



STATE OF ALASKA
JUDICIAL RETIREMENT SYSTEM

Actuarial Valuation

as of

June 30, 1984

STATE OF ALASKA
JUDICIAL RETIREMENT SYSTEM

Actuarial Valuation
as of
June 30, 1984

T A B L E O F C O N T E N T S

	<u>Page</u>
SUMMARY	1
ANALYSIS OF THE VALUATION	3
SECTION 1 THE BASIS OF THE VALUATION.	5
1.1 BRIEF OUTLINE OF THE PLAN	6
1.2 CHANGES IN PLAN PARTICIPANTS FROM 6-30-82 TO 6-30-84	8
1.3 MISCELLANEOUS INFORMATION AS OF JUNE 30	9
1.4 ANNUAL EARNINGS BY AGE AND SERVICE AND SERVICE GROUPS BY AGE GROUPS	10
1.5 ACTUARIAL METHOD AND ASSUMPTIONS.	11
TABLE 1 - DISABILITY RATES.	12
SECTION 2 DETAILED VALUATION RESULTS.	13
2.1 DEVELOPMENT OF VALUATION ASSETS AS OF JUNE 30.	14
2.2 BREAKDOWN OF PRESENT VALUE OF BENEFITS.	15
2.3 DEVELOPMENT OF NORMAL COST.	16
2.4 CALCULATION OF TOTAL CONTRIBUTION RATE.	17

Benefit Services / Consulting Actuaries

SUMMARY

In accordance with your request, we have completed a valuation of the Alaska Judicial Retirement System as of June 30, 1984. The principal results of the actuarial valuation are presented in this summary and analysis; the two sections which follow are meant to provide the necessary supporting details.

Section 1 presents the fundamental information on which the valuation was based. Included is a summary of plan provisions, information about plan participants, and disclosure of the actuarial method and assumptions used.

Section 2 presents the detailed actuarial valuation results. Its sub-sections present a step-by-step derivation of the recommended contribution.

The purposes of an actuarial valuation are:

1. To examine the status of funding of the Plan, and
2. To determine the contribution rate for the fiscal year 1987-88.

The most significant results of the valuation are as follows:

	<u>1982</u>	<u>1984</u>
(1) Status of Funding as of June 30		-
(a) Valuation Assets	\$ 2,580,200	\$ 8,044,425
(b) Present Value of Accrued Benefits	27,827,998	36,210,374
(c) Accrued Benefit Funding Ratio	9.3%	22.2%
	<u>FY85-FY86</u>	<u>FY87-FY88</u>
(2) Recommended Contributions		
(a) Normal Cost	\$ 1,366,796	\$ 1,375,669
(b) Past Service Cost	2,189,984	2,443,103
(c) Total Cost	3,556,780	3,818,772
(d) Cost As Percent of Base Pay	109.14%	113.44%

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us, to determine a sound value for the Plan liabilities. I certify that, to the best of my knowledge and belief, the attached statements are true and correct.

Respectfully submitted,

Robert F. Richardson

Robert F. Richardson, ASA
Principal

RFR/jam

March 5, 1985

ANALYSIS OF THE VALUATION

This actuarial valuation report is based upon the same actuarial method of assumptions used in the last actuarial report. During the two year period since the last report, the total employer contribution rate increased 3.6% as a percentage of base pay. There are two major reasons for this increase.

Health Insurance Premiums

The most important factor leading to the increase in cost in the Judicial Retirement System is the increase in providing medical insurance to retirees. During the two year period, the monthly premium per retiree increased from \$115.61 to \$193.40. The impact of this premium increase was to increase the employer contribution rate to the JRS by more than 2% of base pay.

Investment Performance

For the period ending June 30, 1983, there was no investment income. Our actuarial calculations are based upon the assumption that plan assets will earn 8% per year. Because the \$2 million fund as of July 1, 1983 was not credited with investment income, there was an actuarial loss from investment sources of slightly more than \$160,000. This actuarial loss in FY83 would have led to an increase in the employer contribution rate of .43% of base pay, however, during the next fiscal year the plan earned slightly more than 8%, thus leading to a small actuarial gain. The net result during the two years was an actuarial loss from investment sources which resulted in the employer contribution rate increasing by .3% of base pay.

Average base pay over the last two years increased by only 5.5%. This contributed to a slight gain. On the other hand, not one retiree or beneficiary ceased benefit payments during the year, leading to a slight actuarial loss from mortality.

In summary, funding progress of the Judicial Retirement System is being achieved. In the next two years, we would anticipate assets exceeding \$15 million and the funding ratio approaching 30%. A leveling off of health cost inflation in the next few years will be helpful. Furthermore, in the future we should anticipate actuarial gains, rather than losses, from investment sources.

SECTION 1

THE BASIS OF THE VALUATION

The foundation of an actuarial valuation is the information and assumptions used in preparing it. In this section, the salient Plan provisions, employee census data, and actuarial methods and assumptions used in preparing the valuation are outlined.

1.1 BRIEF OUTLINE OF THE
ALASKA JUDICIAL RETIREMENT SYSTEM

(1) Employees Included

All Judges and Justices of the Supreme, Superior and District Courts.

(2) Employee Contributions

- (a) Mandatory Employee Contributions: 7% of salary for each year of service up to 15 years, if appointed after June 30, 1978.
- (b) Interest Credited: 4½% compounded semi-annually on June 30 and December 31.
- (c) Refund at Termination (no vesting): Return of contributions with interest.
- (e) Refund at Death: If no widow's pension payable, return of contributions with interest.

(3) Normal Retirement Benefit

- (a) Eligibility: Age 60 with 5 or more years of Service.
- (b) Type: Life only, with Automatic 50% Joint and Survivor Benefit if married.
- (c) Amount: (For each year of service up to 15 years) 5% of the monthly salary authorized for the appropriate court, at the time each payment is made.

(4) Early Retirement Benefit

- (a) Eligibility: Age 55 or 20 or more years of service.
- (b) Type: Life only, with Automatic 50% Joint and Survivor Benefit if married.
- (c) Amount: Actuarial equivalent of Normal Retirement Benefit based on service to Early Retirement Date.

(5) Deferred Vested Benefit

- (a) Eligibility: Five or more years of service.
- (b) Type: Normal or Early Retirement Benefit.
- (c) Amount: Monthly benefit begins on employee's Normal Retirement Date. Amount determined in the same manner as Normal Retirement Benefit.

(6) Disability Benefit

- (a) Eligibility: Two or more years of service.
- (b) Type: Monthly benefit payable until death or recovery.
- (c) Amount: Same as Normal Retirement Benefit except payments commence immediately.

(7) Death Benefit Before Retirement

If not married, accrued contributions with interest are returned. If married, an income benefit is available at death after two years of service. The Benefit is 50% of the accrued Normal Retirement Benefit, but at least 30% of the authorized salary. Under certain conditions, survivor benefits are payable to minor dependents.

(8) Medical Benefits

Each retiree is provided with major medical benefits.

1.2 CHANGES IN PLAN PARTICIPANTS
FROM 6-30-82 TO 6-30-84

Active Participants

Total, 6-30-82	48
New Entrants	5
Returned From Non-Vested Status	0
Returned From Vested Status	0
Non-Vested Terminations	0
Vested Terminations	(3)
Retirements	(3)
Deaths	<u>0</u>
Total, 6-30-84	47

Vested Terminations

Total, 6-30-82	7
New Vested Terminations	3
Retirements	0
Returned to Active Status	0
Correction (Hodges)	(1)
Deaths	<u>0</u>
Total, 6-30-84	9

Retirees and Survivors

Total, 6-30-82	24
New Retirements	3
New Survivors	0
Deaths	<u>0</u>
Total, 6-30-84	27

1.3 MISCELLANEOUS INFORMATION

AS OF JUNE 30

Active Members

	<u>1981</u>	<u>1982</u>	<u>1984</u>
(1) Number	48	48	47
(2) Average Age	46.22	46.24	47.53
(3) Average Service	6.77	7.88	8.42
(4) Average Annual Base Pay	\$64,404	\$67,893	\$71,621

Vested Terminated Members

(1) Number	--	7	9
(2) Average Age	--	41.91	46.39
(3) Average Monthly Benefit	--	\$2,389	\$2,350

Retirees and Beneficiaries

(1) Number	21	24	27
(2) Average Age	64.54	64.92	65.80
(3) Average Monthly Benefit	\$2,554	\$2,862	\$3,069

STATE OF ALASKA JUDICIAL RETIREMENT SYSTEM - ACTIVES

VALUATION DATE 6/30/84

-----ANNUAL EARNINGS BY AGE-----				----ANNUAL EARNINGS BY SERVICE----			
AGE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS	SERVICE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0-19	0	0.	0.	0	1	73620.	73620.
20-24	0	0.	0.	1	4	264528.	66132.
25-29	0	0.	0.	2	4	284496.	71124.
30-34	2	127272.	63636.	3	6	434304.	72384.
35-39	7	475404.	67915.	4	1	73620.	73620.
40-44	10	739944.	73994.	0- 4	16	1130568.	70661.
45-49	14	1024812.	73201.	5- 9	18	1283880.	71327.
50-54	6	431736.	71956.	10-14	7	531960.	75994.
55-59	4	282540.	70635.	15-19	3	200892.	66964.
60-64	3	210876.	70292.	20-24	3	218904.	72968.
65-69	1	73620.	73620.	25-29	0	0.	0.
70-74	0	0.	0.	30-34	0	0.	0.
75-79	0	0.	0.	35-39	0	0.	0.
80+	0	0.	0.	40+	0	0.	0.
TOTAL	47	3366204.	71621.	TOTAL	47	3366204.	71621.

SERVICE GROUPS BY AGE GROUPS

AGE	S E R V I C E G R O U P									TOTAL
	0- 4	5- 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0
30-34	1	1	0	0	0	0	0	0	0	2
35-39	5	2	0	0	0	0	0	0	0	7
40-44	3	5	2	0	0	0	0	0	0	10
45-49	3	6	4	1	0	0	0	0	0	14
50-54	4	2	0	0	0	0	0	0	0	6
55-59	0	1	0	1	2	0	0	0	0	4
60-64	0	1	1	1	0	0	0	0	0	3
65-69	0	0	0	0	1	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80+	0	0	0	0	0	0	0	0	0	0
TOTAL	16	18	7	3	3	0	0	0	0	47

1.4 ANNUAL EARNINGS BY AGE AND SERVICE
 AND SERVICE GROUPS BY AGE GROUPS
 William M. Mercer-Meldinger, Incorporated

1.5 ACTUARIAL METHOD AND ASSUMPTIONS

Valuation of Liabilities

- A. Actuarial Method - Attained Age Normal. The unfunded accrued benefit liability is amortized over 25 years. -
- B. Actuarial Assumptions -
1. Interest 8% per year, compounded annually, net of investment expenses.
 2. Mortality 1984 Unisex Pension Mortality Table.
 3. Salary Scale 7.5% per year, compounded annually.
 4. Turnover and Early Retirement Annual turnover and early retirement at each age and service is the greatest of the following amounts:
 - a) 0%
 - b) 3% if service is greater than 15 years.
 - c) 6% if vested and immediately eligible for full benefits based on retirement provision.
 - d) 10% if vested and age is greater than 65.
 5. Disability 25% of disability under the State of Alaska 1976 study.
 6. Maximum Retirement Age Age 70.
 7. Health Benefits Assumed to increase with 8% annual inflation.
- C. Valuation Assets - Based upon accrued book values.

TABLE 1
 PUBLIC EMPLOYEES' RETIREMENT SYSTEM
 OF ALASKA

Disability Rates - 1976 Study

All Employees

Annual Rates Per 1,000 Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.70	45	1.62
21	.71	46	1.76
22	.72	47	1.91
23	.73	48	2.07
24	.74	49	2.23
25	.75	50	2.40
26	.76	51	2.60
27	.78	52	2.86
28	.80	53	3.18
29	.82	54	3.55
30	.84	55	4.00
31	.86	56	4.59
32	.88	57	5.34
33	.90	58	6.10
34	.93	59	7.20
35	.96	60	8.43
36	.99	61	9.75
37	1.03	62	11.30
38	1.07	63	13.05
39	1.11	64	14.90
40	1.15		
41	1.20		
42	1.27		
43	1.36		
44	1.48		

For the Judicial Retirement System, we have assumed 25% of the above rates of disability.

SECTION 2
DETAILED VALUATION RESULTS

This section presents in detail the results of the actuarial valuation that were outlined in the Summary.

2.1 DEVELOPMENT OF VALUATION ASSETS

AS OF JUNE 30

	<u>FY83</u>	<u>FY84</u>
Net Assets Available for Benefits, Beginning of Year	<u>\$2,094,704</u>	<u>\$4,742,903</u>
Additions:		
Employee Contributions	\$ 71,671	\$ 108,739
Employer Contributions	3,463,842	3,752,226
Indebtedness Interest	933	1,081
Investment Income	<u>-0-</u>	<u>435,260</u>
	<u>\$3,536,446</u>	<u>\$4,297,306</u>
Deductions:		
Employee Refund	\$ 21,142	\$ -0-
Retirement Benefits	831,382	948,439
Medical Benefits	<u>35,723</u>	<u>47,784</u>
	<u>\$ 888,247</u>	<u>\$ 995,784</u>
Net Assets Available for Benefits, End of Year	<u><u>\$4,742,903</u></u>	<u><u>\$8,044,425</u></u>

2.2 BREAKDOWN OF PRESENT VALUE
OF BENEFITS

<u>Active Participants</u>	<u>Present Value of Accrued Benefits</u>	<u>Present Value of Fully Projected Benefits</u>
Retirement Benefits	\$ 8,247,810	\$22,852,648
Disability Benefits	251,161	603,507
Death Benefits	1,532,263	3,606,256
Deferred Benefits	3,232,491	8,211,874
Health Benefits	<u>401,342</u>	<u>1,018,681</u>
Subtotal	\$13,665,067	\$36,292,966
 <u>Retirees and Survivors</u>		
Retired Members' Benefits	\$16,310,993	\$16,310,993
Health Benefits	<u>609,559</u>	<u>609,559</u>
Subtotal	\$16,920,552	\$16,920,552
 <u>Vested Terminations</u>		
Deferred Retirement Benefits	\$ 5,339,678	\$ 5,339,678
Health Benefits	<u>285,077</u>	<u>285,077</u>
Subtotal	\$ 5,624,755	\$ 5,624,755
 Total Present Value of Benefits	 \$36,210,374	 \$58,838,273

2.3 DEVELOPMENT OF NORMAL COST

(1) Present Value of Fully Projected Benefits	\$58,838,273
(2) Present Value of Accrued Benefits	36,210,374
(3) Present Value of Future Member Contributions	1,019,577
(4) Present Value of Future Consolidated Employer Contributions (1) - (2) - (3)	21,608,322
(5) Average Present Value of Future Service	15.7075
(6) Normal Cost (4) ÷ (5)	\$ 1,375,669

2.4 CALCULATION OF TOTAL CONTRIBUTION RATE

(1) Present Value of Accrued Benefits	\$36,210,374
(2) Assets	8,044,425
(3) Total Unfunded Liability (1) - (2)	28,165,949
(4) 25-Year Amortization Factor	11.528758
(5) Past Service Payment (3) ÷ (4)	2,443,103
(6) Normal Cost	1,375,669
(7) Total Contribution (5) + (6)	3,818,772
(8) Total Current Base Pay	3,366,204
(9) Contribution as Percent of Base Pay (7) ÷ (8)	113.44%