

# 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, 2016

May 2017

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May 23, 2017

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, 2016 performed by Conduent HR Services, LLC (Conduent), formerly known as Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), all as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2016. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

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. Conduent 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, 2016.

PERS DCR is funded by Employer/State 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.

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 Conduent to review any statement you wish to make on the results contained in this report. Conduent will not accept any liability for any such statement made without the review by Conduent.

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, 2016 to better reflect expected future healthcare experience. Based on recent experience, the healthcare cost trend assumptions are still reasonable and were not changed. The DCR medical plan design was finalized in July 2016 and we adjusted cost factors accordingly to estimate the value of the benefits. 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 is a Fellow of the Society of Actuaries and Larry Langer is an Associate of the Society of Actuaries. Both are Fellows of the Conference of Consulting Actuaries and 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. 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,



David J. Kershner, FSA, EA, MAAA, FCA  
Principal



Larry Langer, ASA, EA, MAAA, FCA  
Principal

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  
Senior Consultant, Health & Productivity

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# Executive Summary

## Overview

The State of Alaska Public Employees' Retirement System Defined Contribution Retirement (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, 2016.

## 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/State 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

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Status as of June 30 (\$'s in 000's)	2015	2016
a. Actuarial Accrued Liability	\$ 63,732	\$ 77,052
b. Valuation Assets	<u>63,202</u>	<u>87,027</u>
c. Unfunded Actuarial Accrued Liability, (a) – (b)	\$ 530	\$ (9,975)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	99.2%	112.9%
e. Fair Value of Assets	\$ 63,540	\$ 82,654
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	99.7%	107.3%

As shown above, the funded ratio based on valuation assets as of June 30, 2016 has increased from 99.2% to 112.9%. The total employer contribution rate has decreased from 1.22% of payroll for FY18 to 1.15% for FY19. The key reasons for the change in the funded status 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 (PERS) Defined Benefit Plan Actuarial Valuation Report as of June 30, 2016 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 and updated plan provisions described in Sections 5.1 & 5.2 of this report (Section 6.2 of the PERS report) and noted in #7 below created a net actuarial gain of approximately \$8.0 million.

### 2. Investment Experience

The approximate FY16 investment return based on fair value was 0.2% compared to the expected investment return of 8.00% (net of investment and administrative expenses of approximately 0.20%). This resulted in a loss of approximately \$5.68 million to the Plan from investment experience. The asset valuation method recognizes 20 percent of this loss (\$1,136,000) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY12 investment loss, 20 percent of the FY13 investment gain, 20 percent of the FY14 investment gain and 20 percent of the FY15 investment loss were recognized this year. The approximate FY16 asset return based on actuarial value was 6.7% compared to the expected asset return of 8.00% (net of investment and administrative expenses).



### **3. Salary Increases**

During the period June 30, 2015 to June 30, 2016, salary increases for continuing active members were slightly less than anticipated in the valuation assumptions.

### **4. Demographic Experience**

The number of active members increased 6.53% from 17,098 at June 30, 2015 to 18,215 at June 30, 2016. 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 40.07 to 40.39 and average credited service increased from 3.28 to 3.56 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 reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status as of June 30, 2016.

### **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 changes in DCR medical benefit provisions since the prior valuation to reflect the adopted design as of July 2016. These changes are described in Section 5.1.

## Comparative Summary of Key Actuarial Valuation Results

Total Employer/State Contribution Rates for Occupational Death & Disability for Fiscal Year:			2018	2019
a.	Employer Normal Cost Rate		0.29%	0.32%
b.	Past Service Cost Rate		<u>(0.10)%</u>	<u>(0.11)%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than 0%		0.19%	0.21%
Total Employer/State Contribution Rates for Retiree Medical for Fiscal Year:			2018	2019
a.	Employer Normal Cost Rate		0.92%	0.88%
b.	Past Service Cost Rate		<u>0.11%</u>	<u>0.06%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than 0%		1.03%	0.94%
Total Employer/State Contribution Rates for Fiscal Year:			2018	2019
a.	Total Employer/State Contribution Rate		1.22%	1.15%
b.	Board Adopted Total Employer/State Contribution Rate		1.22%	TBD

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

Valuation Date	Fiscal Year	Total Employer/State Contribution Rate		
		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	0.43% / 0.16%	1.03%	1.46% / 1.19%
June 30, 2016	FY19	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 FY16 gain/(loss) on total actuarial accrued liability as of June 30, 2016. (\$'s in 000's):

	Occupational Death & Disability		Healthcare	Total
Retirement Experience	\$	0	\$	0
Termination Experience		(27)	1,181	1,154
Active Mortality Experience		1,046	(35)	1,011
Inactive Mortality Experience		(51)	(5)	(56)
Disability Experience		1,557	158	1,715
New Entrants		(102)	(1,593)	(1,695)
Rehires		(25)	(1,029)	(1,054)
Other Demographic Experience <sup>1</sup>		192	(4,127)	(3,935)
Salary Increases		24	N/A	24
Medical Claims Costs		N/A	(11,515)	(11,515)
EGWP Impact <sup>2</sup>		N/A	19,559	19,559
Total	\$	2,614	\$	2,594
			\$	5,208

<sup>1</sup> As described in section 5.1, DCR health benefits were updated to reflect updated understanding of retiree medical contributions.

<sup>2</sup> As described in sections 5.1 & 5.2, DCR health benefits were finalized and updated to reflect adopted design, including EGWP effective January 1, 2018.

## Section 1 Actuarial Funding Results

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

As of June 30, 2016	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 1,811	\$ 144
Occupational Disability Benefits	9,756	2,098
Medical and Prescription Drug Benefits	15,914	8,037
Medicare Part D Subsidy	<u>(2,511)</u>	<u>(1,285)</u>
Subtotal	\$ 24,970	\$ 8,994
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 435	\$ 435
Disability Benefits	1,771	1,771
Medical and Prescription Drug Benefits	205	205
Medicare Part D Subsidy	<u>(27)</u>	<u>(27)</u>
Subtotal	\$ 2,384	\$ 2,384
<b>Total</b>	<b>\$ 27,354</b>	<b>\$ 11,378</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 13,773</b>	<b>\$ 4,448</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 13,581</b>	<b>\$ 6,930</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 16,119</b>	<b>\$ 8,242</b>

As of June 30, 2016	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 192
Occupational Disability Benefits	792
Medical and Prescription Drug Benefits	1,146
Medicare Part D Subsidy	<u>(182)</u>
Subtotal	\$ 1,948
<b>Total</b>	<b>\$ 1,948</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 984</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 964</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 1,146</b>

## Actuarial Liabilities and Normal Cost – Others

(\$'s in 000's)

As of June 30, 2016	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 7,962	\$ 692
Occupational Disability Benefits	9,742	682
Medical and Prescription Drug Benefits	133,975	79,047
Medicare Part D Subsidy	<u>(26,826)</u>	<u>(16,038)</u>
Subtotal	\$ 124,853	\$ 64,383
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 0	\$ 0
Disability Benefits	941	941
Medical and Prescription Drug Benefits	415	415
Medicare Part D Subsidy	<u>(65)</u>	<u>(65)</u>
Subtotal	\$ 1,291	\$ 1,291
<b>Total</b>	<b>\$ 126,144</b>	<b>\$ 65,674</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 18,645</b>	<b>\$ 2,315</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 107,499</b>	<b>\$ 63,359</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 134,390</b>	<b>\$ 79,462</b>

As of June 30, 2016	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 1,083
Occupational Disability Benefits	1,354
Medical and Prescription Drug Benefits	10,407
Medicare Part D Subsidy	<u>(2,083)</u>
Subtotal	\$ 10,761
<b>Total</b>	<b>\$ 10,761</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 2,437</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 8,324</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 10,407</b>

## Actuarial Liabilities and Normal Cost – All Members

(\$'s in 000's)

As of June 30, 2016	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 9,773	\$ 836
Occupational Disability Benefits	19,498	2,780
Medical and Prescription Drug Benefits	149,889	87,084
Medicare Part D Subsidy	<u>(29,337)</u>	<u>(17,323)</u>
Subtotal	\$ 149,823	\$ 73,377
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 435	\$ 435
Disability Benefits	2,712	2,712
Medical and Prescription Drug Benefits	620	620
Medicare Part D Subsidy	<u>(92)</u>	<u>(92)</u>
Subtotal	\$ 3,675	\$ 3,675
<b>Total</b>	<b>\$ 153,498</b>	<b>\$ 77,052</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 32,418</b>	<b>\$ 6,763</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 121,080</b>	<b>\$ 70,289</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 150,509</b>	<b>\$ 87,704</b>

As of June 30, 2016	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 1,275
Occupational Disability Benefits	2,146
Medical and Prescription Drug Benefits	11,553
Medicare Part D Subsidy	<u>(2,265)</u>
Subtotal	\$ 12,709
<b>Total</b>	<b>\$ 12,709</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 3,421</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 9,288</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 11,553</b>

## Section 1.2 Actuarial Contributions for FY19 Peace Officer/Firefighter (\$'s in 000's)

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 984	\$ 964	\$ 1,948
2. DCR Plan Rate Payroll Projected for FY17	129,811	129,811	129,811
3. Employer Normal Cost Rate, (1) ÷ (2)	0.76%	0.74%	1.50%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 4,448	\$ 6,930	\$ 11,378
2. Valuation Assets	<u>7,682</u>	<u>6,295</u>	<u>13,977</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (3,234)	\$ 635	\$ (2,599)
4. Funded Ratio based on Valuation Assets	172.7%	90.8%	122.8%
5. Past Service Cost Amortization Payment	\$ (221)	\$ 57	\$ (164)
6. DCR Plan Rate Payroll Projected for FY17	129,811	129,811	129,811
7. Past Service Cost Rate, (5) ÷ (6)	(0.17)%	0.04%	(0.13)%
<b>Total Employer/State Contribution Rate, not less than 0%</b>	<b>0.59%</b>	<b>0.78%</b>	<b>1.37%</b>

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

Total Employer/State Contribution Rate as Percent of Total Payroll	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 984	\$ 964	\$ 1,948
2. Total DB and DCR Plan Rate Payroll Projected for FY17	317,068	317,068	317,068
3. Employer Normal Cost Rate, (1) ÷ (2)	0.31%	0.30%	0.61%
4. Past Service Cost Amortization Payment	\$ (221)	\$ 57	\$ (164)
5. Past Service Cost Rate, (4) ÷ (2)	(0.07)%	0.02%	(0.05)%
<b>Total Employer/State Contribution Rate, (3) + (5)</b>	<b>0.24%</b>	<b>0.32%</b>	<b>0.56%</b>

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

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (100)	\$ (105)	\$ (9)
FY08 Gain	06/30/2008	17	(586)	(613)	(49)
Change in Assumptions	06/30/2009	18	(104)	(109)	(8)
FY09 Loss	06/30/2009	18	446	468	36
Change in Assumptions	06/30/2010	19	79	82	6
FY10 Gain	06/30/2010	19	(282)	(296)	(22)
FY11 Loss	06/30/2011	20	73	73	5
FY12 Gain	06/30/2012	21	(349)	(362)	(25)
FY13 Gain	06/30/2013	22	(204)	(210)	(14)
Change in Assumptions	06/30/2014	23	(1,274)	(1,304)	(86)
PRPA Modification	06/30/2014	23	(91)	(93)	(6)
FY14 Gain	06/30/2014	23	(95)	(97)	(6)
FY15 Gain	06/30/2015	24	(664)	(672)	(43)
FY16 Loss	06/30/2016	25	4	4	0
<b>Total</b>				<b>\$ (3,234)</b>	<b>\$ (221)</b>

## Schedule of Past Service Cost Amortizations – Retiree Medical

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (21)	\$ (23)	\$ (2)
Change in Assumptions	06/30/2008	17	17	17	1
FY08 Gain	06/30/2008	17	(62)	(66)	(5)
Change in Assumptions	06/30/2009	18	(8)	(8)	(1)
FY09 Gain	06/30/2009	18	(38)	(39)	(3)
Change in Assumptions	06/30/2010	19	41	41	3
FY10 Gain	06/30/2010	19	(46)	(46)	(3)
FY11 Loss	06/30/2011	20	70	71	5
Change in Assumptions	06/30/2012	21	3,085	3,204	224
FY12 Gain	06/30/2012	21	(273)	(284)	(20)
FY13 Loss	06/30/2013	22	880	908	62
Change in Assumptions	06/30/2014	23	(3,034)	(3,102)	(205)
FY14 Loss	06/30/2014	23	1,213	1,241	82
FY15 Gain	06/30/2015	24	(712)	(720)	(46)
EGWP Impact	06/30/2016	25	(1,675)	(1,675)	(105)
FY16 Loss	06/30/2016	25	1,116	1,116	70
<b>Total</b>				<b>\$ 635</b>	<b>\$ 57</b>



## Schedule of Past Service Cost Amortizations – Total

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (121)	\$ (128)	\$ (11)
Change in Assumptions	06/30/2008	17	17	17	1
FY08 Gain	06/30/2008	17	(648)	(679)	(54)
Change in Assumptions	06/30/2009	18	(112)	(117)	(9)
FY09 Loss	06/30/2009	18	408	429	33
Change in Assumptions	06/30/2010	19	120	123	9
FY10 Gain	06/30/2010	19	(328)	(342)	(25)
FY11 Loss	06/30/2011	20	143	144	10
Change in Assumptions	06/30/2012	21	3,085	3,204	224
FY12 Gain	06/30/2012	21	(622)	(646)	(45)
FY13 Loss	06/30/2013	22	676	698	48
Change in Assumptions	06/30/2014	23	(4,308)	(4,406)	(291)
PRPA Modification	06/30/2014	23	(91)	(93)	(6)
FY14 Loss	06/30/2014	23	1,118	1,144	76
FY15 Gain	06/30/2015	24	(1,376)	(1,392)	(89)
EGWP Impact	06/30/2016	25	(1,675)	(1,675)	(105)
FY16 Loss	06/30/2016	25	1,120	1,120	70
<b>Total</b>				<b>\$ (2,599)</b>	<b>\$ (164)</b>

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 15.847561. The amortization method is level percentage of pay.

The equivalent single amortization period is 25.

## Actuarial Contributions for FY19 - Others

(\$'s in 000's)

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 2,437	\$ 8,324	\$ 10,761
2. DCR Plan Rate Payroll Projected for FY17	929,980	929,980	929,980
3. Employer Normal Cost Rate, (1) ÷ (2)	0.26%	0.90%	1.16%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 2,315	\$ 63,359	\$ 65,674
2. Valuation Assets	<u>15,494</u>	<u>57,556</u>	<u>73,050</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (13,179)	\$ 5,803	\$ (7,376)
4. Funded Ratio based on Valuation Assets	669.3%	90.8%	111.2%
5. Past Service Cost Amortization Payment	\$ (912)	\$ 529	\$ (383)
6. DCR Plan Rate Payroll Projected for FY17	929,980	929,980	929,980
7. Past Service Cost Rate, (5) ÷ (6)	(0.10)%	0.06%	(0.04)%
<b>Total Employer/State Contribution Rate, not less than 0%</b>	<b>0.16%</b>	<b>0.96%</b>	<b>1.12%</b>

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

Total Employer/State Contribution Rate as Percent of Total Payroll	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 2,437	\$ 8,324	\$ 10,761
2. Total DB and DCR Plan Rate Payroll Projected for FY17	1,990,607	1,990,607	1,990,607
3. Employer Normal Cost Rate, (1) ÷ (2)	0.12%	0.42%	0.54%
4. Past Service Cost Amortization Payment	\$ (912)	\$ 529	\$ (383)
5. Past Service Cost Rate, (4) ÷ (2)	(0.05)%	0.03%	(0.02)%
<b>Total Employer/State Contribution Rate, (3) + (5)</b>	<b>0.07%</b>	<b>0.45%</b>	<b>0.52%</b>

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

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (40)	\$ (42)	\$ (3)
FY08 Gain	06/30/2008	17	(318)	(334)	(27)
Change in Assumptions	06/30/2009	18	(92)	(96)	(8)
FY09 Gain	06/30/2009	18	(1,924)	(2,017)	(156)
Change in Assumptions	06/30/2010	19	24	26	2
FY10 Gain	06/30/2010	19	(994)	(1,040)	(77)
FY11 Gain	06/30/2011	20	(1,184)	(1,231)	(88)
FY12 Gain	06/30/2012	21	(1,233)	(1,281)	(90)
FY13 Gain	06/30/2013	22	(779)	(804)	(55)
Change in Assumptions	06/30/2014	23	(51)	(51)	(3)
PRPA Modification	06/30/2014	23	(27)	(28)	(2)
FY14 Gain	06/30/2014	23	(2,003)	(2,048)	(136)
FY15 Gain	06/30/2015	24	(1,850)	(1,872)	(121)
FY16 Gain	06/30/2016	25	(2,361)	(2,361)	(148)
<b>Total</b>				<b>\$ (13,179)</b>	<b>\$ (912)</b>

## Schedule of Past Service Cost Amortizations – Retiree Medical

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (335)	\$ (350)	\$ (29)
Change in Assumptions	06/30/2008	17	165	173	14
FY08 Gain	06/30/2008	17	(702)	(732)	(59)
Change in Assumptions	06/30/2009	18	(122)	(128)	(9)
FY09 Gain	06/30/2009	18	(438)	(460)	(36)
Change in Assumptions	06/30/2010	19	(572)	(596)	(44)
FY10 Loss	06/30/2010	19	579	602	44
FY11 Loss	06/30/2011	20	820	857	62
Change in Assumptions	06/30/2012	21	25,180	26,148	1,826
FY12 Loss	06/30/2012	21	1,451	1,507	105
FY13 Loss	06/30/2013	22	9,974	10,288	698
Change in Assumptions	06/30/2014	23	(21,822)	(22,317)	(1,474)
FY14 Loss	06/30/2014	23	7,002	7,160	473
FY15 Gain	06/30/2015	24	(8,726)	(8,832)	(569)
EGWP Impact	06/30/2016	25	(17,884)	(17,884)	(1,125)
FY16 Loss	06/30/2016	25	10,367	10,367	652
<b>Total</b>				<b>\$ 5,803</b>	<b>\$ 529</b>

## Schedule of Past Service Cost Amortizations – Total

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (375)	\$ (392)	\$ (32)
Change in Assumptions	06/30/2008	17	165	173	14
FY08 Gain	06/30/2008	17	(1,020)	(1,066)	(86)
Change in Assumptions	06/30/2009	18	(214)	(224)	(17)
FY09 Gain	06/30/2009	18	(2,362)	(2,477)	(192)
Change in Assumptions	06/30/2010	19	(548)	(570)	(42)
FY10 Gain	06/30/2010	19	(415)	(438)	(33)
FY11 Gain	06/30/2011	20	(364)	(374)	(26)
Change in Assumptions	06/30/2012	21	25,180	26,148	1,826
FY12 Loss	06/30/2012	21	218	226	15
FY13 Loss	06/30/2013	22	9,195	9,484	643
Change in Assumptions	06/30/2014	23	(21,873)	(22,368)	(1,477)
PRPA Modification	06/30/2014	23	(27)	(28)	(2)
FY14 Loss	06/30/2014	23	4,999	5,112	337
FY15 Gain	06/30/2015	24	(10,576)	(10,704)	(690)
EGWP Impact	06/30/2016	25	(17,884)	(17,884)	(1,125)
FY16 Loss	06/30/2016	25	8,006	8,006	504
<b>Total</b>				<b>\$ (7,376)</b>	<b>\$ (383)</b>

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 19.258486. The amortization method is level percentage of pay.

The equivalent single amortization period is 37.

## Actuarial Contributions for FY19 - All Members (\$'s in 000's)

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 3,421	\$ 9,288	\$ 12,709
2. DCR Plan Rate Payroll Projected for FY17	1,059,791	1,059,791	1,059,791
3. Employer Normal Cost Rate, (1) ÷ (2)	0.32%	0.88%	1.20%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 6,763	\$ 70,289	\$ 77,052
2. Valuation Assets	<u>23,176</u>	<u>63,851</u>	<u>87,027</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (16,413)	\$ 6,438	\$ (9,975)
4. Funded Ratio based on Valuation Assets	342.7%	90.8%	112.9%
5. Past Service Cost Amortization Payment	\$ (1,133)	\$ 586	\$ (547)
6. DCR Plan Rate Payroll Projected for FY17	1,059,791	1,059,791	1,059,791
7. Past Service Cost Rate, (5) ÷ (6)	(0.11)%	0.06%	(0.05)%
<b>Total Employer/State Contribution Rate, not less than 0%</b>	<b>0.21%</b>	<b>0.94%</b>	<b>1.15%</b>

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

Total Employer/State Contribution Rate as Percent of Total Payroll	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 3,421	\$ 9,288	\$ 12,709
2. Total DB and DCR Plan Rate Payroll Projected for FY17	2,307,675	2,307,675	2,307,675
3. Employer Normal Cost Rate, (1) ÷ (2)	0.15%	0.40%	0.55%
4. Past Service Cost Amortization Payment	\$ (1,133)	\$ 586	\$ (547)
5. Past Service Cost Rate, (4) ÷ (2)	(0.05)%	0.03%	(0.02)%
<b>Total Employer/State Contribution Rate, (3) + (5)</b>	<b>0.10%</b>	<b>0.43%</b>	<b>0.53%</b>

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

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (140)	\$ (147)	\$ (12)
FY08 Gain	06/30/2008	17	(904)	(947)	(76)
Change in Assumptions	06/30/2009	18	(196)	(205)	(16)
FY09 Gain	06/30/2009	18	(1,478)	(1,549)	(120)
Change in Assumptions	06/30/2010	19	103	108	8
FY10 Gain	06/30/2010	19	(1,276)	(1,336)	(99)
FY11 Gain	06/30/2011	20	(1,111)	(1,158)	(83)
FY12 Gain	06/30/2012	21	(1,582)	(1,643)	(115)
FY13 Gain	06/30/2013	22	(983)	(1,014)	(69)
Change in Assumptions	06/30/2014	23	(1,325)	(1,355)	(89)
PRPA Modification	06/30/2014	23	(118)	(121)	(8)
FY14 Gain	06/30/2014	23	(2,098)	(2,145)	(142)
FY15 Gain	06/30/2015	24	(2,514)	(2,544)	(164)
FY16 Gain	06/30/2016	25	(2,357)	(2,357)	(148)
<b>Total</b>				<b>\$ (16,413)</b>	<b>\$ (1,133)</b>

## Schedule of Past Service Cost Amortizations – Retiree Medical

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (356)	\$ (373)	\$ (31)
Change in Assumptions	06/30/2008	17	182	190	15
FY08 Gain	06/30/2008	17	(764)	(798)	(64)
Change in Assumptions	06/30/2009	18	(130)	(136)	(10)
FY09 Gain	06/30/2009	18	(476)	(499)	(39)
Change in Assumptions	06/30/2010	19	(531)	(555)	(41)
FY10 Loss	06/30/2010	19	533	556	41
FY11 Loss	06/30/2011	20	890	928	67
Change in Assumptions	06/30/2012	21	28,265	29,352	2,050
FY12 Loss	06/30/2012	21	1,178	1,223	85
FY13 Loss	06/30/2013	22	10,854	11,196	760
Change in Assumptions	06/30/2014	23	(24,856)	(25,419)	(1,679)
FY14 Loss	06/30/2014	23	8,215	8,401	555
FY15 Gain	06/30/2015	24	(9,438)	(9,552)	(615)
EGWP Impact	06/30/2016	25	(19,559)	(19,559)	(1,230)
FY16 Loss	06/30/2016	25	11,483	11,483	722
<b>Total</b>				<b>\$ 6,438</b>	<b>\$ 586</b>

## Schedule of Past Service Cost Amortizations – Total

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	16	\$ (496)	\$ (520)	\$ (43)
Change in Assumptions	06/30/2008	17	182	190	15
FY08 Gain	06/30/2008	17	(1,668)	(1,745)	(140)
Change in Assumptions	06/30/2009	18	(326)	(341)	(26)
FY09 Gain	06/30/2009	18	(1,954)	(2,048)	(159)
Change in Assumptions	06/30/2010	19	(428)	(447)	(33)
FY10 Gain	06/30/2010	19	(743)	(780)	(58)
FY11 Gain	06/30/2011	20	(221)	(230)	(16)
Change in Assumptions	06/30/2012	21	28,265	29,352	2,050
FY12 Gain	06/30/2012	21	(404)	(420)	(30)
FY13 Loss	06/30/2013	22	9,871	10,182	691
Change in Assumptions	06/30/2014	23	(26,181)	(26,774)	(1,768)
PRPA Modification	06/30/2014	23	(118)	(121)	(8)
FY14 Loss	06/30/2014	23	6,117	6,256	413
FY15 Gain	06/30/2015	24	(11,952)	(12,096)	(779)
EGWP Impact	06/30/2016	25	(19,559)	(19,559)	(1,230)
FY16 Loss	06/30/2016	25	9,126	9,126	574
<b>Total</b>				<b>\$ (9,975)</b>	<b>\$ (547)</b>

The amortization factor for 25 years is 15.898717. The weighted average amortization factor is 18.235832. The amortization method is level percentage of pay.

The equivalent single amortization period is 32.

## Section 1.3 Actuarial Gain/(Loss) for FY16 (\$'s in 000's)

	Occupational Death & Disability	Retiree Medical	Total
1. Expected Actuarial Accrued Liability			
a. Actuarial Accrued Liability, June 30, 2015	\$ 5,049	\$ 58,683	\$ 63,732
b. Normal Cost for FY16	2,812	8,801	11,613
c. Interest on (a) and (b) at 8.00%	629	5,399	6,028
d. Benefit Payments for FY16	338	0	338
e. Interest on (d) at 8.00%, adjusted for timing	13	0	13
f. EGWP Impact	<u>0</u>	<u>19,559</u>	<u>19,559</u>
g. Expected Actuarial Accrued Liability as of June 30, 2016, (a) + (b) + (c) – (d) – (e) – (f)	\$ 8,139	\$ 53,324	\$ 61,463
2. Actual Actuarial Accrued Liability, June 30, 2016	<u>6,763</u>	<u>70,289</u>	<u>77,052</u>
<b>3. Liability Gain/(Loss), (1)(g) – (2)</b>	<b>\$ 1,376</b>	<b>\$ (16,965)</b>	<b>\$ (15,589)</b>
4. Expected Actuarial Asset Value			
a. Actuarial Asset Value, June 30, 2015	\$ 19,014	\$ 44,188	\$ 63,202
b. Interest on (a) at 8.00%	1,521	3,535	5,056
c. Employer/State Contributions for FY16	3,118	16,184	19,302
d. Interest on (c) at 8.00%, adjusted for timing	122	635	757
e. Benefit Payments for FY16	338	0	338
f. Interest on (e) at 8.00%, adjusted for timing	<u>13</u>	<u>0</u>	<u>13</u>
g. Expected Actuarial Asset Value, June 30, 2016, (a) + (b) + (c) + (d) – (e) – (f)	\$ 23,424	\$ 64,542	\$ 87,966
5. Actuarial Asset Value, June 30, 2016	<u>23,176</u>	<u>63,851</u>	<u>87,027</u>
<b>6. Actuarial Asset Gain/(Loss), (5) – (4)(g)</b>	<b>\$ (248)</b>	<b>\$ (691)</b>	<b>\$ (939)</b>
<b>7. Actuarial Gain/(Loss), (3) + (6)</b>	<b>\$ 1,128</b>	<b>\$ (17,656)</b>	<b>\$ (16,528)</b>
<b>8. Contribution Gain/(Loss)</b>	<b>\$ 1,229</b>	<b>\$ 6,173</b>	<b>\$ 7,402</b>
<b>9. FY16 Gain/(Loss), (7) + (8)</b>	<b>\$ 2,357</b>	<b>\$ (11,483)</b>	<b>\$ (9,126)</b>



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

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (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
June 30, 2016	77,052	87,027	112.9%	(9,975)

## Section 2 Plan Assets

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

As of June 30, 2016	Occupational Death & Disability	Retiree Medical	Total	Allocation Percent
Cash and Short-Term Investments				
- Cash and Cash Equivalents	\$ 353	\$ 1,352	\$ 1,705	2.1%
- Subtotal	\$ 353	\$ 1,352	\$ 1,705	2.1%
Fixed Income Investments				
- Domestic Fixed Income Pool	\$ 1,232	\$ 3,349	\$ 4,581	5.6%
- International Fixed Income Pool	342	929	1,271	1.6%
- Tactical Fixed Income Pool	215	703	918	1.1%
- High Yield Pool	756	2,055	2,811	3.5%
- Treasury Inflation Protection Pool	52	141	193	0.2%
- Emerging Debt Pool	146	398	544	0.7%
- Subtotal	\$ 2,743	\$ 7,575	\$ 10,318	12.7%
Equity Investments				
- Domestic Equity Pool	\$ 5,600	\$ 15,223	\$ 20,823	25.6%
- International Equity Pool	4,564	12,408	16,972	20.9%
- Private Equity Pool	1,713	4,657	6,370	7.8%
- Emerging Markets Equity Pool	614	1,670	2,284	2.8%
- Alternate Equity Strategies	914	2,485	3,399	4.2%
- Subtotal	\$ 13,405	\$ 36,443	\$ 49,848	61.3%
Other Investments				
- Real Estate Pool	\$ 1,691	\$ 4,597	\$ 6,288	7.7%
- Other Investments Pool	2,116	5,754	7,870	9.7%
- Absolute Return Pool	1,414	3,843	5,257	6.5%
- Other Assets	0	0	0	0.0%
- Subtotal	\$ 5,221	\$ 14,194	\$ 19,415	23.9%
Total Cash and Investments	\$ 21,722	\$ 59,564	\$ 81,286	100.0%
Net Accrued Receivables	224	1,144	1,368	
Net Assets	\$ 21,946	\$ 60,708	\$ 82,654	
Peace Officer/Firefighter	\$ 7,274	N/A	N/A	
Others	14,672	N/A	N/A	
All Members	\$ 21,946	\$ 60,708	\$ 82,654	

## Section 2.2 Changes in Fair Value of Assets During FY16 (\$'s in 000's)

Fiscal Year 2016	Occupational Death & Disability	Retiree Medical	Total
1. Net Assets, June 30, 2015 (fair value)	\$ 19,172	\$ 44,368	\$ 63,540
Additions:			
a. Member Contributions	\$ 14	\$ 0	\$ 14
b. Employer/State Contributions	3,104	16,184	19,288
c. Interest and Dividend Income	369	935	1,304
d. Net Appreciation (Depreciation) in Fair Value of Investments	(356)	(677)	(1,033)
e. Other	<u>0</u>	<u>0</u>	<u>0</u>
f. Total Additions	\$ 3,131	\$ 16,442	\$ 19,573
Deductions:			
a. Medical Benefits	\$ 0	\$ 0	\$ 0
b. Death & Disability Benefits	338	0	338
c. Investment Expenses	5	11	16
d. Administrative Expenses	<u>14</u>	<u>91</u>	<u>105</u>
e. Total Deductions	\$ 357	\$ 102	\$ 459
Net Assets, June 30, 2016 (fair value)	\$ 21,946	\$ 60,708	\$ 82,654
Approximate Fair Value Investment Return Rate During FY16 Net of All Expenses	(0.0)%	0.3%	0.2%

## 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.

	Occupational Death & Disability	Retiree Medical	Total
1. Investment Gain/(Loss) for FY16			
a. Fair Value, June 30, 2015	\$ 19,172	\$ 44,368	\$ 63,540
b. Contributions for FY16	3,118	16,184	19,302
c. Benefit Payments	338	0	338
d. Actual Investment Return ( <i>net of expenses</i> )	(6)	156	150
e. Expected Return Rate ( <i>net of expenses</i> )	8.00%	8.00%	8.00%
f. Expected Return	1,643	4,184	5,827
g. Investment Gain/(Loss) for the Year, (d) – (f)	(1,649)	(4,028)	(5,677)
2. Actuarial Value, June 30, 2016			
a. Fair Value, June 30, 2016	\$ 21,946	\$ 60,708	\$ 82,654
b. Deferred Investment Gain/(Loss)	(1,230)	(3,143)	(4,373)
c. Preliminary Actuarial Value, June 30, 2016, (a) – (b)	23,176	63,851	87,027
d. Upper Limit: 120% of Fair Value, June 30, 2016	26,335	72,850	N/A
e. Lower Limit: 80% of Fair Value, June 30, 2016	17,557	48,566	N/A
f. Actuarial Value, June 30, 2016, (c) limited by (d) and (e)	\$ 23,176	\$ 63,851	\$ 87,027
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	105.6%	105.2%	105.3%
4. Approximate Actuarial Value Investment Return Rate During FY16 Net of All Expenses	6.8%	6.7%	6.7%
5. Actuarial Value Allocation*			
a. Peace Officer/Firefighter	\$ 7,682	\$ 6,295	\$ 13,977
b. Others	<u>15,494</u>	<u>57,556</u>	<u>73,050</u>
c. All Members	\$ 23,176	\$ 63,851	\$ 87,027

\*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 Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2012	\$ (487)	\$ (389)	\$ (98)	\$ 0
6/30/2013	390	234	78	78
6/30/2014	1,287	514	257	516
6/30/2015	(841)	(168)	(168)	(505)
6/30/2016	(1,649)	0	(330)	(1,319)
<b>Total</b>	<b>\$ (1,300)</b>	<b>\$ 191</b>	<b>\$ (261)</b>	<b>\$ (1,230)</b>

Retiree Medical				
Fiscal Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2012	\$ (828)	\$ (663)	\$ (165)	\$ 0
6/30/2013	661	396	133	132
6/30/2014	2,276	910	455	911
6/30/2015	(1,608)	(322)	(322)	(964)
6/30/2016	(4,028)	0	(806)	(3,222)
<b>Total</b>	<b>\$ (3,527)</b>	<b>\$ 321</b>	<b>\$ (705)</b>	<b>\$ (3,143)</b>

Total				
Fiscal Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2012	\$ (1,315)	\$ (1,052)	\$ (263)	\$ 0
6/30/2013	1,051	630	211	210
6/30/2014	3,563	1,424	712	1,427
6/30/2015	(2,449)	(490)	(490)	(1,469)
6/30/2016	(5,677)	0	(1,136)	(4,541)
<b>Total</b>	<b>\$ (4,827)</b>	<b>\$ 512</b>	<b>\$ (966)</b>	<b>\$ (4,373)</b>

## Section 2.4 Historical Asset Rates of Return

Year Ending	Actuarial Value		Fair Value	
	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%
June 30, 2016	6.7%	6.7%	0.2%	4.1%

\*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 Liabilities (AAL)	Actuarial Value of Assets	Funded Ratio	Unfunded AAL (UAAL)	Covered Payroll	UAAL as a Percentage of 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 Liabilities (AAL)	Actuarial Value of Assets	Funded Ratio	Unfunded AAL (UAAL)	Covered Payroll	UAAL as a Percentage of Covered Payroll
June 30, 2016 <sup>1</sup>	\$ 160,884	\$ 63,851	39.7%	\$ 97,033	\$ 867,000	11.2%
June 30, 2015	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>1</sup> Based on the partially funded discount rate of 5.4%. As of June 30, 2016, neither EGWP (adopted July 1, 2017 effective January 1, 2018) nor RDS are reflected for the GASB 43 valuation results.

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

### Schedule of Employer/State 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 Contribution (ARC)	Percentage of ARC 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 Contributed
June 30, 2016	\$ 16,907	96%
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.

Valuation Date	Fiscal Year	ARC (% of Pay)		
		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*
June 30, 2016	FY19	N/A*	N/A*	N/A*

\*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. DB 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, 2016
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	14 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), 5.40% 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%.

\*Includes inflation at 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, 2016 disclosure.

PERS DCR retiree medical benefits were 29.4% funded as of June 30, 2013 (beginning of FY14), so for fiscal year ending 2016 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 5.40%

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.

As of June 30, 2016, neither EGWP (adopted July 1, 2017 effective January 1, 2018) nor RDS are reflected for the GASB 43 valuation results.

## 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.

Valuation Date	Actuarial Accrued Liability For:				Portion of Actuarial Accrued Liability Covered by Assets		
	(1)	(2)	(3)	Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer-Financed Portion)				
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	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).

<sup>1</sup> Change in Assumptions, for June 30, 2016 the liability reflects final DCR benefits adopted July 2016.

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

Valuation Date	Occupational Death & Disability Actuarial Accrued Liability For:				Portion of Actuarial Accrued Liability Covered by Assets		
	(1)	(2)	(3)	Occupational Death & Disability Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer-Financed Portion)				
June 30, 2016	\$ 0	\$ 0	\$ 6,763	\$ 23,176	100.0%	100.0%	100.0%
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>1</sup> Change in Assumptions

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

Valuation Date	Retiree Medical Actuarial Accrued Liability For:				Portion of Actuarial Accrued Liability Covered by Assets		
	(1)	(2)	(3)	Retiree Medical Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer-Financed Portion)				
June 30, 2016	\$ 0	\$ 0	\$ 70,289	\$ 63,851	100.0%	100.0%	90.8%
June 30, 2015	0	0	58,683	44,188	100.0%	100.0%	75.3%
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>1</sup> Change in Assumptions

## Section 4 Member Data

### Section 4.1 Summary of Members Included

As of June 30	2012	2013	2014	2015	2016 <sup>1</sup>
<b>Peace Officer/Firefighter – Active Members</b>					
1. Number	909	1,108	1,313	1,438	1,605
2. Average Age	34.36	34.35	34.80	34.93	35.17
3. Average Credited Service	2.91	3.07	3.28	3.71	4.12
4. Average Entry Age	31.45	31.28	31.52	31.22	31.05
5. Average Annual Earnings	\$ 68,440	\$ 68,197	\$ 69,904	\$ 71,839	\$ 76,213
<b>Others – Active Members</b>					
1. Number	11,688	13,208	14,487	15,660	16,610
2. Average Age	39.69	39.96	40.19	40.54	40.90
3. Average Credited Service	2.32	2.55	2.94	3.24	3.51
4. Average Entry Age	37.37	37.41	37.25	37.30	37.39
5. Average Annual Earnings	\$ 48,504	\$ 50,961	\$ 52,831	\$ 53,780	\$ 55,335
<b>Total – Active Members</b>					
1. Number	12,597	14,316	15,800	17,098	18,215
2. Average Age	39.31	39.53	39.74	40.07	40.39
3. Average Credited Service	2.36	2.59	2.97	3.28	3.56
4. Average Entry Age	36.95	36.94	36.77	36.79	36.83
5. Average Annual Earnings	\$ 49,943	\$ 52,295	\$ 54,250	\$ 55,299	\$ 57,175
<b>Retirees, Disabilitants and Beneficiaries</b>					
1. Number	1	4	6	12	12
2. Average Age	N/A	39	34	43	44
3. Average Monthly Death & Disability Benefit	N/A	\$ 2,320	\$ 2,554	\$ 2,399	\$ 2,442
<b>Inactive Members*</b>					
1. Number	36	118	251	456	586
<b>Total Number of Members</b>	<b>12,634</b>	<b>14,438</b>	<b>16,057</b>	<b>17,566</b>	<b>18,813</b>

\* 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.

<sup>1</sup> 20 members who were terminated before the valuation date were subsequently rehired, per client data as of October 1, 2016. These members were valued as active as of the valuation date.

## Section 4.2 Age and Service Distribution of Active Members

**Annual Earnings by Age**

Age	Number	Total Annual Earnings	Average Annual Earnings
0 – 19	67	\$ 2,601,623	\$ 38,830
20 – 24	1,162	54,511,669	46,912
25 – 29	2,852	151,809,284	53,229
30 – 34	3,182	190,404,360	59,838
35 – 39	2,580	156,122,482	60,513
40 – 44	2,103	120,595,040	57,344
45 – 49	1,898	108,240,635	57,029
50 – 54	1,752	101,063,050	57,684
55 – 59	1,460	85,677,541	58,683
60 – 64	808	49,703,928	61,515
65 – 69	270	16,623,257	61,568
70 – 74	64	3,363,398	52,553
75+	17	720,233	42,367
<b>Total</b>	<b>18,215</b>	<b>\$1,041,436,500</b>	<b>\$ 57,175</b>

**Annual Earnings by Credited Service**

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	3,788	\$ 179,882,209	\$ 47,487
1	2,996	153,803,663	51,336
2	2,339	131,206,779	56,095
3	2,089	121,995,128	58,399
4	1,802	110,091,950	61,094
0 – 4	13,014	696,979,729	53,556
5 – 9	5,189	343,514,090	66,200
10 – 14	12	942,681	78,557
15 – 19	0	0	0
20 – 24	0	0	0
25 – 29	0	0	0
30 – 34	0	0	0
35 – 39	0	0	0
40+	0	0	0
<b>Total</b>	<b>18,215</b>	<b>\$ 1,041,436,500</b>	<b>\$ 57,175</b>

**Years of Credited Service by Age**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	67	0	0	0	0	0	0	0	0	67
20 – 24	1,155	7	0	0	0	0	0	0	0	1,162
25 – 29	2,475	377	0	0	0	0	0	0	0	2,852
30 – 34	2,266	916	0	0	0	0	0	0	0	3,182
35 – 39	1,712	866	2	0	0	0	0	0	0	2,580
40 – 44	1,399	703	1	0	0	0	0	0	0	2,103
45 – 49	1,253	644	1	0	0	0	0	0	0	1,898
50 – 54	1,094	657	1	0	0	0	0	0	0	1,752
55 – 59	936	520	4	0	0	0	0	0	0	1,460
60 – 64	464	341	3	0	0	0	0	0	0	808
65 – 69	149	121	0	0	0	0	0	0	0	270
70 – 74	33	31	0	0	0	0	0	0	0	64
75+	11	6	0	0	0	0	0	0	0	17
<b>Total</b>	<b>13,014</b>	<b>5,189</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,215</b>

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 Inactive*	Retired	Disabled	Beneficiary	Total
As of June, 2015	17,098	456	0	10	2	17,566
Vested Termination	(273)	274	0	0	0	1
Non-vested Termination	(1,714)	(3)	0	0	0	(1,717)
Refund of Contributions	(692)	(107)	0	0	0	(799)
Converted To/From DB Plan	5	0	0	0	0	5
Transfer In	83	0	0	0	0	83
Transfer Out	(50)	(1)	0	0	0	(51)
Disabled	0	0	0	0	0	0
Retired	0	0	0	0	0	0
Deceased, No Beneficiary	(28)	(1)	0	0	0	(29)
Deceased, With Beneficiary	0	0	0	0	0	0
Return to Active	377	(32)	0	0	0	345
Data Adjustment	0	0	0	0	0	0
New Entrant	3,409	N/A	N/A	N/A	N/A	3,409
As of June 30, 2016	18,215	586	0	10	2	18,813

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



## Section 4.4

### Schedule of Active Member Valuation Data

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2016	18,215	\$ 1,041,437	\$ 57,175	3.4%	157
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 are the annualized earnings (“valuation pay”) for the fiscal year ending on the valuation date.

## Section 4.5

### Active Member Payroll Reconciliation

Payroll Field	Payroll Data (000s)
a) DRB actual reported salaries FY16 – employer list	\$ 963,777
b) DRB actual reported salaries FY16 – valuation data	894,940
c) Include October data adjustment for rehires	895,304
d) Annualized valuation data	1,041,437
e) Valuation payroll as of June 30, 2016	1,111,770
f) Rate payroll for FY17	1,059,791

- a) Actual reported salaries from DRB employer listing showing all payroll paid during FY16, including those who were not active as of June 30, 2016
- b) Payroll from valuation data for people who are in active status as of June 30, 2016
- c) Payroll from (b) including additional people added who were listed as active as of October 1, 2016 and were run as active in the valuation
- d) Payroll from (c) annualized for both new entrants and part-timers
- e) Payroll from (d) with one year of salary scale applied to estimate salaries payable for the upcoming year
- f) Payroll from (e) with the part-timer annualization removed

# 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, 2016.

### 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 157 employers participating in PERS DCR, including the State of Alaska, and 156 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 or b) Medicare eligible and 10 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's and any covered dependent premium is 100% until the member is Medicare eligible. Upon the member's Medicare-eligibility, the required contribution will follow the service based schedule shown below.
- 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 a summary of the medical benefit design adopted in July 2016. The plan description below is used for valuation purposes and indicates participant cost-sharing. Please refer to the benefit handbook for more details.

Plan Design Feature	In-Network*	Out-of-Network <sup>(1)</sup>
Deductible (single / family)	\$300 / \$600	\$300 / \$600
Medical services (participant share)	20%	40%
Emergency Room Copay (non-emergent use)	\$100	\$100
Medical Out-of-Pocket Maximum (single / family, after deductible)	\$1,200 / \$2,400	\$2,400 / \$4,800
Medicare Coordination	Carve-out	Carve-out
Pharmacy	No Deductible	No Deductible
Retail Generic (per 30-day fill)	20% \$10 min / \$50 max	
Retail Non-Formulary Brand (per 30-day fill)	25% \$25 min / \$75 max	40%
Retail Formulary Brand (per 30-day fill)	35% \$80 min / \$150 max	
Mail-Order Generic	\$20 copay	
Mail-Order Non-Formulary Brand	\$50 copay	40%
Mail-Order Formulary Brand	\$100 copay	
Pharmacy Out-of-Pocket Max (single / family)	\$1,000 / \$2,000	\$1,000 / \$2,000
Medicare Pharmacy Arrangement	Retiree Drug Subsidy / Employer Group Waiver Plan effective 1/1/2018	
Wellness / Preventative	100%, Not subject to deductible	

<sup>(1)</sup> OON applies only to non-Medicare eligible participants.

\*Assumed to increase annually to mitigate impact of healthcare cost trend

- Conduent used its manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the adopted DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree health plan value to the DB retiree health plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits (including RDS) to estimate corresponding values for the adopted DCR retiree medical plan design. These factors are noted in Section 5.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. The RDS subsidy offset in 2018 was increased by 60% to reflect estimated Medicare reimbursements under the Employer Group Waiver Plan (EGWP) arrangement. We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost assumptions so no further adjustment was needed for the DCR medical plan. The network differential is reflected in the relative plan value adjustments.
- The medical plan’s coverage is supplemental to Medicare. Medicare coordination is described in the 2016 DCR Plan Handbook, referred to in the industry as carve-out coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to that amount. Starting at 2018, the prescription drug coverage is a Medicare Part D EGWP arrangement.
- The premium for 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 aligns with the member’s subsidy. While a member is not Medicare-eligible, premiums are 100% of the estimated cost.<sup>1</sup>

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

For valuation purposes this year, we set premiums equal to the age related plan costs and apply the plan subsidy percentage; thus reflecting the updated cost using enrollment information. Future premiums calculated and charged to participants will be determined to reflect any adjustment due to the updated defined benefit plan data as current premiums were determined using information based upon enrollment with dual coverage members.

- Coverage will continue for surviving spouses of covered retired members.

<sup>1</sup> As per discussion with the State, reflects updated understanding of stature regarding retiree contribution requirements and employer subsidies.

## **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**

- Updated non-Medicare eligible dependent coverage premiums to reflect subsidy when the member is Medicare-eligible.
- Updated factors used to adjust the defined benefit plan costs to reflect adopted DCR plan design

## 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.

### **Actuarial Method – Entry Age Normal Cost.**

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.

### **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.

## Valuation of Retiree Medical and Prescription Drug 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, 2016.

Due to the lack of experience for the DCR retiree health plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2016 for the Defined Benefit (DB) retiree healthcare plan covering TRS, PERS, and others. The DB rates were used 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, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, upcoming FY17 claims costs were reduced 3.1% for medical and 11.2% for prescription drugs. In addition, to account for the difference in Medicare coordination, upcoming FY17 medical claims costs for Medicare eligible retirees were further reduced 33.75%. The health care trend rate used for the DB health benefits was reduced 0.2% each year for the DCR health benefits to reflect the fact that the retiree healthcare benefits to be offered to DCR 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 (25 years of service for Peace/Fire) prior to Medicare 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 age-related total projected plan costs, again with no implicit subsidy assumed.

The State intends to transition to an Employer Group Waiver Program (EGWP) for this group in 2018. That impact is reflected in the valuation, but not in the base cost rates for 2016 or 2017. We estimated the impact of the EGWP plan by offsetting an amount equal to 160% of the RDS amount (a one-time adjustment, trended at regular prescription drug thereafter) based upon Conduent's review of client and industry comparisons of subsidies under RDS and EGWP. We will assess the historical patterns for EGWP / RDS reimbursements as part of the experience study and cost development work for the next valuation to determine any need for further adjustment. A review of a 2016 Medicare Trustees report indicates varying rates of increase for CMS subsidies under both RDS and EGWP. The projections for the next ten years indicate that EGWP reimbursements for direct and reinsurance subsidies are expected to be consistently significantly higher than projected RDS reimbursements.

Because EGWP subsidies are dependent upon risk scores which have not previously been measured for the State retiree population, and because EGWP subsidies are highly leveraged, there is considerable uncertainty in the estimate.

The estimate of the impact of the EGWP arrangement is a somewhat conservative estimate based on our experience with other similar implementations. EGWP subsidies are provided by three mechanisms, a capitation amount, a discount on brand name drugs (provided by pharmaceutical manufacturers rather than the federal government but still through the administration of a pharmacy benefit manager), and catastrophic payment.

The greatest variation in our estimate comes from the capitation amount, which is dependent upon the risk score of the population. The risk score is a measure of how sick (or well) the population is, depending on such matters as age and diagnosis. The higher the risk score, the larger the capitation. On the other hand, the healthier the population, the lower the capitation. Relatively small variations in risk score result in large swings in the capitation. Employer retiree groups tend to be healthier than the Medicare population as a whole. Our 60% estimate is meant to be conservative and is based on typical employer groups.



## **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. Conduent 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. The adopted DCR plan does not place lifetime limits on benefits, but does restrict dependent child coverage.

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; legislation passed in December 2015 delayed it to 2020. Based upon guidance available at the time of disclosure, Conduent determined the impact on plan liabilities to be immaterial (approximately \$350,000 (0.50%)) 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.

The Trump administration has clearly announced its intention to repeal healthcare reform. As one of his first acts in office, President Trump issued an executive order that states that federal agencies can grant waivers, exemptions and delays of "Obamacare" provisions that would impose costs on states or individuals. On February 15, 2016, CMS issued proposed rules that are intended to minimize adverse selection, but which might disrupt the fragile balance of the healthcare exchanges. We can expect more information about what is being altered. As of the writing of this letter we have not identified any action that has already formally been adopted 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.

## **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, 2016 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.

\*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	<p>Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY17 medical and prescription drug are shown below:</p> <table border="1"> <thead> <tr> <th></th> <th>Medical</th> <th>Prescription Drugs</th> </tr> </thead> <tbody> <tr> <td>Pre-Medicare</td> <td>\$ 14,380</td> <td>\$ 3,320</td> </tr> <tr> <td>Medicare Parts A &amp; B</td> <td>\$ 1,707</td> <td>\$ 3,320</td> </tr> <tr> <td>Medicare Part B Only</td> <td>\$ 8,562</td> <td>\$ 3,320</td> </tr> <tr> <td>Medicare Part D</td> <td>N/A</td> <td>\$ 614</td> </tr> </tbody> </table> <p>Members are assumed to attain Medicare eligibility at age 65.</p>		Medical	Prescription Drugs	Pre-Medicare	\$ 14,380	\$ 3,320	Medicare Parts A & B	\$ 1,707	\$ 3,320	Medicare Part B Only	\$ 8,562	\$ 3,320	Medicare Part D	N/A	\$ 614																													
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Third Party Administrator Fees	\$206.88 per person per year; assumed trend rate of 5% per year.																																												
Base Claims Costs Adjustments	<p>Due to higher initial copays, deductibles, out-of-pocket limits and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:</p> <ul style="list-style-type: none"> <li>• 0.969 for the medical plan.</li> <li>• 0.6625 for the medical Medicare coordination method.</li> <li>• 0.888 for the prescription drug plan.</li> </ul>																																												
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 percentage.																																												
Active Data Adjustment	To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.																																												
Health Cost Trend	<p>The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 8.8% is applied to the FY17 pre-Medicare medical claims costs to get the FY18 medical claims costs.</p> <table border="1"> <thead> <tr> <th></th> <th>Medical Pre-65</th> <th>Medical Post-65</th> <th>Prescription Drugs</th> </tr> </thead> <tbody> <tr> <td>FY17</td> <td>8.8%</td> <td>5.8%</td> <td>5.4%</td> </tr> <tr> <td>FY18</td> <td>8.2%</td> <td>5.7%</td> <td>5.1%</td> </tr> <tr> <td>FY19</td> <td>7.6%</td> <td>5.6%</td> <td>4.8%</td> </tr> <tr> <td>FY20</td> <td>7.0%</td> <td>5.6%</td> <td>4.6%</td> </tr> <tr> <td>FY21</td> <td>6.5%</td> <td>5.6%</td> <td>4.4%</td> </tr> <tr> <td>FY22</td> <td>6.0%</td> <td>5.6%</td> <td>4.2%</td> </tr> <tr> <td>FY23</td> <td>5.6%</td> <td>5.6%</td> <td>4.0%</td> </tr> <tr> <td>FY26</td> <td>5.6%</td> <td>5.6%</td> <td>4.0%</td> </tr> <tr> <td>FY51</td> <td>4.4%</td> <td>4.0%</td> <td>4.0%</td> </tr> <tr> <td>FY101</td> <td>4.4%</td> <td>4.0%</td> <td>4.0%</td> </tr> </tbody> </table> <p>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</p>		Medical Pre-65	Medical Post-65	Prescription Drugs	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%	FY23	5.6%	5.6%	4.0%	FY26	5.6%	5.6%	4.0%	FY51	4.4%	4.0%	4.0%	FY101	4.4%	4.0%	4.0%
	Medical Pre-65	Medical Post-65	Prescription Drugs																																										
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FY51	4.4%	4.0%	4.0%																																										
FY101	4.4%	4.0%	4.0%																																										

model has been adopted by the Society of Actuaries, and has been populated with assumptions that are specific to the State of Alaska.

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.

Aging Factors*	Prescription		
	Age	Medical	Drugs
	0-44	2.0%	4.5%
	45-54	2.5%	3.5%
	55-64	3.5%	3.0%
	65-74	4.0%	1.5%
	75-84	1.5%	0.5%
	85-95	0.5%	0.0%
	96+	0.0%	0.0%

\* Note that pre-65 the factor represents the amount to increase from the ages noted to the next age. However post-65, the factor represents the adjustment to get to the ages noted up to age in the range. That is, 2.5% is used to age from 54 to 55, but 1.5% is use to age from 83 to 84.

Retiree Medical Participation

<u>Decrement Due to Disability</u>		<u>Decrement Due to Retirement</u>	
<u>Age</u>	<u>Percent Participation</u>	<u>Age</u>	<u>Percent Participation</u>
<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+	<u>Years of Svc</u>
			<15 70.5%
			15-19 75.2%
			20-24 79.9%
			25-29 89.3%
			30+ 94.0%

\*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 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
55	0.3296	0.2383	90	14.4286	10.3593
56	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 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 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**

Age	Peace Officer/ Firefighter Rate	Other Member 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
≤ 50	2.0%
51	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

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 of Projected Benefits	Amount which, together with future interest, is expected to be sufficient to 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 Contribution (ARC)	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	<p>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.</p> <p>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.</p>
GASB 74 and 75	<p>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.</p> <p>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.</p>
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.