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October 30, 2014

milliman.com

#### PERSONAL & CONFIDENTIAL

Mr. Robert Thibeault Finance Director Town of Coventry 1670 Flat River Road Coventry, RI 02816

Re:

Coventry Police Officers Retirement Plan

Dear Bob:

At your request, we have performed an actuarial valuation of the Town of Coventry Police Officers Retirement Plan as of July 1, 2014 for the Fiscal Year ending June 30, 2016. The results of the valuation are contained in the following report.

Respectfully submitted,

Steve A. Lemanski, FSA, FCA

Consulting Actuary

SAL/dp 10 COV2014POLValCov



# TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Actuarial Valuation as of July 1, 2014 For Fiscal Year Ending June 30, 2016

Prepared by Milliman, Inc.

**Steve A. Lemanski, FSA, FCA**Consulting Actuary

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### **Table of Contents**

			Page
	CEI	RTIFICATION	1
ı	EXI	ECUTIVE SUMMARY	
	A.	Highlights	3
	B.	Summary of Principal Results	8
II	PLA	AN ASSETS	
	A.	Summary of Fund Transactions	9
	B.	Development of Actuarial Value of Assets	10
III	DE	VELOPMENT OF CONTRIBUTION	
	A.	Past Service Cost	11
	В.	Actuarially Determined Contribution	12
IV	AC	COUNTING INFORMATION	
	A.	Notes to Required Supplementary Information	13
	В.	Historical Schedule of Funding Progress	14
	C.	Schedule of Employer Contributions	15
	D.	Accrued and Vested Benefits	16
	E.	Statement of Changes in Accrued Plan Benefits	17
٧	ME	MBERSHIP DATA	
	Α.	Reconciliation of Membership From Prior Valuation	18
	В.	Statistics of Membership	19
	C.	Distribution of Active Members as of July 1, 2014	20
	D.	Distribution of Active Members as of July 1, 2014 - Average Pay	21
	E.	Distribution of Inactive Members as of July 1, 2014	22
	API	PENDICES	
	A.	Actuarial Funding Method	23
	В.	Actuarial Assumptions	24
	C.	Summary of Plan Provisions	26

#### TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

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### Certification

We have performed an actuarial valuation of the Plan as of July 1, 2014 for fiscal year ending June 30, 2016. 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.

This report may not be used for purposes other than those listed above without Milliman's prior written consent. If this report is distributed to other parties, it must be copied in its entirety, including this certification section.

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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.

July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Page 1

### 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.

I further certify that, in my 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; 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.

I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Steve A. Lemanski, FSA, FCA

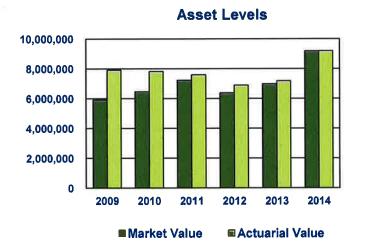
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#### **Assets**

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	Actuaria
Value as of July 1, 2013	\$6,978,785	\$7,183,249
Contributions	4,870,116	4,870,116
Investment Income	784,064	583,844
Benefit Payments and Administrative Expenses	(3,442,944)	(3,442,944)
Value as of July 1, 2014	9,190,021	9,194,265

For fiscal year 2014, the plan's assets earned 10.19% on a Market Value basis and 7.68% on an Actuarial Value basis. The actuarial assumption for this period was 7.00%; the result is an asset gain of \$245,500 on a Market Value basis and a gain of \$53,600 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.



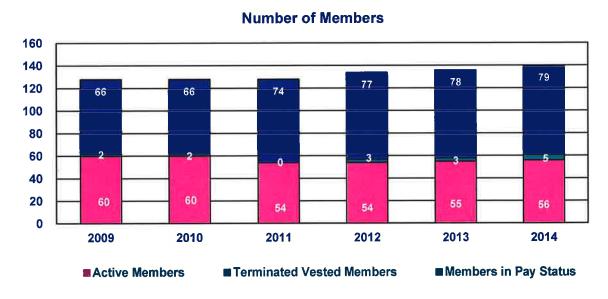


Please note that the Actuarial Value currently exceeds the Market Value by \$4,200. This figure represents investment losses that will be gradually recognized over the next five years. This process will exert upward pressure on the Town's contribution, unless there are offsetting market gains.

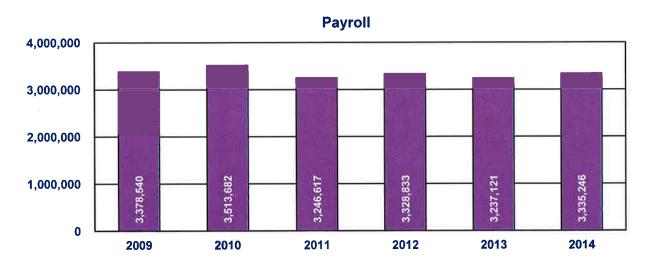
July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

#### 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.



From July 1, 2013 to July 1, 2014, the overall membership increased from 136 to 140. During this period, there were a total of 2 new members, the death of 1 member without a beneficiary and 3 new alternate payees.



From July 1, 2013 to July 1, 2014, Total payroll increased by approximately 3.0%.

July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Page 4

#### **Plan Changes**

For members hired after December 31, 2012:

- The employee contribution rate is 12%
- Longevity pay is removed from pensionable compensation
- Retirement eligibility is 25 years of Credited Service, but not earlier than age 55
- The final average earnings period is the final 5 years of base compensation
- The Normal Retirement Benefit equals 50% of the average base pay of the 5 years immediately preceding retirement. For any member who works beyond 25 years, his or her pension benefit shall be increased by 2% for each year worked to a maximum of 60% of the 5-year average base pay.

#### **Changes in Actuarial Methods or Assumptions**

For members hired after December 31, 2012, the salary scale assumption was updated to reflect the removal of longevity pay from pensionable compensation.

The impact of the above changes was to reduce the July 1, 2014 Unfunded Accrued Liability by approximately \$12,400 and to reduce the Fiscal Year 2016 Actuarially Determined Contribution by about \$17,600.

July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

#### **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 2008-2009 are manifested by a gradual decline in the funded ratio. Net actuarial gains have contributed to a rise in the Funded Ratio for the July 1, 2013 and July 1, 2014 actuarial valuations.

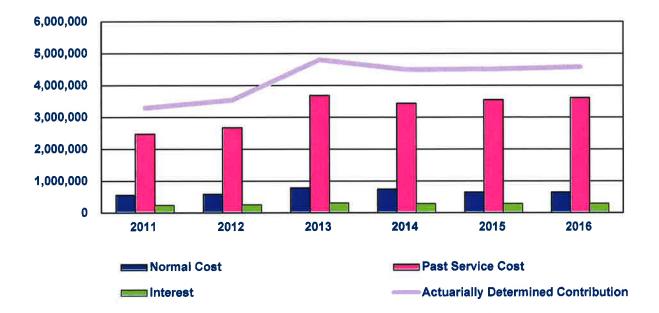
#### **Funded Status**



#### **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 **Interest** assuming payment is made mid-year. 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 several fiscal years are shown below.



## Section I - Executive Summary B. Summary of Principal Results

Membership	July 1, 2013	July 1, 2014
Active Members	55	56
Terminated Vested Members	3	5
Terminated Nonvested Members Due Refund	0	0
Members in Pay Status	78	79
Payroll	\$3,237,121	\$3,335,246
Assets and Liabilities	July 1, 2013	July 1, 2014
Market Value of Assets	\$6,978,785	\$9,190,021
Actuarial Value of Assets	7,183,249	9,194,265
Accrued Liability for Active Members	\$14,712,925	\$15,124,470
Accrued Liability for Terminated Vested Members	104,736	389,651
Accrued Liability for Members in Pay Status	55,164,488	55,908,503
Total Accrued Liability	69,982,149	71,422,624
Unfunded Accrued Liability	62,798,900	62,228,359
Funded Ratio	10.3%	12.9%
Actuarially Determined Contribution for Fiscal Year	2015	2016
Normal Cost	\$652,463	\$653,297
Past Service Cost	3,548,707	3,613,874
Interest	294,082	298,702
Actuarially Determined Contribution	4,495,252	4,565,873
Contribution as a Percent of Payroll	138.9%	136.9%

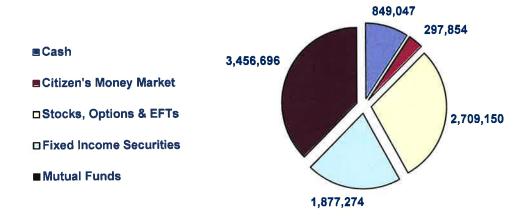
July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

## Section II - Plan Assets A. Summary of Fund Transactions

Assets	Contributions	Total
\$6,978,785	\$0	\$6,978,785
4,563,733	0	4,563,733
284,729	21,654	306,383
(3,436,521)	0	(3,436,521)
173,475	0	173,475
610,589	0	610,589
0	0	0
0	0	0
(6,423)	0	(6,423)
9,168,367	21,654	9,190,021
		10.19%
	\$6,978,785 4,563,733 284,729 (3,436,521) 173,475 610,589 0 0 (6,423)	\$6,978,785 \$0  4,563,733 0  284,729 21,654  (3,436,521) 0  173,475 0  610,589 0  0 0  0 0  (6,423) 0

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.

#### **Asset Allocation**



## 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	\$6,978,785
b. Employer and Employee Contributions	4,848,462
c. Benefit Payments and Administrative Expenses	(3,442,944)
d. Expected Investment Return Based on 7.00% Interest	<u>538,611</u>
e. Expected Market Value of Assets as of July 1, 2014	8,922,914

2. Actual Market Value of Assets as of July 1, 2014

9,190,021

3. Delayed Recognition of Market Gains/(Losses):

			Percent Not	<b>Amount Not</b>	
	Plan Year End	Gain/(Loss)	Recognized	Recognized	
	06/30/2014	\$245,453	80%	\$196,362	
	06/30/2013	(60,266)	60%	(36,160)	
	06/30/2012	(714,126)	40%	(285,650)	
	06/30/2011	606,021	20%	<u>121,204</u>	
					(4,244)
4.	Actuarial Value as of Ju	uly 1, 2014: (2) - (3)			9,194,265
5.	Approximate Rate of R	eturn on Actuarial Va	lue		7.68%
6.	Actuarial Value Gain/(L	oss)			53,612

## 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 26 years starting on July 1, 2012.

	July 1, 2013	July 1, 2014
Accrued Liability		
Active Members	\$14,712,925	\$15,124,470
Terminated Vested Members	104,736	389,651
Terminated Non-Vested Members Due Refund	0	0
Retired Members	50,562,694	50,912,883
Disabled Members	0	0
Beneficiaries of Deceased Members	4,601,794	<u>4,995,620</u>
Total	69,982,149	71,422,624
Actuarial Value of Assets (see Section II B)	7,183,249	9,194,265
Unfunded Accrued Liability: (1) - (2)	62,798,900	62,228,359
Funded Ratio: (2) / (1)	10.3%	12.9%
Amortization Period	25	24
Amortization Growth Rate	3.75%	3.75%
Past Service Cost: (3) amortized over (5)	3,548,707	3,613,874
	Terminated Vested Members Terminated Non-Vested Members Due Refund Retired Members Disabled Members Beneficiaries of Deceased Members Total  Actuarial Value of Assets (see Section II B)  Unfunded Accrued Liability: (1) - (2)  Funded Ratio: (2) / (1)  Amortization Period  Amortization Growth Rate	Active Members \$14,712,925 Terminated Vested Members 104,736 Terminated Non-Vested Members Due Refund 0 Retired Members 50,562,694 Disabled Members 0 Beneficiaries of Deceased Members 4,601,794 Total 69,982,149  Actuarial Value of Assets (see Section II B) 7,183,249  Unfunded Accrued Liability: (1) - (2) 62,798,900  Funded Ratio: (2) / (1) 10.3%  Amortization Period 25  Amortization Growth Rate 3.75%

## Section III - Development of Contribution B. Actuarially Determined Contribution

		Fiscal Year June 30, 2015	Fiscal Year June 30, 2016
1.	Total Normal Cost	\$902,988	\$918,266
2.	Expected Employee Contributions	272,125	286,569
3.	Expected Expenses	21,600	21,600
4.	Net Normal Cost: (1) - (2) + (3)	652,463	653,297
5.	Past Service Cost (see Section III A)	3,548,707	3,613,874
6.	Interest on (4) + (5) assuming mid-year payment	294,082	298,702
7.	Actuarially Determined Contribution: (4) + (5) + (6)	4,495,252	4,565,873
8.	Total Payroll	3,237,121	3,335,246
9.	Contribution as a Percent of Total Payroll: (7) / (8)	138.87%	136.90%

## 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 26 years from July 1, 2012

Asset Valuation Method 5 Year Smoothed Market Value

**Actuarial Assumptions** 

Investment Rate of Return 7.00%

Projected Salary Increases Graded 13.55% to 3.75%

Amortization Growth Rate 3.75% Inflation 2.75%

Cost-of-Living Adjustments For officers retired prior to July 1, 1986;

1.50% (compounded)

For officers retired after July 1, 1986 (and

hired prior to January 1, 1994);

2.50% (compounded)

For officers hired on or after January 1,

1994;

2.75% (non-compounded)

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

		(1)	(2)	(3)	(4)	(5)	(6) UAAL as a
Actuarial	For	Actuarial	Actuarial	Unfunded AAL	Funded	Covered	Percentage of
Valuation Date	For Fiscal Year	Value of Accrued (UAAL) ar Assets Liability (AAL) (2) - (1)		Ratio (1) / (2)	Covered Payroll	Covered Payroll (3) / (5)	
07/01/2009	2011	7,901,431	47,748,419	39,846,988	16.5%	3,378,540	1179.4%
07/01/2010	2012	7,818,426	49,763,177	41,944,751	15.7%	3,513,682	1193.8%
07/01/2011	2013	7,598,092	67,351,328	59,753,236	11.3%	3,246,617	1840.5%
07/01/2012	2014	6,899,524	69,397,077	62,497,553	9.9%	3,124,718	2000.1%
07/01/2013	2015	7,183,249	69,982,149	62,798,900	10.3%	3,047,317	2060.8%
07/01/2014	2016	9,194,265	71,422,624	62,228,359	12.9%	3,144,906	1978.7%

July 1, 2014 Actuarial Valuation Page 14

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## Section IV - Accounting Information C. Schedule of Employer Contributions

	(1)	(2) Contribution in	(3)	(4)	(5)
	A -4	Relation to the	Contribution		Contribution as a
Fiscal Year Ending	Actuarially Determined	Actuarially Determined	Deficiency/ (Excess)	Covered	Percentage of Covered Payroll
June 30	Contribution	Contribution	(1) - (2)	Payroll	(2) / (4)
2011	\$3,278,626	\$2,274,733	\$1,003,893	\$3,378,540	67%
2012	3,530,006	2,274,733	1,255,273	3,513,682	65%
2013	4,784,708	3,260,756	1,523,952	3,246,617	100%
2014	4,481,020	4,563,733	(82,713)	3,124,718	146%
2015	4,495,252	TBD	TBD	3,047,317	TBD
2016	4,565,873	TBD	TBD	3,144,906	TBD

July 1, 2014 Actuarial Valuation Page 15

### 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	As of
		July 1, 2013	July 1, 2014
1:	Value of Vested Benefits		
2557	Active Members	\$12,239,053	\$12,613,487
	Terminated Vested Members	104,736	389,651
	Terminated Non-Vested Due Refund	0	0
	Retired Members	50,562,694	50,912,883
	Disabled Members	0	0
	Beneficiaries of Deceased Members	<u>4,601,794</u>	<u>4,995,620</u>
	Total Value of Vested Benefits	67,508,277	68,911,641
2.	Value of Non-Vested Benefits	4,134,304	4,043,981
3.	Total Value of Accrued Benefits: (1) + (2)	71,642,581	72,955,622
4.	Market Value of Assets	6,978,785	9,190,021
5.	Vested Funded Ratio: (4) / (1)	10,3%	13.3%
6.	Accrued Funded Ratio: (4) / (3)	9.7%	12.6%

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

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

Increase for interest due to the decrease in the discount period \$4,896,737

Benefits Accumulated/(Forfeited) (56,657)

Benefit Payments (3,436,521)

Plan Amendments (90,518)

Changes in Actuarial Assumptions 0

Net Increase/(Decrease) 1,313,041

#### Value of Accrued Plan Benefits:

July 1, 2014 \$72,955,622

July 1, 2013 71,642,581

Net Increase/(Decrease) 1,313,041

## 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.

		Term.	Due		· ·	Bene-	
	Active	Vested	Refund	Retirees	Disabled	ficiaries	Total
Count as of July 1, 2013	55	3	0	63	0	15	136
Terminated not vested	·	2	2	-	•	-	0
Terminated, benefits due	(1)	1	-	200	*	-	0
Retired	-	-	-	;=:	140	-	0
Died, with beneficiary	_	-	-			-	0
Died, no beneficiary	-	-	+	(1)		-	(1)
New member	2	-	77	::		-	2
New beneficiary	_	-	77		:50	-	0
Lump sum paid	-	-	=	) <u>*</u>	•	-	0
Rehired	-	-	-	12	-	-	0
New QDRO	_	1	2		· ·	2	3
Correction	-	-	<u>u</u>	(1)	*	1	0
Count as of July 1, 2014	56	5	0	61	0	18	140

## Section V - Membership Data B. Statistics of Membership

	As of	As of
	July 1, 2013	July 1, 2014
Number of Active Members		
Number	55	56
Average Age	37.8	38.1
Average Service	10.4	11.0
Total Payroll	\$3,237,121	\$3,335,246
Average Payroll	58,857	59,558
Terminated Vested Members		
Number	3	5
Total Annual Benefit	\$15,773	\$45,645
Average Annual Benefit	5,258	9,129
Average Age	35,3	40.0
Terminated Nonvested Members Due Refund		
Number	0	0
Retired Members		
Number	63	61
Total Annual Benefit	\$3,028,250	\$3,086,291
Average Annual Benefit	48,067	50,595
Average Age	59,4	59.9
Disabled Members		
Number	0	0
Total Annual Benefit	\$0	\$0
Average Annual Benefit	0	0
Average Age	0.0	0.0
Beneficiaries of Deceased Members		
Number	15	18
Total Annual Benefit	\$381,929	\$416,705
Average Annual Benefit	25,462	23,150
Average Age	67.0	66.3

July 1, 2014 Actuarial Valuation

Page 19

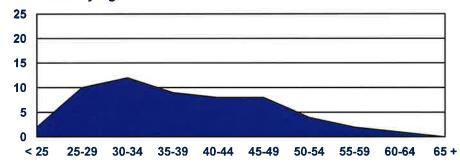
#### TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

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

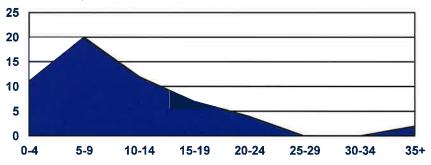
#### **Years of Service**

	100.001.00								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
< 25	2	0	0	0	0	0	0	0	2
25-29	5	5	0	0	0	0	0	0	10
30-34	1	10	1	0	0	0	0	0	12
35-39	1	1	7	0	0	0	0	0	9
40-44	0	2	3	3	0	0	0	0	8
45-49	2	1	1	3	1	0	0	0	8
50-54	0	0	0	1	3	0	0	0	4
55-59	0	1	0	0	0	0	0	1	2
60-64	0	0	0	0	0	0	0	1	1
65 +	0	0	0	0	0	0	0	0	0
Total	11	20	12	7	4	0	0	2	56

### **Distribution By Age**



### **Distribution by Years of Service**



July 1, 2014 Actuarial Valuation

TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Page 20

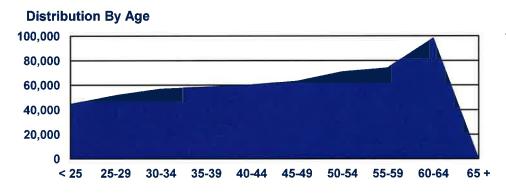
This work product was prepared solely for the Town for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

Section V - Membership Data

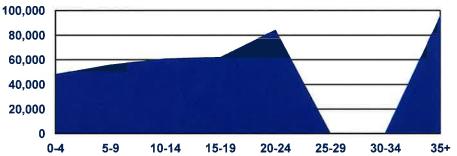
D. Distribution of Active Members as of July 1, 2014 - Average Pay

#### **Years of Service**

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
< 25	44,529	0	0	0	0	0	0	0	44,529
25-29	47,364	56,039	0	0	0	0	0	0	51,701
30-34	50,529	56,722	65,455	0	0	0	0	0	56,933
35-39	51,216	53,306	60,336	0	0	0	0	0	58,542
40-44	0	56,111	60,724	62,468	0	0	0	0	60,225
45-49	50,809	47,902	59,003	63,368	108,307	0	0	0	63,367
50-54	0	0	0	56,111	75,936	0	0	0	70,980
55-59	0	56,111	0	0	0	0	0	92,170	74,141
60-64	0	0	0	0	0	0	0	98,170	98,170
65 +	0	0	0	0	0	0	0	0	0
Total	48,113	55,848	60,749	61,945	84,029	0	0	95,170	59,558



### Distribution by Years of Service



July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Page 21

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

			Annua
	Age	Number	Benefits
Terminated Vested Members			4.0
Terminated vested Wembers	< 30	0	\$0
	30 - 39	2	2,814
	40 - 49	3	42,831
	50 - 59	0	C
	60 - 64	0	C
	65 +	0	С
	Total	5	45,645
Retired Members	< 50	11	\$667,767
	50 - 59	18	994,927
	60 - 69	24	1,127,250
	70 - 79	7	281,058
	80 - 89	1	15,288
	90 +	0	C
	Total	61	3,086,290
Disabled Retirees	< 50	0	\$0
	50 - 59	0	C
	60 - 69	0	C
	70 - 79	0	C
	80 - 89	0	C
	90 +	0	C
	Total	0	С
Beneficiaries	< 50	0	\$0
	50 - 59	7	118,328
	60 - 69	, 5	145,144
	70 - 79	4	87,532
	80 - 89	1	53,890
	90 +	1	11,810
	Total	18	416,704

### **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, 2012, the amortization period is 26 years (closed period).

The **Actuarial Value of Assets** is determined by first projecting the Actuarial Value forward from the last valuation date based on the actual cash flow during the year and the assumed interest rate. The difference between this expected actuarial value and the actual market value is recognized over a **five** year period, subject to the Actuarial Value remaining within +/- 20% of the Market Value.

### **Appendix B - Actuarial Assumptions**

Interest 7.00%

**Salary Scale** 

Service	Hired Pre 1/1/2013 Rate	Hired Post 12/31/2012 Rate
1	9.75%	9.75%
2	6.15	6.15
3	13.55	13.55
4	2.75	2.75
5	7.75	3.75
6-9	3.75	3.75
10	7.15	3.75
11-14	3.75	3.75
15	5.15	3.75
16-19	3.75	3.75
20	3.75	3.75
21-24	3.75	3.75
25	3.75	3.75
26 - on	3.75	3.75

Employees hired prior to 1994 receive an additional 60% salary increase in the year before retirement.

#### **Amortization Growth Rate**

3.75%

#### **Expenses**

Prior year's actual administrative expenses increased by 3% and rounded to the nearest \$100.

### Mortality

RP-2000 Combined Healthy Mortality Table with generational projection per Scale AA with separate male and female tables. This assumption recognizes future mortality improvements beyond the valuation date.

#### Turnover

None

#### **Pre-Retirement Disability**

1987 Commissioner's Group Disability Table, six month elimination period, separately for males and females:

Age	Male	Female
22	0.0800%	0.1000%
27	0.0890	0.1157
32	0.1050	0.1554
37	0.1370	0.2315
42	0.2020	0.3050
47	0.3560	0.4628
52	0.6620	0.7282
57	1.1870	1.0683
62	1.6710	1.2532

July 1, 2014 Actuarial Valuation

Page 24

### **Appendix B - Actuarial Assumptions**

#### Active members are assumed to retire based on the following rates: Rate of Retirement

50% of employees hired prior to 1994 are assumed to retire when first eligible. 30% are assumed to retire in the three years thereafter. 15% are assumed to retire in the six years thereafter. 100% of employees are

assumed to retire at 30 years of service.

75% of employees hired after 1994 are assumed to retire when first eligible. 20% are assumed to retire in the years thereafter. 100% of employees are assumed to retire at 30 years of service.

**Percent Married** 75% of active and terminated vested members are assumed to be married.

**Age of Spouse** Females are assumed to be three years younger than their male spouses.

1 ½% (compounded) for officers retired prior to July 1, 1986. **Cost of Living Adjustment** 

> 2 1/2% (compounded) for officers retired after July 1, 1986 (and hired prior to January 1, 1994).

2 3/4% (non-compounded) for officers hired on or after January 1, 1994.

### **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** Full-time police officers that have received his/her appointment.

**Employee Contributions** Members hired on or after January 1, 2013 contribute 12% of pensionable

earnings. Members hired on or after January 1, 1994 contribute 9% of pensionable earnings. Members hired before January 1, 1994 contribute

8% of pensionable earnings. Interest is credited at 5% per year.

Normal Retirement Date Officers who received their appointments prior to January 1, 1994: 20

years of service.

Officers who received their appointments after January 1, 1994, but prior to

January 1, 2013: 23 years of service.

Officers who received their appointments on or after January 1, 2013: 25

years of service, but no earlier than age 55.

Normal Retirement Benefit 50% of Compensation. For members hired before January 1, 2013,

Compensation is the final 12 months of pensionable earnings. For members hired after January 1, 2013, Compensation is the final five years'

average pensionable earnings.

Disability Retirement Eligibility Injured in the line of duty and unable to return to work within 2 years.

Disability Retirement Benefit Immediate benefit equal to 66 2/3% of accrued benefit, payable until the

member's Normal Retirement Date.

Normal Form of Annuity 100% Joint & Survivor Annuity with Modified Cash Refund. Optional forms

of benefit are available on an actuarially equivalent basis.

**Pre-Retirement Spouse's** 

**Death Eligibility** 

Has attained Normal Retirement Date

**Pre-Retirement Spouse's** 

**Death Benefit** 

100% of the benefit that would have been payable as if he/she had retired

on the date of death.

**Pre-Retirement Lump Sum** 

**Death Eligibility** 

Immediate (if not eligible for Pre-Retirement Spouse's Death Benefit).

Pre-Retirement Lump Sum

**Death Benefit** 

Refund of Employee Contributions with interest to date of death.

July 1, 2014 Actuarial Valuation
TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

Page 26

### **Appendix C - Summary of Plan Provisions**

### Death Benefits After Retirement

Based on form of benefit elected at retirement.

#### **Vesting**

25% after 4 years of service, increasing 5% for each of the next 5 years, then increasing 10% for each of the next 5 years to 100% after 15 years. Members are 100% vested at their Early Retirement Date, Normal Retirement Date, or Disability Retirement Date.

### Termination Benefit Pre-Retirement

Refund of Employee Contributions with interest to date of termination.

#### **Cost of Living Adjustment**

1 1/2% (compounded) for officers retired prior to July 1, 1986.

2 ½% (compounded) for officers retired after July 1, 1986 (and hired prior to January 1, 1994).

For officers hired on or after January 1, 1994, there will be an annual non-compounded cost-of-living adjustment (COLA) equal to the greater of (a) 1.50%, or (b) the Consumer Price Index (CPI-W) as published by the Bureau of Labor Statistics (BLS).