

**State of Alaska**

**Judicial Retirement System**

**Actuarial Valuation**

**as of June 30, 1992**

**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 Judicial Retirement System as of June 30, 1992;
2. review experience under the Plan for the period July 1, 1990 to June 30, 1992;
3. determine the contribution rate for the Judicial Retirement System for Fiscal Years 1995 and 1996;
4. provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into two sections. Section 1 contains the results of the valuation. It includes the experience of the Plan during the 1990/91 and 1991/92 plan years, the current annual costs, and reporting and disclosure information.

Section 2 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.

The principal results are as follows:

## Funding Status as of June 30:

	<u>1990</u>	<u>1992</u>
a. Valuation Assets	\$28,014,214	\$36,878,167
b. Accrued Liability	34,481,706	47,270,758
c. Funding Ratio, (a) / (b)	81.2%	78.0%

## Recommended Contribution Rates:

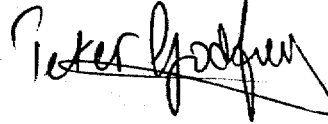
	<u>FY93-FY94</u>	<u>FY95-FY96</u>
a. Normal Cost Rate	23.95%	21.63%
b. Past Service Cost Rate	15.51%	19.55%
c. Total Employer Cost Rate	39.46%	41.18%

n preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data and financial information provided to us by your office, to determine a sound value for the System's 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,



Brian R. McGee, FSA  
Principal



Peter L. Godfrey, FIA  
Associate

JWJ/PLG/GTS/DLN/jls

August 24, 1993

# Analysis of Valuation

## Actuarial Method and Assumptions

The actuarial method and assumptions are the same as those used in the June 30, 1990 valuation.

## Salary Increases

Salaries for all active judges increased significantly from June 30, 1990 to June 30, 1992. The following table presents the annual salaries for the different court appointments:

	June 30, 1990	June 30, 1992
District Court	\$ 66,816.00	\$ 81,888.00
Appellate Court	79,992.00	98,688.00
Superior Court	77,304.00	96,600.00
Supreme Court	85,728.00	104,472.00
Administrative Director	77,304.00	102,468.00

The average annual salary increased from \$74,880 at June 30, 1990 to \$93,685 at June 30, 1992, an average annual increase of 11.9%. Since we assumed an average annual salary increase of 6% in the valuation as of June 30, 1990, there resulted an actuarial loss due to salary experience which decreased the funding ratio and increased the total contribution rate.

## Investment Performance

The rate of return on investments during Fiscal Year 1991 was 9.15% and the rate of return during Fiscal Year 1992 was 13.26%, net of administrative expenses. However, as noted in Section 1.1, the value of the assets as of June 30, 1990, reported in the June 30, 1990 valuation report, was understated. There was therefore an increased return on investments which was not reported in the June 30, 1990 valuation. Recognition of this return in this valuation increased the net annual return during the two-year period to 12.23%. Our actuarial calculations are based upon the assumption that the System's assets will earn 9% per year. This resulted in an actuarial gain to the System, increasing the funding ratio and reducing the contribution rate.

## **Health Premiums**

The blended monthly premium reduced from \$243.98 for FY91 to \$226.90 for FY93, an annual decrease of 3.6%. Since we assumed an annual increase in health premiums of 9% during FY91 and FY92, there resulted an actuarial gain from health premiums which increased the funding ratio and reduced the total contribution rate.

## **Membership Statistics**

The average age of active participants increased by 0.63 years and the average past service decreased 0.09 years. The average salary increased dramatically from June 30, 1990 to June 30, 1992. The average age of vested terminated members increased by 1.41 years and of retirees and survivors by 0.92 years. Average benefits increased substantially for retirees and terminated vested participants. The changes in active and retired participant averages tended to produce an actuarial loss. The net effect was to reduce the funding ratio and increase the total contribution rate of the system.

## **Summary**

The overall effect of the actuarial loss was a decrease in the funding ratio from 81.2% to 78.0% and an increase in the total contribution rate from 39.46% to 41.18% of pay. We expect the System to continue to maintain a sound financial position.

# **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 FY91 and FY92.

Section 1.2 shows the actuarial present values as of June 30, 1992.

Section 1.3 calculates the actuarial gain or loss for FY91 and FY92.

Section 1.4 develops the total contribution rate.

Section 1.5 provides disclosure information for GASB Statement No. 5.

## 1.1 Development of Valuation Assets

	<u>FY91</u>	<u>FY92</u>
<b>Net Assets Available for Benefits, Beginning of Year</b>	<u>\$28,603,119*</u>	<u>\$31,968,055</u>
<b>Additions:</b>		
Employee Contributions	\$ 217,516	\$ 250,497
Employer Contributions	2,491,202	2,542,598
Net Realized Gains	128,180	810,664
Net Unrealized Gains	506,656	1,330,380
Investment Income	<u>2,081,521</u>	<u>2,234,475</u>
	\$ 5,425,075	\$ 7,168,614
<b>Deductions:</b>		
Retirement Benefits	\$ 1,879,416	\$ 2,054,973
Medical Benefits	114,554	109,944
Administrative Expenses	<u>66,169</u>	<u>93,585</u>
	\$ 2,060,139	\$ 2,258,502
<b>Net Assets Available for Benefits, End of Year</b>	<u>\$31,968,055</u>	<u>\$36,878,167</u>
<b>Approximate Investment Return Rate During the Year, Net of Administrative Expenses</b>	9.15%	13.26%

\* The value of assets reported in the June 30, 1990 valuation as of the end of FY90 was \$28,014,214. The statement of net assets provided to us for this valuation shows a value of assets as of the beginning of FY91 of \$28,603,119. Based on conversations with the Division of Retirement and Benefits, we understand that the end of FY90 value was understated and should have been \$28,603,119.



## 1.2 Breakdown of Present Value of Benefits at June 30, 1992

	<u>Normal Cost</u>	<u>Accrued Liability</u>
<b>Active Participants</b>		
Retirement Benefits	\$ 744,738	\$ 7,681,663
Disability Benefits	30,937	258,236
Death Benefits	156,977	1,371,869
Deferred Benefits	352,041	4,871,882
Health Benefits	<u>41,628</u>	<u>1,175,779</u>
Subtotal	\$1,326,321	\$15,359,429
<b>Retirees and Survivors</b>		
Retired Members' Benefits		\$23,210,493
Health Benefits		<u>1,108,191</u>
Subtotal		\$24,318,684
<b>Vested Terminations</b>		
Deferred Retirement Benefits		\$ 6,930,151
Health Benefits		<u>662,494</u>
Subtotal		\$ 7,592,645
<b>Total</b>		<b>\$47,270,758</b>

### 1.3 Development of Actuarial Gain/(Loss) for FY91 and FY92

1.	Unfunded Liability, June 30, 1990	\$ 6,467,492
2.	Normal Cost for FY91	1,108,634
3.	Normal Cost for FY92	1,208,411
4.	Interest on (1), (2) and (3) at 9%	1,521,742
5.	Employee Contributions for FY91 and FY92	468,013
6.	Employer Contributions for FY91 and FY92	5,033,800
7.	Interest on (5) and (6) at 9%	496,767
8.	Expected Unfunded Liability, June 30, 1992, (1) + (2) + (3) + (4) - (5) - (6) - (7)	4,307,699
9.	Actual Unfunded Liability, June 30, 1992	10,392,591
10.	Actuarial Gain/(Loss) for the Period, (8) - (9)	\$ (6,084,892)

## 1.4 Calculation of Total Contribution Rate

1. Total Normal Cost	\$ 1,326,321
2. Total Salaries	4,965,324
3. Total Normal Cost Rate, (1) / (2)	26.71%
4. Average Employee Contribution Rate	5.08%
5. Employer Normal Cost Rate, (3) - (4)	21.63%
6. Accrued Liability	\$47,270,758
7. Assets	36,878,167
8. Total Unfunded Liability, (6) - (7)	10,392,591
9. Amortization Factor	10.706612
10. Past Service Payment, (8) / (9)	970,670
11. Past Service Rate, (10) / (2)	19.55%
12. Total Employer Contribution Rate, (5) + (11)	41.18%

# 1.5 Disclosure for G.A.S.B. Statement No. 5

**State of Alaska**  
**Judicial Retirement System**  
**Disclosure for G.A.S.B. Statement No. 5**

<u>Valuation Date</u>	***** Pension Benefit Obligation *****				
	Current Retirees & Terminated	***** Current Employees ***** Contribs With Int	***** Employer Financed ***** Vested	Non-Vested	Total
June 30, 1991*	\$ 29,897,257	\$ 1,154,693	\$ 13,530,420	\$ 1,043,842	\$ 45,626,212
June 30, 1992	\$ 31,911,329	\$ 1,694,938	\$ 12,647,003	\$ 1,017,488	\$ 47,270,758

<u>Valuation Date</u>	***** Valuation Assets *****			***** Market Value Assets *****		
	Net Assets Available For Benefits	Unfunded PBO	Assets as Percent of PBO	Net Assets Available For Benefits	Unfunded PBO	Assets as Percent of PBO
June 30, 1991*	\$ 31,968,055	\$ 13,658,157	70%	\$ 31,968,055	\$ 13,658,157	70%
June 30, 1992	\$ 36,878,167	\$ 10,392,591	78%	\$ 36,878,167	\$ 10,392,591	78%

\* Based on an actuarial update.

## **Section 2**

### **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 2.1 and participant census information is shown in Section 2.2 to Section 2.4.

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 System in a reasonable and acceptable manner, are described in Section 2.5.

## **2.1 Summary of Plan Provisions**

### **1. Effective Date**

May 4, 1963, with amendments through June 30, 1993.

### **2. Administration of Plan**

The Commissioner of Administration is responsible for administering the Judicial Retirement System (JRS). The Alaska State Pension Investment Board is responsible for managing and investing the fund (Ch 31, SLA 1992).

### **3. Employees Included**

JRS membership is mandatory for all Supreme Court justices and Superior, District and Appellate Court judges. The administrative director of the Court System may elect to participate in either the JRS or the Public Employees' Retirement System (PERS).

### **4. Credited Service**

Members receive credit for each day of JRS employment. Earlier service as a magistrate or deputy magistrate before July 1, 1967 is covered under the JRS.

### **5. Employee Contributions**

Employees hired after July 1, 1978, are required to contribute 7% of their base annual salaries. Contributions are required for a maximum of 15 years. Employees hired before July 1, 1978 are not required to contribute.

Interest Credited: 4.5% compounded semiannually on June 30 and December 31.

Refund of Contributions: Nonvested employees may receive a refund of their contributions and interest earned if they terminate employment. Refunded contributions, plus 7% indebtedness interest, must be repaid within one year of JRS reemployment.

JRS contributions for terminated members may be attached to satisfy claims under Alaska Statute 09.38.065 or federal tax levies. Contributions that are attached to satisfy claims or tax levies may be reinstated at any time. The member is not required to return to JRS employment.

## 2.1 Summary of Plan Provisions (continued)

### 6. Retirement Eligibility and Benefits

Normal Retirement: Members are eligible for normal retirement at age 60 if they have at least five years of JRS service. Terminated, vested members may defer retirement and begin receiving benefits when they reach age 60.

Early Retirement: Members are eligible for early retirement at any age if they have at least 20 years of service. Terminated, vested members may defer retirement and begin receiving benefits when they reach age 55. Under early retirement, members receive reduced benefits equal to the actuarial equivalent of their normal retirement benefits. Early benefits are based on the member's service and early retirement date.

Type of Benefit: Lifetime monthly benefits are paid to the member. Upon the member's death, a survivor's benefit (below) may be payable if the member has an eligible spouse or dependent children.

Computation of Normal Retirement Benefit: 5% of authorized monthly base salary for each year of JRS service up to a maximum of 15 years. JRS benefits are recalculated when the salary for the office held changes. The maximum JRS benefit payable to a member is 75% of the authorized salary.

### 7. Survivor's Benefits

Survivor's benefits are payable to the spouse of a member if they have been married for at least one year immediately preceding the member's death and the member has at least two years of JRS service. The monthly survivor's benefit is equal to:

- (a) one-half of the monthly benefit that the member would have received if retired at the time of death; or
- (b) 30% of the authorized monthly base salary if the member was not eligible to retire, or was entitled to less than 60% of the authorized monthly base salary.

If there is no eligible surviving spouse, the member's dependent children receive, in equal shares, 50% of the benefit under (a) or (b).

When there is both an eligible surviving spouse and dependent children residing in separate households, the spouse and children share equally the benefit under (a) or (b).

If there is no surviving spouse or dependent children, the members' contribution account balance, including interest earned, will be paid to the designated beneficiary.

## **2.1 Summary of Plan Provisions (continued)**

### **8. Disability Benefits**

Members are eligible to receive monthly disability benefits at any age if they become incapacitated and they have at least two years of JRS service. Disability benefits are calculated the same as normal retirement benefits. See (6) *Retirement Benefits and Eligibility*.

### **9. Medical Benefits**

Medical benefits are provided at no cost to JRS members, their spouses and dependents while monthly retirement, disability and survivor benefits are being paid.



## 2.2 Changes in System Participation From June 30, 1990 to June 30, 1992

### Active Participants

Total, June 30, 1990	52
New Entrants	10
Returned From Non-Vested Status	0
Returned From Vested Status	2
Non-Vested Terminations	0
Vested Terminations	(7)
Retirements	(4)
Deaths	<u>0</u>
Total, June 30, 1992	53

### Vested Terminations

Total, June 30, 1990	12
New Vested Terminations	7
Retirements	0
Returned to Active Status	(2)
Omitted from Previous Valuation	0
Deaths	<u>0</u>
Total, June 30, 1992	17

### Retirees, Survivors and QDRO's

Total, June 30, 1990	39
New Retirements	4
New Survivors	1
New QDRO Recipients	0
Deaths	<u>(1)</u>
Total, June 30, 1992	43

## 2.3 Miscellaneous Information as of June 30

	<u>1984</u>	<u>1986</u>	<u>1988</u>	<u>1990</u>	<u>1992</u>
<b>Active Members</b>					
1. Number	47	54	53	52	53
2. Average Age	47.53	46.51	47.99	48.64	49.27
3. Average Service	8.42	8.01	8.94	9.52	9.43
4. Average Annual Base Pay	\$ 71,621	\$ 75,245	\$ 75,404	\$ 74,880	\$ 93,685

### **Vested Terminated Members**

1. Number	9	9	9	12	17
2. Average Age	46.39	47.58	47.98	48.18	49.59
3. Average Service	9.01	7.91	6.72	8.05	8.62
4. Average Monthly Benefit	\$ 2,350	\$ 2,137	\$ 2,001	\$ 2,446	\$ 3,107

### **Retirees, Beneficiaries and QDRO's**

1. Number	27	30	34	39	43
2. Average Age	65.80	67.11	67.53	68.21	69.13
3. Average Monthly Benefit	\$ 3,069	\$ 3,173	\$ 3,154	\$ 2,964	\$ 3,888

## 2.4 Distributions of Active Participants

### ----- Annual Earnings By Age -----

Age Groups	Number of People	Total Earnings	Average Earnings
0-19	0	\$ 0	\$ 0
20-24	0	0	0
25-29	0	0	0
30-34	0	0	0
35-39	0	0	0
40-44	16	1,444,704	90,294
45-49	17	1,602,240	94,249
50-54	9	876,300	97,367
55-59	7	677,232	96,747
60-64	3	260,376	86,792
65-69	1	104,472	104,472
70-74	0	0	0
75-79	0	0	0
80+	0	0	0
<b>Total</b>	<b>53</b>	<b>\$ 4,965,324</b>	<b>\$ 93,685</b>

### ----- Annual Earnings By Service -----

Years of Service	Number of People	Total Earnings	Average Earnings
0	1	\$ 81,888	\$ 81,888
1	8	730,752	91,344
2	3	275,088	91,696
3	4	371,688	92,922
4	1	81,888	81,888
0- 4	17	1,541,304	90,665
5- 9	13	1,196,952	92,073
10-14	13	1,261,008	97,001
15-19	7	675,228	96,461
20-24	1	104,472	104,472
25-29	1	81,888	81,888
30-34	1	104,472	104,472
35-39	0	0	0
40+	0	0	0
<b>Total</b>	<b>53</b>	<b>\$ 4,965,324</b>	<b>\$ 93,685</b>

### Years of Service By Age

Age	Years of Service									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	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0
40-44	10	3	3	0	0	0	0	0	0	16
45-49	7	5	5	0	0	0	0	0	0	17
50-54	0	4	2	3	0	0	0	0	0	9
55-59	0	0	2	3	1	1	0	0	0	7
60-64	0	1	1	1	0	0	0	0	0	3
65-69	0	0	0	0	0	0	1	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
<b>Total</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>53</b>

## 2.5 Actuarial Basis

### Valuation of Liabilities

- A. Actuarial Method - Projected Unit Credit.** Liabilities and contributions shown in the report are computed using the Projected Unit Credit method of funding. The unfunded accrued benefit liability is amortized over 25 years. Actuarial funding surpluses are amortized over five years.

The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, each participant's total pension projected to retirement with salary scale 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 of the Plan 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 Plan. The level annual payment to be made over a stipulated number of years to amortize the Unfunded Liability is 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              | 9% per year, compounded annually, net of expenses. |
| 2. Mortality             | 1984 Unisex Pension Mortality Table.               |
| 3. Salary Scale          | 6% per year, compounded annually.                  |
| 4. Health Cost Inflation | 9% per year.                                       |

## 2.5 Actuarial Basis (continued)

- |                                  |   |
|----------------------------------|---|
| 5. Turnover and Early Retirement | Annual turnover and early retirement at each age and service is the <u>greatest</u> of the following amounts: <ol style="list-style-type: none"><li>a. 0%</li><li>b. 3% if service is greater than 15 years.</li><li>c. 6% if vested <u>and</u> immediately eligible for full benefits based on retirement provision.</li><li>d. 10% if vested <u>and</u> age is greater than 64.</li></ol> |
| 6. Disability                    | In accordance with Table 1.   |
| 7. Maximum Retirement Age        | Age 70.   |

### Valuation of Assets

Based upon asset data as furnished by the Division of Retirement and Benefits.

### Valuation of Medical Benefits

Medical benefits for retirees are provided by the payment of premiums from the fund. A pre-65 cost and lower post-65 cost (due to Medicare) are assumed such that the total rate for all retirees equals the current premium rate, increased with 9% annual inflation. The actuarial cost method used for funding retirement benefits is also used to fund health benefits.

For FY93 the pre-65 monthly premium is \$310.80 and the post-65 premium is \$108.37, based on a total blended premium of \$226.90. These rates and the pre-65/post-65 split were provided by Deloitte & Touche.

**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		