

**Town of Scituate Retirement Plan for the Police
Department Employees**

Financial Disclosure Information
in accordance with Statements of
Governmental Accounting Standards Board
Statement No. 67 (“GASB 67”) & No. 68 (“GASB 68”)

for the fiscal year beginning April 1, 2018
and ending March 31, 2019

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September 2019

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I. INTRODUCTION

The purpose of this report is to present certain financial information relative to the Town of Scituate Retirement Plan for the Police Department Employees (the "Plan") in accordance with Governmental Accounting Standards Board Statement No. 67 ("GASB 67") & No. 68 ("GASB 68"). GASB 67 is applicable to the Plan and GASB 68 is applicable to the Plan sponsor, the Town of Scituate, RI.

The report presents information regarding the Plan for the period beginning April 1, 2018 and ending March 31, 2019. This report is based on the adoption of GASB 67 and GASB 68 for the Plan effective April 1, 2015. This report includes the determination of the Plan's current discount rate, Net Pension Liability, pension expense, and balances of deferred inflows and outflows.

This report was based on information submitted to our firm by the Town of Scituate, RI in the form of census data, substantive plan provisions, asset/benefit payment information, and other ancillary material pertaining to the plan. The major provisions of the Plan, upon which this report and valuation are based, are outlined in Appendix A. Census data was provided as of March 31, 2019. We have not independently verified, nor do we make any representations as to the accuracy of such information.

Actuarial computations under GASB 67 and GASB 68 are for purposes of fulfilling employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB 67 and GASB 68 and are in conformity with applicable actuarial standards of practice. To the best of our knowledge, the information contained in this report was determined in accordance with GASB 67 and GASB 68. In addition, no relationship exists with the plan or plan sponsor that impairs the objectivity of our work.

The actuarial assumptions used for this reporting represent my best estimates of current and future Plan experience. A summary of these assumptions and the basis for their determination can be found in Appendix B, as well as the Summary of Actuarial Assumptions exhibit.

I meet the GASB 67 and GASB 68 Qualification Standards of the American Academy of Actuaries to render the actuarial opinions included in this report, based upon my education, experience and continuing education.

Reviewed by:



Jeffrey C. Liter, Ph.D., E.A., M.A.A.A.
Enrolled Actuary

09/19/2019

Date

II. NET PENSION LIABILITY

A. Net Pension Liability as of April 1, 2018

The Net Pension Liability for the Plan was measured as of April 1, 2018, and the Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of April 1, 2018.

The components of the Net Pension Liability of the Plan as of April 1, 2018, were as follows:

Total Pension Liability	\$	15,542,056
Plan Fiduciary Net Position	\$	(5,839,817)
Net Pension Liability	\$	<u>9,702,239</u>

Plan Fiduciary Net Position as a percentage of the Total Pension Liability	37.57%
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The discount rate used to calculate the Total Pension Liability was 7.50%.

B. Net Pension Liability as of March 31, 2019

The Net Pension Liability for the Plan was measured as of March 31, 2019, and the Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of April 1, 2019.

The components of the Net Pension Liability of the Plan as of March 31, 2019, were as follows:

Total Pension Liability	\$	16,808,761
Plan Fiduciary Net Position	\$	(6,075,161)
Net Pension Liability	\$	<u>10,733,600</u>

Plan Fiduciary Net Position as a percentage of the Total Pension Liability	36.14%
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The discount rate used to calculate the Total Pension Liability was 7.0%.

II. NET PENSION LIABILITY

C. Changes in Net Pension Liability for the Fiscal Year ending March 31, 2019

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balance as of 4/1/2018	\$15,542,056	\$5,839,817	\$9,702,239
Changes for the year:			
Service Cost	201,808		201,808
Interest on Total Pension Liability	1,140,969		1,140,969
Differences Between Expected and Actual Experience	(61,260)		(61,260)
Changes of Assumptions	873,746		873,746
Changes in Benefit Terms	0		0
Contributions - Employer		847,392	(847,392)
Contributions - Employee		113,246	(113,246)
Net Investment Income		194,521	(194,521)
Benefit Payments	(888,558)	(888,558)	0
Administrative Expense		(31,257)	31,257
Other Changes	0	0	0
Net Changes	<u>\$1,266,705</u>	<u>\$235,344</u>	<u>\$1,031,361</u>
Balance as of 3/31/2019	<u><u>\$16,808,761</u></u>	<u><u>\$6,075,161</u></u>	<u><u>\$10,733,600</u></u>

D. Sensitivity of the Net Pension Liability to Changes in Discount Rate as of March 31, 2019

The following presents the Net Pension Liability as of March 31, 2019 calculated using the discount rate of 7.00%, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	<u>1% Decrease</u> 6.00%	Current <u>Discount Rate</u> 7.00%	<u>1% Increase</u> 8.00%
Plan's Net Pension Liability as of March 31, 2019:	13,056,111	10,733,600	8,846,002

II. NET PENSION LIABILITY

E. Schedule of Changes in the Net Pension Liability and Related Ratios - Last 10 Fiscal Years

Fiscal Year Ending	03/31/2019	03/31/2018	03/31/2017	03/31/2016	03/31/2015	03/31/2014	03/31/2013	03/31/2012	03/31/2011	03/31/2010
Total Pension Liability (TPL)										
Service Cost	\$ 201,808	\$ 183,866	\$ 203,864	\$ 203,864	\$ 191,506					
Interest on TPL	1,140,969	1,092,957	1,029,716	970,057	899,459					
Differences between exp. and actual experience	(61,260)	432,238	448,363	(409,813)	392,571					
Changes of assumptions	873,746	(199,966)	0	(179,601)	152,290					
Changes in benefit terms	0	0	0	923,914	0					
Benefit payments	<u>(888,558)</u>	<u>(868,346)</u>	<u>(796,428)</u>	<u>(712,962)</u>	<u>(671,686)</u>					
Net Change in TPL	1,266,705	640,749	885,515	795,459	964,140					
Total Pension Liability - beginning	15,542,056	14,901,307	14,015,792	13,220,333	12,256,192					
Total Pension Liability - end (a)	<u>\$ 16,808,761</u>	<u>\$ 15,542,056</u>	<u>\$ 14,901,307</u>	<u>\$ 14,015,792</u>	<u>\$ 13,220,333</u>					
Plan Fiduciary Net Position (FNP)										
Contributions - Employer	\$ 847,392	\$ 856,215	\$ 750,786	\$ 791,829	\$ 728,868					
Contributions - Employee	113,246	116,018	117,991	144,719	111,747					
Net investment income	194,521	477,960	448,169	(174,131)	344,110					
Benefit payments	(888,558)	(868,346)	(796,428)	(712,962)	(671,686)					
Administrative expense	(31,257)	(30,534)	(27,345)	(25,311)	(24,170)					
Other changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>					
Net Changes in FNP	235,344	551,313	493,173	24,144	488,869					
Fiduciary Net Position - beginning	5,839,817	5,288,504	4,795,331	4,771,187	4,282,318					
Fiduciary Net Position - end (b)	<u>\$ 6,075,161</u>	<u>\$ 5,839,817</u>	<u>\$ 5,288,504</u>	<u>\$ 4,795,331</u>	<u>\$ 4,771,187</u>					
Net Pension Liability - ending (a) - (b)	<u>\$ 10,733,600</u>	<u>\$ 9,702,239</u>	<u>\$ 9,612,803</u>	<u>\$ 9,220,461</u>	<u>\$ 8,449,146</u>					
Plan Fiduciary Net Position as a percentage of the Total Pension Liability										
	36.14%	37.57%	35.49%	34.21%	36.09%					
Covered Employee Payroll										
	\$ 911,172	\$ 935,534	\$ 934,546	\$ 1,111,367	\$ 821,754					
Net Pension Liability as a percentage of covered employee payroll										
	1178.00%	1037.08%	1028.61%	829.65%	1028.18%					
Notes to Schedule:	None									

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, governments should present information for those years for which information is available.

III. SCHEDULE OF PLAN CONTRIBUTIONS

A. Schedule of Plan Contributions - Last 10 Fiscal Years

Fiscal Year Ending Valuation Date	03/31/2019 04/01/2018	03/31/2018 04/01/2017	03/31/2017 04/01/2016	03/31/2016 04/01/2015	03/31/2015 04/01/2014	03/31/2014 04/01/2013	03/31/2013 04/01/2012	03/31/2012 04/01/2011	03/31/2011 04/01/2010	03/31/2010 04/01/2009
Actuarially Determined Contribution*	\$ 942,550	\$ 821,810	\$ 767,944	\$ 716,189	\$ 637,901	\$ 638,018	\$ 629,958	\$ 632,116	\$ 576,686	\$ 580,159
Contributions in relation to the actuarially determined contribution	\$ 847,392	\$ 856,215	\$ 750,786	\$ 791,829	\$ 728,868	\$ 758,709	\$ 637,460	\$ 356,593	\$ 357,144	\$ 353,672
Contribution deficiency / (excess)	\$ 95,158	\$ (34,405)	\$ 17,158	\$ (75,640)	\$ (90,967)	\$ (120,691)	\$ (7,502)	\$ 275,523	\$ 219,542	\$ 226,487
Covered Employee Payroll	\$ 911,172	\$ 935,534	\$ 934,546	\$ 1,111,367	\$ 821,754	\$ 916,057	N/A	\$ 917,936	N/A	\$ 898,737
Contributions as a percentage of covered employee payroll	93.00%	91.52%	80.34%	71.25%	88.70%	82.82%	N/A	38.85%	N/A	39.35%

* The Town of Scituate's portion of the contribution for the fiscal year beginning April 1, 2019 will be \$1,054,062 reduced by the actual amount of employee contributions.

Notes to Schedule:

Actuarially Determined Contribution:	Calculated as the normal cost plus an amortization of the unfunded actuarial accrued liability. Effective with the April 1, 2013 valuation, the amortization of the the Unfunded Accrued Liability is over a 25 year period that declines by one each year effective back to April 1, 2012. The amortization period as of April 1, 2019 is 18 years.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method
Normal Cost:	The normal cost is the sum of the normal costs for all active participants who have not reached the assumed retirement date. For each such participant, the individual normal cost is the participant's normal cost accrual rate multiplied by the participant's current compensation. The normal cost accrual rate equals (a) the actuarial present value of future benefits as of the participant's entry age divided by (b) the actuarial present value of future compensation as of the participant's entry age. For other participants, the normal cost equals zero.
Salary Increase:	3.00% per year. 3.50% per year for Fiscal Year Ending March 31, 2016 - March 31, 2018. 4.00% per year prior to Fiscal Year Ending March 31, 2016
Asset valuation method:	The assets used to determine plan costs are equal to the current market value
Investment Rate of Return:	7.00%. 7.50% prior to Fiscal Year Ending March 31, 2019.
Retirement Age:	See Appendix B.
Mortality:	See Appendix B.

IV. PENSION EXPENSE

A. Pension Expense for the Fiscal Year Ending March 31, 2019

1. Service Cost as of April 1, 2018	\$	201,808
2. Interest on the Total Pension Liability		
a. Total Pension Liability as of April 1, 2018	\$	15,542,056
b. Service Cost (time-weighted)		100,904
c. Expected benefit payments (time-weighted)		(430,046)
d. Average expected Total Pension Liability	\$	15,212,914
e. Discount Rate		7.50%
f. Interest on the Total Pension Liability [(d) x (e)]	\$	1,140,969
3. Projected earning on pension plan investments		
a. Fiduciary Net Position as of April 1, 2018	\$	5,839,817
b. Plan Contributions (time-weighted)		480,319
c. Expected benefit payments (time-weighted)		(430,046)
d. Average expected Fiduciary Net Position	\$	5,890,090
e. Long Term Rate of Return on Investments		7.50%
f. Earnings on Fiduciary Net Position [(d) x (e)]	\$	441,757
4. Recognition of Deferred Outflows and (Inflows) of Resources ¹		
a. Difference between expected and actual experience	\$	99,044
b. Changes of assumptions	\$	153,906
c. Difference between projected and actual earnings on Plan investments	\$	124,751
d. Total recognized deferred outflow and (inflows) of resources [(a) + (b) + (c)]	\$	377,701
5. Employee Contributions	\$	(113,246)
6. Administrative Expenses	\$	31,257
7. Other changes	\$	0
8. Total Pension Expense for the Fiscal Year Ending March 31, 2019 [(1) + (2.f) - (3.f) + (4.d) + (5) + (6) + (7)]	\$	1,196,732

¹ Please refer to Section V for details of the recognition of deferred outflows and inflows of resource.

IV. PENSION EXPENSE

B. Pension Expense and Deferred Outflows of Resources and Deferred (Inflows) of Resources Related to the Plan

The Plan's deferred outflows of resources and deferred (inflows) of resources as of March 31, 2019 are as follows:

	Deferred Outflows of Resources	Deferred (Inflows) of Resources
1. Difference between expected and actual experience	\$ 406,807	\$ (155,670)
2. Changes of assumptions	\$ 642,474	\$ (159,275)
3. Difference between projected and actual earnings on Plan investments	\$ 305,386	\$ (79,860)
4. Total Deferred Outflows / (Inflows)	\$ 1,354,667	\$ (394,805)

Amounts reported as deferred outflows of resources and deferred (inflows) of resources will be recognized in pension expense as follows:

5. Fiscal Year Ending:	March 31, 2020	\$ 377,703
	March 31, 2021	\$ 306,109
	March 31, 2022	\$ 226,602
	March 31, 2023	\$ 49,448
	March 31, 2024	\$ 0
	Thereafter	\$ 0
	Total	\$ 959,862

V. DEFERRED OUTFLOWS AND INFLOWS

A. Schedule of Differences Between Expected and Actual Plan Experience

Year Ending	Difference Between Expected and Actual Experience	Recognition Period (Years)	Deferred Outflow/ (Inflow) as of 4/1/2018	Increase/(Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience											
				3/31/2019	3/31/2020	3/31/2021	3/31/2022	3/31/2023	3/31/2024	3/31/2025	3/31/2026	3/31/2027	3/31/2028	3/31/2029	
3/31/2016	(409,813)	5.479	(185,422)	(74,797)	(74,797)	(35,828)	0	0	0	0	0	0	0	0	0
3/31/2017	448,363	4.786	260,999	93,682	93,682	73,635	0	0	0	0	0	0	0	0	0
3/31/2018	432,238	4.485	335,864	96,374	96,374	96,374	46,742	0	0	0	0	0	0	0	0
3/31/2019	(61,260)	3.778	(61,260)	<u>(16,215)</u>	<u>(16,215)</u>	<u>(16,215)</u>	<u>(12,615)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
				<u>\$ 99,044</u>	<u>\$ 99,044</u>	<u>\$ 117,966</u>	<u>\$ 34,127</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

B. Schedule of Changes in Plan Assumptions

Year Ending	Difference Between Expected and Actual Experience	Recognition Period (Years)	Deferred Outflow/ (Inflow) as of 4/1/2018	Increase/(Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Plan Assumptions											
				3/31/2019	3/31/2020	3/31/2021	3/31/2022	3/31/2023	3/31/2024	3/31/2025	3/31/2026	3/31/2027	3/31/2028	3/31/2029	
3/31/2016	(179,601)	5.479	(81,261)	(32,780)	(32,780)	(15,701)	0	0	0	0	0	0	0	0	0
3/31/2017	0	4.786	0	0	0	0	0	0	0	0	0	0	0	0	0
3/31/2018	(199,966)	4.485	(155,380)	(44,586)	(44,586)	(44,586)	(21,622)	0	0	0	0	0	0	0	0
3/31/2019	873,746	3.778	873,746	<u>231,272</u>	<u>231,272</u>	<u>231,272</u>	<u>179,930</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
				<u>\$ 153,906</u>	<u>\$ 153,906</u>	<u>\$ 170,985</u>	<u>\$ 158,308</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

C. Schedule of Difference Between Projected and Actual Earnings on Plan Investments

Year Ending	Difference Between Expected and Actual Experience	Recognition Period (Years)	Deferred Outflow/ (Inflow) as of 4/1/2018	Increase/(Decrease) in Pension Expense Arising from the Recognition of Difference Between Projected and Actual Earnings on Plan Investments					
				3/31/2019	3/31/2020	3/31/2021	3/31/2022	3/31/2023	3/31/2024
3/31/2016	537,977	5.000	215,192	107,595	107,597	0	0	0	0
3/31/2017	(85,053)	5.000	(51,031)	(17,011)	(17,011)	(17,009)	0	0	0
3/31/2018	(76,400)	5.000	(61,120)	(15,280)	(15,280)	(15,280)	(15,280)	0	0
3/31/2019	247,236	5.000	247,236	<u>49,447</u>	<u>49,447</u>	<u>49,447</u>	<u>49,447</u>	<u>49,448</u>	<u>0</u>
				<u>\$ 124,751</u>	<u>\$ 124,753</u>	<u>\$ 17,158</u>	<u>\$ 34,167</u>	<u>\$ 49,448</u>	<u>\$ -</u>

V. DEFERRED OUTFLOWS AND INFLOWS

D. Plan Demographics Projected to March 31, 2019

Status	<u>Count</u>	<u>Avg. Future Service</u>
Active	11	10.092
Terminated Vested	1	1.000
Disabled	4	1.000
Retirees and Beneficiaries	<u>20</u>	<u>1.000</u>
Total	36	3.778

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2019 - Analysis of Crossover Point

Plan Year	Prior Year's Actuarially Determined Contribution	Projected Market Value of Assets	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Value of Benefit Payments		
				"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Portion	Present Value of "Unfunded" Portion	Present Value of All Benefit Payments - Single Rate
4/1						7.00%	3.29%*	7.00%
2019	847,392	6,075,161	867,714	867,714	0	867,714	0	867,714
2020	942,550	6,654,860	875,273	875,273	0	818,012	0	818,012
2021	938,218	7,262,352	884,160	884,160	0	772,260	0	772,260
2022	966,529	7,931,826	962,890	962,890	0	786,005	0	786,005
2023	982,201	8,566,370	973,963	973,963	0	743,032	0	743,032
2024	1,012,170	9,263,681	1,044,207	1,044,207	0	744,505	0	744,505
2025	1,031,000	9,941,271	1,054,489	1,054,489	0	702,651	0	702,651
2026	1,062,937	10,686,875	1,216,380	1,216,380	0	757,500	0	757,500
2027	1,065,380	11,282,282	1,224,795	1,224,795	0	712,842	0	712,842
2028	1,099,074	11,943,573	1,232,768	1,232,768	0	670,544	0	670,544
2029	1,134,314	12,677,010	1,242,043	1,242,043	0	631,392	0	631,392
2030	1,171,326	13,487,675	1,253,871	1,253,871	0	595,705	0	595,705
2031	1,210,423	14,379,999	1,376,329	1,376,329	0	611,107	0	611,107
2032	1,226,106	15,194,771	1,383,171	1,383,171	0	573,967	0	573,967
2033	1,269,976	16,101,385	1,512,106	1,512,106	0	586,421	0	586,421
2034	1,289,507	16,926,393	1,514,791	1,514,791	0	549,030	0	549,030
2035	1,341,512	17,856,090	1,517,793	1,517,793	0	514,129	0	514,129
2036	1,403,719	18,907,447	1,519,215	1,519,215	0	480,945	0	480,945
2037	1,494,137	20,119,131	1,625,804	1,625,804	0	481,017	0	481,017
2038	54,230	19,784,694	1,626,655	1,626,655	0	449,784	0	449,784
2039	61,311	19,435,146	1,625,325	1,625,325	0	420,015	0	420,015
2040	59,333	19,062,399	1,639,295	1,639,295	0	395,911	0	395,911
2041	57,378	18,649,101	1,633,104	1,633,104	0	368,613	0	368,613
2042	54,784	18,212,902	1,624,355	1,624,355	0	342,653	0	342,653
2043	52,622	17,755,429	1,612,960	1,612,960	0	317,990	0	317,990
2044	50,409	17,278,004	1,598,875	1,598,875	0	294,591	0	294,591
2045	48,177	16,782,113	1,582,604	1,582,604	0	272,517	0	272,517
2046	45,901	16,268,789	1,563,612	1,563,612	0	251,633	0	251,633
2047	43,608	15,739,715	1,541,899	1,541,899	0	231,905	0	231,905
2048	41,294	15,196,678	1,517,488	1,517,488	0	213,302	0	213,302
2049	38,987	14,641,585	1,490,383	1,490,383	0	195,787	0	195,787
2050	36,689	14,076,465	1,460,579	1,460,579	0	179,320	0	179,320
2051	34,407	13,503,489	1,428,110	1,428,110	0	163,863	0	163,863
2052	32,163	12,924,958	1,393,044	1,393,044	0	149,383	0	149,383

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2019 - Analysis of Crossover Point

Plan Year	Prior Year's Actuarially Determined Contribution	Projected Market Value of Assets	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Value of Benefit Payments		
				"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Portion	Present Value of "Unfunded" Portion	Present Value of All Benefit Payments - Single Rate
4/1						7.00%	3.29%*	7.00%
2053	29,951	12,343,240	1,355,471	1,355,471	0	135,844	0	135,844
2054	27,811	11,760,806	1,315,561	1,315,561	0	123,219	0	123,219
2055	25,718	11,180,087	1,273,555	1,273,555	0	111,481	0	111,481
2056	23,712	10,603,456	1,229,779	1,229,779	0	100,607	0	100,607
2057	21,775	10,033,087	1,184,593	1,184,593	0	90,570	0	90,570
2058	19,926	9,470,937	1,138,394	1,138,394	0	81,344	0	81,344
2059	18,162	8,918,676	1,091,515	1,091,515	0	72,892	0	72,892
2060	16,473	8,377,724	1,044,200	1,044,200	0	65,170	0	65,170
2061	14,865	7,849,347	996,692	996,692	0	58,136	0	58,136
2062	13,340	7,334,642	949,224	949,224	0	51,745	0	51,745
2063	11,886	6,834,521	902,027	902,027	0	45,955	0	45,955
2064	10,520	6,349,735	855,324	855,324	0	40,725	0	40,725
2065	9,219	5,880,828	809,277	809,277	0	36,012	0	36,012
2066	7,990	5,428,215	763,981	763,981	0	31,772	0	31,772
2067	6,830	4,992,239	719,461	719,461	0	27,963	0	27,963
2068	5,748	4,573,249	675,769	675,769	0	24,547	0	24,547
2069	4,726	4,171,541	632,916	632,916	0	21,486	0	21,486
2070	3,771	3,787,429	590,855	590,855	0	18,746	0	18,746
2071	2,899	3,421,310	549,514	549,514	0	16,294	0	16,294
2072	2,091	3,073,663	508,861	508,861	0	14,101	0	14,101
2073	1,364	2,745,049	468,907	468,907	0	12,144	0	12,144
2074	723	2,436,057	429,760	429,760	0	10,402	0	10,402
2075	171	2,147,208	391,578	391,578	0	8,858	0	8,858
2076	0	1,879,193	354,548	354,548	0	7,495	0	7,495
2077	0	1,632,335	318,814	318,814	0	6,299	0	6,299
2078	0	1,406,653	284,501	284,501	0	5,253	0	5,253
2079	0	1,202,038	251,754	251,754	0	4,345	0	4,345
2080	0	1,018,222	220,747	220,747	0	3,560	0	3,560
2081	0	854,740	191,679	191,679	0	2,889	0	2,889
2082	0	710,890	164,715	164,715	0	2,320	0	2,320
2083	0	585,753	139,957	139,957	0	1,843	0	1,843
2084	0	478,248	117,462	117,462	0	1,445	0	1,445
2085	0	387,160	97,326	97,326	0	1,119	0	1,119
2086	0	311,100	79,550	79,550	0	855	0	855

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2019 - Analysis of Crossover Point

Plan Year Beginning	Prior Year's Actuarially Determined Contribution	Projected Market Value of Assets	Projected Benefit Payments	Projected Benefit Payments		Actuarial Present Value of Benefit Payments				
				"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Portion 7.00%	Present Value of "Unfunded" Portion 3.29%*	Present Value of All Benefit Payments - Single Rate 7.00%		
2087	0	248,587	64,130	64,130	0	644	0	644		
2088	0	198,050	50,970	50,970	0	478	0	478		
2089	0	157,913	39,911	39,911	0	350	0	350		
2090	0	126,668	30,822	30,822	0	253	0	253		
2091	0	102,843	23,443	23,443	0	180	0	180		
2092	0	85,140	17,546	17,546	0	126	0	126		
2093	0	72,417	12,934	12,934	0	87	0	87		
2094	0	63,661	9,374	9,374	0	59	0	59		
2095	0	58,035	6,699	6,699	0	39	0	39		
2096	0	54,823	4,687	4,687	0	26	0	26		
2097	0	53,492	3,232	3,232	0	17	0	17		
2098	0	53,585	2,190	2,190	0	10	0	10		
2099	0	54,766	1,454	1,454	0	6	0	6		
2100	0	56,788	918	918	0	4	0	4		
2101	0	59,495	566	566	0	2	0	2		
2102	0	62,743	332	332	0	1	0	1		
2103	0	66,443	203	203	0	1	0	1		
2104	0	70,515	120	120	0	0	0	0		
2105	0	74,936	68	68	0	0	0	0		
2106	0	79,696	37	37	0	0	0	0		
2107	0	84,794	19	19	0	0	0	0		
2108	0	90,241	0	0	0	0	0	0		
2109	0	96,057	0	0	0	0	0	0		
						18,085,762	+	0	=	18,085,762

* The 3.29% discount rate is the March 29, 2018 S&P Municipal Bond 20 Year High Grade Index.

** NOTE: The first-year ARC presented is the actual contribution for that year, when available.

VI. DETERMINATION OF DISCOUNT RATE

B. Funding Policy

Currently, the funding policy is to fund 100% of the actuarially determined contribution. The actuarially determined contribution is calculated as the normal cost plus an amortization of the unfunded actuarial accrued liability. Effective with the April 1, 2013 valuation, the amortization of the the Unfunded Accrued Liability is over a 25 year period that declines by one each year effective back to April 1, 2012. The amortization period as of April 1, 2019 is 18 years.

C. Long Term Expected Rate of Return and Asset Allocation

The long term expected rate of return on Plan investments was determined by the investment manager.

<u>Asset Class</u>	<u>March 31, 2019 Asset Allocation</u>	<u>Target Asset Allocation</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Large Cap Equity	29.7%	27.0%	6.55%
Dom SMid Cap Value Equity	5.6%	5.0%	7.35%
International Equity	18.6%	18.0%	7.25%
Emerging Markets	5.3%	5.0%	8.25%
Investment Grade Bonds	34.0%	34.0%	3.05%
Real Estate	5.5%	5.0%	5.75%
Cash and Equivalents	1.3%	6.0%	2.25%
	<u>100.0%</u>	<u>100.0%</u>	

Projected Rate of Return*: 5.31%

* The rates provided are the current rates.

The plan sponsor has chosen to use 7.00% as the plan's interest rate assumption.

In future valuation periods, consideration for the current expected returns on assets will be made in selecting the interest rate assumption.

Money-Weighted Rate of Return for Fiscal Year Ending 03/31/2019**: 3.32%

** This rate is determined assuming contributions and expenses are paid in the middle of the month and benefits are paid at the beginning of the month.

APPENDIX A - SUMMARY OF PLAN PROVISIONS

This exhibit summarizes the major provisions of the Town of Scituate Retirement Plan for the Police Department Employees included in the valuation. 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. This exhibit is based on our understanding of benefits as described by the plan document, Summary Plan Description, and applicable collective bargaining agreements. To the extent that this exhibit does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Eligibility Requirements:

All regular or permanent police of the Town of Scituate, Rhode Island, following completion of a six month waiting period. Only employees hired before July 1, 2014 are eligible to participate.

Normal Retirement Date:

For participants hired prior to June 30, 2000, upon completion of 20 Years of Service, the participant is eligible for normal retirement. Alternatively, a participant may continue in service beyond 20 years. For participants hired on or after July 1, 2000, upon completion of 25 Years of Service the participant is eligible for normal retirement.

A participant may retire upon the completion of ten years of service or the attainment of age 56, whichever is later.

Compensation:

The monthly equivalent of a Participant's annual compensation, including longevity pay and holiday pay, but exclusive of bonuses, overtime and other forms of additional compensation, and exclusive of any program of deferred compensation, employee benefits or additional remuneration payable other than in cash.

Average Compensation:

Compensation of a participant averaged over three (3) years as an employee prior to the earlier of (1) his termination of Service, (2) his retirement or (3) termination of the Plan.

Normal Retirement Benefit:

For participants hired on or prior to June 30, 2000, a benefit equal to 2.5% of Average Compensation times the first 20 years of service, plus 2% of Average Compensation times years of service in excess of 20 years. Maximum benefit is 60% of Average Compensation. For participants hired on or after July 1, 2000, a benefit equal to 2.4% of Average Compensation times the first 25 years of service. Maximum benefit is 60% of Average Compensation.

Normal Form of Benefit:

Life annuity for single participants and an unreduced 67.5% Joint and Survivor Annuity for married participants.

APPENDIX A - SUMMARY OF PLAN PROVISIONS

Death Benefit for Actives not yet Eligible for Normal Retirement:

In the event of death of a member, while employed, benefits shall be according to the state law as to Police Pensions.

Upon death of a member due to occupational causes:

- (a) Total Employee Mandatory Contributions
- (b) A payment of \$800 for each year of service up to \$16,000.
Minimum Lump Sum: \$4,000
- (c) A spouse's benefit equal to 50% of Participant's Average Compensation for spouse's life or until she remarries, if earlier plus 10% of Participant's Average Compensation for each child until the child attains age 18; subject to an overall maximum of 66 $\frac{2}{3}$ % of Participant's Average Compensation.

Upon death of a member due to non-occupational causes:

- (a) Total Employee Mandatory Contributions
- (b) A payment of \$800 for each year of service up to \$16,000.
Minimum Lump Sum: \$4,000
- (c) A spouse's benefit equal to 30% of Participant's Average Compensation for spouse's life or until she remarries, if earlier plus 10% of Participant's Average Compensation for each child until the child attains age 18; subject to an overall maximum of 50% of Participant's Average Compensation.

Death Benefit for Actives Eligible for Normal Retirement:

For active married participants, spouse shall receive a monthly benefit of 67.5% of the participant's accrued benefit payable for spouse's life or if earlier, until the spouse remarries. If there is no surviving spouse, each child of the Participant under the age of eighteen (18) shall share equally in the 67 $\frac{1}{2}$ % of the monthly retirement benefit until the last such child of the Participant shall have attained age eighteen (18). In addition, a payment of \$800 for each year of service up to \$16,000 (Minimum Lump Sum: \$4,000).

Post-Retirement Death Benefit:

For retired married participants, spouse shall receive a monthly benefit of 67.5% of the participant's accrued benefit payable for spouse's life or if earlier, until the spouse remarries. If there is no surviving spouse, each child of the Participant under the age of eighteen (18) shall share equally in the 67 $\frac{1}{2}$ % of the monthly benefit until the last such child has attained age eighteen (18). In addition, a payment of \$800 for each year of service up to \$16,000. The lump sum death benefit is reduced by 25% for each year following retirement subject to a minimum benefit of \$4,000.

APPENDIX A - SUMMARY OF PLAN PROVISIONS

- Disability:*** Upon becoming disabled due to occupational causes, a benefit equal to 66⅔% of the participant's Average Compensation payable for the period of disability. Upon becoming disabled due to non-occupational causes after completing 7 years of service, a benefit equal to 1⅔% of the participant's Average Compensation for each year of credited service, but not less than 25% and not greater than 50%.
- Termination of Employment:*** With less than ten years of service, a refund of employee contributions. A member who terminates after ten years of service will be eligible to receive a pension commencing at age 56 equal to his or her accrued benefit.
- Funding:*** Effective July 1, 2015, the members of the Plan shall each contribute 12% of Compensation and the Town of Scituate shall contribute 10% of Compensation earned by each member.
- Cost of Living Adjustment:*** For retirees prior to July 1, 2003 the Cost of Living Adjustment is equal to the negotiated rate of salary increase times 30% compounded annually.
- For retirees on or after July 1, 2003, who were hired on or before July 1, 2012, the Cost of Living Adjustment is equal to 3% of the initial retirement benefit (non-compounded). This COLA is deferred for a period of 3 years for any member who retires after June 30, 2015 (COLA begins in the 4th year after date of retirement).

APPENDIX B - ACTUARIAL ASSUMPTIONS & METHODS

A. Actuarial Cost Method

*Actuarial Cost Method
for GASB 67 / 68:*

Costs have been computed in accordance with the Entry Age Normal Cost Method.

The normal cost is the sum of the normal costs for all participants. For a current participant, the individual normal cost is the participant's normal cost accrual rate multiplied by the participant's current compensation. The normal cost accrual rate equals (a) the present value of future benefits as of the participant's entry age divided by (b) the present value of future compensation as of the participant's entry age. For other than a current participant, the normal cost equals \$0.

The accrued liability is the sum of the individual accrued liabilities for all participants. The individual accrued liability is equal to the present value of future benefits less the normal cost accrual rate multiplied by the present value of future compensation.

Asset Valuation Method:

The assets used to determine plan costs are based on the market value as of March 31, 2019.

*Recognition of Deferred
Outflows and Inflows:*

The (a) differences between expected and actual Plan experience and (b) changes in Plan assumptions are recognized over a closed period (beginning with the current fiscal year) equal to the average expected service for active participants as of the valuation date used to determine the Net Pension Liability for the end of the fiscal year. The difference between projected and actual earnings on Plan investments are recognized over a closed 5-year period (beginning with the current fiscal year).

APPENDIX B - ACTUARIAL ASSUMPTIONS & METHODS

B. Actuarial Assumptions as of March 31, 2019

*Discount Rate for Purposes
of Determining Net Pension*

Liability: 7.00%

Long Term Rate of Return

on Investments: 7.00%

Municipal Bond: 3.29%

The Municipal Bond rates is based on the S&P Municipal Bond 20 Year High Grade Index.

Salary Increases: 3.00%

Payroll Growth Rate: 3.00%

Inflation: 3.00%

*Pre and Post
Retirement Mortality:*

RP-2014 Blue Collar Employee/Annuitant with Scale MP-2018 Generational Improvements from 2006 (M/F).

Disability Mortality:

RP-2014 Disabled Annuitant with Scale MP-2018 Generational Improvements from 2006 (M/F).

Terminations: None

Occupational Disability:

Occupational disability assumed to equal 3 times the 1974 Railroad Retirement Board Incidence.

Assumed Retirement Age:

The completion of 25 Years of Service

Spousal Death Benefit:

75% of active participants are assumed married with one child under age 18. Spouses are assumed to be 4 years younger than the participant.

APPENDIX B - ACTUARIAL ASSUMPTIONS & METHODS

Cost-of-Living

Increases: A 3.0% non-compounded COLA for active members who retire on or after July 1, 2003. For members who retired before July 1, 2003, 30% of the negotiated salary increase, compounded annually.

For retirees on or after July 1, 2003, who were hired on or before July 1, 2012, the Cost of Living Adjustment is equal to 3% of the initial retirement benefit (non-compounded). This COLA is deferred for a period of 3 years for any member who retires after June 30, 2015 (COLA begins in the 4th year after date of retirement).

Expenses: Assumed paid by the Town

All other assumptions are consistent with the Plan's actuarial valuation as of April 1, 2019.

C. Changes in Actuarial Methods or Assumptions since April 1, 2018

Mortality: RP-2014 Blue Collar Employee/Annuitant/Disabled Annuitant with Scale MP-2018 Generational Improvements from 2006 (M/F). Previously, Mortality improvements were projected beyond the valuation date using the MP-2017 mortality improvement scale.

Salary Increases: 3.00% (previously, 3.50%).

Discount Rate: Because the long term rate of return assumption changed from 7.50% to 7.00%, and the Crossover Point was not reached (see Section VI), the discount rate for purposes of determining the Net Pension Liability has changed from the beginning of the Fiscal Year.

	<u>4/1/2018</u>	<u>3/31/2019</u>
Long Term Rate of Return for Investments:	7.50%	7.00%
Municipal Bond Rate:	3.51%	3.29%
Discount Rate for Net Pension Liability Purposes:	7.50%	7.00%

SELECTION OF ACTUARIAL ASSUMPTIONS

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Investment Return Interest Rate	7.00%	Town of Scituate	The investment return interest rate is developed based on the allocation of the Plan's assets by investment class and the capital market outlook for each investment class. This information is provided by the Plan's investment advisor. The assumed rate of return is derived net of spending, taxes, and investment expenses.	The investment return interest rate changed from 7.50% as of the prior measurement date, March 31, 2018. This change increased the Entry Age Normal Accrued Liability as of the current measurement date, March 31, 2019, by 6.28%.
Long-Term Rate of Return on Assets	7.00%	Town of Scituate	The interest rate is developed based on the allocation of the Plan's assets by investment class and the capital market outlook for each investment class. This information is provided by the Plan's investment advisor.	The long-term rate of return on assets changed from 7.50% as of the prior measurement date, March 31, 2019.
Salary Scale	3.00%	Town of Scituate	This assumption was set based on a review of experience under the plan and the rate increase set in recent Collective Bargaining Agreement.	The salary scale changed from 3.50% as of the prior measurement date, March 31, 2018. This change decreased the Entry Age Normal Accrued Liability as of the current measurement date, March 31, 2019, by 0.49%.
Taxable Wage Base Increase	N/A	Town of Scituate	Plan benefits are frozen and do not depend on future taxable wage base.	None
IRC 415 and 401(a)(17) Limit Projection	N/A	Town of Scituate	Compensation and benefits are not large enough to be impacted by these limits.	None
Pre-Retirement Mortality	RP-2014 Blue Collar Employee with Scale MP-2018 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2014. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2018 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Employee with Scale MP-2017 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2018. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in post-retirement and disability mortality, decreased the Entry Age Normal Accrued Liability as of the current measurement date, April 1, 2019, by 0.27%.
Post-Retirement Mortality	RP-2014 Blue Collar Healthy Annuitant with Scale MP-2018 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2014. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2018 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Healthy Annuitant with Scale MP-2017 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2018. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement and disability mortality, decreased the Entry Age Normal Accrued Liability as of the current measurement date, April 1, 2019, by 0.27%.

SELECTION OF ACTUARIAL ASSUMPTIONS

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Disability Mortality	RP-2014 Disabled Annuitant with Scale MP-2018 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2014. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2018 projection scale.	The mortality tables changed from the RP-2014 Disabled Annuitant with Scale MP-2017 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2018. The change was made to reflect the best estimate of future experience under the plan. This change, together with the change in pre-retirement and post-retirement mortality, decreased the Entry Age Normal Accrued Liability as of the current measurement date, April 1, 2019, by 0.27%.
Disability Rates	Occupational disability assumed to equal 3 times the 1974 Railroad Retirement Board Incidence	Town of Scituate	This assumption was set based on a review of experience under the plan.	None
Withdrawal Rates	None	Town of Scituate	The incidence of Withdrawal under the plan is negligible.	None
Retirement Rates	Participants are assumed to retire after 25 years of service.	Town of Scituate	This assumption was set based on a review of experience under the Plan.	None
Administrative Expenses	N/A	Town of Scituate	Assumed paid by the Town.	None
Percent Married	75% of males and 75% of females are assumed to be married.	Town of Scituate	This assumption was set based on a review of experience under the Plan.	None
Age of Spouse	The female spouse is assumed to be 4 years younger than the male spouse.	Town of Scituate	This assumption was set based on a review of experience under the Plan.	None

APPENDIX C - GLOSSARY

The following includes only a sample of the terms in the GASB 68 Glossary. This list includes terms that are newer as a result of GASB 68.

Actuarially determined contribution - A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Ad hoc cost-of-living adjustments (ad hoc COLAs) - Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.

Automatic cost-of-living adjustments (automatic COLAs) - Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).

Average future service - Average expected remaining service lives of active and inactive members, including retirees. This becomes the recognition period for amounts deferred resulting from: (1) differences between expected and actual experience or (2) changes in Plan assumptions.

Collective deferred outflows of resources and deferred inflows of resources related to pensions - Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective net pension liability.

Collective net pension liability - The net pension liability for benefits provided through (1) a cost-sharing pension plan or (2) a single-employer or agent pension plan in circumstances in which there is a special funding situation.

Collective pension expense - Pension expense arising from certain changes in the collective net pension liability.

Contributions - Additions to a pension plan's fiduciary net position for amounts from employers, nonemployer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.

Discount rate - The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

APPENDIX C - GLOSSARY

1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension plan's fiduciary net position is projected (under the requirements of this Statement) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.

2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.

Entry age actuarial cost method - A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability.

Fiduciary Net Position (definition not included in GASB 68 glossary) - generally the value of Plan assets.

Net pension liability - The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan.

Total pension liability - The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of this Statement.