

# 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, 2017

June 2018



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State of Alaska  
The Alaska Retirement Management Board  
The Department of Revenue, Treasury Division  
The Department of Administration, Division of Retirement and Benefits  
P.O. Box 110203  
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### **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, 2017 performed by Conduent HR Consulting, LLC (Conduent HR Consulting).

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), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2017. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under PERS DCR 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 HR Consulting is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS DCR as of June 30, 2017.

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

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 beginning with 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, 2017 to better reflect expected future healthcare experience. Based on recent experience, the health care cost trend assumptions were also updated. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Sections 5.2 and 5.3.

Governmental Accounting Standards Board (GASB) Statement No. 74 (GASB 74) is effective for PERS DCR beginning with fiscal year ending June 30, 2017, and a separate GASB 74 report as of June 30, 2017 has been prepared. Section 3 of this report contains accounting information previously disclosed under GASB 25 for fiscal years 2007 through 2013 and accounting information previously disclosed under GASB 43 for fiscal years 2007 through 2016.

This report was prepared under my supervision and in accordance with all applicable Actuarial Standards of Practice. David Kershner is a Fellow of the Society of Actuaries, an Enrolled Actuary and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

I am available to discuss this report with you at your convenience. I can be reached at 602-803-6174.

Respectfully submitted,

Conduent HR Consulting, LLC



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David J. Kershner, FSA, 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 his qualification to render opinions in such matters in accordance with the Qualification Standards of the American Academy of Actuaries.

A handwritten signature in black ink that reads "Scott Young". The signature is written in a cursive style with a large initial 'S' and 'Y'.

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Scott Young, FSA, EA, MAAA  
Director

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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 PERS DCR as of the valuation date of June 30, 2017.

## Purpose

An actuarial valuation is performed on the 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 review the current funded status of the plan and assess the funded status as an appropriate measure for determining actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. 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 data, assets, and actuarial methods and assumptions as of the valuation date.

## Funded Status

Where presented, references to “funded ratio” and “unfunded actuarial 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)		2016	2017
a.	Actuarial Accrued Liability	\$ 77,052	\$ 117,243
b.	Valuation Assets	<u>87,027</u>	<u>108,503</u>
c.	Unfunded Actuarial Accrued Liability, (a) – (b)	\$ (9,975)	\$ 8,740
d.	Funded Ratio based on Valuation Assets, (b) ÷ (a)	112.9%	92.5%
e.	Fair Value of Assets	\$ 82,654	\$ 108,231
f.	Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	107.3%	92.3%

As shown above, the funded ratio based on valuation assets as of June 30, 2017 has decreased from 112.9% to 92.5%. The total employer/State contribution rates have changed as follows (expressed as a percentage of DCR payroll):

- Peace Officer/Firefighter: 1.54% for FY19; 1.78% for FY20
- Others: 1.22% for FY19; 1.61% for FY20
- All Members: 1.26% for FY19; 1.64% for FY20

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. Investment Experience

The approximate FY17 investment return based on fair value of assets was 12.6% compared to the expected investment return of 8.00% (net of investment and administrative expenses of approximately 0.05%). This resulted in a gain of approximately \$4.2 million to the plan from investment experience. The asset valuation method recognizes 20 percent of this gain (\$849,000) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY13 investment gain, 20 percent of the FY14 investment gain, 20 percent of the FY15 investment loss and 20 percent of the FY16 investment loss were recognized this year. The approximate FY17 asset return based on actuarial value of assets was 7.8% compared to the expected asset return of 8.00% (net of investment and administrative expenses).

### 2. Salary Increases

Salary increases for continuing active members during FY17 were less than anticipated in the valuation assumptions, resulting in a liability gain of approx. \$131,000.

### 3. Demographic Experience

The number of active members increased 5.3% from 18,215 at June 30, 2016 to 19,171 at June 30, 2017. The average age of active members increased from 40.39 to 40.72 and average credited service increased from 3.6 to 3.9 years.

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

## Funded Status (continued)

### 4. Retiree Medical Claims Experience

Please refer to the State of Alaska Public Employees' Retirement System (PERS) Defined Benefit Plan Actuarial Valuation Report as of June 30, 2017 for a full description of the assumptions and costs of the retiree medical plan. Adjustments to these costs and assumptions are described in this report.

The recent claims experience described in Section 5.2 of this report (Section 6.2 of the PERS report), created an actuarial gain of approximately \$0.9 million.

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

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

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

The health care cost trend assumption was updated as shown in Section 5.3 to reflect anticipated increases in costs based on recent survey data. Healthcare claim costs are updated annually as described in Section 5.2. Minor updates were made to the factors used to adjust the DB plan costs to reflect DCR plan design differences.

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

There have been no changes in PERS DCR benefit provisions since the prior valuation, other than the State's decision to defer the EGWP implementation date from January 1, 2018 to January 1, 2019.

## Comparative Summary of Key Actuarial Valuation Results

Total Employer/State Contribution Rates for Occupational Death & Disability for Fiscal Year:			2019	2020
<b><u>Peace Officer/Firefighter</u></b>				
a.	Employer Normal Cost Rate		0.76%	0.72%
b.	Past Service Cost Rate		<u>(0.17)%</u>	<u>(0.19)%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)		0.76%	0.72%
<b><u>Others</u></b>				
a.	Employer Normal Cost Rate		0.26%	0.26%
b.	Past Service Cost Rate		<u>(0.10)%</u>	<u>(0.11)%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)		0.26%	0.26%
Total Employer/State Contribution Rates for Retiree Medical for Fiscal Year:			2019	2020
a.	Employer Normal Cost Rate		0.88%	1.14%
b.	Past Service Cost Rate		<u>0.06%</u>	<u>0.18%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)		0.94%	1.32%

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	0.76% / 0.26%	0.94%	1.54% / 1.22%
June 30, 2017	FY20	TBD	TBD	TBD

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

## Summary of Actuarial Accrued Liability Gain/(Loss)

The following table shows the FY17 gain/(loss) on actuarial accrued liability as of June 30, 2017 (\$'s in 000's):

	Occupational Death & Disability	Retiree Medical	Total
Retirement Experience	\$ 0	\$ 98	\$ 98
Termination Experience	(1)	1,418	1,417
Active Mortality Experience	850	6	856
Inactive Mortality Experience	3	24	27
Disability Experience	2,000	228	2,228
New Entrants	(159)	(1,666)	(1,825)
Rehires	(39)	(1,354)	(1,393)
Salary Increases	131	N/A	131
Trend Rates	N/A	(24,441)	(24,441)
Medical Claims Costs	N/A	922	922
EGWP Impact	N/A	(14)	(14)
Miscellaneous	<u>349</u>	<u>1,018</u>	<u>1,367</u>
Total	\$ 3,134	\$ (23,761)	\$ (20,627)

# Section 1: Actuarial Funding Results

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

As of June 30, 2017	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 1,971	\$ 168
Occupational Disability Benefits	10,053	2,315
Medical and Prescription Drug Benefits	22,964	12,523
Medicare Part D Subsidy	<u>(3,208)</u>	<u>(1,763)</u>
Subtotal	\$ 31,780	\$ 13,243
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 737	\$ 737
Disability Benefits	1,735	1,735
Medical and Prescription Drug Benefits	252	252
Medicare Part D Subsidy	<u>(30)</u>	<u>(30)</u>
Subtotal	\$ 2,694	\$ 2,694
<b>Total</b>	<b>\$ 34,474</b>	<b>\$ 15,937</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 14,496</b>	<b>\$ 4,955</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 19,978</b>	<b>\$ 10,982</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 23,216</b>	<b>\$ 12,775</b>

As of June 30, 2017	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 208
Occupational Disability Benefits	805
Medical and Prescription Drug Benefits	1,501
Medicare Part D Subsidy	<u>(209)</u>
Subtotal	\$ 2,305
<b>Total</b>	<b>\$ 2,305</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 1,013</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 1,292</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 1,501</b>

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

As of June 30, 2017	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 8,442	\$ 801
Occupational Disability Benefits	10,267	819
Medical and Prescription Drug Benefits	189,434	116,535
Medicare Part D Subsidy	<u>(29,923)</u>	<u>(18,574)</u>
Subtotal	\$ 178,220	\$ 99,581
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 183	\$ 183
Disability Benefits	782	782
Medical and Prescription Drug Benefits	898	898
Medicare Part D Subsidy	<u>(138)</u>	<u>(138)</u>
Subtotal	\$ 1,725	\$ 1,725
<b>Total</b>	<b>\$ 179,945</b>	<b>\$ 101,306</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 19,674</b>	<b>\$ 2,585</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 160,271</b>	<b>\$ 98,721</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 190,332</b>	<b>\$ 117,433</b>

As of June 30, 2017	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 1,141
Occupational Disability Benefits	1,411
Medical and Prescription Drug Benefits	13,722
Medicare Part D Subsidy	<u>(2,154)</u>
Subtotal	\$ 14,120
<b>Total</b>	<b>\$ 14,120</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 2,552</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 11,568</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 13,722</b>

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

As of June 30, 2017	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Occupational Death Benefits	\$ 10,413	\$ 969
Occupational Disability Benefits	20,320	3,134
Medical and Prescription Drug Benefits	212,398	129,058
Medicare Part D Subsidy	<u>(33,131)</u>	<u>(20,337)</u>
Subtotal	\$ 210,000	\$ 112,824
<b>Benefit Recipients</b>		
Survivor Benefits	\$ 920	\$ 920
Disability Benefits	2,517	2,517
Medical and Prescription Drug Benefits	1,150	1,150
Medicare Part D Subsidy	<u>(168)</u>	<u>(168)</u>
Subtotal	\$ 4,419	\$ 4,419
<b>Total</b>	<b>\$ 214,419</b>	<b>\$ 117,243</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 34,170</b>	<b>\$ 7,540</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 180,249</b>	<b>\$ 109,703</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 213,548</b>	<b>\$ 130,208</b>

As of June 30, 2017	Normal Cost
<b>Active Members</b>	
Occupational Death Benefits	\$ 1,349
Occupational Disability Benefits	2,216
Medical and Prescription Drug Benefits	15,223
Medicare Part D Subsidy	<u>(2,363)</u>
Subtotal	\$ 16,425
<b>Total</b>	<b>\$ 16,425</b>
<b>Total Occupational Death &amp; Disability</b>	<b>\$ 3,565</b>
<b>Total Retiree Medical, Net of Part D Subsidy</b>	<b>\$ 12,860</b>
<b>Total Retiree Medical, Gross of Part D Subsidy</b>	<b>\$ 15,223</b>

**Section 1.2 Actuarial Contributions as of June 30, 2017**

**Peace Officer/Firefighter (for FY20) (\$'s in 000's)**

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 1,013	\$ 1,292	\$ 2,305
2. DCR Plan Rate Payroll Projected for FY18	140,461	140,461	140,461
3. Employer Normal Cost Rate, (1) ÷ (2)	0.72%	0.92%	1.64%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 4,955	\$ 10,982	\$ 15,937
2. Valuation Assets	<u>8,734</u>	<u>8,165</u>	<u>16,899</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (3,779)	\$ 2,817	\$ (962)
4. Funded Ratio based on Valuation Assets	176.3%	74.3%	106.0%
5. Past Service Cost Amortization Payment	\$ (265)	\$ 195	\$ (70)
6. DCR Plan Rate Payroll Projected for FY18	140,461	140,461	140,461
7. Past Service Cost Rate, (5) ÷ (6)	(0.19)%	0.14%	(0.05)%
<b>Total Employer/State Contribution Rate, not less than Normal Cost Rate</b>	<b>0.72%</b>	<b>1.06%</b>	<b>1.78%</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	\$ 1,013	\$ 1,292	\$ 2,305
2. Total DB and DCR Plan Rate Payroll Projected for FY18	320,302	320,302	320,302
3. Employer Normal Cost Rate, (1) ÷ (2)	0.32%	0.40%	0.72%
4. Past Service Cost Amortization Payment	\$ (265)	\$ 195	\$ (70)
5. Past Service Cost Rate, (4) ÷ (2)	(0.08)%	0.06%	(0.02)%
<b>Total Employer/State Contribution Rate, (3) + (5), not less than (3)</b>	<b>0.32%</b>	<b>0.46%</b>	<b>0.78%</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	15	\$ (100)	\$ (104)	\$ (9)
FY08 Gain	06/30/2008	16	(586)	(609)	(51)
Change in Assumptions	06/30/2009	17	(104)	(109)	(9)
FY09 Loss	06/30/2009	17	446	467	37
Change in Assumptions	06/30/2010	18	79	82	6
FY10 Gain	06/30/2010	18	(282)	(296)	(23)
FY11 Loss	06/30/2011	19	73	73	5
FY12 Gain	06/30/2012	20	(349)	(364)	(26)
FY13 Gain	06/30/2013	21	(204)	(212)	(15)
Change in Assumptions	06/30/2014	22	(1,274)	(1,315)	(89)
PRPA Modification	06/30/2014	22	(91)	(94)	(6)
FY14 Gain	06/30/2014	22	(95)	(98)	(7)
FY15 Gain	06/30/2015	23	(664)	(679)	(45)
FY16 Loss	06/30/2016	24	4	4	0
FY17 Gain	06/30/2017	25	(525)	(525)	(33)
<b>Total</b>				<b>\$ (3,779)</b>	<b>\$ (265)</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	15	\$ (21)	\$ (23)	\$ (2)
Change in Assumptions	06/30/2008	16	17	17	1
FY08 Gain	06/30/2008	16	(62)	(66)	(6)
Change in Assumptions	06/30/2009	17	(8)	(8)	(1)
FY09 Gain	06/30/2009	17	(38)	(39)	(3)
Change in Assumptions	06/30/2010	18	41	41	3
FY10 Gain	06/30/2010	18	(46)	(46)	(4)
FY11 Loss	06/30/2011	19	70	71	5
Change in Assumptions	06/30/2012	20	3,085	3,218	232
FY12 Gain	06/30/2012	20	(273)	(285)	(21)
FY13 Loss	06/30/2013	21	880	914	64
Change in Assumptions	06/30/2014	22	(3,034)	(3,129)	(212)
FY14 Loss	06/30/2014	22	1,213	1,252	85
FY15 Gain	06/30/2015	23	(712)	(728)	(48)
EGWP Impact	06/30/2016	24	(1,675)	(1,696)	(109)
FY16 Loss	06/30/2016	24	1,116	1,130	73
Change in Assumptions	06/30/2017	25	2,244	2,244	141
FY17 Gain	06/30/2017	25	(50)	(50)	(3)
<b>Total</b>				<b>\$ 2,817</b>	<b>\$ 195</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	15	\$ (121)	\$ (127)	\$ (11)
Change in Assumptions	06/30/2008	16	17	17	1
FY08 Gain	06/30/2008	16	(648)	(675)	(57)
Change in Assumptions	06/30/2009	17	(112)	(117)	(10)
FY09 Loss	06/30/2009	17	408	428	34
Change in Assumptions	06/30/2010	18	120	123	9
FY10 Gain	06/30/2010	18	(328)	(342)	(27)
FY11 Loss	06/30/2011	19	143	144	10
Change in Assumptions	06/30/2012	20	3,085	3,218	232
FY12 Gain	06/30/2012	20	(622)	(649)	(47)
FY13 Loss	06/30/2013	21	676	702	49
Change in Assumptions	06/30/2014	22	(4,308)	(4,444)	(301)
PRPA Modification	06/30/2014	22	(91)	(94)	(6)
FY14 Loss	06/30/2014	22	1,118	1,154	78
FY15 Gain	06/30/2015	23	(1,376)	(1,407)	(93)
Plan Change - EGWP	06/30/2016	24	(1,675)	(1,696)	(109)
FY16 Loss	06/30/2016	24	1,120	1,134	73
Change in Assumptions	06/30/2017	25	2,244	2,244	141
FY17 Gain	06/30/2017	25	(575)	(575)	(36)
<b>Total</b>				<b>\$ (962)</b>	<b>\$ (70)</b>

The amortization method is level percentage of pay.

## Actuarial Contributions as of June 30, 2017

Others (for FY20) (\$'s in 000's)

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 2,552	\$ 11,568	\$ 14,120
2. DCR Plan Rate Payroll Projected for FY18	990,980	990,980	990,980
3. Employer Normal Cost Rate, (1) ÷ (2)	0.26%	1.17%	1.43%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 2,585	\$ 98,721	\$ 101,306
2. Valuation Assets	<u>18,210</u>	<u>73,394</u>	<u>91,604</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (15,625)	\$ 25,327	\$ 9,702
4. Funded Ratio based on Valuation Assets	704.4%	74.3%	90.4%
5. Past Service Cost Amortization Payment	\$ (1,093)	\$ 1,786	\$ 693
6. DCR Plan Rate Payroll Projected for FY18	990,980	990,980	990,980
7. Past Service Cost Rate, (5) ÷ (6)	(0.11)%	0.18%	0.07%
<b>Total Employer/State Contribution Rate, not less than Normal Cost Rate</b>	<b>0.26%</b>	<b>1.35%</b>	<b>1.61%</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	\$ 2,552	\$ 11,568	\$ 14,120
2. Total DB and DCR Plan Rate Payroll Projected for FY18	1,970,738	1,970,738	1,970,738
3. Employer Normal Cost Rate, (1) ÷ (2)	0.13%	0.59%	0.72%
4. Past Service Cost Amortization Payment	\$ (1,093)	\$ 1,786	\$ 693
5. Past Service Cost Rate, (4) ÷ (2)	(0.06)%	0.09%	0.03%
<b>Total Employer/State Contribution Rate, (3) + (5), not less than (3)</b>	<b>0.13%</b>	<b>0.68%</b>	<b>0.81%</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	15	\$ (40)	\$ (42)	\$ (4)
FY08 Gain	06/30/2008	16	(318)	(332)	(28)
Change in Assumptions	06/30/2009	17	(92)	(95)	(7)
FY09 Gain	06/30/2009	17	(1,924)	(2,010)	(161)
Change in Assumptions	06/30/2010	18	24	26	2
FY10 Gain	06/30/2010	18	(994)	(1,040)	(80)
FY11 Gain	06/30/2011	19	(1,184)	(1,234)	(91)
FY12 Gain	06/30/2012	20	(1,233)	(1,286)	(93)
FY13 Gain	06/30/2013	21	(779)	(809)	(56)
Change in Assumptions	06/30/2014	22	(51)	(52)	(4)
PRPA Modification	06/30/2014	22	(27)	(28)	(2)
FY14 Gain	06/30/2014	22	(2,003)	(2,065)	(140)
FY15 Gain	06/30/2015	23	(1,850)	(1,891)	(125)
FY16 Gain	06/30/2016	24	(2,361)	(2,390)	(154)
FY17 Gain	06/30/2017	25	(2,377)	(2,377)	(150)
<b>Total</b>				<b>\$ (15,625)</b>	<b>\$ (1,093)</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	15	\$ (335)	\$ (347)	\$ (30)
Change in Assumptions	06/30/2008	16	165	172	15
FY08 Gain	06/30/2008	16	(702)	(727)	(60)
Change in Assumptions	06/30/2009	17	(122)	(128)	(10)
FY09 Gain	06/30/2009	17	(438)	(458)	(37)
Change in Assumptions	06/30/2010	18	(572)	(596)	(46)
FY10 Loss	06/30/2010	18	579	602	47
FY11 Loss	06/30/2011	19	820	859	64
Change in Assumptions	06/30/2012	20	25,180	26,268	1,892
FY12 Loss	06/30/2012	20	1,451	1,514	110
FY13 Loss	06/30/2013	21	9,974	10,357	723
Change in Assumptions	06/30/2014	22	(21,822)	(22,510)	(1,527)
FY14 Loss	06/30/2014	22	7,002	7,222	490
FY15 Gain	06/30/2015	23	(8,726)	(8,924)	(589)
EGWP Impact	06/30/2016	24	(17,884)	(18,099)	(1,166)
FY16 Loss	06/30/2016	24	10,367	10,492	675
Change in Assumptions	06/30/2017	25	21,288	21,288	1,339
FY17 Gain	06/30/2017	25	(1,658)	(1,658)	(104)
<b>Total</b>				<b>\$ 25,327</b>	<b>\$ 1,786</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	15	\$ (375)	\$ (389)	\$ (34)
Change in Assumptions	06/30/2008	16	165	172	15
FY08 Gain	06/30/2008	16	(1,020)	(1,059)	(88)
Change in Assumptions	06/30/2009	17	(214)	(223)	(17)
FY09 Gain	06/30/2009	17	(2,362)	(2,468)	(198)
Change in Assumptions	06/30/2010	18	(548)	(570)	(44)
FY10 Gain	06/30/2010	18	(415)	(438)	(33)
FY11 Gain	06/30/2011	19	(364)	(375)	(27)
Change in Assumptions	06/30/2012	20	25,180	26,268	1,892
FY12 Loss	06/30/2012	20	218	228	17
FY13 Loss	06/30/2013	21	9,195	9,548	667
Change in Assumptions	06/30/2014	22	(21,873)	(22,562)	(1,531)
PRPA Modification	06/30/2014	22	(27)	(28)	(2)
FY14 Loss	06/30/2014	22	4,999	5,157	350
FY15 Gain	06/30/2015	23	(10,576)	(10,815)	(714)
EGWP Impact	06/30/2016	24	(17,884)	(18,099)	(1,166)
FY16 Loss	06/30/2016	24	8,006	8,102	521
Change in Assumptions	06/30/2017	25	21,288	21,288	1,339
FY17 Gain	06/30/2017	25	(4,035)	(4,035)	(254)
<b>Total</b>				<b>\$ 9,702</b>	<b>\$ 693</b>

The amortization method is level percentage of pay.

**Actuarial Contributions as of June 30, 2017**

**All Members (for FY20) (\$'s in 000's)**

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 3,565	\$ 12,860	\$ 16,425
2. DCR Plan Rate Payroll Projected for FY18	1,131,441	1,131,441	1,131,441
3. Employer Normal Cost Rate, (1) ÷ (2)	0.32%	1.14%	1.46%
<b>Past Service Rate</b>			
1. Actuarial Accrued Liability	\$ 7,540	\$ 109,703	\$ 117,243
2. Valuation Assets	<u>26,944</u>	<u>81,559</u>	<u>108,503</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (19,404)	\$ 28,144	\$ 8,740
4. Funded Ratio based on Valuation Assets	357.3%	74.3%	92.5%
5. Past Service Cost Amortization Payment	\$ (1,358)	\$ 1,981	\$ 623
6. DCR Plan Rate Payroll Projected for FY18	1,131,441	1,131,441	1,131,441
7. Past Service Cost Rate, (5) ÷ (6)	(0.12)%	0.18%	0.06%
<b>Total Employer/State Contribution Rate, not less than Normal Cost Rate</b>	<b>0.32%</b>	<b>1.32%</b>	<b>1.64%</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	\$ 3,565	\$ 12,860	\$ 16,425
2. Total DB and DCR Plan Rate Payroll Projected for FY18	2,291,040	2,291,040	2,291,040
3. Employer Normal Cost Rate, (1) ÷ (2)	0.16%	0.56%	0.72%
4. Past Service Cost Amortization Payment	\$ (1,358)	\$ 1,981	\$ 623
5. Past Service Cost Rate, (4) ÷ (2)	(0.06)%	0.09%	0.03%
<b>Total Employer/State Contribution Rate, (3) + (5), not less than (3)</b>	<b>0.16%</b>	<b>0.65%</b>	<b>0.81%</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	15	\$ (140)	\$ (146)	\$ (13)
FY08 Gain	06/30/2008	16	(904)	(941)	(79)
Change in Assumptions	06/30/2009	17	(196)	(204)	(16)
FY09 Gain	06/30/2009	17	(1,478)	(1,543)	(124)
Change in Assumptions	06/30/2010	18	103	108	8
FY10 Gain	06/30/2010	18	(1,276)	(1,336)	(103)
FY11 Gain	06/30/2011	19	(1,111)	(1,161)	(86)
FY12 Gain	06/30/2012	20	(1,582)	(1,650)	(119)
FY13 Gain	06/30/2013	21	(983)	(1,021)	(71)
Change in Assumptions	06/30/2014	22	(1,325)	(1,367)	(93)
PRPA Modification	06/30/2014	22	(118)	(122)	(8)
FY14 Gain	06/30/2014	22	(2,098)	(2,163)	(147)
FY15 Gain	06/30/2015	23	(2,514)	(2,570)	(170)
FY16 Gain	06/30/2016	24	(2,357)	(2,386)	(154)
FY17 Gain	06/30/2017	25	(2,902)	(2,902)	(183)
<b>Total</b>				<b>\$ (19,404)</b>	<b>\$ (1,358)</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	15	\$ (356)	\$ (370)	\$ (32)
Change in Assumptions	06/30/2008	16	182	189	16
FY08 Gain	06/30/2008	16	(764)	(793)	(66)
Change in Assumptions	06/30/2009	17	(130)	(136)	(11)
FY09 Gain	06/30/2009	17	(476)	(497)	(40)
Change in Assumptions	06/30/2010	18	(531)	(555)	(43)
FY10 Loss	06/30/2010	18	533	556	43
FY11 Loss	06/30/2011	19	890	930	69
Change in Assumptions	06/30/2012	20	28,265	29,486	2,124
FY12 Loss	06/30/2012	20	1,178	1,229	89
FY13 Loss	06/30/2013	21	10,854	11,271	787
Change in Assumptions	06/30/2014	22	(24,856)	(25,639)	(1,739)
FY14 Loss	06/30/2014	22	8,215	8,474	575
FY15 Gain	06/30/2015	23	(9,438)	(9,652)	(637)
EGWP Impact	06/30/2016	24	(19,559)	(19,795)	(1,275)
FY16 Loss	06/30/2016	24	11,483	11,622	748
Change in Assumptions	06/30/2017	25	23,532	23,532	1,480
FY17 Gain	06/30/2017	25	(1,708)	(1,708)	(107)
<b>Total</b>				<b>\$ 28,144</b>	<b>\$ 1,981</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	15	\$ (496)	\$ (516)	\$ (45)
Change in Assumptions	06/30/2008	16	182	189	16
FY08 Gain	06/30/2008	16	(1,668)	(1,734)	(145)
Change in Assumptions	06/30/2009	17	(326)	(340)	(27)
FY09 Gain	06/30/2009	17	(1,954)	(2,040)	(164)
Change in Assumptions	06/30/2010	18	(428)	(447)	(35)
FY10 Gain	06/30/2010	18	(743)	(780)	(60)
FY11 Gain	06/30/2011	19	(221)	(231)	(17)
Change in Assumptions	06/30/2012	20	28,265	29,486	2,124
FY12 Gain	06/30/2012	20	(404)	(421)	(30)
FY13 Loss	06/30/2013	21	9,871	10,250	716
Change in Assumptions	06/30/2014	22	(26,181)	(27,006)	(1,832)
PRPA Modification	06/30/2014	22	(118)	(122)	(8)
FY14 Loss	06/30/2014	22	6,117	6,311	428
FY15 Gain	06/30/2015	23	(11,952)	(12,222)	(807)
EGWP Impact	06/30/2016	24	(19,559)	(19,795)	(1,275)
FY16 Loss	06/30/2016	24	9,126	9,236	594
Change in Assumptions	06/30/2017	25	23,532	23,532	1,480
FY17 Gain	06/30/2017	25	(4,610)	(4,610)	(290)
<b>Total</b>				<b>\$ 8,740</b>	<b>\$ 623</b>

The amortization method is level percentage of pay.

**Section 1.3: Actuarial Gain/(Loss) for FY17** (\$'s in 000's)

	Occupational Death & Disability	Retiree Medical	Total
1. Expected Actuarial Accrued Liability			
a. Actuarial Accrued Liability, June 30, 2016	\$ 6,763	\$ 70,289	\$ 77,052
b. Normal Cost for FY17	3,421	9,288	12,709
c. Interest on (a) and (b) at 8.00%	815	6,366	7,181
d. Benefit Payments for FY17	313	0	313
e. Interest on (d) at 8.00%, adjusted for timing	12	0	12
f. Assumption Changes	<u>0</u>	<u>(23,532)</u>	<u>(23,532)</u>
g. Expected Actuarial Accrued Liability as of June 30, 2017, (a) + (b) + (c) – (d) – (e) – (f)	\$ 10,674	\$ 109,475	\$ 120,149
2. Actual Actuarial Accrued Liability, June 30, 2017	<u>7,540</u>	<u>109,703</u>	<u>117,243</u>
3. <b>Liability Gain/(Loss), (1)(g) – (2)</b>	<b>\$ 3,134</b>	<b>\$ (228)</b>	<b>\$ 2,906</b>
4. Expected Actuarial Asset Value			
a. Actuarial Asset Value, June 30, 2016	\$ 23,176	\$ 63,851	\$ 87,027
b. Interest on (a) at 8.00%	1,854	5,108	6,962
c. Employer/State Contributions for FY17	2,196	12,280	14,476
d. Interest on (c) at 8.00%, adjusted for timing	86	482	568
e. Benefit Payments for FY17	313	0	313
f. Interest on (e) at 8.00%, adjusted for timing	<u>12</u>	<u>0</u>	<u>12</u>
g. Expected Actuarial Asset Value, June 30, 2017, (a) + (b) + (c) + (d) – (e) – (f)	\$ 26,987	\$ 81,721	\$ 108,708
5. Actuarial Asset Value, June 30, 2017	<u>26,944</u>	<u>81,559</u>	<u>108,503</u>
6. <b>Actuarial Asset Gain/(Loss), (5) – (4)(g)</b>	<b>\$ (43)</b>	<b>\$ (162)</b>	<b>\$ (205)</b>
7. <b>Actuarial Gain/(Loss), (3) + (6)</b>	<b>\$ 3,091</b>	<b>\$ (390)</b>	<b>\$ 2,701</b>
8. <b>Contribution Gain/(Loss)</b>	<b>\$ (189)</b>	<b>\$ 2,098</b>	<b>\$ 1,909</b>
9. <b>FY17 Gain/(Loss), (7) + (8)</b>	<b>\$ 2,902</b>	<b>\$ 1,708</b>	<b>\$ 4,610</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)
June 30, 2017	117,243	108,503	92.5%	8,740

## Section 2 Plan Assets

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

As of June 30, 2017	Occupational Death & Disability	Retiree Medical	Total	Allocation Percent
<b>Cash and Short-Term Investments</b>				
- Cash and Cash Equivalents	\$ 704	\$ 1,615	\$ 2,319	2.2%
- Subtotal	\$ 704	\$ 1,615	\$ 2,319	2.2%
<b>Fixed Income Investments</b>				
- Domestic Fixed Income Pool	\$ 2,248	\$ 6,816	\$ 9,064	8.4%
- International Fixed Income Pool	194	588	782	0.7%
- Tactical Fixed Income Pool	237	716	953	0.9%
- High Yield Pool	681	2,064	2,745	2.6%
- Treasury Inflation Protection Pool	59	177	236	0.2%
- Emerging Debt Pool	<u>176</u>	<u>532</u>	<u>708</u>	<u>0.7%</u>
- Subtotal	\$ 3,595	\$ 10,893	\$ 14,488	13.5%
<b>Equity Investments</b>				
- Domestic Equity Pool	\$ 6,797	\$ 20,601	\$ 27,398	25.5%
- International Equity Pool	5,462	16,553	22,015	20.5%
- Private Equity Pool	2,241	6,792	9,033	8.4%
- Emerging Markets Equity Pool	828	2,509	3,337	3.1%
- Alternate Equity Strategies	<u>1,020</u>	<u>3,092</u>	<u>4,112</u>	<u>3.8%</u>
- Subtotal	\$ 16,348	\$ 49,547	\$ 65,895	61.3%
<b>Other Investments</b>				
- Real Estate Pool	\$ 1,892	\$ 5,731	\$ 7,623	7.1%
- Other Investments Pool	2,556	7,751	10,307	9.6%
- Absolute Return Pool	1,685	5,107	6,792	6.3%
- Other Assets	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.0%</u>
- Subtotal	\$ 6,133	\$ 18,589	\$ 24,722	23.0%
<b>Total Cash and Investments</b>	\$ 26,780	\$ 80,644	\$ 107,424	100.0%
<b>Net Accrued Receivables</b>	<u>(31)</u>	<u>838</u>	<u>807</u>	
<b>Net Assets</b>	\$ 26,749	\$ 81,482	\$ 108,231	
Peace Officer/Firefighter	\$ 8,671	N/A	N/A	
Others	<u>18,078</u>	<u>N/A</u>	<u>N/A</u>	
<b>All Members</b>	\$ 26,749	\$ 81,482	\$ 108,231	

## Section 2.2: Changes in Fair Value of Assets During FY17 (\$'s in 000's)

Fiscal Year 2017	Occupational Death & Disability	Retiree Medical	Total
1. Fair Value of Assets, June 30, 2016	\$ 21,946	\$ 60,708	\$ 82,654
2. Additions:			
a. Member Contributions	\$ 0	\$ 0	\$ 0
b. Employer/State Contributions	2,196	12,280	14,476
c. Interest and Dividend Income	415	1,205	1,620
d. Net Appreciation (Depreciation) in Fair Value of Investments	2,530	7,318	9,848
e. Securities	<u>1</u>	<u>4</u>	<u>5</u>
f. Total Additions	\$ 5,142	\$ 20,807	\$ 25,949
3. Deductions:			
a. Medical Benefits	\$ 0	\$ 0	\$ 0
b. Death & Disability Benefits	313	0	313
c. Investment Expenses	8	20	28
d. Administrative Expenses	18	12	30
e. Securities Expenses	<u>0</u>	<u>1</u>	<u>1</u>
f. Total Deductions	\$ 339	\$ 33	\$ 372
4. Fair Value of Assets, June 30, 2017	\$ 26,749	\$ 81,482	\$ 108,231
Approximate Fair Value Investment Return Rate During FY17 Net of All Expenses	12.7%	12.6%	12.6%

### 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 FY17			
a. Fair Value, June 30, 2016	\$ 21,946	\$ 60,708	\$ 82,654
b. Contributions for FY17	2,196	12,280	14,476
c. Benefit Payments	313	0	313
d. Actual Investment Return ( <i>net of expenses</i> )	2,920	8,494	11,414
e. Expected Return Rate ( <i>net of expenses</i> )	8.00%	8.00%	8.00%
f. Expected Return	1,830	5,338	7,168
g. Investment Gain/(Loss) for the Year, (d) – (f)	1,090	3,156	4,246
2. Actuarial Value, June 30, 2017			
a. Fair Value, June 30, 2017	\$ 26,749	\$ 81,482	\$ 108,231
b. Deferred Investment Gain/(Loss)	(195)	(77)	(272)
c. Preliminary Actuarial Value, June 30, 2017, (a) – (b)	26,944	81,559	108,503
d. Upper Limit: 120% of Fair Value, June 30, 2017	32,099	97,778	N/A
e. Lower Limit: 80% of Fair Value, June 30, 2017	21,399	65,186	N/A
f. Actuarial Value, June 30, 2017, (c) limited by (d) and (e)	\$ 26,944	\$ 81,559	\$ 108,503
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	100.7%	100.1%	100.3%
4. Approximate Actuarial Value Investment Return Rate During FY17 Net of All Expenses	7.8%	7.8%	7.8%
5. Actuarial Value Allocation <sup>1</sup>			
a. Peace Officer/Firefighter	\$ 8,734	\$ 8,165	\$ 16,899
b. Others	18,210	73,394	91,604
c. All Members	\$ 26,944	\$ 81,559	\$ 108,503

<sup>1</sup> Occupational death & disability allocated using fair value of assets. Retiree medical allocated based on retiree medical actuarial accrued liability.

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

Occupational Death & Disability					
Fiscal Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years	
6/30/2013	\$ 390	\$ 312	\$ 78	\$ 0	
6/30/2014	1,287	771	257	259	
6/30/2015	(841)	(336)	(168)	(337)	
6/30/2016	(1,649)	(330)	(330)	(989)	
6/30/2017	1,090	0	218	872	
<b>Total</b>	<b>\$ 277</b>	<b>\$ 417</b>	<b>\$ 55</b>	<b>\$ (195)</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	
6/30/2013	\$ 661	\$ 529	\$ 132	\$ 0	
6/30/2014	2,276	1,365	455	456	
6/30/2015	(1,608)	(644)	(322)	(642)	
6/30/2016	(4,028)	(806)	(806)	(2,416)	
6/30/2017	3,156	0	631	2,525	
<b>Total</b>	<b>\$ 457</b>	<b>\$ 444</b>	<b>\$ 90</b>	<b>\$ (77)</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	
6/30/2013	\$ 1,051	\$ 841	\$ 210	\$ 0	
6/30/2014	3,563	2,136	712	715	
6/30/2015	(2,449)	(980)	(490)	(979)	
6/30/2016	(5,677)	(1,136)	(1,136)	(3,405)	
6/30/2017	4,246	0	849	3,397	
<b>Total</b>	<b>\$ 734</b>	<b>\$ 861</b>	<b>\$ 145</b>	<b>\$ (272)</b>	

**Section 2.4: Historical Asset Rates of Return**

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative*	Annual	Cumulative <sup>1</sup>
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%
June 30, 2017	7.8%	6.8%	12.6%	4.9%

<sup>1</sup> Cumulative since FYE June 30, 2008

## Section 3 Accounting Information<sup>1</sup>

### 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.

	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 for fiscal years 2007 through 2016.

	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>2</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> Figures for fiscal years after 2016 are contained in separate GASB 74 reports.

<sup>2</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 GASB 43.

### 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.

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 years 2007 through 2016.

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 for fiscal years 2007 through 2016.

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%	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%

GASB 74 accounting is effective beginning in FY17 and is 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.

See Section 3.3 of prior years' actuarial valuation reports for Notes to Trend Data.

**Section 3.3 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:			Valuation Assets	Portion of Actuarial Accrued Liability Covered by Assets		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2010 <sup>1</sup>	\$ 0	\$ 0	\$ 8,038	\$ 13,568	100.0%	100.0%	100.0%
June 30, 2009 <sup>1</sup>	0	0	4,316	8,613	100.0%	100.0%	100.0%
June 30, 2008 <sup>1</sup>	0	0	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

The exhibit below shows the occupational death & disability solvency test for valuation dates June 30, 2006 through June 30, 2016.

Valuation Date	Occupational Death & Disability Actuarial Accrued Liability For:			Occupational Death & Disability Valuation Assets	Portion of Actuarial Accrued Liability Covered by Assets		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
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 through June 30, 2016.

Valuation Date	Retiree Medical Actuarial Accrued Liability For:			Retiree Medical Valuation Assets	Portion of Actuarial Accrued Liability Covered by Assets		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
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	2013	2014	2015	2016	2017 <sup>1</sup>
<b>Peace Officer/Firefighter – Active Members</b>					
1. Number	1,108	1,313	1,438	1,605	1,701
2. Average Age	34.35	34.80	34.93	35.17	35.59
3. Average Credited Service	3.07	3.28	3.71	4.12	4.65
4. Average Entry Age	31.28	31.52	31.22	31.05	30.94
5. Average Annual Earnings	\$ 68,197	\$ 69,904	\$ 71,839	\$ 76,213	\$ 77,800
<b>Others – Active Members</b>					
1. Number	13,208	14,487	15,660	16,610	17,470
2. Average Age	39.96	40.19	40.54	40.90	41.22
3. Average Credited Service	2.55	2.94	3.24	3.51	3.83
4. Average Entry Age	37.41	37.25	37.30	37.39	37.39
5. Average Annual Earnings	\$ 50,961	\$ 52,831	\$ 53,780	\$ 55,335	\$ 56,100
<b>Total – Active Members</b>					
1. Number	14,316	15,800	17,098	18,215	19,171
2. Average Age	39.53	39.74	40.07	40.39	40.72
3. Average Credited Service	2.59	2.97	3.28	3.56	3.90
4. Average Entry Age	36.94	36.77	36.79	36.83	36.82
5. Average Annual Earnings	\$ 52,295	\$ 54,250	\$ 55,299	\$ 57,175	\$ 58,025
<b>Disabilitants and Beneficiaries (Occupational Death &amp; Disability)</b>					
1. Number	4	6	12	12	14
2. Average Age	39	34	43	44	42
3. Average Monthly Death & Disability Benefit	2,320	\$ 2,554	\$ 2,399	\$ 2,442	\$2,199
<b>Retirees and Surviving Spouses (Retiree Medical)<sup>2</sup></b>					
1. Number	0	0	0	0	7
2. Average Age	N/A	N/A	N/A	N/A	69.88
<b>Total Number of Members</b>	<b>14,320</b>	<b>15,806</b>	<b>17,100</b>	<b>18,227</b>	<b>19,192</b>

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

<sup>1</sup> 28 members who were terminated before the valuation date were subsequently rehired, per client data as of October 1, 2017. These members were valued as active as of the valuation date.

<sup>2</sup> Counts do not include dependent spouses (2 as of June 30, 2017).

## Section 4.2: Age and Service Distribution of Active Members

Annual Earnings by Age				Annual Earnings by Credited Service			
Age	Number	Total Annual Earnings	Average Annual Earnings	Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0 – 19	67	\$ 2,756,477	\$ 41,141	0	3,679	\$ 174,395,158	\$ 47,403
20 – 24	1,108	50,382,243	45,471	1	2,867	148,516,914	51,802
25 – 29	2,883	155,396,702	53,901	2	2,503	136,461,704	54,519
30 – 34	3,385	203,719,272	60,183	3	2,009	120,225,736	59,844
35 – 39	2,736	168,317,538	61,520	4	1,836	111,501,482	60,731
40 – 44	2,251	133,535,498	59,323	0 – 4	12,894	691,100,994	53,599
45 – 49	2,046	118,406,295	57,872	5 – 9	5,665	375,515,849	66,287
50 – 54	1,836	108,888,055	59,307	10 – 14	611	45,718,329	74,825
55 – 59	1,552	92,653,798	59,700	15 – 19	1	62,784	0
60 – 64	909	55,343,933	60,884	20 – 24	0	0	0
65 – 69	301	17,839,256	59,267	25 – 29	0	0	0
70 – 74	76	4,192,963	55,171	30 – 34	0	0	0
75+	21	965,926	45,996	35 – 39	0	0	0
				40+	0	0	0
<b>Total</b>	<b>19,171</b>	<b>\$1,112,397,956</b>	<b>\$ 58,025</b>	<b>Total</b>	<b>19,171</b>	<b>\$1,112,397,956</b>	<b>\$ 58,025</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	1,103	5	0	0	0	0	0	0	0	1,108
25 – 29	2,510	367	6	0	0	0	0	0	0	2,883
30 – 34	2,263	1,040	82	0	0	0	0	0	0	3,385
35 – 39	1,704	929	103	0	0	0	0	0	0	2,736
40 – 44	1,361	790	100	0	0	0	0	0	0	2,251
45 – 49	1,253	709	84	0	0	0	0	0	0	2,046
50 – 54	1,073	691	71	1	0	0	0	0	0	1,836
55 – 59	894	580	78	0	0	0	0	0	0	1,552
60 – 64	471	375	63	0	0	0	0	0	0	909
65 – 69	144	138	19	0	0	0	0	0	0	301
70 – 74	37	34	5	0	0	0	0	0	0	76
75+	14	7	0	0	0	0	0	0	0	21
<b>Total</b>	<b>12,894</b>	<b>5,665</b>	<b>611</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,171</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	Retirees and Surviving Spouses	OD&D Disabilitants	OD&D Beneficiaries	Total
As of June 30, 2016	18,215	0	10	2	18,227
Vested Termination	(346)	0	0	0	(346)
Non-vested Termination	(1,737)	0	0	0	(1,737)
Refund of Contributions	(691)	0	0	0	(691)
Converted To/From DB Plan	5	0	0	0	5
Transfer In	119	0	0	0	119
Transfer Out	(87)	0	0	0	(87)
Disabled	0	0	0	0	0
Retired	(7)	7	0	0	0
Deceased, No Beneficiary	(20)	0	0	0	(20)
Deceased, With Beneficiary	(3)	0	0	3	0
Return to Active	370	0	0	0	370
Data Adjustment	0	0	(1)	0	(1)
New Entrant	3,353	N/A	N/A	N/A	3,353
As of June 30, 2017	19,171	7	9	5	19,192

#### 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, 2017	19,171	\$ 1,112,398	\$ 58,025	1.5%	157
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 ("valuation pay") are the annualized earnings 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 FY17 – employer list	\$ 1,040,377
b) DRB actual reported salaries FY17 – valuation data	945,025
c) Include October data adjustment for rehires	945,577
d) Annualized valuation data	1,112,398
e) Valuation payroll as of June 30, 2017	1,186,407
f) Rate payroll for FY18	1,131,441

- a) Actual reported salaries from DRB employer listing showing all payroll paid during FY17, including those who were not active as of June 30, 2017
- b) Payroll from valuation data for people who are in active status as of June 30, 2017
- c) Payroll from (b) including additional people added who were listed as active as of October 1, 2017 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

#### Effective Date

July 1, 2006, with amendments through June 30, 2017.

#### 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.

#### Employers Included

Currently there are 157 employers participating in PERS DCR, including the State of Alaska, and 156 political subdivisions and public organizations.

#### 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 non-vested 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.

#### Member Contributions

Other than the member-paid premiums discussed later in this section, there are no member contributions for the occupational death & disability and retiree medical benefits.

#### 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) 25 years of service as a peace officer or firefighter and 30 years of service for any other employee 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.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.1: Summary of Plan Provisions (continued)

- 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 <sup>1</sup>	Out-of-Network <sup>1 2</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	Exclusion	Exclusion
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 1/1/2019	
Wellness / Preventative	100%, Not subject to deductible	

- Conduent HR Consulting 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 medical plan value to the DB retiree medical plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits 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 2019 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 retiree medical plan. The medical network differential is reflected in the relative plan value adjustments.

<sup>1</sup> Assumed to increase annually to mitigate impact of healthcare cost trend

<sup>2</sup> OON applies only to non-Medicare eligible participants.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.1: Summary of Plan Provisions (continued)

- The retiree medical plan's coverage is supplemental to Medicare. Medicare coordination is described in the 2016 DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage will be through 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, which is not reflected in this valuation, that can be used to pay for premiums or other medical expenses.
- For valuation purposes, retiree premiums were assumed to equal the percentages outlined in the table above times the age-related plan costs. Future premiums calculated and charged to DCR participants will need to be determined reflecting any appropriate adjustments to the defined benefit (DB) plan data because current DB premiums were determined using information based upon enrollment with dual coverage members.
- Coverage will continue for surviving spouses of covered retired members.

#### 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.

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

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.1: Summary of Plan Provisions (continued)

- 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 subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

#### **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 subsidized retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% of the estimated cost until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

#### **Changes Since the Prior Valuation**

- There have been no changes in PERS DCR benefit provisions since the prior valuation other than the State's decision to defer the EGWP implementation date from January 1, 2018 to January 1, 2019.

## Section 5: Basis of the Actuarial Valuation (continued)

### 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 actuarial 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. Under the new accounting standards (GASB 74 and 75), the GASB requirements will not directly control amortization periods used for funding of the plan.

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death and 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 disabled 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 was \$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.

#### **Changes in Methods Since the Prior Valuation**

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

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.2: Description of Actuarial Methods and Valuation Procedures (continued)

#### 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 of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2017.

Due to the lack of experience for the DCR retiree medical plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2017 for the Defined Benefit (DB) retiree medical 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 FY18 claims costs were reduced 2.1% for medical claims, and 10.4% for prescription drugs. In addition, to account for the difference in Medicare coordination, upcoming FY18 medical claims costs for Medicare eligible retirees were further reduced 29.3%. The medical and prescription drug percentages mentioned above were reduced 0.2% in each future year for the DCR medical benefits to reflect the fact that the medical benefit 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 because those members will be required to pay the full plan premium prior to Medicare. 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 2019. That impact is reflected in the valuation, but not in the base cost rates for 2017 or 2018. 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 the rates shown in Section 5.3 thereafter) based upon Conduent HR Consulting's review last year of client and industry comparisons of subsidies under RDS and EGWP.

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. Once a vendor is selected for the 2019 implementation of the EGWP arrangement, we will review an updated estimate of EGWP subsidies from that vendor and update the next valuation accordingly.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.2: Description of Actuarial Methods and Valuation Procedures (continued)

#### 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 HR Consulting 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, with further delay to 2022 passed in January 2018. Based upon guidance available at the time of disclosure, Conduent HR Consulting determined the impact on plan liabilities to be immaterial (less than \$105,000 (0.10%)) 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 Tax Cuts and Jobs Act passed in December 2017 included the elimination of the individual mandate penalty and changed the inflation measure for purposes of determining the limits for the High Cost Excise Tax to use chained CPI. It is our understanding the law does not directly impact other provisions of the ACA. While the nullification of the ACA's individual mandate penalty does not directly impact employer group health plans, it could contribute to the destabilization of the individual market and increase the number of uninsured. Such destabilization could translate to increased costs for employers. We have considered this when setting our healthcare cost trend assumptions and will continue to monitor this issue.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. While the House of Representatives voted to the pass the American Health Care Act (AHCA), which would have repealed many provisions of the Affordable Care Act (ACA), the bill was rejected by the Senate. We will continue to monitor legislative activity.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2017 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 DB plan as of June 30, 2013.

#### **Investment Return**

8.00% per year (geometric), compounded annually, net of investment 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)<sup>1</sup>**

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)<sup>1</sup>**

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.

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<sup>1</sup> The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 109%.

# Section 5: Basis of the Actuarial Valuation (continued)

## Section 5.3: Summary of Actuarial Assumptions (continued)

### 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 60% 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.

### Per Capita Claims Cost

Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY18 medical and prescription drug are shown below:

	Medical	Prescription Drugs
Pre-Medicare	\$13,682	\$ 3,493
Medicare Parts A & B	\$ 1,485	\$ 3,706
Medicare Part B Only	\$ 4,722	\$ 3,706
Medicare Part D	N/A	\$ 659

Members are assumed to attain Medicare eligibility at age 65.

### Third Party Administrator Fees

\$236 per person per year; assumed trend rate of 4% per year.

### Base Claims Costs Adjustments

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:

- 0.979 for the pre-Medicare plan.
- 0.686 for both the Medicare medical plan and Medicare coordination method (2.1% for the medical plan and 29.3% reduction for the coordination method).
- 0.896 for the prescription drug plan.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.3: Summary of Actuarial Assumptions (continued)

#### 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

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 8.0% is applied to the FY18 pre-Medicare medical claims costs to get the FY19 medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs	RDS/ EGWP
FY18	8.0%	5.5%	9.0%	6.5%
FY19	7.5%	5.5%	8.5%	6.2%
FY20	7.0%	5.4%	8.0%	6.0%
FY21	6.5%	5.4%	7.5%	5.7%
FY22	6.3%	5.4%	7.1%	5.5%
FY23	6.1%	5.4%	6.8%	5.4%
FY24	5.9%	5.4%	6.4%	5.2%
FY25	5.8%	5.4%	6.1%	5.0%
FY26	5.6%	5.4%	5.7%	4.8%
FY27-FY40	5.4%	5.4%	5.4%	4.7%
FY41	5.2%	5.2%	5.2%	4.6%
FY42	5.1%	5.1%	5.1%	4.5%
FY43	5.0%	5.0%	5.0%	4.5%
FY44	4.8%	4.8%	4.8%	4.4%
FY45	4.7%	4.7%	4.7%	4.3%
FY46	4.5%	4.5%	4.5%	4.2%
FY47	4.4%	4.4%	4.4%	4.2%
FY48	4.3%	4.3%	4.3%	4.1%
FY49	4.1%	4.1%	4.1%	4.0%
FY50+	4.0%	4.0%	4.0%	4.0%

For 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 estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska. The model was updated this year to use the newest version and incorporate recent trend survey information, which generated the updated trend rates shown above.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.3: Summary of Actuarial Assumptions (continued)

#### Aging Factors<sup>1</sup>

Age	Medical	Prescription 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%

#### Retiree Medical Participation

Decrement Due to Disability		Decrement Due to Retirement	
Age	Percent Participation	Age	Percent Participation
<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+	<b>Years of Service</b>
			<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.

<sup>1</sup> Note that the pre-65 factor represents the percentage increase from the ages noted to the next age. However, the post-65 factor represents the percentage decrease from the ages noted to the prior age. That is, 2.5% is used to adjust from 54 to 55, but 1.5% is used to adjust from age 84 back to age 83.

## Section 5: Basis of the Actuarial Valuation (continued)

### Section 5.3: Summary of Actuarial Assumptions (continued)

#### **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. Non-vested 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.

#### **Changes in Assumptions Since the Prior Valuation**

The health care cost trend assumption was updated as shown above to reflect anticipated increases in costs based on recent survey data. Healthcare claim costs are updated annually as described in Section 5.2. Minor updates were made to the factors used to adjust the DB plan costs to reflect DCR plan design differences.

## 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**

<b>Age</b>	<b>Unisex Rate</b>
≤ 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**

Governmental Accounting Standards Board Statement Number 67 amends Number 25 effective for the fiscal year beginning after June 15, 2013, and defines new financial reporting requirements for public pension plans.

Governmental Accounting Standards Board Statement Number 68 amends Number 27 effective for fiscal years beginning after June 15, 2014 and defines new accounting and financial reporting requirements for employers sponsoring public pension plans.

## **GASB 74 and 75**

Governmental Accounting Standards Board Statement Number 74 amends Number 43 effective for the fiscal year beginning after June 15, 2016, and defines new financial reporting requirements for public postemployment benefit plans. Governmental Accounting Standards Board Statement Number 75 amends Number 45 effective for fiscal years beginning after June 15, 2017, and defines new accounting and financial reporting requirements for employers sponsoring public postemployment benefit plans.

## Glossary of Terms (continued)

### **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.