

***Town of Cumberland, RI  
Police Retirement Plan***

***Actuarial Valuation Report  
July 1, 2015***

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## Highlights

### Purpose of the Valuation

This report summarizes actuarial information regarding the plan's liabilities and benefit obligations as compared to assets available for benefits on the valuation date. The report was prepared by Nyhart to:

- determine the acceptable range of employer contributions; and
- determine the plan's funded status.

Principal results of actuarial valuations are shown in the following sections.

<b>Plan Year Ending</b>	<b>06/30/17</b>	<b>06/30/16</b>	<b>06/30/15</b>
<b>Employer Contributions</b>			
Valuation payroll	N/A	\$ 2,938,631	\$ 2,633,451
Projected payroll	\$ 3,029,776	\$ 2,938,631	\$ 2,633,451
Actuarial Recommended Funding Contribution	\$ 2,175,379	\$ 2,110,186	\$ 1,997,828
As percent of projected payroll	71.8%	71.8%	75.9%
Employer contribution	N/A	N/A	\$ 1,997,828
As percent of projected payroll	N/A	N/A	75.9%
<b>Valuation Date</b>			
	<b>07/01/15</b>	<b>07/01/14</b>	<b>07/01/13</b>
<b>Plan Assets</b>			
Fair market value	\$ 13,274,528	\$ 12,224,387	\$ 10,308,869
Actuarial value for funding	\$ 13,217,038	\$ 11,630,376	\$ 9,981,864
<b>Funded Status</b>			
Actuarial Accrued Liability	\$ 32,119,567	\$ 31,046,330	\$ 29,585,610
Unfunded Accrued Liability	\$ 18,902,529	\$ 19,415,954	\$ 19,603,746
<b>Funded Ratio</b>			
Market Value Basis	41.3%	39.4%	34.8%
Actuarial Value Basis	41.1%	37.5%	33.7%

**Highlights** – Continued

Valuation Date	07/01/15	07/01/14	07/01/13
<b>Participants</b>			
Number of participants:			
Active	44	43	43
Inactive with deferred benefits	0	0	1
Inactive receiving benefits	<u>70</u>	<u>72</u>	<u>68</u>
Total in valuation	114	115	112
Active participant averages:			
Age nearest birthday	38.2	37.4	38.2
Years of employment to date	9.9	9.1	10.0
Compensation for benefits	\$ 66,787	\$ 61,243	\$ 61,655

**Changes Since the Last Valuation**

Historically, the Actuarial Recommended Funding Contribution was determined annually for the plan year beginning on the valuation date. Beginning with plan year beginning July 1, 2016, the method has been changed such that the Actuarial Recommended Funding Contribution is based on the calculated contribution as a percentage of payroll from the prior valuation date. This percentage is applied to projected payroll for the following plan year.

For example, the calculated funding contribution for the plan year beginning July 1, 2015 was 71.8% of valuation payroll. Therefore, the Actuarial Recommended Funding Contribution for plan year beginning July 1, 2016 is 71.8% of payroll projected from the July 1, 2015 valuation to the plan year beginning July 1, 2016. Details of these calculations are shown in this report.

The following assumption changes became effective 07/01/2015:

- The mortality table was updated from the RP-2000 table with generational improvements per scale AA to the RP-2014 table with blue collar adjustments and Social Security generational improvements from 2006. This assumption change resulted in a decrease in the Actuarial Accrued Liability and the Actuarial Recommended Funding Contribution.
- The salary scale has been changed from 3.5% for all participants to an age- based table as a result of the experience study from 2009-2014. This change resulted in a decrease in the Actuarial Accrued Liability and an increase in the Actuarial Recommended Funding Contribution.

The combined impact of the assumption changes resulted in a net decrease in the Actuarial Accrued Liability and a net increase in the Actuarial Recommended Funding Contribution.

## Actuary's Opinion

This report provides information regarding the actuarial valuation prepared for

### Town of Cumberland, RI Police Retirement Plan

The actuarial valuation was prepared as of July 1, 2015 using information which has been reconciled and reviewed for reasonableness. Employee census information was provided by the Town and asset information was provided by the trustee. Our review was not performed at the source, and we therefore do not accept responsibility for the accuracy or completeness of the data on which the information is based.

To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with the Actuarial Standards of Practice as described by the American Academy of Actuaries.

In our opinion, the actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

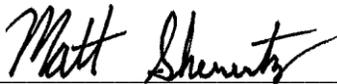
To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Nyhart

Valuation prepared by:

Valuation reviewed by:



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Matt Sherertz, ASA, EA



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Tayt V. Odom, FSA, EA, MAAA

December 11, 2015

Date

## Section 1 - Assets

### 1.1 Reconciliation of Plan Assets

Transaction activity is summarized in Section A and market value of assets is reconciled in Section B for the period 07/01/2014 through 06/30/2015 as follows:

A. Net income (loss):

(1) Contributions:		
From town	\$ 1,997,828	
From participants	260,793	
Other	<u>0</u>	\$ 2,258,621
(2) Interest and Dividends		353,472
(3) Realized Gains/(Losses)		(87,195)
(4) Unrealized Gains/(Losses)		403,501
(5) Other income		3,539
(6) Disbursements:		
Benefit payments	\$ 1,765,110	
Administrative/Other expenses	<u>106,732</u>	1,871,842
(7) Net income (loss) = (1) + (2) + (3) + (4) + (5) - (6)		\$ 1,060,096

B. Reconciliation of market value of assets:

(1) Market value of assets as of 06/30/2014	\$ 12,224,387
(2) Adjustment for payable from plan as of 06/30/2014	(9,955)
(3) Net income (loss) from A(7)	1,060,096
(4) Market value of assets as of 06/30/2015 = (1) + (2) + (3)	\$ 13,274,528

**Section 1** – Continued**1.2 Summary of Assets**

(1) Cash and Cash Equivalents			\$	509,986
(2) General investments:				
Equities	\$	7,910,869	(60%)	
Fixed Income		3,837,390	(29%)	
Government Securities		781,065	(6%)	
Others		<u>143,775</u>	(1%)	
				12,673,099
(3) Receivables:				
Employer contributions	\$	166,486		
Income		<u>45,062</u>		211,548
(4) Prepaid Expenses				0
(5) Liabilities:				
Due to broker for investments purchased	\$	70,744		
Due to other funds		<u>49,361</u>		120,105
(6) Total assets = (1) + (2) + (3) + (4) – (5)				\$ 13,274,528

**1.3 Actuarial Value of Assets**

The market value of plan assets has been adjusted for valuation purposes to smooth the effects of appreciation and/or depreciation in assets over a 5-year period. Determination of the actuarial value of plan assets is detailed below.

(1) Fair market value of assets as of 06/30/2015				\$ 13,274,528			
(2) Five-year smoothing of gains/(losses):							
2014-2015	\$	(367,669)	x 80%	=	\$	(294,135)	
2013-2014	\$	525,716	x 60%	=	\$	315,430	
2012-2013	\$	305,870	x 40%	=	\$	122,348	
2011-2012	\$	(430,767)	x 20%	=	\$	(86,153)	\$ 57,490
(3) Actuarial value of assets = (1) – (2)							\$ 13,217,038

**Section 1** – Continued

**1.4 Average Rates of Return**

Average rates of investment return have been determined using the formula

Two times (**I**) divided by (**A + B – I**), where

**I** is the dollar amount of earnings (including unrealized appreciation or depreciation of plan assets) for the plan year;

**A** is the value of assets at the beginning of the plan year; and

**B** is the value of assets at the end of the plan year

Under this formula, all transactions are assumed to occur in the middle of the year, therefore, rates of return determined in this manner are estimates and should be used only for comparison with actuarial assumptions.

<b>Plan Year Ending</b>	<b>06/30/15</b>	<b>06/30/14</b>	<b>06/30/13</b>
Based on average market value:			
Earnings after expenses	4.6%	12.5%	10.9%
Based on actuarial value:			
Earnings after expenses	9.2%	10.3%	5.4%

## Section 2 – Contribution Recommendation

### 2.1 Actuarial Recommended Funding Contribution

Plan Year Ending	06/30/17	06/30/16	06/30/15
Valuation Date	07/01/15	07/01/15	07/01/14
(1) Employer normal cost	\$ 478,578	\$ 478,578	\$ 397,279
(2) Net amortization payment (Exhibit 1)	1,484,386	1,484,386	1,461,166
(3) Interest at valuation rate on (1) + (2)	147,222	147,222	139,383
(4) Calculated Contribution at valuation date (1) + (2) + (3)	\$ 2,110,186	\$ 2,110,186	\$ 1,997,828
(5) Valuation payroll	\$ 2,938,631	\$ 2,938,631	\$ 2,633,451
(6) Calculated contribution as a percentage of valuation payroll (4) ÷ (5)	71.8%	71.8%	75.9%
(7) Projected payroll	\$ 3,029,776	\$ 2,938,631	\$ 2,633,451
(8) Actuarial recommended funding contribution (6) x (7)	\$ 2,175,379	\$ 2,110,186	\$ 1,997,828

## Section 3 – Basis for the Valuation

### 3.1 Plan Participants

Participant information provided by the plan administrator is summarized in the following table.

	<b>Active</b>	<b>Inactive Participants</b>		<b>Total</b>
		<b>Benefits Deferred</b>	<b>Receiving Benefits</b>	
Participants at 06/30/14	43	0	72	115
Retired	0	0	0	0
Rehires	0	0	0	0
Deaths without survivor	0	0	(2)	(2)
Deaths with survivor benefits	0	0	0	0
Disabled	0	0	0	0
Beneficiary added	0	0	0	0
Vested terminations	0	0	0	0
Nonvested terminations	0	0	0	0
Add alternate payees	0	0	0	0
Benefits paid in full	0	0	0	0
Data corrections	0	0	0	0
New participants during the plan year	1	0	0	1
Participants as of 06/30/15	44	0	70	114

**Section 3** – Continued**3.2 Information about Participants****Active Participants**

Total Number accruing benefits	44
Number eligible for normal retirement benefits	2
Number with non-vested benefits	32
Number not yet eligible for retirement benefits	10
Average age for valuation	38.2
Average years of employment	9.9
Average pay	\$ 66,787

**Inactive Participants with Deferred Retirement Benefits**

Number of former participants with deferred retirement benefits	0
Average age for valuation	N/A
Total deferred monthly benefits	N/A
Average deferred monthly benefit	N/A

**Inactive Participants Due Return of Contributions**

Number of former participants due return of contributions	0
Average age for valuation	N/A
Total employee contributions (without interest)	N/A
Average employee contribution amount (without interest)	N/A

**Retired Participants and Beneficiaries**

Number of retired pensioners	50
Number of disabled pensioners	6
Number of beneficiaries	10
Number of alternate payees	4
Total monthly benefits	\$ 146,530
Average monthly benefit	\$ 2,093

### **Section 3** – Continued

#### **3.3 Summary of Plan Provisions**

**Name of plan**

Town of Cumberland, RI Police Retirement Plan

**Effective date**

July 1, 1958. Amended and Restated on October 20, 2004.

**Participation**

All full-time Police Officers are eligible to participate in the Plan.

**Normal retirement benefit**

Police Officers hired on or before 7/1/2013:

For Credited Service prior to 7/1/2013, 2.75% of Average Annual Earnings for the first 20 years plus 1.00% for the next 5 years. For Credited Service after 7/1/2013, 2.50% of Average Annual Earnings for the first 20 years plus 1.00% for the next 10 years. The maximum retirement benefit is 60% of Average Annual Earnings.

Note: Officers retiring between 7/1/2013 and 6/30/2014 receive 2.75% of Average Annual Earnings for the first 20 years plus 1.00% for the next 5 years.

Police Officers hired after 7/1/2013:

2% of Average Annual Earnings for each year of Credited Service up to 30 total years.

**Normal retirement date**

Police Officers hired on or before 7/1/2013:

Participants may retire upon completion of 20 years of service regardless of age.

Police Officers hired after 7/1/2013:

Participants may retire upon reaching age 55 and the completion of 25 years of service.

**Average Annual Earnings**

Police Officers hired on or before 7/1/2013:

Average of final 36 months of base salary, overtime, holiday, shift differential, longevity and accreditation

Police Officers hired after 7/1/2013:

Average over working career of base salary, holiday, longevity

**Credited Service**

Full years and completed months from date of participation.

## Section 3 – Continued

### 3.3 Summary of Plan Provisions – Continued

#### Pre-retirement death benefit

If an active officer dies after 15 years of service and while married, the spouse will receive a monthly pension equal to the amount which would be payable if the Officer had retired with a 67.5% Joint & Survivor Annuity.

For those with less than 15 years of service, the beneficiary will receive a refund of the member's contributions with 5% interest.

#### Postretirement death benefit

A spouse's pension equal to 67.5% of the participant's pension is payable until the earlier of the spouse's death or remarriage, or to surviving dependent children under age 18.

#### Disability Retirement

Duty Related 66.67% of Average Compensation.

Non Duty Related Completed 12 years to 18 years. Accrued benefit subject to reduction as follows: At 12 years – 60%, increase by 5% for each year up to 17 years, 100% at 18 years.

#### Employee Contributions

Police Officers hired on or before 7/1/2013: 8% of Annual Earnings effective 7/1/2013

Police Officers hired after 7/1/2013: 11% of Annual Earnings effective 7/1/2013

No interest is accrued.

#### Cost of living adjustments

3% non-compounded from age 57 for retirement on or after July 1, 1992. No COLA for retirement before July 1, 1992.

#### Vesting

Police Officers hired on or before 7/1/2013: 100% on completing 15 years of service.

Police Officers hired after 7/1/2013: 100% on completing 25 years of service.

#### Normal form of payment

The normal form of payment for a married participant is a monthly benefit payable for the participant's lifetime with 67.5% of such benefit continuing to a surviving spouse. The normal form of payment for an unmarried participant is a monthly benefit payable for the participant's lifetime with no further payments after the participant's death.

**Section 3** – Continued

**3.4 Actuarial Assumptions**

Actuarial assumptions concerning future events are described below. Please see *Highlights* section for comments regarding changes in assumptions since the last valuation.

**Retirement Rates**

*Police Officers hired on or before 7/1/2013:*

<u>Service</u>	<u>Rate</u>
20	70%
21-24	10%
25	70%
26-29	10%
30	100%

*Police Officers hired after 7/1/2013:*

100% at age 55 with 25 years of service

**Mortality**

RP-2014 table with blue collar adjustments and Social Security generational improvements from 2006.

**Disablement**

1985 Pension Disability Table. All Disability is assumed to be Duty related.

**Withdrawal**

None.

**Future salary increases**

<u>Age</u>	<u>Rate</u>
< 25	6.0%
25-29	6.0%
30-34	5.5%
35-39	5.0%
40-44	4.0%
45-49	3.0%
50-54	2.0%
55-59	1.0%
60+	1.0%

**Valuation interest rate**

7.5%

**Eligible spouse**

100% of active members are assumed to be married with female spouse 4 years younger than husbands

**Section 3** – Continued**3.5 Valuation Procedures****Funding method****Actuarial Recommended Funding Contribution – Entry Age Normal Cost Method**

The actuarial cost method used in determining the Actuarial Recommended Funding Contribution is the entry age normal cost method.

In determining the Actuarial Recommended Funding Contribution, the excess of the entry age actuarial accrued liability over the actuarial value of plan assets is amortized over a closed 20-year period as a level % of pay. For this purpose, pay is assumed to grow at 3.5% annually.

The Actuarial Recommended Funding Contribution is determined as a percentage of projected payroll in the following plan year.

**Asset valuation method**

The actuarial value of assets is equal to the fair market value of assets on the valuation date adjusted for a 5-year phase-in of gains and losses on fair market value of assets.

**Other procedures**

Benefits projected to assumed retirement age for active participants have been limited so as not to exceed maximum benefit limits imposed by Code Section 415(b) and/or maximum compensation limits of Code Section 401(a)(17).

**Exhibit 1 – Unfunded Actuarial Liability****A. Unfunded Entry-Age Actuarial Accrued Liability**

(1)	Active participants	\$ 8,616,995
(2)	Inactive participants with deferred benefits	0
(3)	Participants/beneficiaries receiving benefits	23,502,572
(4)	Total entry-age actuarial accrued liability (1) + (2) + (3)	32,119,567
(5)	Actuarial value of assets as of 07/01/15	13,217,038
(6)	Unfunded actuarial liability as of 07/01/15 = (4) – (5), not less than zero	\$ 18,902,529

**B. Actuarial Recommended Funding Contribution Amortization Schedule**

	First Payment	Remaining Amortization Period (Years)	Outstanding Balance	Annual Payment
Charges:	07/01/2012	17	\$ 19,435,761	\$ 1,522,053
	07/01/2013	18	\$ (3,478)	\$ (262)
	07/01/2014	19	\$ (130,887)	\$ (9,485)
	07/01/2015	20	\$ (398,867)	\$ (27,920)
	Total		\$ 18,902,529	\$ 1,484,386