



STATE OF ALASKA  
JUDICIAL RETIREMENT SYSTEM

Actuarial Valuation  
as of  
June 30, 1982

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**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, 1982. 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 1985.

The most significant results of the valuation are as follows:

	<u>1981</u>	<u>1982</u>
(1) Status of Funding as of June 30		
(a) Valuation Assets	\$ 39,728	\$ 2,580,200
(b) Present Value of Accrued Benefits	21,118,355	27,827,998
(c) Accrued Benefit Funding Ratio	.2%	9.3%
(2) Contributions For Fiscal Year	<u>1983-84</u>	<u>1985</u>
(a) Normal Cost	\$ 1,410,730	\$ 1,366,796
(b) Past Service Cost	1,828,352	2,189,984
(c) Total Cost	<u>3,239,082</u>	3,556,780
(d) Cost As Percent of Base Pay	104.78%	109.14%

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, ASA  
Principal

RFR:js

September 21, 1982

3591 = 85,898.51 CR  
3859 2,796,005.91 ✓  
3904 - 787,199.97 DR  
2,094,704.25 ?

## ANALYSIS OF THE VALUATION

This year's actuarial valuation report is based upon the same actuarial method and assumptions as used in last year's initial valuation report. As can be seen in the prior Summary, there was a large increase in the present value of accrued benefits of more than \$6.7 million. Concurrent with the increase in the accrued liability, there was a large increase in the contribution rate. The goal of the actuarial method and assumptions is to keep your annual contributions level as a percentage of earnings. However, since last year's actuarial valuation report, the contribution rate has increased 4.36%. The reasons for this large increase follow.

### Vested Terminations

A more complete review of the plan's data uncovered five terminated vested members who were not included in last year's actuarial data. Inclusion of these five additional members increased accrued liabilities by approximately \$2.6 million.

### Additional Credited Service

A review of employment histories for current active participants in the plan showed additional credited service for several members of the System . . . thus increasing the average credited service for active members from 6.77 years to 7.88 years. This additional

credited service added an additional \$1.4 million to the accrued liability.

Summary

Primarily due to changes in the employee data and other data corrections, accrued liabilities increased dramatically during the year . . . thus leading to an increase in the annual contribution rate. In any plan covering only a small number of members, annual contribution rates can vary from year to year. However, the more than 4% increase in the contribution rate this year is abnormal and should not be anticipated to occur in the future years.

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

Mandatory Employee Contributions: 7% of salary for each year of service up to 15 years, if appointed after June 30, 1978.

Interest Credited:  $4\frac{1}{2}\%$  compounded semi-annually on June 30 and December 31.

Refund at Termination (no vesting): Return of contributions with interest.

Refund at Death: If no widow's pension payable, return of contributions with interest.

(3) Normal Retirement Benefit

Eligibility: Age 60 with 5 or more years of Service.

Type: Life only, with Automatic 50% Joint and Survivor Benefit if married.

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

Eligibility: Age 55 or 20 or more years of Service.

Type: Life only, with Automatic 50% Joint and Survivor Benefit if married.

Amount: Actuarial equivalent of Normal Retirement Benefit based on service to Early Retirement Date.

(5) Deferred Vested Benefit

Eligibility: Five or more years of Service.

Type: Normal or Early Retirement Benefit.

Amount: Monthly benefit begins on employee's Normal Retirement Date. Amount determined in the same manner as Normal Retirement Benefit.

(6) Disability Benefit

Eligibility: Two or more years of Credited Service.

Type: Monthly benefit payable until death or recovery.

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.

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1.2 CHANGES IN PLAN PARTICIPANTS  
FROM 6-30-81 TO 6-30-82

Active Participants

Total, 6-30-81	48
New Entrants	6
Returned From Non-Vested Status	0
Returned From Vested Status	0
Non-Vested Terminations	(2)
Vested Terminations	(2)
Retirements	(2)
Deaths	<u>0</u>
Total, 6-30-82	48

Vested Terminations

Total, 6-30-81	0
New Vested Terminations	7
Retirements	0
Returned to Active Status	0
Deaths	<u>0</u>
Total, 6-30-82	7

Retirees and Survivors

Total, 6-30-81	21
New Retirements	3
New Survivors	0
Deaths	<u>0</u>
Total, 6-30-82	24

1.3 MISCELLANEOUS INFORMATION

AS OF JUNE 30

Active Members

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

Inactive Members

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

Retirees and Beneficiaries

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

STATE OF ALASKA - JUDICIAL RETIREMENT SYSTEM

VALUATION DATE 7/ 1/1982

----- ANNUAL EARNINGS BY AGE-----			
AGE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0-19	0	0.	0.
20-24	0	0.	0.
25-29	0	0.	0.
30-34	3	181800.	60600.
35-39	9	607392.	67488.
40-44	10	699864.	69986.
45-49	12	830004.	69167.
50-54	7	452748.	64678.
55-59	5	356352.	71270.
60-64	1	60600.	60600.
65-69	1	70116.	70116.
70-74	0	0.	0.
75-79	0	0.	0.
80+	0	0.	0.
TOTAL	48	3258876.	67893.

---- ANNUAL EARNINGS BY SERVICE----			
SERVICE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0	4	270948.	67737.
1	6	413628.	68933.
2	1	70116.	70116.
3	0	0.	0.
4	6	402240.	67040.
0-4	17	1156932.	68055.
5-9	16	1081920.	67620.
10-14	8	559632.	69954.
15-19	4	251916.	62979.
20-24	3	208476.	69492.
25-29	0	0.	0.
30-34	0	0.	0.
35-39	0	0.	0.
40+	0	0.	0.
TOTAL	48	3258876.	67893.

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	3	0	0	0	0	0	0	0	0	3
35-39	6	3	0	0	0	0	0	0	0	9
40-44	4	5	1	0	0	0	0	0	0	10
45-49	3	3	5	1	0	0	0	0	0	12
50-54	1	4	1	0	1	0	0	0	0	7
55-59	0	1	1	2	1	0	0	0	0	5
60-64	0	0	0	1	0	0	0	0	0	1
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	17	16	8	4	3	0	0	0	0	43

1.4 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 <u>greatest</u> of the following amounts:<br>a) 0%<br>b) 3% if service is greater than 15 years.<br>c) 6% if vested <u>and</u> immediately eligible for <u>full</u> benefits based on retirement provision.<br>d) 10% if vested <u>and</u> 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, 1982

Total Fund, 6-30-81 \$ 39,728

Additions:

Employer Contributions	\$2,797,161 *	
Employee Contributions	<u>87,707</u>	2,884,868

Disbursements:

Benefit Payments	\$ 763,019	
Expenses	<u>26,494</u>	<u>789,513</u>

Total Fund, 6-30-82 2,135,083

Employee<sup>r</sup> Contributions Receivable 444,605 \*

Employer<sup>e</sup> Contributions Receivable 512 *2nd PLAN*

Valuation Assets, 6-30-82 \$2,580,200

2.2 BREAKDOWN OF PRESENT VALUE  
OF BENEFITS

<u>Active Participants</u>	<u>Present Value of Accrued Benefit</u>	<u>Present Value of Fully Projected Benefit</u>
Retirement Benefits	\$ 8,422,134	\$25,891,090
Disability Benefits	111,185	416,517
Death Benefits	812,448	3,180,712
Deferred Benefits	727,300	3,238,675
Health Benefits	<u>213,286</u>	<u>533,215</u>
Subtotal	\$10,286,353	\$33,260,209
 <u>Retirees and Survivors</u>		
Retired Members' Benefits	\$13,557,867	\$13,557,867
Health Benefits	<u>236,328</u>	<u>236,328</u>
Subtotal	\$13,794,195	\$13,794,195
 <u>Vested Terminations</u>		
Deferred Retirement Benefits	\$ 3,645,013	\$ 3,645,013
Health Benefits	<u>102,437</u>	<u>102,437</u>
Subtotal	\$ 3,747,450	\$ 3,747,450
 Total Present Value of Benefits	 \$27,827,998	 \$50,801,854

2.3 DEVELOPMENT OF NORMAL COST  
FOR FISCAL YEAR 1985

(1) Present Value of Fully Projected Benefits	\$50,801,854
(2) Present Value of Accrued Benefits	27,827,998
(3) Present Value of Future Member Contributions	795,955
(4) Present Value of Future Consolidated Employer Contributions (1) - (2) - (3)	22,177,901
(5) Average Present Value of Future Service	16.2262
(6) Normal Cost	\$ 1,366,796

2.4 CALCULATION OF TOTAL CONTRIBUTION  
FOR FISCAL YEAR 1985

(1) Present Value of Accrued Benefits	\$27,827,998
(2) Assets	2,580,200
(3) Total Unfunded Liability (1) - (2)	25,247,798
(4) 25-Year Amortization Factor	11.528758
(5) Past Service Payment (3) ÷ (4)	2,189,984
(6) Normal Cost	1,366,796
(7) Total Contribution	3,556,780
(8) Total Current Base Pay	3,258,876
(9) Contribution as Percent of Base Pay (7) ÷ (8)	109.14%