Milliman

TOWN OF NEWINGTON
POLICE OFFICERS' PENSION PLAN

Actuarial Valuation as of July 1, 2014
For Fiscal Year 2015-16

Prepared by

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Certification

We have performed an actuarial valuation of the Plan as of July 1, 2014 for fiscal year 2015-16. This report presents the results of our valuation.

The ultimate cost of a pension plan is the total amount needed to provide benefits for plan members and beneficiaries and to pay the expenses of administering the plan. Pension costs are met by contributions and by investment return on plan assets. The principal purpose of this report is to set forth an actuarial recommendation of the contribution, or range of contributions, which will properly fund the plan, in accordance with applicable government regulations. In addition, this report provides:

- A valuation of plan assets and liabilities to review the year-to-year progress of funding.
- Information needed to meet disclosure requirements.
- Review of plan experience for the previous year to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application.
- Assessment of the relative funded position of the plan, i.e., through a comparison of plan assets and projected plan liabilities.
- Comments on any other matters which may be of assistance in the funding and operation of the plan.

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In preparing this report, we relied on employee census data and financial information as of the valuation date, furnished by the Town. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have found them to be reasonably consistent and comparable with data used for other purposes. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete and our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Certification

The calculations reported herein have been made on a basis consistent with our understanding of ERISA and the related sections of the tax code. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices.

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

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

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

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Rebecca A. Sielman, FSA
Consulting Actuary

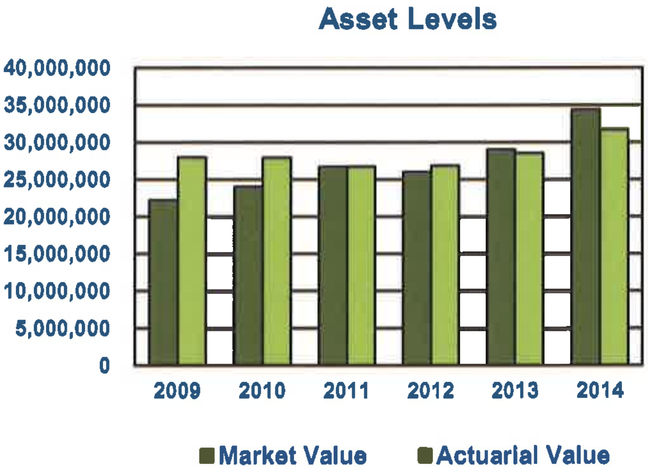
Section I - Executive Summary
A. Highlights

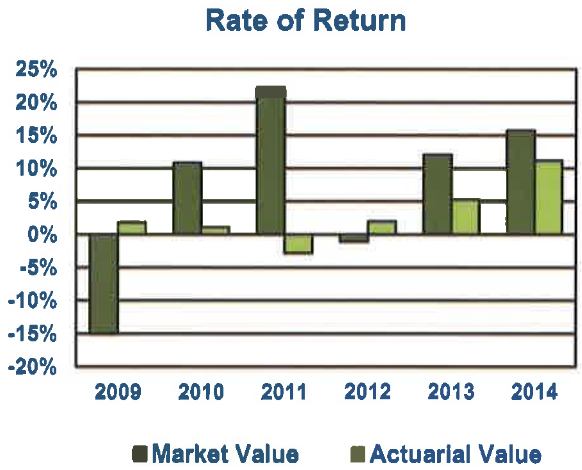
Assets

There are two different measures of the plan's assets that are used throughout this report. The **Market Value** is a snapshot of the plan's investments as of the valuation date. The **Actuarial Value** is a smoothed asset value designed to temper the volatile fluctuations in the market by recognizing investment gains or losses over five years.

	Market	Actuarial
Value as of July 1, 2013	$29,396,197	$28,505,350
Contributions	3,104,334	3,104,334
Investment Income	4,597,031	3,188,048
Benefit Payments and Administrative Expenses	(3,123,919)	(3,123,919)
Value as of July 1, 2014	33,973,643	31,673,813

For fiscal year 2013-14, the plan's assets earned 15.74% on a Market Value basis and 11.19% on an Actuarial Value basis. The actuarial assumption for this period was 7.50%; the result is an asset gain of $2,406,600 on a Market Value basis and a gain of $1,051,300 on an Actuarial Value basis. Historical asset values are shown in the graph below to the left; historical returns are shown in the graph below to the right.





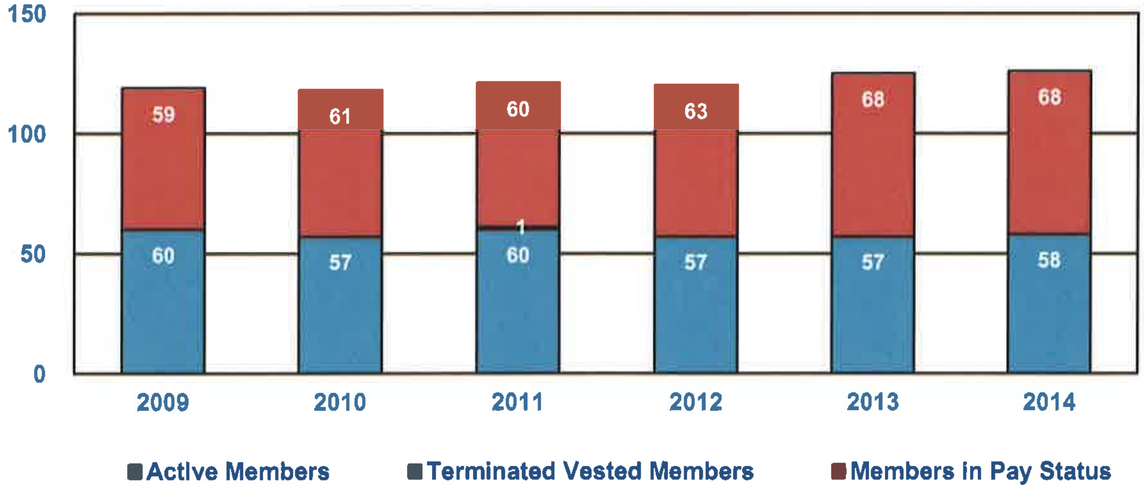
Please note that the Actuarial Value currently is less than the Market Value by $2,299,800. This figure represents investment gains that will be gradually recognized over the next five years. This process will exert downward pressure on the Town's contribution, unless there are offsetting market losses.

Section I - Executive Summary
A. Highlights

Membership

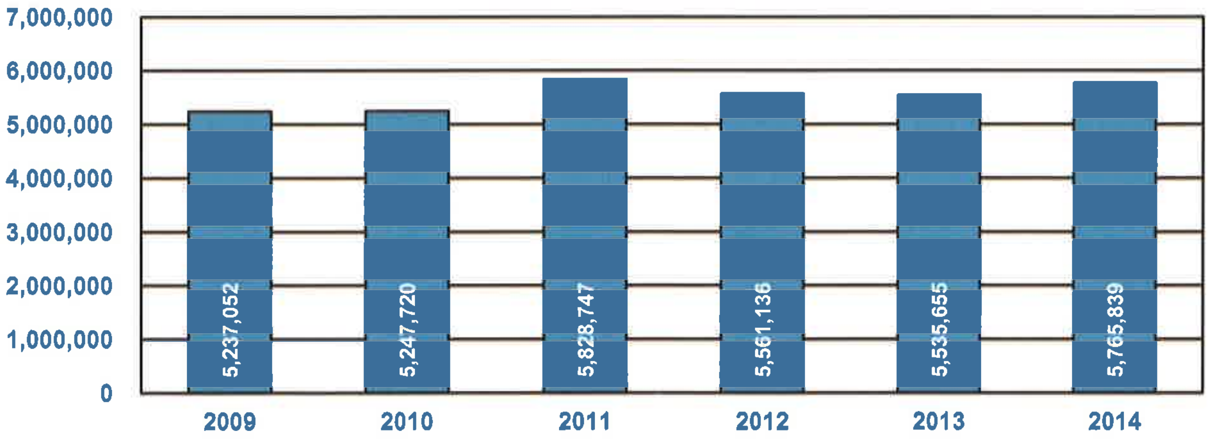
There are three basic categories of plan members included in the actuarial valuation: (1) active employees who have met the eligibility requirements for membership, (2) former employees who have a vested right to benefits but have not yet started collecting, and (3) members who are receiving monthly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

Number of Members



From July 1, 2013 to July 1, 2014, the overall membership increased from 125 to 126. During this period, there was 1 new member and 1 retiree died with benefits continuing to a beneficiary.

Payroll



Section I - Executive Summary
A. Highlights

Plan Changes

The employee contribution rate was increased from 7% of pay to 7.5% effective July 1, 2013 and 8% effective July 1, 2014.

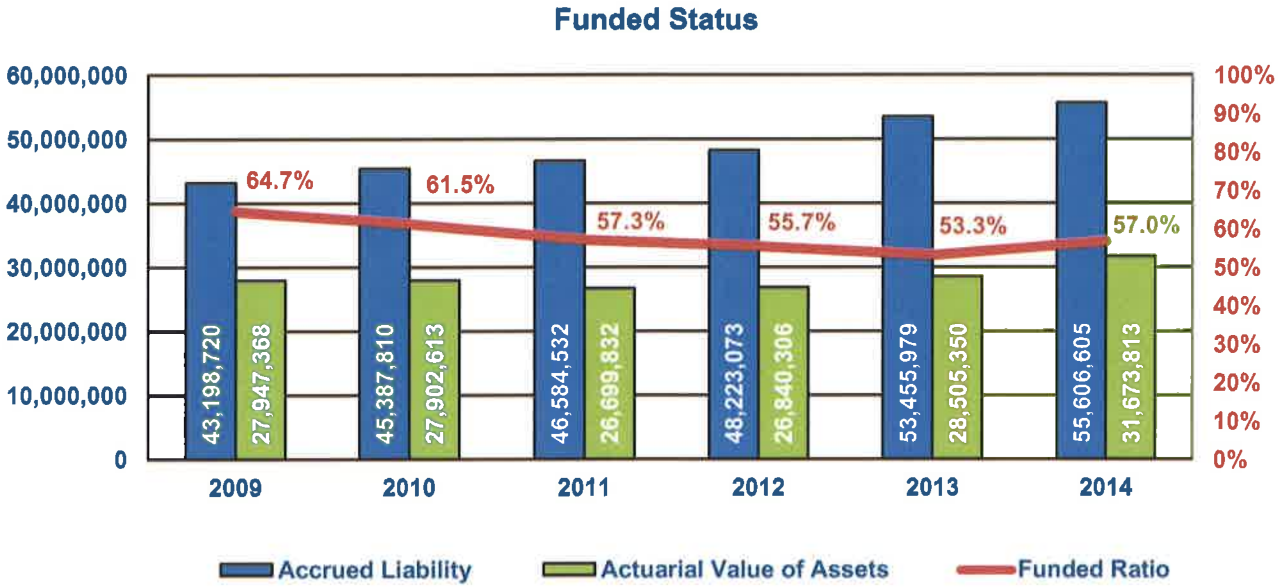
Changes in Actuarial Methods or Assumptions

None.

Section I - Executive Summary
A. Highlights

Funded Status

The chart below shows the plan's Accrued Liability and Actuarial Value of Assets for the past few years. Since investment gains and losses are recognized gradually over a five year period, the large market losses suffered in 2007-08 and 2008-09 are manifested by a gradual decline in the funded ratio. Absent future market losses, the funded ratio should start to rise.

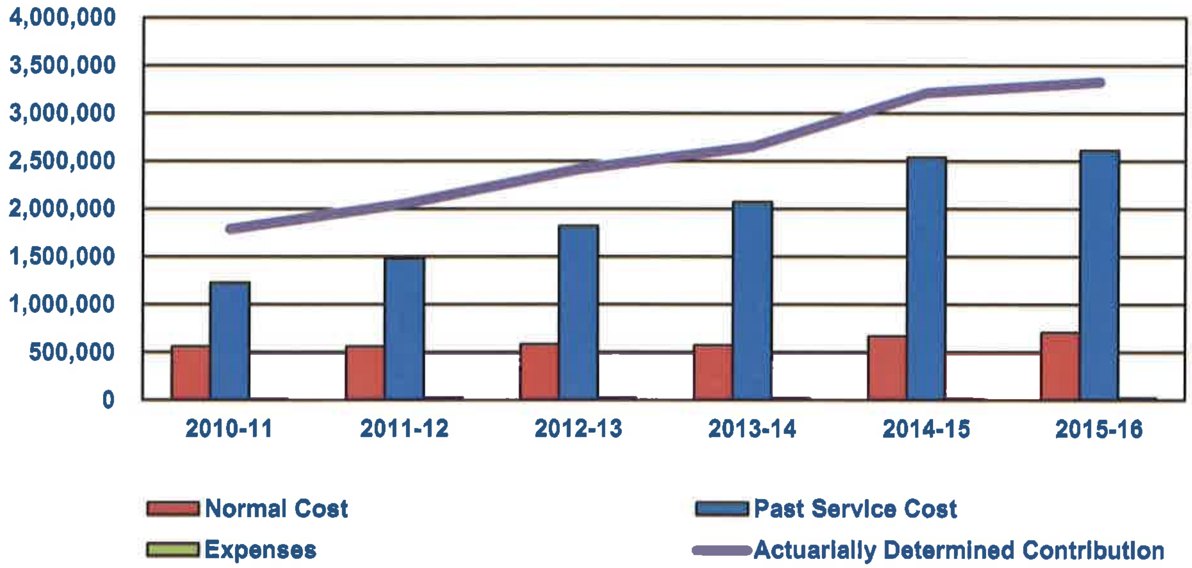


Section I - Executive Summary
A. Highlights

Actuarially Determined Contribution

The Actuarially Determined Contribution consists of three pieces: a **Normal Cost** payment to fund the benefits earned each year, a **Past Service Cost** to gradually reduce any unfunded or surplus liability, and **Expenses** expected to be paid from plan assets. If the plan has a sufficiently large surplus, the Past Service Cost may be large enough to cover the Normal Cost, in which case no contribution is required.

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

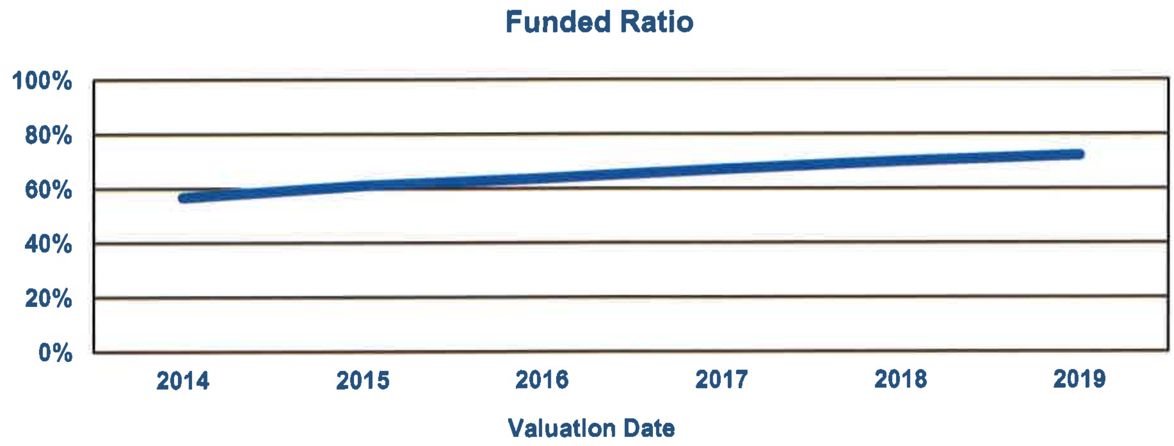


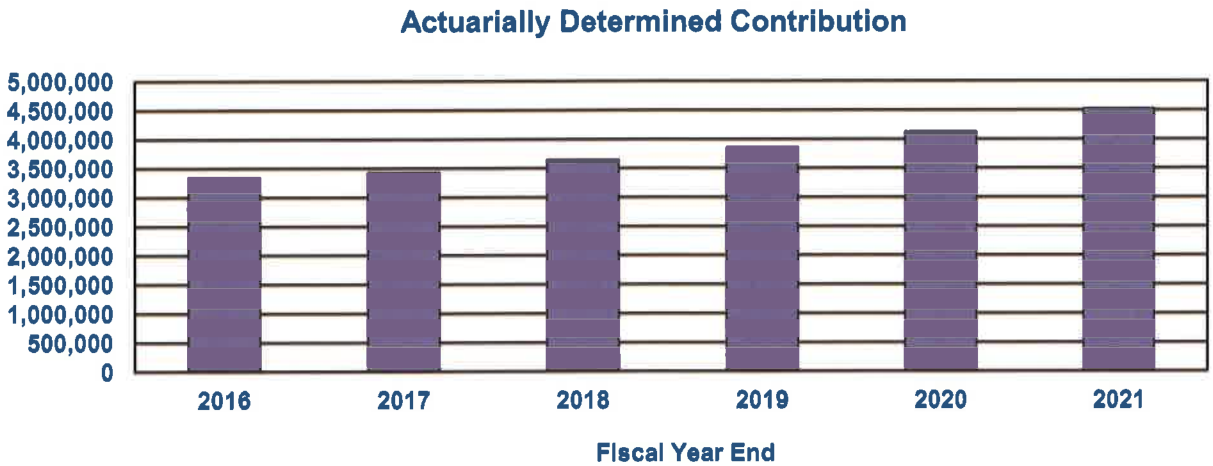
The significant rise in the Actuarially Determined Contribution during this period is largely due to the large market loss suffered in 2007-09.

Section I - Executive Summary
A. Highlights

Long Range Forecast

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





To the extent that there are future investment or liability gains or losses, changes in the actuarial assumptions or methods, or plan changes, the actual valuation results will differ from these forecasts. Please see Section III C for more details of the long range forecast.

Section I - Executive Summary
B. Summary of Principal Results

Membership	July 1, 2013	July 1, 2014
Active Members	57	58
Terminated Vested Members	0	0
Members in Pay Status	68	68
Payroll	$5,535,655	$5,765,839

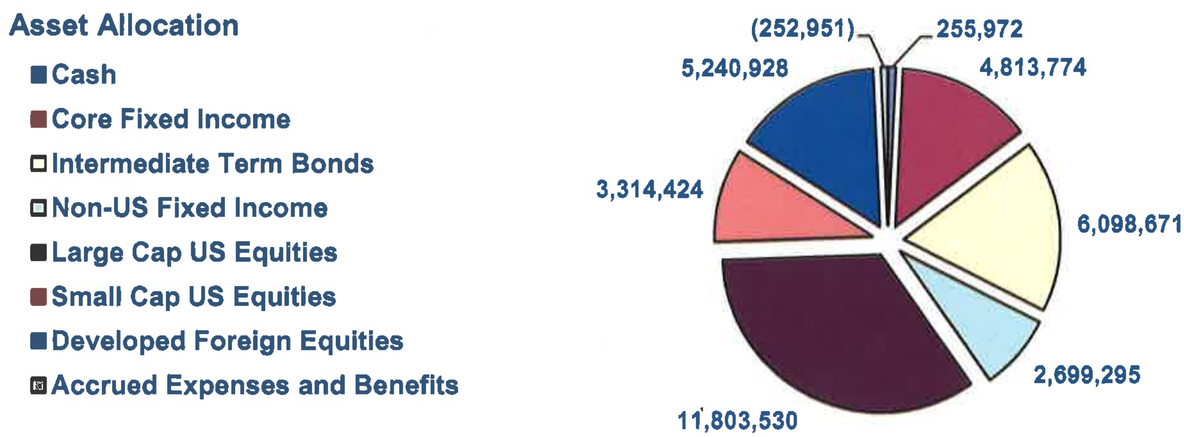
Assets and Liabilities	July 1, 2013	July 1, 2014
Market Value of Assets	$29,017,821	$33,973,643
Actuarial Value of Assets	28,505,350	31,673,813
Accrued Liability for Active Members	$13,895,567	$16,548,639
Accrued Liability for Terminated Vested Members	0	0
Accrued Liability for Members in Pay Status	39,560,412	39,057,966
Total Accrued Liability	53,455,979	55,606,605
Unfunded Accrued Liability	24,950,629	23,932,792
Funded Ratio	53.3%	57.0%

Actuarially Determined Contribution for Fiscal Year	2014-15	2015-16
Normal Cost	$666,976	$706,685
Past Service Cost	2,539,572	2,611,100
Expenses	16,400	20,500
Actuarially Determined Contribution	3,222,948	3,338,285
Actuarially Determined Contribution as a percent of pay	58.2%	57.9%

Section II - Plan Assets
A. Summary of Fund Transactions

Market Value as of July 1, 2013	$29,396,197
Employer Contributions	2,661,462
Employee Contributions	434,704
Benefit Payments	(3,103,988)
Interest and Dividends	335,600
Transfer of Employee Contributions	8,168
Unrealized Gains/(Losses)	0
Realized Gains/(Losses)	4,434,528
Investment Expenses	(173,097)
Administrative Expenses	(19,931)
Market Value as of July 1, 2014	33,973,643
Accrued Contribution	0
Adjusted Market Value as of July 1, 2014	33,973,643
Approximate Rate of Return	15.74%

Note: The rate shown here is not the dollar or time weighted investment yield rate which measures investment performance. It is an approximate net return assuming all activity occurred on average midway through the fiscal year.



Section II - Plan Assets
B. Development of Actuarial Value of Assets

In order to minimize the impact of market fluctuations on the contribution level, we use an Actuarial Value of Assets that recognizes gains and losses over a five year period. The Actuarial Value of Assets as of July 1, 2014 is determined below.

1. Expected Market Value of Assets:	
a. Market Value of Assets as of July 1, 2013	$29,396,197
b. Employer and Employee Contributions	3,104,334
c. Benefit Payments and Administrative Expenses	(3,123,919)
d. Expected Investment Return Based on 7.50% Interest	2,190,453
e. Expected Market Value of Assets as of July 1, 2014	31,567,065
2. Actual Market Value of Assets as of July 1, 2014	33,973,643
3. Market Value (Gain)/Loss: (1e) - (2)	(2,406,578)
4. Delayed Recognition of Market (Gains)/Losses:	

Plan Year End	(Gain)/Loss	Percent Not Recognized	Amount Not Recognized
06/30/2014	($2,406,578)	80%	($1,925,262)
06/30/2013	(1,123,296)	60%	(673,978)
06/30/2012	2,336,191	40%	934,476
06/30/2011	(3,175,330)	20%	(635,066)

	(2,299,830)
5. Actuarial Value as of July 1, 2014: (2) + (4)	31,673,813
6. Approximate Rate of Return on Actuarial Value	11.19%
7. Actuarial Value (Gain)/Loss	(1,051,287)

Section III - Development of Contribution
A. Past Service Cost

For determining the Past Service Cost, the Unfunded Accrued Liability is amortized as a level percent over a period of 20 years starting on July 1, 2005.

		July 1, 2013	July 1, 2014
1.	Accrued Liability		
	Active Members	$13,895,567	$16,548,639
	Terminated Vested Members	0	0
	Retired Members	34,854,753	34,053,004
	Disabled Members	1,622,698	1,538,656
	Beneficiaries of Deceased Members	3,082,961	3,466,306
	Total	53,455,979	55,606,605
2.	Actuarial Value of Assets (see Section II B)	28,505,350	31,673,813
3.	Unfunded Accrued Liability: (1) - (2)	24,950,629	23,932,792
4.	Funded Ratio: (2) / (1)	53.3%	57.0%
5.	Amortization Period	12	11
6.	Amortization Growth Rate	3.50%	3.50%
7.	Past Service Cost: (3) amortized over (5)	2,539,572	2,611,100

Section III - Development of Contribution
B. Actuarially Determined Contribution

	Fiscal Year 2014-15	Fiscal Year 2015-16
1. Total Normal Cost	$1,056,955	$1,164,119
2. Expected Employee Contributions	389,979	457,434
3. Expected Expenses	16,400	20,500
4. Net Normal Cost: (1) - (2) + (3)	683,376	727,185
5. Past Service Cost (see Section III A)	2,539,572	2,611,100
6. Actuarially Determined Contribution: (4) + (5)	3,222,948	3,338,285
7. Actuarially Determined Contribution as a percent of pay	58.2%	57.9%

Section III - Development of Contribution
C. Long Range Forecast

This forecast is based on the results of the July 1, 2014 actuarial valuation and assumes that the Town will pay the Actuarially Determined Contribution each year, the assets will return the assumed interest rate on a market value basis each year, and there are no future changes in the actuarial methods or assumptions or in the plan provisions. Actual results at each point in time will yield different values, reflecting the actual experience of the plan membership and assets.

		Values as of the Valuation Date					Cash Flows Projected to the Following Fiscal Year			
Valuation Date	Interest Rate	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio	Fiscal Year Ending	Town Contributions	Employee Contributions	Benefit Payments	Net Cash Flows
7/1/2014	7.500%	$55,606,605	$31,673,813	$23,932,792	57.0%	2016	$3,338,285	$464,000	($3,329,000)	$473,285
7/1/2015	7.375%	58,690,000	35,990,000	22,700,000	61.3%	2017	3,422,000	474,000	(3,439,000)	457,000
7/1/2016	7.250%	61,705,000	39,458,000	22,247,000	63.9%	2018	3,638,000	483,000	(3,543,000)	578,000
7/1/2017	7.125%	64,851,000	43,561,000	21,290,000	67.2%	2019	3,846,000	480,000	(3,718,000)	608,000
7/1/2018	7.000%	68,140,000	47,756,000	20,384,000	70.1%	2020	4,121,000	486,000	(3,923,000)	684,000
7/1/2019	6.875%	71,496,000	51,705,000	19,791,000	72.3%	2021	4,522,000	486,000	(4,139,000)	869,000
7/1/2020	6.750%	74,867,000	55,943,000	18,924,000	74.7%	2022	5,017,000	492,000	(4,321,000)	1,188,000
7/1/2021	6.750%	77,120,000	60,593,000	16,527,000	78.6%	2023	5,327,000	495,000	(4,492,000)	1,330,000
7/1/2022	6.750%	79,320,000	65,885,000	13,435,000	83.1%	2024	5,612,000	500,000	(4,649,000)	1,463,000
7/1/2023	6.750%	81,478,000	71,680,000	9,798,000	88.0%	2025	5,985,000	507,000	(4,813,000)	1,679,000
7/1/2024	6.750%	83,627,000	78,004,000	5,623,000	93.3%	2026	6,650,000	509,000	(4,992,000)	2,167,000
7/1/2025	6.750%	85,760,000	84,976,000	784,000	99.1%	2027	1,815,000	515,000	(5,175,000)	(2,845,000)
7/1/2026	6.750%	87,848,000	92,924,000	(5,076,000)	105.8%	2028	0	522,000	(5,356,000)	(4,834,000)
7/1/2027	6.750%	89,878,000	96,225,000	(6,347,000)	107.1%	2029	0	536,000	(5,473,000)	(4,937,000)
7/1/2028	6.750%	91,858,000	97,692,000	(5,834,000)	106.4%	2030	0	537,000	(5,636,000)	(5,099,000)
7/1/2029	6.750%	93,882,000	99,151,000	(5,269,000)	105.6%	2031	0	543,000	(5,851,000)	(5,308,000)
7/1/2030	6.750%	95,869,000	100,539,000	(4,670,000)	104.9%	2032	0	553,000	(6,026,000)	(5,473,000)
7/1/2031	6.750%	97,777,000	101,804,000	(4,027,000)	104.1%	2033	0	557,000	(6,222,000)	(5,665,000)
7/1/2032	6.750%	99,654,000	102,983,000	(3,329,000)	103.3%	2034	0	563,000	(6,458,000)	(5,895,000)
7/1/2033	6.750%	101,464,000	104,043,000	(2,579,000)	102.5%	2035	0	577,000	(6,635,000)	(6,058,000)

For purposes of this forecast the amortization period declines to 1 year to illustrate the progress of the plan towards becoming fully funded; in actual practice the amortization period will not be less than 10 years in order to shield the Town from contribution volatility.

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

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

Valuation Date	July 1, 2014
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percent
Amortization Period	Closed 20 years from July 1, 2005
Asset Valuation Method	5 Year Smoothed Market Value
Actuarial Assumptions	
Investment Rate of Return	7.50%
Projected Salary Increases	3.50%
Amortization Growth Rate	3.50%
Inflation	2.50%
Cost-of-Living Adjustments	1.50%

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

Actuarial Valuation Date	For Fiscal Year	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Unfunded AAL (UAAL) (2) - (1)	(4) Funded Ratio (1) / (2)	(5) Covered Payroll	(6) UAAL as a Percentage of Covered Payroll (3) / (5)
07/01/2005	2006-07	$23,772,710	$35,085,061	$11,312,351	67.8%	$4,205,379	269.0%
07/01/2006	2007-08	24,742,806	36,042,071	11,299,265	68.6%	4,374,797	258.3%
07/01/2007	2008-09	26,546,049	38,205,414	11,659,365	69.5%	4,499,543	259.1%
07/01/2008	2009-10	28,004,694	41,214,834	13,210,140	67.9%	4,788,496	275.9%
07/01/2009	2010-11	27,947,368	43,198,720	15,251,352	64.7%	5,237,052	291.2%
07/01/2010	2011-12	27,902,613	45,387,810	17,485,197	61.5%	5,247,720	333.2%
07/01/2011	2012-13	26,699,832	46,584,532	19,884,700	57.3%	5,828,742	341.1%
07/01/2012	2013-14	26,840,306	48,223,073	21,382,767	55.7%	5,561,136	384.5%
07/01/2013	2014-15	28,505,350	53,455,979	24,950,629	53.3%	5,535,655	450.7%
07/01/2014	2015-16	31,673,813	55,606,605	23,932,792	57.0%	5,765,839	415.1%

Section IV - Accounting Information
C. Schedule of Employer Contributions

Fiscal Year Ending June 30	(1) Actuarially Determined Contribution	(2) Contribution in Relation to the Actuarially Determined Contribution	(3) Contribution Deficiency/ (Excess) (1) - (2)	(4) Covered Payroll	(5) Contribution as a Percentage of Covered Payroll (2) / (4)
2007	$1,354,455	$1,354,455	$0	$4,205,379	32.2%
2008	1,276,735	1,276,735	0	4,374,797	29.2%
2009	1,335,957	1,335,957	0	4,499,543	29.7%
2010	1,525,296	1,525,296	0	4,788,496	31.9%
2011	1,799,656	1,799,656	0	5,237,052	34.4%
2012	2,064,999	2,064,999	0	5,247,720	39.4%
2013	2,426,210	2,804,586	(378,376)	5,828,747	48.1%
2014	2,661,462	2,661,462	0	5,561,136	47.9%
2015	3,222,948	TBD	TBD	5,535,655	TBD
2016	3,338,285	TBD	TBD	5,765,839	TBD

Section IV - Accounting Information
D. Accrued and Vested Benefits

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

	As of July 1, 2013	As of July 1, 2014
1. Value of Vested Benefits		
Active Members	$9,523,531	$11,704,542
Terminated Vested Members	0	0
Retired Members	34,854,753	34,053,004
Disabled Members	1,622,698	1,538,656
Beneficiaries of Deceased Members	3,082,961	3,466,306
Total Value of Vested Benefits	49,083,943	50,762,508
2. Value of Non-Vested Benefits	970,822	1,134,457
3. Total Value of Accrued Benefits: (1) + (2)	50,054,765	51,896,965
4. Market Value of Assets	29,396,197	33,973,643
5. Vested Funded Ratio: (4) / (1)	59.9%	66.9%
6. Accrued Funded Ratio: (4) / (3)	58.7%	65.5%

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

Increase/(Decrease) during the 2013-2014 plan year attributable to:

Increase for interest due to the decrease in the discount period	$3,637,708
Benefits Accumulated/(Forfeited)	602,918
Benefit Payments	(3,103,988)
Plan Amendments	0
Changes in Actuarial Assumptions	705,562
Net Increase/(Decrease)	1,842,200

Value of Accrued Plan Benefits:

July 1, 2014	$51,896,965
July 1, 2013	50,054,765
Net Increase/(Decrease)	1,842,200

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

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

	Active	Term. Vested	Retirees	Disabled	Bene- ficiaries	Total
Count as of July 1, 2013	57	0	56	4	8	125
Terminated not vested	-	-	-	-	-	0
Terminated, benefits due	-	-	-	-	-	0
Retired	-	-	-	-	-	0
Died, with beneficiary	-	-	(1)	-	1	0
Died, no beneficiary	-	-	-	-	-	0
Paid refund	-	-	-	-	-	0
New member	1	-	-	-	-	1
New beneficiary	-	-	-	-	-	0
Correction	-	-	-	-	-	0
Count as of July 1, 2014	58	0	55	4	9	126

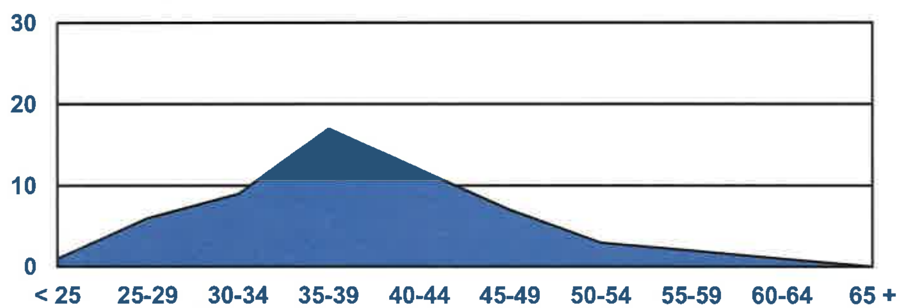
Section V - Membership Data
B. Statistics of Membership

	As of July 1, 2013	As of July 1, 2014
Active Members		
Number	57	58
Average Age	38.7	39.5
Average Service	9.5	10.4
Total Payroll	$5,535,655	$5,765,839
Average Payroll	97,117	99,411
Terminated Vested Members		
Number	0	0
Total Annual Benefit	$0	$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Retired Members		
Number	56	55
Total Annual Benefit	$2,733,762	$2,712,256
Average Annual Benefit	48,817	49,314
Average Age	62.0	62.9
Disabled Members		
Number	4	4
Total Annual Benefit	$130,963	$132,175
Average Annual Benefit	32,741	33,044
Average Age	51.5	52.5
Beneficiaries of Deceased Members		
Number	8	9
Total Annual Benefit	$255,146	$288,996
Average Annual Benefit	31,893	32,111
Average Age	67.4	67.2

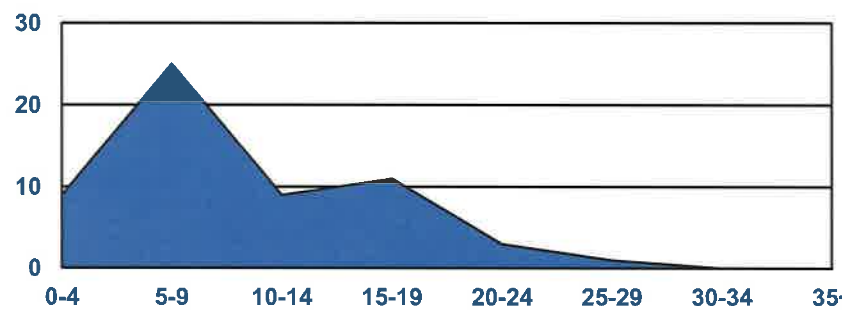
Section V - Membership Data
C. Distribution of Active Members as of July 1, 2014 - Count

	Years of Service								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
< 25	1	0	0	0	0	0	0	0	1
25-29	5	1	0	0	0	0	0	0	6
30-34	0	9	0	0	0	0	0	0	9
35-39	2	7	5	3	0	0	0	0	17
40-44	1	4	2	4	1	0	0	0	12
45-49	0	1	2	2	2	0	0	0	7
50-54	0	1	0	2	0	0	0	0	3
55-59	0	1	0	0	0	1	0	0	2
60-64	0	1	0	0	0	0	0	0	1
65 +	0	0	0	0	0	0	0	0	0
Total	9	25	9	11	3	1	0	0	58

Distribution By Age



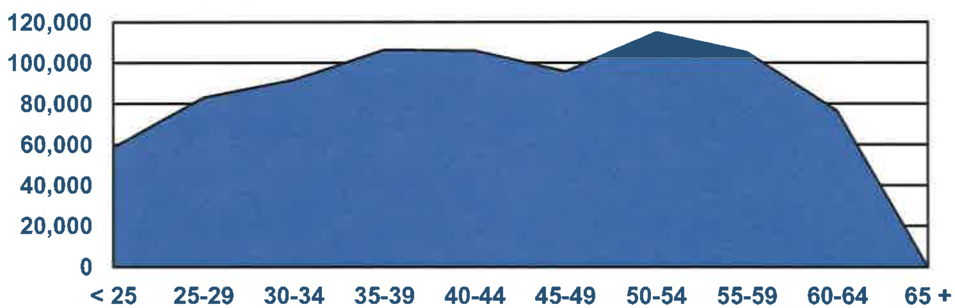
Distribution by Years of Service



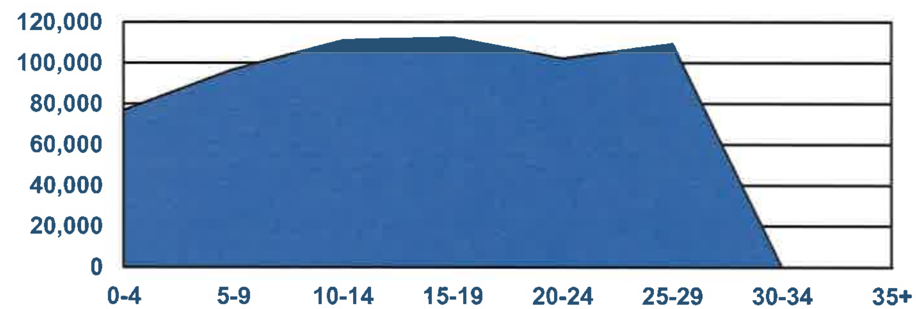
Section V - Membership Data
D. Distribution of Active Members as of July 1, 2014 - Average Pay

	Years of Service								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
< 25	58,485	0	0	0	0	0	0	0	58,485
25-29	80,972	93,326	0	0	0	0	0	0	83,031
30-34	0	91,688	0	0	0	0	0	0	91,688
35-39	76,734	105,580	114,082	115,500	0	0	0	0	106,438
40-44	75,467	95,457	120,922	112,056	124,838	0	0	0	106,017
45-49	0	111,663	93,675	94,942	90,977	0	0	0	95,836
50-54	0	91,674	0	126,577	0	0	0	0	114,943
55-59	0	100,941	0	0	0	109,418	0	0	105,180
60-64	0	76,301	0	0	0	0	0	0	76,301
65 +	0	0	0	0	0	0	0	0	0
Total	76,920	96,799	111,067	112,524	102,264	109,418	0	0	99,411

Distribution By Age



Distribution by Years of Service



Section V - Membership Data
E. Distribution of Inactive Members as of July 1, 2014

	Age	Number	Annual Benefits
Terminated Vested Members / Members Due Refunds	< 30	0	$0
	30 - 39	0	0
	40 - 49	0	0
	50 - 59	0	0
	60 - 64	0	0
	65 +	0	0
	Total	0	0
Retired Members	< 50	8	$449,762
	50 - 59	16	857,809
	60 - 69	14	703,857
	70 - 79	14	611,145
	80 - 89	3	89,688
	90 +	0	0
	Total	55	2,712,261
Disabled Members	< 50	1	$42,548
	50 - 59	2	68,294
	60 - 69	1	21,333
	70 - 79	0	0
	80 - 89	0	0
	90 +	0	0
	Total	4	132,175
Beneficiaries of Deceased Members	< 50	0	$0
	50 - 59	3	158,000
	60 - 69	3	105,386
	70 - 79	2	12,291
	80 - 89	1	13,318
	90 +	0	0
	Total	9	288,995

Appendix A - Actuarial Funding Method

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

The **Normal Cost** is determined by calculating the present value of future benefits for present active Members that will become payable as the result of death, disability, retirement or termination. This cost is then spread as a level percentage of earnings from entry age to termination as an Active Member. If Normal Costs had been paid at this level for all prior years, a fund would have accumulated. Because this fund represents the portion of benefits that would have been funded to date, it is termed the **Accrued Liability**. In fact, it is calculated by adding the present value of benefits for Retired Members and Terminated Vested Members to the present value of benefits for Active Members and subtracting the present value of future Normal Cost contributions.

The funding cost of the Plan is derived by making certain specific assumptions as to rates of interest, mortality, turnover, etc. which are assumed to hold for many years into the future. Since actual experience may differ somewhat from the assumptions, the costs determined by the valuation must be regarded as estimates of the true costs of the Plan.

The unfunded liability for the plan is the excess of the Accrued Liability over the assets which have been accumulated for the plan. This Unfunded Accrued Liability is amortized as a level percent. Beginning on July 1, 2005, the amortization period is 20 years; the amortization period will decrease each year until it reaches 10 years, after which point it will remain at 10 years.

The **Actuarial Value of Assets** is determined by recognizing asset gains and losses over **five** years.

Appendix B - Actuarial Assumptions

Interest	7.50%
Salary Scale	3.50%
Amortization Growth Rate	3.50%
Expenses	Administrative expenses paid in the prior year, increased by 3% and rounded to the nearest $100.
Mortality	RP-2000 Combined Healthy Mortality Table, Male and Female, with generational projection of future mortality improvements per Scale AA. This assumption includes a margin for improvements in longevity beyond the valuation date.
Turnover	None.
Rate of Retirement	50% in the first year eligible for Normal Retirement. 15% in each following year. 100% at age 65. For employees hired after January 1, 2007, no retirements are assumed prior to the completion of 25 years of service.
Rate of Disability	11th Railroad Retirement Board Disability Rates.
Disabled Mortality	RP-2000 Disabled Mortality Table, Male and Female.
Marital Status	80% of members are assumed to be married with wives 3 years younger than husbands.
Cost of Living Adjustment	1.50%
Worker's Compensation	10% of Final Average Earnings.

Appendix C - Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Eligibility	Employed for twenty or more hours a week for more than 5 months per calendar year.
Employee Contributions	8% of after tax Earnings. Interest is credited at 4% per annum. Refund of Employee Contributions with interest to date of termination of employment or death, unless the employee is eligible for a deferred retirement income.
Continuous Service	The period of continuous employment with the Police Department beginning with the first of the month following date of employment.
Final Average Earnings	Highest average earnings received in any three full calendar years.
Normal Retirement Date	Earlier of age 50 or completion of 20 years of service. For employees hired after January 1, 2007. the completion of 25 years of service is required to be eligible for cost of living adjustments and retiree medical benefits.
Normal Retirement Benefit	2.5% of Final Average Earnings multiplied by Continuous Service. For employees hired before January 1, 2007. the benefit is capped at 70% of base compensation in the year prior to retirement. For employees hired after January 1, 2007, the benefit is capped at 62.5% of base compensation in the year prior to retirement.
Early Retirement Date	Age 45 and 10 years of Continuous Service.
Early Retirement Benefit	Benefit is based on Credited Service and Final Average Compensation to actual retirement date actuarially reduced for early commencement.
Deferred Retirement Date	Members may continue to work beyond Normal Retirement.
Deferred Retirement Benefit	Benefit based on Credited Service and Final Average Compensation to actual date of retirement.
Death Benefit Eligibility	Married Member (for at least one year) or with minor children. Age 25 with 1 year of Aggregate Service.
Death Benefit	35% of benefit accrued to date of death.

Appendix C - Summary of Plan Provisions

Disability Retirement	Members not covered under the Long Term Disability Contract.
Disability Retirement Benefit	60% of earnings at the time of disability, less Worker's Compensation.
Termination Benefit Eligibility	Ten years of Continuous Service.
Termination Benefit	Benefit accrued to date of termination with payment commencing on Normal Retirement Date.
Cost of Living Adjustment	One half of active salary increases.