



State of Alaska National Guard and Naval Militia Retirement System

Actuarial Valuation Report
As of June 30, 2016

July 2017

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July 10, 2017

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 National Guard and Naval Militia Retirement System (NGNMRS) as of June 30, 2016 performed by Conduent HR Services, LLC (Conduent), formerly known as Buck Consultants, LLC.

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

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Conduent is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the System as of June 30, 2016.

The contribution requirements reflect the cost of benefits accruing in FY15 and FY16 and an amortization as a level dollar amount of the initial unfunded actuarial accrued liability and subsequent gains/losses over a period of 20 years less average military service of active members. The contribution levels are recommended by the actuary and adopted by the Board each year. This objective is currently being met and is projected to continue to be met.

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

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the System. The actuary performs an analysis of System 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 in 2014. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Sections 5.2 and 5.3.

David Kershner is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries and a Fellow of the Conference of Consulting Actuaries. He meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice. I am available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,



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

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Executive Summary

Overview

The State of Alaska National Guard and Naval Militia Retirement System (NGNMRS) provides pension benefits to the National Guard, naval militia and other eligible members. The Commissioner of the Department of Administration is responsible for administering the System. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the System. This report presents the results of the actuarial valuation of the System as of the valuation date of June 30, 2016.

Purpose

An actuarial valuation is performed on the retirement plan bi-annually as of the end of the fiscal year, and roll-forward valuations are performed every other year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the Employer contribution necessary to meet the Board's funding policy for the System;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the System and assess the funded status as an appropriate measure for determining future actuarially determined contributions;
4. To compare actual and expected experience under the System; 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 NGNMRS based on the plan provisions, membership data, assets, and actuarial methods and assumptions as of the valuation date. 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.

Funded Status

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

Funded Status as of June 30		2014	2016
a.	Actuarial Accrued Liability	\$ 36,715,287	\$ 31,184,361
b.	Valuation Assets	<u>36,271,836</u>	<u>38,439,835</u>
c.	Unfunded Actuarial Accrued Liability, (a) – (b)	\$ 443,451	\$ (7,255,474)
d.	Funded Ratio based on Valuation Assets, (b) ÷ (a)	98.8%	123.3%
e.	Fair Value of Assets	\$ 37,467,105	\$ 35,826,154
f.	Funding Ratio based on Fair Value of Assets, (e) ÷ (a)	102.0%	114.9%

Recommended Contribution Amounts		FY17	FY19
a.	Normal Cost	\$ 603,495	\$ 610,686
b.	Past Service Cost	69,405	(1,135,568)
c.	Expense Load	<u>194,000</u>	<u>241,000</u>
d.	Total Annual Contribution, (a) + (b) + (c), not less than 0	\$ 866,900	\$ 0

The recommended contribution amount for FY18 based on a roll-forward valuation as of June 30, 2015 was \$907,231.

The funded ratio (based on Actuarial Value of Assets) increased from 98.8% at June 30, 2014, to 123.3% at June 30, 2016. This increase was primarily due to data remediation. The next page contains further details on the key changes since the last valuation.

1. Investment Experience

The approximate investment returns based on fair value of assets were 0.9% for FY15 and (0.2)% for FY16, compared to the expected investment return of 7.00%. This resulted in losses of approximately \$2.2 million for FY15 and \$2.6 million for FY16 from investment experience. Due to the asset valuation method that recognizes investment gains and losses over a 5-year period, the approximate rates of return based on actuarial value of assets were 7.0% for FY15 and 4.2% for FY16.

2. Demographic Experience

Section 4 provides statistics on active and inactive participants. The number of active participants decreased 2.1% from 4,139 at June 30, 2014 to 4,054 at June 30, 2016 due to members retiring and terminating and the recognition of cashed out participants. The average age of active participants decreased from 34.26 to 33.71 and average credited service decreased from 7.23 to 6.69 years.

The number of retirees and QDROs increased 5.8% from 639 to 676, and their average age decreased from 58.29 to 58.28. There was an 18.7% decrease in the number of vested terminated participants from 1,756 to 1,427, primarily due to the recognition of cashed out participants. Their average age increased from 56.58 to 58.37.

The recognition of previously valued participants who had cashed out was a significant portion of our data remediation process, as well as service adjustments which affected participant status. These changes resulted in decreased liabilities for terminated vested participants.

3. Changes in Methods Since the Prior Valuation

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

4. Changes in Assumptions Since the Prior Valuation

There have been no changes in the assumptions since the prior valuation (other than the expense load which is updated bi-annually).

5. Changes in Benefit Provisions Since the Prior Valuation


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

Section 1 Actuarial Funding Results

Section 1.1 Actuarial Liabilities and Normal Cost

As of June 30, 2016	Normal Cost	Actuarial Accrued Liability	Present Value of Projected Benefits
Active Members			
Retirement Benefits	\$ 584,945	\$ 10,117,806	\$ 13,722,842
Termination Benefits	0	0	0
Death Benefits	15,322	198,446	293,627
Disability Benefits	10,419	190,893	255,106
Subtotal	\$ 610,686	\$ 10,507,145	\$ 14,271,575
Inactive Members			
Vested Terminated		\$ 15,055,857	\$ 15,055,857
Retirees (including QDROs)		5,621,359	5,621,359
Subtotal		\$ 20,677,216	\$ 20,677,216
Total	\$ 610,686	\$ 31,184,361	\$ 34,948,791

Section 1.2 Actuarial Contributions as of June 30, 2016 (for FY19)

		
1. Actuarial Accrued Liability	\$	31,184,361
2. Valuation Assets		<u>38,439,835</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$	(7,255,474)
4. Past Service Cost Amortization Payment ¹	\$	(1,135,568)
5. Normal Cost		610,686
6. Expense Load		<u>241,000</u>
7. Total Contribution, (4) + (5) + (6), not less than 0	\$	0

¹ Calculated on a level dollar basis over an 8-year period as of June 30, 2016.

Section 1.3 Actuarial Gain/(Loss) for FY16

1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability, June 30, 2015	\$ 38,313,473
b. Normal Cost for FY16	603,495
c. Interest on (a) and (b) at 7.00%	2,724,188
d. Actual Benefit Payments for FY16	1,728,729
e. Interest on (d) at 7.00%, adjusted for timing	59,482
f. Change in Actuarial Assumptions	<u>0</u>
g. Expected Actuarial Accrued Liability as of June 30, 2016, (a) + (b) + (c) – (d) – (e) + (f)	\$ 39,852,945
2. Actual Actuarial Accrued Liability, June 30, 2016	<u>31,184,361</u>
3. Liability Gain/(Loss), (1)(g) – (2)	\$ 8,668,584
4. Expected Actuarial Asset Value	
a. Actuarial Asset Value, June 30, 2015	\$ 37,855,133
b. Interest on (a) at 7.00%	2,649,859
c. Employer Contributions for FY16	734,500
d. Interest on (e) at 7.00%, adjusted for timing	25,273
e. Benefit Payments for FY16	1,728,729
f. Interest on (e) at 7.00%, adjusted for timing	<u>59,482</u>
g. Expected Actuarial Asset Value as of June 30, 2016, (a) + (b) + (c) + (d) – (e) – (f)	\$ 39,476,554
5. Actuarial Asset Value, June 30, 2016	<u>38,439,835</u>
6. Actuarial Asset Gain/(Loss), (5) – (4)(g)	\$ (1,036,719)
7. Actuarial Gain/(Loss), (3) + (6)	\$ 7,631,865

Section 1.4 Development of Change in Unfunded Liability during FY16

1. 2015 Unfunded Liability	\$	458,340
a. Interest on Unfunded Liability	\$	32,084
b. Normal Cost		603,495
c. Employer Contributions		(734,500)
d. Interest on (b) and (c)		16,972
e. Change in Actuarial Assumptions		<u>0</u>
f. Expected Change in Unfunded Liability during FY16		(81,949)
2. Expected 2016 Unfunded Liability	\$	376,391
a. Liability (gain)/loss	\$	(8,668,584)
b. Asset (gain)/loss		<u>1,036,719</u>
c. Total (gain)/loss during FY16		(7,631,865)
3. Actual 2016 Unfunded Liability, (2) + (2)(c)	\$	(7,255,474)

Section 1.5 History of Unfunded Liability and Funded Ratio

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2000	\$ 17,967,471	\$ 13,734,397	76.4%	\$ 4,233,074
June 30, 2002	\$ 20,545,214	\$ 12,114,025	59.0%	\$ 8,431,189
June 30, 2004	\$ 19,749,305	\$ 13,391,055	67.8%	\$ 6,358,250
June 30, 2006	\$ 25,457,589	\$ 15,587,569	61.2%	\$ 9,870,020
June 30, 2007	\$ 26,289,978	\$ 16,882,529	64.2%	\$ 9,407,449
June 30, 2008	\$ 28,904,645	\$ 28,370,756	98.2%	\$ 533,889
June 30, 2009	\$ 30,208,411	\$ 30,123,348	99.7%	\$ 85,063
June 30, 2010	\$ 30,034,407	\$ 32,000,585	106.5%	\$ (1,966,178)
June 30, 2011	\$ 31,324,457	\$ 33,019,577	105.4%	\$ (1,695,120)
June 30, 2012	\$ 32,771,017	\$ 33,682,091	102.8%	\$ (911,074)
June 30, 2013	\$ 33,907,968	\$ 34,178,622	100.8%	\$ (270,654)
June 30, 2014	\$ 36,715,287	\$ 36,271,836	98.8%	\$ 443,451
June 30, 2015	\$ 38,313,473	\$ 37,855,133	98.8%	\$ 458,340
June 30, 2016	\$ 31,184,361	\$ 38,439,835	123.3%	\$ (7,255,474)

Section 2 Plan Assets

Section 2.1 Summary of Fair Value of Assets

Fair Value of Assets as of June 30	2015	2016
Assets		
1. Cash and Cash Equivalents	\$ 1,173,043	\$ 867,684
2. Receivables	23,949	431
3. Domestic Equity Pool	10,500,324	10,401,504
4. International Equity Pool	6,561,696	6,038,708
5. Tactical Fixed Income Pool	188,169	493,131
6. Domestic Fixed Income Pool	13,721,455	13,262,076
7. Frontier Market Pool	6,747	0
8. International Fixed Income Pool	1,700,799	1,687,770
9. Emerging Market Debt	251,084	243,939
10. Emerging Market Equity Pool	781,820	812,635
11. Taxable Municipal Bonds	350,286	404,941
12. High Yield Pool	<u>1,709,358</u>	<u>1,654,193</u>
13. Total Assets	\$ 36,968,730	\$ 35,867,012
Liabilities		
14. Accrued expenses	\$ 52,738	\$ 29,304
15. Due to State of Alaska General Fund	<u>36,152</u>	<u>11,554</u>
16. Total Liabilities	\$ 88,890	\$ 40,858
Fair Value of Assets, (13) – (16)	\$ 36,879,840	\$ 35,826,154

Section 2.2 Changes in Fair Value of Assets

Fair Value of Assets as of June 30	2015	2016
1. Fair Value of Assets at beginning of year	37,467,105	36,879,840
2. Additions		
a. Employer Contributions	\$ 627,300	\$ 734,500
b. Investment Income	682,793	248,844
c. Other	<u>145</u>	<u>581</u>
d. Total Additions	\$ 1,310,238	\$ 983,925
3. Disbursements		
a. Retirement Benefits	\$ 1,563,816	\$ 1,728,729
b. Administrative Expenses	240,750	241,750
c. Investment Expenses	<u>92,937</u>	<u>67,132</u>
d. Total Deductions	\$ 1,897,503	\$ 2,037,611
4. Fair Value of Assets at end of year	\$ 36,879,840	\$ 35,826,154
Approximate Fair Value Investment Return Rate Net of All Expenses	0.9%	(0.2)%

Section 2.3 Development of Actuarial Value of Assets

The actuarial value of assets was equal to the market value at June 30, 2006. Future investment gains and losses will be recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of market value as of the valuation date.

1. Deferral of Investment Gain/(Loss) for FY16	
a. Market Value, June 30, 2015	\$ 36,879,840
b. Contributions for FY16	734,500
c. Benefit Payments for FY16	1,728,729
d. Actual Investment Return (net of expenses)	(59,457)
e. Expected Return Rate (net of expenses)	7.00%
f. Expected Return - Weighted for Timing	2,547,379
g. Investment Gain/(Loss) for the Year, (d) – (f)	(2,606,836)
h. Deferred Investment Gain/(Loss)	(2,085,469)
2. Actuarial Value, June 30, 2016	
a. Market Value, June 30, 2016	\$ 35,826,154
b. Deferred Investment Gain/(Loss)	<u>(2,613,681)</u>
c. Preliminary Actuarial Value, June 30, 2016, (a) – (b)	\$ 38,439,835
d. Upper Limit: 120% of Market Value, June 30, 2016	\$ 42,991,385
e. Lower Limit: 80% of Market Value, June 30, 2016	\$ 28,660,923
f. Actuarial Value, June 30, 2016, [(c) limited by (d) and (e)]	\$ 38,439,835
g. Ratio of Actuarial Value of Assets to Market Value of Assets	107.3%
h. Approximate Actuarial Value Investment Return Rate During FY16 Net of All Expenses	4.2%

The table below shows the development of asset gain/(loss).

Plan Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2012	\$ (2,124,811)	\$ (1,699,848)	\$ (424,963)	\$ 0
6/30/2013	178,673	107,205	35,734	35,734
6/30/2014	1,951,966	780,786	390,393	780,787
6/30/2015	(2,241,223)	(448,245)	(448,245)	(1,344,733)
6/30/2016	(2,606,836)	0	(521,367)	(2,085,469)
Total	\$ (4,842,231)	\$ (1,260,102)	\$ (968,448)	\$ (2,613,681)

Section 2.4 Historical Asset Rates of Return

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative*	Annual	Cumulative*
June 30, 2005	N/A	N/A	6.4%	6.4%
June 30, 2006	N/A	N/A	5.2%	5.8%
June 30, 2007	8.4%	8.4%	13.1%	8.2%
June 30, 2008	6.4%	7.4%	(2.3)%	5.5%
June 30, 2009	2.8%	5.8%	(9.8)%	2.2%
June 30, 2010	3.0%	5.1%	11.8%	3.8%
June 30, 2011	4.6%	5.0%	13.4%	5.1%
June 30, 2012	3.4%	4.7%	0.5%	4.5%
June 30, 2013	4.6%	4.7%	7.6%	4.8%
June 30, 2014	8.8%	5.2%	13.4%	5.7%
June 30, 2015	7.0%	5.4%	0.9%	5.2%
June 30, 2016	4.2 %	5.3%	(0.2)%	4.8%

*Cumulative since FYE June 30, 2005.

Section 3 Accounting Information*

Section 3.1 Historical Exhibits

Schedule of Employer Contributions

The exhibit below shows the pension disclosure under GASB No. 25 for fiscal years ending in 1998 through 2013.

Fiscal Year Ended June 30	Annual Required Contribution	Actual Annual Contribution	Supplemental Contributions	Total Contributions	Percentage Contributed
1996	\$ 1,359,862	\$ 1,104,400	\$ 8,000,000 ¹	\$ 9,104,400	669.5%
1997	1,626,000	1,434,900	0	1,434,900	88.2%
1998	1,626,000	1,434,900	0	1,434,900	88.2%
1999	1,104,519	1,104,519	0	1,104,519	100.0%
2000	1,104,519	1,104,500	0	1,104,500	100.0%
2001	879,784	879,800	0	879,800	100.0%
2002	879,784	879,800	0	879,800	100.0%
2003	1,322,502	1,322,500	0	1,322,500	100.0%
2004	1,322,502	1,322,500	0	1,322,500	100.0%
2005	2,025,257	1,996,800	0	1,996,800	98.6%
2006	2,025,257	2,053,800	0	2,053,800	101.4%
2007	1,737,406	1,737,406	0	1,737,406	100.0%
2008	1,737,406	1,737,406	10,000,000 ²	11,737,406	675.6%
2009	2,473,282	2,473,300	0	2,473,300	100.0%
2010	2,415,077	2,603,300	0	2,603,300	107.8%
2011	965,329	965,375	0	965,375	100.0%
2012	895,565	895,611	0	965,611	100.0%
2013	431,367	739,100	0	739,100	171.3%

*Pension accounting figures for fiscal years after 2013 are contained in separate GASB 67 reports.

¹ During the year ended June 30, 1996, the System received an \$8,000,000 supplemental appropriation from the State of Alaska General Fund to increase System funding. This appropriation was in addition to the amount designated for the 1996 actuarial required contribution. The original contribution requirements for the years ended June 30, 1998 and 1997 were calculated to be \$2,584,919. These contribution requirements were revised to \$1,626,000 as a result of the supplemental contribution in fiscal year 1996.

² During the year ended June 30, 2008, the System received a \$10,000,000 supplemental appropriation from the State of Alaska General Fund to increase System funding.

Schedule of Funding Progress

Note: Prior to adoption of GASB Statements No. 25 and 26 in 1997, information which does not meet the parameters of GASB 25 was used to determine funding requirements. Therefore, the history prior to 1997 has not been shown.

Actuarial Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Annual Active Member Payroll	UAAL as a Percentage of Annual Active Member Payroll
June 30, 1998	\$ 14,252,184	\$ 12,671,276	88.9%	\$ 1,580,908	N/A	N/A
June 30, 2000	17,967,471	13,734,397	76.4%	4,233,074	N/A	N/A
June 30, 2002	20,545,214	12,114,025	59.0%	8,431,189	N/A	N/A
June 30, 2004	19,749,305	13,391,055	67.8%	6,358,250	N/A	N/A

The exhibit below shows the pension disclosure under GASB No. 25 through June 30, 2013.

Actuarial Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Annual Active Member Payroll	UAAL as a Percentage of Annual Active Member Payroll
June 30, 2006	25,457,589	15,587,569	61.2%	9,870,020	N/A	N/A
June 30, 2008	28,904,645	28,370,756	98.2%	533,889	N/A	N/A
June 30, 2010	30,034,407	32,000,585	106.5%	(1,966,178)	N/A	N/A
June 30, 2012	32,771,017	33,682,091	102.8%	(911,074)	N/A	N/A

Section 3.2 Notes to Trend Data

Valuation Date	June 30, 2016
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level dollar, open
Equivalent Single Amortization Period	20 years less average military service of active members
Asset Valuation Method	5-year smoothed market
Actuarial Assumptions:	
Investment rate of return	7.00% per annum, net of investment expenses
Projected salary increases	None
Cost-of-living adjustment	None

Section 4 Member Data

Section 4.1 Summary of Members Included

Census Information as of June 30	2014	2016
Active Air Guard Members		
1. Number	2,164	2,174
2. Number Vested	591	417
3. Average Age	36.52	35.16
4. Average Alaska Guard Service	8.95	7.55
5. Average Total Military Service	14.44	13.08
Active Army Guard Members		
1. Number	1,911	1,820
2. Number Vested	242	199
3. Average Age	31.72	32.00
4. Average Alaska Guard Service	5.37	5.72
5. Average Total Military Service	9.83	10.41
Active Naval Militia Members		
1. Number	64	60
2. Number Vested	7	6
3. Average Age	33.75	33.26
4. Average Alaska Guard Service	4.67	4.93
5. Average Total Military Service	10.48	10.72
Total Active Members		
1. Number	4,139	4,054
2. Number Vested	840	622
3. Average Age	34.26	33.71
4. Average Alaska Guard Service	7.23	6.69
5. Average Total Military Service	12.25	11.85
Vested Terminated Members		
1. Number	1,756	1,427
2. Average Age	56.58	58.37
3. Average Alaska Guard Service	15.58	14.41
4. Average Total Military Service	25.27	24.69
Retirees (including QDROs)		
1. Number	639	676
2. Average Age	58.29	58.28
3. Average Years Remaining	11.71	12.00

Section 4.2(a) Age and Service Distributions of Active Members – All Actives

Total Alaska Guard Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	143	0	0	0	0	0	0	0	0	143
20-24	612	88	0	0	0	0	0	0	0	700
25-29	470	302	32	0	0	0	0	0	0	804
30-34	367	231	130	19	0	0	0	0	0	747
35-39	223	206	141	52	6	0	0	0	0	628
40-44	104	117	117	67	40	3	0	0	0	448
45-49	51	58	89	59	43	20	2	0	0	322
50-54	31	30	30	32	31	25	6	0	0	185
55-59	7	5	11	14	13	13	4	3	0	70
60-64	1	3	2	0	0	1	0	0	0	7
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	2,009	1,040	552	243	133	62	12	3	0	4,054

Section 4.2(b) Age and Service Distributions of Active Members – Air Actives

Total Alaska Guard Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	39	0	0	0	0	0	0	0	0	39
20-24	238	40	0	0	0	0	0	0	0	278
25-29	218	154	12	0	0	0	0	0	0	384
30-34	192	159	86	11	0	0	0	0	0	448
35-39	123	140	86	31	3	0	0	0	0	383
40-44	54	76	73	49	35	2	0	0	0	289
45-49	24	30	51	34	36	14	2	0	0	191
50-54	17	15	18	20	25	20	4	0	0	119
55-59	3	2	4	6	10	10	3	2	0	40
60-64	1	1	1	0	0	0	0	0	0	3
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	909	617	331	151	109	46	9	2	0	2,174

Section 4.2(c) Age and Service Distributions of Active Members – Army Actives

Total Alaska Guard Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	102	0	0	0	0	0	0	0	0	102
20-24	360	48	0	0	0	0	0	0	0	408
25-29	247	141	20	0	0	0	0	0	0	408
30-34	171	69	44	8	0	0	0	0	0	292
35-39	91	65	54	21	3	0	0	0	0	234
40-44	49	40	41	17	5	1	0	0	0	153
45-49	26	28	37	24	6	6	0	0	0	127
50-54	14	14	12	11	6	5	2	0	0	64
55-59	3	3	7	7	3	3	1	1	0	28
60-64	0	2	1	0	0	1	0	0	0	4
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	1,063	410	216	88	23	16	3	1	0	1,820

Section 4.2(d) Age and Service Distributions of Active Members – Navy Actives

Total Alaska Guard Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	2	0	0	0	0	0	0	0	0	2
0-24	14	0	0	0	0	0	0	0	0	14
25-29	5	7	0	0	0	0	0	0	0	12
30-34	4	3	0	0	0	0	0	0	0	7
35-39	9	1	1	0	0	0	0	0	0	11
40-44	1	1	3	1	0	0	0	0	0	6
45-49	1	0	1	1	1	0	0	0	0	4
50-54	0	1	0	1	0	0	0	0	0	2
55-59	1	0	0	1	0	0	0	0	0	2
60-64	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	37	13	5	4	1	0	0	0	0	60

Section 4.3 Member Data Reconciliation

	Active Members	Vested Members	Benefit Recipients	Total
Total at June 30, 2014	4,139	1,756	639	6,534
New Entrants	1,181	0	0	1,181
Rehires	3	(3)	0	0
Non-vested Terminations	(814)	(195)	0	(1,009)
Vested Terminations	(256)	256	0	0
Retirements	(72)	(24)	96	0
New Survivors	0	0	0	0
New QDROs	0	0	3	3
Deaths	(2)	(5)	(9)	(16)
Data Change/Expiration of Benefits	(125) ¹	(358) ²	(53) ³	(536)
Total at June 30, 2016	4,054	1,427	676	6,157

¹ Includes 123 participants who cashed out and 2 data correction removals.

² Includes 376 participants who cashed out and 18 data correction additions.

³ Includes 63 participants with an expiration of benefits and 10 data correction additions.

Section 5 Basis of the Actuarial Valuation

Section 5.1 Summary of Plan Provisions

1. Effective Date

January 1, 1973

2. Members Included

Members of the Alaska National Guard who were active on or after January 1, 1973, and members of the Alaska Naval Militia who were active on or after July 1, 1980.

3. Eligibility Service

Eligibility service is defined as the combined Alaska guard service, guard service in any other state, active military service and the reserves of them. A member must have 20 years of eligibility service to be vested in the National Guard and Naval Militia Retirement System.

4. Benefit Service

Benefit service is defined as satisfactory service in any branch of the Alaska guard. A member must have 5 years of benefit service to be vested in the National Guard and Naval Militia Retirement System. Benefit service is also used to determine the length of the member's pension retirement benefit.

5. Retirement

a. Eligibility:

Members are eligible for voluntary retirement after completing 20 years of satisfactory service in the Alaska National Guard, Alaska Naval Militia or U.S. Armed Forces, and the reserve of them or any combination of that service if they have at least five years of Alaska National Guard or Naval Militia service. Credit is also allowed for Territorial Guard service rendered to the former territory of Alaska.

Members are eligible for involuntary retirement at any time assuming there has been no misconduct.

b. Benefit:

Eligible members may elect to receive:

- (i) monthly benefits of \$100 which are payable for a period equal to the number of months that they were active members;
- (ii) a lump sum benefit equal to the actuarial equivalent of (i); or
- (iii) monthly payments until age 72 equal to the actuarial equivalent of (i).

6. Vesting

Members are 100% vested after 20 years of total service in the Alaska National Guard, Alaska Naval Militia, U.S. Armed Forces or Reserves, or any combination of that service if members have at least five years of Alaska National Guard or Naval Militia service.

7. Survivor's Benefits

a. Active Members: If the member has at least five years of active service in the Alaska National Guard or Naval Militia, the designated beneficiary will receive a lump sum benefit equal to the benefit in 5(b) above.

b. Retired or Terminated Vested Members:

The designated beneficiary will receive a lump benefit equal to the remaining benefits payable in 5(b) above.

8. Disability Benefits

Members are eligible to receive monthly disability benefits of \$100 (which are payable for a period equal to the number of months that they were active members) at any age if they become incapacitated and are vested in the plan.

9. Changes Since the Prior Valuation

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

Section 5.2 Descriptions of Actuarial Methods and Valuation Procedures

Actuarial Method – Entry Age Normal

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method. Any funding surplus or unfunded accrued liability is amortized over 20 years less the average total military service of active 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 system assets measured on the valuation date.

Under this method, differences between the actual experience and that assumed in the determination of costs and liabilities will emerge as adjustments in the Unfunded Actuarial Accrued Liability, subject to amortization.

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 will be phased in over five years. Assets are initialized at market value as of June 30, 2006. All assets are valued at market 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 market value of assets.

Data Remediation

Raw census data as provided by the Division contained a number of data inconsistencies when reconciled to census data received for prior valuations. As a result, Conduent has made a series of data assumptions addressing such inconsistencies.

In addition, our data remediation process recognized a number of previously valued participants who had cashed out, resulting in decreased liabilities for terminated vested participants. There were also a number of duplicate records and service adjustments affecting participants' statuses and benefit amounts. We summarized these assumptions and delivered them in an excel file on March 24, 2017.

Section 5.3 Summary of Actuarial Assumptions

Investment Return	7.00% per year (geometric), compound annually, net of investment expenses.			
Pre-termination Mortality*	60% of the male and 65% of the female rates of the post-termination healthy mortality.			
Post-termination Mortality*	96% of all rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB.			
Disability Mortality*	RP-2000 Disabled Retiree Mortality Table projected to 2018 with Projection Scale BB.			
Inflation Rate	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.			
Administrative Expenses	The expense load is equal to the average of the prior 2 years actual administrative expenses rounded to the nearest \$1,000 as follows:			
	Fiscal Year Ending June 30		Amount	
	2015		\$	240,750
	2016			<u>241,750</u>
	Total		\$	482,500
			÷	<u>2</u>
	Expense Load (Rounded)		\$	241,000
Turnover	Sample rates are:			
	Select Rates of Turnover During the First 5 Years of Employment		Ultimate Rates of Turnover After the First 5 Years of Employment	
	Year of Employment	Unisex Rate	Age	Unisex Rate
	1	20.00%	30	7.40%
	2	10.00%	40	6.06%
	3	10.00%	50	3.26%
	4	10.00%		
	5	10.00%		
Disability	Incidence rates based upon the 2009-2013 actual experience of the State of Alaska Public Employees' Retirement System. Sample rates are shown below.			
	Age	Unisex Rate		
	20	0.0224%		
	25	0.0468%		
	30	0.0712%		
	35	0.0849%		
	40	0.1027%		
	45	0.1446%		
	50	0.2142%		
	55	0.3692%		
	60	0.6388%		

*The mortality assumption includes an allowance for future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 115%.

Retirement

Active members are assumed to retire beginning at the earliest eligible retirement age according to the following rates:

Age	Rate	Age	Rate
<51	10%	58	35%
51	10	59	40
52	10	60	45
53	12	61	50
54	15	62	50
55	20	63	50
56	25	64	50
57	30	65+	100

Vested Terminated members are assumed to retire at current age or age 50, whichever is later.

Form of Payment

100% of members are assumed to elect benefits paid in the form of a lump sum. Lump sums are calculated based on a 7% discount rate using post-termination healthy mortality.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension 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 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 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	Disclosure measure of annual pension cost.
GASB 25 and 27	Governmental Accounting Standards Board Statement Number 25 which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 27 which specifies Employer reporting of Pension 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.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual member or the plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment status.