

State of Alaska

Teachers' 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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June 5, 2018

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
Juneau, AK 99811-0203

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 Teachers' Retirement System Defined Contribution Retirement (TRS 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 TRS 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 TRS DCR as of June 30, 2017.

TRS 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 TRS DCR is to pay required contributions that remain level as a percent of TRS 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 TRS 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 TRS 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 TRS 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.

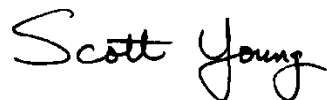
Respectfully submitted,

Conduent HR Consulting, LLC



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 a long, sweeping underline.

Scott Young, FSA, EA, MAAA
Director

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Executive Summary

Overview

The State of Alaska Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan provides occupational death & disability and retiree medical benefits to teachers and other 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 TRS 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 TRS 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	\$ 22,007	\$ 33,707
b. Valuation Assets	<u>28,733</u>	<u>34,586</u>
c. Unfunded Actuarial Accrued Liability, (a) – (b)	\$ (6,726)	\$ (879)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	130.6%	102.6%
e. Fair Value of Assets	\$ 27,216	\$ 34,379
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	123.7%	102.0%

As shown above, the funded ratio based on valuation assets as of June 30, 2017 has decreased from 130.6% to 102.6%. The total employer/State contribution rate has increased from 0.87% of payroll for FY19 to 1.17% 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 a potential for actuarial gains or losses.

1. Investment Experience

The approximate FY17 investment return based on fair value was 12.6% compared to the expected investment return of 8.00% (net of investment and administrative expenses of approximately 0.10%). This resulted in a gain of approximately \$1.3 million to the plan from investment experience. The asset valuation method recognizes 20 percent of this gain (\$266,000) 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 was 7.6% 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 very small liability gain.

3. Demographic Experience

The number of active members increased 7.1% from 4,383 at June 30, 2016 to 4,694 at June 30, 2017. The average age of active members increased from 39.57 to 40.21 and average credited service increased from 4.5 to 4.9 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 Teachers' Retirement System (TRS) 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 TRS report) created an actuarial gain of approximately \$0.3 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 TRS 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
a.	Employer Normal Cost Rate		0.08%	0.08%
b.	Past Service Cost Rate		<u>(0.08)%</u>	<u>(0.08)%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)		0.08%	0.08%

Total Employer/State Contribution Rates for Retiree Medical for Fiscal Year:			2019	2020
a.	Employer Normal Cost Rate		0.79%	1.02%
b.	Past Service Cost Rate		<u>(0.06)%</u>	<u>0.07%</u>
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)		0.79%	1.09%

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

Valuation Date	Fiscal Year	Total Employer/State Contribution Rate		
		Occupational Death & Disability	Retiree Medical	Total
N/A	FY07	N/A	1.75%	1.75%
N/A	FY08	0.56%	0.99%	1.55%
N/A	FY09	0.62%	0.99%	1.61%
June 30, 2007	FY10	0.32%	1.03%	1.35%
June 30, 2008	FY11	0.28%	0.68%	0.96%
June 30, 2009	FY12	0.00%	0.58%	0.58%
June 30, 2010	FY13	0.00%	0.49%	0.49%
June 30, 2011	FY14	0.00%	0.47%	0.47%
June 30, 2012	FY15	0.00%	2.04%	2.04%
June 30, 2013	FY16	0.00%	2.04%	2.04%
June 30, 2014	FY17	0.00%	1.05%	1.05%
June 30, 2015	FY18	0.00%	0.91%	0.91%
June 30, 2016	FY19	0.08%	0.79%	0.87%
June 30, 2017	FY20	TBD	TBD	TBD

Contribution rates are based on salary for TRS 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	\$ 154	\$ 154
Termination Experience	(2)	1,435	1,433
Active Mortality Experience	63	(22)	41
Inactive Mortality Experience	0	0	0
Disability Experience	191	(21)	170
New Entrants	0*	(600)	(600)
Rehires	0*	(617)	(617)
Salary Increases	0*	N/A	0
Trend Rates	N/A	(7,948)	(7,948)
Medical Claims Costs	N/A	305	305
EGWP Impact	N/A	(2)	(2)
Miscellaneous	<u>0*</u>	<u>(60)</u>	<u>(60)</u>
Total	\$ 252	\$ (7,376)	\$ (7,124)

*Impact was less than \$1,000.

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost (\$'s in 000's)

As of June 30, 2017	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Occupational Death Benefits	\$ 618	\$ 70
Occupational Disability Benefits	1,463	(44)
Medical and Prescription Drug Benefits	63,484	39,809
Medicare Part D Subsidy	<u>(10,063)</u>	<u>(6,327)</u>
Subtotal	\$ 55,502	\$ 33,508
Benefit Recipients		
Survivor Benefits	\$ 0	\$ 0
Disability Benefits	0	0
Medical and Prescription Drug Benefits	240	240
Medicare Part D Subsidy	<u>(41)</u>	<u>(41)</u>
Subtotal	\$ 199	\$ 199
Total	\$ 55,701	\$ 33,707
Total Occupational Death & Disability	\$ 2,081	\$ 26
Total Retiree Medical, Net of Part D Subsidy	\$ 53,620	\$ 33,681
Total Retiree Medical, Gross of Part D Subsidy	\$ 63,724	\$ 40,049

As of June 30, 2017	Normal Cost
Active Members	
Occupational Death Benefits	\$ 72
Occupational Disability Benefits	187
Medical and Prescription Drug Benefits	3,992
Medicare Part D Subsidy	<u>(634)</u>
Subtotal	\$ 3,617
Total	\$ 3,617
Total Occupational Death & Disability	\$ 259
Total Retiree Medical, Net of Part D Subsidy	\$ 3,358
Total Retiree Medical, Gross of Part D Subsidy	\$ 3,992

Section 1.2: Actuarial Contributions as of June 30, 2017 (for FY20) (\$'s in 000's)

Normal Cost Rate	Occupational Death & Disability	Retiree Medical	Total
1. Total Normal Cost	\$ 259	\$ 3,358	\$ 3,617
2. DCR Plan Rate Payroll Projected for FY18	327,765	327,765	327,765
3. Employer Normal Cost Rate, (1) ÷ (2)	0.08%	1.02%	1.10%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 26	\$ 33,681	\$ 33,707
2. Valuation Assets	<u>3,588</u>	<u>30,998</u>	<u>34,586</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ (3,562)	\$ 2,683	\$ (879)
4. Funded Ratio based on Valuation Assets	13800.0%	92.0%	102.6%
5. Past Service Cost Amortization Payment	(267)	214	(53)
6. DCR Plan Rate Payroll Projected for FY18	327,765	327,765	327,765
7. Past Service Cost Rate, (5) ÷ (6)	(0.08)%	0.07%	(0.02)%
Total Employer/State Contribution Rate, not less than Normal Cost Rate	0.08%	1.09%	1.17%

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	\$ 259	\$ 3,358	\$ 3,617
2. Total DB and DCR Plan Rate Payroll Projected for FY18	753,606	753,606	753,606
3. Employer Normal Cost Rate, (1) ÷ (2)	0.03%	0.45%	0.48%
4. Past Service Cost Amortization Payment	\$ (267)	\$ 164	\$ (153)
5. Past Service Cost Rate, (4) ÷ (2)	(0.04)%	0.03%	(0.02)%
Total Employer/State Contribution Rate, (3) + (5), not less than (3)	0.03%	0.48%	0.51%

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	\$ 16	\$ 15	\$ 1
FY08 Gain	06/30/2008	16	(392)	(404)	(34)
Change in Assumptions	06/30/2009	17	(82)	(84)	(7)
FY09 Gain	06/30/2009	17	(594)	(621)	(50)
Change in Assumptions	06/30/2010	18	(7)	(8)	(1)
FY10 Gain	06/30/2010	18	(479)	(501)	(39)
FY11 Gain	06/30/2011	19	(560)	(584)	(43)
FY12 Gain	06/30/2012	20	(129)	(136)	(10)
FY13 Gain	06/30/2013	21	(149)	(154)	(11)
Change in Assumptions	06/30/2014	22	(50)	(53)	(4)
PRPA Modification	06/30/2014	22	(25)	(25)	(2)
FY14 Gain	06/30/2014	22	(255)	(262)	(18)
FY15 Gain	06/30/2015	23	(275)	(282)	(19)
FY16 Gain	06/30/2016	24	(209)	(212)	(14)
FY17 Gain	06/30/2017	25	(251)	(251)	(16)
Total				\$ (3,562)	\$ (267)

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	\$ (239)	\$ (249)	\$ (22)
Change in Assumptions	06/30/2008	16	84	91	8
FY08 Gain	06/30/2008	16	(393)	(404)	(34)
Change in Assumptions	06/30/2009	17	(69)	(70)	(6)
FY09 Gain	06/30/2009	17	(281)	(295)	(24)
Change in Assumptions ¹	06/30/2010	18	0	0	0
FY10 Gain	06/30/2010	18	(545)	(569)	(44)
FY11 Gain	06/30/2011	19	(94)	(97)	(7)
Change in Assumptions	06/30/2012	20	11,518	12,017	866
FY12 Gain	06/30/2012	20	(60)	(60)	(4)
FY13 Loss	06/30/2013	21	3,439	3,573	249
Change in Assumptions	06/30/2014	22	(9,736)	(10,043)	(681)
FY14 Loss	06/30/2014	22	1,616	1,666	113
FY15 Gain	06/30/2015	23	(3,485)	(3,564)	(235)
EGWP Impact	06/30/2016	24	(6,400)	(6,477)	(417)
FY16 Loss	06/30/2016	24	958	970	62
Change in Assumptions	06/30/2017	25	7,645	7,645	481
FY17 Gain	06/30/2017	25	(1,451)	(1,451)	(91)
Total				\$ 2,683	\$ 214

¹ The net effect of changing assumptions was less than \$1,000. The demographic assumption changes decreased liability by \$133,000 and the economic assumption changes increased the liability by \$133,000. Therefore, the net effect of all assumption changes is \$0 for amortization purposes.

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	\$ (223)	\$ (234)	\$ (21)
Change in Assumptions	06/30/2008	16	84	91	8
FY08 Gain	06/30/2008	16	(785)	(808)	(68)
Change in Assumptions	06/30/2009	17	(151)	(154)	(13)
FY09 Gain	06/30/2009	17	(875)	(916)	(74)
Change in Assumptions	06/30/2010	18	(7)	(8)	(1)
FY10 Gain	06/30/2010	18	(1,024)	(1,070)	(83)
FY11 Gain	06/30/2011	19	(654)	(681)	(50)
Change in Assumptions	06/30/2012	20	11,518	12,017	866
FY12 Gain	06/30/2012	20	(189)	(196)	(14)
FY13 Loss	06/30/2013	21	3,290	3,419	238
Change in Assumptions	06/30/2014	22	(9,786)	(10,096)	(685)
PRPA Modification	06/30/2014	22	(25)	(25)	(2)
FY14 Loss	06/30/2014	22	1,361	1,404	95
FY15 Gain	06/30/2015	23	(3,760)	(3,846)	(254)
EGWP Impact	06/30/2016	24	(6,400)	(6,477)	(417)
FY16 Loss	06/30/2016	24	749	758	48
Change in Assumptions	06/30/2017	25	7,645	7,645	481
FY17 Gain	06/30/2017	25	(1,702)	(1,702)	(107)
Total				\$ (879)	\$ (53)

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	\$ 19	\$ 21,988	\$ 22,007
b. Normal Cost for FY17	238	2,372	2,610
c. Interest on (a) and (b) at 8.00%	21	1,949	1,970
d. Benefit Payments for FY17	0	4	4
e. Interest on (d) at 8.00%, adjusted for timing	0	0	0
f. Assumption Changes	<u>0</u>	<u>(7,645)</u>	<u>(7,645)</u>
g. Expected Actuarial Accrued Liability as of June 30, 2017, (a) + (b) + (c) – (d) – (e) – (f)	\$ 278	\$ 33,950	\$ 34,228
2. Actual Actuarial Accrued Liability, June 30, 2017	<u>26</u>	<u>33,681</u>	<u>33,707</u>
3. Liability Gain/(Loss), (1)(g) – (2)	\$ 252	\$ 269	\$ 521
4. Expected Actuarial Asset Value			
a. Actuarial Asset Value, June 30, 2016	\$ 3,323	\$ 25,410	\$ 28,733
b. Interest on (a) at 8.00%	266	2,033	2,299
c. Employer/State Contributions for FY17	0	3,525	3,525
d. Interest on (c) at 8.00%, adjusted for timing	0	138	138
e. Benefit Payments for FY17	0	4	4
f. Interest on (e) at 8.00%, adjusted for timing	<u>0</u>	<u>0</u>	<u>0</u>
g. Expected Actuarial Asset Value, June 30, 2017, (a) + (b) + (c) + (d) – (e) – (f)	\$ 3,589	\$ 31,102	\$ 34,691
5. Actuarial Asset Value, June 30, 2017	<u>3,588</u>	<u>30,998</u>	<u>34,586</u>
6. Actuarial Asset Gain/(Loss), (5) – (4)(g)	\$ (1)	\$ (104)	\$ (105)
7. Actuarial Gain/(Loss), (3) + (6)	\$ 251	\$ 165	\$ 416
8. Contribution Gain/(Loss)	\$ 0	\$ 1,286	\$ 1,286
9. FY17 Gain/(Loss), (7) + (8)	\$ 251	\$ 1,451	\$ 1,702

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	\$ 374	\$ 597	159.7%	\$ (223)
June 30, 2008	801	1,728	215.7%	(927)
June 30, 2009	1,460	3,424	234.5%	(1,964)
June 30, 2010	2,448	5,472	223.5%	(3,024)
June 30, 2011	3,858	7,566	196.1%	(3,708)
June 30, 2012	16,874	9,285	55.0%	7,589
June 30, 2013	22,138	11,146	50.3%	10,992
June 30, 2014	16,296	13,611	83.5%	2,685
June 30, 2015	19,797	20,847	105.3%	(1,050)
June 30, 2016	22,007	28,733	130.6%	(6,726)
June 30, 2017	33,707	34,586	102.6%	(879)

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
Cash and Short-Term Investments				
- Cash and Cash Equivalents	\$ 69	\$ 612	\$ 681	2.0%
- Subtotal	\$ 69	\$ 612	\$ 681	2.0%
Fixed Income Investments				
- Domestic Fixed Income Pool	\$ 299	\$ 2,586	\$ 2,885	8.4%
- International Fixed Income Pool	26	223	249	0.7%
- Taxable Fixed Income Pool	31	272	303	0.9%
- High Yield Pool	91	783	874	2.6%
- Treasury Inflation Protection Pool	8	67	75	0.2%
- Emerging Debt Pool	23	202	225	0.7%
- Subtotal	\$ 478	\$ 4,133	\$ 4,611	13.4%
Equity Investments				
- Domestic Equity Pool	\$ 903	\$ 7,817	\$ 8,720	25.5%
- International Equity Pool	674	5,843	6,517	19.1%
- International Equity Small Cap Pool	51	438	489	1.4%
- Private Equity Pool	298	2,577	2,875	8.4%
- Emerging Markets Equity Pool	110	952	1,062	3.1%
- Alternative Equity	135	1,173	1,308	3.8%
- Subtotal	\$ 2,171	\$ 18,800	\$ 20,971	61.3%
Other Investments				
- Real Estate Pool	\$ 251	\$ 2,175	\$ 2,426	7.1%
- Other Investments Pool	339	2,940	3,279	9.6%
- Absolute Return Pool	224	1,938	2,162	6.3%
- Other Assets	0	0	0	0.0%
- Subtotal	\$ 814	\$ 7,053	\$ 7,867	23.0%
Total Cash and Investments	\$ 3,532	\$ 30,598	\$ 34,130	100.0%
Net Accrued Receivables	(1)	250	249	
Net Assets	\$ 3,531	\$ 30,848	\$ 34,379	

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	\$ 3,137	\$ 24,079	\$ 27,216
2. Additions:			
a. Member Contributions	\$ 0	\$ 0	\$ 0
b. Employer/State Contributions	0	3,525	3,525
c. Interest and Dividend Income	57	462	519
d. Net Appreciation (Depreciation) in Fair Value of Investments	350	2,805	3,155
e. Other	<u>0</u>	<u>1</u>	<u>1</u>
f. Total Additions	\$ 407	\$ 6,793	\$ 7,200
3. Deductions:			
a. Medical Benefits	\$ 0	\$ 4	\$ 4
b. Death & Disability Benefits	0	0	0
c. Investment Expenses	1	8	9
d. Administrative Expenses	<u>12</u>	<u>12</u>	<u>24</u>
e. Total Deductions	\$ 13	\$ 24	\$ 37
4. Fair Value of Assets, June 30, 2017	\$ 3,531	\$ 30,848	\$ 34,379
Approximate Fair Value Investment Return Rate During FY17 Net of All Expenses	12.6%	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	\$ 3,137	\$ 24,079	\$ 27,216
b. Contributions for FY17	0	3,525	3,525
c. Benefit Payments	0	4	4
d. Actual Investment Return (<i>net of expenses</i>)	394	3,248	3,642
e. Expected Return Rate (<i>net of expenses</i>)	8.00%	8.00%	8.00%
f. Expected Return	251	2,064	2,315
g. Investment Gain/(Loss) for the Year (d) – (f)	143	1,184	1,327
2. Actuarial Value, June 30, 2017			
a. Fair Value, June 30, 2017	\$ 3,531	\$ 30,848	\$ 34,379
b. Deferred Investment Gain/(Loss)	(57)	(150)	(207)
c. Preliminary Actuarial Value, June 30, 2017 (a) – (b)	\$ 3,588	\$ 30,998	\$ 34,586
d. Upper Limit: 120% of Fair Value, June 30, 2017	\$ 4,237	\$ 37,017	\$ 41,254
e. Lower Limit: 80% of Fair Value, June 30, 2017	\$ 2,825	\$ 24,679	\$ 27,504
f. Actuarial Value, June 30, 2017, (c) limited by (d) and (e)	\$ 3,588	\$ 30,998	\$ 34,586
3. Ratio of Actuarial Value of Assets to Fair Value of Assets			
	101.6%	100.5%	100.6%
4. Approximate Actuarial Value Investment Return Rate During FY17 Net of All Expenses			
	8.0%	7.6%	7.6%

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	\$ 99	\$ 80	\$ 19	\$ 0	
6/30/2014	272	162	54	56	
6/30/2015	(168)	(68)	(34)	(66)	
6/30/2016	(269)	(54)	(54)	(161)	
6/30/2017	143	0	29	114	
Total	\$ 77	\$ 120	\$ 14	\$ (57)	

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	\$ 278	\$ 224	\$ 54	\$ 0	
6/30/2014	928	558	186	184	
6/30/2015	(694)	(278)	(139)	(277)	
6/30/2016	(1,674)	(335)	(335)	(1,004)	
6/30/2017	1,184	0	237	947	
Total	\$ 22	\$ 169	\$ 3	\$ (150)	

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	\$ 377	\$ 304	\$ 73	\$ 0	
6/30/2014	1,200	720	240	240	
6/30/2015	(862)	(346)	(173)	(343)	
6/30/2016	(1,943)	(389)	(389)	(1,165)	
6/30/2017	1,327	0	266	1,061	
Total	\$ 99	\$ 289	\$ 17	\$ (207)	

Section 2.4: Historical Asset Rates of Return

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative ¹	Annual	Cumulative ¹
June 30, 2008	6.4%	6.4%	(0.3)%	(0.3)%
June 30, 2009	3.2%	4.8%	(12.0)%	(6.3)%
June 30, 2010	4.2%	4.6%	6.4%	(2.3)%
June 30, 2011	7.4%	5.3%	18.9%	2.6%
June 30, 2012	6.9%	5.6%	1.6%	2.4%
June 30, 2013	7.7%	6.0%	11.9%	3.9%
June 30, 2014	10.9%	6.6%	18.0%	5.8%
June 30, 2015	9.5%	7.0%	3.1%	5.5%
June 30, 2016	6.5%	6.9%	(0.1)%	4.9%
June 30, 2017	7.6%	7.1%	12.6%	6.3%

¹ Cumulative since FYE June 30, 2008

Section 3: Accounting Information¹

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	\$ 80	\$ 2,532	3,165.0%	\$ (2,452)	\$ 206,771	(1.2)%
June 30, 2012	63	2,348	3,727.0%	(2,285)	200,043	(1.1)%
June 30, 2011	57	2,193	3,847.4%	(2,136)	170,606	(1.3)%
June 30, 2010	18	1,577	8,761.1%	(1,559)	118,813	(1.3)%
June 30, 2009	14	1,071	7,650.0%	(1,057)	89,708	(1.2)%
June 30, 2008	44	420	954.5%	(376)	56,369	(0.7)%
June 30, 2007	16	0	0.0%	16	28,410	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 ²	53,070	25,410	47.9%	27,660	289,714	9.5%
June 30, 2015	42,743	17,733	41.5%	25,010	255,186	9.8%
June 30, 2014	18,290	10,791	59.0%	7,499	229,971	3.3%
June 30, 2013	25,152	8,614	34.2%	16,538	206,771	8.0%
June 30, 2012	19,427	6,937	35.7%	12,490	200,043	6.2%
June 30, 2011	4,386	5,373	122.5%	(987)	170,606	(0.6)%
June 30, 2010	2,809	3,895	138.7%	(1,086)	118,813	(0.9)%
June 30, 2009	1,690	2,353	139.2%	(663)	89,708	(0.7)%
June 30, 2008	899	1,308	145.5%	(409)	56,369	(0.7)%
June 30, 2007	403	597	148.1%	(194)	28,410	(0.7)%

¹ Figures for fiscal years after 2016 are contained in separate GASB 74 reports.

² Based on the partially funded discount rate of 5.5%. 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	\$ 0	100%
June 30, 2012	0	100%
June 30, 2011	474	100%
June 30, 2010	442	100%
June 30, 2009	623	100%
June 30, 2008	408	100%
June 30, 2007	72	0%

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	\$6,837	92%
June 30, 2015	6,099	93%
June 30, 2014	1,334	89%
June 30, 2013	1,241	89%
June 30, 2012	1,420	82%
June 30, 2011	1,422	81%
June 30, 2010	1,628	87%
June 30, 2009	1,162	85%
June 30, 2008	763	85%
June 30, 2007	575	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	Retiree Medical	Total
N/A	FY07	N/A	1.75%	1.75%
N/A	FY08	0.56%	1.16%	1.72%
N/A	FY09	0.62%	1.16%	1.78%
June 30, 2007	FY10	0.32%	1.18%	1.50%
June 30, 2008	FY11	0.28%	0.84%	1.12%
June 30, 2009	FY12	0.00%	0.71%	0.71%
June 30, 2010	FY13	0.00%	0.60%	0.60%
June 30, 2011	FY14	0.00%	0.58%	0.58%
June 30, 2012	FY15	0.00%	2.39%	2.39%
June 30, 2013	FY16	0.00%	2.36%	2.36%

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 ¹	\$ 0	\$ 0	\$ 2,448	\$ 5,472	100.0%	100.0%	100.0%
June 30, 2009 ¹	0	0	1,460	3,424	100.0%	100.0%	100.0%
June 30, 2008 ¹	0	0	801	1,728	100.0%	100.0%	100.0%
June 30, 2007	0	0	374	597	100.0%	100.0%	100.0%
June 30, 2006	0	0	0	0	100.0%	100.0%	100.0%

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

¹ 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)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer-Financed Portion)				
June 30, 2016	0	0	19	3,323	100.0%	100.0%	100.0%
June 30, 2015	0	0	29	3,114	100.0%	100.0%	100.0%
June 30, 2014 ¹	0	0	23	2,820	100.0%	100.0%	100.0%
June 30, 2013	0	0	80	2,532	100.0%	100.0%	100.0%
June 30, 2012	0	0	63	2,348	100.0%	100.0%	100.0%
June 30, 2011	0	0	57	2,193	100.0%	100.0%	100.0%
June 30, 2010 ¹	0	0	18	1,577	100.0%	100.0%	100.0%
June 30, 2009 ¹	0	0	14	1,071	100.0%	100.0%	100.0%
June 30, 2008	0	0	44	420	100.0%	100.0%	100.0%
June 30, 2007	0	0	16	0	100.0%	100.0%	0.0%
June 30, 2006	0	0	0	0	N/A	N/A	N/A

¹ 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:				Portion of Actuarial Accrued Liability Covered by Assets		
	(1)	(2)	(3)	Retiree Medical Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Inactive Members	Active Members (Employer-Financed Portion)				
June 30, 2016	0	0	21,988	25,410	100.0%	100.0%	100.0%
June 30, 2015	0	0	19,768	17,733	100.0%	100.0%	89.7%
June 30, 2014 ¹	0	0	16,273	10,791	100.0%	100.0%	66.3%
June 30, 2013	0	0	22,058	8,614	100.0%	100.0%	39.1%
June 30, 2012 ¹	0	0	16,811	6,937	100.0%	100.0%	41.3%
June 30, 2011	0	0	3,801	5,373	100.0%	100.0%	100.0%
June 30, 2010 ¹	0	0	2,430	3,895	100.0%	100.0%	100.0%
June 30, 2009 ¹	0	0	1,446	2,353	100.0%	100.0%	100.0%
June 30, 2008 ¹	0	0	757	1,308	100.0%	100.0%	100.0%
June 30, 2007	0	0	358	597	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).

¹ Change in Assumptions

Section 4: Member Data

Section 4.1: Summary of Members Included

As of June 30	2013	2014	2015	2016	2017 ¹
Active Members					
1. Number	3,272	3,547	4,095	4,383	4,694
2. Average Age	38.10	38.52	39.15	39.57	40.21
3. Average Credited Service	3.52	3.90	4.19	4.50	4.88
4. Average Entry Age	34.58	34.62	34.96	35.07	35.33
5. Average Annual Earnings	\$ 60,496	\$ 61,940	\$ 63,635	\$ 65,219	\$ 66,542
Disabilitants and Beneficiaries (Occupational Death & Disability)					
1. Number	0	0	0	0	0
2. Average Age	N/A	N/A	N/A	N/A	N/A
3. Average Monthly Death & Disability Benefit	N/A	N/A	N/A	N/A	N/A
Retirees and Surviving Spouses (Retiree Medical)²					
1. Number	0	0	0	0	4
2. Average Age	N/A	N/A	N/A	N/A	69.72
Total Number of Members	3,272	3,547	4,095	4,383	4,698

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

¹ 142 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.

² Counts do not include dependent spouses (0 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	1	\$ 49,298	\$ 49,298	0	125	\$ 6,800,112	\$ 54,401
20 – 24	118	6,111,927	51,796	1	729	43,406,675	59,543
25 – 29	666	37,744,529	56,673	2	616	37,564,060	60,981
30 – 34	1,042	66,342,262	63,668	3	546	34,250,700	62,730
35 – 39	853	56,792,370	66,580	4	476	31,186,755	65,518
40 – 44	568	39,891,588	70,232	0 – 4	2,492	153,208,301	61,480
45 – 49	499	35,092,690	70,326	5 – 9	1,774	125,978,360	71,014
50 – 54	404	29,755,229	73,652	10 – 14	425	32,873,794	77,350
55 – 59	301	22,066,623	73,311	15 – 19	3	286,059	95,353
60 – 64	180	13,729,380	76,274	20 – 24	0	0	0
65 – 69	51	3,900,704	76,484	25 – 29	0	0	0
70 – 74	10	796,871	79,687	30 – 34	0	0	0
75+	1	73,043	73,043	35 – 39	0	0	0
				40+	0	0	0
Total	4,694	\$312,346,514	\$ 66,542	Total	4,694	\$ 312,346,514	\$ 66,542

Years of Credited Service by Age										
Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0 – 19	1	0	0	0	0	0	0	0	0	1
20 – 24	118	0	0	0	0	0	0	0	0	118
25 – 29	587	79	0	0	0	0	0	0	0	666
30 – 34	491	499	52	0	0	0	0	0	0	1,042
35 – 39	364	377	111	1	0	0	0	0	0	853
40 – 44	261	229	78	0	0	0	0	0	0	568
45 – 49	227	216	56	0	0	0	0	0	0	499
50 – 54	187	167	48	2	0	0	0	0	0	404
55 – 59	132	121	48	0	0	0	0	0	0	301
60 – 64	95	59	26	0	0	0	0	0	0	180
65 – 69	23	23	5	0	0	0	0	0	0	51
70 – 74	5	4	1	0	0	0	0	0	0	10
75+	1	0	0	0	0	0	0	0	0	1
Total	2,492	1,774	425	3	0	0	0	0	0	4,694

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	4,383	0	0	0	4,383
Vested Termination	(154)	0	0	0	(154)
Non-vested Termination	(283)	0	0	0	(283)
Refund of Contributions	(24)	0	0	0	(24)
Disabled	0	0	0	0	0
Retired	(3)	3	0	N/A	0
Deceased, No Beneficiary	(3)	0	0	0	(3)
Deceased, With Beneficiary	0	0	0	0	0
Return to Active	86	N/A	N/A	N/A	86
Data Adjustment	0	1	0	0	1
New Entrant	692	0	0	0	692
As of June 30, 2017	4,694	4	0	0	4,698

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	4,694	\$ 312,347	\$ 66,542	2.0%	57
June 30, 2016	4,383	285,854	65,219	2.5%	58
June 30, 2015	4,095	260,584	63,635	2.7%	58
June 30, 2014	3,547	219,701	61,940	2.4%	58
June 30, 2013	3,272	197,944	60,496	3.5%	58
June 30, 2012	3,057	178,761	58,476	4.7%	58
June 30, 2011	2,708	151,269	55,860	5.6%	58
June 30, 2010	2,246	118,813	52,900	5.7%	58
June 30, 2009	1,792	89,708	50,061	6.4%	58
June 30, 2008	1,198	56,369	47,053	6.2%	58

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	\$ 335,269
b) DRB actual reported salaries FY17 – valuation data	295,695
c) Include October data adjustment for rehires	304,900
d) Annualized valuation data	312,347
e) Valuation payroll as of June 30, 2017	332,604
f) Rate payroll for FY18	327,765

- 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 57 employers participating in TRS DCR, including the State of Alaska, 53 school districts, and three other eligible 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 elementary or secondary teachers, school nurses, or a person in a position requiring a teaching certificate as a condition of hire in a public school of the State of Alaska, the Department of Education and Early Development or in the Department of Labor and Workforce Development.
- Full-time or part-time teachers at the University of Alaska or persons occupying full-time administrative positions requiring academic standing who are not in the University's Optional Retirement Plan.

Members can convert to TRS DCR if they are an eligible non-vested member of the TRS defined benefit plan whose employer consents to transfers to the defined contribution plan and they elect to transfer his or her account balance to TRS 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) 30 years of service or b) Medicare eligible and 10 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's and any covered dependent premium is 100% until the member is Medicare eligible. Upon the member's Medicare-eligibility, the required contribution will follow the service based schedule shown below.
- Coverage cannot be denied except for failure to pay premium.

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 ¹	Out-of-Network ^{1 2}
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.

¹ Assumed to increase annually to mitigate impact of healthcare cost trend

² 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 cost¹.
- 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 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.
- Disability Benefit Adjustment: The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year or 9%, whichever is less.
- Member earns service while on occupational disability.
- 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.
- 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.

¹ 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)

Occupational Death Benefits

- Benefit is 40% of salary.
- 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 TRS benefits for at least 8 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 TRS 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 Teachers' 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 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 the valuation, Conduent HR Consulting determined the impact on plan liabilities to be immaterial (approximately \$50,000 (0.15%)) 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 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 TRS 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)¹

Based upon the 2010-2013 actual experience. (See Table 2).

68% of male rates and 60% of female rates of post-termination mortality.

Deaths are assumed to result from occupational causes 15% of the time.

Mortality (Post-termination)¹

Based upon the 2010-2013 actual experience. (See Table 3).

94% of male and 97% of female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3-year setback for males and a 4-year setback for females.

Disability Mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB.

Turnover

Select and ultimate rates based upon the 2010-2013 actual withdrawal experience. (See Table 4).

Disability

Incidence rates based upon the 2010-2013 actual experience, in accordance with Table 5. Disabilities are assumed to result from occupational causes 15% of the time.

¹ 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 110%.

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. 85% of male members and 75% of female members are assumed to be married at termination from active service.

Per Capita Claims Cost

Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY18 medical benefits 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 Cost 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% reduction for the medical plan and 29.3% reduction for the coordination method).
- 0.896 for the prescription drug plan.

Imputed Data

Data changes from the prior year which are deemed to have an 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.

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 on the June 30 client data but active in the October 1 client records are updated to active status.

Section 5: Basis of the Actuarial Valuation (continued)

Section 5.3 Summary of Actuarial Assumptions (continued)

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 cost to get the FY19 medical claims cost.

	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 valuations 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 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 Factors¹

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+	94.00%	65+	Years of Service
			<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.

¹ 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)

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 TRS DCR Plan Salary Scale

Years of service	Percent Increase
0	8.11%
1	7.51
2	6.91
3	6.41
4	6.11
5	6.11
6	5.90
7	5.69
8	5.55
9	5.40
10	5.26
11	5.11
12	4.96
13	4.84
14	4.72
15	4.60
16	4.49
17	4.37
18	4.27
19	4.17
20	4.07
21	3.97
22+	3.87

Table 2: Alaska TRS DCR Plan Mortality Table (Pre-termination)

Age	Male	Female	Age	Male	Female
20	0.0182%	0.0098%	55	0.1615%	0.0985%
21	0.0191	0.0101	56	0.1766	0.1054
22	0.0200	0.0104	57	0.1901	0.1132
23	0.0209	0.0105	58	0.2117	0.1221
24	0.0216	0.0105	59	0.2409	0.1344
25	0.0222	0.0106	60	0.2643	0.1501
26	0.0226	0.0107	61	0.2917	0.1659
27	0.0228	0.0109	62	0.3229	0.1837
28	0.0228	0.0111	63	0.3599	0.2080
29	0.0229	0.0114	64	0.4021	0.2367
30	0.0231	0.0118	65	0.4504	0.2723
31	0.0238	0.0123	66	0.5057	0.3118
32	0.0249	0.0130	67	0.5594	0.3582
33	0.0269	0.0137	68	0.6202	0.4036
34	0.0302	0.0146	69	0.7017	0.4546
35	0.0340	0.0169	70	0.7828	0.5130
36	0.0382	0.0193	71	0.8702	0.5696
37	0.0425	0.0217	72	0.9643	0.6297
38	0.0468	0.0240	73	1.0813	0.6959
39	0.0509	0.0262	74	1.1964	0.7841
40	0.0547	0.0283	75	1.3285	0.8701
41	0.0584	0.0305	76	1.4797	0.9678
42	0.0618	0.0330	77	1.6508	1.0757
43	0.0653	0.0357	78	1.8423	1.1923
44	0.0692	0.0389	79	2.0534	1.3163
45	0.0736	0.0427	80	2.2841	1.4502
46	0.0787	0.0470	81	2.5382	1.5972
47	0.0846	0.0517	82	2.8208	1.7607
48	0.0913	0.0567	83	3.1344	1.9438
49	0.0979	0.0620	84	3.5081	2.1486
50	0.1050	0.0674	85	3.9193	2.3782
51	0.1126	0.0731			
52	0.1208	0.0791			
53	0.1295	0.0855			
54	0.1483	0.0908			

Table 3: Alaska TRS DCR Plan Mortality Table (Post-termination)

Age	Male	Female	Age	Male	Female
50	0.1544%	0.1124%	85	5.7637%	3.9636%
51	0.1656	0.1219	86	6.4248	4.3940
52	0.1777	0.1318	87	7.2770	4.8789
53	0.1904	0.1424	88	8.2264	5.4261
54	0.2181	0.1513	89	9.2884	6.0450
55	0.2375	0.1641	90	10.4794	6.8659
56	0.2597	0.1756	91	11.8129	7.7983
57	0.2795	0.1887	92	13.2941	8.8452
58	0.3113	0.2035	93	14.9196	10.0021
59	0.3543	0.2240	94	16.5479	11.2560
60	0.3887	0.2501	95	18.2705	12.5866
61	0.4289	0.2765	96	20.0693	13.9699
62	0.4749	0.3062	97	21.9249	15.3813
63	0.5293	0.3466	98	23.3940	16.4973
64	0.5913	0.3946	99	25.2821	17.8741
65	0.6624	0.4538	100	26.7022	18.8730
66	0.7436	0.5196	101	28.5888	20.1393
67	0.8227	0.5970	102	29.9408	20.9540
68	0.9121	0.6727	103	31.8102	22.0440
69	1.0318	0.7576	104	33.1094	22.6232
70	1.1511	0.8550	105	34.9384	23.7489
71	1.2798	0.9494	106	36.0058	24.6863
72	1.4180	1.0494	107	36.8483	25.8063
73	1.5902	1.1599	108	37.4013	27.0683
74	1.7595	1.3068	109	37.6000	28.4323
75	1.9536	1.4502	110	37.6000	29.8577
76	2.1760	1.6130	111	37.6000	31.3043
77	2.4276	1.7929	112	37.6000	32.7318
78	2.7093	1.9871	113	37.6000	34.0998
79	3.0198	2.1938	114	37.6000	35.3678
80	3.3590	2.4170	115	37.6000	36.4959
81	3.7326	2.6620	116	37.6000	37.4435
82	4.1482	2.9345	117	37.6000	38.1702
83	4.6095	3.2397	118	37.6000	38.6359
84	5.1589	3.5811	119	100.0000	100.0000

Table 4: Alaska TRS DCR Plan Turnover Assumptions

Select Rates of Turnover During the First 5 Years of Employment

Years of Service	Male	Female
0	20.70%	21.80%
1	19.55	18.70
2	16.10	15.40
3	13.80	13.20
4	11.50	11.00
5	7.32	8.05

Ultimate Rates of Turnover After the First 5 Years of Employment

Age	Male	Female	Age	Male	Female
15	6.2959%	6.6811%	40	6.1753%	6.5647%
16	6.2959	6.6811	41	6.1604	6.5516
17	6.2959	6.6811	42	6.1455	6.5386
18	6.2959	6.6811	43	6.1081	6.5175
19	6.2959	6.6811	44	6.0706	6.4965
20	6.2959	6.6811	45	6.0332	6.4754
21	6.2959	6.6811	46	5.9957	6.4544
22	6.2959	6.6811	47	5.9583	6.4333
23	6.2903	6.6773	48	5.9053	6.3975
24	6.2847	6.6735	49	5.8522	6.3617
25	6.2791	6.6697	50	5.7992	6.3259
26	6.2735	6.6659	51	5.7461	6.2901
27	6.2679	6.6621	52	5.6931	6.2543
28	6.2623	6.6583	53	5.5800	6.1818
29	6.2567	6.6544	54	5.4670	6.1093
30	6.2512	6.6506	55	5.3539	6.0367
31	6.2456	6.6467	56	5.2409	5.9642
32	6.2400	6.6429	57	5.1278	5.8917
33	6.2360	6.6351	58	5.1711	6.0021
34	6.2320	6.6273	59	5.2144	6.1125
V					
35	6.2280	6.6194	60	5.2578	6.2230
36	6.2240	6.6116	61	5.3011	6.3334
37	6.2200	6.6038	62	5.3444	6.4438
38	6.2051	6.5908	63	5.7296	6.6292
39	6.1902	6.5777	64	6.1148	6.8146
			65+	6.5000	7.0000

Table 5: Alaska TRS DCR Plan Disability Table

Age	Unisex
< 19	0.0560%
20	0.0560
21	0.0563
22	0.0565
23	0.0574
24	0.0583
25	0.0593
26	0.0602
27	0.0611
28	0.0611
29	0.0612
30	0.0612
31	0.0613
32	0.0613
33	0.0622
34	0.0631
35	0.0641
36	0.0650
37	0.0659
38	0.0674
39	0.0689
40	0.0703
41	0.0718
42	0.0733
43	0.0770
44	0.0806
45	0.0843
46	0.0879
47	0.0916
48	0.0975
49	0.1034
50	0.1093
51	0.1152
52	0.1211
53	0.1356
54	0.1501

Table 6: Alaska TRS DCR Plan Retirement Table

Age	Unisex Rate
< 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.

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