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February 21, 2019

PERSONAL & CONFIDENTIAL

Ms. Janet Murphy
Director of Finance
Town of Newington
131 Cedar Street
Newington, CT 06111

Re: Town of Newington Pension Plans
Actuarial Reports for Fiscal Year 2019-2020

Dear Janet:

We are pleased to provide these actuarial reports for the Town of Newington Pension Plans. The reports show the financial status of the plans as of July 1, 2018 and present the cost figures for 2019-2020. A summary of the principal results of each valuation can be found at the end of Section I.

The Actuarially Determined Contributions for FY 2019-2020 are shown below:

	Administrative Plan	Municipal Plan	Police Plan	Total
Town	\$443,194	\$870,680	\$3,758,427	\$5,072,301
Board of Education	<u>69,041</u>	<u>1,014,573</u>	<u>0</u>	<u>1,083,614</u>
Total	512,235	1,885,253	3,758,427	6,155,915

Please let me know if you have any questions.

Sincerely,

Rebecca A. Sielman, FSA
Consulting Actuary



TOWN OF NEWINGTON ADMINISTRATIVE EMPLOYEES' PENSION PLAN

**Actuarial Valuation as of July 1, 2018
For Fiscal Year 2019-20**

Prepared by

Rebecca A. Sielman, FSA
Consulting Actuary

Teresa M. Medeiros, FSA
Consulting Actuary

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Certification

We have performed an actuarial valuation of the Plan as of July 1, 2018 for fiscal year 2019-20. 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 set forth an actuarial recommendation of the contribution, or range of contributions, which will properly fund the plan, in accordance with applicable government regulations. In addition, this report provides:

- A valuation of plan assets and liabilities to review the year-to-year progress of funding.
- Information needed to meet disclosure requirements.
- 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.

Milliman's work is prepared solely for the internal business use of the 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 exception(s): (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

The calculations reported herein have been made on a basis consistent with our understanding of ERISA and the related sections of the tax code. 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. 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.

We further certify that, in our opinion, each actuarial assumption, method and technique used is reasonable taking into account the experience of the Plan and reasonable expectations or would, in the aggregate, result in a total contribution equivalent to that which would be determined if each such assumption, method, or technique were reasonable. Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurement.

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.

The signing actuary is independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

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



Teresa M. Medeiros, FSA
Consulting Actuary

Section I - Executive Summary

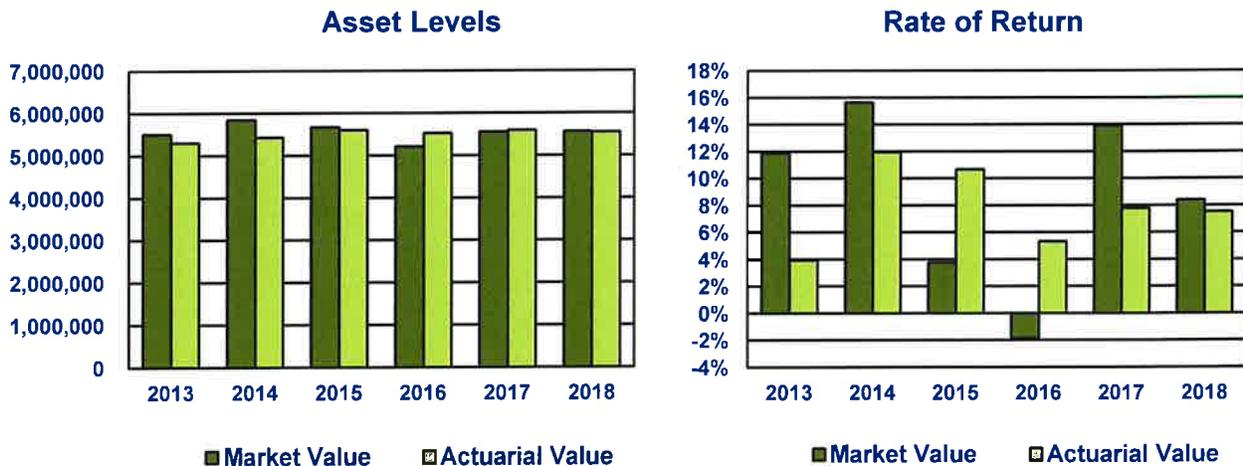
A. Highlights

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 over five years.

	Market	Actuarial
Value as of July 1, 2017	\$5,557,866	\$5,590,931
Employer and Employee Contributions	520,184	520,184
Investment Income	448,395	403,464
Benefit Payments and Administrative Expenses	(964,623)	(964,623)
Value as of July 1, 2018	5,561,822	5,549,956

For fiscal year 2017-18, the plan's assets earned 8.40% on a Market Value basis and 7.52% on an Actuarial Value basis. The actuarial assumption for this period was 7.125%; the result is an asset gain of \$68,200 on a Market Value basis and a gain of \$21,200 on an Actuarial Value basis. Historical asset values are shown in the graph below to the left; historical returns are shown in the graph below to the right.



Please note that the Actuarial Value currently is less than the Market Value by \$11,900. This figure represents investment gains that will be gradually recognized over the next five years. This process will exert downward pressure on the Town's contribution, unless there are offsetting market losses.

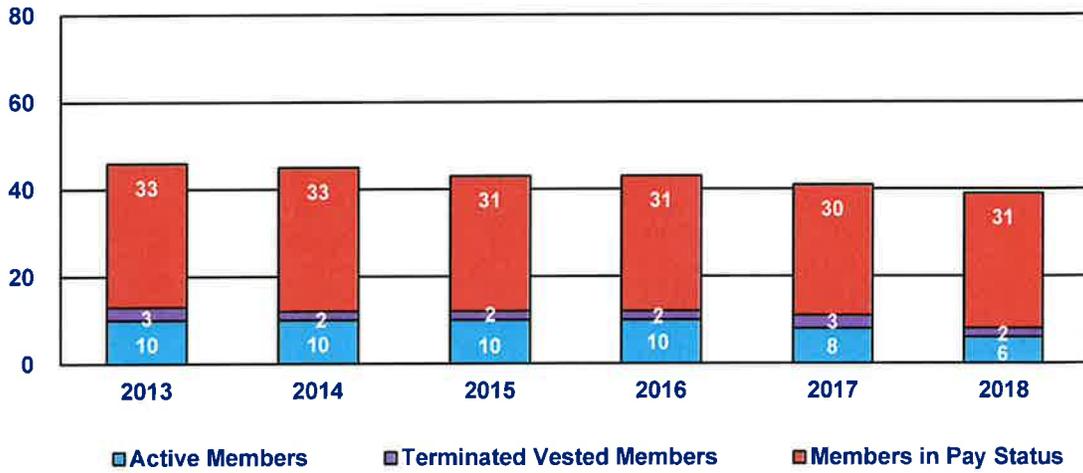
Section I - Executive Summary

A. Highlights

Membership

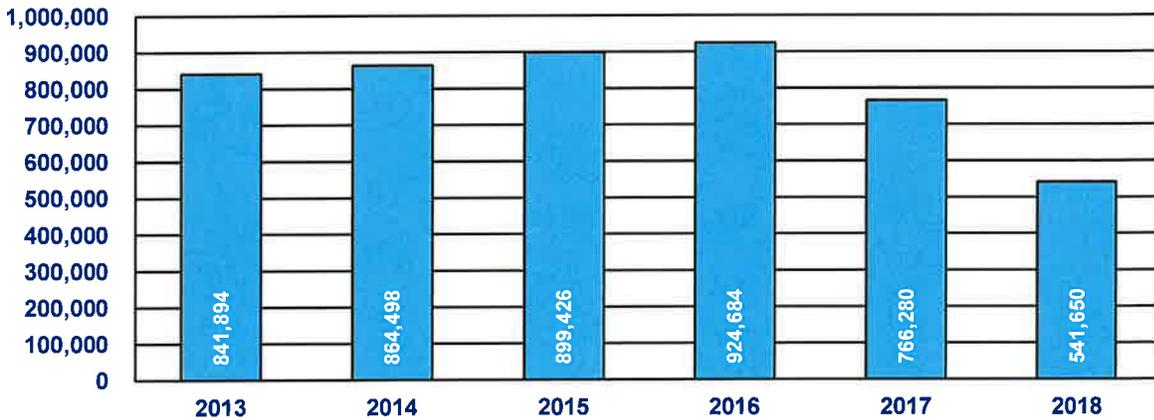
There are three basic categories of plan members included in the actuarial valuation: (1) active employees who have met the eligibility requirements for membership, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) members who are receiving monthly pension benefits.

Number of Members



From July 1, 2017 to July 1, 2018, the overall membership decreased from 41 to 39. During this period, three members retired, one retiree died, and one beneficiary died.

Payroll



Section I - Executive Summary

A. Highlights

Plan Changes

None.

Changes in Actuarial Methods or Assumptions

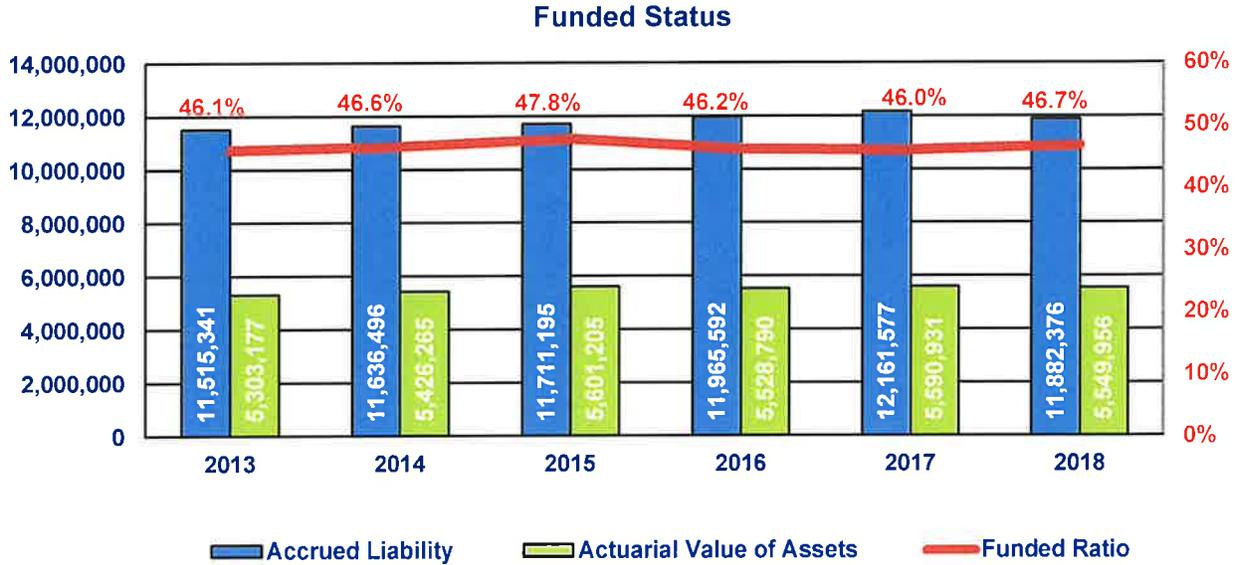
In order to better anticipate future market returns, we have lowered the interest rate assumption from 7.125% to 7.00%. This change increased the Unfunded Accrued Liability by \$124,000 and increased the Actuarially Determined Contribution by \$6,700. We will continue to reduce the interest rate assumption by increments over the next several years.

Section I - Executive Summary

A. Highlights

Funded Status

The chart below shows the plan's Accrued Liability and Actuarial Value of Assets for the past few years.



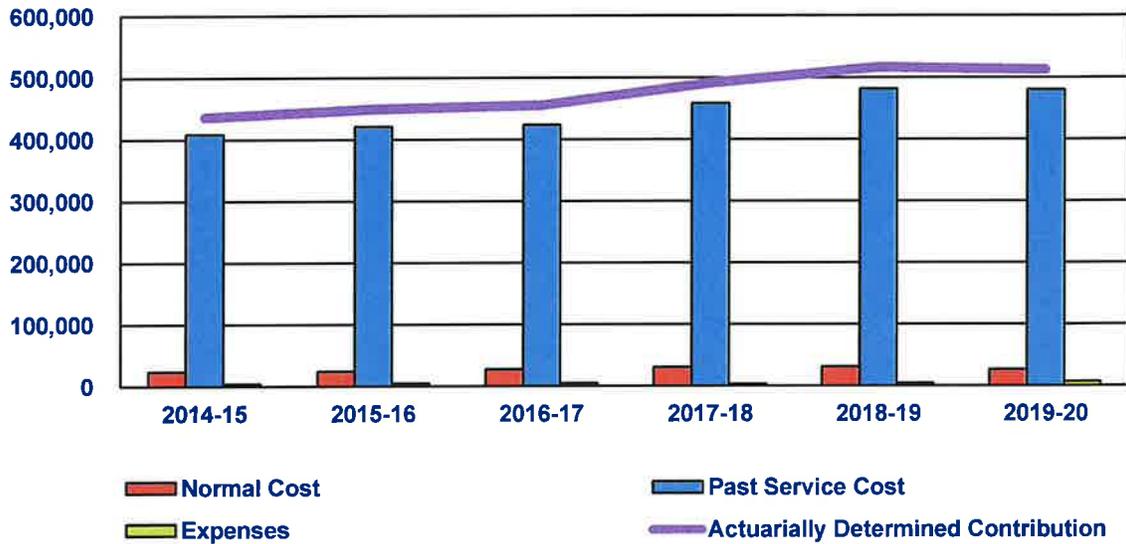
Section I - Executive Summary

A. Highlights

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 **Expenses** expected to be paid from plan assets. If the plan has a sufficiently large surplus, the Past Service Cost may be large enough to cover the Normal Cost, in which case no contribution is required.

Contribution levels for the current year and the past few fiscal years are shown below.



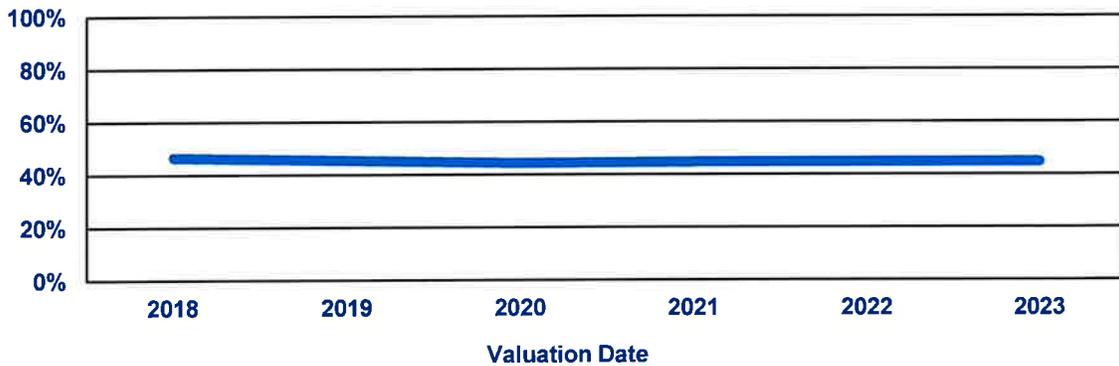
Section I - Executive Summary

A. Highlights

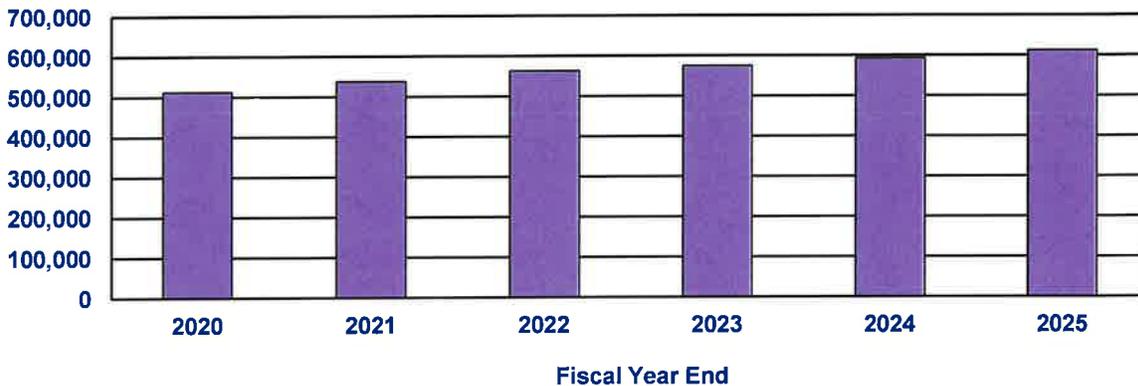
Long Range Forecast

The Town intends to reduce the interest rate assumption gradually over the next several years. This will depress the funded ratio and increase the Actuarially Determined Contribution while that process is underway.

Funded Ratio



Actuarially Determined Contribution



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
B. Summary of Principal Results

Membership	July 1, 2017	July 1, 2018
Active Members	8	6
Terminated Vested Members	3	2
Members in Pay Status	30	31
Payroll	\$766,280	\$541,650
Assets and Liabilities	July 1, 2017	July 1, 2018
Market Value of Assets	\$5,557,866	\$5,561,822
Actuarial Value of Assets	5,590,931	5,549,956
Accrued Liability for Active Members	\$2,998,170	\$2,063,337
Accrued Liability for Terminated Vested Members	578,370	213,435
Accrued Liability for Members in Pay Status	8,585,037	9,605,604
Total Accrued Liability	12,161,577	11,882,376
Unfunded Accrued Liability	6,570,646	6,332,420
Funded Ratio	46.0%	46.7%
Actuarially Determined Contribution for Fiscal Year	2018-19	2019-20
Normal Cost	\$30,967	\$26,191
Past Service Cost	481,405	479,644
Expenses	4,200	6,400
Actuarially Determined Contribution	516,572	512,235
Breakdown of Actuarially Determined Contribution	2018-19	2019-20
Board of Education	\$78,104	\$69,041
Town	438,468	443,194
Total	516,572	512,235

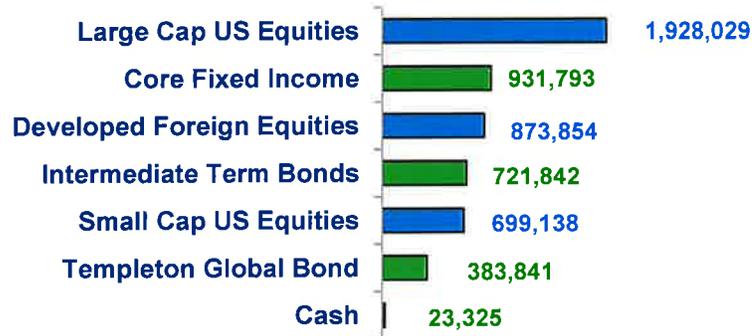
Section II - Plan Assets

A. Summary of Fund Transactions

Market Value as of July 1, 2017	\$5,557,866
Employer Contributions	491,441
Employee Contributions	28,743
Benefit Payments	(958,438)
Interest and Dividends	114,091
Capital Gains/(Losses)	365,123
Investment Expenses	(30,819)
Administrative Expenses	(6,185)
 Market Value as of July 1, 2018	 5,561,822
 Approximate Rate of Return	 8.404%

Note: 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.

Asset Allocation as of July 1, 2018



Section II - Plan Assets

B. Development of Actuarial Value of Assets

In order to minimize the impact of market fluctuations on the contribution level, we use an Actuarial Value of Assets that recognizes gains and losses over a five year period. The Actuarial Value of Assets as of July 1, 2018 is determined below.

1.	Expected Market Value of Assets:																					
	a. Market Value of Assets as of July 1, 2017	\$5,557,866																				
	b. Employer and Employee Contributions	520,184																				
	c. Benefit Payments and Administrative Expenses	(964,623)																				
	d. Expected Investment Return Based on 7.125% Interest	<u>380,154</u>																				
	e. Expected Market Value of Assets as of July 1, 2018	5,493,581																				
2.	Actual Market Value of Assets as of July 1, 2018	5,561,822																				
3.	Market Value (Gain)/Loss: (1e) - (2)	(68,241)																				
4.	Delayed Recognition of Market (Gains)/Losses:																					
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Plan Year End</th> <th style="text-align: right;">(Gain)/Loss</th> <th style="text-align: right;">Percent Not Recognized</th> <th style="text-align: right;">Amount Not Recognized</th> </tr> </thead> <tbody> <tr> <td>06/30/2018</td> <td style="text-align: right;">(\$68,241)</td> <td style="text-align: right;">80%</td> <td style="text-align: right;">(\$54,593)</td> </tr> <tr> <td>06/30/2017</td> <td style="text-align: right;">(335,791)</td> <td style="text-align: right;">60%</td> <td style="text-align: right;">(201,475)</td> </tr> <tr> <td>06/30/2016</td> <td style="text-align: right;">505,167</td> <td style="text-align: right;">40%</td> <td style="text-align: right;">202,067</td> </tr> <tr> <td>06/30/2015</td> <td style="text-align: right;">210,674</td> <td style="text-align: right;">20%</td> <td style="text-align: right;"><u>42,135</u></td> </tr> </tbody> </table>	Plan Year End	(Gain)/Loss	Percent Not Recognized	Amount Not Recognized	06/30/2018	(\$68,241)	80%	(\$54,593)	06/30/2017	(335,791)	60%	(201,475)	06/30/2016	505,167	40%	202,067	06/30/2015	210,674	20%	<u>42,135</u>	(11,866)
Plan Year End	(Gain)/Loss	Percent Not Recognized	Amount Not Recognized																			
06/30/2018	(\$68,241)	80%	(\$54,593)																			
06/30/2017	(335,791)	60%	(201,475)																			
06/30/2016	505,167	40%	202,067																			
06/30/2015	210,674	20%	<u>42,135</u>																			
5.	Actuarial Value of Assets as of July 1, 2018: (2) + (4)	5,549,956																				
6.	Approximate Rate of Return on Actuarial Value of Assets	7.52%																				
7.	Actuarial Value (Gain)/Loss	(21,193)																				

Section III - Development of Contribution

A. Past Service Cost

For determining the Past Service Cost, the Unfunded Accrued Liability is amortized as a level percent over a period of 30 years starting on July 1, 2005.

	July 1, 2017	July 1, 2018
1. Accrued Liability		
Active Members	\$2,998,170	\$2,063,337
Terminated Vested Members	578,370	213,435
Retired Members	8,024,082	9,084,656
Disabled Members	0	0
Beneficiaries of Deceased Members	<u>560,955</u>	<u>520,948</u>
Total	12,161,577	11,882,376
2. Actuarial Value of Assets (see Section II B)	5,590,931	5,549,956
3. Unfunded Accrued Liability: (1) - (2)	6,570,646	6,332,420
4. Funded Ratio: (2) / (1)	46.0%	46.7%
5. Amortization Period	18	17
6. Amortization Growth Rate	3.50%	3.50%
7. Past Service Cost: (3) amortized over (5)	481,405	479,644

Section III - Development of Contribution
B. Actuarially Determined Contribution

	Fiscal Year 2018-19	Fiscal Year 2019-20
1. Total Normal Cost	\$63,444	\$49,168
2. Expected Employee Contributions	32,477	22,977
3. Expected Expenses	4,200	6,400
4. Net Normal Cost: (1) - (2) + (3)	35,167	32,591
5. Past Service Cost (see Section III A)	481,405	479,644
6. Actuarially Determined Contribution: (4) + (5)	516,572	512,235

Milliman Actuarial Valuation

**Section III - Development of Contribution
C. Long Range Forecast**

This forecast is based on the results of the July 1, 2018 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. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

Valuation Date	Interest Rate	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio	Fiscal Year Ending	Cash Flows Projected to the Following Fiscal Year			
							Town Contributions	Employee Contributions	Benefit Payments	Net Cash Flows
7/1/2018	7.000%	\$11,882,376	\$5,549,956	\$6,332,420	46.7%	2020	\$512,235	\$20,000	(\$1,024,000)	(\$491,765)
7/1/2019	6.875%	11,840,000	5,389,000	6,451,000	45.5%	2021	538,000	18,000	(1,035,000)	(479,000)
7/1/2020	6.750%	11,753,000	5,230,000	6,523,000	44.5%	2022	563,000	16,000	(1,040,000)	(461,000)
7/1/2021	6.750%	11,511,000	5,167,000	6,344,000	44.9%	2023	576,000	14,000	(1,043,000)	(453,000)
7/1/2022	6.750%	11,242,000	5,047,000	6,195,000	44.9%	2024	593,000	12,000	(1,043,000)	(438,000)
7/1/2023	6.750%	10,946,000	4,912,000	6,034,000	44.9%	2025	613,000	10,000	(1,038,000)	(415,000)
7/1/2024	6.750%	10,627,000	4,783,000	5,844,000	45.0%	2026	636,000	8,000	(1,033,000)	(389,000)
7/1/2025	6.750%	10,286,000	4,669,000	5,617,000	45.4%	2027	659,000	7,000	(1,023,000)	(357,000)
7/1/2026	6.750%	9,922,000	4,575,000	5,347,000	46.1%	2028	684,000	6,000	(1,006,000)	(316,000)
7/1/2027	6.750%	9,542,000	4,506,000	5,036,000	47.2%	2029	711,000	5,000	(986,000)	(270,000)
7/1/2028	6.750%	9,151,000	4,474,000	4,677,000	48.9%	2030	742,000	4,000	(962,000)	(216,000)
7/1/2029	6.750%	8,751,000	4,488,000	4,263,000	51.3%	2031	776,000	3,000	(934,000)	(155,000)
7/1/2030	6.750%	8,347,000	4,559,000	3,788,000	54.6%	2032	814,000	3,000	(905,000)	(88,000)
7/1/2031	6.750%	7,943,000	4,697,000	3,246,000	59.1%	2033	859,000	2,000	(906,000)	(45,000)
7/1/2032	6.750%	7,543,000	4,914,000	2,629,000	65.1%	2034	913,000	2,000	(878,000)	37,000
7/1/2033	6.750%	7,112,000	5,189,000	1,923,000	73.0%	2035	986,000	1,000	(845,000)	142,000
7/1/2034	6.750%	6,683,000	5,567,000	1,116,000	83.3%	2036	1,126,000	1,000	(825,000)	302,000
7/1/2035	6.750%	6,257,000	6,079,000	178,000	97.2%	2037	189,000	1,000	(790,000)	(600,000)
7/1/2036	6.750%	5,824,000	6,791,000	(967,000)	116.6%	2038	0	0	(752,000)	(752,000)
7/1/2037	6.750%	5,398,000	6,617,000	(1,219,000)	122.6%	2039	0	0	(712,000)	(712,000)

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.

Section IV - Accounting Information
A. Notes to Required Supplementary Information

The information presented in Section IV has been determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	July 1, 2018
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percent
Amortization Period	Closed 30 years from July 1, 2005
Asset Valuation Method	5 Year Smoothed Market Value
Actuarial Assumptions	
Investment Rate of Return	7.000%
Projected Salary Increases	3.50%
Amortization Growth Rate	3.50%
Inflation	2.75%
Cost-of-Living Adjustments	None

Milliman Actuarial Valuation

**Section IV - Accounting Information
B. Historical Schedule of Funding Progress**

Actuarial Valuation Date	For Fiscal Year	(1) Actuarial Value of Assets	(2) Accrued Liability	(3) Unfunded		(4) Funded Ratio (1) / (2)	(5) Payroll	(6) UAAAL as a Percentage of Payroll (3) / (5)
				Accrued Liability (UAAAL)	(2) - (1)			
07/01/2009	2010-11	\$7,026,255	\$9,941,593	\$2,915,338		70.7%	\$885,459	329.2%
07/01/2010	2011-12	6,563,152	10,057,455	3,494,303		65.3%	814,867	428.8%
07/01/2011	2012-13	6,017,893	10,774,341	4,756,448		55.9%	761,442	624.7%
07/01/2012	2013-14	5,495,997	11,043,839	5,547,842		49.8%	750,544	739.2%
07/01/2013	2014-15	5,303,177	11,515,341	6,212,164		46.1%	841,894	737.9%
07/01/2014	2015-16	5,426,265	11,636,496	6,210,231		46.6%	864,498	718.4%
07/01/2015	2016-17	5,601,205	11,711,195	6,109,990		47.8%	899,426	679.3%
07/01/2016	2017-18	5,528,790	11,965,592	6,436,802		46.2%	924,684	696.1%
07/01/2017	2018-19	5,590,931	12,161,577	6,570,646		46.0%	766,280	857.5%
07/01/2018	2019-20	5,549,956	11,882,376	6,332,420		46.7%	541,650	1169.1%

Section IV - Accounting Information
C. Schedule of Employer Contributions

Fiscal Year Ending June 30	(1) Actuarially Determined Contribution	(2) Contribution in Relation to the Actuarially Determined Contribution	(3) Contribution Deficiency/ (Excess) (1) - (2)	(4) Payroll	(5) Contribution as a Percentage of Payroll (2) / (4)
2011	\$237,105	\$237,105	\$0	\$885,459	26.8%
2012	286,830	286,830	0	814,867	35.2%
2013	323,910	422,081	(98,171)	761,442	55.4%
2014	382,657	382,657	0	750,544	51.0%
2015	436,353	436,353	0	841,894	51.8%
2016	449,398	449,398	0	864,498	52.0%
2017	455,458	455,458	0	899,426	50.6%
2018	491,441	491,441	0	924,684	53.1%
2019	516,572	TBD	TBD	766,280	TBD
2020	512,235	TBD	TBD	541,650	TBD

Section IV - Accounting Information
D. Accrued and Vested Benefits

The actuarially computed Value of Accrued Benefits represents the present value of (a) the benefits based on earnings and service to date expected to become payable at future dates to present employees, (b) the benefits expected to become payable to former employees who have terminated service with vested rights or who have become inactive, and (c) the benefits currently payable to retired participants and beneficiaries.

	As of July 1, 2017	As of July 1, 2018
1. Value of Vested Benefits		
Active Members	\$2,290,345	\$1,616,815
Terminated Vested Members	578,370	213,435
Retired Members	8,024,082	9,084,656
Disabled Members	0	0
Beneficiaries of Deceased Members	<u>560,955</u>	<u>520,948</u>
Total Value of Vested Benefits	11,453,752	11,435,854
2. Value of Non-Vested Benefits	17,687	12,627
3. Total Value of Accrued Benefits: (1) + (2)	11,471,439	11,448,481
4. Market Value of Assets	5,557,866	5,561,822
5. Vested Funded Ratio: (4) / (1)	48.5%	48.6%
6. Accrued Funded Ratio: (4) / (3)	48.4%	48.6%

Section IV - Accounting Information
E. Statement of Changes in Accrued Plan Benefits

Increase/(Decrease) during the 2017-2018 plan year attributable to:

Increase for interest due to the decrease in the discount period	\$783,783
Benefits Accumulated/(Forfeited)	34,369
Benefit Payments	(958,438)
Plan Amendments	0
Changes in Actuarial Assumptions	117,328
Net Increase/(Decrease)	(22,958)

Value of Accrued Plan Benefits:

July 1, 2018	\$11,448,481
July 1, 2017	11,471,439
Net Increase/(Decrease)	(22,958)

Section V - Membership Data
A. Reconciliation of Membership from Prior Valuation

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

	Active	Term. Vested	Retirees	Disabled	Bene- ficiaries	Total
Count as of July 1, 2017	8	3	28	0	2	41
Terminated not vested	-	-	-	-	-	0
Terminated, benefits due	-	-	-	-	-	0
Retired	(2)	(1)	3	-	-	0
Died, with beneficiary	-	-	-	-	-	0
Died, no beneficiary	-	-	(1)	-	(1)	(2)
Transfer in from other plan	-	-	-	-	-	0
New member	-	-	-	-	-	0
New beneficiary	-	-	-	-	-	0
Correction	-	-	-	-	-	0
Count as of July 1, 2018	6	2	30	0	1	39

As of July 1, 2018, the active membership included 3 Board of Education members with payroll of \$264,812 and 3 Town members with payroll of \$276,838.

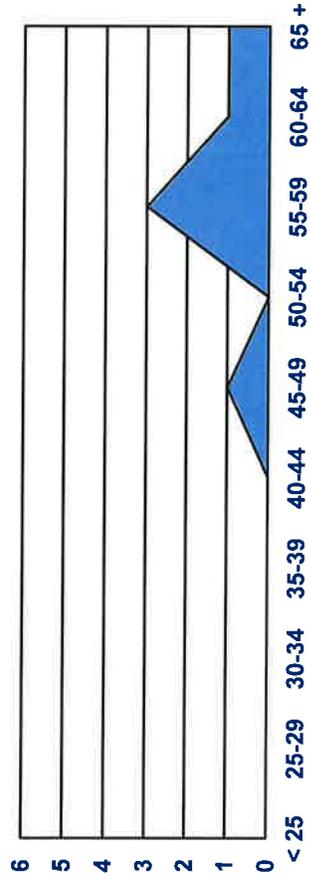
Section V - Membership Data
B. Statistics of Membership

	As of July 1, 2017	As of July 1, 2018
Active Members		
Number	8	6
Average Age	57.6	57.7
Average Service	22.8	22.4
Total Payroll	\$766,280	\$541,650
Average Payroll	95,785	90,275
Terminated Vested Members		
Number	3	2
Total Annual Benefit	\$70,858	\$38,498
Average Annual Benefit	23,619	19,249
Average Age	56.3	56.5
Retired Members		
Number	28	30
Total Annual Benefit	\$835,547	\$934,532
Average Annual Benefit	29,841	31,151
Average Age	71.9	71.7
Disabled Members		
Number	0	0
Total Annual Benefit	\$0	\$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Beneficiaries of Deceased Members		
Number	2	1
Total Annual Benefit	\$58,173	\$50,059
Average Annual Benefit	29,087	50,059
Average Age	77.0	66.0

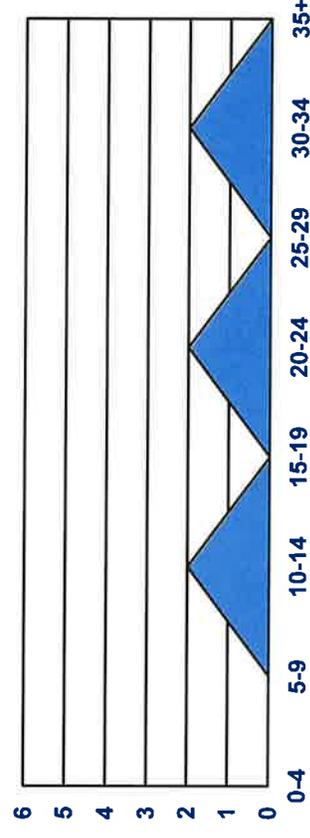
Section V - Membership Data
C. Distribution of Active Members as of July 1, 2018 - Count

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

Distribution By Age



Distribution by Years of Service



Section V - Membership Data
D. Distribution of Inactive Members as of July 1, 2018

	Age	Number	Annual Benefits
Terminated Vested Members /	< 30	0	\$0
Members Due Refunds	30 - 39	0	0
	40 - 49	0	0
	50 - 59	1	30,273
	60 - 64	1	8,225
	65 +	0	0
	Total	2	38,498
Retired Members	< 50	0	\$0
	50 - 59	3	131,069
	60 - 69	11	331,310
	70 - 79	9	322,612
	80 - 89	7	149,541
	90 +	0	0
	Total	30	934,532
Disabled Members	< 50	0	\$0
	50 - 59	0	0
	60 - 69	0	0
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	0	0
Beneficiaries of Deceased Members	< 50	0	\$0
	50 - 59	0	0
	60 - 69	1	50,059
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	1	50,059

Appendix A - Actuarial Funding Method

The actuarial funding method used in the valuation of this Plan is known as the **Entry Age Normal Cost Method**. Recommended annual contributions until the accrued liability is completely funded will consist of two pieces: Normal Cost plus a payment towards the Unfunded Accrued Liability.

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 liability for the plan is the excess of the Accrued Liability over the assets which have been accumulated for the plan. This Unfunded Accrued Liability is amortized as a level percent. Beginning on July 1, 2005, the amortization period is 30 years; the amortization period will decrease each year until it reaches 10 years, after which point it will remain at 10 years.

The **Actuarial Value of Assets** is determined by recognizing asset gains and losses over **five** 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	Current: 7.00%																				
	Prior: 7.125%																				
Salary Scale	3.50%																				
Amortization Growth Rate	3.50%																				
Expenses	Administrative expenses paid in the prior year, increased by 3% and rounded to the nearest \$100.																				
Healthy Mortality	RP-2000 Combined Healthy Mortality Table, Male and Female, with generational projection of future mortality improvements per Scale AA. This assumption includes a margin for improvements in longevity beyond the valuation date.																				
Turnover	Rates according to the following table:																				
	<table border="0"> <thead> <tr> <th style="text-align: center;">Age</th> <th style="text-align: center;">Rate</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">20</td><td style="text-align: center;">11.9%</td></tr> <tr><td style="text-align: center;">25</td><td style="text-align: center;">11.8%</td></tr> <tr><td style="text-align: center;">30</td><td style="text-align: center;">11.0%</td></tr> <tr><td style="text-align: center;">35</td><td style="text-align: center;">10.6%</td></tr> <tr><td style="text-align: center;">40</td><td style="text-align: center;">9.5%</td></tr> <tr><td style="text-align: center;">45</td><td style="text-align: center;">7.5%</td></tr> <tr><td style="text-align: center;">50</td><td style="text-align: center;">5.1%</td></tr> <tr><td style="text-align: center;">55</td><td style="text-align: center;">1.2%</td></tr> <tr><td style="text-align: center;">60</td><td style="text-align: center;">0.3%</td></tr> </tbody> </table>	Age	Rate	20	11.9%	25	11.8%	30	11.0%	35	10.6%	40	9.5%	45	7.5%	50	5.1%	55	1.2%	60	0.3%
Age	Rate																				
20	11.9%																				
25	11.8%																				
30	11.0%																				
35	10.6%																				
40	9.5%																				
45	7.5%																				
50	5.1%																				
55	1.2%																				
60	0.3%																				
Retirement	Rates according to the following table:																				
	<table border="0"> <thead> <tr> <th style="text-align: center;">Age</th> <th style="text-align: center;">Rate</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">55-59</td><td style="text-align: center;">5%</td></tr> <tr><td style="text-align: center;">60-61</td><td style="text-align: center;">10%</td></tr> <tr><td style="text-align: center;">62-64</td><td style="text-align: center;">25%</td></tr> <tr><td style="text-align: center;">65</td><td style="text-align: center;">35%</td></tr> <tr><td style="text-align: center;">66-69</td><td style="text-align: center;">50%</td></tr> <tr><td style="text-align: center;">70</td><td style="text-align: center;">100%</td></tr> </tbody> </table>	Age	Rate	55-59	5%	60-61	10%	62-64	25%	65	35%	66-69	50%	70	100%						
Age	Rate																				
55-59	5%																				
60-61	10%																				
62-64	25%																				
65	35%																				
66-69	50%																				
70	100%																				
Disability	11th Railroad Retirement Board Disability Rates.																				

Appendix B - Actuarial Assumptions

Disabled Mortality

RP-2000 Disabled Mortality Table, Male and Female. This assumption does not include a margin for improvements in longevity beyond the valuation date.

Marital Status

80% of members are assumed to be married with wives 3 years younger than husbands.

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.

Eligibility	Employed for twenty or more hours a week for more than 5 months per calendar year. Employees hired after July 1, 1997 are not covered by this plan.
Final Average Earnings	Highest average earnings received in any three consecutive full calendar years.
Continuous Service	Period of continuous employment with the Town beginning with the first of the month following date of employment.
Aggregate Service	The sum of all periods of Continuous Service.
Member Contributions	4.5% of after tax Earnings. Interest is credited at 4% per annum. Refund of Employee Contributions with interest to date of termination of employment or death, unless the employee is eligible for a deferred retirement income.
Normal Form of Benefit	Modified Cash Refund.
Normal Retirement Date	Earlier of age 65, or age 55 with completion of 30 years of service.
Normal Retirement Benefit	1.75% of Final Average Earnings not in excess of \$10,000 plus 2% of Final Average Earnings in excess of \$10,000 multiplied by years of Aggregate Service with a minimum of \$750 per year.
Early Retirement Date	Age 55 and 10 years of Continuous Service or 15 years of Aggregate Service.
Early Retirement Benefit	Accrued Benefit, actuarially reduced if payments begin prior to the member's 58th birthday.
Death Benefit Eligibility	Married Member (of at least one year) or with minor children. Age 30 with 5 years of Continuous Service.
Death Benefit	35% of benefit accrued to date of death.

Appendix C - Summary of Plan Provisions

Disability Retirement Eligibility	Ten years of Aggregate Service and not eligible for benefits under the Long Term Disability Contract.
Disability Retirement Benefit	Accrued Benefit, not less than \$1,000 per year, payable to the earlier of the end of disability, death or Normal Retirement Date.
Vesting	<p>Prior to July 1, 1989 - Ten years of Continuous Service or 15 years of Aggregate Service.</p> <p>Effective July 1, 1989 - Five years of Continuous Service or 15 years of Aggregate Service.</p>
Termination Benefit	Benefit accrued to date of termination with payment commencing on Normal Retirement Date.