



STATE OF ALASKA  
JUDICIAL RETIREMENT SYSTEM

Actuarial Valuation

as of

June 30, 1986

WILLIAM M.  
**MERCER - Meidinger**  
INCORPORATED

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**William M. Mercer-Meidinger, Incorporated**

**HIGHLIGHTS**

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

- (1) present the results of a valuation of the Alaska Judicial Retirement System as of June 30, 1986;
- (2) review experience under the plan for the year ended June 30, 1986;
- (3) determine the contribution rate for the Judicial Retirement System;
- (4) provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into two sections. Section 1 describes the basis of the valuation. It summarizes the plan provisions, provides information relating to the plan participants, and describes the funding methods and actuarial assumptions used in determining liabilities and costs.

Section 2 contains the results of the valuation. It includes the experience of the plan during the 1984-1986 plan years, the current annual costs, and reporting and disclosure information.

The principle results are as follows:

	<u>1984*</u>	<u>1986</u>
Funding Status as of June 30		
(a) Valuation Assets	\$ 8,044,425	\$ 15,005,269
(b) Present Value of Accrued Benefits	25,728,017	28,407,780
(c) Accrued Benefit Funding Ratio (a) / (b)	31.3%	52.8%
Recommended Contribution Rates	<u>FY87-FY88</u>	<u>FY89-FY90</u>
(a) Normal Cost Rate	27.73%	24.27%
(b) Past Service Cost Rate	49.07%	30.81%
(c) Total Annual Cost Rate	76.80%	55.08%

\* after change in actuarial assumptions

**William M. Mercer-Meidinger, Incorporated**

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data and financial information provided to us by the plan sponsor, to determine a sound value for the plan liabilities. We believe that this value and the method suggested for funding it are in full compliance with the Governmental Accounting Standards Board, the Internal Revenue Code, and all applicable regulations.

Respectfully submitted,

*Robert F. Richardson*

Robert F. Richardson, ASA  
Principal

RFR/jam

December 19, 1986

## ANALYSIS OF VALUATION

### Actuarial Method and Assumptions

This actuarial report is the first to utilize the projected unit credit actuarial method and the revised actuarial assumptions.

The interest rate assumption was increased from 8% to 9% per year. The salary scale was lowered to 6% per year, down from 7.5%. We also assumed health benefits would increase with 9% annual inflation rather than 8% as in the prior assumptions.

This change in funding method was made to conform to the accounting procedures which were adopted by the Governmental Accounting Standards Board (GASB) in December 1985.

### Salary Increase

The increase in average annual salary was less than the actuarial assumption. As of June 30, 1986, the average annual salary was \$75,245, up only 5.6% from June 30, 1984. We assumed salaries would increase 6.5% each year. Accordingly, there was a large actuarial gain from less-than-anticipated salary increases which contributed to the decrease in total contribution rate and the large increase in the funding ratio.

### Investment Performance

For the period ending June 30, 1986, there was no investment income. For the period ending June 30, 1985, the plan's investment return was 7.75%. Our actuarial calculations are based upon the assumption that plan assets will earn 9% per year. The net result during the two years was an actuarial loss from investment resources.

### Membership Statistics

The average age decreased 1.02 years and the average service decreased .41 years. These provided small actuarial gains to the plan.

### Conclusions

Due to the large increase in assets, the accrued benefit funding ratio increased substantially from 31.3% to 52.8%. In summary, funding progress of the Judicial Retirement System is being achieved.

Section 1  
BASIS OF VALUATION

In this section, the basis of the valuation is presented and described. This information -- the provisions of the plan 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 plan provisions is provided in Section 1.1 and participant census information is shown in Section 1.2 to Section 1.4.

The valuation is based upon the premise that the plan 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 plan in a reasonable and acceptable manner, are described in Section 1.5.

Section 1.1  
SUMMARY OF PLAN PROVISIONS

(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: 4-1/2% compounded semiannually 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.



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Section 1.2  
CHANGES IN PLAN PARTICIPANTS FROM 6-30-84 TO 6-30-86

Active Participants

Total, 6-30-84	47
New Entrants	11
Returned From Non-Vested Status	0
Returned From Vested Status	0
Non-Vested Terminations	0
Vested Terminations	(1)
Retirements	(3)
Deaths	<u>(0)</u>
Total, 6-30-86	54

Vested Terminations

Total, 6-30-84	9
New Vested Terminations	1
Retirements	(1)
Returned to Active Status	0
Deaths	<u>0</u>
Total, 6-30-86	9

Retirees and Survivors

Total, 6-30-84	27
New Retirements	4
New Survivors	3
Deaths	<u>(4)</u>
Total, 6-30-86	30

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**Section 1.3**  
**MISCELLANEOUS INFORMATION AS OF JUNE 30**

<u>Active Members</u>	<u>1982</u>	<u>1984</u>	<u>1986</u>
(1) Number	48	47	54
(2) Average Age	46.24	47.53	46.51
(3) Average Service	7.88	8.42	8.01
(4) Average Annual Base Pay	\$67,893	\$71,621	\$75,245
 <u>Vested Terminated Members</u>			
(1) Number	7	9	9
(2) Average Age	41.91	46.39	47.58
(3) Average Service	8.98	9.01	7.91
(4) Average Monthly Benefit	\$ 2,389	\$ 2,350	\$ 2,137
 <u>Retirees and Beneficiaries</u>			
(1) Number	24	27	30
(2) Average Age	64.92	65.80	67.11
(3) Average Monthly Benefit	\$ 2,862	\$ 3,069	\$ 3,173

Section 1.4  
DISTRIBUTIONS OF ACTIVE PARTICIPANTS

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STATE OF ALASKA - JUDICIAL RETIREMENT SYSTEM - ACTIVES VALUATION DATE 6/30/1986

----- ANNUAL EARNINGS BY AGE-----		----- ANNUAL EARNINGS BY SERVICE-----	
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	1	66816.	66816.
35-39	9	632808.	70312.
40-44	15	1133472.	75565.
45-49	12	932628.	77719.
50-54	10	779400.	77940.
55-59	5	363480.	72696.
60-64	1	77304.	77304.
65-69	1	77304.	77304.
70-74	0	0.	0.
75-79	0	0.	0.
80+	0	0.	0.
TOTAL	54	4063212.	75245.

  

----- ANNUAL EARNINGS BY SERVICE-----		----- ANNUAL EARNINGS BY AGE-----	
SERVICE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0	1	77304.	77304.
1	10	710112.	71011.
2	1	77304.	77304.
3	4	277752.	69438.
4	4	298728.	74682.
0-4	20	1441200.	72060.
5-9	15	1160808.	77387.
10-14	12	921516.	76793.
15-19	4	320328.	80082.
20-24	1	66816.	66816.
25-29	2	152544.	76272.
30-34	0	0.	0.
35-39	0	0.	0.
40+	0	0.	0.
TOTAL	54	4063212.	75245.

SERVICE GROUPS BY AGE GROUPS

AGE	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	1	0	0	0	0	0	0	0	0	1
35-39	7	2	0	0	0	0	0	0	0	9
40-44	7	7	1	0	0	0	0	0	0	15
45-49	2	4	5	1	0	0	0	0	0	12
50-54	2	2	2	3	1	0	0	0	0	10
55-59	1	0	2	0	0	2	0	0	0	5
60-64	0	0	1	0	0	0	0	0	0	1
65-69	0	0	1	0	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	20	15	12	4	1	2	0	0	0	54

Section 1.5  
ACTUARIAL METHOD AND ASSUMPTIONS

Valuation of Liabilities

- A. Actuarial Method - Projected Unit Credit. The unfunded accrued benefit liability is amortized over 25 years.
- B. Actuarial Assumptions -
1. Interest 9% per year, compounded annually, net of investment expenses.
  2. Mortality 1984 Unisex Pension Mortality Table.
  3. Salary Scale 6% 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 In accordance with Table 1.
  6. Maximum Retirement Age Age 70.
  7. Health Benefits Assumed to increase with 9% annual inflation.
- C. Valuation Assets - Based upon accrued book values.

TABLE 1  
STATE OF ALASKA  
JUDICIAL RETIREMENT SYSTEM

Disability Rates

Annual Rates Per 1,000 Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.17	45	.41
21	.17	46	.44
22	.18	47	.48
23	.18	48	.52
24	.18	49	.56
25	.19	50	.60
26	.19	51	.65
27	.19	52	.72
28	.20	53	.80
29	.20	54	.89
30	.21	55	1.00
31	.21	56	1.15
32	.22	57	1.34
33	.22	58	1.53
34	.23	59	1.80
35	.24	60	2.11
36	.25	61	2.44
37	.26	62	2.83
38	.27	63	3.26
39	.28	64	3.73
40	.29		
41	.30		
42	.32		
43	.34		
44	.37		

Section 2  
VALUATION RESULTS

This section sets forth the results of the actuarial valuation.

Section 2.1 shows the transactions of the plan's fund during FY85 and FY86.

Section 2.2 shows the actuarial present values as of June 30, 1986.

Section 2.3 develops the total contribution rate.

Section 2.1  
DEVELOPMENT OF VALUATION ASSETS AS OF JUNE 30

	<u>FY85</u>	<u>FY86</u>
Net Assets Available for Benefits, Beginning of Year	<u>\$ 8,044,425</u>	<u>\$11,057,148</u>
Additions:		
Employee Contributions	\$ 140,107	\$ 158,635
Employer Contributions	3,245,922	4,870,704
Indebtedness Interest	980	800
Investment Income	<u>711,563</u>	<u>0</u>
	<u>\$ 4,098,572</u>	<u>\$ 5,030,139</u>
Deductions:		
Retirement Benefits	\$ 1,010,030	\$ 955,557
Medical Benefits	63,300	60,900
Employee Interest Earned	12,519	0
Administrative Expenses	<u>0</u>	<u>65,561</u>
	<u>\$ 1,085,849</u>	<u>\$ 1,082,018</u>
Net Assets Available for Benefits, End of Year	<u>\$11,057,148</u> =====	<u>\$15,005,269</u> =====

Section 2.2  
BREAKDOWN OF PRESENT VALUE OF BENEFITS

	<u>Normal Cost</u>	<u>Present Value of Accrued Benefits</u>
<u>Active Participants</u>		
Retirement Benefits	\$ 571,325	\$ 5,208,149
Disability Benefits	25,287	193,500
Death Benefits	132,625	1,086,993
Deferred Benefits	384,287	3,670,283
Health Benefits	<u>33,068</u>	<u>906,320</u>
Subtotal	\$ 1,146,592	\$11,065,245
 <u>Retirees and Survivors</u>		
Retired Members' Benefits		\$14,044,187
Health Benefits		<u>563,892</u>
Subtotal		\$14,608,079
 <u>Vested Terminations</u>		
Deferred Retirement Benefits		\$ 2,488,118
Health Benefits		<u>246,338</u>
Subtotal		\$ 2,734,456
 Total		 \$28,407,780



Section 2.3  
CALCULATION OF TOTAL CONTRIBUTION RATE

(1) Total Normal Cost	\$ 1,146,592
(2) Total Salaries	4,063,212
(3) Total Normal Cost Rate (1) / (2)	28.22%
(4) Average Employee Contribution Rate	3.95%
(5) Employer Normal Cost Rate (3) - (4)	24.27%
(6) Present Value of Accrued Benefits	\$28,407,780
(7) Assets	15,005,269
(8) Total Unfunded Liability, (6) - (7)	13,402,511
(9) Amortization Factor	10.706612
(10) Past Service Payment (8) / (9)	\$ 1,251,798
(11) Past Service Rate (10) / (2)	30.81%
(12) Total Contribution Rate, (5) + (11)	55.08%