



A N G E L L

March 25, 2015

***VIA E-MAIL ONLY***  
**PERSONAL & CONFIDENTIAL**

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Mr. Theodore J. Przybyla  
Town of Scituate  
P.O. Box 127  
195 Danielson Pike  
North Scituate, RI 02857

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

Dear Mr. Przybyla:

The purpose of this report is to present an actuarial Experience Study for the Town of Scituate Retirement Plan for the Police Department Employees (the "Plan"), as required under the Rhode Island Retirement Security Act of 2011 ("RIRSA") enacted on November 18, 2011. This actuarial experience analysis includes a review of past and current plan experience, both demographic and economic, as well as future projections of the status of the Plan. Previously, in March of 2012, an initial Experience Study similar to this one was filed with the State of Rhode Island.

It is our understanding that this Experience Study must be filed with the State of Rhode Island by or before April 1, 2015.

The analysis includes a snapshot of the Plan's funded status, under current actuarial assumptions and methods, as of April 1, 2014. Additionally, it reviews the Plan's past experience compared to the current assumptions being used in the actuarial valuation.

An appendix has been provided that summarizes the Plan's actuarial methods and assumptions, as well as the party responsible for approving them.

This analysis has been based on the most recent actuarial valuation as of April 1, 2014, a copy of which is enclosed. The April 1, 2014 actuarial valuation has been based on information submitted to our firm in the form of census data and ancillary material pertaining to the Plan and has not been audited by us. The valuation provides a complete description of plan provisions, actuarial assumptions and actuarial methods that are not further detailed within the actuarial experience analysis.



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Mr. Theodore J. Przybyla  
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If you have any questions regarding the analysis, please contact either David Ward at 401.438.9250, extension 132, or Matt Crawford at extension 202.

Sincerely,

A handwritten signature in black ink that reads "David Pratt Ward".

David Pratt Ward, E.A., M.A.A.A  
Director of Actuarial Services

A handwritten signature in black ink that reads "Matt Crawford".

Matt Crawford  
Defined Benefits Administrator

Enclosures

# Town of Scituate Retirement Plan for the Police Department Employees

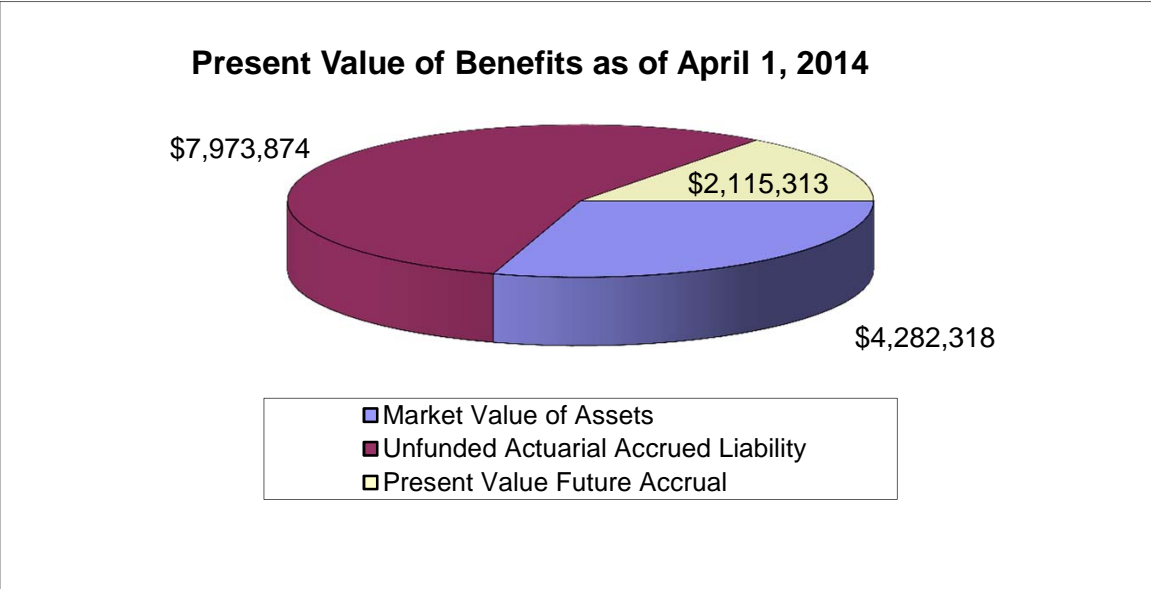
<p style="text-align: center;"><b>SECTION I</b> <b>ACTUARIAL EXPERIENCE</b> <b>ANALYSIS</b></p>
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The purpose of Section I of this report is to review the current condition of the Plan. Included in this section is the Plan's current funded status as of April 1, 2014, as determined by the most recent actuarial valuation. Additionally, this section will provide the historical funded status of the Plan.

Section I also highlights the current and past participant demographics of the Plan. Included within the analysis of the participant demographics, is a review of the actuarial assumptions and actuarial methods used in the Plan's actuarial valuation.

# Town of Scituate Retirement Plan for the Police Department Employees

## Current Plan Funded Status



<u>Valuation Results as of April 1, 2014</u>	<u>Share of AAL (\$)</u>	<u>Share of AAL (%)</u>
Market Value of Assets (MVA)	\$4,282,318	34.9%
Unfunded Actuarial Accrued Liability (UAAL)	\$7,973,874	65.1%
Actuarial Accrued Liability (AAL)	\$12,256,192	100.0%

<u>Valuation Results as of April 1, 2014</u>	<u>Share of PVB (\$)</u>	<u>Share of PVB (%)</u>
Actuarial Accrued Liability (AAL)	\$12,256,192	85.3%
Present Value of Future Accruals	\$2,115,313	14.7%
Present Value of Future Benefits (PVB)	\$14,371,505	100.0%

**As of April 1, 2014, the Plan is 34.9% funded**

Valuation results are based on the closed census data as of April 1, 2014, a 7.50% discount rate and the provisions of the April 1, 2014 actuarial valuation.

# Town of Scituate Retirement Plan for the Police Department Employees

Current Plan Funded Status
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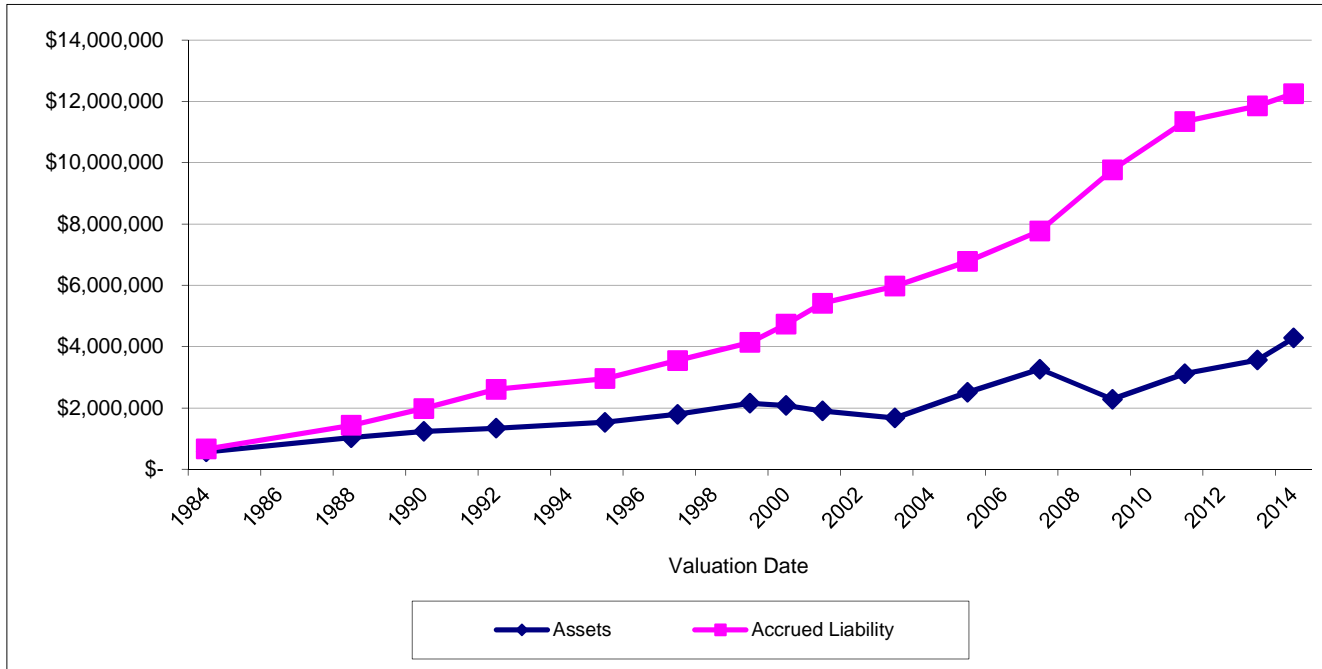
The April 1, 2014 valuation results can also be presented on a basis of funded status for (a) current retirees and (b) current active participants. In reality, the Plan's assets for all participants are commingled and the funded status of the Plan is valued as a whole, not per individual or group. The following illustration is strictly for illustration purposes:

Valuation Results as of <u>April 1, 2014</u>	<u>Total</u> <u>Plan</u>	Retirees & Disabled <u>Share</u>	Actives <u>Share</u>
1. Actuarial Accrued Liability (AAL)	\$12,256,192	\$7,945,393	\$4,310,799
2. Plan Assets*	<u>\$4,282,318</u>	<u>\$4,188,090</u>	<u>\$94,228</u>
3. Unfunded AAL (UAAL)	\$7,973,874	\$3,757,303	\$4,216,571
4. Funded Ratio	34.9%	52.7%	2.2%
5. April 1, 2014 Annual Required Contribution (ARC)			
a. Normal Cost	\$220,737	\$0	\$220,737
b. 23 Year Amortization of UAAL	\$487,136	\$229,539	\$257,597
c. Interest (through mid-year)	<u>\$26,545</u>	<u>\$8,608</u>	<u>\$17,938</u>
d. ARC: (a) + (b) + (c)	\$734,418	\$238,147	\$496,271
6. Proj. Employee Contributions	\$94,228	\$0	\$94,228
7. Net Employer Contribution (5.d-6)	\$640,190	\$238,147	\$402,043
8. Expected Benefit Payments	\$602,838	\$602,838	\$0
9. Covered Compensation	\$942,282	\$0	\$942,282

\*Assets for actives are equal to the aggregate balance of employee contribution account balances. All other assets are allocated to retirees, to the extent funded.

# Town of Scituate Retirement Plan for the Police Department Employees

## Historical Plan Funded Status



The chart above illustrates the Plan's spread between Accrued Liability and Plan Assets as determined in actuarial valuation reports since 1984. The current underfunding can be attributed to many factors. The following items highlight a few, but not all, of the general events that have attributed to the Plan's underfunded status:

**Market Losses from 2000 through 2004:** The Plan experienced large losses in assets during the years between 1999 and 2004. Assets as of April 1, 1999 were \$2.1 million and decreased to \$1.6 million by April 1, 2003. During the same period liabilities increased from \$4.1 million to \$5.9 million, an annual increase of 9.5%. This rate of increase is generally anticipated when liabilities are valued using a 9.00% discount rate and experience a few new hired employees during the period, as was the case between 1999 and 2004.

**Decrease in Discount Rates Post-2008:** The market experienced large losses again beginning in 2008, which caused uncertainty and extreme volatility in the markets. As a result, discount rate and long term rate of return assumptions have started to decrease. The April 1, 2009 actuarial valuation decreased the discount rate from 9.00% to 8.25%. This rate decreased again in 2011 to 7.50%. The discount rate is examined each year as the valuation is prepared, and has remained at 7.50% through 2014. Below is a history of the Plan's discount rates selected to value Plan liabilities.

<u>Valuation Years</u>	<u>Discount Rate</u>	<u>Valuation Years</u>	<u>Discount Rate</u>
1984 - 1988	7.00%	2009 - 2010	8.25%
1990 - 1995	8.00%	2011 - 2014	7.50%
1997 - 2007	9.00%	2015+	TBD

**Actual Contributions Less Than Recommended:** It is a general recommendation (required for single employer plans) to make contributions to a plan equal to the anticipated benefit accrual for the coming year (Normal Cost), plus an amortized amount of the underfunding. It had been the Plan's practice to value the annual recommended contribution (commonly referred to as ARC) using a 25-year open amortization schedule until 2012 when a 25 year closed amortization period was chosen and the Town began contributing an amount in excess of the ARC. This has significantly improved the Plan's funded status.

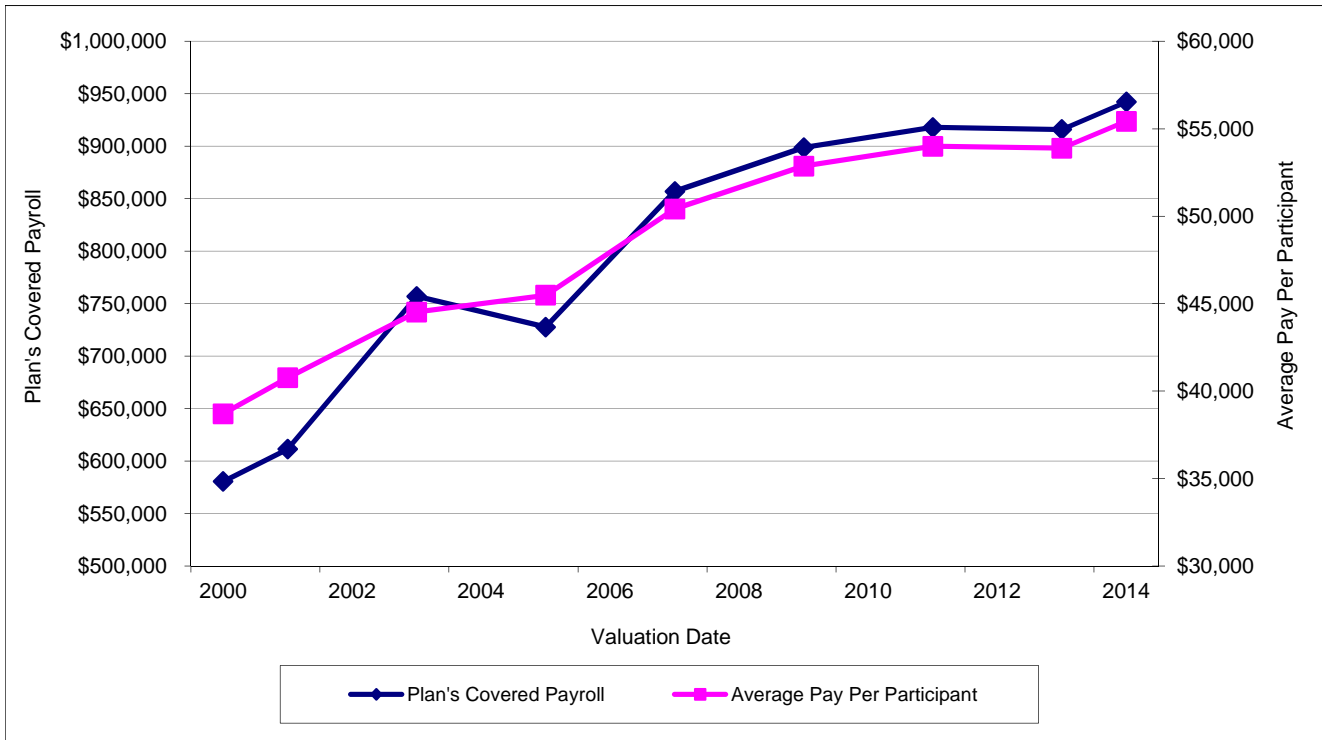
# Town of Scituate Retirement Plan for the Police Department Employees

## ACTUARIAL EXPERIENCE RESULTS

### Salary Scale Assumption

As of April 1, 2014, the salary scale assumption used in the Plan's actuarial valuation is 4.00% per year.

The chart below illustrates the Plan's covered payroll as a whole, over the span of the actuarial valuations completed between April 1, 2000 and April 1, 2014. The geometric average increase over this 11-year time period is 4.25%. The chart also illustrates the average covered payroll per active participant in the Plan over the same period. The average salary increase on a per active participant basis is 2.60%.



Considering only the participants active as of April 1, 2014, the average increase in salary from April 1, 2006 through April 1, 2014 is 2.83%.

The Collective Bargaining Agreement beginning July 1, 2012 is currently under negotiation. When it is resolved, it is possible it will include pay raises for periods beginning July 1, 2012 and later. Therefore, those pay raises would impact the averages presented above, as well as the Salary Scale Assumption to be used in future years. It is our understanding that the current 4.00% assumption is consistent with the expected increase in pay from time of hire through retirement date, when considering rank advancements and pay increases.

# Town of Scituate Retirement Plan for the Police Department Employees

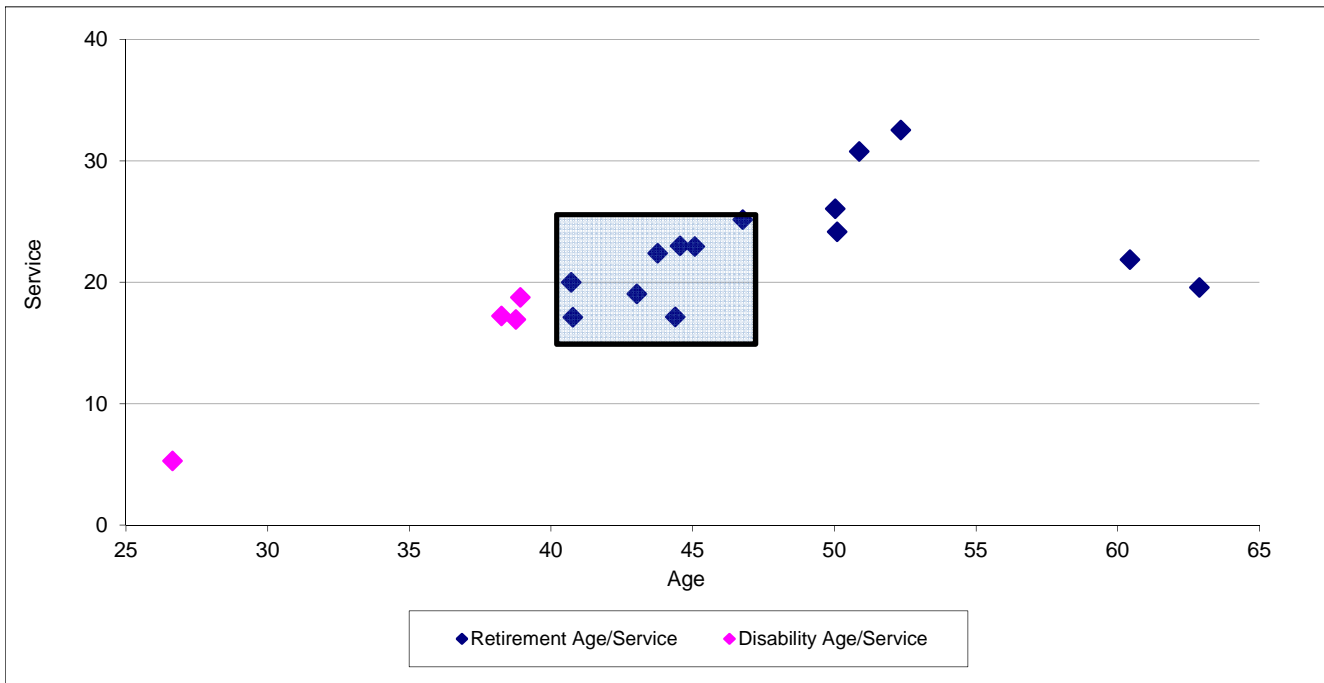
## ACTUARIAL EXPERIENCE RESULTS

Actuarial experience results of salary scale review: Based on the smaller sample size of participants in this Plan, it is reasonable to assume that the Plan's covered payroll on a whole, is a good indicator of the general salary increases budgeted for the active participants. Therefore, the 4.00% salary scale is a reasonable rate to assume in the actuarial valuations at this time.

### Retirement Age Assumption

As of April 1, 2014, the retirement assumption used in the Plan's actuarial valuation is 100% retirement at the time a participant attains 25 years of vesting service. At the time a participant attains 25 years of vesting service, he/she will have fully accrued a benefit under the Plan and will be eligible for immediate retirement with an unreduced benefit.

The chart below illustrates the age and service of actual retirements (and disability retirements for comparison) for retirees that were covered under the Plan between April 1, 2000 and April 1, 2014.



The shaded box in the chart above illustrates the propensity to retire between the ages of 40 and 45, with between 17 and 23 years of service. Not shown on the chart above is a group of 4 active participants (as of 4/1/2014) between the ages of 49 and 51 with over 23 years of service, all of whom are assumed to retire by the end of 2015.



# Town of Scituate Retirement Plan for the Police Department Employees

## ACTUARIAL EXPERIENCE RESULTS

Actuarial experience results of retirement age review: The current assumption assumes a participant retires at the earliest date possible at the time they are fully accrued in their benefit (the benefit formula has a maximum of 25 years of service, with an option to retire beginning at the later of 56 years of age and 10 attained years of service). If the retirement age is shifted to shorter service, a portion of participants would be assumed to retire without fully accruing their benefit. If the retirement age is shifted to longer service, there will be a period where the participant's benefit does not increase other than for salary increases; the current built in Cost of Living Adjustments (COLAs) will generally increase benefits in a similar fashion to the increase in salary rates. Therefore, the immediate retirement assumption at 25 years of service is a reasonable and generally conservative assumption in the actuarial valuation at this time.

### **Mortality Assumption**

The current mortality table being used in the April 1, 2014 actuarial valuation is the gender specific 2014 IRS Table. This table was updated from the April 1, 2013 valuation which used the 2013 IRS Table.

The Plan has experienced only 2 deaths since April 1, 2000. The Plan's current and historical population does not provide a significant sample size of members (alive or deceased) to prepare an analysis of the mortality table currently being used in the actuarial valuation.

The State of Rhode Island currently uses a version of the RP-2000 Combined Healthy mortality table for the State Police valuation, with white collar adjustments projected with Scale AA from 2000. Further, the pre-retirement rates are 75% of the typical rates, and post-termination rates are 115% of the rates for males (95% for females).

Analysis of the mortality assumption used by the State of Rhode Island resulted in a slightly lower liability than the assumption currently used by the Plan, but only lower by less than 0.5%. Changing the current RP-2000 Combined Healthy mortality table would result in an immaterial difference under the Plan's valuation at this time, however it is understood that the ongoing mortality improvement will increase this variance in the future and should be re-evaluated in the future.

The Society of Actuaries finalized Mortality Improvement Scale MP-2014 to be used in conjunction with the mortality tables on October 27, 2014. It was not final as of the April 1 valuation date and, therefore, was not used. When the April 1, 2015 valuation is prepared, a mortality assumption update reflecting Scale MP-2014 will be considered.

### **Termination Rates**

Currently, there is no termination assumption being used in the valuation.

Since April 1, 2000, there have been only 4 terminations prior to becoming eligible for retirement. This results in an average turnover of 1.7% per year. Therefore, given the small population of this plan, it is reasonable to assume no termination rate.

# Town of Scituate Retirement Plan for the Police Department Employees

## ACTUARIAL EXPERIENCE RESULTS

### Disability Assumption

As of the April 1, 2014 valuation, the assumed rates for disabled retirement are equal to 3 times the rates from the 1974 Railroad Retirement Board Incidence Table.

There are a total of 3 disabled participants receiving pension benefits. No disability retirements have occurred since 1999.

### Investment Rate of Return / Discount Rate

The current investment rate of return (also commonly referred to as the discount rate) used in the April 1, 2014 actuarial valuation is 7.50%.

The historical rate of return on Plan assets from April 1, 1999 through April 1, 2014 is approximately 4.8%.

As of April 1, 2014, the Plan asset allocation was as follows:

Domestic Equity:	\$2,098,336	49.0%
International Equity:	\$895,004	20.9%
Fixed Income:	655,195	15.3%
Real Estate / Other:	226,963	5.3%
Cash & Equivalents:	406,820	9.5%
Total:	\$4,282,318	100.0%

With this asset allocation, a 7.16% long-term rate of return would be expected for future periods. Target asset allocation has recently been modified, which results in expected return of 7.50%

Prior to the current economic uncertainty, the asset allocation above would have typically justified using a long term rate of return assumption of 7.50%, as most assets are invested in equities. Under the current environment, a long term rate of return of 7.50% may be an optimistic assumption until the markets become more stable. For comparison purposes, the State of Rhode Island values the State Police pension plan using a 7.50% discount rate, comprised of 3.00% inflation rate and a 4.50% net real rate of return. When the April 1, 2015 valuation is prepared, changing the rate of return assumption to reflect the current asset allocation will be considered.

### Cost of Living Adjustments

Effective July 1, 2003, any member eligible to retire after completing 20 years of service or more, is entitled to 3.00% non-compounded cost of living adjustment (COLA) annually. This COLA does not apply to past retirees.

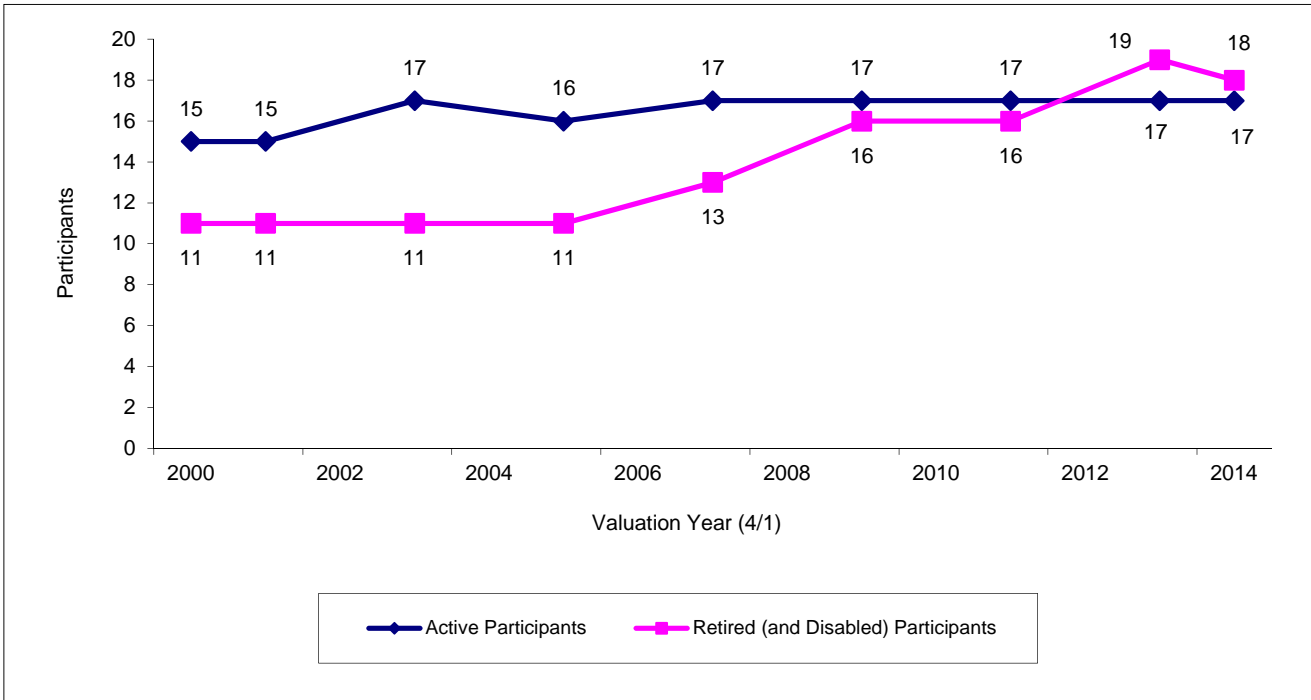
The April 1, 2014 actuarial valuation assumed a 3.00% annual COLA, which is an assumption assuming some participants are entitled to 3.00% COLA and some participants do not receive COLAs.

The annual increase in the Consumer Price Index (CPI) for urban consumers was 2.29% from April 1, 2003 through April 1, 2014.

Members that retired prior to July 1, 2003 will receive an increase to their pension benefit equal to 30% of any percentage increase that has been granted to the position or rank the participant held as of the date of his or her retirement.

# Town of Scituate Retirement Plan for the Police Department Employees

Plan Participant Counts



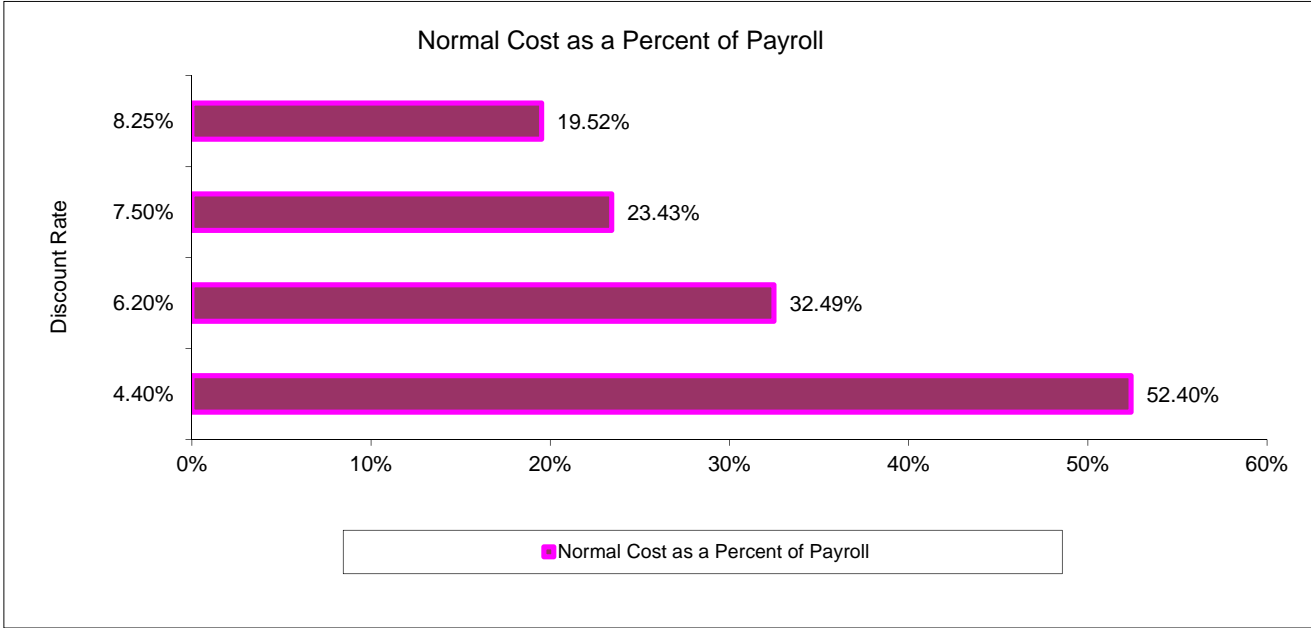
Participant Statistics

	<u>04/01/2011</u>	<u>04/01/2014</u>
Active Participant Count	17	17
Average Age of Actives	37.43	39.53
Average Service of Actives	11.25	12.45
Retiree Participant Count	12	15*
Average Age of Retiree	59.10	60.43
Average Age at Retirement	48.12	49.02
Average Service at Retirement	22.89	23.05
Disabled Participant Count	4	3
Average Age of Disabled	51.29	51.63
Average Age at Disability	35.64	35.64
Average Service at Disability	14.55	14.55

\* Includes one Alternate Payee under a QDRO and one Beneficiary of a deceased participant.

# Town of Scituate Retirement Plan for the Police Department Employees

## Normal Cost Sensitivity



The Plan's Actuarial Cost Method has been determined under the Entry Age Normal cost method.

The Plan's normal cost is the sum of the normal costs for all participant. 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 Normal Retirement Benefit for participants, under the Plan's provisions, is:

<p>For participants hired on or before June 30, 2000:</p>	<p><b>2.5% of base annual pay multiplied by first 20 years of service, plus 2.0% of base annual pay multiplied by the next 5 years of service (maximum of 60% of base annual pay)</b></p>
<p>For participants hired on or after July 1, 2000:</p>	<p><b>2.4% of base annual pay multiplied by first 25 years of service (maximum of 60% of base annual pay)</b></p>

The normal form of benefit is a life annuity increased by 30% of any dollar increase that may be granted in the retiree's rank or position held at retirement. In addition, effective July 1, 2003, any member who is eligible to retire after completing 20 years of service or more shall be entitled to a 3 percent (3%) non-compounded cost of living adjustment (COLA) annually. This does not apply to any past retirees.

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

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

Summary of Actuarial Assumptions as of April 1, 2014

Assumption		Entity Who Selects Assumption	Basis for Assumption Selection	Change in Assumption
Discount Rate	7.50%	Town of Scituate, Rhode Island	The discount rate is assumed to be equal to the Plan's Long-Term Rate of Return on Assets.	None
Long-Term Rate of Return on Assets	7.50%	Town of Scituate, Rhode Island	The assumed long-term rate of return on assets 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.	None
Salary Scale	4.00%	Town of Scituate, Rhode Island	The plan sponsor reviewed the experience under the Plan.	None
IRC 415 and 401(a)(17) Limit Projection	N/A	Town of Scituate, Rhode Island	Plan participants all earn well below the current limits.	None
Pre-Retirement Mortality	IRS 2014 P.V. Optional Combined Table with static projection (M/F)	Town of Scituate, Rhode Island	The Society of Actuaries finalized Mortality Improvement Scale MP-2014 to be used in conjunction with the mortality tables on October 27, 2014. It was not final as of the April 1 valuation date and, therefore, was not used. When the April 1, 2015 valuation is prepared, a mortality assumption update reflecting Scale MP-2014 will be considered.	IRS 2013 P.V. Optional Combined Table (M/F)
Post-Retirement Mortality	IRS 2014 P.V. Optional Combined Table with static projection (M/F)	Town of Scituate, Rhode Island	The Society of Actuaries finalized Mortality Improvement Scale MP-2014 to be used in conjunction with the mortality tables on October 27, 2014. It was not final as of the April 1 valuation date and, therefore, was not used. When the April 1, 2015 valuation is prepared, a mortality assumption update reflecting Scale MP-2014 will be considered.	IRS 2013 P.V. Optional Combined Table (M/F)
Form of Payment	67.5% Joint & Survivor Annuity	Town of Scituate, Rhode Island	The plan sponsor reviewed the experience under the Plan.	None
Withdrawal Rates	None	Town of Scituate, Rhode Island	The plan sponsor reviewed the experience under the Plan.	None
Disability Rates	3 times the rates specified by the 1974 Railroad Retirement Board Valuation.	Town of Scituate, Rhode Island	The plan sponsor reviewed the experience under the Plan.	None
Retirement Rates	25 years of service	Town of Scituate, Rhode Island	The Plan sponsor reviewed the experience under the Plan.	None
Cost of Living Adjustment (COLA)	3% compounded annually	Town of Scituate, Rhode Island	The Plan sponsor reviewed the experience under the Plan.	None