

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

**Actuarial Valuation Report  
as of June 30, 1998**

**Prepared by:**

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# Highlights

This report has been prepared by William M. Mercer, Incorporated to:

1. present the results of a valuation of the Alaska National Guard and Naval Militia Retirement System as of June 30, 1998;
2. determine the contribution rate for the Retirement System for Fiscal Year 2001 and Fiscal Year 2002;
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 1997 and 1998 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 principle results are as follows:

<b>Funding Status as of June 30:</b>	<u>1996</u>	<u>1998</u>
a. Valuation Assets	\$ 9,948,108	\$ 12,671,276
b. Present Value of Accumulated Benefits	12,511,803	14,252,184
c. Accumulated Benefit Funding Ratio, (a)/(b)	79.5%	88.9%
<b>Recommended Contribution Amounts:</b>	<u>FY99/00</u>	<u>FY01/02</u>
a. Normal Cost	\$ 671,318	\$ 596,874
b. Past Service Cost	433,201	282,910
c. Total Annual Cost	1,104,519	879,784

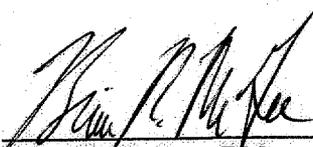
We have prepared an actuarial valuation of the State of Alaska National Guard and Naval Militia Retirement System as of June 30, 1998. The results of the valuation are set forth in this report, which reflects the provisions of the Plan as amended and effective through January 1, 1999.

The valuation is based on employee and financial data, which was provided by the System and which is summarized in this report.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current federal statutes and regulations issued thereunder, using an actuarial cost method which we believe is appropriate. In our opinion, the actuarial assumptions are reasonable and represent our best estimate of the anticipated experience under the Plan. This report fully and fairly discloses the actuarial position of the Plan on an ongoing basis.

There have been no changes in plan provisions, valuation procedures, actuarial assumptions or actuarial cost method since the last valuation of the plan as of June 30, 1996.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

 _____ Brian R. McGee, FSA	<u>11/12/99</u> _____ Date
 _____ James W. Jacobson, ASA, MAAA	<u>11/12/99</u> _____ Date
William M. Mercer, Incorporated One Union Square, Suite 3200 600 University Street Seattle, WA 98101-3137  206 808 8800	

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## **Analysis of Valuation**

The actuarial methods used to value plan liabilities this year are the same as those used in the June 30, 1996 actuarial report. The Highlights section on page 1 of this Report shows that the funding ratio has increased from 79.5% at June 30, 1996 to 88.9% at June 30, 1998.

The average annual rate of return on assets during the period was 14.1%, compared to our assumption of 8.25% resulting in an actuarial gain from investment return. Section 1.1 of the Report shows that the value of assets rose during the period from \$9,948,108 to \$12,671,276.

## **Section 1**

### **Valuation Results**

This section sets forth the results of the actuarial valuation.

Section 1.1 shows the transactions of the System's fund during FY97 and FY98.

Section 1.2 shows the actuarial present values of benefits and the normal cost as of June 30, 1998.

Section 1.3 develops the total contribution.

## 1.1 Development of Valuation Assets as of June 30

	FY98	FY97
Net Assets Available for Benefits, July 1	<u>\$11,069,615</u>	<u>\$9,948,108</u>
Additions:		
Employer Contributions	\$ 1,434,900	\$ 1,434,900
Investment Income	<u>1,615,548</u>	<u>1,395,532</u>
	\$ 3,050,448	\$ 2,830,432
Deductions:		
Retirement Benefits	\$ 1,417,069	\$ 1,676,371
Administrative Expenses	<u>31,718</u>	<u>32,554</u>
	\$ 1,448,787	\$ 1,708,925
Net Assets Available for Benefits, June 30	<u>\$12,671,276</u>	<u>\$11,069,615</u>
Estimated Investment Return, Net of Administrative Expenses	14.3%	13.9%

## 1.2 Breakdown of Present Value of Benefits as of June 30, 1998

	<u>Normal Cost</u>	<u>Accrued Liability</u>
<b>Active Members</b>		
Retirement Benefits	\$ 337,656	\$ 5,546,088
Termination Benefits*	172,902	1,894,261
Death Benefits	64,506	548,398
Involuntary Retirement Benefits	<u>21,810</u>	<u>228,141</u>
Subtotal	\$ 596,874	\$ 8,216,888
<b>Inactive Members</b>		
Vested Terminated		\$ 2,032,962
Retirees		<u>4,002,334</u>
Subtotal		\$ 6,035,296
<b>Total</b>		<u>\$ 14,252,184</u>

\* Members who terminate before assumed retirement age, but after completing 20 years of service.

### 1.3 Calculation of Total Contribution Amount - FY01 and FY02

1.	Accrued Liability	\$ 14,252,184
2.	Assets	12,671,276
3.	Total Unfunded Accrued Liability, (1) - (2)	1,580,908
4.	Amortization Factor (7.0 years) (assuming payments at beginning of the year)	5.588027
5.	Past Service Payment, (3)/(4)	282,910
6.	Normal Cost	596,874
7.	Total Contribution, (5) + (6)	\$ 879,784

## **Section 2**

### **Information Required by GASB No. 25**

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

Section 2.1 shows the Schedule of Employer Contribution.

Section 2.2 shows the Schedule of Funding Progress.

## 2.1 Schedule of Employer Contributions

<u>Year ended June 30</u>	<u>Annual required Contribution*</u>	<u>Annual actual Contribution</u>	<u>Percentage Contributed</u>	<u>Supplemental Contributions*</u>
1994	\$ 964,001	\$ 964,001	100.0%	-
1995	1,104,352	1,104,352	100.0%	-
1996	1,359,862	1,104,400	81.2%	8,000,000
1997	1,626,000	1,434,900	88.2%	-
1998	1,626,000	1,434,900	88.2%	-

\* **Supplemental Contribution**

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 Asset (a)	Actuarial Accrued Liabilities (AAL) Projected Unit Credit (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, 1994	\$ 2,414,426	\$ 14,031,289	\$ 11,616,863	17.2%	N/A	N/A
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

## **Section 3**

### **Basis of Valuation**

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

A summary of the System's provisions is provided in Section 3.1 and participant 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 participants who will retire, die, terminate their services, their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, 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.

**(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

	<u>June 30:</u>	
	<u>1998</u>	<u>1996</u>
<b>Active Air Guard Members</b>		
1. Number	1,745	1,920
2. Average Age	35.57	35.27
3. Average Alaska Guard Service	6.85	6.79
4. Average Total Military Service	13.42	13.25
<b>Active Army Guard Members</b>		
1. Number	1,583	1,912
2. Average Age	34.45	34.37
3. Average Alaska Guard Service	8.08	7.06
4. Average Total Military Service	12.38	9.90
<b>Active Naval Militia Members</b>		
1. Number	76	117
2. Average Age	35.35	36.99
3. Average Alaska Militia Service	5.64	4.06
4. Average Total Military Service	10.73	11.26
<b>Vested Terminated</b>		
1. Number	310	N/A
2. Average Age	49.57	N/A
3. Average Alaska Militia Service	18.27	N/A
4. Average Total Military Service	27.03	N/A
<b>Retirees</b>		
1. Number	511	524
2. Average Age	60.34	59.37
3. Average Years Remaining	10.42	11.07

### 3.3(a) Distributions of Active Participants

State of Alaska National Guard - All Actives

Valuation Date 6/30/98

AGE	Total Military Service										TOTAL	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL		
0-19	104	0	0	0	0	0	0	0	0	0	0	104
20-24	272	114	1	0	1	0	0	0	0	0	0	388
25-29	84	324	136	0	0	0	0	0	0	0	0	544
30-34	39	124	397	116	0	0	0	0	0	0	0	676
35-39	18	67	199	376	96	0	0	0	0	0	0	756
40-44	0	31	58	157	166	33	0	0	0	0	0	445
45-49	2	2	26	66	105	87	13	0	0	0	0	301
50-54	0	2	7	29	30	50	37	2	0	0	0	157
55-59	0	0	0	6	7	9	8	2	1	0	0	33
60-64	0	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0	0	0
75+	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	519	664	824	750	405	179	58	4	1	3,404		

### 3.3(b) Distributions of Active Participants

State of Alaska National Guard - Air Actives

Valuation Date 6/30/98

AGE	Total Military Service										TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL	
0-19	23	0	0	0	0	0	0	0	0	0	23
20-24	126	47	1	0	1	0	0	0	0	0	175
25-29	37	150	69	0	0	0	0	0	0	0	256
30-34	18	71	222	70	0	0	0	0	0	0	381
35-39	8	26	110	231	51	0	0	0	0	0	426
40-44	0	16	32	78	90	21	0	0	0	0	237
45-49	1	2	14	31	51	54	9	0	0	0	162
50-54	0	1	4	15	8	26	17	1	0	0	72
55-59	0	0	0	4	4	2	2	0	1	1	13
60-64	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0	0
75+	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	213	313	452	429	205	103	28	1	1	1	1,745

### 3.3(c) Distributions of Active Participants

State of Alaska National Guard - Army Actives

Valuation Date 6/30/98

AGE	Total Military Service										TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+		
0-19	79	0	0	0	0	0	0	0	0	0	79
20-24	139	60	0	0	0	0	0	0	0	0	199
25-29	43	170	65	0	0	0	0	0	0	0	278
30-34	18	51	170	46	0	0	0	0	0	0	285
35-39	8	38	83	141	45	0	0	0	0	0	315
40-44	0	15	25	73	75	12	0	0	0	0	200
45-49	1	0	8	29	51	33	4	0	0	0	126
50-54	0	1	3	14	21	23	20	1	0	0	83
55-59	0	0	0	1	3	6	6	2	0	0	18
60-64	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0	0
75+	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	288	335	354	304	195	74	30	3	0	0	1,583

### 3.3(d) Distributions of Active Participants

State of Alaska National Guard - Navy Actives

Valuation Date 6/30/98

AGE	Total Military Service										TOTAL
	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	0	2
20-24	7	7	0	0	0	0	0	0	0	0	14
25-29	4	4	2	0	0	0	0	0	0	0	10
30-34	3	2	5	0	0	0	0	0	0	0	10
35-39	2	3	6	4	0	0	0	0	0	0	15
40-44	0	0	1	6	1	0	0	0	0	0	8
45-49	0	0	4	6	3	1	0	0	0	0	13
50-54	0	0	0	0	1	1	0	0	0	0	2
55-59	0	0	0	1	0	0	0	0	0	0	2
60-64	0	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0	0
75+	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	18	16	18	17	5	2	0	0	0	0	76

### 3.4 Actuarial Method and Assumptions

- A. **Actuarial Method - Projected Unit Credit.** Liabilities and contributions shown in the report are computed using the Projected Unit Credit method of funding.

The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, each participant's total pension is broken down into units, each associated with a year of past or future service. The principle underlying the method is that each unit is funded in the year for which it is credited. Typically, when the method is introduced there will be an initial liability for benefits credited for service prior to that date, and to the extent that this liability is not covered by assets there is an Unfunded Liability to be funded over a chosen period in accordance with an amortization schedule.

An Accrued Liability is calculated at the valuation date as the present value of benefits credited with respect to service to that date.

The Unfunded Liability at the valuation date is the excess of the Accrued Liability over the Assets of the System. The Unfunded Liability is amortized over 20 years less the average total military service of active members, and is referred to as the Past Service Cost.

The Normal Cost is the present value of those benefits which are expected to be credited with respect to service during the year beginning 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.

B. **Actuarial Assumptions -**

- |              |  |
|--------------|--|
| 1. Interest  | 8.25% per year, compounded annually, net of investment expenses. |
| 2. Mortality | 1984 Unisex Pension Mortality Table.                             |

### 3.4 Actuarial Method and Assumptions (continued)

3. 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:

<u>Age</u>	<u>Rate</u>
30	.04930
40	.04041
50	.02172

4. Disability

Disability rates under Group Long Term Disability policies, as given in the 1978 Society of Actuaries Study.

5. Retirement Age

Active members are assumed to retire after 20 years of total military service, except:

- a. 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;
- b. if they complete 20 years of total military service after age 60, it is assumed they will retire at age 60.

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

6. Assets

Market value.