



**State of Alaska  
National Guard and Naval Militia  
Retirement System**

Actuarial Valuation Report as of June 30, 2010

**buck**consultants®

Submitted By:  
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September 30, 2011

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

Dear Members of The Alaska Retirement Management Board, The Department of Revenue, and The Department of Administration:

### **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, 2010 by Buck Consultants. The purposes of the report include:

- (1) a presentation of the valuation results of the System as of June 30, 2010;
- (2) a determination of the appropriate contribution rate for the System which will be applied for the fiscal year ending June 30, 2013; 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 3.5)
- (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 actuarial assumptions are based on the results of an experience study presented to the Alaska Retirement Management Board (Board) in September 2010 and adopted by the Board in December 2010. Actuarial methods were also reviewed during the experience study.

The contribution requirements reflect the cost of benefits accruing in FY11 and FY12 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. The funding objective for the plan, as adopted by the Board, is currently being met.

A summary of the actuarial assumptions and methods is presented in Section 3.5 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 is a member of the American Academy of Actuaries and the Society of Actuaries, is fully qualified to provide actuarial services to the State of Alaska, and is 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

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## 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, 2010;
2. determine the contribution rate for the System for Fiscal Year 2013;
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 2009 and 2010 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>2008</b>	<b>2010</b>
1. Valuation Assets	\$ 28,370,756	\$ 32,000,585
2. Accrued Liability	28,904,645	30,034,407
3. Funding Ratio, (1) ÷ (2)	98.2%	106.5%

  

<b>Recommended Contribution Amounts</b>	<b>FY11</b>	<b>FY13</b>
1. Normal Cost	\$ 744,154	\$ 605,097
2. Past Service Cost	84,175	(307,730)
3. Expense Load	137,000	134,000
4. Total Annual Contribution, (1) + (2) + (3)	\$ 965,329	\$ 431,367

The recommended contribution amount for FY12 based on a roll-forward valuation as of June 30, 2009 is \$895,565.

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## Analysis of the Valuation

The funding ratio increased from 98.2% at June 30, 2008, to 106.5% at June 30, 2010. This increase was primarily due to a combination of the effects of the changes in assumptions used in the valuation, as well as a surplus between the actuarially required and actual contributions.

The annual rate of return on market value of assets during the year was 11.76%. The annual rate of return on actuarial value of assets during the year was 3.01%, compared to the assumed rate of 7.25%, resulting in an actuarial loss from investment return of approximately \$1.3 million for FY10.

Effective for the June 30, 2010 valuation, the Board adopted the changes to the demographic and economic assumptions recommended by the actuary based on the results of an experience analysis performed on the population experience from July 1, 2005 through June 30, 2009. The changes in assumptions were adopted by the Board during the December 2010 Board meeting.

## **Section 1**

This section sets forth the results of the actuarial valuation.

Section 1.1 Shows the transactions of the System's fund during FY09 and FY10.

Section 1.2 Shows the actuarial present value of benefits and the normal cost as of June 30, 2010.

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>2009</b>	<b>2010</b>
<b>Assets:</b>		
1. Cash and Cash Equivalents	\$ 2,152	\$ 14,856
2. Domestic Equity Pool	8,433,391	7,340,828
3. International Equity Pool	3,117,222	4,076,849
4. Retirement Fixed Income Pool	13,954,357	13,244,918
5. Domestic Fixed Income Pool	0	4,819,313
<b>6. Total Assets (1) + (2) + (3) + (4) + (5)</b>	<b>25,507,122</b>	<b>29,496,764</b>
<b>Liabilities:</b>		
7. Accrued expenses	65,354	52,525
8. Due to State of Alaska General Fund	11,926	12,517
<b>9. Total Liabilities (7) + (8)</b>	<b>77,280</b>	<b>65,042</b>
<b>Total Net Assets (6) – (9)</b>	<b>\$ 25,429,842</b>	<b>\$ 29,431,722</b>

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

Change in Net Assets as of June 30	2009	2010
<b>Receipts:</b>		
1. Employer Contributions	\$ 2,473,300	\$ 2,603,300
2. State of Alaska Appropriation	0	0
3. Investment Income	(2,521,251)	3,202,804
4. <b>Total Receipts (1) + (2) + (3)</b>	<b>\$ (47,951)</b>	<b>\$ 5,806,104</b>
<b>Disbursements:</b>		
5. Retirement Benefits	\$ 1,535,247	\$ 1,647,349
6. Administrative Expenses	150,946	117,747
7. Investment Expenses	24,942	39,128
8. <b>Total Disbursements (5) + (6) + (7)</b>	<b>\$ 1,711,135</b>	<b>\$ 1,804,224</b>
9. <b>Net Income (4) - (8)</b>	<b>\$ (1,759,086)</b>	<b>\$ 4,001,880</b>
10. Net Assets Available for Benefits at beginning of year	\$ 27,188,928	\$ 25,429,842
11. <b>Net Assets Available for Benefits at end of year (9) + (10)</b>	<b>\$ 25,429,842</b>	<b>\$ 29,431,722</b>
Estimated Investment Return, Net of All Expenses	(9.8)%	11.8%

### 1.1(c) 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 current valuation date.

#### In Thousands

1. Deferral of Investment Return for FY10	
a. Market Value, June 30, 2009	\$ 25,429,842
b. Contributions for FY10	2,603,300
c. Benefit Payments for FY10	1,647,349
d. Actual Investment Return ( <i>net of expenses</i> )	3,045,929
e. Expected Return Rate ( <i>net of expenses</i> )	7.25%
f. Expected Return - Weighted for Timing	1,877,710
g. Investment Gain/(Loss) for the Year ( <i>d. - f.</i> )	1,168,219
h. Deferred Investment Return/(Loss)	(2,568,863)
2. Actuarial Value, June 30, 2010	
a. Market Value, June 30, 2010	\$ 29,431,722
b. 2010 Deferred Investment Return/(Loss)	(2,568,863)
c. Preliminary Actuarial Value, June 30, 2010 ( <i>a. - b.</i> )	32,000,585
d. Upper Limit: 120% of Market Value, June 30, 2010	35,318,066
e. Lower Limit: 80% of Market Value, June 30, 2010	23,545,378
f. Actuarial Market Value, June 30, 2010 ( <i>c. limited by d. and e.</i> )	\$ 32,000,585
g. Ratio of Actuarial Value of Assets to Market Value of Assets	108.7%
h. Approximate Actuarial Value Investment Return Rate During FY10 Net of All Expenses	3.0%

**1.1(c) Actuarial Value of Assets (continued)**

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

<b>Plan Year Ended</b>	<b>Asset Gain/(Loss)</b>	<b>Gain/(Loss) Recognized in Prior Years</b>	<b>Gain/(Loss) Recognized This Year</b>	<b>Gain/(Loss) Deferred to Future Years</b>
6/30/2007	\$ 914,738	\$ 548,844	\$ 182,948	\$ 182,946
6/30/2008	(2,163,337)	(865,334)	(432,667)	(865,336)
6/30/2009	(4,701,746)	(940,349)	(940,349)	(2,821,048)
6/30/2010	1,168,219	0	233,644	934,575
<b>Total</b>	<b>\$ (4,782,126)</b>	<b>\$ (1,256,839)</b>	<b>\$ (956,424)</b>	<b>\$ (2,568,863)</b>

## 1.2 Actuarial Values

As of June 30, 2010	Normal Cost	Accrued Liability
<b>Active Members</b>		
1. Retirement Benefits	\$ 568,569	\$ 10,330,534
2. Termination Benefits	0	0
3. Death Benefits	21,744	250,056
4. Disability Benefits	14,784	265,777
<b>5. Total Active Actuarial Value</b> <i>(1) + (2) + (3) + (4)</i>	<b>\$ 605,097</b>	<b>\$ 10,846,367</b>
<b>Inactive Members</b>		
6. Vested Terminated		\$ 14,705,434
7. Retirees (including QDROs)		4,482,606
<b>8. Total Inactive Actuarial Value</b> <i>(6) + (7)</i>		<b>\$ 19,188,040</b>
<b>Total Actuarial Value</b> <i>(5) + (8)</i>	<b>\$ 605,097</b>	<b>\$ 30,034,407</b>

### 1.3 Development of Actuarial Gain/(Loss) for FY10

1.	Accrued Liability, June 30, 2009	\$ 30,208,411
2.	Normal Cost for FY10	744,154
3.	Interest on (1) and (2) at 7.25%	2,244,061
4.	Benefit Payments for FY10	1,647,349
5.	Interest on (4) at 7.25% for one-half year	58,672
6.	Change in Assumptions	(666,018)
7.	Expected Accrued Liability, June 30, 2010 (1) + (2) + (3) – (4) – (5) + (6)	\$ 30,824,587
8.	Accrued Liability, June 30, 2010	30,034,407
<b>9.</b>	<b>Liability Gain/(Loss) (7) – (8)</b>	<b>\$ 790,180</b>
10.	Valuation Assets, June 30, 2009	\$ 30,123,348
11.	Interest on (10) at 7.25%	2,183,943
12.	Contributions for FY10	2,603,300
13.	Interest on (12) at 7.25% for one-half year	92,719
14.	Benefit Payments for FY10	1,647,349
15.	Interest on (14) at 7.25% for one-half year	58,672
16.	Expected Valuation Assets, June 30, 2010 (10) + (11) + (12) + (13) – (14) – (15)	\$ 33,297,289
17.	Valuation Assets, June 30, 2010	32,000,585
<b>18.</b>	<b>Asset Gain/(Loss) (17) – (16)</b>	<b>\$ (1,296,704)</b>
<b>19.</b>	<b>Actuarial Gain/(Loss) (9) + (18)</b>	<b>\$ (506,524)</b>
<b>20.</b>	<b>Effect of Contribution Surplus/(Deficit) due to Contribution Delay</b>	<b>\$ 1,735,525</b>
<b>21.</b>	<b>Total Gain/(Loss (19) + (20)</b>	<b>\$ 1,229,001</b>

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**1.4 Calculation of Total Contribution Amount – FY13**

1. Accrued Liability	\$	30,034,407
2. Assets		32,000,585
3. Total Unfunded Accrued Liability, (1) – (2)	\$	(1,966,178)
4. Amortization Factor (8.0 years) (assuming payments at beginning of the year)		6.389289
5. Past Service Payment, (3) ÷ (4)	\$	(307,730)
6. Normal Cost		605,097
7. Expense Load		134,000
8. <b>Total Contribution</b> , (5) + (6) + (7)	\$	<b>431,367</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.

Section 2.3      Actuarial Assumptions, Methods, and Additional Information.

## 2.1 Schedule of Employer Contributions

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 <sup>1</sup>	\$ 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 <sup>2</sup>	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%

<sup>1</sup> 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.

<sup>2</sup> 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.

## 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, 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
June 30, 2008	28,370,756	28,904,645	533,889	98.2%	N/A	N/A
June 30, 2010	32,000,585	30,034,407	(1,966,178)	106.5%	N/A	N/A

## 2.3 Actuarial Assumptions, Methods and Additional Information

Valuation Date	June 30, 2010
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level dollar, open
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
Projected salary increases	None
Cost-of-living adjustment	None

\* Includes inflation at 3.12% 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 system'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 3.1, 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 3.5.

### **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. 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.

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

#### **7. 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 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.

### 3.2 Changes in System Participation from June 30, 2008 to June 30, 2010

	Active Members	Vested Members	Benefit Recipients	Total
Total at June 30, 2008	3,897	1,148	516	5,561
New Entrants	1,146	0	0	1,146
Rehires	79	(11)	0	68
Nonvested Terminations	(811)	0	0	(811)
Vested Terminations	(164)	164	0	0
Retirements	(55)	(28)	83	0
New Survivors	0	0	0	0
New QDROs	0	0	0	0
Deaths	(5)	(8)	(12)	(25)
Data Change/Expiration of Benefits	(2)	(14)	(40)	(56)
Total at June 30, 2010	4,085	1,251	547	5,883

### 3.3 Participant Census Information

Census Information as of June 30	2008	2010
<b>Active Air Guard Members</b>		
Number	1,956	2,208
Number Vested	524	531
Average Age	36.16	35.53
Average Alaska Guard Service	8.18	7.81
Average Total Military Service	14.54	13.78
<b>Active Army Guard Members</b>		
Number	1,866	1,789
Number Vested	260	250
Average Age	31.94	31.99
Average Alaska Guard Service	5.19	5.09
Average Total Military Service	10.16	10.15
<b>Active Naval Militia Members</b>		
Number	75	88
Number Vested	20	18
Average Age	37.63	36.08
Average Alaska Militia Service	6.14	5.57
Average Total Military Service	13.39	11.23
<b>Total Active Members</b>		
Number	3,897	4,085
Number Vested	804	799
Average Age	34.17	33.99
Average Alaska Guard Service	6.71	6.57
Average Total Military Service	12.42	12.14
<b>Vested Terminated Members</b>		
Number	1,148	1,251
Average Age	53.50	54.78
Average Alaska Guard Service	18.29	17.96
Average Total Military Service	25.79	25.61
<b>Retirees (including QDROs)</b>		
Number	516	547
Average Age	58.95	58.75
Average Years Remaining	11.58	11.61

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

Age Group	Total Military Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	201	0	0	0	0	0	0	0	0	201
20-24	563	128	0	0	0	0	0	0	0	691
25-29	165	493	90	0	0	0	0	0	0	748
30-34	71	149	389	55	0	0	0	0	0	664
35-39	20	65	133	283	66	0	0	0	0	567
40-44	15	30	55	144	309	37	0	0	0	590
45-49	2	5	39	43	125	117	26	0	0	357
50-54	1	2	11	24	30	52	63	4	0	187
55-59	0	1	0	5	10	23	21	13	2	75
60-64	0	1	0	0	1	2	1	0	0	5
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>1,038</b>	<b>874</b>	<b>717</b>	<b>554</b>	<b>541</b>	<b>231</b>	<b>111</b>	<b>17</b>	<b>2</b>	<b>4,085</b>

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

Age Group	Total Military Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	57	0	0	0	0	0	0	0	0	57
20-24	209	46	0	0	0	0	0	0	0	255
25-29	81	282	48	0	0	0	0	0	0	411
30-34	32	86	242	34	0	0	0	0	0	394
35-39	4	37	81	186	31	0	0	0	0	339
40-44	5	11	34	85	203	27	0	0	0	365
45-49	1	3	19	23	85	85	14	0	0	230
50-54	1	1	3	13	19	34	37	4	0	112
55-59	0	0	0	3	9	11	11	7	1	42
60-64	0	1	0	0	0	2	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
<b>Total</b>	<b>390</b>	<b>467</b>	<b>427</b>	<b>344</b>	<b>347</b>	<b>159</b>	<b>62</b>	<b>11</b>	<b>1</b>	<b>2,208</b>

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

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	142	0	0	0	0	0	0	0	0	142
20-24	335	80	0	0	0	0	0	0	0	415
25-29	78	204	42	0	0	0	0	0	0	324
30-34	36	63	142	21	0	0	0	0	0	262
35-39	16	25	51	90	35	0	0	0	0	217
40-44	9	16	21	58	98	10	0	0	0	212
45-49	1	1	18	20	38	31	12	0	0	121
50-54	0	1	6	11	11	17	25	0	0	71
55-59	0	0	0	2	1	8	8	5	1	25
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>617</b>	<b>390</b>	<b>280</b>	<b>202</b>	<b>183</b>	<b>66</b>	<b>45</b>	<b>5</b>	<b>1</b>	<b>1,789</b>

### 3.4 (d) Distributions of Active Participants – Navy Actives

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	2	0	0	0	0	0	0	0	0	2
0-24	19	2	0	0	0	0	0	0	0	21
25-29	6	7	0	0	0	0	0	0	0	13
30-34	3	0	5	0	0	0	0	0	0	8
35-39	0	3	1	7	0	0	0	0	0	11
40-44	1	3	0	1	8	0	0	0	0	13
45-49	0	1	2	0	2	1	0	0	0	6
50-54	0	0	2	0	0	1	1	0	0	4
55-59	0	1	0	0	0	4	2	1	0	8
60-64	0	0	0	0	1	0	1	0	0	2
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>31</b>	<b>17</b>	<b>10</b>	<b>8</b>	<b>11</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>88</b>

### 3.5 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 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 Liability, subject to amortization.

#### 2. Actuarial Assumptions

- (a) Interest 7.00% per year, compounded annually, net of investment expenses.
- (b) 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
2009	\$ 150,946
2010	<u>117,747</u>
Total	\$ 268,693
	$\div$ <u>2</u>
Expense Load (Rounded)	\$ 134,000

- (c) Mortality Pre-termination: 1994 Group Annuity Mortality (GAM) Table, sex distinct, 1994 Base Year without margin, projected to 2013 using Projection Scale AA, 80% of the male table for males and 60% of the female table for females.

Post-termination: 1994 GAM Table, sex-distinct, 1994 Base Year without margin projected to 2013 using Projection Scale AA for males and with a 1-year set-forward for females.

Disability: RP-2000 Disabled Retiree Mortality Table.

- (d) 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%		

### 3.5 Actuarial Methods and Assumptions (continued)

- (e) Disability Incidence rates based upon the 2005-2009 actual experience of the State of Alaska Public Employees' Retirement System Peace Officer/Firefighter Plan.

Sample rates are shown below.

Age	Unisex Rate
20	.088%
25	.094%
30	.105%
35	.120%
40	.144%
45	.203%
50	.300%
55	.500%
60	1.054%

- (f) Retirement Age Active members are assumed to retire beginning at the earliest eligible retirement age according to the following rates:

Age	Rate	Age	Rate
<51	5%	58	56%
51	11%	59	62%
52	18%	60	68%
53	24%	61	75%
54	30%	62	81%
55	37%	63	87%
56	43%	64	94%
57	49%	65+	100%

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

- (g) 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 Since the Prior Valuation

There were no changes in methods from the prior valuation.

### 3.5 Actuarial Methods and Assumptions (continued)

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

	June 30, 2008	June 30, 2010
Investment Return	7.25% per year, compounded annually, net of expenses.	7.00% per year, compounded annually, net of expenses.
Pre-termination Mortality	1994 GAM Table, 1994 Base Year without margin.	80% of the male rates and 60% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA.
Post-termination Mortality	1994 GAM Table, 1994 Base Year without margin.	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA for males and with a 1-year set-forward for females.
Total Inflation	3.5% annually.	3.12% annually.
Turnover	<ul style="list-style-type: none"> <li>– Unisex</li> <li>– 2-year select period</li> <li>– Ultimate follows T-3 Table from Pension Actuary's Handbook</li> </ul>	<ul style="list-style-type: none"> <li>– Unisex</li> <li>– 5-year select period</li> <li>– Increase all ultimate rates by 50%</li> </ul>
Retirement	Members are assumed to retire after 20 years of eligibility service, unless they complete 20 years before age 55. Then it is assumed that they will work one-half of the remaining years to age 55.	Assumed to begin retiring at the earliest eligible retirement age in accordance with the table of retirement rates.
Disability Mortality	Table ranging from 5.10% for males and 4.26% for females at age 20 to 8.13% for males and 4.73% for females at age 64.	RP-2000 Disabled Retiree Mortality Table.
Disability	Disability rates under Group Long Term Disability policies, as given in the 1978 Society of Actuaries Study.	Incidence rates based upon the 2005-2009 actual experience of the State of Alaska Public Employees' Retirement System Peace Officer/Firefighter Plan.