

STATE OF ALASKA  
JUDICIAL RETIREMENT SYSTEM

Actuarial Valuation  
as of  
June 30, 1981

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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, 1981. 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 1983.

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The most significant results of the valuation are as follows:

	<u>1981</u>
(1) Status of Funding as of June 30	
(a) Valuation Assets	\$ 39,728
(b) Present Value of Accrued Benefits	21,118,355
(c) Accrued Benefit Funding Ratio	0.19%
(2) Contributions For Fiscal Year	<u>1983</u>
(a) Normal Cost	\$1,410,730
(b) Past Service Cost	1,828,352
(c) Total Cost	3,239,082
(d) Cost As Percent of Base Pay	104.78%

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  
Vice President/Actuary

RFR:js

September 16, 1981

ANALYSIS OF THE VALUATION

This is the first actuarial valuation report completed on the State of Alaska Judicial Retirement System. Since the plan was established, it has been funded on a "pay-as-you-go" method. Under this approach, assets which are only sufficient to provide benefits becoming due during the year are appropriated.

Legislation adopted in 1980 provides for this plan to be funded on an actuarially sound basis. Under this approach, the goal is to accumulate assets in a fund before retirement which, along with interest earnings, will be sufficient to provide all benefits which are expected to be payable to the member. The present value of benefits which are payable to those who are currently retired is approximately \$11.3 million. Current active judges and justices have also accumulated benefits based upon their service prior to July 1, 1981. Even though benefits to current active members will not be payable for several years, there is still an accrued liability based upon their prior service. The present value of accrued benefits to the current active members is approximately \$9.8 million. Therefore, in total, there is an unfunded accrued liability of approximately \$21.1 million.

When a plan is funded on an actuarially sound basis, each year a contribution is made which will pay for the benefits earned during

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the year by the current active members plus a payment which will be sufficient to amortize the unfunded accrued liability. With the very large unfunded liability that now exists, the past service payment for fiscal year 1983 is \$1,828,352. The value of benefits earned during the year is \$1,410,730. Thus, the total recommended contribution for fiscal year 1983 is \$3,091,401, or 104.78% of base pay.

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 JUDGES' RETIREMENT SYSTEM

(1) Employees Included

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

(2) Employee Contributions

Mandatory Employee Contributions: 7%, 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 and 20 or more Years Service.

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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.

1.2 MISCELLANEOUS INFORMATION

AS OF JUNE 30

Active Members

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

Retirees and Beneficiaries

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

Inactive Members

There are no inactive members with deferred benefits.

----- 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	8	524076.	65510.
20-24	0	0.	0.	1	3	191628.	63876.
25-29	0	0.	0.	2	0	0.	0.
30-34	3	173484.	57828.	3	5	314580.	62916.
35-39	11	695220.	63202.	4	7	441084.	63012.
40-44	10	676860.	67686.	0-4	23	1471368.	63973.
45-49	9	591252.	65695.	5-9	10	656376.	65638.
50-54	7	430236.	61462.	10-14	11	697836.	63440.
55-59	4	265824.	66456.	15-19	4	265824.	66456.
60-64	3	191628.	63876.	20-24	0	0.	0.
65-69	1	66900.	66900.	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	48	3091404.	64404.	TOTAL	48	3091404.	64404.

SERVICE GROUPS BY AGE GROUPS

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
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	2	1	0	0	0	0	0	0	0	3
35-39	11	0	0	0	0	0	0	0	0	11
40-44	6	3	1	0	0	0	0	0	0	10
45-49	2	3	4	0	0	0	0	0	0	9
50-54	2	1	2	2	0	0	0	0	0	7
55-59	0	1	2	1	0	0	0	0	0	4
60-64	0	1	2	0	0	0	0	0	0	3
65-69	0	0	0	1	0	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80+	0	0	0	0	0	0	0	0	0	0
TOTAL	23	10	11	4	0	0	0	0	0	48

1.3 ANNUAL EARNINGS BY AGE AND SERVICE AND SERVICE GROUPS BY AGE GROUPS

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. 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.
  4. Disability 25% of disability under the State of Alaska 1976 study.
  5. Retirement Age Age 70.
  6. Salary Scale 7.5% per year, compounded annually.

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 JULY 1, 1981

The only assets under the system are the current member contribution accounts, estimated to total \$39,728.

2.2 BREAKDOWN OF PRESENT VALUE  
OF BENEFITS

	<u>Present Value of Accrued Benefit</u>	<u>Present Value of Fully Projected Benefit</u>
Retirement Benefits (Including Deferred)	\$ 9,442,395	\$31,798,378
Disability Benefits	115,169	468,025
Lump-Sum Benefits (Return of Contributions)	584	15,937
Health Benefits	<u>217,227</u>	<u>543,067</u>
Total	\$ 9,775,375	\$32,825,407
Retired Members' Benefits	\$11,001,259	\$11,001,259
Health Benefits	<u>341,721</u>	<u>341,721</u>
Total Present Value of Benefits	\$21,118,355	\$44,168,387

2.3 DEVELOPMENT OF NORMAL COST  
FOR FISCAL YEAR 1983

(1) Present Value of Fully Projected Benefits	\$44,168,387
(2) Present Value of Accrued Benefits	21,118,355
(3) Present Value of Future Member Contributions	681,642
(4) Present Value of Future Consolidated Employer Contributions (1) - (2) - (3)	22,368,390
(5) Average Present Value of Future Service	15.8559
(6) Normal Cost	\$ 1,410,730

2.4 CALCULATION OF TOTAL CONTRIBUTION  
FOR FISCAL YEAR 1983

(1) Present Value of Accrued Benefits	\$21,118,355
(2) Assets	39,728
(3) Total Unfunded Liability (1) - (2)	21,078,627
(4) 25-Year Amortization Factor	11.528758
(5) Past Service Payment (3) ÷ (4)	1,828,352
(6) Normal Cost	1,410,730
(7) Total Contribution	3,239,082
(8) Total Current Base Pay	3,091,404
(9) Contribution as Percent of Base Pay (7) ÷ (8)	104.78%