Bryan, Pendleton, Swats & McAllister, LLC

Town of Trumbull Retirement Plan

Actuarial Valuation Report

July 1, 2016

Table of Contents

Annual Recommended Contribution

An actuarial valuation of the Town of Trumbull Retirement Plan was conducted as of July 1, 2016 for the Town of Trumbull. The purpose of the valuation is to determine the cost implications of the pension plan including a determination of the annual funding levels for the plan year ending, and tax year ending, June 30, 2017.

The recommended contribution represents an amount that is sufficient to support the benefits of the plan, to pay administrative expenses, and to achieve the Town's financing objectives described below.

Annual Recommended Contribution at July 1, 2016	**$**	**5,048,000**

Yearly Comparison

	July 1, 2016		July 1, 2014		July 1, 2012	
Number of Participants						
Active		406		376		436
Deferred Vested		79		68		74
Receiving Benefits		355		340		325
Total		840		784		835
Active Participant Statistics						
Average Age		54.9		55.3		54.0
Average Service		13.9		15.2		13.7
Average Compensation	$	46,150	$	45,120	$	42,570
Total Compensation		18,737,000		16,964,000		18,559,000
Covered Payroll		18,737,000		16,964,000		18,559,000
Plan Liabilities at Beginning of Year						
Active Participants		35,445,822		34,362,408		34,252,494
Deferred Vested		4,532,281		2,199,286		2,534,617
Receiving Benefits		40,109,448		34,600,681		31,117,889
Total Accrued Liability		80,087,551		71,162,375		67,905,000
Plan Assets at Beginning of Year						
Market Value of Assets	$	28,599,503	$	26,560,965	$	18,942,173
Actuarial Value of Assets (AVA)		30,705,246		24,997,527		19,096,003
Actuarial Funded Status						
Funded Status		(49,382,305)		(46,164,848)		(48,808,997)
Funded Ratio		38.3%		35.1%		28.1%
Annual Recommended Contribution						
Total (Dollars)	$	5,048,000	$	4,144,000	$	4,576,000
Total (Percentage of Covered Payroll)		26.9%		24.4%		24.7%
Actual Contribution (Subsequent Year)						
Total		TBD	$	4,144,000	$	4,576,000
Percentage of Recommended Contribution		TBD		100.0%		100.0%

Highlights

Plan Experience

The market value of assets increased from $28,469,493 to $28,599,503 since July 1, 2015. The estimated rate of return on a market value basis was approximately -1.10%, which was less favorable than the 7.50% return on assets assumption used last year.

The minimum required contribution for the plan increased from $4,144,000 to $5,048,000. The main reason for the increase was the change towards funding to 100% of the accrued liability, as described below.

Financing Objective and Town's Contribution Rate

The financing objective of the Plan is to fully fund all current costs based on the normal contribution rate payable by the Town determined under the funding method; and to liquidate the unfunded accrued liability, as defined below, based on accrued liability contributions payable by the Town over an amortization period of 25 years.

The recommended contribution described within this report is sufficient to support the benefits of the Plan, administrative expenses, and achieve the financing objective set forth above.

Unfunded Accrued Liability

The unfunded accrued liability is determined as the excess, if any, of the actuarial liability determined under the Entry Age Normal cost method over the actuarial value of assets. This unfunded accrued liability is being amortized over a 25 year amortization period for purposes of determining the contribution rates for the fiscal year.

The results of the valuation indicate that the annual recommended contribution payable by the Town, when taken together with the current assets of the Plan, is adequate to fund the actuarial liabilities for all benefits payable under the Plan.

Changes in Plan Provisions, Actuarial Assumptions, and Actuarial Methods

The following changes were made to the actuarial assumptions or methods since the prior valuation peformed as of July 1, 2014:

- The actuarial funding method was changed to the entry-age normal method.
- The amortization of unfunded liabilities was changed to utilize 100% of accrued liabilities.
- The amortization period was changed to a closed period.

Summaries of the plan provisions, actuarial assumptions, and actuarial methods can be found in the Basis for Valuation section of this report.

Purpose and Use

BPS&M, LLC has prepared this report for Town of Trumbull to present the results of the actuarial valuation of the Town of Trumbull Retirement Plan as of July 1, 2016 and information pertaining to the plan and fiscal years ending in 2017 and 2016. The valuation reflects the benefits in effect on the valuation date and was prepared on the basis of the data submitted by the Town. Bryan, Pendleton, Swats & McAllister, LLC is not responsible for consequences resulting from the use of any part of this report without prior authorization and approval. Determinations for other purposes, such as bond ratings or judging benefit security upon plan termination, may be significantly different from the results shown in this report. This report provides actuarial advice and does not constitute legal, accounting, tax, or investment advice.

Data

The actuarial valuation shown in this report has been prepared using employee data and plan documentation furnished by the Town of Trumbull as of July 1, 2016 and plan assets furnished by the trustee for the twelve month period ending June 30, 2016. While we have not audited the data, we have reviewed it for reasonableness and internal consistency, and to the best of our knowledge, there are no material limitations to the data provided. Summaries of the census data and plan provisions can be found in the Basis for Valuation section of this report.

Assumptions, Methods, and Procedures

The actuarial calculations contained in the report are built on deterministic actuarial modeling, making a single determination of liabilities and costs. Further, these actuarial calculations are based on a combination of demographic and asset data as well as assumptions concerning future changes in these data. As such, the actuarial calculations contained herein are an estimate of projected future occurrences.

Regulatory Issues

The determinations of this report have been prepared based on applicable law, final and proposed regulations, and other regulatory guidance provided by the Governmental Accounting Standards Board. There have no been no significant legislative or administrative changes since the prior valuation. Events such as the enactment of technical corrections to current law, issuance of final regulations, and other guidance may impact the determinations of this report, but are not expected to adversely impact the plan sponsor who relies in good faith on these determinations. Bryan, Pendleton, Swats & McAllister, LLC reserves the right to reissue this report should such events materially impact the determinations found in this report.

Certification

This report has been prepared under the supervision of J. Bradford Fisher, a Fellow of the Society of Actuaries, Enrolled Actuaries and consulting actuary with Bryan, Pendleton, Swats and McAllister, LLC who has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein. To the best of our knowledge, this report has been prepared in accordance with generally accepted actuarial standards including the overall appropriateness of the analysis, assumptions, and results and conforms to appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board, which standards form the basis for the actuarial report. We are not aware of any direct or material indirect financial interest or relationship, including investment management or other services that could create, or appear to create, a conflict of interest that would impair the objectivity of our work.

J. Bradford Fisher, F.S.A.

J. Bradford Fisher, FSA, EA, MAAA
Consulting Actuary
Enrollment No. 14-03869
Phone 615.665.5316

January 9, 2017
Date

Market Value of Assets

The market value of assets as of the valuation date is shown below.

Market Value of Assets as of July 1, 2016	$	28,599,503

Reconciliation of Plan Assets

The change in the market value of assets for the prior two fiscal years is shown below.

		Plan Year Ending	
		June 30, 2016	June 30, 2015
1.	Market Value of Assets, Beginning of Year	$ 28,469,493	$ 26,560,965
2.	Increases		
	a. Employer Contributions during the Year	4,144,000	4,693,000
	b. Employee Contributions	1,013,082	957,865
	c. Investment Income	540,231	479,762
	d. Net Realized and Unrealized Gains/(Losses)	(855,680)	280,362
	e. Subtotal *(a + b + c + d)*	4,841,633	6,410,989
3.	Decreases		
	a. Benefit Payments	(4,599,339)	(4,307,805)
	b. Administrative Expenses	(33,670)	(129,154)
	c. Administrative Expenses	(35,000)	(35,000)
	d. Other Expenses	(43,614)	(30,502)
	e. Subtotal *(a + b + c + d)*	(4,711,623)	(4,502,461)
4.	**Market Value of Assets, End of Year**	**28,599,503**	**28,469,493**
5.	Approximate Rate of Return during the Year	-1.10%	2.80%

Actuarial Value of Assets

The actuarial value of assets is used in the determination of plan contributions. It phases in recognition of gains and losses. A method of smoothing is used because the market value can vary widely from one year to the next, resulting in undesirable fluctuations in pension contributions. The smoothing is accomplished by recognizing gains and losses over a three-year period at 33.33% per year.

1.	Market Value of Assets, 7/1/2016	$ 28,599,503
2.	Gain/(Loss) Not Recognized in Actuarial Value 7/1/2016	(2,105,743)
3.	Preliminary Actuarial Value 7/1/2016: (1)-(2)	30,705,246
4.	Preliminary Actuarial Value as a Percentage of Market Value: (3)/(1)	107.4%
5.	Additional Recognition for 10% Corridor Around Market Value:	N/A
6.	Actuarial Value 7/1/2016 After Corridor: (3)+(5)	30,705,246
7.	Actuarial Value as a Percentage of Market Value: (6)/(1)	107.4%

Year	(a) Excess Gain/(Loss)	(b) Unrecognized Portion	(c) Not recognized as of 7/1/2016 (a) X (b)
2015-2016	$(2,503,352)	66.67%	(1,668,901)
2014-2015	(1,310,524)	33.33%	(436,842)
2013-2014	1,937,541	0	0
Total			(2,105,743)

Actuarial Value of Assets

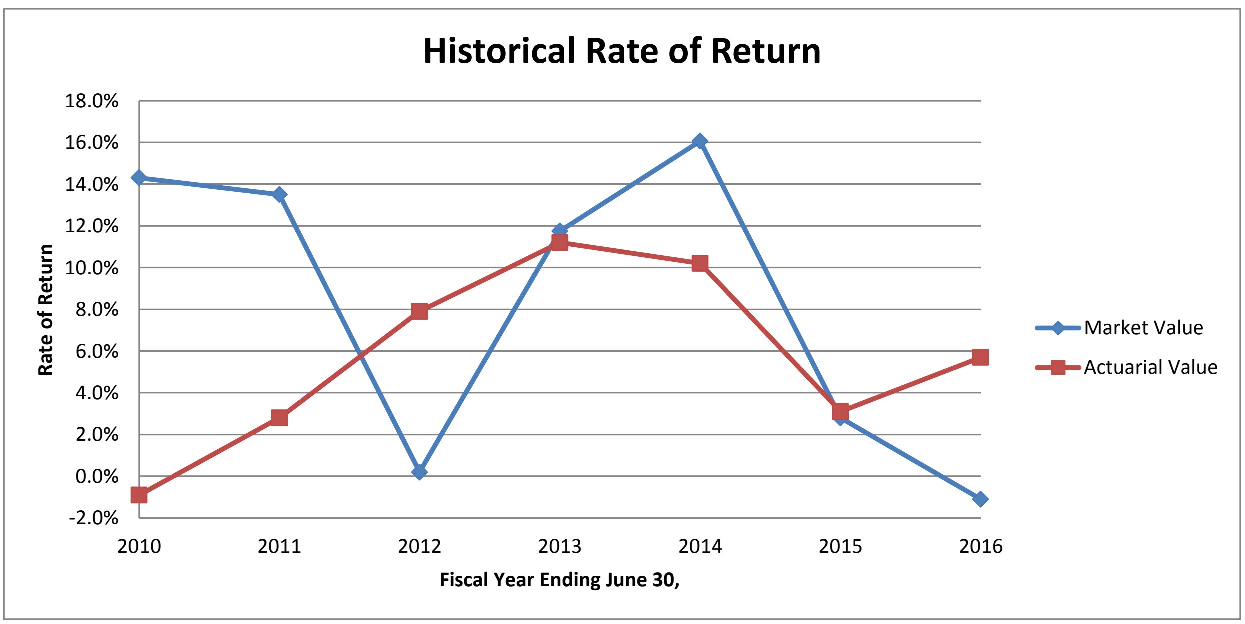
	Development of Market Value Gain/(Loss) for 2014-2015 Plan Year		
1.	Market Value of Assets, 7/1/2014	$	26,560,965
2.	Contributions		5,650,865
3.	Benefit Payments		4,436,959
4.	Administrative Expenses		30,502
5.	Expected Return at 7.50%		2,035,648
6.	Expected Value 7/1/2015: (1)+(2)-(3)-(4)+(5)		29,780,017
7.	Market Value of Assets, 7/1/2015		28,469,493
8.	Market Value Gain/(Loss) for 2014-2015 Plan Year: (7)-(6)		(1,310,524)

	Development of Market Value Gain/(Loss) for 2015-2016 Plan Year		
1.	Market Value of Assets, 7/1/2015	$	28,469,493
2.	Contributions		5,157,082
3.	Benefit Payments		4,633,009
4.	Administrative Expenses		43,614
5.	Expected Return at 7.50%		2,152,903
6.	Expected Value 7/1/2016: (1)+(2)-(3)-(4)+(5)		31,102,855
7.	Market Value of Assets, 7/1/2016		28,599,503
8.	Market Value Gain/(Loss) for 2015-2016 Plan Year: (7)-(6)		(2,503,352)

Rate of Return

The actuarial value of assets, which is used to measure the actuarial funded status of the plan and to determine the Town's contribution rate for the following fiscal year, is determined using a method that is designed to smooth the impact of market fluctuations. Unlike the market value, which immediately reflects all gains and losses during the year, the actuarial value recognizes 33.33% of the gains and losses. The net gain during the fiscal year ended June 30, 2016 will be recognized gradually, with a portion recognized in this year's asset value and the remainder recognized over future years. Thus, the 5.7% rate of return on the actuarial value of assets during the last year actually reflects a portion of last year's return on the market value, plus a portion of the market performance during the prior years.

	Rate of Return Based on	
Fiscal Year Ending June 30,	**Market Value**	**Actuarial Value**
2010	14.3%	-0.9%
2011	13.5%	2.8%
2012	0.2%	7.9%
2013	11.8%	11.2%
2014	16.1%	10.2%
2015	2.8%	3.1%
2016	-1.1%	5.7%



Actuarial Accrued Liability

The actuarial accrued liability is determined under the actuarial cost method used. This is broken out below by status for the prior two plan years.

	As of July 1, 2016	As of July 1, 2014
1. Retirees/Beneficiaries	$ 40,109,448	$ 34,600,681
2. Terminated Members	4,532,281	2,199,286
3. Active Members	35,445,822	34,362,408
4. Actuarial Accrued Liability: (1) + (2) + (3)	**80,087,551**	**71,162,375**

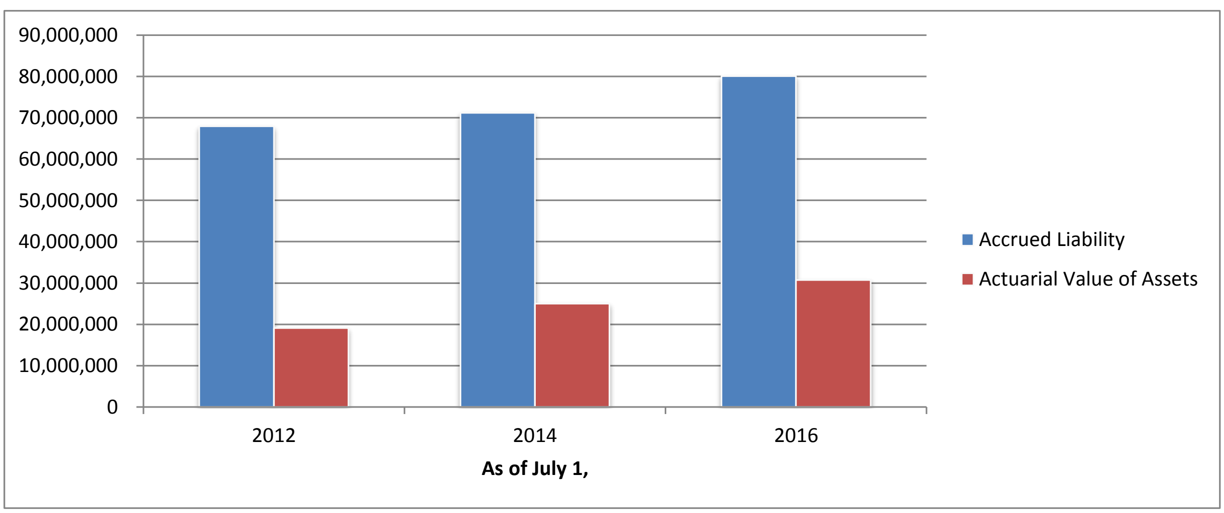
Funded Status

The Plan's actuarial funded status is measured by comparing the actuarial value of assets (based on a three year smoothing of gain and losses) with the accrued liability.

	As of July 1, 2016	As of July 1, 2014
1. Actuarial Asset Value	$ 30,705,246	$ 24,997,527
2. Actuarial Accrued Liability	80,087,551	71,162,375
3. Funded Status: (1) - (2)	**(49,382,305)**	**(46,164,848)**
4. Funded Ratio: (1)/(2)	38.34%	35.13%

Historical Actuarial Funded Status

As of July 1,	Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio
2012	67,905,000	19,096,003	(48,808,997)	28.12%
2014	71,162,375	24,997,527	(46,164,848)	35.13%
2016	80,087,551	30,705,246	(49,382,305)	38.34%



Actuarial Balance Sheet

The valuation components illustrated below are for the actuarial cost method used.

	As of July 1, 2016	As of July 1, 2014
1. Liabilities - Present Value of Future Benefits		
Actuarial Accrued Liability		
a. Active Participants	$ 35,445,822	$ 34,362,408
b. Terminated Vested Participants	4,532,281	2,199,286
c. Retired Participants and Beneficiaries	40,109,448	34,600,681
d. Total	**80,087,551**	**71,162,375**
e. Increase Due to Expected Future Service	12,243,386	11,873,936
f. Total	**92,330,937**	**83,036,311**
2. Assets		
a. Actuarial Value of Assets	$ 30,705,246	$ 24,997,527
b. Prospective Valuation Assets		
i. Unfunded Actuarial Accrued Liability	49,382,305	46,164,848
ii. Present Value of Future Employer Normal Costs	5,505,712	6,582,468
iii. Present Value of Future Employee Contributions	6,737,674	5,291,468
c. Total	**92,330,937**	**83,036,311**

Amortization Schedule

The 25 year amortization of 90% of the unfunded accrued liability is shown below for the current and prior plan year.

	Plan Year Ending	
	June 30, 2016	**June 30, 2014**
1. Actuarial Accrued Liability	$ 80,087,551	$ 71,162,375
2. 90% of Accrued Liability	n/a	64,046,138
3. Actuarial Value of Assets	30,705,246	24,997,527
4. Unfunded Actuarial Accrued Liability	49,382,305	39,048,611
2. Years to Amortize	25	25
3. Amortization Payment	**(4,121,000)**	**(3,259,000)**

Annual Recommended Contribution

Development of Annual Recommended Contribution

	Plan Year Ending	
	June 30, 2016	**June 30, 2014**
1. Normal Cost, Net of Employee Contributions	$ 745,000	$ 802,000
2. 25-year Amortization of Unfunded Liability *	4,121,000	3,259,000
3 Interest Adjustment	182,000	n/a
6. Annual Recommended Contribution: (4) + (5)	**5,048,000**	**4,144,000**
7. Covered Payroll (All Members)	18,737,000	16,964,000
8. Percent of Covered Payroll	26.90%	24.40%

* For 2014, *amortization amount targets 90% of actuarial accrued liability. Amortization period is 25 years.*

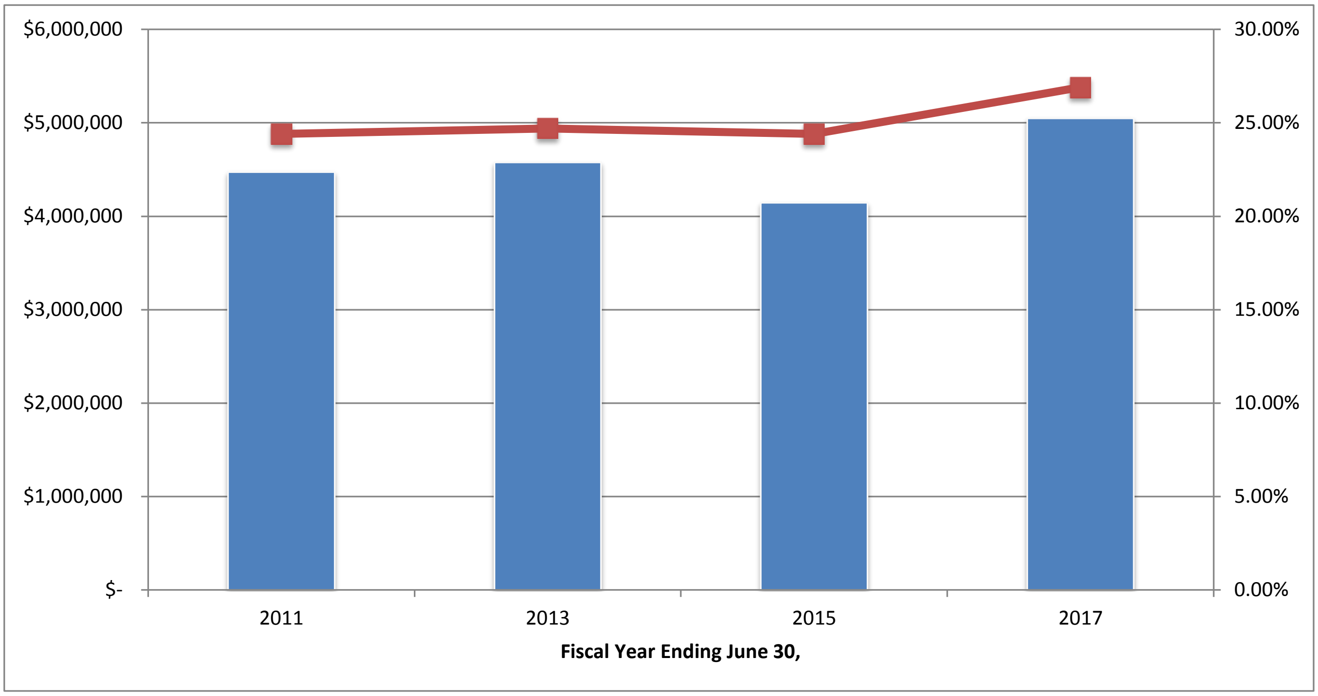
Annual Recommended Contribution by Department

Department	Compensation *	Contribution Allocation
Board of Education		
A: Teachers Aides	$ 3,375,000	$ 943,000
C: Custodians	3,210,000	897,000
L: Lunch Program	484,000	135,000
S: Supervisors, Dept. Heads, Non-Represented	1,239,000	346,000
T: Secretaries	2,028,000	566,000
Sub-Total	10,336,000	2,887,000
Town		
H: Highway Local 1303	2,339,000	653,000
M: Municipal Association	3,225,000	901,000
N: Nurses	546,000	153,000
S: Supervisors, Dept. Heads, Non-Represented	1,077,000	301,000
Y: Administrators	548,000	153,000
Sub-Total	7,735,000	2,161,000
Total	18,071,000	5,048,000

* *Reported Compensation (i.e., before assumed 3.50% increase for coming year).*

Historical Annual Recommended Contribution

Plan Year Ending June 30,	Annual Recommended Contribution	Percent of Covered Payroll
2011	$ 4,472,000	24.40%
2013	4,576,000	24.70%
2015	4,144,000	24.40%
2017	5,048,000	26.90%



Summary of Plan Provisions

This summary has been prepared for valuation purposes only. It summarizes the plan provisions necessary to perform the actuarial valuation.

Effective date

July 1, 1973.

Latest Plan Amendment/Restatement

Restated as of July 1, 2015.

Plan year

July 1 - June 30.

Covered employees

All full-time employees not otherwise covered by a plan to which the Town makes a contribution. At its August 1, 2011 meeting, the Trumbull Town Council voted voted to close the plan to future hires. The last to enter were Public Works Staff hired prior to January 1, 2015. Subsequent hires are instead eligible for a defined contribution plan.

Benefits

1. Normal Retirement Benefit

a.	Eligibility	The first day of the month following the earlier of: Age 62 and 5 years of service (subject to vesting percentage), unreduced benefit with 10 years of service, or Age 60 and age plus service equals at least 85.
b.	Amount	2.0% of final earnings for each year of service. Maximum annual pension is 60% of final earnings. Minimum annual pension is $1,200.

2. Early Retirement Benefit

a.	Eligibility	Age 55 with 10 years of service.
b.	Amount	Normal retirement benefit based on final earnings and service to termination date, reduced by 1/2% for each month the early retirement date precedes the normal retirement date.

3. Vested Benefit

a. Eligibility

According to the following schedule:

Years	Percent
0-4	0%
5	50%
6	60%
7	70%
8	80%
9	90%
10 or more	100%

b. Amount

At normal retirement date, normal retirement benefit based on final earnings and service to date of termination. Employee contributions must remain in the Plan or vested benefit will be forfeited.

Cash refund of contributions, with credited interest to date of termination, for non-vested terminations and vested terminations who agree to forfeit retirement benefit.

4. Death Benefit to Spouse (pre-retirement)

a. Eligibility

Death in active service or as a vested employee that did not receive a refund of employee contributions.

b. Amount

Employee contributions with credited interest to date of death.

In addition, the Pension Board will maintain a $25,000 term life insurance policy for each participating employee (not part of pension plan).

Beneficiaries of fully vested deceased participants have the option to receive 120 months of retirement benefits at the deceased participant's normal retirement date. To receive this benefit, however, the beneficiary may not receive the participant's employee contributions with interest, and must assign the proceeds from the $25,000 life insurance policy to the pension plan.

5. Death Benefit to Spouse (post-retirement)

a. Eligibility

Death after retirement and before the expiration of the certain period if receiving a certain and continuous annuity, or death after retirement while receiving a joint and survivor annuity.

b. Amount

Dependent upon the form of benefit in effect for the participant at time of death. In no event will a retiree and his beneficiary receive less than his employee contributions with credited interest to either his early or normal retirement date.

6. Disability Benefit (non-work related)

a. Eligibility	Total and permanent disability and completion of 10 years of service, eligible for Social Security Disability Benefits.
b. Amount	Normal retirement benefit based on final earnings and service to date of disability. Benefit commences at date of disability.

7. Disability Benefit (work related)

a. Eligibility	Eligible for Social Security Disability Benefits and Worker's Compensation Benefits. Disability must be work related.
b. Amount	Disability benefit shown above with a minimum benefit of 66 2/3% of salary at time of disability. In no event shall the benefit plus the Worker's Compensation and Social Security Disability Benefit exceed 100% of the salary in effect for the position from which the annual employee was disabled.

8. Normal Form	10 year certain and life annuity.

Contributions

1. By Members	Varies from 3.5% to 6.0% of earnings depending on Town/BOE contract. Interest credited at the rate of 5% per year compounded annually.
2. By Town	The Town is required to contribute the remaining amounts necessary to finance coverage.

Service and Compensation

1. Credited Service	Continuous employment with the Town. A period of six months or more but less than one year shall be deemed to be a full year of service; a period of less than six months shall be disregarded. Service will not be credited without corresponding employee contributions for participants who, prior to current plan, did not contribute when first eligible.
2. Earnings	Base pay exclusive of extra compensation of any kind, such as overtime pay, bonuses, commissions, etc.
3. Final Earnings	Average earnings during the 36 consecutive months, while a participant, that produces the highest average.

Changes in Plan Provisions Since Prior Year

Certain employee contribution rates were increased.

Summary of Actuarial Assumptions

Interest Rate

7.50% per year. (Net of investment management fees.)

Salary Increases

3.50% per year.

Entry Date

Plan anniversary coincident with or next following the later of age 18 or one year of service

Mortality Rates

Pre-Retirement: 1994 Unisex Pensioners Mortality Table, with rates projected to valuation year.

Post-Retirement: 1994 Unisex Pensioners Mortality Table, with rates projected to valuation year.

Rates of Retirement

Eligible participants are assumed to retire based on the following:

Age	% Retiring
55 - 59	3%
60 - 64	10%
65 - 74	20%
75 - 79	25%
80+	100%

Withdrawal Rates

Sample rates are as follows:

Age	Males	Females
20	7.94%	7.94%
25	7.72%	7.72%
30	7.40%	7.40%
35	6.86%	6.86%
40	6.11%	6.11%
45	5.16%	5.16%
50	3.62%	3.62%
55	1.37%	1.37%
60	0.13%	0.13%
63	0.00%	0.00%

Disability Rates

Non-Occupational:	0.25% per year at each age.
Occupational:	None.

Expenses

Estimate of bank fees incurred for administrative (not investment) assistance.

Percent Married

85%.

Age of Spouse

Husbands 3 years older than wives.

Summary of Actuarial Methods

Asset Valuation Method

The actuarial value of assets used in the development of plan contributions phases in recognition of gains and losses (the difference between actual and expected asset value). Gain and losses are recognized over a three year period at 33.33% per year.

Actuarial Cost Method

Entry Age Normal (level percentage of pay) actuarial cost method for all benefits.

Amortization Method

Level dollar, closed period.

Summary of Participant Data

Participant Data Reconciliation

	Active	Deferred Inactive	Receiving Benefits	Total
1. As of July 1, 2014	376	68	342	786
2. Retirements	(31)	(3)	34	0
3. Deaths	0	0	(21)	(21)
4. Non-vested terminations, due re	(2)	2	0	0
5. Vested terminations	(19)	19	0	0
6. Rehires	0	0	0	0
7. Cash-out	(3)	(7)	0	(10)
8. Survivors	0	0	9	9
9. Expiration of benefits	0	0	(9)	(9)
10. New entrants	85	0	0	85
11. Suspended Actives	0	0	0	0
12. Data Corrections	0	0	0	0
13. As of July 1, 2016	**406**	**79**	**355**	**840**

Distribution of Active Participants

	Years of Credited Service							
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
< 25	1	0	0	0	0	0	0	1
25-29	1	3	0	0	0	0	0	4
30-34	5	1	0	0	0	0	0	6
35-39	7	4	3	2	0	0	0	16
40-44	4	11	10	1	2	0	0	28
45-49	8	14	22	4	2	2	0	52
50-54	10	25	25	10	2	9	4	85
55-59	8	19	26	20	9	4	3	89
60-64	5	14	19	16	8	6	7	75
65-69	0	6	4	10	5	3	5	33
70+	0	2	2	2	6	1	4	17
Total	**49**	**99**	**111**	**65**	**34**	**25**	**23**	**406**

Distribution of Inactive Participants with Average Monthly Benefit

Deferred Inactive

Age Last Birthday	Number		Monthly Benefit		Average Monthly Benefit
< 35	2	$	182.31	$	91.16
35 - 39	2		1,970.88		985.44
40 - 44	1		200.00		200.00
45 - 49	10		6,087.72		608.77
50 - 54	18		44,745.98		2,485.89
55 - 59	13		(18,059.03)		(1,389.16)
60 - 64	15		5,903.07		393.54
65+	18		12,155.96		675.33
Total	**79**		**53,186.89**		**673.25**

Currently Receiving Benefits

Age Last Birthday	Number		Monthly Benefit		Average Monthly Benefit
< 55	5	$	6,969.26	$	1,393.85
55 - 59	3		6,694.10		2,231.37
60 - 64	21		36,015.20		1,715.01
65 - 69	72		96,060.85		1,334.18
70 - 74	76		97,529.79		1,283.29
75 - 79	56		64,530.27		1,152.33
80 - 84	59		56,342.78		954.96
85 - 89	42		27,662.67		658.64
90+	21		9,956.69		474.13
Total	**355**		**401,761.61**		**1,131.72**