

**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, 2017
and ending March 31, 2018

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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, 2017 and ending March 31, 2018. 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, 2018. 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

09/17/2018

Date

II. NET PENSION LIABILITY

A. Net Pension Liability as of April 1, 2017

The Net Pension Liability for the Plan was measured as of April 1, 2017, and the Total Pension Liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of April 1, 2017.

The components of the Net Pension Liability of the Plan as of April 1, 2017, were as follows:

Total Pension Liability	\$	14,901,307
Plan Fiduciary Net Position	\$	(5,288,504)
Net Pension Liability	\$	<u>9,612,803</u>

Plan Fiduciary Net Position as a percentage of the Total Pension Liability	35.49%
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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, 2018

The Net Pension Liability for the Plan was measured as of March 31, 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 March 31, 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%.

II. NET PENSION LIABILITY

C. Changes in Net Pension Liability for the Fiscal Year ending March 31, 2018

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balance as of 4/1/2017	\$14,901,307	\$5,288,504	\$9,612,803
Changes for the year:			
Service Cost	183,866		183,866
Interest on Total Pension Liability	1,092,957		1,092,957
Differences Between Expected and Actual Experience	432,238		432,238
Changes of Assumptions	(199,966)		(199,966)
Changes in Benefit Terms	0		0
Contributions - Employer		856,215	(856,215)
Contributions - Employee		116,018	(116,018)
Net Investment Income		477,960	(477,960)
Benefit Payments	(868,346)	(868,346)	0
Administrative Expense		(30,534)	30,534
Other Changes	0	0	0
Net Changes	<u>\$640,749</u>	<u>\$551,313</u>	<u>\$89,436</u>
Balance as of 3/31/2018	<u><u>\$15,542,056</u></u>	<u><u>\$5,839,817</u></u>	<u><u>\$9,702,239</u></u>

D. Sensitivity of the Net Pension Liability to Changes in Discount Rate as of March 31, 2018

The following presents the Net Pension Liability as of March 31, 2018 calculated using the discount rate of 7.50%, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	<u>1% Decrease</u> 6.50%	Current <u>Discount Rate</u> 7.50%	<u>1% Increase</u> 8.50%
Plan's Net Pension Liability as of March 31, 2018:	11,775,558	9,702,239	8,007,944

II. NET PENSION LIABILITY

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

Fiscal Year Ending	03/31/2018	03/31/2017	03/31/2016	03/31/2015	03/31/2014	03/31/2013	03/31/2012	03/31/2011	03/31/2010	03/31/2009
Total Pension Liability (TPL)										
Service Cost	\$ 183,866	\$ 203,864	\$ 203,864	\$ 191,506						
Interest on TPL	1,092,957	1,029,716	970,057	899,459						
Differences between exp. and actual experience	432,238	448,363	(409,813)	392,571						
Changes of assumptions	(199,966)	0	(179,601)	152,290						
Changes in benefit terms	0	0	923,914	0						
Benefit payments	<u>(868,346)</u>	<u>(796,428)</u>	<u>(712,962)</u>	<u>(671,686)</u>						
Net Change in TPL	640,749	885,515	795,459	964,140						
Total Pension Liability - beginning	14,901,307	14,015,792	13,220,333	12,256,192						
Total Pension Liability - end (a)	<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	\$ 856,215	\$ 750,786	\$ 791,829	\$ 728,868						
Contributions - Employee	116,018	117,991	144,719	111,747						
Net investment income	477,960	448,169	(174,131)	344,110						
Benefit payments	(868,346)	(796,428)	(712,962)	(671,686)						
Administrative expense	(30,534)	(27,345)	(25,311)	(24,170)						
Other changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>						
Net Changes in FNP	551,313	493,173	24,144	488,869						
Fiduciary Net Position - beginning	5,288,504	4,795,331	4,771,187	4,282,318						
Fiduciary Net Position - end (b)	<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>\$ 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	37.57%	35.49%	34.21%	36.09%						
Covered Employee Payroll	\$ 935,534	\$ 934,546	\$ 1,111,367	\$ 821,754						
Net Pension Liability as a percentage of covered employee payroll	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	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	03/31/2009
Valuation Date	04/01/2017	04/01/2016	04/01/2015	04/01/2014	04/01/2013	04/01/2012	04/01/2011	04/01/2010	04/01/2009	04/01/2008
Actuarially Determined Contribution*	\$ 821,810	\$ 767,944	\$ 716,189	\$ 637,901	\$ 638,018	\$ 629,958	\$ 632,116	\$ 576,686	\$ 580,159	\$ 372,804
Contributions in relation to the actuarially determined contribution	\$ 856,215	\$ 750,786	\$ 791,829	\$ 728,868	\$ 758,709	\$ 637,460	\$ 356,593	\$ 357,144	\$ 353,672	\$ 350,092
Contribution deficiency / (excess)	\$ (34,405)	\$ 17,158	\$ (75,640)	\$ (90,967)	\$ (120,691)	\$ (7,502)	\$ 275,523	\$ 219,542	\$ 226,487	\$ 22,712
Covered Employee Payroll	\$ 935,534	\$ 934,546	\$ 1,111,367	\$ 821,754	\$ 916,057	N/A	\$ 917,936	N/A	\$ 898,737	N/A
Contributions as a percentage of covered employee payroll	91.52%	80.34%	71.25%	88.70%	82.82%	N/A	38.85%	N/A	39.35%	N/A

* The Town of Scituate's portion of the contribution for the fiscal year beginning April 1, 2018 will be \$938,821 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, 2018 is 19 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:	3.50% per year. 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:	7.50%
Retirement Age:	See Appendix B.
Mortality:	See Appendix B.

IV. PENSION EXPENSE

A. Pension Expense for the Fiscal Year Ending March 31, 2018

1. Service Cost as of April 1, 2017	\$	183,866
2. Interest on the Total Pension Liability		
a. Total Pension Liability as of April 1, 2017	\$	14,901,307
b. Service Cost (time-weighted)		91,933
c. Expected benefit payments (time-weighted)		(420,485)
d. Average expected Total Pension Liability	\$	14,572,755
e. Discount Rate		7.50%
f. Interest on the Total Pension Liability [(d) x (e)]	\$	1,092,957
3. Projected earning on pension plan investments		
a. Fiduciary Net Position as of April 1, 2017	\$	5,288,504
b. Plan Contributions (time-weighted)		486,117
c. Expected benefit payments (time-weighted)		(420,485)
d. Average expected Fiduciary Net Position	\$	5,354,136
e. Long Term Rate of Return on Investments		7.50%
f. Earnings on Fiduciary Net Position [(d) x (e)]	\$	401,560
4. Recognition of Deferred Outflows and (Inflows) of Resources ¹		
a. Difference between expected and actual experience	\$	115,259
b. Changes of assumptions	\$	(77,366)
c. Difference between projected and actual earnings on Plan investments	\$	75,304
d. Total recognized deferred outflow and (inflows) of resources [(a) + (b) + (c)]	\$	113,197
5. Employee Contributions	\$	(116,018)
6. Administrative Expenses	\$	30,534
7. Other changes	\$	0
8. Total Pension Expense for the Fiscal Year Ending March 31, 2018	\$	902,976
[(1) + (2.f) - (3.f) + (4.d) + (5) + (6) + (7)]		

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, 2018 are as follows:

	<u>Deferred Outflows of Resources</u>	<u>Deferred (Inflows) of Resources</u>
1. Difference between expected and actual experience	\$ 596,863	\$ (185,422)
2. Changes of assumptions	\$ 0	\$ (236,641)
3. Difference between projected and actual earnings on Plan investments	<u>\$ 215,192</u>	<u>\$ (112,151)</u>
4. Total Deferred Outflows / (Inflows)	<u><u>\$ 812,055</u></u>	<u><u>\$ (534,214)</u></u>

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, 2019	\$ 113,197	
	March 31, 2020	\$ 113,199	
	March 31, 2021	\$ 41,605	
	March 31, 2022	\$ 9,840	
	March 31, 2023	\$ 0	
	Thereafter	<u>\$ 0</u>	
	Total	<u><u>\$ 277,841</u></u>	

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 4/1/2017	Increase/(Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience											
				3/31/2018	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	
3/31/2016	(409,813)	5.479	(260,219)	(74,797)	(74,797)	(74,797)	(35,828)	0	0	0	0	0	0	0	0
3/31/2017	448,363	4.786	354,681	93,682	93,682	93,682	73,635	0	0	0	0	0	0	0	0
3/31/2018	432,238	4.485	432,238	<u>96,374</u>	<u>96,374</u>	<u>96,374</u>	<u>96,374</u>	<u>46,742</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
				<u>\$ 115,259</u>	<u>\$ 115,259</u>	<u>\$ 115,259</u>	<u>\$ 134,181</u>	<u>\$ 46,742</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 4/1/2017	Increase/(Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Plan Assumptions											
				3/31/2018	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	
3/31/2016	(179,601)	5.479	(114,041)	(32,780)	(32,780)	(32,780)	(15,701)	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	(199,966)	<u>(44,586)</u>	<u>(44,586)</u>	<u>(44,586)</u>	<u>(44,586)</u>	<u>(21,622)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
				<u>\$ (77,366)</u>	<u>\$ (77,366)</u>	<u>\$ (77,366)</u>	<u>\$ (60,287)</u>	<u>\$ (21,622)</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 4/1/2017	Increase/(Decrease) in Pension Expense Arising from the Recognition of Difference Between Projected and Actual Earnings on Plan Investments					
				3/31/2018	3/31/2019	3/31/2020	3/31/2021	3/31/2022	3/31/2023
3/31/2016	537,977	5.000	322,787	107,595	107,595	107,597	0	0	0
3/31/2017	(85,053)	5.000	(68,042)	(17,011)	(17,011)	(17,011)	(17,009)	0	0
3/31/2018	(76,400)	5.000	(76,400)	<u>(15,280)</u>	<u>(15,280)</u>	<u>(15,280)</u>	<u>(15,280)</u>	<u>(15,280)</u>	<u>0</u>
				<u>\$ 75,304</u>	<u>\$ 75,304</u>	<u>\$ 75,306</u>	<u>\$ (32,289)</u>	<u>\$ (15,280)</u>	<u>\$ -</u>

V. DEFERRED OUTFLOWS AND INFLOWS

D. Plan Demographics Projected to March 31, 2018

Status	<u>Count</u>	<u>Avg. Future Service</u>
Active	12	11.456
Disabled	4	1.000
Retirees and Beneficiaries	<u>20</u>	<u>1.000</u>
Total	36	4.485

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2018 - 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						7.50%	3.51%*	7.50%
2018	856,215	5,839,817	860,091	860,091	0	860,091	0	860,091
2019	821,810	6,316,891	868,042	868,042	0	807,481	0	807,481
2020	823,788	6,824,203	875,949	875,949	0	757,987	0	757,987
2021	853,066	7,392,243	885,176	885,176	0	712,532	0	712,532
2022	883,585	8,025,148	963,556	963,556	0	721,511	0	721,511
2023	903,582	8,629,161	975,001	975,001	0	679,145	0	679,145
2024	936,253	9,300,038	1,045,671	1,045,671	0	677,555	0	677,555
2025	959,637	9,957,374	1,056,358	1,056,358	0	636,725	0	636,725
2026	994,852	10,688,288	1,217,375	1,217,375	0	682,585	0	682,585
2027	1,004,606	11,280,230	1,226,207	1,226,207	0	639,569	0	639,569
2028	1,042,166	11,944,889	1,234,612	1,234,612	0	599,026	0	599,026
2029	1,081,667	12,689,718	1,244,342	1,244,342	0	561,625	0	561,625
2030	1,123,399	13,521,158	1,256,729	1,256,729	0	527,643	0	527,643
2031	1,167,756	14,445,103	1,385,506	1,385,506	0	541,126	0	541,126
2032	1,191,245	15,298,178	1,392,894	1,392,894	0	506,057	0	506,057
2033	1,241,544	16,256,298	1,524,493	1,524,493	0	515,227	0	515,227
2034	1,271,348	17,148,040	1,589,365	1,589,365	0	499,676	0	499,676
2035	1,321,795	18,072,888	1,590,444	1,590,444	0	465,130	0	465,130
2036	1,393,284	19,135,229	1,591,775	1,591,775	0	433,041	0	433,041
2037	1,497,370	20,378,099	1,708,622	1,708,622	0	432,399	0	432,399
2038	62,005	20,070,683	1,711,286	1,711,286	0	402,859	0	402,859
2039	65,623	19,743,034	1,711,721	1,711,721	0	374,848	0	374,848
2040	63,618	19,390,242	1,709,798	1,709,798	0	348,304	0	348,304
2041	61,570	19,012,979	1,705,392	1,705,392	0	323,169	0	323,169
2042	59,446	18,612,064	1,698,396	1,698,396	0	299,389	0	299,389
2043	57,262	18,188,495	1,688,728	1,688,728	0	276,916	0	276,916
2044	55,023	17,743,434	1,676,333	1,676,333	0	255,706	0	255,706
2045	52,737	17,278,185	1,661,191	1,661,191	0	235,717	0	235,717
2046	50,418	16,794,181	1,643,288	1,643,288	0	216,909	0	216,909
2047	48,068	16,292,969	1,622,619	1,622,619	0	199,238	0	199,238
2048	45,698	15,776,218	1,599,202	1,599,202	0	182,662	0	182,662
2049	43,331	15,245,718	1,573,018	1,573,018	0	167,136	0	167,136
2050	40,954	14,703,391	1,544,065	1,544,065	0	152,614	0	152,614
2051	38,597	14,151,321	1,512,378	1,512,378	0	139,053	0	139,053

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2018 - 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						7.50%	3.51%*	7.50%
2052	36,260	13,591,703	1,478,022	1,478,022	0	126,413	0	126,413
2053	33,962	13,026,833	1,441,113	1,441,113	0	114,657	0	114,657
2054	31,713	12,459,057	1,401,828	1,401,828	0	103,750	0	103,750
2055	29,524	11,890,708	1,360,440	1,360,440	0	93,663	0	93,663
2056	27,394	11,323,997	1,317,295	1,317,295	0	84,365	0	84,365
2057	25,345	10,760,949	1,272,775	1,272,775	0	75,827	0	75,827
2058	23,361	10,203,316	1,227,251	1,227,251	0	68,013	0	68,013
2059	21,456	9,652,597	1,181,030	1,181,030	0	60,886	0	60,886
2060	19,618	9,110,065	1,134,332	1,134,332	0	54,398	0	54,398
2061	17,844	8,576,848	1,087,359	1,087,359	0	48,508	0	48,508
2062	16,136	8,053,943	1,040,309	1,040,309	0	43,171	0	43,171
2063	14,506	7,542,223	993,403	993,403	0	38,348	0	38,348
2064	12,931	7,042,367	946,811	946,811	0	34,000	0	34,000
2065	11,430	6,554,943	900,660	900,660	0	30,086	0	30,086
2066	9,983	6,080,406	854,971	854,971	0	26,567	0	26,567
2067	8,607	5,619,239	809,716	809,716	0	23,406	0	23,406
2068	7,286	5,171,970	764,884	764,884	0	20,567	0	20,567
2069	6,035	4,739,191	720,438	720,438	0	18,020	0	18,020
2070	4,853	4,321,571	676,298	676,298	0	15,736	0	15,736
2071	3,757	3,919,928	632,363	632,363	0	13,687	0	13,687
2072	2,729	3,535,220	588,599	588,599	0	11,851	0	11,851
2073	1,808	3,168,550	545,043	545,043	0	10,209	0	10,209
2074	977	2,821,039	501,833	501,833	0	8,743	0	8,743
2075	252	2,493,760	459,193	459,193	0	7,442	0	7,442
2076	0	2,188,006	417,365	417,365	0	6,293	0	6,293
2077	0	1,904,679	376,576	376,576	0	5,281	0	5,281
2078	0	1,644,247	337,045	337,045	0	4,397	0	4,397
2079	0	1,406,978	299,010	299,010	0	3,629	0	3,629
2080	0	1,192,916	262,714	262,714	0	2,966	0	2,966
2081	0	1,001,853	228,435	228,435	0	2,399	0	2,399
2082	0	833,275	196,419	196,419	0	1,919	0	1,919
2083	0	686,381	166,846	166,846	0	1,516	0	1,516
2084	0	560,124	139,884	139,884	0	1,183	0	1,183
2085	0	453,211	115,695	115,695	0	910	0	910

VI. DETERMINATION OF DISCOUNT RATE

A. Determination of Discount Rate as of March 31, 2018 - 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 7.50%	Present Value of "Unfunded" Portion 3.51%*	Present Value of All Benefit Payments - Single Rate 7.50%		
2086	0	364,092	94,313	94,313	0	690	0	690		
2087	0	291,073	75,767	75,767	0	516	0	516		
2088	0	232,315	59,961	59,961	0	380	0	380		
2089	0	185,950	46,727	46,727	0	275	0	275		
2090	0	150,157	35,882	35,882	0	197	0	197		
2091	0	123,180	27,128	27,128	0	138	0	138		
2092	0	103,450	20,183	20,183	0	96	0	96		
2093	0	89,587	14,790	14,790	0	65	0	65		
2094	0	80,378	10,649	10,649	0	44	0	44		
2095	0	74,843	7,566	7,566	0	29	0	29		
2096	0	72,135	5,270	5,270	0	19	0	19		
2097	0	71,629	3,623	3,623	0	12	0	12		
2098	0	72,802	2,445	2,445	0	8	0	8		
2099	0	75,282	1,618	1,618	0	5	0	5		
2100	0	78,793	1,022	1,022	0	3	0	3		
2101	0	83,167	631	631	0	2	0	2		
2102	0	88,250	372	372	0	1	0	1		
2103	0	93,953	226	226	0	0	0	0		
2104	0	100,201	133	133	0	0	0	0		
2105	0	106,978	75	75	0	0	0	0		
2106	0	114,282	41	41	0	0	0	0		
2107	0	122,126	22	22	0	0	0	0		
2108	0	130,531	0	0	0	0	0	0		
						16,995,936	+	0	=	16,995,936

* The 3.51% 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, 2018 is 19 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, 2018 Asset Allocation</u>	<u>Target Asset Allocation</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Large Cap Equity	27.4%	27.0%	7.11%
Dom SMid Cap Value Equity	10.6%	5.0%	7.67%
International Equity	18.2%	18.0%	8.98%
Emerging Markets	5.4%	5.0%	8.76%
Investment Grade Bonds	33.1%	34.0%	2.84%
Real Estate	5.0%	5.0%	9.80%
Cash and Equivalents	0.3%	6.0%	2.09%
	<u>100.0%</u>	<u>100.0%</u>	

Projected Rate of Return*: 5.94%

* The rates provided are the current rates.

In the past, the plan sponsor has chosen to use 7.50% 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 03/31/2018**: 8.92%

** 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, 2018.

*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, 2018

*Discount Rate for Purposes
of Determining Net Pension*

Liability: 7.50%

Long Term Rate of Return

on Investments: 7.50%, net of expenses, including inflation

Municipal Bond: 3.51%

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

Salary Increases: 3.50%

Payroll Growth Rate: 3.50%

Inflation: 3.00%

*Pre and Post
Retirement Mortality:*

RP-2014 Blue Collar Employee/Annuitant with Scale MP-2017 Generational Improvements from 2006 (M/F).

Disability Mortality:

RP-2014 Disabled Annuitant with Scale MP-2017 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, 2018.

C. Changes in Actuarial Methods or Assumptions since April 1, 2017

Mortality: RP-2014 Blue Collar Employee/Annuitant/Disabled Annuitant with Scale MP-2017 Generational Improvements from 2006 (M/F). Previously, Mortality improvements were projected beyond the valuation date using the MP-2015 mortality improvement scale.

Discount Rate: Based on the long term rate of return assumption remaining unchanged, and the Crossover Point not being reached (see Section VI), the discount rate for purposes of determining the Net Pension Liability has not changed from the beginning of the Fiscal Year.

	<u>4/1/2017</u>	<u>3/31/2018</u>
Long Term Rate of Return for Investments:	7.50%	7.50%
Municipal Bond Rate:	3.67%	3.51%
Discount Rate for Net Pension Liability Purposes:	7.50%	7.50%

SELECTION OF ACTUARIAL ASSUMPTIONS

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Investment Return Interest Rate	7.50%	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.	None
Salary Scale	3.50%	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.	None
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-2017 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2015. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2017 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Employee with Scale MP-2015 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2017. 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, 2018, by 1.27%.
Post-Retirement Mortality	RP-2014 Blue Collar Healthy Annuitant with Scale MP-2017 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2015. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2017 projection scale.	The mortality tables changed from the RP-2014 Blue Collar Healthy Annuitant with Scale MP-2015 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2017. 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, 2018, by 1.27%.

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-2017 Generational Improvements from 2006 (M/F)	Town of Scituate	The Society of Actuaries published a study of retirement experience in October, 2015. As recommended by the authors of the study, the mortality tables used for the Plan include generational projection of mortality improvements using the MP-2017 projection scale.	The mortality tables changed from the RP-2014 Disabled Annuitant with Scale MP-2015 Generational Improvements from 2006 (M/F) as of the prior measurement date, April 1, 2017. 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, 2018, by 1.27%.
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.