



State of Alaska  
National Guard and Naval Militia  
Retirement System

Actuarial Valuation Report as of June 30, 2006



Submitted By:  
Buck Consultants  
1200 Seventeenth Street, Suite 1200  
Denver, CO 80202

October 11, 2007

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

Dear Members of the Board:

### **Actuarial Certification**

The bi-annual actuarial valuation required for the State of Alaska National Guard and Naval Militia Retirement System has been prepared as of June 30, 2006 by Buck Consultants. The purposes of the report include:

- (1) a presentation of the valuation results of the Plan as of June 30, 2006;
- (2) a determination of the appropriate contribution rate for the System which will be applied for the fiscal years ending June 30, 2009 and June 30, 2010; and
- (3) the provision of reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The following schedules that we have prepared are included in this report:

- (1) Summary of actuarial assumptions and methods (Section 3.4)
- (2) Schedule of employer contributions (Section 2.1)
- (3) Schedule of funding progress (Section 2.2)

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us by the Division of Retirement and Benefits and financial information provided in the financial statements audited by KPMG LLP, to determine a sound value for the System liability. The employee data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior valuation's data.

The contribution requirements reflect the cost of benefits accruing in FY07 and FY08 and an amortization as a level dollar amount of the initial unfunded accrued liability and subsequent gains/losses over a period of 20 years less average military service of active members. The amortization period is set by the Board. Contribution levels are recommended by the Actuary and adopted by the Board each year.

A summary of the actuarial assumptions and methods is presented in Section 3.4 of this report. The assumptions, when applied in combination, fairly represent past and anticipated future experience of the System.

Future contribution requirements may differ from those determined in the valuation because of:

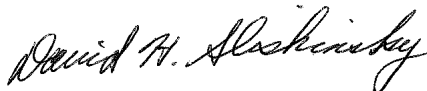
- (1) differences between actual experience and anticipated experience based on the assumptions;
- (2) changes in actuarial assumptions or methods;
- (3) changes in statutory provisions; or
- (4) differences between the contribution amounts determined by the valuation and those adopted by the Board.

The undersigned are members of the American Academy of Actuaries and the Society of Actuaries, are fully qualified to provide actuarial services to the State of Alaska, and are available to answer questions regarding this report.

We believe that the assumptions and methods used for funding purposes and for the disclosures presented in this report satisfy the parameter requirements set forth in the Government Accounting Standards Board (GASB) Statement No. 25.

We believe that this report conforms with the requirements of the Alaska statutes, and where applicable, other federal and accounting laws, regulations and rules, as well as generally accepted actuarial principles and practices.

Sincerely,



David H. Sliskinsky, ASA, EA, MAAA  
Principal, Consulting Actuary



Michelle Reding DeLange, FSA, EA, MAAA  
Director, Consulting Actuary

---

## Contents

<b>Report Highlights .....</b>	<b>1</b>
<b>Analysis of the Valuation.....</b>	<b>2</b>
<i>Section 1: Valuation Results.....</i>	<i>3</i>
1.1(a) Statement of Net Assets .....	4
1.1(b) Statement of Changes in Net Assets .....	5
1.2 Actuarial Present Values.....	6
1.3 Calculation of Total Contribution Amount - FY09 - FY10.....	7
<i>Section 2: Information Required by GASB No. 25.....</i>	<i>8</i>
2.1 Schedule of Employer Contributions.....	9
2.2 Schedule of Funding Progress .....	10
<i>Section 3: Basis of Valuation.....</i>	<i>11</i>
3.1 Summary of System Provisions .....	12
3.2 Participant Census Information.....	14
3.3(a) Distributions of Active Participants - All Actives .....	15
3.3(b) Distributions of Active Participants - Air Actives .....	16
3.3(c) Distributions of Active Participants - Army Actives .....	17
3.3(d) Distributions of Active Participants - Navy Actives.....	18
3.4 Actuarial Methods and Assumptions .....	19

---

## Report Highlights

This report has been prepared by Buck Consultants for the State of Alaska National Guard and Naval Militia Retirement System to:

1. present the results of a valuation of the State of Alaska National Guard and Naval Militia Retirement System as of June 30, 2006;
2. determine the contribution rate for the Retirement System for Fiscal Year 2009 and Fiscal Year 2010;
3. provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into three sections. Section 1 contains the results of the valuation. It includes a development of assets during the 2005 and 2006 fiscal years, the current annual costs and reporting and disclosure information.

Section 2 contains disclosure information required by GASB No. 25. It contains schedules of employer contributions and funding progress.

Section 3 describes the basis of the valuation. It summarizes the System provisions, provides information relating to the System's participants, and describes the funding methods and actuarial assumptions used in determining liabilities and costs.

The principal results are as follows:

<b>Funding Status as of June 30</b>	<b>2004</b>		<b>2006</b>	
1. Valuation Assets	\$	13,391,055	\$	15,587,569
2. Accrued Liability		19,749,305		25,457,589
3. Funding Ratio, (1) ÷ (2)		67.8%		61.2%

<b>Recommended Contribution Amounts</b>	<b>FY07/FY08</b>		<b>FY09/FY10</b>	
1. Normal Cost	\$	705,583	\$	750,758
2. Past Service Cost		1,031,823		1,722,524
3. Total Annual Contribution, (1) + (2)	\$	1,737,406	\$	2,473,282

---

## Analysis of the Valuation

The funding ratio decreased from 67.8% at June 30, 2004, to 61.2% at June 30, 2006. This decrease was due to a combination of the effects of the changes in assumptions and methods used in the valuation, as well as a demographic loss based on the experience of the system since the last valuation. The result was a total actuarial loss to the System of approximately \$1.9 million for the two-year period.

The average annual rate of return on assets during the period was 5.81%, compared to the assumed rate of 8.25%, resulting in an actuarial loss from investment return of approximately \$0.7 million for the two-year period.

The changes in actuarial assumptions and methods since the prior valuation were as follows:

- The actuarial cost method was changed from the Projected Unit Credit Method to the Entry Age Normal Method.
- The valuation interest rate was changed from 8.25% to 7.25% per annum.
- Retirement rates were extended from an expected retirement age of 60 regardless of service to age 60 and 20 years of service.
- The asset valuation method was changed from using the market value of assets without smoothing of gains and losses to a five-year smoothing asset valuation method. This new method will be phased in over the next five years with the first phase-in recognized during FY07.

## **Section 1**

This section sets forth the results of the actuarial valuation.

Section 1.1 Shows the transactions of the System's fund during FY05 and FY06.

Section 1.2 Shows the actuarial present value of benefits and the normal cost as of June 30, 2006.

Section 1.3 Shows the development of the total contribution.

**1.1(a) Statement of Net Assets**

<b>Net Assets as of June 30</b>	<b>2005</b>	<b>2006</b>
<b>Assets:</b>		
1. Cash and Cash Equivalents	\$ 24,556	\$ 24,997
2. Domestic Equity Pool	4,511,413	4,971,107
3. Retirement Fixed Income Pool	0	0
4. International Equity Pool	1,803,186	2,034,314
5. External Domestic Fixed Income Pool	8,261,554	8,642,845
<b>6. Total Assets (1) + (2) + (3) + (4) + (5)</b>	<b>14,600,709</b>	<b>15,673,263</b>
<b>Liabilities:</b>		
7. Accrued expenses	62,115	77,749
8. Due to State of Alaska General Fund	32,342	7,945
<b>9. Total Liabilities (7) + (8)</b>	<b>94,457</b>	<b>85,694</b>
<b>Total Net Assets (6) – (9)</b>	<b>\$ 14,506,252</b>	<b>\$ 15,587,569</b>



## 1.1(b) Statement of Changes in Net Assets

Change in Net Assets as of June 30	2005	2006
<b>Receipts:</b>		
1. Employer Contributions	\$ 1,996,800	\$ 2,053,800
2. Investment Income	1,047,150	963,337
3. <b>Total Receipts (1) + (2)</b>	<b>3,043,950</b>	<b>3,017,137</b>
<b>Disbursements:</b>		
4. Retirement Benefits	\$ 1,745,064	\$ 1,740,146
5. Administrative Expenses	85,633	110,428
6. Investment Expenses	98,056	85,246
7. <b>Total Disbursements (4) + (5) + (6)</b>	<b>1,928,753</b>	<b>1,935,820</b>
8. <b>Net Income (3) - (7)</b>	<b>\$ 1,115,197</b>	<b>\$ 1,081,317</b>
9. Net Assets Available for Benefits at beginning of year	13,391,055	14,506,252
10. <b>Net Assets Available for Benefits at end of year (8) + (9)</b>	<b>\$ 14,506,252</b>	<b>\$ 15,587,569</b>
Estimated Investment Return, Net of All Expenses	6.4%	5.2%

## 1.2 Actuarial Present Values

As of June 30, 2006	Normal Cost	Accrued Liability
<b>Active Members</b>		
1. Retirement Benefits	\$ 605,500	\$ 10,145,154
2. Termination Benefits <sup>1</sup>	106,135	1,465,836
3. Death Benefits	27,210	238,013
4. Disability Benefits	11,913	194,605
<b>5. Total Active Actuarial Present Value</b> <i>(1) + (2) + (3) + (4)</i>	<b>\$ 750,758</b>	<b>\$ 12,043,608</b>
<b>Inactive Members</b>		
6. Vested Terminated		\$ 9,348,912
7. Retirees (including QDROs)		4,065,069
<b>8. Total Inactive Actuarial Present Value</b> <i>(6) + (7)</i>		<b>\$ 13,413,981</b>
<b>Total Actuarial Present Value</b> <i>(5) + (8)</i>		<b>\$ 25,457,589</b>

<sup>1</sup> Members who terminate before assumed retirement age, but after completing 20 years of service.

**1.3 Calculation of Total Contribution Amount – FY09 and FY10**

1. Accrued Liability	\$ 25,457,589
2. Assets	15,587,569
3. Total Unfunded Accrued Liability, (1) – (2)	\$ 9,870,020
4. Amortization Factor (7.0 years) (assuming payments at beginning of the year)	5.729974
5. Past Service Payment, (3) ÷ (4)	\$ 1,722,524
6. Normal Cost	750,758
7. <b>Total Contribution</b> , (5) + (6)	\$ <b>2,473,282</b>

## **Section 2**

This section contains supplementary information on retirement benefits that is required to be disclosed in financial statements to comply with Statement No. 25 of the Governmental Accounting Standards Board (GASB No. 25)

Section 2.1      Presents the Schedule of Employer Contributions.

Section 2.2      Presents the Schedule of Funding Progress.

## 2.1 Schedule of Employer Contributions

Fiscal Year Ended June 30	Annual Required Contribution	Actual Annual Contribution	Percentage Contributed	Supplemental Contributions <sup>2</sup>
1996	\$ 1,359,862	\$ 1,104,400	81.2%	\$ 8,000,000
1997	1,626,000	1,434,900	88.2%	0
1998	1,626,000	1,434,900	88.2%	0
1999	1,104,519	1,104,519	100.0%	0
2000	1,104,519	1,104,500	100.0%	0
2001	879,784	879,800	100.0%	0
2002	879,784	879,800	100.0%	0
2003	1,322,502	1,322,500	100.0%	0
2004	1,322,502	1,322,500	100.0%	0
2005	2,025,257	1,996,800	98.6%	0
2006	2,025,257	2,053,800	101.4%	0

<sup>2</sup> During the year ended June 30, 1996, the Plan received an \$8,000,000 supplemental appropriation from the State of Alaska General Fund to increase Plan 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.

## 2.2 Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liabilities (AAL) <sup>3</sup> (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a ÷ b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) ÷ c)
June 30, 1996	\$ 9,948,108	\$ 12,511,803	\$ 2,563,695	79.5%	N/A	N/A
June 30, 1998	12,671,276	14,252,184	1,580,908	88.9%	N/A	N/A
June 30, 2000	13,734,397	17,967,471	4,233,074	76.4%	N/A	N/A
June 30, 2002	12,114,025	20,545,214	8,431,189	59.0%	N/A	N/A
June 30, 2004	13,391,055	19,749,305	6,358,250	67.8%	N/A	N/A
June 30, 2006	15,587,569	25,457,589	9,870,020	61.2%	N/A	N/A

## 2.3 Actuarial Assumptions, Methods and Additional Information

Valuation Date	June 30, 2006
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level dollar, closed
Amortization Period	20 years less average military service of active members
Asset Valuation Method	5-year smoothed market
Actuarial Assumptions	
Investment rate of return*	7.25% per annum
Projected salary increases	None
Cost-of-living adjustment	None

\* Includes inflation at 3.50% per annum.

<sup>3</sup> Prior to the June 30, 2006 valuation, Projected Unit Credit was the actuarial cost method used to determine actuarial accrued liability. Effective for the June 30, 2006 valuation, the Entry Age Normal Level Dollar Cost Method is used.

### **Section 3**

In this section, the basis of the valuation is presented and described. This information -- the provisions of the System and the census of members -- is the foundation of the valuation, since these are the present facts upon which benefit payments will depend.

Employee data was provided by the System. This information would customarily not be verified by a plan's actuary. We have reviewed the data for internal consistencies and made best estimates of the missing or inconsistent data.

A summary of the System's provisions is provided in Section 3.1 and member census information is shown in Sections 3.2 and 3.3.

The valuation is based upon the premise that the System will continue in existence, so that future events must also be considered. These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund, the number of members who will retire, die, terminate their services, their ages at such termination and their expected benefits.

The actuarial assumptions and methods, which have been adopted to guide the sponsor in funding the System in a reasonable and acceptable manner, are described in Section 3.4.

### **3.1 Summary of System 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. 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).

#### **4. 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.



### **3.1 Summary of System Provisions (continued)**

#### **5. Death 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 3(b) above.

(b) Retired or Terminated Vested Members:

The designated beneficiary will receive a lump benefit equal to the remaining benefits payable in 3(b) above.

### 3.2 Participant Census Information

Census Information as of June 30	2004	2006
<b>Active Air Guard Members</b>		
Number	1,910	1,909
Average Age	36.15	36.10
Average Alaska Guard Service	7.74	8.01
Average Total Military Service	14.37	14.46
<b>Active Army Guard Members</b>		
Number	1,875	1,871
Average Age	33.89	33.17
Average Alaska Guard Service	5.44	5.96
Average Total Military Service	9.32	11.31
<b>Active Naval Militia Members</b>		
Number	81	66
Average Age	41.51	40.16
Average Alaska Militia Service	8.14	6.70
Average Total Military Service	12.14	12.39
<b>Vested Terminated Members</b>		
Number	704	936
Average Age	51.79	52.51
Average Alaska Guard Service	14.92	14.99
Average Total Military Service	24.85	24.66
<b>Retirees (including QDROs)</b>		
Number	475	506
Average Age	60.75	59.50
Average Years Remaining	10.47	11.27

## 3.3 (a) Distributions of Active Participants – All Actives

State of Alaska National Guard – All Actives										Valuation Date 6/30/2006
Total Military Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	188	0	0	0	0	0	0	0	0	188
20-24	413	201	1	0	1	0	0	0	0	616
25-29	114	374	86	0	0	0	0	0	0	574
30-34	48	131	283	100	0	0	1	0	0	563
35-39	34	55	136	361	108	0	0	0	0	694
40-44	4	32	50	190	268	64	0	0	0	608
45-49	1	6	19	47	115	132	23	0	0	343
50-54	0	1	2	20	49	50	53	5	0	180
55-59	1	2	0	3	13	18	12	22	1	72
60-64	0	0	0	0	1	2	0	2	2	7
65-69	0	0	0	1	0	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>803</b>	<b>802</b>	<b>577</b>	<b>722</b>	<b>555</b>	<b>266</b>	<b>89</b>	<b>29</b>	<b>3</b>	<b>3,846</b>

## 3.3 (b) Distributions of Active Participants – Air Actives

State of Alaska National Guard – Air Actives										Valuation Date 6/30/2006
Total Military Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	40	0	0	0	0	0	0	0	0	40
20-24	163	73	1	0	1	0	0	0	0	238
25-29	43	182	46	0	0	0	0	0	0	271
30-34	12	50	179	54	0	0	1	0	0	296
35-39	6	25	66	209	70	0	0	0	0	376
40-44	1	10	21	117	168	45	0	0	0	362
45-49	1	1	6	31	73	74	12	0	0	198
50-54	0	0	2	12	23	26	28	4	0	95
55-59	0	1	0	1	7	9	4	9	0	31
60-64	0	0	0	0	0	0	0	1	0	1
65-69	0	0	0	1	0	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>266</b>	<b>342</b>	<b>321</b>	<b>425</b>	<b>342</b>	<b>154</b>	<b>45</b>	<b>14</b>	<b>0</b>	<b>1,909</b>

### 3.3 (c) Distributions of Active Participants – Army Actives

State of Alaska National Guard – Army Actives										Valuation Date 6/30/2006
Total Military Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	148	0	0	0	0	0	0	0	0	148
20-24	248	125	0	0	0	0	0	0	0	373
25-29	71	188	40	0	0	0	0	0	0	299
30-34	34	77	101	46	0	0	0	0	0	258
35-39	22	26	68	145	37	0	0	0	0	298
40-44	2	19	29	70	98	19	0	0	0	237
45-49	0	3	13	16	39	58	11	0	0	140
50-54	0	1	0	6	20	23	24	1	0	75
55-59	0	1	0	1	6	7	8	13	1	37
60-64	0	0	0	0	1	2	0	1	2	6
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
<b>Total</b>	<b>525</b>	<b>440</b>	<b>251</b>	<b>284</b>	<b>201</b>	<b>109</b>	<b>43</b>	<b>15</b>	<b>3</b>	<b>1,871</b>

**3.3 (d) Distributions of Active Participants – Navy Actives**

State of Alaska National Guard – Navy Actives										Valuation Date 6/30/2006
Total Military Service										
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	0	0	0	0	0	0	0	0	0	0
0-24	2	3	0	0	0	0	0	0	0	5
25-29	0	4	0	0	0	0	0	0	0	4
30-34	2	4	3	0	0	0	0	0	0	9
35-39	6	4	2	7	1	0	0	0	0	20
40-44	1	3	0	3	2	0	0	0	0	9
45-49	0	2	0	0	3	0	0	0	0	5
50-54	0	0	0	2	6	1	1	0	0	10
55-59	1	0	0	1	0	2	0	0	0	4
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
<b>Total</b>	<b>12</b>	<b>20</b>	<b>5</b>	<b>13</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>66</b>

### 3.4 Actuarial Methods and Assumptions

1. **Actuarial Method** – Entry Age Normal Actuarial Cost. Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost method of funding. Any funding surpluses or unfunded accrued liability is amortized over 20 years less the average total military service of active members.

The 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 Liability is the excess of the actuarial accrued liability over the actuarial value of plan 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 Liability, subject to amortization.

#### 2. Actuarial Assumptions

- (a) Interest 7.25% per year, compounded annually, net of expenses.
- (b) Mortality 1994 Group Annuity Mortality Basic Table for males and females, 1994 base year.

Sample disabled mortality rates are shown below:

Age	Rate	
	Males	Females
30	.0495	.0432
40	.0476	.0396
50	.0580	.0401
60	.0746	.0442
70	.0873	.0536

- (c) Turnover Turnover is assumed at 25% in the first year, and at 8% in the second; both rates are independent of age. Turnover after the second year is assumed to follow the T-3 Table published in the Pension Actuary's Handbook. Sample rates are:

Age	Rate
30	.04930
40	.04041
50	.02172

### 3.4 Actuarial Methods and Assumptions (continued)

- (d) Disability                      Disability rates under Group Long Term Disability policies, as given in the 1978 Society of Actuaries Study.
- (e) Retirement Age                Active members are assumed to retire after 20 years of total military service, except if they complete 20 years of total military service before age 55, it is assumed that they will work one-half of the remaining years to age 55.
- Vested Terminated members are assumed to retire at current age or age 50, whichever is later.
- (f) 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 is initialized as of June 30, 2006 at market value and will be phased in over the next five years. Valuation assets are constrained to a range of 80% to 120% of the market value of assets.

### 3. Changes in Methods and Assumptions Since the Prior Valuation

The actuarial cost method was changed from the Projected Unit Credit Method to the Entry Age Normal Method.

The valuation interest rate was changed from 8.25% to 7.25% per annum.

Retirement rates were extended from an expected retirement age of 60 regardless of service to age 60 and 20 years of service.

The asset valuation method was changed from using the market value of assets without smoothing of gains and losses to a five-year smoothing asset valuation method. This new method will be phased in over the next five years with the first phase-in recognized during FY07.