# CITY OF DOVER, DELAWARE

## General Employee Pension Plan
## Actuarial Valuation

## AS OF JULY 1, 2014 FOR
## FISCAL YEAR ENDING JUNE 30, 2015

1550 Liberty Ridge Drive
Suite 200
Wayne, PA 19087-5572

Tel +1 610 687.5644
Fax +1 610.687.4236

www.milliman.com

September 10, 2015

Ms. Donna Mitchell
Controller/Treasurer
City of Dover
5 E. Reed Street
Weyandt Hall, Suite 300
Dover, DE 19901

Dear Ms. Mitchell:

This report presents the results of the July 1, 2014 actuarial valuation for the City of Dover, Delaware General Employee Pension Plan for determining contributions for the fiscal year ending June 30, 2015.

Purpose

The main purposes of this report are:

- to determine the Actuarially Determined Contribution per the City's funding policy for the fiscal year ending June 30, 2015; and

- to assess the relative funded position of the plan; and

- to review the experience of the plan for the valuation year ending June 30, 2014.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the City. The calculations in the enclosed report have been made on a basis consistent with our understanding of the City's funding requirements and goals as well as the plan provisions described in this report. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. Calculations for GASB 67 and 68 purposes are provided in a separate report.

Milliman's work is prepared solely for the internal business use of the City. 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:

- The City may provide a copy of Milliman's work, in its entirety, to the City'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 City.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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.

Data Reliance

In performing this analysis, we relied on data and other information (both written and oral), such as the plan provisions, provided by City of Dover, Delaware. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. 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.

Variability of Results

Future actuarial measurements may differ significantly from the current measurements presented in this valuation due to actual plan experience deviating from the actuarial assumptions, the natural operation of the plan's actuarial cost method (such as the expiration of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions, actuarial assumptions, and applicable law. An assessment of the potential range and cost effect of such differences is beyond the scope of this project.

Certification

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 based on our understanding of the benefits provided by the City, which are consistent with the principles prescribed by the Actuarial Standards Board, the Code of Professional Conduct, and the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States of the American Academy of Actuaries. We further certify that all costs and liabilities have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan where available and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan.

The valuation date is the date that all participant and other pertinent information is collected and liabilities are measured. The valuation date for this valuation is July 1, 2014. The City requires actuarial valuations on a biannual basis to be consistent with requirements under GASB 67 and 68. Therefore, the results of this valuation may be used for the 2015 fiscal year and be the basis for the 2016 fiscal year, unless significant changes occur that would affect the results of this valuation. Assuming no significant changes, the next valuation would be for the 2016 fiscal year.

We are members of the American Academy of Actuaries and meet its qualification standards to render this actuarial opinion.

Respectfully submitted,

By: Timm J Nu

Tim Nugent, F.S.A.
Member American Academy of Actuaries

By: Scott Porter

Scott F. Porter, F.S.A.
Member American Academy of Actuaries

SFP:TJN\078DVR01-10
g:\corr15\dvr\dvrval2014_genpen.doc

**CITY OF DOVER, DELAWARE**

General Employee Pension Plan Actuarial Valuation

**TABLE OF CONTENTS**

# SECTION I – SUMMARY OF RESULTS

## Executive Summary

The purpose of the actuarial valuation is to determine the actuarially determined contribution in accordance with the City's funding policy to ensure funding on a consistent basis. The valuation does not include the new accounting standards for pension plans, GASB Statements 67 and 68, as that information is provided in a separate report.

The Actuarially Determined Contribution (ADC) increased from $2.63 million for the fiscal year ending June 30, 2014 to $2.98 million for the fiscal year ending June 30, 2015. The ADC comprises the Normal Cost and an amortization of the Unfunded Accrued Liability plus an interest adjustment. The Normal Cost is based on the individual Entry Age Normal cost method. This method determines the normal cost on an individual basis and the City portion reflects an offset due to expected employee contributions. Since the prior valuation, the Entry Age Normal cost method has been modified to be consistent with the version required by GASB 67 and 68. This change decreased the ADC by approximately $10,000.

The normal cost rate increased from 4.60% based on the 2012 actuarial valuation to 5.04% based on the 2014 actuarial valuation. As of July 1, 2014, the normal cost is $0.28 million including an interest adjustment.

To improve the funding of the plan, the amortization period has been decreased from 21 years based on the old period to 15 years (closed) amortization of the unfunded liability. This change increased the amortization payment by $409,000. Along with other changes to methods and assumptions, the amortization payment totals $2.54 million with an interest adjustment is $0.17 million. The Unfunded Accrued Liability decreased slightly from $25.85 million as of July 1, 2013 to $25.45 million as of July 1, 2014. As of July 1, 2014, the funded ratio is 56.3% based on the actuarial value of assets and 59.1% based on the market value of assets.

The slight decrease in the unfunded liability is primarily due to City contributions made in in excess of the ADC by $0.84 million during the prior year and an actuarial gain offset by changes in the economic assumptions. The changes in the economic assumptions include a reduction in the interest rate assumption from 7.0% to 6.5%, the salary increase assumption from 4.0% to 3.0% and the inflation assumption from 2.75% to 2.50%. These changes increased the ADC by $0.14 million.

The actuarial gain is due the actuarial value of assets earning more than expected, salary increases less than expected and fewer deaths than expected partially offset by fewer terminations than expected and more retirements than expected.

## SECTION I – SUMMARY OF RESULTS
(Continued)

The market value of assets estimated rate of return during the prior year was 13.76%. However for purposes of determining contributions, asset gains and losses are smoothed in over a 5-year period. Due to asset losses in prior years, the estimated return on the actuarial value of assets is 9.71%, which is more than the assumed return of 7% resulting in an actuarial gain. As of July 1, 2014, the actuarial value of assets is 95.4% of market value. Unless future investment losses are experienced, recognition of these deferred gains will decrease the contribution requirements slightly in the near future.

### Funding Policy

The City makes payroll based contributions equal to the normal cost rate for active members in the plan. Over the last couple of years, the City has also made payroll based contributions supplemented by lump sum contributions to pay the amortization of the unfunded liability. The Actuarially Determined Contribution is based on an amortization of the unfunded actuarial accrued liability over 15 years beginning July 1, 2014 on a closed basis.

### Valuation Date

The valuation date is the date that all participant and other pertinent information is collected and liabilities are measured. This date may not be more than 24 months prior to the beginning of the fiscal year for GASB 67 and 68 purposes. The valuation date for this valuation is July 1, 2014 which is at the beginning of the 2015 fiscal year. This is consistent with the prior valuation completed as of July 1, 2012 for the 2013 and 2014 fiscal years. The results of this valuation may be used for the 2015 fiscal year and be the basis for the 2016 fiscal year, unless significant changes occur that would affect the results of this valuation. Assuming no significant changes, the next valuation would be for the 2017 fiscal year, based on a July 1, 2016 valuation date.

### Discussion of Supporting Exhibits

Exhibit 1 summarizes the assets as of June 30, 2014 and the change in assets from the prior year.

Exhibit 2 develops the actuarial value of assets as of July 1, 2014 and displays the estimated rates of return for the last five years on the market value and actuarial value of assets.

## SECTION I – SUMMARY OF RESULTS
(Continued)

Exhibit 3 summarizes the actuarial experience for the year ending June 30, 2014. In total, the plan experienced an actuarial gain of $1.02 million. The exhibit also shows the change in the funded ratio from 53.7% as of July 1, 2013 to 56.3% as of July 1, 2014.

Exhibit 4 summarizes the unfunded actuarial accrued liability and net employer normal cost by Fund. The actuarial accrued liability by Fund is calculated directly with 55% attributable to the General Fund, 8% attributable to the Water/Wastewater Fund and 37% attributable to the Electric Fund. Assets for the different internal funds of the City (General Fund, Water Fund, and Electric Fund) are determined based on cash flows and an allocation of investment income. Cash flows reflect actual Fund contributions and an allocation of benefit payments and expenses. This allocation will result in different funded ratios for each Fund.

Exhibit 4 also summarizes the normal cost attributable to each Fund. The normal cost is calculated directly by participants allocated to the indicated fund. The City's normal cost equals the gross normal cost for the plan less expected employee contributions. The estimated normal cost rate for the fiscal year ending June 30, 2015 for the total plan is 5.04%

Exhibit 5 summarizes the development of the Actuarially Determined Contribution for the fiscal year ending June 30, 2015 by Fund.

Exhibit 6 displays the funded ratio on both a market value and actuarial value basis as of the current valuation date and for the prior four years. Since July 1, 2010, the funded ratio has increased from 33.7% to 59.1% on a market value basis.

It also displays the contributions made by the City during the prior five fiscal years. The City's contribution has averaged 146.3% during this period.

Exhibit 7 summarizes the expected benefit payments from the plan projected over the next 10 fiscal years.

<u>Census Data</u>

Section III summarizes the census data provided by the City utilized in the preparation of the actuarial valuation. The section shows an age benefit profile of the retirees receiving benefits as of July 1, 2014.

## SECTION I – SUMMARY OF RESULTS
(Continued)

Summary of Principal Plan Provisions

Section IV summarizes the principal plan provisions as of the valuation date utilized in the preparation of this actuarial valuation. This information was supplied through various correspondences with the City.

Actuarial Assumptions and Methods

Section V summarizes the actuarial assumptions and methods utilized in the preparation of this actuarial valuation. The liabilities provided in this report are heavily dependent upon the assumptions utilized, especially regarding annual per capita costs and healthcare trend.

## SECTION II – EXHIBITS

### Market Value of Assets as of June 30, 2014

| | | |
|---|---|---|
| Assets | | |
| Operating Account, Receivables and Payables | ($5,675) | |
| Cash equivalents | $1,592,124 | |
| Mutual Funds - Equity | $20,970,469 | |
| Mutual Funds - Bonds | $11,868,691 | |
| Total | | $34,425,609 |

### Allocation of Market Value by Fund as of June 30, 2014

| | |
|---|---|
| General Fund | $14,642,387 |
| Water/Wastewater Fund | $2,590,534 |
| Electric Fund | $17,192,688 |
| Total Pension Assets | $34,425,609 |

### Change in Market Value of Assets

| | | |
|---|---|---|
| Market Value of Assets as of June 30, 2013 | | $30,262,853 |
| Income | | |
| City's contributions | 3,472,736 | |
| Employee contributions | 211,550 | |
| Net Investment and other income | 4,153,081 | |
| Total | | 7,837,367 |
| Disbursements | | |
| Benefit payments and contribution refunds | (3,654,194) | |
| Administrative Expenses | (20,417) | |
| Total | | (3,674,611) |
| Net increase/ (decrease) | | 4,162,756 |
| Market Value of Assets as of June 30, 2014 | | $34,425,609 |
| Estimated rate of return | | 13.76% |

Exhibit 1

## Development of Actuarial Value of Assets

Unexpected Returns

| Year Ending | Expected Return | Actual Return | Unexpected Return | Percentage Weight | Amount Deferred |
|---|---|---|---|---|---|
| 2014 | $ 2,113,168 | $ 4,153,081 | $ 2,039,913 | 80% | $ 1,631,930 |
| 2013 | 1,613,028 | 1,751,243 | 138,215 | 60% | 82,929 |
| 2012 | 1,542,187 | (4,991) | (1,547,178) | 40% | (618,871) |
| 2011 | 1,257,835 | 3,776,674 | 2,518,839 | 20% | 503,768 |
| Total | $ 6,526,218 | $ 9,676,007 | $ 3,149,789 | | $ 1,599,756 |

| | |
|---|---|
| Market Value of Assets as of June 30, 2014 | 34,425,609 |
| Actuarial Value of Assets as of June 30, 2014 | 32,825,853 |
| Ratio of Actuarial Value to Market Value | 95.4% |
| Estimated rate of return | 9.71% |

## Estimated Historical Rates of Return

| Fiscal Year Ending | Market Value | Actuarial Value |
|---|---|---|
| June 30, 2014 | 13.76% | 9.71% |
| June 30, 2013 | 7.60% | 5.52% |
| June 30, 2012 | -0.02% | 3.07% |
| June 30, 2011 | 21.02% | 4.86% |
| June 30, 2010 | 12.31% | 2.62% |
| 5 - Year Average | 10.71% | 5.13% |

Exhibit 2

## Actuarial Experience for Year Ending June 30, 2014

| | |
|---|---|
| Actuarial Accrued Liability BOY | $55,768,000 |
| Actuarial Value of Assets BOY | 29,919,687 |
| Unfunded Accrued Liability BOY | 25,848,313 |
| Funded Ratio BOY | 53.7% |
| Gross Normal Cost BOY | 487,280 |
| Interest | 1,843,492 |
| Contributions Made with Interest | (3,807,665) |
| Increases in UAL due to: | |
| Plan Changes | - |
| Assumption Changes | 2,098,929 |
| Method Changes | - |
| Total | 2,098,929 |
| Expected UAL | 26,470,349 |
| Actuarial Accrued Liability EOY | $58,278,646 |
| Actuarial Value of Assets EOY | 32,825,853 |
| Unfunded Accrued Liability EOY | 25,452,793 |
| Funded Ratio EOY | 56.3% |
| (Gain)/Loss | (1,017,556) |

Exhibit 3

## SECTION II – EXHIBITS

### Allocation of Unfunded Actuarial Accrued Liability by Fund as of July 1, 2014

| | (110) General Fund | (412) Water Fund | (480) Electric Fund | Total |
|---|---|---|---|---|
| Actives | $9,627,827 | $1,153,458 | $6,273,924 | $17,055,209 |
| Deferred Vesteds | 431,442 | 103,705 | 364,315 | 899,462 |
| Retirees | 21,754,399 | 3,457,256 | 15,112,320 | 40,323,975 |
| Total Actuarial Accrued Liability | 31,813,668 | 4,714,419 | 21,750,559 | 58,278,646 |
| Actuarial Value of Assets | 13,961,956 | 2,470,152 | 16,393,745 | 32,825,853 |
| Unfunded Actuarial Liability | 17,851,712 | 2,244,267 | 5,356,814 | 25,452,793 |
| Funded Ratio | 43.9% | 52.4% | 75.4% | 56.3% |

### Allocation of Entry Age Normal Cost by Fund for the Fiscal Year Ending June 30, 2015

| | | | | |
|---|---|---|---|---|
| Gross Normal Cost | $292,997 | $49,363 | $111,307 | $453,667 |
| Member Contributions | 122,825 | 18,590 | 58,543 | 199,958 |
| City Normal Cost (int. adj for timing) | 185,288 | 33,387 | 58,126 | 276,801 |
| Expected Payroll for Fiscal Year | 3,389,088 | 509,645 | 1,591,459 | 5,490,192 |
| Normal Cost Rate | 5.47% | 6.55% | 3.65% | 5.04% |

Certain retirees are allocated to multiple funds according to the following percentages: General Fund 39%, Water/Wastewater Fund 16% and Electric Fund 45%.

Actuarial Value of Assets are allocated to each Fund based on AVA ratio and contributions made by each Fund beginning with 2013 fiscal year.

The Entry Age Normal Cost is determined by individual.

Exhibit 4

## SECTION II – EXHIBITS

### Annual Required Contribution For Fiscal Year Ending June 30, 2015

| | | (110) General Fund | (412) Water Fund | (480) Electric Fund | Total |
|---|---|---|---|---|---|
| Actuarial Accrued Liability | | $31,813,668 | $4,714,419 | $21,750,559 | $58,278,646 |
| Actuarial Value of Assets | | 13,961,956 | 2,470,152 | 16,393,745 | 32,825,853 |
| Unfunded Liability | | 17,851,712 | 2,244,267 | 5,356,814 | 25,452,793 |
| | | | | | |
| Normal Cost | | $185,288 | $33,387 | $58,126 | $276,801 |
| Amortization Payment | | 1,782,704 | 224,116 | 534,941 | 2,541,761 |
| Interest at | 6.50% | 115,876 | 14,567 | 34,771 | 165,214 |
| Actuarially Determined Contribution | | 2,083,868 | 272,070 | 627,838 | 2,983,776 |

The ARC is based on a discount rate of 6.5% and a 15-year amortization (closed) of the unfunded liability.

Exhibit 5

## SECTION II – EXHIBITS

### Historical Summary of Assets and Liabilities

| Valuation Date | Market Value of Assets | Actuaral Value of Assets | Actuarial Accrued Liability | Funded Ratio Market Value | Funded Ratio Actuarial Value |
|---|---|---|---|---|---|
| 7/1/2014 | $34,425,609 | $32,825,853 | $58,278,646 | 59.1% | 56.3% |
| 7/1/2013 | 30,262,853 | 29,919,687 | 55,768,000 | 54.3% | 53.7% |
| 7/1/2012 | 22,048,586 | 22,177,831 | 55,006,282 | 40.1% | 40.3% |
| 7/1/2011 | 22,008,915 | 21,472,928 | 53,486,000 | 41.1% | 40.1% |
| 7/1/2010 | 17,705,888 | 19,963,426 | 52,462,693 | 33.7% | 38.1% |

### Schedule of Employer Contributions

| Fiscal Year End | Actuarially Determined Contribution | City Contributions | Contribution Deficiency (Excess) | Percent Contributed |
|---|---|---|---|---|
| 6/30/2014 | $2,628,694 | $3,472,736 | ($844,042) | 132.1% |
| 6/30/2013 | 3,217,964 | 9,788,571 | (6,570,607) | 304.2% |
| 6/30/2012 | 3,130,022 | 3,142,951 | (12,929) | 100.4% |
| 6/30/2011 | 3,149,493 | 3,347,728 | (198,235) | 106.3% |
| 6/30/2010 | 2,564,767 | 2,270,623 | 294,144 | 88.5% |

Exhibit 6

## Expected Benefit Payments by Fiscal Year

| Fiscal Year | Amount |
|---|---|
| 2015 | $ 3,755,000 |
| 2016 | 3,760,000 |
| 2017 | 3,789,000 |
| 2018 | 3,816,000 |
| 2019 | 3,868,000 |
| 2020 | 3,933,000 |
| 2021 | 4,005,000 |
| 2022 | 4,083,000 |
| 2023 | 4,160,000 |
| 2024 | 4,255,000 |

## SECTION III – CENSUS DATA

## Summary of Active Data as of July 1, 2014

***Number of Participants by Age and Service Groups***

| | Years of Service | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | <1 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40&Up | Total |
| 0-24 | - | - | 1 | - | - | - | - | - | - | - | 1 |
| 25-29 | - | - | 8 | - | - | - | - | - | - | - | 8 |
| 30-34 | - | - | 6 | 2 | - | - | - | - | - | - | 8 |
| 35-39 | - | - | 12 | 5 | - | - | - | - | - | - | 17 |
| 40-44 | - | - | 5 | 7 | 3 | 3 | - | - | - | - | 18 |
| 45-49 | - | - | 4 | 7 | 4 | 4 | 2 | - | - | - | 21 |
| 50-54 | - | - | 4 | 3 | 2 | 4 | 5 | 5 | - | - | 23 |
| 55-59 | - | - | 2 | 5 | 2 | 8 | 1 | - | 1 | - | 19 |
| 60-64 | - | - | 3 | 2 | - | - | - | - | - | - | 5 |
| 65-69 | - | - | - | - | - | 1 | - | - | - | - | 1 |
| 70&Up | - | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | 45 | 31 | 11 | 20 | 8 | 5 | 1 | - | 121 |

## SECTION III – CENSUS DATA

### Summary of Inactive Data as of July 1, 2014

### Participants with Deferred Benefits

| Age | Number of Participants | Monthly Benefit Amount |
|---|---|---|
| < 30 | 0 | $0 |
| 30 - 34 | 1 | 1,287 |
| 35 - 39 | 1 | 820 |
| 40 - 44 | 1 | 1,084 |
| 45 - 49 | 1 | 798 |
| 50 - 54 | 4 | 3,375 |
| 55 - 59 | 5 | 3,677 |
| 60 - 64 | 3 | 1,952 |
| 65 & Up | 1 | 683 |
| Total | 17 | $13,676 |

### Participants in Pay Status

| Age | Number of Participants | Monthly Benefit Amount |
|---|---|---|
| < 55 | 17 | $33,862 |
| 55 - 59 | 37 | 71,578 |
| 60 - 64 | 39 | 62,966 |
| 65 - 69 | 36 | 59,105 |
| 70 - 74 | 23 | 28,683 |
| 75 - 79 | 14 | 10,519 |
| 80 - 84 | 30 | 27,838 |
| 85 - 89 | 7 | 8,486 |
| 90 & Up | 4 | 2,363 |
| Total | 207 | $305,400 |

## SECTION IV – SUMMARY OF PRINCIPAL PLAN PROVISIONS as of JULY 1, 2014

1) Type of Plan: The Plan is a contributory, defined benefit plan. Effective, May 1, 1994, contributions by members are 3½% of the actual average monthly earnings and are deducted on a payroll basis.

2) Eligibility for Membership: Full-time employment (at least 37 ½ hours worked per week) with the City. Effective May 1, 1994, employees may make an irrevocable decision to join the Deferred Compensation Plan and forfeit participation in the pension plan. Effective September 28, 2009, participation in the pension plan is closed (i.e. no new members can become participants).

3) Definitions:
   a) Continuous Service: Continuous Service is earned for full-time employment with the City. A member who terminates and is rehired within 5 years may have service restored if reemployed within 90 days, reemployed for 5 years if had less than 20 years of continuous service or reemployed for 2 years if had at least 20 years of continuous service. Any contributions withdrawn must be repaid with interest.

   b) Earnings: Base pay plus scheduled overtime and payment for being on-call, except hours called out.

   c) Average Monthly Earnings: 36 consecutive months in the final ten years of continuous service, which results in the highest average, no less than $150.

   d) Eligible Survivor: The member's spouse or domestic partner of at least one year and not domiciled apart at the date of death or surviving children under the age of 18.

4) Retirement Benefits

   a) Unreduced Retirement

   Eligibility: Satisfaction of either of the following eligibility requirements:

   (1) Later of attainment of age 65 and completion of 10 years of Continuous Service (normal retirement).
   (2) If hired prior to May 1, 1994, later of attainment of age 50 and completion of 20 years of Continuous Service.
   (3) If hired prior to May 1, 1994, completion of 25 years of Continuous Service.

## SECTION IV – SUMMARY OF PRINCIPAL PLAN PROVISIONS as of JULY 1, 2014
(Continued)

(4) If hired on or after May 1, 1994, later of attainment of age 55 and completion of 80 points (age plus Continuous Service).

Benefit: 1/50th of Average Monthly Earnings times Continuous Service.

b) Reduced Retirement:

Eligibility: Attainment of age 55 and completion of 10 years of Continuous Service.

Benefit: The Unreduced Retirement Benefit reduced 6% for each year the early retirement date precedes age 65.

c) Termination Benefits:

Eligibility: Termination of service other than for reasons of retirement, death or disability.

Benefit: For members with at least 10 years of continuous service, the Unreduced Retirement Benefit payable at age 65.

Refund: Accumulated contributions with interest accumulated at 5% will be refunded on the 90th day following termination upon request or automatically after 5 years for non-vested participants. Vested participants may elect a refund in lieu of the deferred vested benefit.

d) Disability Benefits:

Eligibility: Total and permanent disability and completion of 10 years of Continuous Service.

Benefit: The Unreduced Retirement Benefit payable immediately. The benefit ceases if the participant has recovered, refuses an examination or attains age 65, at which time the normal retirement benefit commences of the same amount.

e) Death Benefits:

Eligibility: Currently retired, eligible to retire with an unreduced or reduced benefit or completion of at least 20 years of service.

**SECTION IV – SUMMARY OF PRINCIPAL PLAN PROVISIONS**
**as of JULY 1, 2014**
(Continued)

Benefit: 50% of the benefit the member was receiving or entitled to receive. Benefits for members not eligible for unreduced retirement will be reduced 6% per year from age 65, but no less than $200 per month. Benefit is payable immediately to an Eligible Survivor and ceases upon the earliest of death, remarriage or attainment of age 18 for children.

Refund: For ineligible members, accumulated contributions with interest accumulated at 5% will be refunded to a designated beneficiary or estate. For retired members and Eligible Survivors, if the monthly benefit payments received in the aggregate are less than the accumulated contributions, the balance of the accumulated contributions will be refunded to a designated beneficiary or estate.

5) Changes in Plan Provisions: There have been no changes since the prior valuation.

## SECTION V - SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

### A. Actuarial Assumptions

Interest Rate: 6.5% per annum, compounded annually.

Salary Scale: 3.0% per annum, compounded annually.

Valuation Compensation: Rate of pay as of July 1, 2014.

Future Increases on IRS Limits on Compensation and Benefits: 2.50%

Termination: Withdrawal rates vary by union status, age, and service. No terminations are assumed once a member is eligible for reduced or unreduced retirement. Illustrative rates are shown below.

| | | Nonunion | | |
|---|---|---|---|---|
| Age | Union | <3 Years | 3 – 4 Years | 5+Years |
| 25 | 10.0% | 30.0% | 27.0% | 25.5% |
| 30 | 9.4 | 30.0 | 27.0 | 23.4 |
| 35 | 8.2 | 30.0 | 27.0 | 20.3 |
| 40 | 6.7 | 30.0 | 27.0 | 16.6 |
| 45 | 5.2 | 30.0 | 27.0 | 12.5 |
| 50 | 3.3 | 30.0 | 27.0 | 7.5 |
| 55 | 1.2 | 30.0 | 27.0 | 2.6 |

Retirement: Rates of retirement vary by union, age and eligibility for unreduced retirement. No reduced retirements are assumed. Illustrative rates are shown below.

| Age | Hired pre 5/94 | Hired pst 5/94 | Age | Hired pre 5/94 | Hired pst 5/94 |
|---|---|---|---|---|---|
| 50-51 | 4% | 0% | 62 | 25% | 20% |
| 52-54 | 8 | 0 | 63-64 | 25 | 15 |
| 55-57 | 8 | 6 | 65 | 25 | 50 |
| 58 | 10 | 6 | 66 | 50 | 50 |
| 59 | 15 | 6 | 67-69 | 100 | 50 |
| 60 | 20 | 10 | 70 | 100 | 100 |
| 61 | 25 | 10 | | | |

## SECTION V - SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

Disability: None assumed.

Mortality: RP-2000 Healthy Annuitant Mortality Table projected on a generational basis using Scale AA. The Employee table is used for pre-retirement. As a generational table, it reflects mortality improvements both before and after the measurement date. Rates vary by age and gender.

Marriage: Husbands are assumed to be 3 years older than wives. Among the active population, 70% of males and 55% of females are assumed to be married. This percentage is not individually explicit, but is considered reasonable, when viewed in the aggregate.

Form of Payment: For assumed married members, 50% joint and survivor annuity. Actual marital status used for retirees. For other members, a 2-year certain and life to approximate the value of the modified cash refund.

Special Data Adjustments: Interest on contributions was estimated based on a 5% interest crediting rate for half of the members Continuous Service as of the valuation date.

### B. Actuarial Cost Method

The plan's actuarial cost method is the Entry Age Normal method. Under this method, a projected benefit is determined at each active participant's assumed retirement age assuming future compensation increases. The plan's normal cost is the sum of each active participant's annual cost for the current year of service determined such that, if it were calculated as a level percentage of compensation each year, it would accumulate at the valuation interest rate over the participant's total prior and future years of service to the assumed retirement date into an amount sufficient to fund the projected benefit. The plan's accrued liability is the sum of (a) the accumulation of each active participant's normal costs attributable to all prior years of service plus (b) the present value of each inactive participant's future benefits. This method is in compliance with GASB Statements No. 67 and 68.

## SECTION V - SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

### C. Asset Valuation Method

The Asset Valuation method smoothes gains and losses over a 5-year period. The formula for the asset valuation method is as follows:

Actuarial Value of Assets = $MV_t - .8UR_1 - .6UR_2 - .4UR_3 - .2UR_4$

Where

$MV_t$ = Market Value of assets as of the valuation date.

$UR_n$= Unexpected return during the $n^{th}$ year preceding the valuation date. The unexpected return for a year equals the total investment return minus the total expected return. The total expected return equals the market value of assets at the beginning of the year plus the weighted net cash flow during the year multiplied by the expected rate of return.

### D. Changes in Actuarial Assumptions or Methods

The following changes have been made to the economic assumptions used in the actuarial valuation:

- The interest rate was reduced from 7.0% to 6.5%
- The salary increase assumption was reduced from 4.0% to 3.0%
- The inflation assumption was reduced from 2.75% to 2.5%

The version of the Entry Age Normal cost method used in the valuation has been modified slightly to be consistent with the version required for calculations under GASB 67 and 68.