%	$20,788,803	61.89%
10	Projected total pay	$31,913,351		$33,587,358	
11	Actuarially Determined Contribution for fiscal years ending June 30, 2024 and June 30, 2023[1]: (9) adjusted with 3.25% interest	$22,901,528	71.76%	$21,464,439	63.91%

[1] Actuarially determined contributions are assumed to be paid at the beginning of every year

Reconciliation of actuarially determined contribution

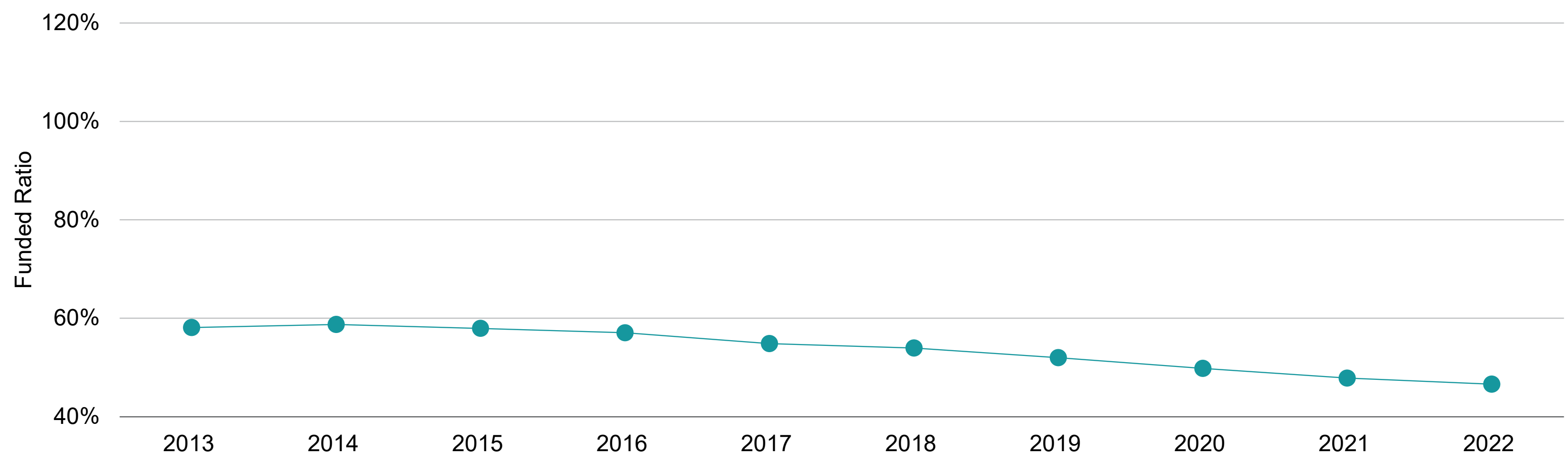
The chart below details the changes in the actuarially determined contribution from the prior valuation to the current year's valuation. The current year valuation results are used to determine the next fiscal year's contribution.

Reconciliation of Actuarially Determined Contribution from Fiscal Year Beginning July 1, 2022 to July 1, 2023

	Amount
Actuarially determined contribution as of July 1, 2022	$21,464,439
Expected amortization increase	575,482
Effect of change in actuarial assumptions	255,128
Change due to recognition of investment loss	406,844
Change in demographic experience	216,445
Net effect of other changes	-16,810
Total change	$1,437,089
Actuarially determined contribution as of July 1, 2023	$22,901,528

Schedule of funding progress through June 30, 2022

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Compensation (c)	UAAL as a Percentage of Covered Compensation [(b) - (a)] / (c)
07/01/2013	$192,202,331	$330,793,117	$138,590,786	58.10%	$40,450,971	342.61%
07/01/2014	208,021,544	354,218,887	146,197,343	58.73%	40,940,891	357.09%
07/01/2015	213,702,418	368,914,089	155,211,671	57.93%	40,058,612	387.46%
07/01/2016	219,060,456	384,162,998	165,102,542	57.02%	38,956,281	423.81%
07/01/2017	228,138,043	415,902,626	187,764,583	54.85%	38,497,587	487.73%
07/01/2018	234,578,607	434,547,482	199,968,875	53.98%	38,122,760	524.54%
07/01/2019	235,759,401	453,661,398	217,901,997	51.97%	34,593,008	629.90%
07/01/2020	232,801,612	467,435,036	234,633,424	49.80%	33,645,319	697.37%
07/01/2021	239,063,851	499,625,045	260,561,194	47.85%	33,587,358	775.77%
07/01/2022	240,585,348	516,183,855	275,598,507	46.61%	31,913,351	863.58%



History of employer contributions

History of Employer Contributions: 2015 – 2024

Year Ended June 30	Actuarially Determined Contribution (ADC)	Actual Employer Contribution	Percent Contributed
2015	$11,045,908	$11,045,908	100.0%
2016	11,879,286	11,856,283	99.8%
2017	12,737,344	12,738,134	100.0%
2018	13,706,771	13,706,771	100.0%
2019	15,430,438	15,430,456	100.0%
2020	16,416,732	16,414,737	100.0%
2021	17,508,860	17,508,860	100.0%
2022	18,964,310	18,964,310	100.0%
2023	21,464,439	- -	- -
2024	22,901,528	- -	- -

Actuarially determined contribution projections

A five-year projection of the actuarially determined contribution (ADC) is shown below. These projected results are based on the same data, plan provisions, assumptions, and methods used in this July 1, 2022 valuation. It is assumed that all assumptions are met for the projection period and that there are no new entrants into the Plan.

Projected Actuarially Determined Contributions for Fiscal Years Ending June 30, 2025 – 2029

Fiscal Year Ended June 30	Estimated ADC *
2025	24,200,000
2026	25,300,000
2027	26,100,000
2028	27,700,000
2029	28,400,000

* Excludes new hires

Risk

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition but have included a brief discussion of some risks that may affect the Plan.

- Economic and Other Related Risks. Potential implications for the Plan due to the following economic effects (that were not reflected as of the valuation date) include:
  - Volatile financial markets and investment returns lower than assumed
  - High inflationary environment impacting salary increases and COLAs
  - Lingering direct and indirect effects of the COVID-19 pandemic
- Investment Risk (the risk that returns will be different than expected)

  If the actual return on market value for the prior plan year were 1% different (either higher or lower), the unfunded actuarial liability would change by 0.91%, or about $2,503,676, disregarding the asset smoothing method.

  Since the Plan's assets are much larger than contributions, investment performance may create volatility in the actuarially determined contribution requirements. For example, for the prior plan year, if the actual return on market value were 1% different, the actuarially determined contribution would increase or decrease by $174,635 disregarding the effects of the 5-year phase-in of investment gains and losses.

  The market value rate of return over the last 10 years has ranged from a low of -10.35% to a high of 27.72%.
- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.
- Contribution Risk (the risk that actual contributions will be different from actuarially determined contribution)

  The Plan's funding policy requires payment of the actuarially determined contribution. As long as this policy is adhered to, contribution risk is negligible.
- Demographic Risk (the risk that participant experience will be different than assumed)

  Examples of this risk include:
  - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
  - More or less active participant turnover than assumed.

Section 2: Actuarial Valuation Results

There are external factors including legislative or financial reporting changes that could impact the Plan's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the Plan.

- Actual Experience Over the Last Five Years

  Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years:

  The non-investment gain(loss) for a year has ranged from a loss of $9,107,364 to a gain of $1,088,047.

  The funded percentage on the actuarial value of assets has ranged from a low of 46.6% to a high of 54.0% since 2018.

Plan Year Ended	Investment Gain/(Loss)	All Other Gains and (Losses)
2018	-1,707,124	1,088,047
2019	-10,766,258	-4,234,738
2020	-21,239,602	-3,204,957
2021	41,351,663	-9,107,364
2022	-44,061,969	-3,090,624

- Maturity Measures

  As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities.

  Currently the Plan has a non-active to active participant ratio of 2.31. For the prior year, benefits and expenses paid were $9,651,425 more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return.

Allocation of Contributions for Fiscal Year Ending June 30, 2024

		Town and Board of Education	Police	Fire	Para-professionals	Dispatchers	Total
1.	Employer normal cost						
	Total normal cost	$694,513	$2,722,200	$2,182,031	$137,038	$123,066	$5,858,848
	Administrative expenses[1]	81,764	45,293	46,819	21,544	4,580	200,000
	Projected employee contributions	420,878	964,802	906,773	90,766	113,278	2,496,497
	Employer normal cost: (a) + (b) + (c)	$355,399	$1,802,691	$1,322,077	$67,816	$14,368	$3,562,351
	Number of participants	482	267	276	127	27	1,179
2.	Actuarial Accrued Liability						
	Active	$30,328,562	$50,918,837	$45,873,841	$3,909,979	$1,860,620	$132,891,839
	Inactive vested	3,452,125	787,460	405,656	1,231,631	94,977	5,971,849
	Retirees, beneficiaries and disabled	118,660,717	114,079,597	136,635,426	3,641,905	4,302,522	377,320,167
	Total Actuarial Accrued Liability	$152,441,404	$165,785,894	$182,914,923	$8,783,515	$6,258,119	$516,183,855
3.	Assets at Actuarial Value[2]	$71,050,592	$77,270,253	$85,253,829	$4,093,861	$2,916,813	$240,585,348
4.	Unfunded Accrued Liability: (2d) – (3)	$81,390,812	$88,515,641	$97,661,094	$4,689,654	$3,341,306	$275,598,507
5.	Payment on unfunded Accrued Liability (21-year amortization, effective interest rate 3.83%)						
	Payment	$5,498,430	$5,979,754	$6,597,583	$316,814	$225,725	$18,618,306
	Amortization years	21	21	21	21	21	21
	Interest rate (1.0725 ÷ 1.0325 - 1)	3.83%	3.83%	3.83%	3.83%	3.83%	3.83%
6.	Annual cost as of July 1, 2022 (1d) + (5a)	$5,853,829	$7,782,445	$7,919,660	$384,630	$240,093	$22,180,657
7.	Payroll	$5,772,038	$12,349,635	$10,677,363	$1,640,043	$1,474,272	$31,913,351
8.	Cost as a percent of payroll	101.42%	63.02%	74.17%	23.45%	16.29%	69.50%
9.	Actuarially Determined Contribution (ADC) for fiscal year ending June 30, 2024 (includes 3.25% interest)						
	Normal cost and expenses	$366,950	$1,861,277	$1,365,045	$70,020	$14,835	$3,678,127
	Amortization payment	5,677,129	6,174,096	6,812,005	327,110	233,061	19,223,401
	ADC payable July 1, 2023	$6,044,079	$8,035,373	$8,177,050	$397,130	$247,896	$22,901,528

[1] Allocated based on number of participants (excluding inactive non-vested)
[2] Allocated based on ratio of Accrued Liability per group to total Accrued Liability

Section 3: Supplemental Information

Exhibit A: Table of Plan Demographics

Category	Year Ended June 30: 2022	Year Ended June 30: 2021	Change From Prior Year
Active participants in valuation:			
• Number	356	393	-9.4%
• Average age	46.8	48.3	-1.5
• Average years of benefit service	15.0	15.5	-0.5
• Projected total pay	$31,913,351	$33,587,358	-5.0%
• Projected average pay	89,644	85,464	4.9%
• Account balances	32,083,021	35,207,918	-8.9%
• Total active vested participants	246	285	-13.7%
Inactive vested participants	42	35	20.0%
Inactive nonvested participants due a refund	67	62	8.1%
Beneficiaries with rights to a deferred benefit	1	1	0.0%
Retired participants:			
Number in pay status	683	663	3.0%
Average age	70.3	70.4	-0.1
Average monthly benefit	$3,573	$3,467	3.1%
Disabled participants:			
Number in pay status	27	28	-3.6%
Average age	57.8	57.9	-0.1
Average monthly benefit	$3,315	$3,230	2.6%
Beneficiaries:			
Number in pay status	70	67	4.5%
Average age	79.1	79.0	0.1
Average monthly benefit	$2,079	$1,998	4.1%

Exhibit B: Reconciliation of Participant Data

	Active Participants	Inactive Vested Participants	Inactive Non-Vested Participants[1]	Deferred Beneficiaries	Disableds	Retired Participants	Beneficiaries	Total
Number as of July 1, 2021	**393**	**35**	**62**	**1**	**28**	**663**	**67**	**1,249**
New participants	20	N/A	4	0	N/A	0	0	24
Terminations – with vested rights	-12	12	N/A	0	0	0	0	0
Terminations – without vested rights	-5	0	5	0	N/A	N/A	N/A	0
Retirements	-37	-4	N/A	0	N/A	41	N/A	0
New disabilities	-1	0	N/A	0	1	N/A	N/A	0
Died with beneficiary	-1	0	N/A	0	0	-4	5	0
Died without beneficiary	0	0	N/A	0	-2	-19	-3	-24
Lump sum cash-outs	-2	0	-4	0	0	0	0	-6
Rehire	1	-1	N/A	0	N/A	0	N/A	0
Alternate payees	0	0	0	0	0	2	0	2
Data adjustments	0	0	0	0	0	0	1	1
Number as of July 1, 2022	**356**	**42**	**67**	**1**	**27**	**683**	**70**	**1,246**

[1] Due a refund of employee contributions

Exhibit C: Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended June 30, 2022		Year Ended June 30, 2021	
Net assets at market value at the beginning of the year		$255,193,345		$210,489,974
Contribution and other income:				
Employer contributions	$18,964,310		$17,508,860	
Employee contributions	3,184,721		3,306,953	
Less administrative expenses	-$187,309		-$215,509	
Net contribution income		$21,961,722		$20,600,304
Investment income:		-$25,910,316		$56,688,952
Total income available for benefits		**-$3,948,594**		**$77,289,256**
Less benefit payments		-31,613,147		-32,585,885
Change in reserve for future benefits		**-$35,561,741**		**$44,703,371**
Net assets at market value at the end of the year		**$219,631,604**		**$255,193,345**

Note: above figures do not include the DROP assets, which are held in a separate account

Exhibit D: Development of the Fund through June 30, 2022

Year Ended June 30	Employer Contributions	Employee Contributions	Net Investment Return[1]	Admin. Expenses	Benefit Payments	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2013	$9,371,591	$3,201,993	$22,570,696	$169,296	$19,311,391	$190,161,061	$192,202,332	101.1%
2014	10,251,091	3,233,330	29,182,221	203,350	18,169,153	214,455,200	208,021,544	97.0%
2015	11,045,908	3,284,777	305,830	175,370	19,519,299	209,397,046	213,702,418	102.1%
2016	11,856,283	3,182,165	-1,933,877	202,385	20,542,906	201,756,326	219,060,455	108.6%
2017	12,738,134	3,398,227	21,112,964	203,873	21,252,122	217,549,656	228,138,041	104.9%
2018	13,706,771	3,288,013	15,430,952	211,022	23,431,176	226,333,194	234,578,607	103.6%
2019	15,430,456	3,285,398	7,035,503	193,141	26,145,083	225,746,327	235,759,401	104.4%
2020	16,414,737	3,446,410	-4,704,328	181,217	30,231,955	210,489,974	232,801,612	110.6%
2021	17,508,860	3,306,953	56,688,952	215,509	32,585,885	255,193,345	239,063,851	93.7%
2022	18,964,310	3,184,721	-25,910,316	187,309	31,613,147	219,631,604	240,585,348	109.5%

Note: above figures do not include the DROP assets, which are held in a separate account

[1] On a market basis, net of investment fees

Exhibit E: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Retirees and Beneficiaries:	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially Equivalent:	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Section 3: Supplemental Information

Actuarial Present Value of Future Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuariallv Determined Contributions.
Actuarial Value of Assets (AVA):	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuariallv Determined Contribution.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Plan is calculated, including: Investment return - the rate of investment yield that the Plan will earn over the long-term future; Mortality rates - the rate or probability of death at a given age for employees and retirees; Retirement rates - the rate or probability of retirement at a given age or service; Disability rates - the rate or probability of disability retirement at a given age; Withdrawal rates - the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; Salary increase rates - the rates of salary increase due to inflation, real wage growth and merit and promotion increases.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.

GASB 67 and GASB 68:	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL):	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal Cost:	The portion of the Actuarial Present Value of Future Benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.
Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.
Plan Fiduciary Net Position:	Market value of assets.
Total Pension Liability (TPL):	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

Section 4: Actuarial Valuation Basis

Exhibit I: Actuarial Assumptions, Methods and Models

Rationale for Assumptions

Most assumptions, unless otherwise noted, are based on an experience study which was completed in 2017. Furthermore, the current data is reviewed in conjunction with each annual valuation. Based on professional judgment, the following assumptions were changed:

- The net investment return assumption was lowered from 7.25% to 7.20% to better reflect future expected experience. This assumption is selected by the Town.
- Mortality for males was projected an additional year using Scale BB.
- The interest crediting rate on employee money assumption was increased from 2.00% per year to 3.00% per year to better reflect future expectations.

Net Investment Return:

7.20% (previously 7.25%). This assumption is selected by the Town.

The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment in consultation with the Town and its asset advisors. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the Plan's target asset allocation.

Pay Increases:

General, Dispatcher and Paraprofessional Employees		Police Employees		Fire Employees	
Age	Rate	Age	Rate	Age	Rate
20	9.00%	20	20.00%	20	22.00%
25	7.38%	25	12.92%	25	14.71%
30	5.75%	30	5.83%	30	7.42%
35	4.13%	35	3.00%	35	4.50%
40	2.50%	40	3.00%	40	4.50%
45	2.50%	45	3.00%	45	4.50%
50	2.50%	50	3.00%	50	4.50%
55	2.50%	55	3.00%	55	4.50%
60	2.50%	60	3.00%	60	4.50%

Mortality Rates:

Males: RP-2000 Combined Healthy Mortality Table with Blue Collar Adjustment, projected 25 years (previously 24) with Scale BB

Females: Separate RP-2014 Tables (adjusted back to 2006), projected generationally with Scale MP-2021

The mortality rates were based on historical and current data, adjusted to reflect estimated future experience and professional judgment.

Termination Rates Before Retirement (unisex unless otherwise noted):

	Rate (%)			
	Disability		Withdrawal	
Age	General Employees, Paraprofessionals, and Dispatchers	Police and Fire	General Employees and Dispatchers	Paraprofessionals
20	0.02	0.06	10.41	39.93
25	0.03	0.09	6.31	27.71
30	0.03	0.11	4.54	20.70
35	0.04	0.15	3.50	15.63
40	0.07	0.22	2.77	11.54
45	0.11	0.36	2.20	8.07
50	0.18	0.61	1.74	5.06
55	0.30	1.01	1.34	2.39
60	0.49	1.63	1.00	1.19

The termination rates and disability rates were based on historical and current data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of terminations by age and the projected number based on the prior years' assumptions.

Withdrawal rates for Police and Fire: 3.00% per year for the first 10 years of service; none thereafter.

Service-related benefits: 100% of Police and Fire deaths and disabilities are assumed to be service-related. For the other groups, no service-related decrements are assumed.

Section 4: Actuarial Valuation Basis

Retirement Rates:

General Employees		Paraprofessionals	
Age	**Rate***	**Age**	**Rate**
Under 55	0%	Under 65	0%
55 – 59	2%	65 – 71	10%
60 – 61	5%	72 – 74	35%
62 – 63	10%	75	100%
64	25%		
65 – 69	45%		
70	100%		

* Rates are changed to 50% upon eligibility for the Rule of 85.

Police Employees		Fire Employees	
Years of Service	**Rate***	**Years of Service**	**Rate***
Less than 25	0%	Less than 25	0%
25	90%	25	40%
26 – 29	15%	26 – 29	15%
30+	35%	30+	35%

* Rate Increases to 100% upon attainment of age 65.

Retirement Rates for Dispatchers:	100% upon first becoming eligible for Normal Retirement, but not prior to age 62
Retirement Rates for Inactive Vested Participants:	Age 62; Age 65 for Paraprofessionals The retirement rates were based on historical and current data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of retirements by age and the projected number based on the prior years' assumptions.
Percent Married:	50% of the male participants and 20% of the female participants are assumed to be married and electing a Joint & Survivor annuity.
Age of Spouse:	Females three years younger than males.

Section 4: Actuarial Valuation Basis

Liability Load for unused sick and vacation pay:	To approximate the effect of including overtime and unused sick and vacation pay in the final average salary, plan liabilities are increased by the percentages listed below:			
	Retirement Liability	**Death Liability**	**Disability Liability**	**Withdrawal Liability**
General Employees and Dispatchers hired before 12/01/1996	13.0%	6.0%	6.0%	2.0%
General Employees and Dispatchers hired after 12/01/1996	3.0%	2.0%	2.0%	2.0%
Fire hired before 01/01/1995	25.0%	12.0%	12.0%	2.0%
Fire hired after 01/01/1995 (overtime only)	5.0%	0.0%	0.0%	0.0%
Police hired before 12/31/2019	16.0%	12.0%	12.0%	2.0%
Paraprofessionals	0.0%	0.0%	0.0%	0.0%
Cost-of-Living Adjustments:	All retirees are assumed to receive the maximum annual COLA under the provisions of plan. The COLA change from 2.0% to 1.5% impacting new General Employee retirees after July 1, 2025 has not yet been reflected. For a summary of COLA provisions by group, please see *Section 4, Exhibit II*.			
Deferred Retirement Option Plan (DROP):	No active employees are assumed to elect the DROP. Employees who have elected the DROP are assumed to stay in the DROP for four years. DROP assets are not factored into the annual valuation since they are held in a separate account managed by the individual employee.			
Administrative Expenses:	$200,000 per year, added to normal cost. The annual administrative expense were based on historical and current data, adjusted to reflect estimated future experience and professional judgment.			
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.			
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service, with Normal Cost determined as if the current benefit accrual rate had always been in effect.			

Exhibit II: Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year: July 1 through June 30

Plan Status:

General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Closed to new hires effective January 1, 2006	Closed to new hires effective July 1, 2015	Ongoing	Ongoing	Ongoing

Normal Retirement:

- Regular Compensation: Annual salary or wages for services with the Town, including overtime, holiday, longevity payments and vacation pay
- Final Average Salary (FAS): Average of Regular Compensation earned during the highest 36 consecutive months of employment
- Amount: Multiplier times FAS times years of service, subject to the Minimum and Maximum listed on the next page

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Eligibility requirement	*Hired prior to March 1, 1983*: Later of age 62 and 8 years of service *Hired after March 1, 1983*: Later of age 65 and 10 years of service, or age 62 and 25 years of service, if earlier	Earliest of: - Age 65 and 10 years of service - Age 62 and 25 years of service - Rule of 85	Earliest of: - Age 65 and 5 years of service - 25 years of service - Rule of 75	25 years of service, no later than age 65 with 15 years of service	25 years of service, no later than age 65 with 10 years of service
Multiplier	2.33%	2.20%	2.20%	*Hired prior to December 31, 2019:* 2.50% *Hired after December 31, 2019:* 2.33%	*Hired prior to May 18, 2017:* 2.50% *Hired after May 18, 2017:* 2.33%

Normal Retirement (continued):

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Lump Sum of unused vacation and/or sick leave included in FAS	*Hired prior to December 1, 1996:* Unused vacation (40 days max) and sick leave (90 days max, unless employee has 200 or more unused sick days at retirement, in which case the max is 100 days) *Hired after December 1, 1996:* Unused vacation (40 days max)	None	*Hired prior to December 1, 1996:* Unused vacation (40 days max) and sick leave (90 days max, unless employee has 200 or more unused sick days at retirement, in which case the max is 100 days) *Hired after December 1, 1996:* Unused vacation (40 days max)	*Hired prior to December 31, 2019:* Unused vacation and sick leave *Hired after December 1, 2019:* None	*Hired prior to January 1, 1995:* Unused vacation and sick leave *Hired after January 1, 1995:* None
Maximum benefit	70% of FAS	70% of FAS	70% of FAS	*Hired prior to December 31, 2019:* 75% of FAS *Hired after December 31, 2019:* 70% of FAS	*Hired prior to January 1, 1995:* 75% of FAS *Hired after January 1, 1995 but prior to May 18, 2017:* 75% of FAS, not more than 100% of base salary *Hired after May 18, 2017:* 70% of FAS
Monthly Minimum	$125 (after 20 years)	None	None	$125	$125

Early Retirement:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Eligibility Requirement	*Hired prior to March 1, 1983*: Later of age 52 and 8 years of service *Hired after March 1, 1983*: Later of age 55 and 10 years of service	N/A	Age 55 and 5 years of service	N/A	N/A
Reduction	0.4167% for each month prior to Normal Retirement Age; unreduced at Rule of 85	N/A	0.4167% for each month prior to Normal Retirement Age	N/A	N/A

- Amount: Normal pension accrued times reduction factor

Benefit Service: Elapsed time including years and months from plan entry

Non-Service Connected Disability:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	None	None	None	None	None
Service Requirement	10 years	10 years	5 years	5 years	5 years
Minimum	N/A	N/A	N/A	20% of FAS	20% of FAS

- Amount: Normal pension accrued based on service and FAS at disability, payable immediately without reduction

Service Connected Disability:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	None	None	None	None	None
Service Requirement	None	None	None	None	None
Pay	Greater of FAS or Regular Compensation	Greater of FAS or Regular Compensation	Greater of FAS or annual rate of pay	Greater of FAS or Regular Compensation*	Greater of FAS or Regular Compensation
Amount	50% of pay, plus 2.33% of Pay for each year of service in excess of 25	50% of pay, plus 2.20% of Pay for each year of service in excess of 25	50% of pay, plus 2.20% of Pay for each year of service in excess of 25	*Under 20 years of service:* 50% of Pay *20 or more years of service:* Normal retirement benefit	*Under 20 years of service:* 50% of Pay *20 or more years of service:* Normal retirement benefit
Maximum**	70% of FAS	70% of FAS	70% of FAS	None	None

*Includes lump sum of sick and unused vacation time

**Payments from this benefit plus Workers' compensation and Social Security may not exceed 100% of Final Average Salary at disability

This benefit is payable immediately and is unreduced for early retirement

Vesting:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	None	None	None	None	None
Service Requirement	*Hired prior to March 1, 1983*: 8 years *Hired after March 1, 1983*: 10 years	10 years	5 years	15 years	10 years

- Amount: Normal pension accrued, payable no earlier than Early Retirement Age, if vested. If not vested, return of contributions with interest

Spouse's Pre-Retirement Death Benefit:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	None	N/A	55	N/A	N/A
Service Requirement	10 years	N/A	5 years	N/A	N/A
Amount	80% of accrued benefit that would have been payable as a life annuity	N/A	100% of accrued benefit that would have been payable as a 100% J&S	N/A	N/A

- Other requirement: Die while in active service
  This benefit is payable immediately to the spouse of the participant without reduction

Dependent's Pre-Retirement Death Benefit- Non-Service Connected:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	N/A	N/A	N/A	None	None
Service Requirement	N/A	N/A	N/A	5 years	5 years
Amount	N/A	N/A	N/A	Normal pension accrued at death	Normal pension accrued at death
Minimum	N/A	N/A	N/A	20% of FAS	20% of FAS

- Other requirement: Die while in active service from causes not related to employment with the Town
  This benefit is payable immediately without reduction

Dependent's Pre-Retirement Death Benefit- Service Connected:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Age Requirement	N/A	N/A	N/A	None	None
Service Requirement	N/A	N/A	N/A	None	None
Amount	N/A	N/A	N/A	*Under 20 years of service:* 50% of Pay *20 or more years of service:* Normal retirement benefit	*Under 20 years of service:* 50% of Pay *20 or more years of service:* Normal retirement benefit
Maximum	N/A	N/A	N/A	100% of Regular Compensation	100% of Regular Compensation

- Other requirement: Die while in active service during the performance of essential duties pertaining to employment with the Town, or while receiving a Service Connected Disability benefit

  This benefit is payable immediately without reduction

Pre-Retirement Death Benefit:

- Eligibility: Not eligible for Spouse or Dependent's Pre-Retirement Death Benefit
- Amount: Return of Contributions with interest

Post-Retirement Death Benefit:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Amount	Contributions with interest, less benefits paid	Contributions with interest, less benefits paid	Contributions with interest, less benefits paid	75% of the amount the participant was receiving*	75% of the amount the participant was receiving*

*Minimum guarantee of employee contributions plus interest, less benefits paid

Section 4: Actuarial Valuation Basis

Employee Contributions:

	General Employees (Town & BOE)	Paraprofessionals	Dispatchers	Police	Fire
Rate of Regular Compensation	9.00%	6.00%	8.00%	*Hired prior to December 31, 2019:* 8.00% *Hired after December 31, 2019:* 9.00%	9.00%

Contributions are not required once the participant has reached the maximum pension benefit

Interest on employee contributions was credited at 4.00% per year prior to July 1, 2015. For the 2015 plan year, interest on employee contributions was credited at 0%. Effective July 1, 2016, the contributions are credited at 120% of the Federal Mid-Term rate as of July.

Employees who terminated after becoming vested will receive interest on their contributions through their retirement date. Employees who terminate before becoming vested will only receive interest on their contributions through their date of termination.

Cost-of-Living:

General Employees (Town & BOE)		
	Increase	**First Payable**
Retirees and Beneficiaries		
Retired prior to January 1, 1991	2.00% per year	One year after retirement
Retired on or after January 1, 1991, but before July 1, 2005	1.00% per year	One year after retirement
Retired on or after July 1, 2005, but before July 1, 2025	2.00% per year	January that is five full years after retirement
Retired on or after July 1, 2025	1.50% per year	January that is five full years after retirement
Disabled		
Retired after December 1, 1996, but before December 31, 2005	1.00% per year	One year after retirement

Cost-of-Living (continued):

Police		
	Increase	**First Payable**
Hired before December 31, 2019		
Retired prior to January 1, 1991	2.00% per year	One year after retirement
Retired on or after January 1, 1991, but before December 31, 1999	1.00% per year	One year after retirement
Retired on or after January 1, 2000	2.00% per year	Fifth year of retirement
Hired after December 31, 2019	1.00% per year	Seventh year of retirement

Fire		
	Increase	**First Payable**
Hired before May 18, 2017		
Retired prior to January 1, 1991	2.00% per year	One year after retirement
Retired on or after January 1, 1991, but before June 30, 2005	1.00% per year	One year after retirement
Retired on or after July 1, 2005	1.00% per year (years 5 through 9), then 2.00% per year	Fifth year of retirement, increasing in ninth year of retirement
Hired after May 18, 2017	1.00% per year	Seventh year of retirement

Participants in the Dispatchers and Paraprofessionals groups are not eligible for a cost-of-living increase

Deferred Retirement Option Plan (DROP):

- Eligibility: Employees in service in the Police and Fire groups on or after July 1, 2005 who have 25 or more years of service but less than 30 years of service.
- Amount: 96% of the participant's benefit at Normal Retirement. During the DROP period, the payments will be made to a separately designated DROP account while the member remains active. At the end of the DROP period (when the employee reaches 30 years of service or terminates, if sooner), the monthly benefit increases to 100% and the member is eligible to receive their accumulated DROP payments.

Changes in Plan Provisions: The disability provision for Paraprofessional employees was reflected in this valuation.