

# State of Alaska Public Employees' Retirement System Defined Contribution Retirement Plan

For Occupational Death and Disability And Retiree Medical Benefits

Actuarial Valuation Report As of June 30, 2015



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June 27, 2016

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
Juneau, AK 99811-0203
P.O. Box 110203

#### **Certification of Actuarial Valuation**

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan as of June 30, 2015 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2015. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness. Valuation census data used for the retiree medical valuation utilized available retiree medical information. Certain pension data fields have been used to clarify the retiree medical data provided to us. Details regarding this information can be found in Section 5.2.c.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the Plan as of June 30, 2015.

PERS DCR is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for PERS DCR is to pay required contributions that remain level as a percent of PERS DCR compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of PERS DCR compensation over a closed layered 25-year period. This objective is currently being met and is projected to continue to be met as required by the Alaska state statutes.

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The Board and staff of the State of Alaska may use this report for the review of the operations of PERS DCR. Use of this report, for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Buck to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without the review by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. In particular, retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2009 to June 30, 2013. Based on that experience study, the Board adopted new assumptions effective for the June 30, 2014 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claims cost rates effective June 30, 2015 to better reflect expected future healthcare experience. Based on recent experience, the healthcare cost trend assumptions are still reasonable and were not changed. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Sections 5.2 and 5.3.

The assumptions and methods used to determine the healthcare Actuarial Required Contributions (ARC) of the Employers to the PERS DCR Plan as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the trend data schedule under GASB No. 43 that is included in the Financial Section of the CAFR. We have also prepared the member data tables shown in Section 4 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions, solvency test, and analysis of financial experience for the Actuarial Section of the CAFR.

David Kershner and Melissa Bissett are Fellows of the Society of Actuaries and Todd Kanaster and Larry Langer are Associates of the Society of Actuaries. All are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. Mr. Kershner, Mr. Kanaster, and Mr. Langer take professional responsibility for the overall appropriateness of the analysis, assumptions and results. This report has been prepared in accordance with all applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

Q.LKL

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Principal

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The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms her qualification to render opinions in such matters in accordance with the Qualification Standards of the American Academy of Actuaries.

Melissa A. Bissett, FSA, MAAA

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### **Executive Summary**

#### Overview

The State of Alaska Public Employees' Retirement System DCR (PERS DCR) Plan provides occupational death & disability and retiree medical benefits to eligible members hired after June 30, 2006 or who have elected participation in this plan. The Commissioner of the Department of Administration is responsible for administering the Plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the Plan. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of June 30, 2015.

#### **Purpose**

An actuarial valuation is performed on the retirement plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

- 1. To determine the Employer contribution necessary to meet the Board's funding policy for the Plan;
- 2. To disclose the funding assets and liability measures as of the valuation date;
- 3. To disclose the healthcare accounting measures for the Plan required by GASB No. 43 for the last fiscal year;
- 4. To review the current funded status of the Plan and assess the funded status as an appropriate measure for determining actuarially determined contributions;
- 5. To compare actual and expected experience under the Plan during the last fiscal year; and
- 6. To report trends in contributions, assets, liabilities, and funded status over the last several years.

The actuarial valuation provides a "snapshot" of the funded position of PERS DCR based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date.

#### **Funded Status**

The funded status is a snapshot measure of the funding of the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. As shown in the chart below, the funded ratio can differ depending on whether the market value of assets or the actuarial value of assets are used. Also, the funded ratios presented below are not necessarily appropriate to use for an assessment of the funded position in the event of a settlement of the obligation was to be considered.

| Funde | ed Status as of June 30 <sup>1</sup> (\$'s in 000's)  | 2014 |           |    | 2015   |
|-------|---|------|-----------|----|--------|
| a.    | Actuarial Accrued Liability                           | \$   | \$ 53,844 |    | 63,732 |
| b.    | Valuation Assets                                      |      | 41,461    |    | 63,202 |
| C.    | Unfunded Actuarial Accrued Liability, (a) - (b)       | \$   | 12,383    | \$ | 530    |
| d.    | Funded Ratio based on Valuation Assets, (b) ÷ (a)     |      | 77.0%     |    | 99.2%  |
| e.    | Fair Value of Assets                                  | \$   | 44,750    | \$ | 63,540 |
| f.    | Funded Ratio based on Fair Value of Assets, (e) ÷ (a) |      | 83.1%     |    | 99.7%  |

As shown above, the funded ratio based on valuation assets as of June 30, 2015 has increased from 77.0% to 99.2%. The total calculated employer contribution rate has decreased from 1.39% of payroll for FY17 to 1.22% for FY18. The key reasons for the change in the funded status and calculated contribution rate are explained below.

The funded status for healthcare benefits is not necessarily an appropriate measure to confirm that assets are sufficient to settle health plan obligations as there are no available financial instruments for purchase. Future experience is likely to vary from assumptions, thus there is potential for actuarial gains or losses.

#### 1. Retiree Medical Experience

Please refer to the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2015 for a full description of the assumptions and costs of the retiree medical plan. Adjustments from these costs and assumptions are described in this report.

The recent claims experience described in Section 5.2 of this report (Section 6.2 of the PERS report), created an actuarial gain of approximately \$5.7 million, resulting in a decrease in the contribution rate for FY18 of approximately 0.59%.

#### 2. Investment Experience

The approximate FY15 investment return based on fair value was 3.3% compared to the expected investment return of 8.00% (net of investment and administrative expenses of approximately 0.10%). This resulted in a loss of approximately \$2.4 million to the Plan from investment experience. The asset valuation method recognizes 20 percent of this loss (\$490,000) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY11 investment gain, 20 percent of the FY12 investment loss, 20 percent of the FY13 investment gain and 20 percent of the FY14 investment gain were recognized this year. The approximate FY15 asset return based on actuarial value was 9.5% compared to the expected asset return of 8.00% (net of investment and administrative expenses).

<sup>&</sup>lt;sup>1</sup> Includes occupational death & disability and retiree medical benefits.

#### 3. Salary Increases

During the period June 30, 2014 to June 30, 2015, salary increases for continuing active members were slightly less than anticipated in the valuation assumptions.

#### 4. Demographic Experience

The number of active members increased 8.22% from 15,800 at June 30, 2014 to 17,098 at June 30, 2015. The number of active members is growing annually since the opening of PERS DCR to new entrants as of July 1, 2006. The average age of active members increased from 39.74 to 40.07 and increased credited service increased from 2.97 to 3.28 years.

The demographic experience gains/losses are shown on page 5.

#### 5. Changes in Methods Since the Prior Valuation

There have been no material changes in the asset or valuation methods since the prior valuation. To increase the efficiency of the data process, assumptions are used for individual data questions which are deemed to have an immaterial impact on liabilities and contribution rates. These data assumptions are described in Section 5.3.

#### 6. Changes in Assumptions Since the Prior Valuation

There have been no changes in assumptions since the prior valuation. Healthcare claim costs are updated annually as described in Section 5.2.

#### 7. Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

### Comparative Summary of Key Actuarial Valuation Results

|                  | mployer Contribution Rates for Occupational Death & ity for Fiscal Year: | 2017           | 2018           |
|------------------|--|----------------|----------------|
| a.               | Employer Normal Cost Rate  | 0.30%          | 0.29%          |
| b.               | Past Service Cost Rate   | <u>(0.09)%</u> | <u>(0.10)%</u> |
| C.               | Total Employer Contribution Rate, (a) + (b), not less than 0%            | 0.21%          | 0.19%          |
| Total E<br>Year: | mployer Contribution Rates for Retiree Medical for Fiscal                | 2017           | 2018           |
| a.               | Employer Normal Cost Rate  | 1.00%          | 0.92%          |
| b.               | Past Service Cost Rate   | <u>0.18%</u>   | <u>0.11%</u>   |
| C.               | Total Employer Contribution Rate,  |                |                |
|                  | (a) + (b), not less than 0%  | 1.18%          | 1.03%          |
| Total E          | mployer Contribution Rates for Fiscal Year:                              | 2017           | 2018           |
| a.               | Total Employer Contribution Rate   | 1.39%          | 1.22%          |
| b.               | Board Adopted Total Employer Contribution Rate                           | 1.39%          | TBD            |

The exhibit below shows the historical Board adopted employer contribution rates for PERS DCR.

|                |             | Total I                                       | <b>Employer Contribution</b> | n Rate              |
|----------------|-------------|---|------------------------------|---------------------|
| Valuation Date | Fiscal Year | Occupational Death & Disability (PF / Others) | Retiree Medical              | Total (PF / Others) |
| N/A            | FY07        | 0.40% / 0.30%                                 | 1.75%                        | 2.15% / 2.05%       |
| N/A            | FY08        | 1.33% / 0.58%                                 | 0.99%                        | 2.32% / 1.57%       |
| N/A            | FY09        | 1.33% / 0.58%                                 | 0.99%                        | 2.32% / 1.57%       |
| June 30, 2007  | FY10        | 1.33% / 0.30%                                 | 0.83%                        | 2.16% / 1.13%       |
| June 30, 2008  | FY11        | 1.18% / 0.31%                                 | 0.55%                        | 1.73% / 0.86%       |
| June 30, 2009  | FY12        | 0.97% / 0.11%                                 | 0.51%                        | 1.48% / 0.62%       |
| June 30, 2010  | FY13        | 0.99% / 0.14%                                 | 0.48%                        | 1.47% / 0.62%       |
| June 30, 2011  | FY14        | 1.14% / 0.20%                                 | 0.48%                        | 1.62% / 0.68%       |
| June 30, 2012  | FY15        | 1.06% / 0.22%                                 | 1.66%                        | 2.72% / 1.88%       |
| June 30, 2013  | FY16        | 1.05% / 0.22%                                 | 1.68%                        | 2.73% / 1.90%       |
| June 30, 2014  | FY17        | 0.49% / 0.17%                                 | 1.18%                        | 1.67% / 1.35%       |
| June 30, 2015  | FY18        | TBD   | TBD                          | TBD                 |

Contribution rates are based on salary for PERS DCR members only.

The rates shown above are for funding purposes which differ from the Annual Required Contribution for GASB No. 43 reporting purposes. Under GASB No. 43, retiree medical liabilities are gross of the retiree drug subsidy and are based on a discount rate in accordance with GASB parameters. Under GASB No. 43, the amortization of the unfunded liabilities is calculated as a level dollar amount.

### Summary of Actuarial Gain/(Loss)

The following table shows the FY15 gain/(loss) on total actuarial accrued liability as of June 30, 2015. (\$'s in 000's):

|   | Occupational<br>Death &<br>Disability |       | He | ealthcare | Total       |
|---|---------------------------------------|-------|----|-----------|-------------|
| Retirement Experience                     | \$                                    | 0     | \$ | 0         | \$<br>0     |
| Termination Experience                    |                                       | 9     |    | 1,146     | 1,155       |
| Active Mortality Experience               |                                       | 1,003 |    | (16)      | 987         |
| Inactive Mortality Experience             |                                       | (18)  |    | (1)       | (19)        |
| Disability Experience                     |                                       | 1,127 |    | (60)      | 1,067       |
| New Entrants                              |                                       | (113) |    | (1,786)   | (1,899)     |
| Rehires                                   |                                       | (27)  |    | (795)     | (822)       |
| Other Demographic Experience <sup>1</sup> |                                       | (758) |    | 701       | (57)        |
| Salary Increases                          |                                       | 55    |    | N/A       | 55          |
| Medical Claims Costs                      |                                       | N/A   |    | 5,699     | 5,699       |
| Total                                     | \$                                    | 1,278 | \$ | 4,888     | \$<br>6,166 |

Reflects data and programming changes, including one participant who was non-participating as of June 30, 2014 and was subsequently hired and disabled as of June 30, 2015. Programming changes include one less year of delay for PRPA death benefits and refinements for deferred disability benefits.

### Section 1 Actuarial Funding Results

### Section 1.1 Actuarial Liabilities and Normal Cost Peace Officer/Firefighter (\$'s in 000's)

| As of June 30, 2015                            | of F | ent Value<br>Projected<br>enefits | Actuarial Accrued<br>(Past Service)<br>Liability |       |  |
|--|------|-----------------------------------|--|-------|--|
| Active Members                                 |      |                                   |  |       |  |
| Occupational Death Benefits                    | \$   | 1,548                             | \$   | 117   |  |
| Occupational Disability Benefits               |      | 6,182                             |  | 1,209 |  |
| Medical and Prescription Drug Benefits         |      | 11,071                            |  | 5,284 |  |
| Medicare Part D Subsidy                        |      | (1,159)                           |  | (556) |  |
| Subtotal                                       | \$   | 17,642                            | \$   | 6,054 |  |
| Benefit Recipients                             |      |                                   |  |       |  |
| Survivor Benefits                              | \$   | 490                               | \$   | 490   |  |
| Disability Benefits                            |      | 1,158                             |  | 1,158 |  |
| Medical and Prescription Drug Benefits         |      | 125                               |  | 125   |  |
| Medicare Part D Subsidy                        |      | (14)                              |  | (14)  |  |
| Subtotal                                       | \$   | 1,759                             | \$   | 1,759 |  |
| Total  | \$   | 19,401                            | \$   | 7,813 |  |
| Total Occupational Death & Disability          | \$   | 9,378                             | \$   | 2,974 |  |
| Total Retiree Medical, Net of Part D Subsidy   | \$   | 10,023                            | \$   | 4,839 |  |
| Total Retiree Medical, Gross of Part D Subsidy | \$   | 11,196                            | \$   | 5,409 |  |

| As of June 30, 2015   |                | Normal<br>Cost                     |  |  |  |
|---|----------------|------------------------------------|--|--|--|
| Active Members Occupational Death Benefits Occupational Disability Benefits Medical and Prescription Drug Benefits Medicare Part D Subsidy Subtotal | \$<br>\$       | 163<br>519<br>851<br>(90)<br>1,443 |  |  |  |
| Total Total Occupational Death & Disability Total Retiree Medical, Net of Part D Subsidy Total Retiree Medical, Gross of Part D Subsidy             | \$<br>\$<br>\$ | 1,443<br>682<br>761<br>851         |  |  |  |

# Actuarial Liabilities and Normal Cost – Others (\$'s in 000's)

| As of June 30, 2015                            |    | sent Value<br>Projected<br>Benefits | Actuarial Accrued<br>(Past Service)<br>Liability |         |  |
|--|----|-------------------------------------|--|---------|--|
| Active Members                                 |    |                                     |  |         |  |
| Occupational Death Benefits                    | \$ | 7,292                               | \$   | 582     |  |
| Occupational Disability Benefits               |    | 8,175                               |  | 639     |  |
| Medical and Prescription Drug Benefits         |    | 108,673                             |  | 60,803  |  |
| Medicare Part D Subsidy                        |    | (12,736)                            |  | (7,187) |  |
| Subtotal                                       | \$ | 111,404                             | \$   | 54,837  |  |
| Benefit Recipients                             |    |                                     |  |         |  |
| Survivor Benefits                              | \$ | 0                                   | \$   | 0       |  |
| Disability Benefits                            |    | 854                                 |  | 854     |  |
| Medical and Prescription Drug Benefits         |    | 261                                 |  | 261     |  |
| Medicare Part D Subsidy                        |    | (33)                                |  | (33)    |  |
| Subtotal                                       | \$ | 1,082                               | \$   | 1,082   |  |
| Total  | \$ | 112,486                             | \$   | 55,919  |  |
| Total Occupational Death & Disability          | \$ | 16,321                              | \$   | 2,075   |  |
| Total Retiree Medical, Net of Part D Subsidy   | \$ | 96,165                              | \$   | 53,844  |  |
| Total Retiree Medical, Gross of Part D Subsidy | \$ | 108,934                             | \$   | 61,064  |  |

| As of June 30, 2015                            |    | Normal<br>Cost |
|--|----|----------------|
| Active Members                                 |    |                |
| Occupational Death Benefits                    | \$ | 998            |
| Occupational Disability Benefits               |    | 1,132          |
| Medical and Prescription Drug Benefits         |    | 9,112          |
| Medicare Part D Subsidy                        |    | (1,072)        |
| Subtotal                                       | \$ | 10,170         |
| Total  | \$ | 10,170         |
| Total Occupational Death & Disability          | \$ | 2,130          |
| Total Retiree Medical, Net of Part D Subsidy   |    | 8,040          |
| Total Retiree Medical, Gross of Part D Subsidy | \$ | 9,112          |

# Actuarial Liabilities and Normal Cost – All Members (\$'s in 000's)

| As of June 30, 2015                            | of | sent Value<br>Projected<br>Benefts | Actuarial Accrued<br>(Past Service)<br>Liability |         |  |
|--|----|------------------------------------|--|---------|--|
|  |    |                                    |  |         |  |
| Active Members                                 |    |                                    |  |         |  |
| Occupational Death Benefits                    | \$ | 8,840                              | \$   | 699     |  |
| Occupational Disability Benefits               |    | 14,357                             |  | 1,848   |  |
| Medical and Prescription Drug Benefits         |    | 119,744                            |  | 66,087  |  |
| Medicare Part D Subsidy                        |    | (13,895)                           |  | (7,743) |  |
| Subtotal                                       | \$ | 129,046                            | \$   | 60,891  |  |
| Benefit Recipients                             |    |                                    |  |         |  |
| Survivor Benefits                              | \$ | 490                                | \$   | 490     |  |
| Disability Benefits                            |    | 2,012                              |  | 2,012   |  |
| Medical and Prescription Drug Benefits         |    | 386                                |  | 386     |  |
| Medicare Part D Subsidy                        |    | (47)                               |  | (47)    |  |
| Subtotal                                       | \$ | 2,841                              | \$   | 2,841   |  |
| Total  | \$ | 131,887                            | \$   | 63,732  |  |
| Total Occupational Death & Disability          | \$ | 25,699                             | \$   | 5,049   |  |
| Total Retiree Medical, Net of Part D Subsidy   | \$ | 106,188                            | \$   | 58,683  |  |
| Total Retiree Medical, Gross of Part D Subsidy | \$ | 120,130                            | \$   | 66,473  |  |

| As of June 30, 2015                            |    | Normal<br>Cost |
|--|----|----------------|
| Active Members                                 |    |                |
| Occupational Death Benefits                    | \$ | 1,161          |
| Occupational Disability Benefits               |    | 1,651          |
| Medical and Prescription Drug Benefits         |    | 9,963          |
| Medicare Part D Subsidy                        |    | (1,162)        |
| Subtotal                                       | \$ | 11,613         |
| Total  | \$ | 11,613         |
| Total Occupational Death & Disability          | \$ | 2,812          |
| Total Retiree Medical, Net of Part D Subsidy   |    | 8,801          |
| Total Retiree Medical, Gross of Part D Subsidy | \$ | 9,963          |

# Section 1.2 Actuarial Contributions for FY18 Peace Officer/Firefighter

(\$'s in 000's)

| Normal Cost Rate   | Occupational<br>Death &<br>Disability |         | Retir | ee Medical | Total         |
|--|---------------------------------------|---------|-------|------------|---------------|
| Total Normal Cost  | \$                                    | 682     | \$    | 761        | \$<br>1,443   |
| 2. DCR Plan Rate Payroll Projected for FY16              |                                       | 110,139 |       | 110,139    | 110,139       |
| 3. Employer Normal Cost Rate, (1) / (2)                  |                                       | 0.62%   |       | 0.69%      | 1.31%         |
| Past Service Rate  |                                       |         |       |            |               |
| Actuarial Accrued Liability                              | \$                                    | 2,974   | \$    | 4,839      | \$<br>7,813   |
| 2. Valuation Assets                                      |                                       | 6,184   |       | 3,644      | <br>9,828     |
| 3. Total Unfunded Actuarial Accrued Liability, (1) – (2) | \$                                    | (3,210) | \$    | 1,195      | \$<br>(2,015) |
| 4. Funded Ratio based on Valuation Assets                |                                       | 207.9%  |       | 75.3%      | 125.8%        |
| 5. Past Service Cost Amortization Payment                | \$                                    | (213)   | \$    | 88         | \$<br>(125)   |
| 6. DCR Plan Rate Payroll Projected for FY16              |                                       | 110,139 |       | 110,139    | 110,139       |
| 7. Past Service Cost Rate, (5) / (6)                     |                                       | (0.19)% |       | 0.08%      | (0.11)%       |
| Total Employer Contribution Rate, not less than 0%       |                                       | 0.43%   |       | 0.77%      | 1.20%         |

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

| Total Employer Contribution Rate as Percent of Total Payroll |   | Occupational<br>Death &<br>Disability |         | Retiree Medical |         | Total |         |
|--|---|---------------------------------------|---------|-----------------|---------|-------|---------|
| 1.   | Total Normal Cost                                     | \$                                    | 682     | \$              | 761     | \$    | 1,443   |
| 2.   | Total DB and DCR Plan Rate Payroll Projected for FY16 |                                       | 304,115 |                 | 304,115 |       | 304,115 |
| 3.   | Employer Normal Cost Rate, (1) / (2)                  |                                       | 0.22%   |                 | 0.25%   |       | 0.47%   |
| 4.   | Past Service Cost Amortization Payment                | \$                                    | (213)   | \$              | 88      | \$    | (125)   |
| 5. Past Service Cost Rate, (4) / (2)                         |   |                                       | (0.07)% |                 | 0.03%   |       | (0.04)% |
| 6.   | Total Employer Contribution Rate, (3) + (5)           |                                       | 0.15%   |                 | 0.28%   |       | 0.43%   |

#### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

|                            | Amortizati   | ion Period | Balances |         |     | Beain    | ning-of-Year |        |
|----------------------------|--------------|------------|----------|---------|-----|----------|--------------|--------|
| Charge                     | Date Created | Years Left |          | Initial | Out | standing | _            | ayment |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$       | (100)   | \$  | (105)    | \$           | (8)    |
| FY08 Gain                  | 06/30/2008   | 18         |          | (586)   |     | (615)    |              | (47)   |
| Change in Assumptions      | 06/30/2009   | 19         |          | (104)   |     | (109)    |              | (8)    |
| FY09 Loss                  | 06/30/2009   | 19         |          | 446     |     | 468      |              | 35     |
| Change in Assumptions      | 06/30/2010   | 20         |          | 79      |     | 82       |              | 6      |
| FY10 Gain                  | 06/30/2010   | 20         |          | (282)   |     | (295)    |              | (21)   |
| FY11 Loss                  | 06/30/2011   | 21         |          | 73      |     | 73       |              | 5      |
| FY12 Gain                  | 06/30/2012   | 22         |          | (349)   |     | (359)    |              | (24)   |
| FY13 Gain                  | 06/30/2013   | 23         |          | (204)   |     | (208)    |              | (14)   |
| Change in Assumptions      | 06/30/2014   | 24         |          | (1,274) |     | (1,290)  |              | (83)   |
| PRPA Modification          | 06/30/2014   | 24         |          | (91)    |     | (92)     |              | (6)    |
| FY14 Gain                  | 06/30/2014   | 24         |          | (95)    |     | (96)     |              | (6)    |
| FY15 Gain                  | 06/30/2015   | 25         |          | (664)   |     | (664)    |              | (42)   |
|                            |              |            |          |         |     |          |              |        |
| Total                      |              |            |          |         | \$  | (3,210)  | \$           | (213)  |

#### Schedule of Past Service Cost Amortizations – Retiree Medical

|                            | Amortizati   | on Period  | Bala       | nces |          | Begin | ning-of-Year |
|----------------------------|--------------|------------|------------|------|----------|-------|--------------|
| Charge                     | Date Created | Years Left | Initial    | Out  | standing | _     | ayment       |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$<br>(21) | \$   | (23)     | \$    | (2)          |
| Change in Assumptions      | 06/30/2008   | 18         | 17         |      | 17       |       | 1            |
| FY08 Gain                  | 06/30/2008   | 18         | (62)       |      | (66)     |       | (5)          |
| Change in Assumptions      | 06/30/2009   | 19         | (8)        |      | (8)      |       | (1)          |
| FY09 Gain                  | 06/30/2009   | 19         | (38)       |      | (39)     |       | (3)          |
| Change in Assumptions      | 06/30/2010   | 20         | 41         |      | 41       |       | 3            |
| FY10 Gain                  | 06/30/2010   | 20         | (46)       |      | (46)     |       | (3)          |
| FY11 Loss                  | 06/30/2011   | 21         | 70         |      | 71       |       | 5            |
| Change in Assumptions      | 06/30/2012   | 22         | 3,085      |      | 3,183    |       | 216          |
| FY12 Gain                  | 06/30/2012   | 22         | (273)      |      | (282)    |       | (19)         |
| FY13 Loss                  | 06/30/2013   | 23         | 880        |      | 901      |       | 60           |
| Change in Assumptions      | 06/30/2014   | 24         | (3,034)    |      | (3,070)  |       | (198)        |
| FY14 Loss                  | 06/30/2014   | 24         | 1,213      |      | 1,228    |       | 79           |
| FY15 Gain                  | 06/30/2015   | 25         | (712)      |      | (712)    |       | (45)         |
|                            |              |            |            |      |          |       |              |
| Total                      |              |            |            | \$   | 1,195    | \$    | 88           |

#### Schedule of Past Service Cost Amortizations - Total

|                            | Amortizat    | ion Period | Balances |         |      |         | Beginning-of-Year |  |
|----------------------------|--------------|------------|----------|---------|------|---------|-------------------|--|
| Charge                     | Date Created | Years Left |          | Initial | Outs | tanding | Payment           |  |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$       | (121)   | \$   | (128)   | (10)              |  |
| Change in Assumptions      | 06/30/2008   | 18         |          | 17      |      | 17      | 1                 |  |
| FY08 Gain                  | 06/30/2008   | 18         |          | (648)   |      | (681)   | (52)              |  |
| Change in Assumptions      | 06/30/2009   | 19         |          | (112)   |      | (117)   | (9)               |  |
| FY09 Loss                  | 06/30/2009   | 19         |          | 408     |      | 429     | 32                |  |
| Change in Assumptions      | 06/30/2010   | 20         |          | 120     |      | 123     | 9                 |  |
| FY10 Gain                  | 06/30/2010   | 20         |          | (328)   |      | (341)   | (24)              |  |
| FY11 Loss                  | 06/30/2011   | 21         |          | 143     |      | 144     | 10                |  |
| Change in Assumptions      | 06/30/2012   | 22         |          | 3,085   |      | 3,183   | 216               |  |
| FY12 Gain                  | 06/30/2012   | 22         |          | (622)   |      | (641)   | (43)              |  |
| FY13 Loss                  | 06/30/2013   | 23         |          | 676     |      | 693     | 46                |  |
| Change in Assumptions      | 06/30/2014   | 24         |          | (4,308) |      | (4,360) | (281)             |  |
| PRPA Modification          | 06/30/2014   | 24         |          | (91)    |      | (92)    | (6)               |  |
| FY14 Loss                  | 06/30/2014   | 24         |          | 1,118   |      | 1,132   | 73                |  |
| FY15 Gain                  | 06/30/2015   | 25         |          | (1,376) |      | (1,376) | (87)              |  |
|                            |              |            |          |         |      |         |                   |  |
| Total                      |              |            |          |         | \$   | (2,015) | \$ (125)          |  |

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 16.120000. The amortization method is level percentage of pay.

The equivalent single amortization period is 26.

## Actuarial Contributions for FY18 - Others (\$'s in 000's)

| Normal Cost Rate   |    | cupational<br>Death &<br>isability | Retir | ee Medical | Total |               |
|--|----|------------------------------------|-------|------------|-------|---------------|
| Total Normal Cost  | \$ | 2,130                              | \$    | 8,040      | \$    | 10,170        |
| 2. DCR Plan Rate Payroll Projected for FY16              |    | 847,996                            |       | 847,996    |       | 847,996       |
| 3. Employer Normal Cost Rate, (1) / (2)                  |    | 0.25%                              |       | 0.95%      |       | 1.20%         |
| Past Service Rate  |    |                                    |       |            |       |               |
| Actuarial Accrued Liability                              | \$ | 2,075                              | \$    | 53,844     | \$    | 55,919        |
| 2. Valuation Assets                                      |    | 12,830                             |       | 40,544     |       | <u>53,374</u> |
| 3. Total Unfunded Actuarial Accrued Liability, (1) - (2) | \$ | (10,755)                           | \$    | 13,300     | \$    | 2,545         |
| 4. Funded Ratio based on Valuation Assets                |    | 618.3%                             |       | 75.3%      |       | 95.4%         |
| 5. Past Service Cost Amortization Payment                | \$ | (737)                              | \$    | 967        | \$    | 230           |
| 6. DCR Plan Rate Payroll Projected for FY16              |    | 847,996                            |       | 847,996    |       | 847,996       |
| 7. Past Service Cost Rate, (5) / (6)                     |    | (0.09)%                            |       | 0.11%      |       | 0.02%         |
| Total Employer Contribution Rate                         |    | 0.16%                              |       | 1.06%      |       | 1.22%         |

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

| Total Employer Contribution Rate as Percent of Total Payroll |                      | Occupational<br>Death &<br>Disability |           | Retiree Medical |           | Total        |
|--|----------------------|---------------------------------------|-----------|-----------------|-----------|--------------|
| Total Normal Cost  |                      | \$                                    | 2,130     | \$              | 8,040     | \$<br>10,170 |
| Total DB and DCR Plan Rate P FY16                            | ayroll Projected for |                                       | 1,976,945 |                 | 1,976,945 | 1,976,945    |
| 3. Employer Normal Cost Rate, (1                             | ) / (2)              |                                       | 0.11%     |                 | 0.41%     | 0.52%        |
| 4. Past Service Cost Amortization                            | Payment              | \$                                    | (737)     | \$              | 967       | \$<br>230    |
| 5. Past Service Cost Rate, (4) / (2)                         |                      |                                       | (0.04)%   |                 | 0.05%     | 0.01%        |
| 6. Total Employer Contribution Ra                            | te, (3) + (5)        |                                       | 0.07%     |                 | 0.46%     | 0.53%        |

#### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

|                            | Amortizati   | ion Period | Bala    | Balances    |                              |  |
|----------------------------|--------------|------------|---------|-------------|------------------------------|--|
| Charge                     | Date Created | Years Left | Initial | Outstanding | Beginning-of-Year<br>Payment |  |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$ (40) | \$ (43)     | \$ (4)                       |  |
| FY08 Gain                  | 06/30/2008   | 18         | (318)   | (335)       | (26)                         |  |
| Change in Assumptions      | 06/30/2009   | 19         | (92)    | (96)        | (7)                          |  |
| FY09 Gain                  | 06/30/2009   | 19         | (1,924) | (2,017)     | (150)                        |  |
| Change in Assumptions      | 06/30/2010   | 20         | 24      | 26          | 2                            |  |
| FY10 Gain                  | 06/30/2010   | 20         | (994)   | (1,038)     | (75)                         |  |
| FY11 Gain                  | 06/30/2011   | 21         | (1,184) | (1,226)     | (86)                         |  |
| FY12 Gain                  | 06/30/2012   | 22         | (1,233) | (1,273)     | (87)                         |  |
| FY13 Gain                  | 06/30/2013   | 23         | (779)   | (797)       | (52)                         |  |
| Change in Assumptions      | 06/30/2014   | 24         | (51)    | (51)        | (3)                          |  |
| PRPA Modification          | 06/30/2014   | 24         | (27)    | (28)        | (2)                          |  |
| FY14 Gain                  | 06/30/2014   | 24         | (2,003) | (2,027)     | (131)                        |  |
| FY15 Gain                  | 06/30/2015   | 25         | (1,850) | (1,850)     | (116)                        |  |
|                            |              |            |         |             |                              |  |
| Total                      |              |            |         | \$ (10,755) | \$ (737)                     |  |

#### Schedule of Past Service Cost Amortizations – Retiree Medical

|                            | Amortizati   | on Period  | Balances    |    |            |    | nning-of-Year |
|----------------------------|--------------|------------|-------------|----|------------|----|---------------|
| Charge                     | Date Created | Years Left | Initial     | Οι | ıtstanding |    | Payment       |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$<br>(335) | \$ | (352)      | \$ | (28)          |
| Change in Assumptions      | 06/30/2008   | 18         | 165         |    | 174        |    | 14            |
| FY08 Gain                  | 06/30/2008   | 18         | (702)       |    | (735)      |    | (57)          |
| Change in Assumptions      | 06/30/2009   | 19         | (122)       |    | (128)      |    | (9)           |
| FY09 Gain                  | 06/30/2009   | 19         | (438)       |    | (460)      |    | (34)          |
| Change in Assumptions      | 06/30/2010   | 20         | (572)       |    | (595)      |    | (43)          |
| FY10 Loss                  | 06/30/2010   | 20         | 579         |    | 601        |    | 43            |
| FY11 Loss                  | 06/30/2011   | 21         | 820         |    | 853        |    | 60            |
| Change in Assumptions      | 06/30/2012   | 22         | 25,180      |    | 25,973     |    | 1,762         |
| FY12 Loss                  | 06/30/2012   | 22         | 1,451       |    | 1,496      |    | 101           |
| FY13 Loss                  | 06/30/2013   | 23         | 9,974       |    | 10,199     |    | 673           |
| Change in Assumptions      | 06/30/2014   | 24         | (21,822)    |    | (22,086)   |    | (1,422)       |
| FY14 Loss                  | 06/30/2014   | 24         | 7,002       |    | 7,086      |    | 456           |
| FY15 Gain                  | 06/30/2015   | 25         | (8,726)     |    | (8,726)    |    | (549)         |
|                            |              |            |             |    |            |    |               |
| Total                      |              |            |             | \$ | 13,300     | \$ | 967           |

#### Schedule of Past Service Cost Amortizations - Total

|                            | Amortizati   | on Period  | Balances    |    |            | Bec | jinning-of-Year |
|----------------------------|--------------|------------|-------------|----|------------|-----|-----------------|
| Charge                     | Date Created | Years Left | Initial     | 0  | utstanding |     | Payment         |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$<br>(375) | \$ | (395)      | \$  | (32)            |
| Change in Assumptions      | 06/30/2008   | 18         | 165         |    | 174        |     | 14              |
| FY08 Gain                  | 06/30/2008   | 18         | (1,020)     |    | (1,070)    |     | (83)            |
| Change in Assumptions      | 06/30/2009   | 19         | (214)       |    | (224)      |     | (16)            |
| FY09 Gain                  | 06/30/2009   | 19         | (2,362)     |    | (2,477)    |     | (184)           |
| Change in Assumptions      | 06/30/2010   | 20         | (548)       |    | (569)      |     | (41)            |
| FY10 Gain                  | 06/30/2010   | 20         | (415)       |    | (437)      |     | (32)            |
| FY11 Gain                  | 06/30/2011   | 21         | (364)       |    | (373)      |     | (26)            |
| Change in Assumptions      | 06/30/2012   | 22         | 25,180      |    | 25,973     |     | 1,762           |
| FY12 Loss                  | 06/30/2012   | 22         | 218         |    | 223        |     | 14              |
| FY13 Loss                  | 06/30/2013   | 23         | 9,195       |    | 9,402      |     | 621             |
| Change in Assumptions      | 06/30/2014   | 24         | (21,873)    |    | (22,137)   |     | (1,425)         |
| PRPA Modification          | 06/30/2014   | 24         | (27)        |    | (28)       |     | (2)             |
| FY14 Loss                  | 06/30/2014   | 24         | 4,999       |    | 5,059      |     | 325             |
| FY15 Gain                  | 06/30/2015   | 25         | (10,576)    |    | (10,576)   |     | (665)           |
|                            |              |            |             |    |            |     |                 |
| Total                      |              |            |             | \$ | 2,545      | \$  | 230             |

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 11.065217. The amortization method is level percentage of pay.

The equivalent single amortization period is 14.

### Actuarial Contributions for FY18 - All Members (\$'s in 000's)

| Normal Cost Rate                                 |             | cupational<br>Death &<br>Disability | Retir | ee Medical | Total        |
|--|-------------|-------------------------------------|-------|------------|--------------|
| Total Normal Cost                                | \$          | 2,812                               | \$    | 8,801      | \$<br>11,613 |
| 2. DCR Plan Rate Payroll Projected for FY16      |             | 958,135                             |       | 958,135    | 958,135      |
| 3. Employer Normal Cost Rate, (1) / (2)          |             | 0.29%                               |       | 0.92%      | 1.21%        |
| Past Service Rate                                |             |                                     |       |            |              |
| Actuarial Accrued Liability                      | \$          | 5,049                               | \$    | 58,683     | \$<br>63,732 |
| 2. Valuation Assets                              |             | 19,014                              |       | 44,188     | <br>63,202   |
| 3. Total Unfunded Actuarial Accrued Liability, ( | 1) - (2) \$ | (13,965)                            | \$    | 14,495     | \$<br>530    |
| 4. Funded Ratio based on Valuation Assets        |             | 376.6%                              |       | 75.3%      | 99.2%        |
| 5. Past Service Cost Amortization Payment        | \$          | (950)                               | \$    | 1,055      | \$<br>105    |
| 6. DCR Plan Rate Payroll Projected for FY16      |             | 958,135                             |       | 958,135    | 958,135      |
| 7. Past Service Cost Rate, (5) / (6)             |             | (0.10)%                             |       | 0.11%      | 0.01%        |
| Total Employer Contribution Rate                 |             | 0.19%                               |       | 1.03%      | 1.22%        |

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

| Total Employer Contribution Rate as Percent of Total Payroll |   | Occupational<br>Death &<br>Disability |           | Retiree Medical |           | Total |           |
|--|---|---------------------------------------|-----------|-----------------|-----------|-------|-----------|
| 1.   | Total Normal Cost                                     | \$                                    | 2,812     | \$              | 8,801     | \$    | 11,613    |
| 2.   | Total DB and DCR Plan Rate Payroll Projected for FY16 |                                       | 2,281,060 |                 | 2,281,060 |       | 2,281,060 |
| 3.   | Employer Normal Cost Rate, (1) / (2)                  |                                       | 0.12%     |                 | 0.39%     |       | 0.51%     |
| 4.   | Past Service Cost Amortization Payment                | \$                                    | (950)     | \$              | 1,055     | \$    | 105       |
| 5.   | Past Service Cost Rate, (4) / (2)                     |                                       | (0.04)%   |                 | 0.05%     |       | 0.01%     |
| 6.   | Total Employer Contribution Rate, (3) + (5)           |                                       | 0.08%     |                 | 0.44%     |       | 0.52%     |

#### Schedule of Past Service Cost Amortizations - Occupational Death & Disability

|                            | Amortizat    | ion Period | Balances    |     |          | Begin | ning-of-Year |
|----------------------------|--------------|------------|-------------|-----|----------|-------|--------------|
| Charge                     | Date Created | Years Left | Initial     | Out | standing |       | Payment      |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$<br>(140) | \$  | (148)    | \$    | (12)         |
| FY08 Gain                  | 06/30/2008   | 18         | (904)       |     | (950)    |       | (73)         |
| Change in Assumptions      | 06/30/2009   | 19         | (196)       |     | (205)    |       | (15)         |
| FY09 Gain                  | 06/30/2009   | 19         | (1,478)     |     | (1,549)  |       | (115)        |
| Change in Assumptions      | 06/30/2010   | 20         | 103         |     | 108      |       | 8            |
| FY10 Gain                  | 06/30/2010   | 20         | (1,276)     |     | (1,333)  |       | (96)         |
| FY11 Gain                  | 06/30/2011   | 21         | (1,111)     |     | (1,153)  |       | (81)         |
| FY12 Gain                  | 06/30/2012   | 22         | (1,582)     |     | (1,632)  |       | (111)        |
| FY13 Gain                  | 06/30/2013   | 23         | (983)       |     | (1,005)  |       | (66)         |
| Change in Assumptions      | 06/30/2014   | 24         | (1,325)     |     | (1,341)  |       | (86)         |
| PRPA Modification          | 06/30/2014   | 24         | (118)       |     | (120)    |       | (8)          |
| FY14 Gain                  | 06/30/2014   | 24         | (2,098)     |     | (2,123)  |       | (137)        |
| FY15 Gain                  | 06/30/2015   | 25         | (2,514)     |     | (2,514)  |       | (158)        |
|                            |              |            |             |     |          |       |              |
| Total                      |              |            |             | \$  | (13,965) | \$    | (950)        |

#### Schedule of Past Service Cost Amortizations - Retiree Medical

|                            | Amortization Period |            | Bala        | nces |           | Beginning-of-Year |         |
|----------------------------|---------------------|------------|-------------|------|-----------|-------------------|---------|
| Charge                     | Date Created        | Years Left | Initial     | Ou   | tstanding |                   | Payment |
| Initial Unfunded Liability | 06/30/2007          | 17         | \$<br>(356) | \$   | (375)     | \$                | (30)    |
| Change in Assumptions      | 06/30/2008          | 18         | 182         |      | 191       |                   | 15      |
| FY08 Gain                  | 06/30/2008          | 18         | (764)       |      | (801)     |                   | (62)    |
| Change in Assumptions      | 06/30/2009          | 19         | (130)       |      | (136)     |                   | (10)    |
| FY09 Gain                  | 06/30/2009          | 19         | (476)       |      | (499)     |                   | (37)    |
| Change in Assumptions      | 06/30/2010          | 20         | (531)       |      | (554)     |                   | (40)    |
| FY10 Loss                  | 06/30/2010          | 20         | 533         |      | 555       |                   | 40      |
| FY11 Loss                  | 06/30/2011          | 21         | 890         |      | 924       |                   | 65      |
| Change in Assumptions      | 06/30/2012          | 22         | 28,265      |      | 29,156    |                   | 1,978   |
| FY12 Loss                  | 06/30/2012          | 22         | 1,178       |      | 1,214     |                   | 82      |
| FY13 Loss                  | 06/30/2013          | 23         | 10,854      |      | 11,100    |                   | 733     |
| Change in Assumptions      | 06/30/2014          | 24         | (24,856)    |      | (25,156)  |                   | (1,620) |
| FY14 Loss                  | 06/30/2014          | 24         | 8,215       |      | 8,314     |                   | 535     |
| FY15 Gain                  | 06/30/2015          | 25         | (9,438)     |      | (9,438)   |                   | (594)   |
| Total                      |                     |            |             | \$   | 14,495    | \$                | 1,055   |

#### Schedule of Past Service Cost Amortizations - Total

|                            | Amortizati   | ion Period | Bala     | inces       | Beginning-of-Year |
|----------------------------|--------------|------------|----------|-------------|-------------------|
| Charge                     | Date Created | Years Left | Initial  | Outstanding | Payment           |
| Initial Unfunded Liability | 06/30/2007   | 17         | \$ (496) | \$ (523)    | \$ (42)           |
| Change in Assumptions      | 06/30/2008   | 18         | 182      | 191         | 15                |
| FY08 Gain                  | 06/30/2008   | 18         | (1,668)  | (1,751)     | (135)             |
| Change in Assumptions      | 06/30/2009   | 19         | (326)    | (341)       | (25)              |
| FY09 Gain                  | 06/30/2009   | 19         | (1,954)  | (2,048)     | (152)             |
| Change in Assumptions      | 06/30/2010   | 20         | (428)    | (446)       | (32)              |
| FY10 Gain                  | 06/30/2010   | 20         | (743)    | (778)       | (56)              |
| FY11 Gain                  | 06/30/2011   | 21         | (221)    | (229)       | (16)              |
| Change in Assumptions      | 06/30/2012   | 22         | 28,265   | 29,156      | 1,978             |
| FY12 Gain                  | 06/30/2012   | 22         | (404)    | (418)       | (29)              |
| FY13 Loss                  | 06/30/2013   | 23         | 9,871    | 10,095      | 667               |
| Change in Assumptions      | 06/30/2014   | 24         | (26,181) | (26,497)    | (1,706)           |
| PRPA Modification          | 06/30/2014   | 24         | (118)    | (120)       | (8)               |
| FY14 Loss                  | 06/30/2014   | 24         | 6,117    | 6,191       | 398               |
| FY15 Gain                  | 06/30/2015   | 25         | (11,952) | (11,952)    | (752)             |
|                            |              |            |          |             |                   |
| Total                      |              |            |          | \$ 530      | \$ 105            |

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 5.047619. The amortization method is level percentage of pay.

The equivalent single amortization period is 6.

# Section 1.3 Actuarial Gain/(Loss) for FY15 (\$'s in 000's)

|    |   |    | cupational<br>& Disability | Reti | ree Medical |    | Total  |
|----|---|----|----------------------------|------|-------------|----|--------|
| 1. | Expected Actuarial Accrued Liability  |    |                            |      |             |    |        |
|    | a. Actuarial Accrued Liability, June 30, 2014   | \$ | 3,627                      | \$   | 50,217      | \$ | 53,844 |
|    | b. Normal Cost for FY15   |    | 2,580                      |      | 8,645       |    | 11,225 |
|    | c. Interest on (a) and (b) at 8.00%   |    | 497                        |      | 4,709       |    | 5,206  |
|    | d. Benefit Payments for FY15  |    | 363                        |      | 0           |    | 363    |
|    | e. Interest on (d) at 8.00%, adjusted for timing  |    | 14                         |      | 0           | _  | 14     |
|    | f. Expected Actuarial Accrued Liability as of June 30, 2015 (a) + (b) + (c) - (d) - (e) | \$ | 6,327                      | \$   | 63,571      | \$ | 69,898 |
| 2. | Actual Actuarial Accrued Liability, June 30, 2015                                       |    | 5,049                      |      | 58,683      |    | 63,732 |
| 3. | Liability Gain/(Loss), (1)(f) – (2)   | \$ | 1,278                      | \$   | 4,888       | \$ | 6,166  |
| 4. | Expected Actuarial Asset Value  |    |                            |      |             |    |        |
|    | a. Actuarial Asset Value, June 30, 2014   | \$ | 14,995                     | \$   | 26,466      | \$ | 41,461 |
|    | b. Interest on (a) at 8.00%   |    | 1,200                      |      | 2,117       |    | 3,317  |
|    | c. Employer Contributions for FY15  |    | 2,804                      |      | 14,552      |    | 17,356 |
|    | d. Interest on (c) at 8.00%, adjusted for timing  |    | 110                        |      | 571         |    | 681    |
|    | e. Benefit Payments for FY15  |    | 363                        |      | 0           |    | 363    |
|    | f. Interest on (e) at 8.00%, adjusted for timing  |    | 14                         |      | 0           |    | 14     |
|    | g. Expected Actuarial Asset Value, June 30, 2015<br>(a) + (b) + (c) + (d) - (e) - (f)   | \$ | 18,732                     | \$   | 43,706      | \$ | 62,438 |
| 5. | Actuarial Asset Value, June 30, 2015  |    | 19,014                     |      | 44,188      |    | 63,202 |
| 6. | Actuarial Asset Gain/(Loss), (5) - (4)(g)   | \$ | 282                        | \$   | 482         | \$ | 764    |
| 7. | Actuarial Gain/(Loss), (3) + (6)  | \$ | 1,560                      | \$   | 5,370       | \$ | 6,930  |
| 8. | 3. Contribution Gain/(Loss)   |    | 954                        | \$   | 4,068       | \$ | 5,022  |
| 9. | FY15 Gain/(Loss), (7) + (8)   | \$ | 2,514                      | \$   | 9,438       | \$ | 11,952 |

# Section 1.4 History of Unfunded Liability and Funded Ratio (\$'s in 000's)

| Valuation<br>Date | Actuarial<br>Accrued<br>Liability | Valuation<br>Assets | Assets as a<br>Percent of<br>Actuarial<br>Accrued<br>Liability | Unfunded<br>Actuarial Accrued<br>Liability<br>(UAAL) |
|-------------------|-----------------------------------|---------------------|--|--|
| June 30, 2007     | \$ 759                            | \$ 1,255            | 165.3%   | \$ (496)   |
| June 30, 2008     | 2,018                             | 4,007               | 198.6%   | (1,989)  |
| June 30, 2009     | 4,316                             | 8,613               | 199.6%   | (4,297)  |
| June 30, 2010     | 8,038                             | 13,568              | 168.8%   | (5,530)  |
| June 30, 2011     | 13,251                            | 19,058              | 143.8%   | (5,807)  |
| June 30, 2012     | 46,921                            | 24,915              | 53.1%  | 22,006   |
| June 30, 2013     | 63,885                            | 31,709              | 49.6%  | 32,176   |
| June 30, 2014     | 53,844                            | 41,461              | 77.0%  | 12,383   |
| June 30, 2015     | 63,732                            | 63,202              | 99.2%  | 530  |

### Section 2 Plan Assets

# Section 2.1 Summary of Fair Value of Assets (\$'s in 000's)

| As of June 30, 2015                  |          | cupational<br>Death &<br>Disability |    | Retiree<br>Medical |    | Total  | Allocation<br>Percent |
|--------------------------------------|----------|-------------------------------------|----|--------------------|----|--------|-----------------------|
| Cash and Short-Term Investments      |          | Jisability                          |    | Medical            |    | Total  | 1 ercent              |
| - Cash and Cash Equivalents          | \$       | 502                                 | \$ | 1,4 <u>55</u>      | \$ | 1,957  | 3.1%                  |
| - Subtotal                           | \$       | 502<br>502                          | \$ | 1,455              | \$ | 1,957  | 3.1%                  |
| Fixed Income Investments             | Ψ        | 302                                 | Ψ  | 1,400              | Ψ  | 1,507  | 3.170                 |
| - Domestic Fixed Income Pool         | \$       | 1,221                               | \$ | 2,779              | \$ | 4,000  | 6.4%                  |
| - International Fixed Income Pool    |          | 303                                 | •  | 690                | •  | 993    | 1.6%                  |
| - Taxable Fixed Income Pool          |          | 97                                  |    | 219                |    | 316    | 0.5%                  |
| - Frontier Market Pool               |          | 4                                   |    | 10                 |    | 14     | 0.0%                  |
| - High Yield Pool                    |          | 493                                 |    | 1,119              |    | 1,612  | 2.6%                  |
| - Treasury Inflation Protection Pool |          | 106                                 |    | 241                |    | 347    | 0.6%                  |
| - Emerging Debt Pool                 |          | 129                                 |    | 293                |    | 422    | 0.7%                  |
| - Subtotal                           | \$       | 2,353                               | \$ | 5,351              | \$ | 7,704  | 12.4%                 |
| Equity Investments                   | '        | ·                                   |    | ·                  |    | ·      |                       |
| - Domestic Equity Pool               | \$       | 5,129                               | \$ | 11,661             | \$ | 16,790 | 26.7%                 |
| - International Equity Pool          |          | 4,188                               |    | 9,520              |    | 13,708 | 21.9%                 |
| - Private Equity Pool                |          | 1,453                               |    | 3,303              |    | 4,756  | 7.6%                  |
| - Emerging Markets Equity Pool       |          | 499                                 |    | 1,134              |    | 1,633  | 2.6%                  |
| - Alternate Equity Strategies        | <u> </u> | 702                                 |    | 1,597              |    | 2,299  | <u>3.7%</u>           |
| - Subtotal                           | \$       | 11,971                              | \$ | 27,215             | \$ | 39,186 | 62.5%                 |
| Other Investments                    |          |                                     |    |                    |    |        |                       |
| - Real Estate Pool                   | \$       | 1,303                               | \$ | 2,962              | \$ | 4,265  | 6.8%                  |
| - Other Investments Pool             |          | 1,842                               |    | 4,188              |    | 6,030  | 9.6%                  |
| - Absolute Return Pool               |          | 1,074                               |    | 2,441              |    | 3,515  | 5.6%                  |
| - Other Assets                       |          | 0                                   |    | 0                  |    | 0      | 0.0%                  |
| - Subtotal                           | \$       | 4,219                               | \$ | 9,591              | \$ | 13,810 | 22.0%                 |
| Total Cash and Investments           | \$       | 19,045                              | \$ | 43,612             | \$ | 62,657 | 100.0%                |
| Net Accrued Receivables              | l        | 127                                 |    | 756                |    | 883    |                       |
| Net Assets                           | \$       | 19,172                              | \$ | 44,368             | \$ | 63,540 |                       |
| Peace Officer/Firefighter            | \$       | 6,235                               |    | N/A                |    | N/A    |                       |
| Others                               | Ψ        | 12,937                              |    | N/A                |    | N/A    |                       |
|                                      | \$       | 19,172                              | \$ | 44,368             | \$ | 63,540 |                       |
| All Members                          | \$       | 19,172                              | \$ | 44,368             | \$ | 63,540 |                       |

# Section 2.2 Changes in Fair Value of Assets During FY15 (\$'s in 000's)

| Fis | cal Year 2015  |    | ational Death<br>Disability | Retir | ee Medical | Total         |
|-----|--|----|-----------------------------|-------|------------|---------------|
| 1.  | Net Assets, June 30, 2014 (fair value)                                   | \$ | 16,182                      | \$    | 28,568     | \$<br>44,750  |
| 2.  | Additions:   |    |                             |       |            |               |
|     | a. Member Contributions  | \$ | 14                          | \$    | 0          | \$<br>14      |
|     | b. Employer Contributions  |    | 2,790                       |       | 14,552     | 17,342        |
|     | c. Interest and Dividend Income  |    | 319                         |       | 647        | 966           |
|     | d. Net Appreciation (Depreciation) in Fair Value of Investments          |    |                             |       |            |               |
|     |  |    | 266                         |       | 626        | 892           |
|     | e. Other   |    | 0                           |       | 0          | <br>0         |
|     | f. Total Additions   | \$ | 3,389                       | \$    | 15,825     | \$<br>19,214  |
| 3.  | Deductions:  |    |                             |       |            |               |
|     | a. Medical Benefits  | \$ | 0                           | \$    | 0          | \$<br>0       |
|     | b. Death & Disability Benefits   | ·  | 363                         | ·     | 0          | 363           |
|     | c. Investment Expenses   |    | 4                           |       | 6          | 10            |
|     | d. Administrative Expenses   |    | 32                          |       | 19         | <br><u>51</u> |
|     | e. Total Deductions  | \$ | 399                         | \$    | 25         | \$<br>424     |
| 4.  | Net Assets, June 30, 2015 (fair value)                                   | \$ | 19,172                      | \$    | 44,368     | \$<br>63,540  |
|     | oroximate Fair Value Investment Return Rate ing FY15 Net of All Expenses |    | 3.1%                        |       | 3.4%       | 3.3%          |

# Section 2.3 Development of Actuarial Value of Assets (\$'s in 000's)

The actuarial value of assets and the fair value were \$0 at June 30, 2006. Investment gains and losses are recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

|    |  | ccupational<br>Death &<br>Disability | Reti | ree Medical | Total        |
|----|--|--------------------------------------|------|-------------|--------------|
| 1. | Investment Gain/(Loss) for FY15  |                                      |      |             |              |
|    | a. Fair Value, June 30, 2014   | \$<br>16,182                         | \$   | 28,568      | \$<br>44,750 |
|    | b. Contributions for FY15  | 2,804                                |      | 14,552      | 17,356       |
|    | c. Benefit Payments for FY15   | 363                                  |      | 0           | 363          |
|    | d. Actual Investment Return (net of expenses)                                      | 549                                  |      | 1,248       | 1,797        |
|    | e. Expected Return Rate (net of expenses)  | 8.00%                                |      | 8.00%       | 8.00%        |
|    | f. Expected Return   | 1,390                                |      | 2,856       | 4,246        |
|    | g. Investment Gain/(Loss) for the Year (d f.)                                      | (841)                                |      | (1,608)     | (2,449)      |
| 2. | Actuarial Value, June 30, 2015   |                                      |      |             |              |
|    | a. Fair Value, June 30, 2015   | \$<br>19,172                         | \$   | 44,368      | \$<br>63,540 |
|    | b. Deferred Investment Gain/(Loss) as of June 30, 2015                             | 158                                  |      | 180         | 338          |
|    | c. Preliminary Actuarial Value, June 30, 2015 (a b.)                               | 19,014                               |      | 44,188      | 63,202       |
|    | d. Upper Limit: 120% of Fair Value, June 30, 2015                                  | 23,006                               |      | 53,242      | N/A          |
|    | e. Lower Limit: 80% of Fair Value, June 30, 2015                                   | 15,338                               |      | 35,494      | N/A          |
|    | f. Actuarial Value, June 30, 2015  |                                      |      |             |              |
|    | (c. limited by d. and e.)  | \$<br>19,014                         | \$   | 44,188      | \$<br>63,202 |
| 3. | Ratio of Actuarial Value of Assets to Fair Value of Assets                         | 99.2%                                |      | 99.6%       | 99.5%        |
| 4. | Approximate Actuarial Value Investment Return Rate During FY15 Net of All Expenses | 9.7%                                 |      | 9.4%        | 9.5%         |
| 5. | Actuarial Value Allocation*  |                                      |      |             |              |
|    | a. Peace Officer/Firefighter   | \$<br>6,184                          |      | N/A         | N/A          |
|    | b. Others  | <br>12,830                           |      | N/A         | <br>N/A      |
|    | c. All Members   | \$<br>19,014                         | \$   | 44,188      | \$<br>63,202 |

<sup>\*</sup>Occupational death & disability allocated using fair value of assets. Retiree medical allocated based on retiree medical actuarial accrued liability.

The tables below show the development of the investment gain/(loss) to be recognized in the current year.

| Occupational Death & Disability |         |             |   |       |    |                                 |   |       |  |  |
|---------------------------------|---------|-------------|---|-------|----|---------------------------------|---|-------|--|--|
| Fiscal Year<br>Ended            | Asset ( | Gain/(Loss) | Gain/(Loss)<br>Recognized in Prior<br>Years |       |    | n/(Loss)<br>Inized This<br>Year | Gain/(Loss) Deferred<br>to Future Years |       |  |  |
| 6/30/2011                       | \$      | 599         | \$  | 480   | \$ | 119                             | \$                                      | 0     |  |  |
| 6/30/2012                       |         | (487)       |   | (291) |    | (98)                            |   | (98)  |  |  |
| 6/30/2013                       |         | 390         |   | 156   |    | 78                              |   | 156   |  |  |
| 6/30/2014                       |         | 1,287       |   | 257   |    | 257                             |   | 773   |  |  |
| 6/30/2015                       |         | (841)       |   | 0     |    | (168)                           |   | (673) |  |  |
| Total                           | \$      | 948         | \$  | 602   | \$ | 188                             | \$                                      | 158   |  |  |

| Retiree Medical      |       |             |   |       |  |       |   |         |  |  |
|----------------------|-------|-------------|---|-------|--|-------|---|---------|--|--|
| Fiscal Year<br>Ended | Asset | Gain/(Loss) | Gain/(Loss)<br>Recognized in Prior<br>Years |       | Gain/(Loss)<br>Recognized This<br>Year |       | Gain/(Loss) Deferred<br>to Future Years |         |  |  |
| 6/30/2011            | \$    | 1,073       | \$  | 859   | \$                                     | 214   | \$                                      | 0       |  |  |
| 6/30/2012            |       | (828)       |   | (498) |  | (165) |   | (165)   |  |  |
| 6/30/2013            |       | 661         |   | 264   |  | 132   |   | 265     |  |  |
| 6/30/2014            |       | 2,276       |   | 455   |  | 455   |   | 1,366   |  |  |
| 6/30/2015            |       | (1,608)     |   | 0     |  | (322) |   | (1,286) |  |  |
| Total                | \$    | 1,574       | \$  | 1,080 | \$                                     | 314   | \$                                      | 180     |  |  |

|                      | Total |             |        |                                      |    |  |    |   |  |  |  |
|----------------------|-------|-------------|--------|--------------------------------------|----|--|----|---|--|--|--|
| Fiscal Year<br>Ended | Asset | Gain/(Loss) | Recogi | in/(Loss)<br>nized in Prior<br>Years |    | Gain/(Loss)<br>Recognized This<br>Year |    | Gain/(Loss) Deferred<br>to Future Years |  |  |  |
| 6/30/2011            | \$    | 1,672       | \$     | 1,339                                | \$ | 333                                    | \$ | 0                                       |  |  |  |
| 6/30/2012            |       | (1,315)     |        | (789)                                |    | (263)                                  |    | (263)                                   |  |  |  |
| 6/30/2013            |       | 1,051       |        | 420                                  |    | 210                                    |    | 421                                     |  |  |  |
| 6/30/2014            |       | 3,563       |        | 712                                  |    | 712                                    |    | 2,139                                   |  |  |  |
| 6/30/2015            |       | (2,449)     |        | 0                                    |    | (490)                                  |    | (1,959)                                 |  |  |  |
| Total                | \$    | 2,522       | \$     | 1,682                                | \$ | 502                                    | \$ | 338                                     |  |  |  |

### Section 2.4 Historical Asset Rates of Return

|               | Actuari | al Value    | Fair \  | /alue       |
|---------------|---------|-------------|---------|-------------|
| Year Ending   | Annual  | Cumulative* | Annual  | Cumulative* |
| June 30, 2008 | 5.0%    | 5.0%        | (7.1)%  | (7.1)%      |
| June 30, 2009 | 2.4%    | 3.7%        | (13.0)% | (10.1)%     |
| June 30, 2010 | 3.9%    | 3.8%        | 6.6%    | (4.8)%      |
| June 30, 2011 | 7.3%    | 4.6%        | 19.2%   | 0.7%        |
| June 30, 2012 | 6.9%    | 5.1%        | 2.0%    | 0.9%        |
| June 30, 2013 | 7.9%    | 5.5%        | 11.8%   | 2.6%        |
| June 30, 2014 | 10.9%   | 6.3%        | 18.0%   | 4.7%        |
| June 30, 2015 | 9.5%    | 6.7%        | 3.3%    | 4.6%        |

<sup>\*</sup>Cumulative since FYE June 30, 2008.

### Section 3 Accounting Information

### Section 3.1 Schedule of Funding Progress (\$'s in 000's)

#### **Schedule of Funding Progress**

The exhibit below shows the death and disability plan disclosure under GASB No. 25 for fiscal years 2007 through 2013. Pension accounting figures for fiscal years after 2013 are subject to GASB 67. Per KPMG, the new accounting standards under GASB 67 are not applicable to the Occupational Death & Disability benefits under this Plan.

|               | Actuarial Accrued<br>Liabilities (AAL) | Actuarial Value<br>of Assets | Funded Ratio | Unfunded AAL<br>(UAAL) | Covered Payroll | UAAL as a<br>Percentage of<br>Covered Payroll |
|---------------|--|------------------------------|--------------|------------------------|-----------------|---|
| June 30, 2013 | \$ 3,603                               | \$ 11,373                    | 315.7%       | \$ (7,770)             | \$ 590,380      | (1.3)%  |
| June 30, 2012 | 2,412                                  | 9,142                        | 379.0%       | (6,730)                | 558,760         | (1.2)%  |
| June 30, 2011 | 1,949                                  | 7,049                        | 361.7%       | (5,100)                | 459,521         | (1.1)%  |
| June 30, 2010 | 853                                    | 4,801                        | 562.8%       | (3,948)                | 421,187         | (0.9)%  |
| June 30, 2009 | 403                                    | 3,138                        | 778.7%       | (2,735)                | 314,118         | (0.9)%  |
| June 30, 2008 | 242                                    | 1,288                        | 532.2%       | (1,046)                | 203,955         | (0.5)%  |
| June 30, 2007 | 48                                     | 188                          | 391.7%       | (140)                  | 105,611         | (0.1)%  |

The exhibit below shows the retiree medical disclosure without regard to Medicare Part D under GASB No. 43.

|                            | Actuarial Accrued<br>Liabilities (AAL) | Actuarial Value<br>of Assets | Funded Ratio | Unfunded AAL<br>(UAAL) | Covered Payroll | UAAL as a<br>Percentage of<br>Covered Payroll |
|----------------------------|--|------------------------------|--------------|------------------------|-----------------|---|
| June 30, 2015 <sup>1</sup> | \$ 124,660                             | \$ 44,188                    | 35.4%        | \$ 80,472              | \$ 778,980      | 10.3%   |
| June 30, 2014              | 56,819                                 | 26,466                       | 46.6%        | 30,353                 | 678,840         | 4.5%  |
| June 30, 2013              | 69,144                                 | 20,336                       | 29.4%        | 48,808                 | 590,380         | 8.3%  |
| June 30, 2012              | 51,798                                 | 15,773                       | 30.5%        | 36,025                 | 558,760         | 6.4%  |
| June 30, 2011              | 13,142                                 | 12,009                       | 91.4%        | 1,133                  | 459,521         | 0.2%  |
| June 30, 2010              | 8,370                                  | 8,767                        | 104.7%       | (397)                  | 421,187         | (0.1)%  |
| June 30, 2009              | 4,594                                  | 5,475                        | 119.2%       | (881)                  | 314,118         | (0.3)%  |
| June 30, 2008              | 2,123                                  | 2,719                        | 128.1%       | (596)                  | 203,955         | (0.3)%  |
| June 30, 2007              | 803                                    | 1,067                        | 132.9%       | (264)                  | 105,611         | (0.2)%  |

<sup>&</sup>lt;sup>1</sup> Based on the partially funded discount rate of 5.4%.

# Section 3.2 Schedule of Employer Contributions (\$'s in 000's)

#### **Schedule of Employer Contributions**

The following shows the death and disability disclosure under GASB No. 25 for fiscal years ending 2007 through 2013. Pension accounting figures for fiscal years after 2013 are subject to GASB 67. Per KPMG, the new accounting standards under GASB 67 are not applicable to the Occupational Death & Disability benefits under this Plan.

| Fiscal Year Ending | Annual Required<br>Contribution (ARC) | Percentage of ARC<br>Contributed |
|--------------------|---------------------------------------|----------------------------------|
| June 30, 2013      | \$ 1,328                              | 116%                             |
| June 30, 2012      | 1,085                                 | 146%                             |
| June 30, 2011      | 1,852                                 | 100%                             |
| June 30, 2010      | 1,495                                 | 100%                             |
| June 30, 2009      | 1,787                                 | 100%                             |
| June 30, 2008      | 1,063                                 | 100%                             |
| June 30, 2007      | 181                                   | 100%                             |

The following shows the retiree medical disclosure without regard to Medicare Part D subsidy under GASB No. 43 for fiscal year ending 2007 and later.

| Fiscal Year Ending | Annual Required Contribution (ARC) | Percentage of ARC<br>Contributed |
|--------------------|------------------------------------|----------------------------------|
| June 30, 2015      | \$ 15,190                          | 96%                              |
| June 30, 2014      | 3,937                              | 94%                              |
| June 30, 2013      | 3,365                              | 95%                              |
| June 30, 2012      | 3,464                              | 82%                              |
| June 30, 2011      | 3,229                              | 78%                              |
| June 30, 2010      | 3,469                              | 87%                              |
| June 30, 2009      | 3,152                              | 85%                              |
| June 30, 2008      | 1,845                              | 85%                              |
| June 30, 2007      | 1,028                              | 100%                             |

The exhibit below shows the annual required contribution (ARC) as a percentage of pay.

|                |             | ARC (% of Pay)                                |                 |                     |  |  |
|----------------|-------------|---|-----------------|---------------------|--|--|
| Valuation Date | Fiscal Year | Occupational Death & Disability (PF / Others) | Retiree Medical | Total (PF / Others) |  |  |
| N/A            | FY07        | 0.40% / 0.30%                                 | 1.75%           | 2.15% / 2.05%       |  |  |
| N/A            | FY08        | 1.33% / 0.58%                                 | 1.17%           | 2.50% / 1.75%       |  |  |
| N/A            | FY09        | 1.33% / 0.58%                                 | 1.17%           | 2.50% / 1.75%       |  |  |
| June 30, 2007  | FY10        | 1.33% / 0.30%                                 | 0.95%           | 2.28% / 1.25%       |  |  |
| June 30, 2008  | FY11        | 1.18% / 0.31%                                 | 0.68%           | 1.86% / 0.99%       |  |  |
| June 30, 2009  | FY12        | 0.97% / 0.11%                                 | 0.62%           | 1.59% / 0.73%       |  |  |
| June 30, 2010  | FY13        | 0.99% / 0.14%                                 | 0.57%           | 1.56% / 0.71%       |  |  |
| June 30, 2011  | FY14        | 1.14% / 0.20%                                 | 0.58%           | 1.72% / 0.78%       |  |  |
| June 30, 2012  | FY15        | 1.06% / 0.22%                                 | 1.95%           | 3.01% / 2.17%       |  |  |
| June 30, 2013  | FY16        | 1.05% / 0.22%                                 | 1.95%           | 3.00% / 2.17%       |  |  |
| June 30, 2014  | FY17        | N/A*  | N/A*            | N/A*                |  |  |
| June 30, 2015  | FY18        | N/A*  | N/A*            | N/A*                |  |  |

<sup>\*</sup>GASB 74 accounting will be in effect beginning in FY17 and will be provided in a separate report.

GASB 43 ARC is based on DCR salary only and a level dollar basis to determine normal cost and amortization of the unfunded liability. These amounts are converted to percentage of pay. DCR salary is the same salary used for determination of employer contribution rates.

#### Section 3.3 Notes to Trend Data

### Actuarial Assumptions, Methods and Additional Information Under GASB

Valuation Date June 30, 2015
Actuarial Cost Method Entry Age Normal

Level Percentage of Pay Normal Cost Basis for

Occupational Death & Disability

Level Dollar Normal Cost Basis for Retiree Medical

Amortization Method Level Percentage of Pay for Occupational Death & Disability,

Level Dollar for Retiree Medical. Closed with bases

established annually.

Equivalent Single Amortization Period 20 years to reflect Retiree Medical liabilities without regard to

Medicare Part D

Asset Valuation Method 5-year smoothed market, 80% to 120% of fair value corridor

**Actuarial Assumptions:** 

Investment rate of return\* 8.00% for Occupational Death & Disability (net

of expenses), 5.41% for retiree medical

Projected salary increases Peace Officer/Firefighter: Merit – 2.75% per year for the first

4 years of employment, grading down to 0.5% at 7 years and

thereafter.

Productivity – 0.5% per year. Inflation – 3.12%.

Others: Merit – 6.00% per year grading down to 2.00% after 5 years; for more than 6 years of service, 1.50% grading

down to 0%.

Productivity – 0.5% per year. Inflation – 3.12%.

GASB 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

GASB 43 outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on 1) the funded ratio and 2) the percentage of the annual required contribution (ARC) actually being contributed to the plan. The State of Alaska has utilized the first methodology to develop a discount rate to be used for June 30, 2015 disclosure.

PERS DCR retiree medical benefits were 30.5% funded as of June 30, 2012 (beginning of FY13), so for fiscal year ending 2015 a partially funded discount rate is required for disclosure. Based upon the funded ratio, an 8.00% fully funded discount rate and a 4.25% unfunded discount rate, the partially funded rate used only for GASB 43 purposes is 5.41%

Based on GASB accounting rules, the retiree drug subsidy the State of Alaska receives under Medicare Part D has not been recognized for GASB 43 disclosure purposes.

<sup>\*</sup>Includes inflation at 3.12%

# Section 3.4 Solvency Test (\$'s in 000's)

The exhibit below shows the combined occupational death & disability and retiree medical solvency test for valuation dates June 30, 2010 and before.

|                            | Actuarial Accrued Liability For: |     |                     |       |   |       |                     |        | Portion of Actuarial Accrued Liability Covered by Assets |        |        |  |
|----------------------------|----------------------------------|-----|---------------------|-------|---|-------|---------------------|--------|--|--------|--------|--|
|                            | (1)                              |     | (2)                 |       | (3)   |       |                     |        |  |        |        |  |
| Valuation<br>Date          | Active Mem                       |     | Inactive<br>Members |       | Active Members<br>(Employer-<br>Financed Portion) |       | Valuation<br>Assets |        | (1)  | (2)    | (3)    |  |
| June 30, 2010 <sup>1</sup> | \$ 0                             |     | \$                  | 0     | \$ 8,038  |       | \$                  | 13,568 | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2009 <sup>1</sup> | 0 0                              |     |                     | 4,316 |   | 8,613 | 100.0%              | 100.0% | 100.0%   |        |        |  |
| June 30, 2008 <sup>1</sup> | 0                                | 0 0 |                     | 2,018 |   |       | 4,007               | 100.0% | 100.0%   | 100.0% |        |  |
| June 30, 2007              | 0                                |     |                     | 0     |   | 759   |                     | 1,255  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2006              | 0                                |     |                     | 0     | 0   |       |                     | 0      | N/A  | N/A    | N/A    |  |

Retiree medical liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

PERS DCR Actuarial Valuation as of June 30, 2015

<sup>&</sup>lt;sup>1</sup> Change in Assumptions

The exhibit below shows the occupational death & disability solvency test for valuation dates June 30, 2006 and later.

|                            | Occupational Death & Disability<br>Actuarial Accrued Liability For: |   |                            |   |  |       |   |        | Portion of Actuarial<br>Accrued Liability<br>Covered by Assets |        |        |  |
|----------------------------|---|---|----------------------------|---|--|-------|---|--------|--|--------|--------|--|
| Valuation<br>Date          | (1) Active Member Contributions                                     |   | (2)<br>Inactive<br>Members |   | (3)  Active Members (Employer- Financed Portion) |       | Occupational<br>Death & Disability<br>Valuation<br>Assets |        | (1)  | (2)    | (3)    |  |
| June 30, 2015              | \$  | 0 | \$                         | 0 | \$   | 5,049 | \$  | 19,014 | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2014 <sup>1</sup> |   | 0 |                            | 0 | ;  | 3,627 |   | 14,995 | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2013              |   | 0 |                            | 0 | ;  | 3,603 |   | 11,373 | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2012              |   | 0 |                            | 0 | :  | 2,412 |   | 9,142  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2011              |   | 0 |                            | 0 |  | 1,949 |   | 7,049  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2010 <sup>1</sup> |   | 0 |                            | 0 |  | 853   |   | 4,801  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2009 <sup>1</sup> |   | 0 |                            | 0 |  | 403   |   | 3,138  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2008              |   | 0 |                            | 0 |  | 242   |   | 1,288  | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2007              |   | 0 |                            | 0 |  | 48    |   | 188    | 100.0%   | 100.0% | 100.0% |  |
| June 30, 2006              |   | 0 |                            | 0 |  | 0     |   | 0      | N/A  | N/A    | N/A    |  |

<sup>&</sup>lt;sup>1</sup> Change in Assumptions

The exhibit below shows the retiree medical solvency test for valuation dates June 30, 2006 and later.

|                            | Actu                             | Retiree Medical<br>arial Accrued Liability | / For:   |   | A      | tion of Actua<br>ccrued Liabil<br>vered by Ass | ity    |
|----------------------------|----------------------------------|--|--|---|--------|--|--------|
| Valuation<br>Date          | (1)  Active Member Contributions | (2)<br>Inactive<br>Members                 | (3)  Active Members (Employer- Financed Portion) | Retiree<br>Medical<br>Valuation<br>Assets | (1)    | (2)  | (3)    |
| June 30, 2015              | \$ 0                             | \$ 0                                       | \$ 66,473  | \$ 44,188                                 | 100.0% | 100.0%   | 66.5%  |
| June 30, 2014 <sup>1</sup> | 0                                | 0  | 50,217   | \$ 26,466                                 | 100.0% | 100.0%   | 52.7%  |
| June 30, 2013              | 0                                | 0  | 60,282   | \$ 20,336                                 | 100.0% | 100.0%   | 33.7%  |
| June 30, 2012 <sup>1</sup> | 0                                | 0  | 44,509   | \$ 15,773                                 | 100.0% | 100.0%   | 35.4%  |
| June 30, 2011              | 0                                | 0  | 11,302   | \$ 12,009                                 | 100.0% | 100.0%   | 100.0% |
| June 30, 2010 <sup>1</sup> | 0                                | 0  | 7,185  | \$ 8,767                                  | 100.0% | 100.0%   | 100.0% |
| June 30, 2009 <sup>1</sup> | 0                                | 0  | 3,913  | \$ 5,475                                  | 100.0% | 100.0%   | 100.0% |
| June 30, 2008 <sup>1</sup> | 0                                | 0  | 1,776  | \$ 2,719                                  | 100.0% | 100.0%   | 100.0% |
| June 30, 2007              | 0                                | 0  | 711  | \$ 1,067                                  | 100.0% | 100.0%   | 100.0% |
| June 30, 2006              | 0                                | 0  | 0  | 0   | N/A    | N/A  | N/A    |

Retiree medical liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

<sup>&</sup>lt;sup>1</sup> Change in Assumptions

## Section 4 Member Data

## Section 4.1 Summary of Members Included

| As of June 30                              | 2011         | 2012         | 2013         | 2014         | 2015         |
|--|--------------|--------------|--------------|--------------|--------------|
| Peace Officer/Firefighter – Active Members |              |              |              |              |              |
| 1. Number                                  | 770          | 909          | 1,108        | 1,313        | 1,438        |
| 2. Average Age                             | 34.23        | 34.36        | 34.35        | 34.80        | 34.93        |
| Average Credited Service                   | 2.54         | 2.91         | 3.07         | 3.28         | 3.71         |
| 4. Average Entry Age                       | 31.69        | 31.45        | 31.28        | 31.52        | 31.22        |
| 5. Average Annual Earnings                 | \$<br>65,769 | \$<br>68,440 | \$<br>68,197 | \$<br>69,904 | \$<br>71,839 |
| Others – Active Members                    |              |              |              |              |              |
| 1. Number                                  | 10,195       | 11,688       | 13,208       | 14,487       | 15,660       |
| 2. Average Age                             | 39.10        | 39.69        | 39.96        | 40.19        | 40.54        |
| Average Credited Service                   | 1.98         | 2.32         | 2.55         | 2.94         | 3.24         |
| 4. Average Entry Age                       | 37.12        | 37.37        | 37.41        | 37.25        | 37.30        |
| 5. Average Annual Earnings                 | \$<br>46,439 | \$<br>48,504 | \$<br>50,961 | \$<br>52,831 | \$<br>53,780 |
| Total – Active Members                     |              |              |              |              |              |
| 1. Number                                  | 10,965       | 12,597       | 14,316       | 15,800       | 17,098       |
| 2. Average Age                             | 38.76        | 39.31        | 39.53        | 39.74        | 40.07        |
| Average Credited Service                   | 2.02         | 2.36         | 2.59         | 2.97         | 3.28         |
| 4. Average Entry Age                       | 36.74        | 36.95        | 36.94        | 36.77        | 36.79        |
| 5. Average Annual Earnings                 | \$<br>47,796 | \$<br>49,943 | \$<br>52,295 | \$<br>54,250 | \$<br>55,299 |
| Retirees, Disabilitants and Beneficiaries  |              |              |              |              |              |
| 1. Number                                  | 1            | 1            | 4            | 6            | 12           |
| 2. Average Age                             | N/A          | N/A          | 39           | 34           | 43           |
| Average Monthly Death & Disability Benefit | N/A          | N/A          | 2,320        | \$<br>2,554  | \$2,399      |
| Inactive Members*                          |              |              |              |              |              |
| 1. Number                                  | 4            | 36           | 118          | 251          | 456          |
| Total Number of Members                    | 10,970       | 12,634       | 14,438       | 16,057       | 17,566       |

<sup>\*</sup> Inactive members who have balances in the defined contribution retirement plan are not eligible for future occupational death and disability or retiree medical benefits.

Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

# Section 4.2 Age and Service Distribution of Active Members

### **Annual Earnings by Age**

### **Annual Earnings by Credited Service**

|         |        | Total<br>Annual | Average<br>Annual | Years<br>of |        | Total<br>Annual   |    | verage<br>Annual |
|---------|--------|-----------------|-------------------|-------------|--------|-------------------|----|------------------|
| Age     | Number | Earnings        | Earnings          | Service     | Number | Earnings          | E  | arnings          |
| 0 – 19  | 76     | \$ 3,005,491    | \$ 39,546         | 0           | 3,904  | \$<br>179,509,076 | \$ | 45,981           |
| 20 - 24 | 1,203  | 54,408,570      | 45,227            | 1           | 2,919  | 150,138,238       |    | 51,435           |
| 25 - 29 | 2,860  | 149,100,705     | 52,133            | 2           | 2,432  | 132,874,836       |    | 54,636           |
| 30 - 34 | 2,926  | 168,620,661     | 57,628            | 3           | 2,035  | 117,478,851       |    | 57,729           |
| 35 - 39 | 2,279  | 133,102,781     | 58,404            | 4           | 1,624  | 96,398,168        |    | 59,358           |
| 40 – 44 | 2,005  | 111,894,476     | 55,808            | 0 – 4       | 12,914 | 676,399,169       |    | 52,377           |
| 45 – 49 | 1,744  | 95,788,764      | 54,925            | 5 – 9       | 4,177  | 268,655,887       |    | 64,318           |
| 50 – 54 | 1,651  | 92,240,559      | 55,870            | 10 – 14     | 7      | 440,856           |    | 62,979           |
| 55 - 59 | 1,322  | 77,227,018      | 58,417            | 15 – 19     | 0      | 0                 |    | 0                |
| 60 - 64 | 739    | 43,518,445      | 58,888            | 20 - 24     | 0      | 0                 |    | 0                |
| 65 - 69 | 221    | 13,149,619      | 59,501            | 25 - 29     | 0      | 0                 |    | 0                |
| 70 – 74 | 59     | 2,683,099       | 45,476            | 30 - 34     | 0      | 0                 |    | 0                |
| 75+     | 13     | 755,725         | 58,133            | 35 - 39     | 0      | 0                 |    | 0                |
|         |        |                 | <u> </u>          | 40+         | 0      | 0                 |    | 0                |
| Total   | 17,098 | \$ 945,495,913  | \$ 55,299         | Total       | 17,098 | \$<br>945,495,912 | \$ | 55,299           |

### Years of Credited Service by Age

| Years of Service |        |         |       |       |       |       |       |       |     |        |
|------------------|--------|---------|-------|-------|-------|-------|-------|-------|-----|--------|
| Age              | 0-4    | 5-9     | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total  |
| 0 – 19           | 76     | 0       | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 76     |
| 20 - 24          | 1,192  | 11      | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 1,203  |
| 25 - 29          | 2,521  | 339     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2,860  |
| 30 - 34          | 2,191  | 735     | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 2,926  |
| 35 - 39          | 1,579  | 699     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 2,279  |
| 40 - 44          | 1,429  | 575     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 2,005  |
| 45 – 49          | 1,242  | 501     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 1,744  |
| 50 – 54          | 1,110  | 540     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 1,651  |
| 55 – 59          | 900    | 420     | 2     | 0     | 0     | 0     | 0     | 0     | 0   | 1,322  |
| 60 - 64          | 494    | 244     | 1     | 0     | 0     | 0     | 0     | 0     | 0   | 739    |
| 65 - 69          | 134    | 87      | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 221    |
| 70 - 74          | 34     | 25      | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 59     |
| 75+              | 12     | 1       | 0     | 0     | 0     | 0     | 0     | 0     | 0   | 13     |
| <b>T</b>         | 40.044 | 4 4 7 7 | _     | •     | •     | •     | 0     |       | 0   | 47.000 |
| Total            | 12,914 | 4,177   | 7     | 0     | 0     | 0     | 0     | 0     | 0   | 17,098 |

Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

### Section 4.3 Member Data Reconciliation

|                            | Actives | Vested<br>Inactive* | Retired | Disabled | Beneficiary | Total   |
|----------------------------|---------|---------------------|---------|----------|-------------|---------|
| As of June, 2014           | 15,800  | 251                 | 0       | 4        | 2           | 16,057  |
| Vested Termination         | (284)   | 287                 | 0       | 0        | 0           | 3       |
| Non-vested Termination     | (1,607) | (14)                | 0       | 0        | 0           | (1,621) |
| Refund of Contributions    | (668)   | (48)                | 0       | 0        | 0           | (716)   |
| Converted To/From DB Plan  | 9       | 0                   | 0       | 0        | 0           | 9       |
| Transfer In                | 40      | 1                   | 0       | 0        | 0           | 41      |
| Transfer Out               | (56)    | (3)                 | 0       | 0        | 0           | (56)    |
| Disabled                   | (2)     | (3)                 | 0       | 6**      | 0           | 1       |
| Retired                    | 0       | 0                   | 0       | 0        | 0           | 0       |
| Deceased, No Beneficiary   | (16)    | (1)                 | 0       | 0        | 0           | (17)    |
| Deceased, With Beneficiary | 0       | 0                   | 0       | 0        | 0           | 0       |
| Return to Active           | 340     | (17)                | 0       | 0        | 0           | 323     |
| Data Adjustment            | 5       | 0                   | 0       | 0        | 0           | 5       |
| New Entrant                | 3,537   | N/A                 | N/A     | N/A      | N/A         | 3,537   |
| As of June 30, 2015        | 17,098  | 456                 | 0       | 10       | 2           | 17,566  |

<sup>\*</sup> Inactive members who have balances in the defined contribution retirement plan are not eligible for future occupational death & disability or retiree medical benefits.

<sup>\*\*</sup> Includes one participant who was non-participating as of June 30, 2014 and was subsequently rehired and disabled as of June 30, 2015.

Section 4.4 Schedule of Active Member Valuation Data

| Valuation<br>Date | Number | Annual<br>Earnings (000's) | Annual<br>Average<br>Earnings | Percent<br>Increase/<br>(Decrease)<br>in Average<br>Earnings | Number of<br>Participating<br>Employers |
|-------------------|--------|----------------------------|-------------------------------|--|---|
| June 30, 2015     | 17,098 | \$ 945,496                 | \$ 55,299                     | 1.9%   | 159                                     |
| June 30, 2014     | 15,800 | 857,150                    | 54,250                        | 3.7%   | 159                                     |
| June 30, 2013     | 14,316 | 748,658                    | 52,295                        | 4.7%   | 159                                     |
| June 30, 2012     | 12,597 | 629,128                    | 49,943                        | 4.5%   | 160                                     |
| June 30, 2011     | 10,965 | 524,088                    | 47,796                        | 4.8%   | 160                                     |
| June 30, 2010     | 9,232  | 421,187                    | 45,622                        | 5.4%   | 160                                     |
| June 30, 2009     | 7,256  | 314,118                    | 43,291                        | 7.2%   | 160                                     |
| June 30, 2008     | 5,052  | 203,955                    | 40,371                        | 8.1%   | 159                                     |
| June 30, 2007     | 2,827  | 105,611                    | 37,358                        | 0.0%   | 160                                     |

Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

### Section 5 Basis of the Actuarial Valuation

### Section 5.1 Summary of Plan Provisions

### 1. Effective Date

July 1, 2006, with amendments through June 30, 2015.

### 2. Administration of Plan

The Commissioner of Administration or the Commissioner's designee is the administrator of the Plan. The Attorney General of the state is the legal counsel for the Plan and shall advise the administrator and represent the Plan in legal proceedings.

The Alaska Retirement Management Board prescribes policies, adopts regulations, invests the funds, and performs other activities necessary to carry out the provisions of the Plan.

### 3. Employers Included

Currently there are 159 employers participating in PERS DCR, including the State of Alaska, and 158 political subdivisions and public organizations.

### 4. Membership

An employee of a participating employer who first enters service on or after July 1, 2006, or a member of the defined benefit plan who works for an employer who began participation on or after July 1, 2006, and meets the following criteria is a member in the Plan:

- Permanent full-time or part-time employees of the State of Alaska, participating political subdivisions or public organizations. An employee must be regularly scheduled to work 30 or more hours per week to be considered full-time by the PERS. An employee must be regularly scheduled to work 15 or more hours per week but less than 30 hours to be considered a part-time employee for PERS purposes.
- Elected state officials.
- Elected municipal officials who are compensated and receive at least \$2,001.00 per month.

Members can convert to PERS DCR if they are an eligible nonvested member of the PERS defined benefit plan whose employer consents to transfers to the defined contribution plan and they elect to transfer his or her account balance to PERS DCR.

### 5. Member Contributions

Other than the member-paid premiums shown on the next page, there are no member contributions for the occupational death & disability and retiree medical benefits.

### 6. Retiree Medical Benefits

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal retirement eligibility is the earlier of a) 30 years of service for Others members and 25 years of service for Peace Officer/Firefighter members, or b) Medicare eligible and 10 years of service.
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until the member is Medicare eligible. The member's premium for dependent coverage is 100% until both the member and dependent are Medicare eligible.
- Coverage cannot be denied except for failure to pay premium.
- Members who are receiving disability benefits or survivors who are receiving monthly survivor benefits are not eligible until the member meets, or would have met if he/she had lived, the normal retirement eligibility requirements.
- The following is an illustration of the potential medical benefits to be offered. The State Department of Administration has not yet established the provisions of the medical plan to be offered to PERS DCR retirees. An updated design is expected to be determined in 2016. The plan description below is used for valuation purposes and is based on prior communications with the Department of Administration.

| Plan Feature                           | Member Cost Share (In-<br>Network)          | Member Cost Share<br>(Out-of-Network) |  |  |  |
|--|---|---------------------------------------|--|--|--|
| Deductible(single/family)*             | \$250/                                      | <b>/\$</b> 500                        |  |  |  |
| Coinsurance **                         | 20% after deductible                        | 40% after deductible                  |  |  |  |
| Maximum Out-of-Pocket* (single/family) | \$2,500/\$5,000                             | \$5,000/\$10,000                      |  |  |  |
| Emergency Room Copay                   | \$100                                       | \$100                                 |  |  |  |
| Preventive Care                        | 0%, benefit limited to \$2,000 /member/year |                                       |  |  |  |
| Lifetime Max                           | \$3,000,000 with \$5,000 restore            |                                       |  |  |  |

<sup>\*</sup>Assumed to increase annually to mitigate impact of healthcare cost trend

- The plan's coverage is supplemental to Medicare.
- The premium for Medicare-eligible retirees or for Medicare-eligible dependents of Medicare-eligible retirees will be based on the member's years of service. The percentage of premium paid by the member is as follows:

| Years of Service   | Percent of Premium Paid by Member |
|--------------------|-----------------------------------|
| Less than 15 years | 30%                               |
| 15 – 19            | 25%                               |
| 20 – 24            | 20%                               |
| 25 – 29            | 15%                               |
| 30 years or more   | 10%                               |

The premium for dependents who are not eligible for Medicare was assumed to be 100%, consistent with that of the retiree.

Members have a separate defined contribution Health Reimbursement Arrangement account that can be used to pay for premiums or other medical expenses.

Coverage will continue for surviving spouses of covered retired members.

<sup>\*\*</sup>includes pharmacy benefits

### 7. Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- For Peace Officer and Firefighters there is a Disability Benefit Adjustment such that:
  - The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year or 9%, whichever is less.
  - At the time the disabled member retires, the retirement benefit will be increased by a
    percentage equal to the total cumulative percentage that has been applied to the disability
    benefit. Monthly annuity payments are made from the member's contribution balance until the
    fund is exhausted, at which the plan pays all remaining payments.
- For Others, there is no increase in the occupational disability benefit after commencement.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service for Others members or 25 years of service for Peace Officer/Firefighter members.
- Peace Officer/Firefighter members may select the defined contribution account or the monthly benefit payable as if they were retiring under Tier 3 (service continues during disability, final average salary is as of date of disability).
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

### 8. Occupational Death Benefits

- Benefit is 40% of salary for Others members and 50% of salary for Peace Officer/Firefighter members.
- Survivor's Pension Adjustment: A survivor's pension is increased by 50% of the cost of living increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60 on July 1, or under age 60 if the recipient has been receiving PERS benefits for at least 5 years as of July 1.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

### 9. Changes Since the Prior Valuation

There have been no changes since the prior valuation.

# Section 5.2 Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

### a. Actuarial Method – Entry Age Normal

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method. Any funding surpluses or unfunded accrued liability is amortized over 25 years as a level percentage of expected payroll. However, in keeping with GASB requirements in effect when the plan was adopted, the net amortization period will not exceed 30 years. These requirements are being amended. Under the new accounting standards that will become applicable to Postemployment Benefit Plans Other Than Pension Plans (GASB 74 and 75), the GASB requirements will not directly control amortization periods used for funding of the plan. Per KPMG, the new accounting standards under GASB 67 (and 68) are not applicable to the Occupational Death & Disability benefits under PERS DCR.

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death & disability benefits (constant dollar amount for retiree medical benefits), from the assumed entry age to the last age with a future benefit were applied to the projected benefits to determine the normal cost (the portion of the total cost of the Plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total DCR Plan payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the Plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for beneficiaries and disability members currently receiving benefits (if any) was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

### b. Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method was phased in over five years. Fair Value of Assets were \$0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by

KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

#### c. Valuation of Retiree Medical Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 6.2(d) of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2015.

Due to the lack of experience for PERS DCR only, base claims costs are based on those described in the actuarial valuation as of June 30, 2015 for PERS with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, upcoming FY16 claims costs were reduced 11.9% for medical and 7.1% for prescription drugs. The health care trend rate was reduced 0.2% each year to reflect the fact that the medical benefit to be offered to members will have annual indexing of member cost sharing features such as deductibles and out-of-pocket amounts.

No implicit subsidies are assumed. Employees projected to retire with 30 years of service prior to Medicare (25 years for PERS peace officer/firefighter) are valued with commencement deferred to Medicare eligibility, as such members will be required to pay the full plan premium. Explicit subsidies for disabled and normal retirement are determined using the plan-defined percentages of total projected plan costs, again with no implicit subsidy assumed.

We have prepared our valuation based on the participant census data that was readily available. Certain pension fields have been used to clarify the retiree medical data provided. This serves as a proxy until additional retiree medical data can be provided.

In accordance with actuarial standards, we note the following specific data sources and steps taken to value retiree medical benefits:

- The Division of Retirement and Benefits provided pension valuation census data. This pension census data included retiree medical enrollment information that indicated the retirement system and an indication regarding eligibility for system-paid benefits.
- Certain adjustments and assumptions were made to determine the number of people enrolled in retiree medical:
  - Where there is an indication of non-system paid health benefits, we reflected the coverage level (e.g. single vs. couple) indicated on the pension data in valuing the retiree medical plan.
  - Where system-paid health benefits coverage is indicated, the premium dollar amount indicated on the data is a composite rate that does not specify the number of people enrolled.
  - Buck understands that retiree medical coverage/eligibility is in place while a pension benefit is payable.
  - For individuals who are receiving a pension benefit, Buck references the pension benefit payment form (single life annuity, joint & survivor, etc.) along with marital status to determine the number of people to value for medical purposes:
    - Where there is a single life-annuity indicated and the marital status is single, we valued one member for health coverage.
    - Where there is a single life-annuity indicated and the marital status is married, we valued two members until the retiree dies. Upon the retiree's death, medical coverage for the spouse is assumed to cease and that spouse is no longer valued.

- Where there is a joint & survivor annuity, we assumed a member and spouse are covered and upon the retiree's death, health coverage is assumed to continue to the surviving spouse.
- For individuals included in the pension data expecting a future pension, we valued health benefits starting at the same point that the pension benefit is assumed to start.
- Future retirees' level of coverage is estimated according to valuation assumptions regarding spousal coverage.
- Limitations on the use of the valuation results due to uncertainty about various aspects of the
  data: Since pension data is used to estimate health care coverage, the retiree medical
  liabilities and resultant figures regarding funded status and proposed employer contribution
  rates may be different if we had data that could directly determine the level of health
  coverage for each retiree.
- Unresolved matters: We have received retiree medical enrollment data, but we have not completed the reconciliation of retiree medical enrollment data to the retiree medical valuation census data. Based on information provided to us, it appears that our valuation may assume that a greater number of individuals are enrolled in the retiree medical coverage than are indicated in the enrollment statistics provided by the carrier. This is because our data assumptions for use of pension data as a proxy for individual retiree medical coverage conservatively include in the valuation any potential dependent. The carrier enrollment information with lower enrollment figures are conservatively used to develop per capita costs, resulting in higher per capita costs than if the counts from the proxy data were used.
- Potential uncertainty or bias: Until we complete the comparison between retiree medical
  enrollment and the proxy data, we cannot specify the magnitude of the difference. There is
  potential for bias and we believe there is conservatism in our methodology. That is, it is
  possible there are more people included in the valuation than are enrolled in the retiree
  medical plan.

#### d. Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions; however, only the Patient Centered Outcomes Research Institute fee impact has been included in the valuation results as part of administrative fee.

Because the State plan is retiree-only, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We did look at the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

The Plan will be subject to the high cost plan excise tax (Cadillac tax) and the value of the Health Reimbursement Account must be included along with projected plan costs. The excise tax was originally to be effective for 2018; recent legislation passed in December 2015 delayed it to 2020. Based upon guidance available at the time of disclosure, Buck determined the impact on plan liabilities to be immaterial (less than \$225,000 (0.4%)) based on a blend of projected pre-Medicare and Medicare retirees and related cost projections. Participants will be responsible for any tax to the extent they are reflected in retiree contributions.

We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

### e. Changes in Methods Since the Prior Valuation

There have been no changes in methods since the prior valuation.

# Section 5.3 Summary of Actuarial Assumptions and Changes in Assumptions

The demographic and economic assumptions used in the June 30, 2015 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2014. These assumptions were the result of an experience study performed for the PERS defined benefit plan as of June 30, 2013.

| Investment Return / Discount Rate   | 8.00% per year (geometric), compounded annually, net of expenses.  |
|---|--|
| Salary Scale  | Inflation – 3.12% per year.  |
|   | Productivity – 0.50% per year.   |
|   | See Table 1 for salary scale rates   |
| Payroll Growth  | 3.62% per year. (Inflation + Productivity)   |
| Total Inflation   | Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.  |
| Mortality (Pre-termination)*  | Based upon 2010-2013 actual mortality experience (see Table 2). 60% of male rates and 65% of female rates of the Post-Termination Mortality rates.  Deaths are assumed to be occupational 70% of the time for Peace  |
|   | Officer/Firefighters, 50% of the time for Others.  |
| Mortality (Post-termination)*   | Based upon 2010-2013 actual mortality experience (see Table 3). 96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 with Projection Scale BB.  |
| Total Turnover  | Rates based upon the 2010-2013 actual experience. (See Table 4.)   |
| Disability  | Incidence rates based on 2010-2013 actual experience, in accordance with Table 5.  |
|   | Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB. Disabilities are assumed to be occupational 70% of the time for Peace Officer/Firefighters, 50% of the time for Others.            |
|   | For Peace Officer/Firefighters, members are assumed to take the monthly annuity 100% of the time.  |
| Retirement  | Retirement rates based upon the 2010-2013 actual experience in accordance with Table 6.  |
| Marriage and Age Difference   | Wives are assumed to be three years younger than husbands. For Others, 75% of male members and 70% female members are assumed to be married. For Peace Officer/Firefighters, 85% of male members and 75% of female members are assumed to be married at termination from active service. |
| Part-Time Status  | Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.65 years of credited service per year for Other members.   |
| Peace Officer / Firefighter Occupational Disability Retirement Benefit Commencement | The occupational disability retirement benefit is assumed to be first payable from the member's DC account and the retirement benefit payable from the occupational death and disability trust will commence five years later.   |
|   |  |

<sup>\*</sup>The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 109%.

| Per Capita Claims Cost         | Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY16 medical and prescription drug are shown below:   |  |                       |  |  |  |
|--------------------------------|---|--|-----------------------|--|--|--|
|                                |   | Medical  | Prescription<br>Drugs |  |  |  |
|                                | Pre-Medicare  | \$ 11,724  | \$ 2,753              |  |  |  |
|                                | Medicare Parts A & B  | \$ 1,461   | \$ 2,753              |  |  |  |
|                                | Medicare Part B Only  | \$ 6,700   | \$ 2,753              |  |  |  |
|                                | Medicare Part D   | N/A  | \$ 496                |  |  |  |
|                                | Members are assumed to attain   | n Medicare eligibility                               | at age 65.            |  |  |  |
| Third Party Administrator Fees | \$194.18 per person per year; a   | ssumed trend rate of                                 | f 5% per year.        |  |  |  |
| Base Claims Costs Adjustments  | Due to higher initial copays, de member cost sharing compare cost adjustments are applied to  0.881 for the medical plan  0.929 for the prescription of   | d to the DB medical pother than the per capita claim | olan, the following   |  |  |  |
| Imputed Data                   | Data changes from the prior year which are deemed to have immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data. Nonvested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting |  |                       |  |  |  |
| Health Cost Trend              | percentage.  The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 9.4% is applied to the FY16 pre-Medicare medical claims costs to get the FY17 medical claims  |  |                       |  |  |  |

costs.

FY100

Medical Medical Prescription Pre-65 Post-65 **Drugs** FY16 9.4% 5.9% 5.7% FY17 8.8% 5.8% 5.4% FY18 8.2% 5.7% 5.1% FY19 7.6% 5.6% 4.8% FY20 7.0% 5.6% 4.6% FY21 6.5% 5.6% 4.4% FY22 6.0% 5.6% 4.2% FY25 5.6% 5.6% 4.2% FY50 4.4% 4.0% 4.0%

As of the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model effectively begins estimating trend amounts beginning in 2014 and projects out to 2090. This model has been adopted by the Society of Actuaries, and has been populated with assumptions that are specific to the State of Alaska.

4.4%

4.0%

Each of the above trend rates was reduced by 0.2% to reflect the fact that the medical benefit offered to members will have annual indexing of member cost sharing.

4.0%

| Aging Factors |       |         | Prescription |
|---------------|-------|---------|--------------|
|               | Age   | Medical | Drugs        |
|               | 0-44  | 2.0%    | 4.5%         |
|               | 45-54 | 2.5%    | 3.5%         |
|               | 55-64 | 3.5%    | 3.0%         |
|               | 65-73 | 4.0%    | 1.5%         |
|               | 75-83 | 1.5%    | 0.5%         |
|               | 85-93 | 0.5%    | 0.0%         |
|               | 94+   | 0.0%    | 0.0%         |

Retiree Medical Participation

| Decreme    | ent Due to Disability | <u>Decre</u> | ment Due to Retirement       |
|------------|-----------------------|--------------|------------------------------|
| <u>Age</u> | Percent Participation | <u>Age</u>   | <b>Percent Participation</b> |
| <56        | 73.00%                | 55           | 40.0%                        |
| 56         | 77.50%                | 56           | 50.0%                        |
| 57         | 79.75%                | 57           | 55.0%                        |
| 58         | 82.00%                | 58           | 60.0%                        |
| 59         | 84.25%                | 59           | 65.0%                        |
| 60         | 86.50%                | 60           | 70.0%                        |
| 61         | 88.75%                | 61           | 75.0%                        |
| 62         | 91.00%                | 62           | 80.0%                        |
| 63         | 93.25%                | 63           | 85.0%                        |
| 64         | 95.50%                | 64           | 90.0%                        |
| 65+        | 94.40%                | 65+          | Years of Svc                 |
|            |                       |              | <15 70.5%                    |
|            |                       |              | 15-19 75.2%                  |
|            |                       |              | 20-24 79.9%                  |
|            |                       |              | 25-29 89.3%                  |
|            |                       |              | 30+ 94.0%                    |

<sup>\*</sup>Participation rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market. This assumption is based on observed trends in participation from a range of other plans.

Table 1 Alaska PERS DCR Plan Salary Scale

### Peace Officer/Firefighter:

| Years of<br>Service | % Increase |
|---------------------|------------|
| 0                   | 9.66%      |
| 1                   | 8.66       |
| 2                   | 7.16       |
| 3                   | 7.03       |
| 4                   | 6.91       |
| 5                   | 6.41       |
| 6                   | 5.66       |
| 7                   | 4.92       |
| 8                   | 4.92       |
| 9                   | 4.92       |
| 10                  | 4.92       |
| 11                  | 4.92       |
| 12                  | 4.92       |
| 13                  | 4.92       |
| 14                  | 4.92       |
| 15                  | 4.92       |
| 16                  | 4.92       |
| 17                  | 4.92       |
| 18                  | 4.92       |
| 19                  | 4.92       |
| 20+                 | 4.92       |

### Others:

| Years of Service | % Increase |
|------------------|------------|
| 0                | 8.55%      |
| 1                | 7.36       |
| 2                | 6.35       |
| 3                | 6.11       |
| 4                | 5.71       |
| 5+               | Age based  |

| Age | % Increase | Age | % Increase |
|-----|------------|-----|------------|
|     |            |     |            |
| 20  | 7.91%      | 45  | 5.44%      |
| 21  | 7.83       | 46  | 5.40       |
| 22  | 7.75       | 47  | 5.36       |
| 23  | 7.51       | 48  | 5.31       |
| 24  | 7.27       | 49  | 5.27       |
|     |            |     |            |
| 25  | 7.03       | 50  | 5.22       |
| 26  | 6.79       | 51  | 5.18       |
| 27  | 6.55       | 52  | 5.13       |
| 28  | 6.52       | 53  | 5.09       |
| 29  | 6.49       | 54  | 5.05       |
|     |            |     |            |
| 30  | 6.47       | 55  | 5.01       |
| 31  | 6.44       | 56  | 4.97       |
| 32  | 6.41       | 57  | 4.93       |
| 33  | 6.33       | 58  | 4.85       |
| 34  | 6.24       | 59  | 4.77       |
|     |            |     |            |
| 35  | 6.16       | 60  | 4.69       |
| 36  | 6.07       | 61  | 4.60       |
| 37  | 5.99       | 62  | 4.52       |
| 38  | 5.90       | 63  | 4.46       |
| 39  | 5.82       | 64  | 4.40       |
|     |            |     |            |
| 40  | 5.73       | 65+ | 4.34       |
| 41  | 5.64       |     |            |
| 42  | 5.55       |     |            |
| 43  | 5.52       |     |            |
| 44  | 5.48       |     |            |

Table 2 Alaska PERS DCR Plan Mortality Table (Pre-termination)

| Age | Male    | Female  | Age | Male    | Female  |
|-----|---------|---------|-----|---------|---------|
| 20  | 0.0188% | 0.0113% | 55  | 0.1978% | 0.1549% |
| 21  | 0.0195  | 0.0114  | 56  | 0.2292  | 0.1730  |
| 22  | 0.0200  | 0.0115  | 57  | 0.2515  | 0.1912  |
| 23  | 0.0204  | 0.0116  | 58  | 0.2775  | 0.2118  |
| 24  | 0.0205  | 0.0119  | 59  | 0.3073  | 0.2355  |
| 25  | 0.0205  | 0.0122  | 60  | 0.3425  | 0.2632  |
| 26  | 0.0206  | 0.0127  | 61  | 0.3826  | 0.2973  |
| 27  | 0.0208  | 0.0132  | 62  | 0.4287  | 0.3343  |
| 28  | 0.0214  | 0.0139  | 63  | 0.4813  | 0.3840  |
| 29  | 0.0225  | 0.0147  | 64  | 0.5324  | 0.4328  |
| 30  | 0.0242  | 0.0156  | 65  | 0.5904  | 0.4874  |
| 31  | 0.0272  | 0.0181  | 66  | 0.6558  | 0.5500  |
| 32  | 0.0307  | 0.0207  | 67  | 0.7184  | 0.6107  |
| 33  | 0.0344  | 0.0233  | 68  | 0.7842  | 0.6751  |
| 34  | 0.0383  | 0.0257  | 69  | 0.8689  | 0.7462  |
| 35  | 0.0422  | 0.0281  | 70  | 0.9744  | 0.8407  |
| 36  | 0.0459  | 0.0304  | 71  | 1.0782  | 0.9329  |
| 37  | 0.0493  | 0.0327  | 72  | 1.1971  | 1.0376  |
| 38  | 0.0526  | 0.0354  | 73  | 1.3334  | 1.1534  |
| 39  | 0.0557  | 0.0383  | 74  | 1.4876  | 1.2783  |
| 40  | 0.0589  | 0.0417  | 75  | 1.6602  | 1.4113  |
| 41  | 0.0623  | 0.0458  | 76  | 1.8504  | 1.5549  |
| 42  | 0.0663  | 0.0504  | 77  | 2.0583  | 1.7125  |
| 43  | 0.0709  | 0.0554  | 78  | 2.2872  | 1.8877  |
| 44  | 0.0762  | 0.0608  | 79  | 2.5419  | 2.0841  |
| 45  | 0.0823  | 0.0664  | 80  | 2.8245  | 2.3037  |
| 46  | 0.0882  | 0.0723  | 81  | 3.1612  | 2.5498  |
| 47  | 0.0946  | 0.0784  | 82  | 3.5318  | 2.8266  |
| 48  | 0.1015  | 0.0848  | 83  | 3.9369  | 3.1386  |
| 49  | 0.1089  | 0.0916  | 84  | 4.3784  | 3.4906  |
| 50  | 0.1167  | 0.0991  | 85  | 4.8601  | 3.8887  |
| 51  | 0.1336  | 0.1095  | 86  | 5.3884  | 4.3371  |
| 52  | 0.1455  | 0.1193  | 87  | 6.0797  | 4.8373  |
| 53  | 0.1591  | 0.1305  | 88  | 6.8537  | 5.3879  |
| 54  | 0.1744  | 0.1407  | 89  | 7.7135  | 5.9830  |
|     |         |         | 90  | 8.6571  | 6.7336  |

Table 3 Alaska PERS DCR Plan Mortality Table (Post-termination)

| Age      | Male    | Female  | Age | Male     | Female   |
|----------|---------|---------|-----|----------|----------|
| 50       | 0.1944% | 0.1524% | 85  | 8.1002%  | 5.9827%  |
| 51       | 0.2227  | 0.1684  | 86  | 8.9807   | 6.6725   |
| 52       | 0.2426  | 0.1835  | 87  | 10.1329  | 7.4420   |
| 53       | 0.2652  | 0.2007  | 88  | 11.4229  | 8.2891   |
| 54       | 0.2907  | 0.2165  | 89  | 12.8559  | 9.2046   |
|          | 0.0000  | 0.0000  | 00  | 4.4.4000 | 40.0500  |
| 55       | 0.3296  | 0.2383  | 90  | 14.4286  | 10.3593  |
| 56<br>57 | 0.3820  | 0.2662  | 91  | 16.0042  | 11.5847  |
| 57       | 0.4192  | 0.2942  | 92  | 17.6712  | 12.8589  |
| 58       | 0.4625  | 0.3259  | 93  | 19.4120  | 14.1591  |
| 59       | 0.5121  | 0.3623  | 94  | 21.2080  | 15.4643  |
| 60       | 0.5708  | 0.4050  | 95  | 23.0428  | 16.7558  |
| 61       | 0.6377  | 0.4574  | 96  | 24.9035  | 18.0154  |
| 62       | 0.7144  | 0.5143  | 97  | 26.7822  | 19.2248  |
| 63       | 0.8021  | 0.5908  | 98  | 28.1616  | 20.0025  |
| 64       | 0.8874  | 0.6658  | 99  | 30.0310  | 21.0437  |
|          |         |         |     |          |          |
| 65       | 0.9839  | 0.7498  | 100 | 31.3360  | 21.5967  |
| 66       | 1.0930  | 0.8462  | 101 | 33.2097  | 22.6721  |
| 67       | 1.1973  | 0.9396  | 102 | 34.4188  | 23.5671  |
| 68       | 1.3070  | 1.0386  | 103 | 36.1155  | 25.0844  |
| 69       | 1.4482  | 1.1479  | 104 | 36.9606  | 26.3111  |
| 70       | 1.6240  | 1.2933  | 105 | 38.1971  | 28.1391  |
| 71       | 1.7969  | 1.4352  | 106 | 38.4000  | 29.5499  |
| 72       | 1.9952  | 1.5964  | 107 | 38.4000  | 30.9816  |
| 73       | 2.2223  | 1.7744  | 108 | 38.4000  | 32.3943  |
| 74       | 2.4793  | 1.9666  | 109 | 38.4000  | 33.7482  |
|          |         |         |     |          |          |
| 75       | 2.7670  | 2.1712  | 110 | 38.4000  | 35.0032  |
| 76       | 3.0840  | 2.3921  | 111 | 38.4000  | 36.1196  |
| 77       | 3.4305  | 2.6346  | 112 | 38.4000  | 37.0574  |
| 78       | 3.8120  | 2.9042  | 113 | 38.4000  | 37.7767  |
| 79       | 4.2365  | 3.2063  | 114 | 38.4000  | 38.2376  |
| 80       | 4.7075  | 3.5441  | 115 | 38.4000  | 38.4000  |
| 81       | 5.2687  | 3.9227  | 116 | 38.4000  | 38.4000  |
| 82       | 5.8863  | 4.3487  | 117 | 38.4000  | 38.4000  |
| 83       | 6.5615  | 4.8286  | 118 | 38.4000  | 38.4000  |
| 84       | 7.2973  | 5.3702  | 119 | 100.0000 | 100.0000 |

Table 4 Alaska PERS DCR Plan Turnover Assumptions

### Peace Officer/Firefighter:

### Select Rates of Turnover During the First 5 Years of Employment

| Years of<br>Service | Male  | Female |
|---------------------|-------|--------|
| 0                   | 18.0% | 16.5%  |
| 1                   | 13.5  | 13.2   |
| 2                   | 10.0  | 11.0   |
| 3                   | 9.0   | 9.9    |
| 4                   | 8.0   | 8.8    |

### Ultimate Rates of Turnover After the First 5 Years of Employment

| Age | Male    | Female  | Age | Male    | Female  |
|-----|---------|---------|-----|---------|---------|
| 20  | 4.8000% | 8.5500% | 45  | 4.9678% | 7.8800% |
| 21  | 4.8000  | 8.5500  | 46  | 4.9061  | 7.8400  |
| 22  | 4.8000  | 8.5500  | 47  | 4.8444  | 7.8000  |
| 23  | 4.9120  | 8.5500  | 48  | 5.2256  | 7.7400  |
| 24  | 5.0240  | 8.5500  | 49  | 5.6067  | 7.6800  |
|     |         |         |     |         |         |
| 25  | 5.1360  | 8.5500  | 50  | 5.9878  | 7.6200  |
| 26  | 5.2480  | 8.5500  | 51  | 6.3689  | 7.5600  |
| 27  | 5.3600  | 8.5500  | 52  | 6.7500  | 7.5000  |
| 28  | 5.3528  | 8.5275  | 53  | 6.9300  | 7.6154  |
| 29  | 5.3456  | 8.5050  | 54  | 7.1100  | 7.7308  |
|     |         |         |     |         |         |
| 30  | 5.3384  | 8.4825  | 55  | 7.2900  | 7.8462  |
| 31  | 5.3312  | 8.4600  | 56  | 7.4700  | 7.9615  |
| 32  | 5.3239  | 8.4375  | 57  | 7.6500  | 8.0769  |
| 33  | 5.3119  | 8.4214  | 58  | 7.8480  | 8.1923  |
| 34  | 5.2998  | 8.4054  | 59  | 8.0460  | 8.3077  |
|     |         |         |     |         |         |
| 35  | 5.2878  | 8.3893  | 60  | 8.2440  | 8.4231  |
| 36  | 5.2757  | 8.3732  | 61  | 8.4420  | 8.5385  |
| 37  | 5.2636  | 8.3571  | 62  | 8.6400  | 8.6538  |
| 38  | 5.2415  | 8.2857  | 63  | 10.7600 | 8.7692  |
| 39  | 5.2194  | 8.2143  | 64  | 12.8800 | 8.8846  |
|     |         |         |     |         |         |
| 40  | 5.1972  | 8.1429  | 65+ | 15.0000 | 9.0000  |
| 41  | 5.1751  | 8.0714  |     |         |         |
| 42  | 5.1529  | 8.0000  |     |         |         |
| 43  | 5.0912  | 7.9600  |     |         |         |
| 44  | 5.0295  | 7.9200  |     |         |         |

Table 4 Alaska PERS DCR Plan Turnover Assumptions

### Others:

### Select Rates of Turnover During the First 5 Years of Employment

| Years of<br>Service | Male  | Female |
|---------------------|-------|--------|
| 0                   | 23.2% | 26.7%  |
| 1                   | 20.0  | 21.3   |
| 2                   | 16.0  | 17.0   |
| 3                   | 12.8  | 13.6   |
| 4                   | 9.0   | 17.8   |

### Ultimate Rates of Turnover After the First 5 Years of Employment

| Age | Male     | Female   | Age | Male    | Female  |
|-----|----------|----------|-----|---------|---------|
| 20  | 10.9667% | 15.0000% | 45  | 6.1728% | 7.1847% |
| 21  | 10.9667  | 15.0000  | 46  | 6.0789  | 6.8938  |
| 22  | 10.9667  | 15.0000  | 47  | 5.9850  | 6.6029  |
| 23  | 10.9674  | 15.0067  | 48  | 6.1414  | 6.5749  |
| 24  | 10.9681  | 15.0133  | 49  | 6.2977  | 6.5469  |
|     |          |          |     |         |         |
| 25  | 10.9689  | 15.0200  | 50  | 6.4541  | 6.5189  |
| 26  | 10.9696  | 15.0267  | 51  | 6.6104  | 6.4908  |
| 27  | 10.9703  | 15.0333  | 52  | 6.7668  | 6.4628  |
| 28  | 10.7312  | 14.4910  | 53  | 6.7714  | 6.6022  |
| 29  | 10.4921  | 13.9486  | 54  | 6.7760  | 6.7416  |
|     |          |          |     |         |         |
| 30  | 10.2529  | 13.4062  | 55  | 6.7806  | 6.8809  |
| 31  | 10.0138  | 12.8638  | 56  | 6.7853  | 7.0203  |
| 32  | 9.7747   | 12.3214  | 57  | 6.7899  | 7.1597  |
| 33  | 9.3219   | 11.7230  | 58  | 7.0131  | 7.4069  |
| 34  | 8.8692   | 11.1246  | 59  | 7.2363  | 7.6541  |
|     |          |          |     |         |         |
| 35  | 8.4164   | 10.5261  | 60  | 7.4595  | 7.9014  |
| 36  | 7.9637   | 9.9277   | 61  | 7.6827  | 8.1486  |
| 37  | 7.5110   | 9.3293   | 62  | 7.9059  | 8.3958  |
| 38  | 7.2996   | 9.0749   | 63  | 8.2239  | 9.5528  |
| 39  | 7.0883   | 8.8205   | 64  | 8.5420  | 10.7097 |
|     |          |          |     |         |         |
| 40  | 6.8770   | 8.5661   | 65+ | 8.8600  | 11.8667 |
| 41  | 6.6657   | 8.3117   |     |         |         |
| 42  | 6.4544   | 8.0573   |     |         |         |
| 43  | 6.3605   | 7.7664   |     |         |         |
| 44  | 6.2667   | 7.4756   |     |         |         |

Table 5 Alaska PERS DCR Plan Disability Table

|     | Peace Officer/   | Other Mer | nber Rate |
|-----|------------------|-----------|-----------|
| Age | Firefighter Rate | Male      | Female    |
| 20  | 0.0224%          | 0.0218%   | 0.0188%   |
| 21  | 0.0224           | 0.0218    | 0.0188    |
| 22  | 0.0224           | 0.0218    | 0.0188    |
| 23  | 0.0305           | 0.0240    | 0.0200    |
| 24  | 0.0387           | 0.0261    | 0.0212    |
| 25  | 0.0468           | 0.0283    | 0.0224    |
| 26  | 0.0550           | 0.0304    | 0.0236    |
| 27  | 0.0631           | 0.0326    | 0.0248    |
| 28  | 0.0658           | 0.0334    | 0.0255    |
| 29  | 0.0685           | 0.0342    | 0.0262    |
| 30  | 0.0712           | 0.0349    | 0.0269    |
| 31  | 0.0739           | 0.0357    | 0.0277    |
| 32  | 0.0765           | 0.0365    | 0.0284    |
| 33  | 0.0793           | 0.0377    | 0.0293    |
| 34  | 0.0821           | 0.0389    | 0.0303    |
| 35  | 0.0849           | 0.0401    | 0.0312    |
| 36  | 0.0877           | 0.0413    | 0.0322    |
| 37  | 0.0905           | 0.0425    | 0.0331    |
| 38  | 0.0946           | 0.0446    | 0.0348    |
| 39  | 0.0986           | 0.0467    | 0.0364    |
| 40  | 0.1027           | 0.0489    | 0.0381    |
| 41  | 0.1068           | 0.0510    | 0.0397    |
| 42  | 0.1108           | 0.0531    | 0.0413    |
| 43  | 0.1221           | 0.0586    | 0.0454    |
| 44  | 0.1333           | 0.0641    | 0.0495    |
| 45  | 0.1446           | 0.0695    | 0.0536    |
| 46  | 0.1559           | 0.0750    | 0.0577    |
| 47  | 0.1671           | 0.0805    | 0.0618    |
| 48  | 0.1828           | 0.0886    | 0.0680    |
| 49  | 0.1985           | 0.0967    | 0.0742    |
| 50  | 0.2142           | 0.1048    | 0.0804    |
| 51  | 0.2299           | 0.1129    | 0.0867    |
| 52  | 0.2456           | 0.1210    | 0.0929    |
| 53  | 0.2868           | 0.1421    | 0.1084    |
| 54  | 0.3280           | 0.1633    | 0.1239    |

Table 6 Alaska PERS DCR Plan Retirement Table

| Age            | Unisex Rate |
|----------------|-------------|
| <u>&lt;</u> 50 | 2.0%        |
|                | 2.0         |
| 52             | 2.0         |
| 53             | 2.0         |
| 54             | 2.0         |
| 55             | 3.0         |
| 56             | 3.0         |
| 57             | 3.0         |
| 58             | 3.0         |
| 59             | 3.0         |
| 60             | 5.0         |
| 61             | 5.0         |
| 62             | 10.0        |
| 63             | 5.0         |
| 64             | 5.0         |
| 65             | 25.0        |
| 66             | 25.0        |
| 67             | 25.0        |
| 68             | 20.0        |
| 69             | 20.0        |
|                |             |
| 70             | 100.0       |

## Glossary of Terms

Contribution (ARC)

Actuarial Accrued Liability Total accumulated cost to fund pension or postemployment benefits

arising from service in all prior years.

Actuarial Cost Method Technique used to assign or allocate, in a systematic and consistent

manner, the expected cost of a pension or postemployment plan for a group of plan members to the years of service that give rise to that cost.

Actuarial Present Value Amount which, together with future interest, is expected to be sufficient to

of Projected Benefits pay all future benefits.

Actuarial Valuation Study of probable amounts of future pension or postemployment benefits

and the necessary amount of contributions to fund those benefits.

Actuary Person who performs mathematical calculations pertaining to pension and

insurance benefits based on specific procedures and assumptions.

Annual Required Disclosure measure of annual pension or postretirement benefit cost

under GASB 25, 27, 43 and 45.

GASB 25 and 27 Governmental Accounting Standards Board Statement Number 25, which

specifies how the ARC was to have been calculated, and Number 27,

which specifies Employer reporting of Pension Cost.

GASB 43 and 45 Governmental Accounting Standards Board Statement Number 43, which

specifies how the ARC is to be calculated, and Number 45, which specifies Employer reporting of Other Postemployment Benefit (OPEB)

Cost.

GASB 67 and 68 Governmental Accounting Standards Board Statement Number 67

amends Number 25 effective for the fiscal year beginning after June 15, 2013, and defines new financial reporting requirements for public

pension plans.

Governmental Accounting Standards Board Statement Number 68 amends Number 27 effective for fiscal years beginning after June 15, 2014 and defines new accounting and financial reporting

requirements for employers sponsoring public pension plans.

GASB 74 and 75

Governmental Accounting Standards Board Statement Number 74

amends Number 43 effective for the fiscal year beginning after

June 15, 2016, and defines new financial reporting requirements for public

postemployment benefit plans.

Governmental Accounting Standards Board Statement Number 75 amends Number 45 effective for fiscal years beginning after

June 15, 2017, and defines new accounting and financial reporting requirements for employers sponsoring public postemployment benefit

plans.

Liquidity Factor Is calculated as the average annual Fair Value of Assets divided by the

total annual benefit payments. This measures the approximate number of years that assets will cover benefit payments without contributions or

investment return. Trend shows solvency risk.

Maturity Ratio The ratio of the actuarial accrued liability for members who are no longer

active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.

Normal Cost That portion of the actuarial present value of benefits assigned to a

particular year in respect to an individual participant or the plan as a

whole.

Rate Payroll Members' earnings used to determine contribution rates.

Unfunded Actuarial Accrued

Liability (UAAL)

The portion of the actuarial accrued liability not offset by plan assets.

Valuation Payroll Members' earnings used to determine Normal Cost and Actuarial Accrued

Liability.

Vested Benefits Benefits which are unconditionally guaranteed regardless of employment.