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January 3, 2018

PERSONAL & CONFIDENTIAL

Ms. Julie R. Goucher, Treasurer
Town of Bristol
Town Hall
10 Court Street
Bristol, RI 02809

Re: Town of Bristol, RI Police Retirement Plan

Dear Julie:

We are pleased to provide ten copies of the revised July 1, 2017 actuarial report for Town of Bristol, RI Police Retirement Plan. The revised report reflects the restoration of the interest rate assumption from 6.50% to 6.75% as we discussed on December 22, 2017.

The Actuarially Determined Contribution for FY 2018-19 is \$1,328,003. Please refer to page 9 of the report for details.

Please let me know if you have questions.

Sincerely,

A handwritten signature in blue ink that reads 'Becky'.

Rebecca A. Sielman, FSA
Consulting Actuary



**Town of Bristol, RI
Police Retirement Plan**

**Actuarial Valuation as of July 1, 2017
For Fiscal Year 2018-19**

Prepared by

Rebecca A. Sielman, FSA
Consulting Actuary

Jennifer M. Castelhana, FSA
Consulting Actuary

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Certification

We have performed an actuarial valuation of the Plan as of July 1, 2017 for fiscal year 2018-19. 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.

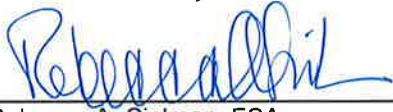
Certification

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.

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



Jennifer M. Castelhana, FSA
Consulting Actuary

Section I - Executive Summary

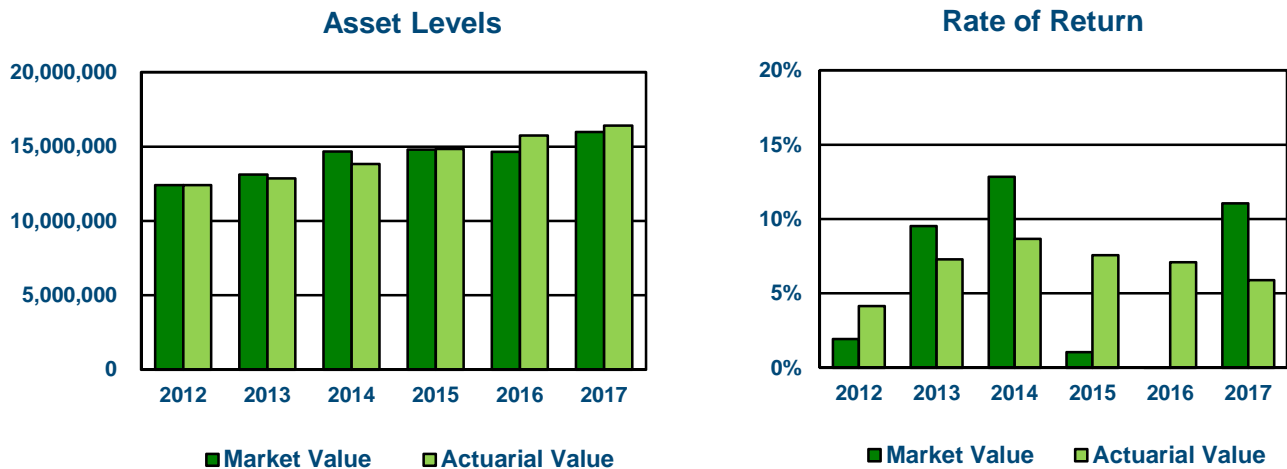
A. Highlights

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, 2016	\$14,651,709	\$15,750,342
Contributions	1,376,611	1,376,611
Investment Income	1,605,990	919,354
Benefit Payments	(1,641,747)	(1,641,747)
Value as of July 1, 2017	15,992,563	16,404,560

For fiscal year 2016-17, the plan's assets earned 11.06% on a Market Value basis and 5.89% on an Actuarial Value basis. The actuarial assumption for this period was 6.75%; the result is an asset gain of \$625,800 on a Market Value basis and a loss of \$134,200 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 exceeds the Market Value by \$412,000. This figure represents investment losses that will be gradually recognized over the next five years. This process will exert upward pressure on the Town's contribution, unless there are offsetting market gains.

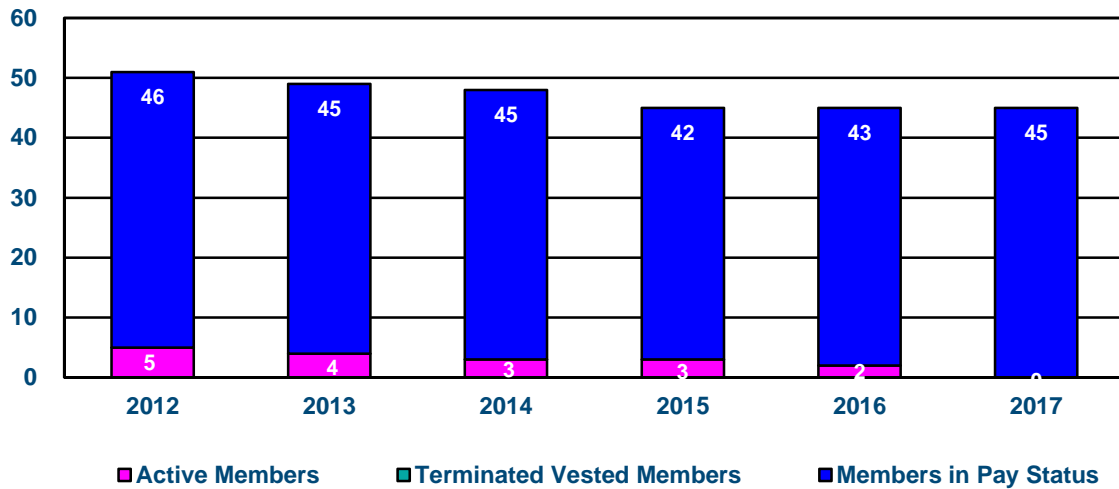
Section I - Executive Summary

A. Highlights

Membership

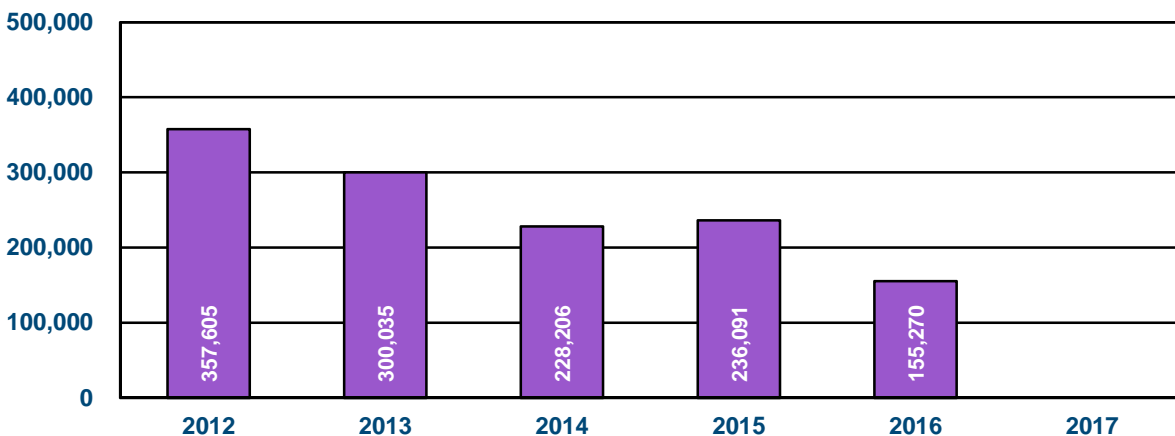
There are three basic categories of plan members included in the actuarial valuation: (1) active employees who have met the eligibility requirements for membership, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) members who are receiving monthly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

Number of Members



From July 1, 2016 to July 1, 2017, the overall membership stayed the same at 45. During this period, there were two retirements of active participants.

Payroll



The decline in payroll levels over the past several years reflects the decline in the number of active members. There are no actives remaining in the plan as of July 1, 2017.

Section I - Executive Summary

A. Highlights

Plan Changes

None.

Changes in Actuarial Methods or Assumptions

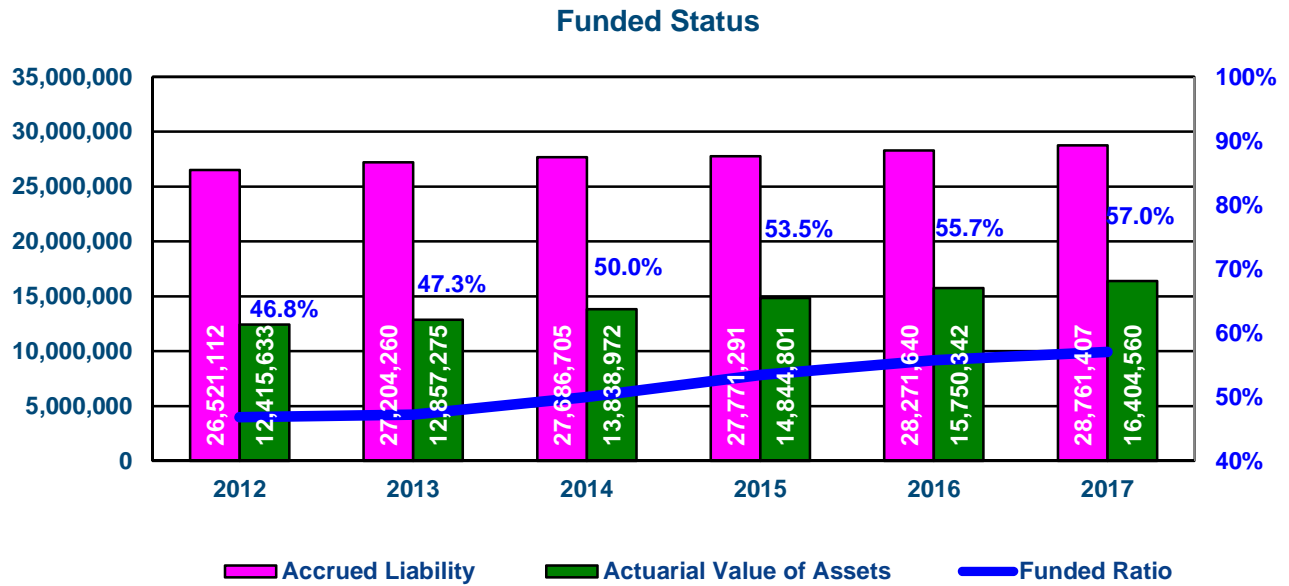
None.

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.



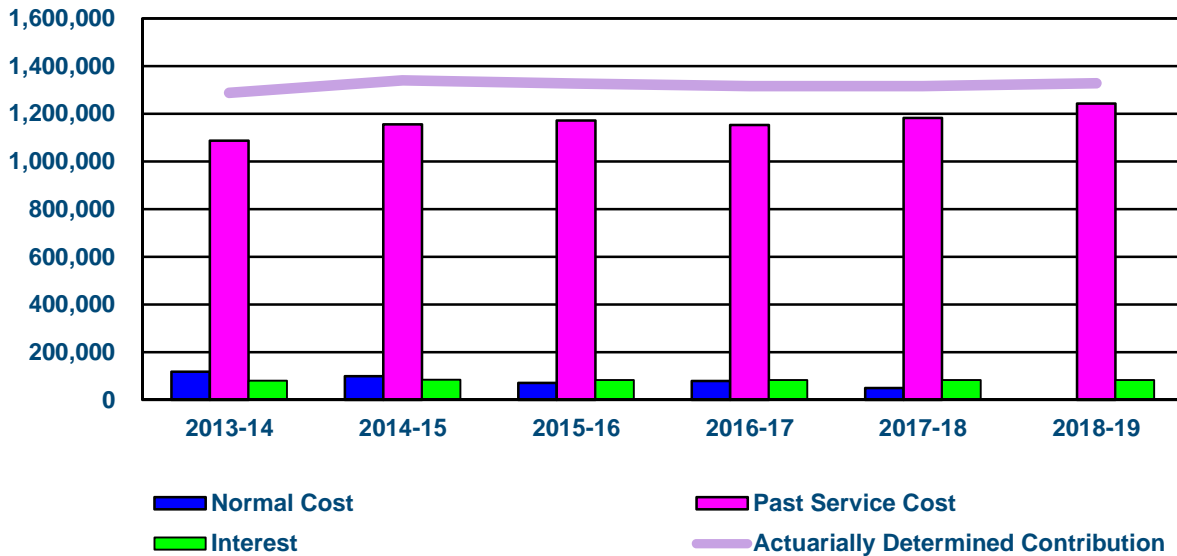
Section I - Executive Summary

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 **Interest** to the end of the year. 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.

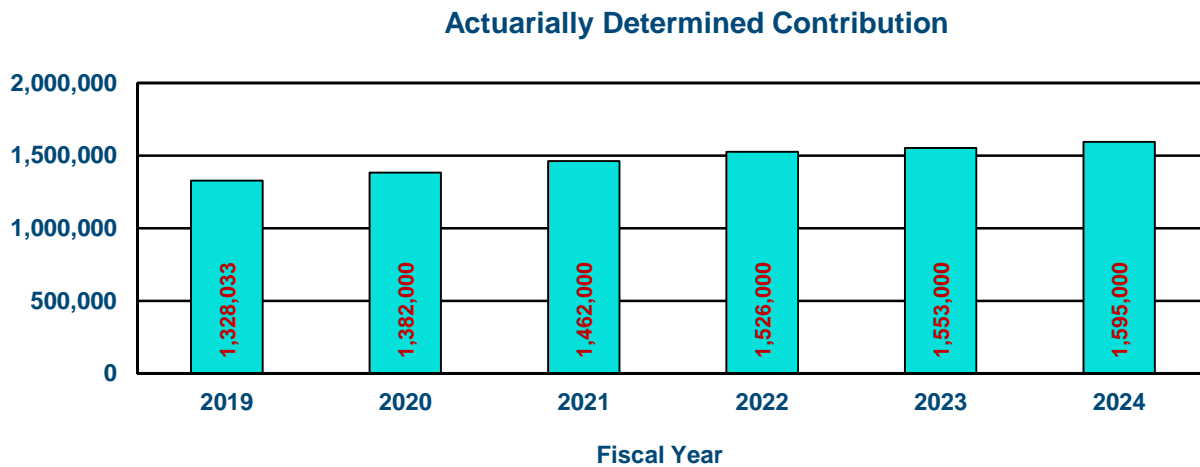
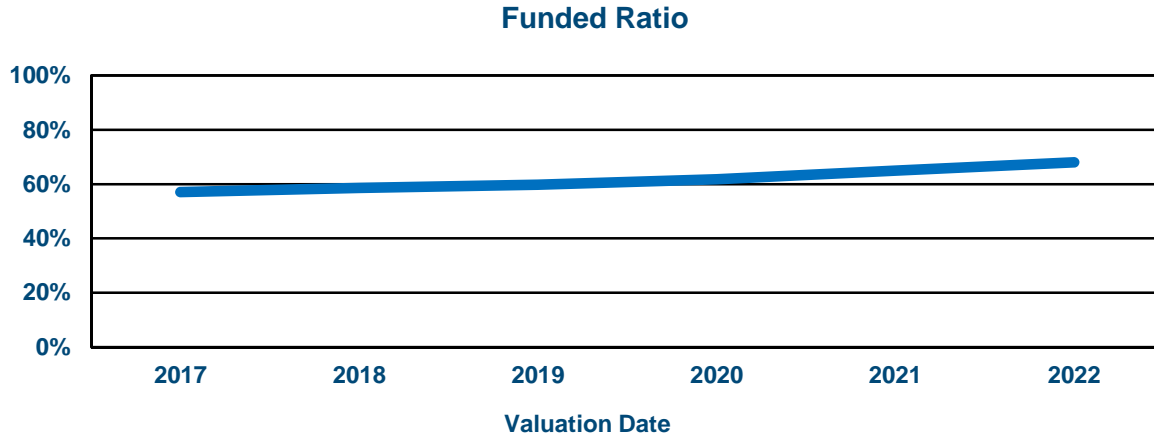
Contribution levels for the current year and the past few fiscal years are shown below.



Section I - Executive Summary

A. Highlights

Long Range Forecast



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, 2016	July 1, 2017
Active Members	2	0
Terminated Vested Members	0	0
Terminated Nonvested Members Due Refund	0	0
Members in Pay Status	43	45
Payroll	\$157,121	\$0
Assets and Liabilities	July 1, 2016	July 1, 2017
Market Value of Assets	\$14,651,709	\$15,992,563
Actuarial Value of Assets	15,750,342	16,404,560
Accrued Liability for Active Members	\$1,535,718	\$0
Accrued Liability for Terminated Vested Members	0	0
Accrued Liability for Members in Pay Status	26,735,922	28,761,407
Total Accrued Liability	28,271,640	28,761,407
Unfunded Accrued Liability	12,521,298	12,356,847
Funded Ratio	55.7%	57.0%
Actuarially Determined Contribution for Fiscal Year	2017-18	2018-19
Normal Cost	\$49,711	\$0
Past Service Cost	1,183,067	1,244,059
Interest	83,213	83,974
Actuarially Determined Contribution	1,315,991	1,328,033

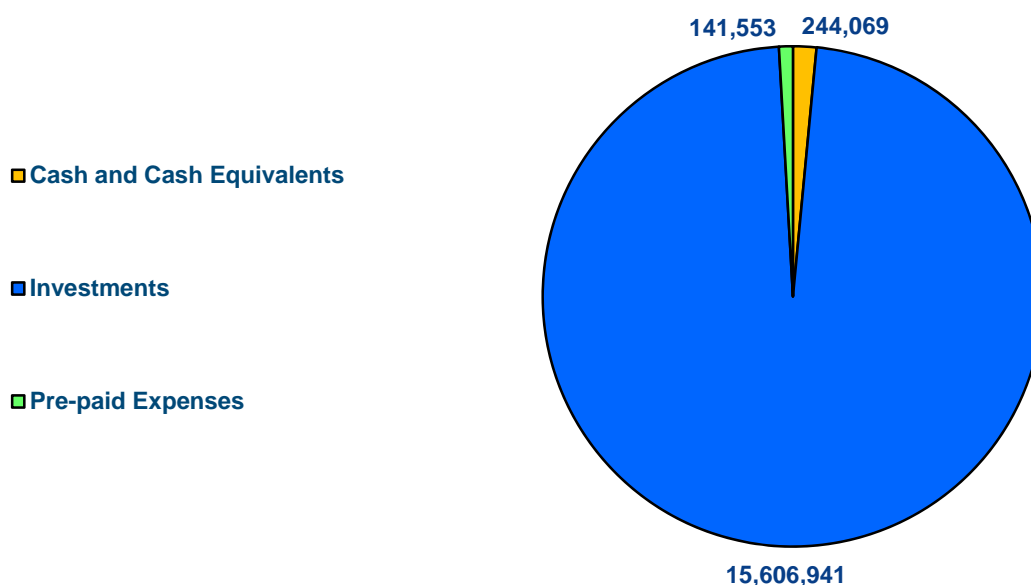
Section II - Plan Assets

A. Summary of Fund Transactions

	Trust Assets	Accruals	Total
Market Value as of July 1, 2016	\$14,521,437.87	\$130,271.60	\$14,651,709.47
Employer Contributions	1,374,450.39	0.00	1,374,450.39
Employee Contributions	2,160.64	0.00	2,160.64
Benefit Payments	(1,653,012.45)	11,264.97	(1,641,747.48)
Interest and Dividends	117,752.08	0.00	117,752.08
Unrealized Gains/(Losses)	1,305,772.88	0.00	1,305,772.88
Realized Gains/(Losses)	248,835.23	0.00	248,835.23
Investment Expenses	(63,867.72)	0.00	(63,867.72)
Administrative Expenses	(2,519.43)	16.44	(2,502.99)
Market Value as of July 1, 2017	15,851,009.49	141,553.01	15,992,562.50
Approximate Rate of Return			11.06%

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



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, 2017 is determined below.

1.	Expected Market Value of Assets:																					
	a. Market Value of Assets as of July 1, 2016	\$14,651,709																				
	b. Employer and Employee Contributions	1,376,611																				
	c. Benefit Payments	(1,641,747)																				
	d. Expected Investment Return Based on 6.75% Interest	<u>980,148</u>																				
	e. Expected Market Value of Assets as of July 1, 2017	15,366,721																				
2.	Actual Market Value of Assets as of July 1, 2017	15,992,563																				
3.	Market Value (Gain)/Loss: (1e) - (2)	(625,842)																				
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: center;">Percent Not Recognized</th> <th style="text-align: right;">Amount Not Recognized</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">6/30/2017</td> <td style="text-align: right;">(\$625,842)</td> <td style="text-align: center;">80%</td> <td style="text-align: right;">(\$500,674)</td> </tr> <tr> <td style="text-align: left;">6/30/2016</td> <td style="text-align: right;">1,231,590</td> <td style="text-align: center;">60%</td> <td style="text-align: right;">738,954</td> </tr> <tr> <td style="text-align: left;">6/30/2015</td> <td style="text-align: right;">832,731</td> <td style="text-align: center;">40%</td> <td style="text-align: right;">333,092</td> </tr> <tr> <td style="text-align: left;">6/30/2014</td> <td style="text-align: right;">(796,875)</td> <td style="text-align: center;">20%</td> <td style="text-align: right;"><u>(159,375)</u></td> </tr> </tbody> </table>	Plan Year End	(Gain)/Loss	Percent Not Recognized	Amount Not Recognized	6/30/2017	(\$625,842)	80%	(\$500,674)	6/30/2016	1,231,590	60%	738,954	6/30/2015	832,731	40%	333,092	6/30/2014	(796,875)	20%	<u>(159,375)</u>	411,997
Plan Year End	(Gain)/Loss	Percent Not Recognized	Amount Not Recognized																			
6/30/2017	(\$625,842)	80%	(\$500,674)																			
6/30/2016	1,231,590	60%	738,954																			
6/30/2015	832,731	40%	333,092																			
6/30/2014	(796,875)	20%	<u>(159,375)</u>																			
5.	Actuarial Value as of July 1, 2017: (2) + (4)	16,404,560																				
6.	Approximate Rate of Return on Actuarial Value	5.89%																				
7.	Actuarial Value (Gain)/Loss	134,235																				

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 20 years starting on July 1, 2009.

	July 1, 2016	July 1, 2017
1. Accrued Liability		
Active Members	\$1,535,718	\$0
Terminated Vested Members	0	0
Terminated Non-Vested Members Due Refund	0	0
Retired Members	22,913,361	24,913,475
Disabled Members	2,595,016	2,637,855
Beneficiaries of Deceased Members	<u>1,227,545</u>	<u>1,210,077</u>
Total	28,271,640	28,761,407
2. Actuarial Value of Assets (see Section II B)	15,750,342	16,404,560
3. Unfunded Accrued Liability: (1) - (2)	12,521,298	12,356,847
4. Funded Ratio: (2) / (1)	55.7%	57.0%
5. Amortization Period	13	12
6. Amortization Growth Rate	3.00%	3.00%
7. Past Service Cost: (3) amortized over (5)	1,183,067	1,244,059

SECTION III - DEVELOPMENT OF CONTRIBUTION
B. Actuarially Determined Contribution

	Fiscal Year 2017-18	Fiscal Year 2018-19
1. Total Normal Cost	\$64,469	\$0
2. Expected Employee Contributions	14,758	0
3. Expected Expenses	0	0
4. Net Normal Cost: (1) - (2) + (3)	49,711	0
5. Past Service Cost (see Section III A)	1,183,067	1,244,059
6. Interest on (4) + (5) to the end of the year	83,213	83,974
7. Actuarially Determined Contribution: (4) + (5) + (6)	1,315,991	1,328,033

SECTION III - DEVELOPMENT OF CONTRIBUTION

C. Long Range Forecast

This forecast is based on the results of the July 1, 2017 actuarial valuation and assumes that the Town will pay the Actuarially Determined Contribution each year, the assets will return 6.75% 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	Values as of the Valuation Date				Fiscal Year Ending	Cash Flows Projected to the Following Fiscal Year			
	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio		Employer Contributions	Employee Contributions	Benefit Payments	Net Cash Flows
7/1/2017	\$28,761,407	\$16,404,560	\$12,356,847	57.0%	2019	\$1,328,033	\$0	(\$1,726,131)	(\$398,098)
7/1/2018	28,949,000	16,967,000	11,982,000	58.6%	2020	1,382,000	0	(1,760,000)	(378,000)
7/1/2019	29,113,000	17,394,000	11,719,000	59.7%	2021	1,462,000	0	(1,794,000)	(332,000)
7/1/2020	29,254,000	18,056,000	11,198,000	61.7%	2022	1,526,000	0	(1,826,000)	(300,000)
7/1/2021	29,368,000	19,064,000	10,304,000	64.9%	2023	1,553,000	0	(1,860,000)	(307,000)
7/1/2022	29,457,000	20,040,000	9,417,000	68.0%	2024	1,595,000	0	(1,893,000)	(298,000)
7/1/2023	29,518,000	21,076,000	8,442,000	71.4%	2025	1,639,000	0	(1,925,000)	(286,000)
7/1/2024	29,548,000	22,191,000	7,357,000	75.1%	2026	1,685,000	0	(1,958,000)	(273,000)
7/1/2025	29,546,000	23,393,000	6,153,000	79.2%	2027	1,731,000	0	(1,989,000)	(258,000)
7/1/2026	29,511,000	24,690,000	4,821,000	83.7%	2028	1,777,000	0	(2,020,000)	(243,000)
7/1/2027	29,441,000	26,090,000	3,351,000	88.6%	2029	1,820,000	0	(2,051,000)	(231,000)
7/1/2028	29,334,000	27,600,000	1,734,000	94.1%	2030	1,851,000	0	(2,080,000)	(229,000)
7/1/2029	29,188,000	29,225,000	(37,000)	100.1%	2031	0	0	(2,108,000)	(2,108,000)
7/1/2030	29,001,000	30,961,000	(1,960,000)	106.8%	2032	0	0	(2,136,000)	(2,136,000)
7/1/2031	28,773,000	30,871,000	(2,098,000)	107.3%	2033	0	0	(2,162,000)	(2,162,000)
7/1/2032	28,501,000	30,747,000	(2,246,000)	107.9%	2034	0	0	(2,186,000)	(2,186,000)
7/1/2033	28,183,000	30,587,000	(2,404,000)	108.5%	2035	0	0	(2,209,000)	(2,209,000)
7/1/2034	27,818,000	30,392,000	(2,574,000)	109.3%	2036	0	0	(2,230,000)	(2,230,000)
7/1/2035	27,405,000	30,160,000	(2,755,000)	110.1%	2037	0	0	(2,249,000)	(2,249,000)
7/1/2036	26,943,000	29,890,000	(2,947,000)	110.9%	2038	0	0	(2,266,000)	(2,266,000)

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, 2017
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percent
Amortization Period	Closed 20 years from July 1, 2009
Asset Valuation Method	5 Year Smoothed Market Value
Actuarial Assumptions	
Investment Rate of Return	6.75%
Projected Salary Increases	4.25%
Amortization Growth Rate	3.00%
Cost-of-Living Adjustments	3.00%

SECTION IV - ACCOUNTING INFORMATION
B. Historical Schedule of Funding Progress

Actuarial Valuation Date	For Fiscal Year	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) - (1)	(4) Funded Ratio (1) / (2)	(5) Covered Payroll	(6) UAAL as a Percentage of Covered Payroll (3) / (5)
07/01/2008	2009-10	\$13,130,907	\$20,456,564	\$7,325,657	64.2%	\$485,611	1508.5%
07/01/2009	2010-11	12,424,250	20,981,926	8,557,676	59.2%	432,376	1979.2%
07/01/2010	2011-12	12,148,307	20,937,357	8,789,050	58.0%	453,506	1938.0%
07/01/2011	2012-13	12,235,119	21,492,883	9,257,764	56.9%	472,541	1959.1%
07/01/2012	2013-14	12,415,633	26,521,112	14,105,479	46.8%	357,605	3944.4%
07/01/2013	2014-15	12,857,275	27,204,260	14,346,985	47.3%	300,035	4781.8%
07/01/2014	2015-16	13,838,972	27,686,705	13,847,733	50.0%	228,206	6068.1%
07/01/2015	2016-17	14,844,801	27,771,291	12,926,490	53.5%	236,091	5475.2%
07/01/2016	2017-18	15,750,342	28,271,640	12,521,298	55.7%	155,270	8064.2%
07/01/2017	2018-19	16,404,560	28,761,407	12,356,847	57.0%	0	N/A

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) Covered Payroll	(5) Contribution as a Percentage of Covered Payroll (2) / (4)
2010	\$770,003	\$770,003	\$0	\$485,611	159%
2011	784,676	784,676	0	432,376	181%
2012	828,850	958,333	(129,483)	453,506	211%
2013	899,460	899,474	(14)	472,541	190%
2014	1,288,194	1,288,194	0	357,605	360%
2015	1,341,343	1,382,578	(41,235)	300,035	461%
2016	1,327,427	1,344,117	(16,690)	228,206	589%
2017	1,316,046	1,374,450	(58,404)	236,091	582%
2018	1,315,991	TBD	TBD	155,270	TBD
2019	1,328,033	TBD	TBD	0	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, 2016	As of July 1, 2017
1. Value of Vested Benefits		
Active Members	\$1,530,318	\$0
Terminated Vested Members	0	0
Terminated Non-Vested Due Refund	0	0
Retired Members	22,913,361	24,913,475
Disabled Members	2,595,016	2,637,855
Beneficiaries of Deceased Members	<u>1,227,545</u>	<u>1,210,077</u>
Total Value of Vested Benefits	28,266,240	28,761,407
2. Value of Non-Vested Benefits	8,767	0
3. Total Value of Accrued Benefits: (1) + (2)	28,275,007	28,761,407
4. Market Value of Assets	14,651,709	15,992,563
5. Vested Funded Ratio: (4) / (1)	51.8%	55.6%
6. Accrued Funded Ratio: (4) / (3)	51.8%	55.6%

SECTION IV - ACCOUNTING INFORMATION
E. Statement of Changes in Accrued Plan Benefits

Increase/(Decrease) during the 2016-17 plan year attributable to:

Increase for interest due to the decrease in the discount period	\$1,854,059
Benefits Accumulated/(Forfeited)	274,088
Benefit Payments	(1,641,747)
Plan Amendments	0
Changes in Actuarial Assumptions	0
Net Increase/(Decrease)	486,400

Value of Accrued Plan Benefits:

July 1, 2017	\$28,761,407
July 1, 2016	28,275,007
Net Increase/(Decrease)	486,400

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	Due Refund	Retirees	Disabled	Bene- ficiaries	Total
Count as of July 1, 2016	2	0	0	34	3	6	45
Terminated not vested	-	-	-	-	-	-	0
Terminated, benefits due	-	-	-	-	-	-	0
Retired	(2)	-	-	2	-	-	0
Died, with beneficiary	-	-	-	-	-	-	0
Died, no beneficiary	-	-	-	-	-	-	0
New member	-	-	-	-	-	-	0
New beneficiary	-	-	-	-	-	-	0
Lump sum paid	-	-	-	-	-	-	0
Rehired	-	-	-	-	-	-	0
New QDRO	-	-	-	-	-	-	0
Correction	-	-	-	-	-	-	0
Count as of July 1, 2017	0	0	0	36	3	6	45

SECTION V - MEMBERSHIP DATA

B. Statistics of Membership

	As of July 1, 2016	As of July 1, 2017
Number of Active Members		
Number	2	0
Average Age	51.0	0.0
Average Service	20.9	0.0
Total Payroll	\$157,121	\$0
Average Payroll	78,561	0
Terminated Vested Members		
Number	0	0
Total Annual Benefit	\$0	\$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Terminated Nonvested Members Due Refund		
Number	0	0
Retired Members		
Number	34	36
Total Annual Benefit	\$1,284,234	\$1,410,285
Average Annual Benefit	37,772	39,175
Average Age	59.9	60.4
Disabled Members		
Number	3	3
Total Annual Benefit	\$147,486	\$151,911
Average Annual Benefit	49,162	50,637
Average Age	52.1	53.1
Beneficiaries of Deceased Members		
Number	6	6
Total Annual Benefit	\$131,276	\$134,341
Average Annual Benefit	21,879	22,390
Average Age	74.9	75.9

SECTION V - MEMBERSHIP DATA
C. Distribution of Inactive Members as of July 1, 2017

	Age	Number	Annual Benefits
Terminated Vested Members	< 30	0	\$0
	30 - 39	0	0
	40 - 49	0	0
	50 - 59	0	0
	60 - 64	0	0
	65 +	0	0
	Total	0	0
Retired Members	< 50	3	\$146,283
	50 - 59	18	818,542
	60 - 69	7	236,104
	70 - 79	8	209,356
	80 - 89	0	0
	90 +	0	0
	Total	36	1,410,285
Disabled Retirees	< 50	1	\$49,806
	50 - 59	2	102,105
	60 - 69	0	0
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	3	151,911
Beneficiaries	< 50	0	\$0
	50 - 59	0	0
	60 - 69	0	0
	70 - 79	5	97,945
	80 - 89	1	36,396
	90 +	0	0
	Total	6	134,341

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, 2009, the amortization period is 20 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 a five year period.

APPENDIX B - ACTUARIAL ASSUMPTIONS

Each of the assumptions used in this valuation was set based on a formal study of the plan's experience for the period July 1, 2010 to July 1, 2014, 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. Please see the report dated April 30, 2015 for details concerning the information, analysis, and conclusions from the formal study of the plan's 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	6.75%
Salary Scale	4.25%
Amortization Growth Rate	3.00%
Cost of Living Increases	3.00%
Expenses	None.
Mortality	RP-2000 Combined Healthy Mortality Table, with generational projection per Scale AA. This assumption includes a margin for future improvements beyond the valuation date.
Disabled Mortality	RP-2000 Disabled Mortality.
Statutory Limits	Applicable annual IRC Section 415 benefit limits and IRC Section 401(a)(17) compensation limits are assumed to increase by 3.50% per year.
Turnover	None.
Retirement	50% of members will retire at the completion of 20 years of service, 50% the year after, 40% the next year, and 5% each year thereafter. 100% will have retired upon attaining 29 years of service.
Disability	50% of the 1985 Pension Disability Table (DP-85 Table) Class 4 rates.
Survivor Benefit	100% of participants are assumed to have an eligible spouse. The female spouse is assumed to be three years younger than the male spouse.
Form of Annuity	Five year certain and life annuity with 67.5% joint and survivor.

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	All members of the Town of Bristol Police Force hired prior to March 22, 1998 are eligible. Employees hired after March 22, 1998 will enter the State Retirement System.
Final Average Earnings	Average of the two highest consecutive years of base pay plus longevity and holiday pay.
Credited Service	Full years and fractions to the nearest month.
Normal Retirement Date	Completion of 20 or more years of service.
Normal Retirement Benefit	60% of final average earnings plus 1% of final average earnings for each year of service in excess of 20 years to a maximum of 10 additional years.
Deferred Retirement	Benefit payment will be deferred to actual retirement and will equal the Normal Retirement benefit based on years of service (maximum 30) and average compensation at actual retirement date.
Early Retirement Eligibility	Vested.
Early Retirement Benefit	Accrued benefits reduced actuarially for early payment.
Severance Benefit Eligibility	Less than 10 years of service.
Severance Benefit	Greater of employee's accumulations or (2) weeks pay for year of service.
Vested Benefit Eligibility	10 years of service.
Vested Benefit	Greater of: Normal Retirement Benefit reduced by ratio of actual years of service at date of termination over total years of service the participant would have worked had the participant continued working to Normal Retirement Date. Greater of 3 weeks pay for each year of service or the total of the participant's own contributions to the fund with interest at 3% is payable as a lump sum.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

Pre-Retirement Survivor Benefit Eligibility	Death as a result of performance of duties or completed at least 5 years of service.
Pre-Retirement Survivor Benefit	Spouse is entitled to 67 ½% of “Accrued Benefit” (assuming constant future earnings to normal retirement date) and children to 22 ½% (i.e. one-third of 67 ½%) until the earliest of 22nd birthday, ceases to attend school unless disabled, or marriage of child. If spouse is more than 3 years younger than participant, then the survivor’s benefit is reduced to the actuarial equivalent of a survivor’s benefit where spouse is precisely 3 years younger (except for children where it’s calculated without actuarial reduction). A maximum of three children are eligible to receive benefits for each death claim. If no survivor benefit is payable to a spouse or surviving children, the beneficiary will receive employee contributions with 3.5% interest.
Lump Sum Death Benefit	\$2,500 if death occurs after actual Retirement Date, otherwise \$8,000.
Post-Retirement Survivor Benefit Eligibility	Death of participant after retirement.
Post-Retirement Survivor Benefit	Spouse is entitled to 67 ½% of “Normal Retirement Benefit” and children to 22 ½% (i.e. one-third of 67 ½%) until the earliest of 22nd birthday, ceases to attend school unless disabled, or marriage of child. If spouse is more than 3 years younger than participant, then the survivor’s benefit is reduced to the actuarial equivalent of a survivor’s benefit where spouse is precisely 3 years younger. A maximum of three children are eligible to receive benefits for each death claim.
Accidental Disability Eligibility	Injuries sustained in the performance of duties.
Accidental Disability Benefit	72% of annual salary at the time of disability.
Ordinary Disability Eligibility	10 years of service.
Ordinary Disability Benefit	50% of final average earnings.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

Cost of Living Adjustment (COLA)	All participants retiring on and after April 1, 1998 and all participants retiring on a disability pension will be eligible for an annual 3.0% Cost of Living Adjustment. The Cost of Living increase is payable July 1 of each year.
Employee Contributions	<p>Prior to July 1, 1998: 38.5% of total cost of plan with a maximum of 9.4% of pay; the contributions are after-tax.</p> <p>On and after July 1, 1998: 11% of pay with adjustments between 13% and 9% based on funding requirements. Post June 30, 1998 contributions are pre-tax.</p> <p>Employee contributions are credited with 3.0% interest for termination and 3.5% for survivor benefits; compounded from each April 1.</p>
Town Contributions	<p>Prior to July 1, 1998: 61.5% of total cost of plan with a maximum of 15% of pay.</p> <p>On and after July 1, 1998: 24% of pay with adjustments up or down based on funding requirements.</p>