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December 29, 2016

### PERSONAL & CONFIDENTIAL

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

Re: Coventry Municipal Employees' Retirement Plan

Dear Bob:

At your request, we have performed an actuarial valuation of the Coventry Municipal Employees' Retirement Plan as of July 1, 2016 for the Fiscal Year ending June 30, 2018. The results of the valuation are contained in the following report.

Respectfully submitted,

Secty

Rebecca A. Sielman, FSA Consulting Actuary

RAS/dp 10 COV2016MUNValCov



# COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

## Actuarial Valuation as of July 1, 2016 For Fiscal Year Ending June 30, 2018

Prepared by Milliman, Inc.

Rebecca A. Sielman, FSA Consulting Actuary

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July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

### Certification

We have performed an actuarial valuation of the Plan as of July 1, 2016 for fiscal year ending June 30, 2018. 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.

Milliman's work is prepared solely for the internal business use of the Town. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s): (a) the Town may provide a copy of Milliman's work, in its entirety, to the Town's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Town; and (b) the Town may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law. No third party recipient of Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' 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.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impact the objectivity of our work.

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.

Rebecca A. Sielman, FSA Consulting Actuary

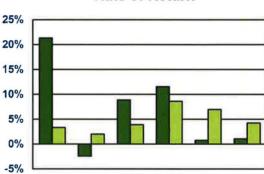
### Assets

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, 2015                     | \$7,544,439 | \$7,797,859 |
| Contributions                                | 1,379,273   | 1,379,273   |
| Investment Income                            | 81,953      | 345,170     |
| Benefit Payments and Administrative Expenses | (804,953)   | (804,953)   |
| Value as of July 1, 2016                     | 8,200,712   | 8,717,349   |

For fiscal year 2016, the plan's assets earned 1.05% on a Market Value basis and 4.27% on an Actuarial Value basis. The actuarial assumption for this period was 7.00%; the result is an asset loss of \$464,400 on a Market Value basis and a loss of \$220,700 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.





2013

2014

2015

Actuarial Value

2016

2011

2012

Market Value

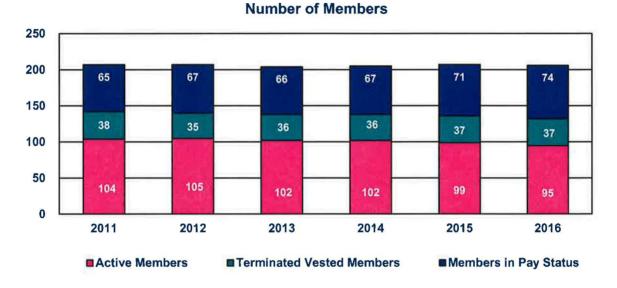
**Rate of Return** 

Please note that the Actuarial Value currently exceeds the Market Value by \$516,600. 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.

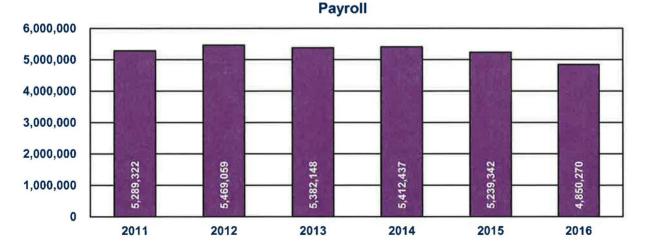
### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

### 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, 2015 to July 1, 2016, the overall membership decreased from 207 to 206.



From July 1, 2015 to July 1, 2016, total payroll decreased by about 6.5%.

#### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

**Plan Changes** 

None.

**Changes in Actuarial Methods or Assumptions** 

None.

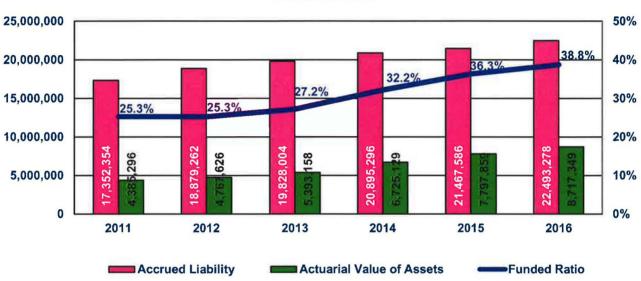
### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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.

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### **Funded Status**

The chart below shows the plan's Accrued Liability and Actuarial Value of Assets for the past several years.



**Funded Status** 

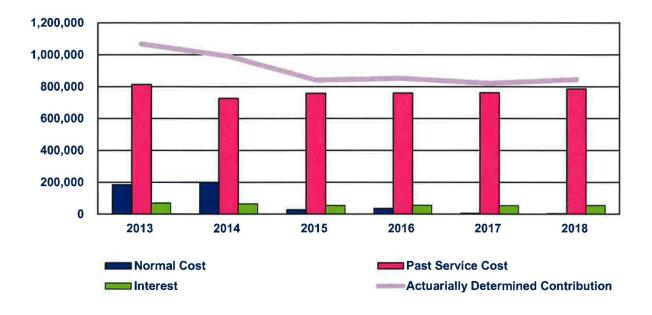
### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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### **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 few fiscal years are shown below.



#### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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

| Membership July                                     | / 1, 2015 | July 1, 2016 |
|---|-----------|--------------|
| Active Members                                      | 99        | 95           |
| Terminated Vested Members                           | 37        | 37           |
| Terminated Nonvested Members Due Refund             | 0         | 0            |
| Members in Pay Status                               | 71        | 74           |
| Payroll \$5,  | 239,342   | \$4,850,270  |
| Assets and Liabilities July                         | y 1, 2015 | July 1, 2016 |
| Market Value of Assets \$7,                         | 544,439   | \$8,200,712  |
| Actuarial Value of Assets 7,                        | 797,859   | 8,717,349    |
| Accrued Liability for Active Members \$13,          | 133,037   | \$13,060,796 |
| Accrued Liability for Terminated Vested Members 1,  | 286,196   | 1,350,206    |
| Accrued Liability for Members in Pay Status 7,      | 048,353   | 8,082,276    |
| Total Accrued Liability 21,                         | 467,586   | 22,493,278   |
| Unfunded Accrued Liability 13,                      | 669,727   | 13,775,929   |
| Funded Ratio  | 36.3%     | 38.8%        |
| Actuarially Determined Contribution for Fiscal Year | 2017      | 2018         |
| Normal Cost   | \$5,461   | \$3,818      |
| Past Service Cost                                   | 762,600   | 786,547      |
| Interest  | 53,764    | 55,326       |
| Actuarially Determined Contribution                 | 821,825   | 845,691      |
| Contribution as a Percent of Payroll                | 15.69%    | 17.44%       |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

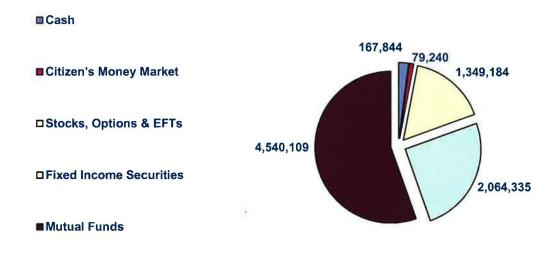
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## Section II - Plan Assets A. Summary of Fund Transactions

| Trust       | Accrued  |  |
|-------------|--|--|
| Assets      | Contributions  | Total  |
| \$7,544,439 | \$0  | \$7,544,439  |
| 864,293     | 0  | 864,293  |
| 514,980     | 0  | 514,980  |
| (803,480)   | 0  | (803,480   |
| 59,434      | 0  | 59,434   |
| 22,519      | 0  | 22,519   |
| 0           | 0  | 0  |
| (1,473)     | 0  | (1,473   |
| 8,200,712   | 0  | 8,200,712  |
|             |  | 1.05%  |
|             | Assets<br>\$7,544,439<br>864,293<br>514,980<br>(803,480)<br>59,434<br>22,519<br>0<br>(1,473) | Assets Contributions   \$7,544,439 \$0   864,293 0   514,980 0   (803,480) 0   59,434 0   22,519 0   0 0   (1,473) 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**



#### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

### 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, 2016 is determined below.

| 1. | Expected Market Value of Assets:                      |             |
|----|---|-------------|
|    | a. Market Value of Assets as of July 1, 2015          | \$7,544,439 |
|    | b. Employer and Employee Contributions                | 1,379,273   |
|    | c. Benefit Payments and Administrative Expenses       | (804,953)   |
|    | d. Expected Investment Return Based on 7.00% Interest | 546,353     |
|    | e. Expected Market Value of Assets as of July 1, 2016 | 8,665,112   |
|    |   |             |
| 2. | Actual Market Value of Assets as of July 1, 2016      | 8,200,712   |

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

4.

5.

7.

|                           |                       | Percent Not | Amount Not  |           |
|---------------------------|-----------------------|-------------|-------------|-----------|
| Period Ending             | Gain/(Loss)           | Recognized  | Recognized  |           |
| 6/30/2016                 | (\$464,400)           | 80%         | (\$371,520) |           |
| 6/30/2015                 | (447,452)             | 60%         | (268,471)   |           |
| 6/30/2014                 | 264,088               | 40%         | 105,635     |           |
| 6/30/2013                 | 88,597                | 20%         | 17,719      |           |
|                           |                       |             |             | (516,637) |
| Actuarial Value as of Jul | y 1, 2016: (2) - (3)  |             |             | 8,717,349 |
| Approximate Rate of Re    | turn on Actuarial Val | lue         |             | 4.27%     |
| Actuarial Value Gain/(Lo  | ss)                   |             |             | 220,682   |
|                           |                       |             |             |           |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

# 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 30 years starting on July 1, 2012.

|    |  | July 1, 2015   | July 1, 2016 |
|----|--|----------------|--------------|
| 1. | Accrued Liability                            |                |              |
|    | Active Members                               | \$13,133,037   | \$13,060,796 |
|    | Terminated Vested Members                    | 1,286,196      | 1,350,206    |
|    | Terminated Non-Vested Members Due Refund     | 0              | 0            |
|    | Retired Members                              | 5,766,371      | 6,654,771    |
|    | Disabled Members                             | 699,405        | 693,238      |
|    | Beneficiaries of Deceased Members            | <u>582,577</u> | 734,267      |
|    | Total  | 21,467,586     | 22,493,278   |
| 2. | Actuarial Value of Assets (see Section II B) | 7,797,859      | 8,717,349    |
| 3. | Unfunded Accrued Liability: (1) - (2)        | 13,669,727     | 13,775,929   |
| 4. | Funded Ratio: (2) / (1)                      | 36.3%          | 38.8%        |
| 5. | Amortization Period                          | 27             | 26           |
| 6. | Amortization Growth Rate                     | 3.40%          | 3.40%        |
| 7. | Past Service Cost: (3) amortized over (5)    | 762,600        | 786,547      |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

|   | Fiscal Year<br>2017   | Fiscal Year<br>2018   |
|---|---|---|
| Total Normal Cost                                       |   | \$481,938   |
|   |   | 479,620   |
|   |   | 1,500   |
| Net Normal Cost: (1) - (2) + (3)                        | 5,461   | 3,818   |
| Past Service Cost (see Section III A)                   | 762,600   | 786,547   |
| Interest on (4) + (5)                                   | 53,764  | 55,326  |
| Actuarially Determined Contribution: (4) + (5) + (6)    | 821,825   | 845,691   |
| Covered Payroll   | 5,239,342   | 4,850,270   |
| Contribution as a Percent of Covered Payroll: (7) / (8) | 15.69%  | 17.44%  |
|   | Past Service Cost (see Section III A)<br>Interest on (4) + (5)<br>Actuarially Determined Contribution: (4) + (5) + (6)<br>Covered Payroll | 2017   Total Normal Cost \$519,496   Expected Employee Contributions 515,435   Expected Expenses 1,400   Net Normal Cost: (1) - (2) + (3) 5,461   Past Service Cost (see Section III A) 762,600   Interest on (4) + (5) 53,764   Actuarially Determined Contribution: (4) + (5) + (6) 821,825   Covered Payroll 5,239,342 |

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

## 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, 2016   |
|--|--|
| Actuarial Cost Method  | Entry Age Normal   |
| Amortization Method  | Level percent  |
| Amortization Period  | Closed 30 years from July 1, 2012                        |
| Asset Valuation Method   | 5 Year Smoothed Market Value                             |
| Actuarial Assumptions  |  |
| Investment Rate of Return<br>Projected Salary Increases<br>Amortization Growth Rate<br>Inflation<br>Cost-of-Living Adjustments | 7.00%<br>Graded 6.65% to 3.40%<br>3.40%<br>2.70%<br>None |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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

|           |             | (1)         | (2)             | (3)          | (4)       | (5)         | (6)<br>UAAL as a       |
|-----------|-------------|-------------|-----------------|--------------|-----------|-------------|------------------------|
| Actuarial |             | Actuarial   | Actuarial       | Unfunded AAL | Funded    |             | Percentage of          |
| Valuation | For         | Value of    | Accrued         | (UAAL)       | Ratio     | Covered     | <b>Covered Payroll</b> |
| Date      | Fiscal Year | Assets      | Liability (AAL) | (2) - (1)    | (1) / (2) | Payroll     | (3) / (5)              |
|           |             |             |                 |              |           |             |                        |
| 7/1/2010  | 2012        | \$4,087,545 | \$14,405,245    | \$10,317,700 | 28.4%     | \$5,486,026 | 188.1%                 |
| 7/1/2011  | 2013        | 4,385,296   | 17,352,354      | 12,967,058   | 25.3%     | 5,289,322   | 245.2%                 |
| 7/1/2012  | 2014        | 4,767,626   | 18,879,262      | 14,111,636   | 25.3%     | 5,469,059   | 258.0%                 |
| 7/1/2013  | 2015        | 5,393,158   | 19,828,004      | 14,434,846   | 27.2%     | 5,382,148   | 268.2%                 |
| 7/1/2014  | 2016        | 6,725,129   | 20,895,296      | 14,170,167   | 32.2%     | 5,412,437   | 261.8%                 |
| 7/1/2015  | 2017        | 7,797,859   | 21,467,586      | 13,669,727   | 36.3%     | 5,239,342   | 260.9%                 |
| 7/1/2016  | 2018        | 8,717,349   | 22,493,278      | 13,775,929   | 38.8%     | 4,850,270   | 284.0%                 |

#### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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|             | (1)          | (2)<br>Contribution in         | (3)                         | (4)         | (5)                                |
|-------------|--------------|--------------------------------|-----------------------------|-------------|------------------------------------|
| Fiscal Year | Actuarially  | Relation to the<br>Actuarially | Contribution<br>Deficiency/ |             | Contribution as a<br>Percentage of |
| Ending      | Determined   | Determined                     | (Excess)                    | Covered     | <b>Covered Payroll</b>             |
| June 30     | Contribution | Contribution                   | (1) - (2)                   | Payroll     | (2) / (4)                          |
| 2012        | \$986,087    | \$559,077                      | \$427,010                   | \$5,486,026 | 10%                                |
| 2013        | 1,068,188    | 773,054                        | 295,134                     | 5,289,322   | 15%                                |
| 2014        | 991,124      | 1,080,077                      | (88,953)                    | 5,469,059   | 20%                                |
| 2015        | 841,584      | 829,250                        | 12,334                      | 5,382,148   | 15%                                |
| 2016        | 852,707      | 864,293                        | (11,586)                    | 5,412,437   | 16%                                |
| 2017        | 821,825      | TBD                            | TBD                         | 5,239,342   | TBD                                |
| 2018        | 845,691      | TBD                            | TBD                         | 4,850,270   | TBD                                |

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

### July 1, 2016 Actuarial Valuation TOWN OF COVENTRY POLICE OFFICERS RETIREMENT PLAN

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## 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, 2015   | July 1, 2016 |
|    |  |                |              |
| 1. | Value of Vested Benefits                   |                |              |
|    | Active Members                             | \$10,141,187   | \$10,268,569 |
|    | Terminated Vested Members                  | 1,286,196      | 1,350,206    |
|    | Terminated Non-Vested Due Refund           | 0              | 0            |
|    | Retired Members                            | 5,766,371      | 6,654,771    |
|    | Disabled Members                           | 699,405        | 693,238      |
|    | Beneficiaries of Deceased Members          | <u>582,577</u> | 734,267      |
|    | Total Value of Vested Benefits             | 18,475,736     | 19,701,051   |
| 2. | Value of Non-Vested Benefits               | 182,413        | 159,182      |
| 3. | Total Value of Accrued Benefits: (1) + (2) | 18,658,149     | 19,860,233   |
| 4. | Market Value of Assets                     | 7,544,439      | 8,200,712    |
| 5. | Vested Funded Ratio: (4) / (1)             | 40.8%          | 41.6%        |
| 6. | Accrued Funded Ratio: (4) / (3)            | 40.4%          | 41.3%        |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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

| Incr | ease/(Decrease) during the 2015 plan year attributable to:       |              |
|------|--|--------------|
|      | Increase for interest due to the decrease in the discount period | \$1,278,424  |
|      | Benefits Accumulated/(Forfeited)                                 | 727,140      |
|      | Benefit Payments   | (803,480)    |
|      | Plan Amendments  | 0            |
|      | Changes in Actuarial Assumptions                                 | 0            |
|      | Net Increase/(Decrease)  | 1,202,084    |
| Valu | ue of Accrued Plan Benefits:                                     |              |
|      | July 1, 2016   | \$19,860,233 |
|      | July 1, 2015   | 18,658,149   |
|      | Net Increase/(Decrease)  | 1,202,084    |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

## 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, 2015 | 99               | 37     | 0      | 57       | 5        | 9         | 207   |
| Terminated not vested    | -                |        |        | -        | -        | -         | 0     |
| Terminated, benefits due | (1)              | 1      | -      | -        | -        | 8         | 0     |
| Retired                  | (2)              | -      | -      | 2        | -        | -         | 0     |
| Died, with beneficiary   | (1)              | (1)    | 2      | (2)      | -        | 4         | 0     |
| Died, no beneficiary     | -                | -      | ×      | (1)      |          | ×         | (1)   |
| New member               | -                | -      | -      | -        | -        | -         | 0     |
| New beneficiary          |                  | -      | -      |          | -        | -         | 0     |
| Lump sum paid            | -                | -      | -      | -        |          | -         | 0     |
| Rehired                  | ( <del>-</del> ) | -      | -      |          | -        | -         | 0     |
| New QDRO                 | -                | -      | -      | -        | -        | ÷         | 0     |
| Correction               | -                | -      | 1      |          | -        | -         | 0     |
| Count as of July 1, 2016 | 95               | 37     | 0      | 56       | 5        | 13        | 206   |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

|   | As of        | As of        |
|---|--------------|--------------|
|   | July 1, 2015 | July 1, 2016 |
| Number of Active Members                |              |              |
| Number                                  | 99           | 95           |
| Average Age                             | 50.6         | 51.5         |
| Average Service                         | 16.1         | 16.6         |
| Total Payroll                           | \$5,239,342  | \$5,069,58   |
| Average Payroll                         | 52,923       | 53,36        |
| Terminated Vested Members               |              |              |
| Number                                  | 37           | 3            |
| Total Annual Benefit                    | \$187,920    | \$193,45     |
| Average Annual Benefit                  | 5,079        | 5,228        |
| Average Age                             | 53.5         | 53.          |
| Terminated Nonvested Members Due Refund |              |              |
| Number                                  | 0            | t.           |
| Retired Members                         |              |              |
| Number                                  | 57           | 50           |
| Total Annual Benefit                    | \$637,877    | \$721,65     |
| Average Annual Benefit                  | 11,191       | 12,88        |
| Average Age                             | 75.0         | 75.3         |
| Disabled Members                        |              |              |
| Number                                  | 5            |              |
| Total Annual Benefit                    | \$53,614     | \$53,61      |
| Average Annual Benefit                  | 10,723       | 10,72        |
| Average Age                             | 57.0         | 58.          |
| Beneficiaries of Deceased Members       |              |              |
| Number                                  | 9            | 1            |
| Total Annual Benefit                    | \$72,027     | \$89,34      |
| Average Annual Benefit                  | 8,003        | 6,87         |
| Average Age                             | 75.0         | 73.          |

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

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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## **Section V - Membership Data** C. Distribution of Active Members as of July 1, 2016 - Count

|       |     |     |       | Year  | s of Service |       |       |     |       |
|-------|-----|-----|-------|-------|--------------|-------|-------|-----|-------|
| Age   | 0-4 | 5-9 | 10-14 | 15-19 | 20-24        | 25-29 | 30-34 | 35+ | Total |
| < 25  | 0   | 0   | 0     | 0     | 0            | 0     | 0     | 0   | 0     |
| 25-29 | 1   | 0   | 1     | 0     | 0            | 0     | 0     | 0   | 2     |
| 30-34 | 0   | 3   | 1     | 0     | 0            | 0     | 0     | 0   | 4     |
| 35-39 | 1   | 0   | 3     | 2     | 0            | 0     | 0     | 0   | 6     |
| 40-44 | 0   | 3   | 3     | 1     | 0            | 0     | 0     | 0   | 7     |
| 45-49 | 1   | 4   | 3     | 4     | 2            | 1     | 0     | 0   | 15    |
| 50-54 | 1   | 3   | 2     | 7     | 2            | 4     | 0     | 0   | 19    |
| 55-59 | 0   | 3   | 7     | 3     | 5            | 7     | 3     | 0   | 28    |
| 60-64 | 0   | 2   | 2     | 3     | 0            | 2     | 2     | 0   | 11    |
| 65 +  | 0   | 0   | 2     | 0     | 0            | 1     | 0     | 0   | 3     |
| Total | 4   | 18  | 24    | 20    | 9            | 15    | 5     | 0   | 95    |

### **Distribution By Age**

**Distribution by Years of Service** 30 30 25 25 20 20 15 15 10 10 5 5 0 0 5-9 50-54 55-59 60-64 65 + 0-4 10-14 15-19 20-24 25-29 30-34 35+ < 25 25-29 30-34 35-39 40-44 45-49

#### July 1, 2016 Actuarial Valuation

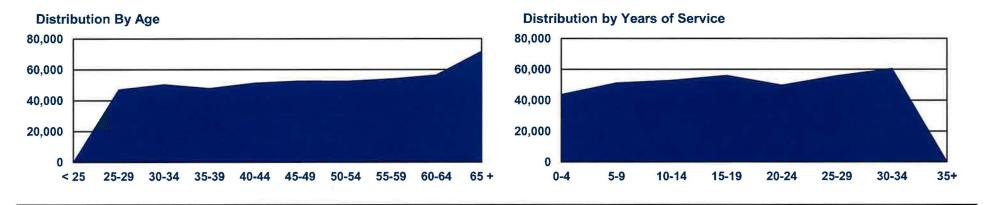
#### **COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN**

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|       |        |        |        | Yea    | s of Service |        |        |     |        |
|-------|--------|--------|--------|--------|--------------|--------|--------|-----|--------|
| Age   | 0-4    | 5-9    | 10-14  | 15-19  | 20-24        | 25-29  | 30-34  | 35+ | Total  |
| < 25  | 0      | 0      | 0      | 0      | 0            | 0      | 0      | 0   | 0      |
| 25-29 | 47,418 | 0      | 46,563 | 0      | 0            | 0      | 0      | 0   | 46,991 |
| 30-34 | 0      | 46,991 | 60,146 | 0      | 0            | 0      | 0      | 0   | 50,280 |
| 35-39 | 41,252 | 0      | 45,975 | 53,824 | 0            | 0      | 0      | 0   | 47,804 |
| 40-44 | 0      | 45,227 | 53,554 | 62,742 | 0            | 0      | 0      | 0   | 51,298 |
| 45-49 | 43,705 | 54,138 | 48,126 | 58,108 | 45,715       | 61,153 | 0      | 0   | 52,643 |
| 50-54 | 42,710 | 54,542 | 48,783 | 56,110 | 50,367       | 49,714 | 0      | 0   | 52,435 |
| 55-59 | 0      | 54,262 | 54,518 | 52,498 | 51,102       | 51,643 | 62,807 | 0   | 53,833 |
| 60-64 | 0      | 50,553 | 50,314 | 55,510 | 0            | 68,934 | 56,962 | 0   | 56,368 |
| 65 +  | 0      | 0      | 68,876 | 0      | 0            | 77,527 | 0      | 0   | 71,759 |
| Total | 43,771 | 51,151 | 52,802 | 55,981 | 49,741       | 55,794 | 60,469 | 0   | 53,364 |





#### July 1, 2016 Actuarial Valuation

#### COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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## Section V - Membership Data E. Distribution of Inactive Members as of July 1, 2016

|                           |         |        | Annua    |
|---------------------------|---------|--------|----------|
|                           | Age     | Number | Benefits |
| Terminated Vested Members | < 20    | 0      | ¢o       |
| reminated vested members  | < 30    | 0      | \$0      |
|                           | 30 - 39 | 4      | 12,105   |
|                           | 40 - 49 | 6      | 36,669   |
|                           | 50 - 59 | 15     | 91,981   |
|                           | 60 - 64 | 4      | 27,814   |
|                           | 65 +    | 8      | 24,884   |
|                           | Total   | 37     | 193,453  |
| Retired Members           | < 50    | 0      | \$0      |
|                           | 50 - 59 | 0      | 0        |
|                           | 60 - 69 | 16     | 323,488  |
|                           | 70 - 79 | 24     | 276,080  |
|                           | 80 - 89 | 10     | 99,990   |
|                           | 90 +    | 6      | 22,098   |
|                           | Total   | 56     | 721,656  |
| Disabled Retirees         | < 50    | 0      | \$0      |
|                           | 50 - 59 | 4      | 47,268   |
|                           | 60 - 69 | 1      | 6,346    |
|                           | 70 - 79 | 0      | 0        |
|                           | 80 - 89 | 0      | 0        |
|                           | 90 +    | 0      | 0        |
|                           | Total   | 5      | 53,614   |
| Beneficiaries             | < 50    | 0      | \$0      |
|                           | 50 - 59 | 1      | 8,262    |
|                           | 60 - 69 | 5      | 19,516   |
|                           | 70 - 79 | 2      | 33,827   |
|                           | 80 - 89 | 4      | 22,096   |
|                           | 90 +    | 1      | 5,647    |
|                           | Total   | 13     | 89,348   |

#### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

### **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 30 years (closed period).

The Actuarial Value of Assets is based on the Market Value as of the valuation date, with future market gains and losses recognized over a five year period.

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

Each of the assumptions used in this valuation was set based on a formal study of the plan's experience for the period July 1, 2010 through June 30, 2014, industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. Please see the report dated March 23, 2015 for details concerning the information, analysis, and conclusions from the formal study of the plan's experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

| Interest                 | 7.00%   |   |
|--------------------------|---|---|
| Salary Scale             | Service<br>1<br>2<br>3<br>4<br>5<br>6-9                                 | Rate<br>6.65%<br>6.65<br>3.40<br>3.40<br>6.10<br>3.40   |
|                          | 10<br>11-14<br>15<br>16-19<br>20<br>21<br>22<br>23<br>24<br>25<br>26 on | 5.90<br>3.40<br>5.80<br>3.40<br>5.50<br>3.40<br>3.40<br>3.40<br>3.40<br>5.20<br>3.40  |
| Amortization Growth Rate | 3.40%   |   |
| Expenses                 | Prior year's actuated to the nearest \$10                               | al administrative expenses increased by 3% and rounded 00.  |
| Mortality                | per Scale AA, w   | ned Healthy Mortality Table with generational projection<br>ith separate Male and Female tables. This assumption<br>mortality improvements beyond the valuation date. |
| Percent Married          | 75% of active and   | d terminated vested members are assumed to be married.  |
| Age of Spouse            | Females are assu  | umed to be three years younger than their male spouses.   |

July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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

|   |    | 0 |   | <u>0</u> 1 |  |
|---|----|---|---|------------|--|
| u | rn | U | v | GI         |  |
|   |    |   |   |            |  |

2003 SOA Small Plan Age Table multiplied by 0.45:

| Age | Rate   |
|-----|--------|
| 20  | 10.94% |
| 25  | 8.78   |
| 30  | 6.98   |
| 35  | 5.45   |
| 40  | 4.23   |
| 45  | 3.29   |
| 50  | 2.52   |
| 55  | 1.89   |
|     |        |

**Rate of Retirement** 

Active members are assumed to retire as follows.

| Age     | Rate |
|---------|------|
| 55 – 58 | 3%   |
| 59      | 5    |
| 60 – 61 | 10   |
| 62      | 30   |
| 63      | 15   |
| 64      | 20   |
| 65      | 35   |
| 66 - 68 | 30   |
| 69      | 50   |
| 70      | 100  |
|         |      |

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

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

| Age | Male   | Female  |
|-----|--------|---------|
| 22  | 0.080% | 0.1000% |
| 27  | 0.089  | 0.1157  |
| 32  | 0.105  | 0.1554  |
| 37  | 0.137  | 0.2315  |
| 42  | 0.202  | 0.3050  |
| 47  | 0.356  | 0.4628  |
| 52  | 0.662  | 0.7282  |
| 57  | 1.187  | 1.0683  |
| 62  | 1.671  | 1.2532  |

### July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

### **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                   | Municipal employees working in nonuniform classifications.   |
|-------------------------------|--|
|                               | Eligible members participate on the first day of the month following date of hire.   |
|                               | All employees hired after November 21, 2013 shall participate in a defined contribution plan, and will not participate in the defined benefit plan.  |
| Employee Contributions        | All active participants contribute 10% of compensation (effective July 1, 2015).   |
|                               | Interest is credited at 5% per annum.  |
| Final Average<br>Compensation | The average of total pay received for the five consecutive years out of the ten latest years which gives the highest average.  |
| Normal Retirement Date        | Age 62.  |
| Normal Retirement Benefit     | 2% of Average Compensation per year of service.  |
| Early Retirement Date         | Age 55 with 10 years of vesting service.   |
| Early Retirement Benefit      | Accrued benefit reduced by 6 2/3% for each of the first 5 years and 3 1/3% for each of the next 2 years by which the member's Early Retirement Date precedes their Normal Retirement Date. |
| Late Retirement Date          | Any age beyond 62.   |
| Late Retirement Benefit       | The greater of (a) the accrued benefit as of the member's Late Retirement<br>Date or (b) the accrued benefit as of the member's Normal Retirement Date<br>increased actuarially.           |
| Disability Retirement Date    | 10 years of service.   |
| Disability Retirement Benefit | Immediate benefit equal to 25% of Average Compensation, payable until the member's Normal Retirement Date.   |
|                               | Deferred benefit equal to the accrued benefit, starting on the member's Normal Retirement Date.  |

July 1, 2016 Actuarial Valuation COVENTRY MUNICIPAL EMPLOYEES' RETIREMENT PLAN

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

| Normal Form of Annuity                   | Life Annuity with Modified Cash Refund. Optional forms of benefit are available on an actuarially equivalent basis.  |
|--|--|
| Vesting                                  | 40% after 4 years of service, increasing 5% for each of the next 2 years, then increasing 10% for each of the next 5 years to 100% after 11 years. Members are 100% vested at their Early Retirement Date, Normal Retirement Date, or Disability Retirement Date.  |
| Pre-Retirement Spouse's<br>Death Benefit | If the member is vested and is married at the time of death, the surviving spouse will receive a benefit equal to 50% of the benefit that would have been payable had the member terminated immediately before death, elected to retire at their earliest retirement eligibility or date of death if later, and elected a 50% joint and survivor annuity. The surviving spouse's benefit is payable starting on the date that would have been the member's earliest retirement date. |
| Pre-Retirement Lump Sum<br>Death Benefit | Refund of Employee Contributions with interest to date of death.   |
| Death Benefits<br>After Retirement       | Based on form of benefit elected at retirement.  |
| Termination Benefit<br>Pre-Retirement    | Refund of Employee Contributions with interest to date of termination.   |