

**STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM**

**ACTUARIAL VALUATION REPORT
AS OF JUNE 30, 1989**

REVISED

Prepared by
William M. Mercer, Incorporated
One Union Square, Suite 3200
600 University Street
Seattle, WA 98101-3137

**WILLIAM M.
MERCER**
INCORPORATED

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HIGHLIGHTS

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

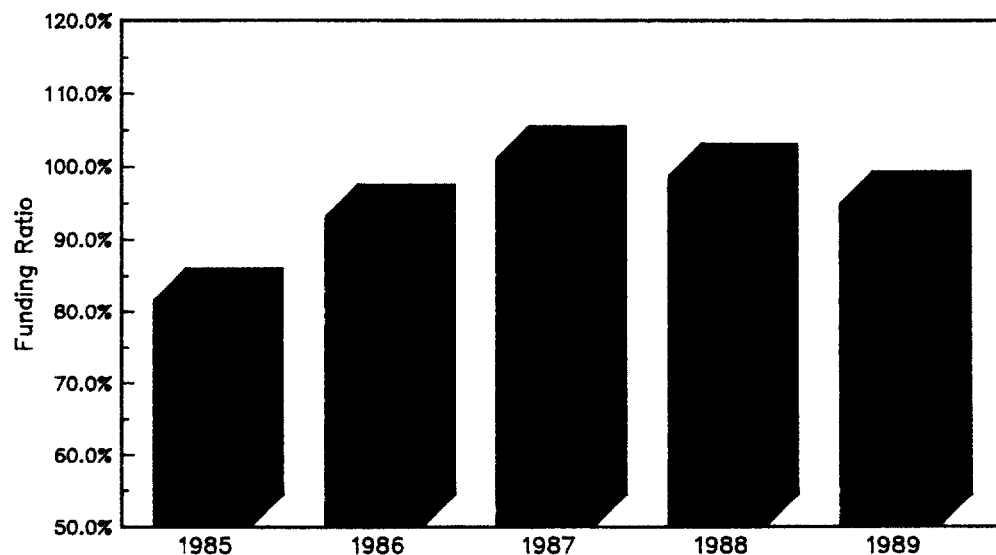
- (1) present the results of a valuation of the Alaska Teachers' Retirement System as of June 30, 1989;
- (2) review experience under the plan for the year ended June 30, 1989;
- (3) determine the appropriate contribution rate for the State and each school district in the System;
- (4) provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into two sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 1988-89 plan year, 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 principle results are as follows:

Funding Status as of June 30:	<u>1988</u>	<u>1989</u>
(a) Valuation Assets*	\$1,331,905	\$1,480,389
(b) Accrued Liability*	1,347,859	1,557,643
(c) Funding Ratio, (a) / (b)	98.8%	95.0%



* In thousands.

Employer Contribution Rates
for Fiscal Year

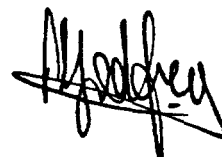
	<u>1991</u>	<u>1992</u>
(a) Normal Cost Rate	11.86%	13.26%
(b) Past Service Rate	.41%	1.90%
(c) Total Contribution Rate	12.27%	15.16%
(d) Three-year Average Rate	10.54%	11.87%

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us by the plan sponsor and financial information provided by the audited report from Coopers & Lybrand, 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,



Brian R. McGee, FSA
Principal



Peter L. Godfrey, FIA, ASA, EA
Consulting Actuary

BRM/PLG/js

April 26, 1990

ANALYSIS OF THE VALUATION

As can be seen from the Highlights section of this report, the funding ratio as of June 30, 1989 has decreased from 98.8% last year to 95.0%, a 3.8% reduction. The employer contribution rate has increased from 12.27% of payroll to 15.16%, an increase of 2.89%. The reasons for the change in the funded status and contribution rate are explained below.

1. Retiree Medical Insurance

During the year ended June 30, 1989, the System sustained an actuarial loss of \$75,955,000 due to the continuing large increases in retiree medical premiums.

For many years, we have commented on the substantial increases in retiree medical insurance premiums. The following table summarizes the monthly premium, per benefit recipient, since retiree medical became a benefit of the TRS.

<u>Fiscal Year</u>	<u>Monthly Premium Per Retiree For Health Coverage</u>	<u>Annual Percentage Increase</u>	<u>Average Annual Increase Since 1978</u>
1977	\$ 34.75	--	--
1978	57.64	66%	--
1979	69.10	20%	20%
1980	64.70	- 6%	6%
1981	96.34	49%	19%
1982	96.34	0%	14%
1983	115.61	20%	15%
1984	156.07	35%	18%
1985	191.85	24%	19%
1986	168.25	-12%	14%
1987	165.00	- 2%	12%
1988	140.25	-15%	9%
1989	211.22	51%	13%
1990	252.83	20%	13%
1991	243.98	-4%	12%

As you can see from the above table, the monthly retiree medical premium increased to \$252.83 during the year from \$211.22, an increase of 20%. The premium for the 1991 fiscal year decreased to \$243.98, making the average annual increase over the two-year period approximately 7.5%. However, we need to examine the pre- and post-65 rates to understand the full impact of the loss from retiree medical costs.

The State has seen a dramatic shift to post-65 rates. While the pre-65 premium rate increased 24%, the post-65 rate increased 65% over last year. This, combined with more retirees and higher average ages, caused an overall 44% increase in the liabilities associated with medical benefits.

The effect on the employer contribution rate of this increase in retiree medical premiums has been an increase of 3.06% of payroll.

2. Investment Performance

The System enjoyed significant actuarial gains from the investment performance of the Trust funds during the year. The rate of return based upon market values was 14.04% and the return based on valuation assets (a five-year smoothing of actuarial values) was 11.26%. As the assumed rate of return was 9%, the resulting actuarial gain was \$31,073,000 which had the effect of reducing the employer contribution rate by 0.76% of payroll.

3. Salary Increases

Once again, salary increases during the year were less than anticipated in the valuation assumptions. Salary experience resulted in an actuarial gain of \$18,146,000 which generated a reduction in the employer contribution rate of 0.45% of payroll.

4. Employee Data

Section 2.2 provides statistics on active and inactive participants. The number of active participants increased from 8,218 at June 30, 1988 to 8,527 at June 30, 1989. Furthermore, the average age of active participants increased from 41.34 to 41.82 and average credited service increased from 10.46 to 10.61.

The number of retirees and beneficiaries also increased from 2,972 to 3,098 and their average age increased from 61.41 to 61.85. There was a large increase in the number of vested terminated participants from 408 to 508. Their average age also increased significantly from 44.26 to 45.11.

Legislation passed in June, 1989 established a second Retirement Incentive Program (R.I.P.) which will be available to participants from July 1, 1989 to December 31, 1989. Thus, the R.I.P. had no new effect on the results of this valuation.

The overall effect of these participant data changes was an actuarial loss of \$26,501,000 resulting in an increase in the employer contribution rate of 0.65% of payroll.

5. Contribution Rates

Following the adoption of a three-year average contribution rate last year, we have developed the average rate applicable to the 1992 fiscal year. As shown in the Highlights section of this report, this rate is 11.87% of TRS payroll. Section 1.3(b) shows the effect of adopting the three-year average rate compared with the calculated rate for each of the last five years.

Asset Smoothing

In the past, the valuation of assets has been based on a three-year average ratio of book and actuarial values. This creates a smoothing of the investment gains and losses. Based on discussions with the Department of Revenue, the equity portion of the assets is growing, which further exposes the System to fluctuations in market returns. In response to this, we analyzed several asset smoothing techniques to determine the one most suitable to the System. Based on this analysis, we have extended the average ratio to five years. Due to a constraint that the valuation assets be within the range of book and actuarial values, this change does not affect valuation assets this year. Over time, we expect this will reduce wide swings in the contribution rates due to market volatility.

Summary

The following table summarizes the sources of change in the employer contribution rate:

(1) Last year's employer contribution rate	12.27%
(2) Increase due to retiree medical insurance.	3.06%
(3) Decrease due to investment performance	(0.76%)
(4) Decrease due to salary increases	(0.45%)
(5) Increase due to demographic experience	0.65%
(6) Impact of all other factors.	<u>0.39%</u>
(7) Employer contribution rate this year	15.16%

In summary, the total actuarial loss during the year was \$67,567,000. This may be expressed as an actuarial loss from retiree health insurance experience of \$75,955,000 and an actuarial gain from all other sources, including those described above, of \$8,388,000. Despite this overall loss during the year, the System remains well funded at 95% of accrued liabilities.

Section 1
VALUATION RESULTS

This section sets forth the results of the actuarial valuation.

Section 1.1(a) shows the distribution of the assets as of June 30, 1989.

Section 1.1(b) shows the transactions of the plan's fund during the Fiscal Year 1989.

Section 1.1(c) develops the valuation assets.

Section 1.2 shows the actuarial present values as of June 30, 1989.

Section 1.3(a) calculates the total contribution rate for Fiscal Year 1992.

Section 1.3(b) develops the three-year smoothed contribution rates for each year since June 30, 1985.

Section 1.4(a) calculates the actuarial gain or loss for FY89.

Section 1.4(b) shows the individual sources of gain and loss.

Section 1.5 provides disclosure information required by G.A.S.B. Statement No. 5.

Section 1.6 contains the financial projections.

Section 1.1(a)
STATEMENT OF NET ASSETS AS OF JUNE 30, 1989 (in thousands)

	<u>Book Value</u>	<u>Actuarial Value*</u>
Cash	\$ 524	\$ 524
Short-Term Investments	12,900	12,900
U.S. Government Bonds	582,596	582,596
Corporate Bonds	160,496	160,496
Common Stock	391,992	423,898
Foreign Stocks	94,046	98,147
Real Estate Equities	79,340	88,738
Mortgages (net of reserves)	88,235	88,235
Financial Futures	0	0
Accrued Receivables and Expenses	<u>24,855</u>	<u>24,855</u>
Total Assets	\$1,434,984	\$1,480,389

* The actuarial value of assets is the fair market value of equities and the book value of fixed income investments, as provided in the audited financial statements.

Section 1.1(b)
CHANGES IN NET ASSETS DURING FISCAL YEAR 1989 (in thousands)

Net Assets, June 30, 1988,
(market value) **\$1,356,575**

Additions:

Employee Contributions	\$ 31,888	
Employer Contributions	47,348	
Dividend Income	18,308	
Interest Income and Realized Gain/(Loss)	107,403	
Unrealized Gain (Loss) on Investments	<u>64,702</u>	269,649

Deductions:

Medical Benefits	\$ 8,073	
Retirement Benefits	65,328	
Refunds of Contributions	2,953	
Administrative Expenses	<u>3,993</u>	<u>80,347</u>

Net Assets, June 30, 1989,
(market value) **\$1,545,877**

**Approximate Investment Return
Rate During the Year:**

Based on Market Values	14.04%
Based on Valuation Assets	11.26%

Section 1.1(c)
DEVELOPMENT OF VALUATION ASSETS AS OF JUNE 30, 1989 (in thousands)

	A	B	C
	<u>Actuarial</u>	<u>Book</u>	<u>Ratio</u>
	<u>Values</u>	<u>Values</u>	<u>(A/B)</u>
(1) June 30, 1989	\$1,480,389	\$1,434,984	1.0316
(2) June 30, 1988	1,331,905	1,273,971	1.0455
(3) June 30, 1987	1,267,159	1,146,583	1.1052
(4) June 30, 1986	1,077,878	1,005,289	1.0722
(5) June 30, 1985	856,845	833,617	1.0279
(6) Average Ratio			1.0565
(7) Book Value at June 30, 1989			\$1,434,984
(8) Valuation Assets at June 30, 1989 (6) x (7) but not outside the range of book and actuarial values			\$1,480,389

Section 1.2

ACTUARIAL PRESENT VALUES AS OF JUNE 30, 1989 (in thousands)

	<u>Normal Cost</u>	<u>Accrued Liabilities</u>
<u>Active Members</u>		
Retirement Benefits	\$ 43,182	\$ 560,187
Termination Benefits	1,207	9,972
Return of Contributions	1,856	9,926
Disability Benefits	297	6,467
Death Benefits	1,247	15,184
Medical Benefits	29,997	206,366
Indebtedness	0	(27,367)
Retirement Incentive Program Receivables	<u>0</u>	<u>(2,388)</u>
Subtotal	\$ 77,786	\$ 778,347
<u>Inactive Members</u>		
Not Vested		\$ 9,209
Vested Terminations - Retirement Benefits		27,965
- Medical Benefits		28,493
Retirees & Beneficiaries - Retirement Benefits		580,328
- Medical Benefits		<u>133,301</u>
Subtotal		\$ 779,296
<u>Totals</u>		\$1,557,643

Section 1.3(a)
DEVELOPMENT OF TOTAL EMPLOYER CONTRIBUTION RATE - FY92 (in thousands)

Normal Cost Rate

(1) Total Normal Cost	\$ 77,786
(2) Total Salaries	380,267
(3) Normal Cost Rate, (1) / (2)	20.46%
(4) Average Member Contribution Rate	7.20%
(5) Employer Normal Cost Rate, (3) - (4)	13.26%

Past Service Rate

(1) Accrued Liability	\$1,557,643
(2) Valuation Assets	1,480,389
(3) Total Unfunded Liability, (1) - (2)	77,254
(4) Amortization Factor (25 year)	10.706612
(5) Past Service Cost, (3) / (4)	7,216
(6) Total Salaries	380,267
(7) Past Service Rate, (5) / (6)	1.90%

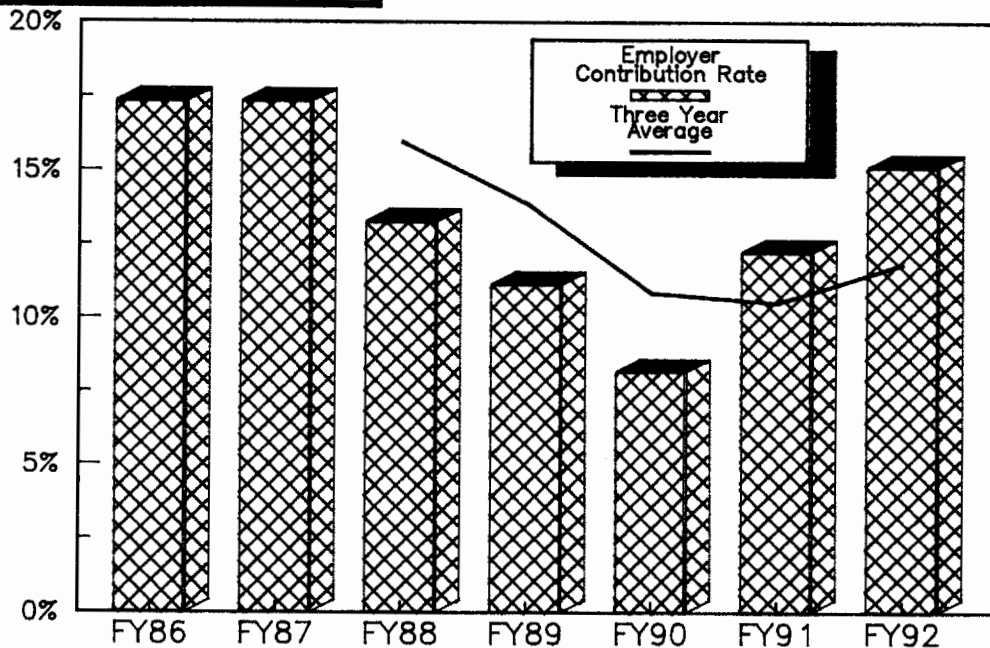
<u>Total Employer Contribution Rate</u>	15.16%
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Section 1.3(b)

THREE-YEAR SMOOTHING OF TOTAL EMPLOYER CONTRIBUTION RATE

<u>Valuation Date</u>	<u>For Fiscal Year</u>	<u>Employer Contribution Rate</u>	<u>Three-Year Average</u>
6-30-83	FY86	17.36%	
6-30-84	FY87	17.36%	
6-30-85	FY88	13.28%*	16.00%
6-30-86	FY89	11.16%	13.93%
6-30-87	FY90	8.19%	10.87%
6-30-88	FY91	12.27%	10.54%
6-30-89	FY92	15.16%	11.87%

Contribution Rates



* A change in actuarial assumptions on June 30, 1985 lowered the contribution rate from 16.68% to 13.28%

Section 1.4(a)
DEVELOPMENT OF ACTUARIAL GAIN/(LOSS) FOR FY89 (in thousands)

(1) Unfunded Liability, June 30, 1988	\$15,954
(2) Normal Cost for FY89	68,898
(3) Interest on (1) and (2) at 9%	7,637
(4) Employee Contributions for FY89	31,888
(5) Employer Contributions for FY89	47,348
(6) Interest on (4) and (5) at 9% for one-half year	3,566
(7) Expected Unfunded Liability, June 30, 1989, (1) + (2) + (3) - (4) - (5) - (6)	9,687
(8) Actual Unfunded Liability, June 30, 1989	77,254
(9) Actuarial Gain/(Loss) for the Year, (7) - (8)	\$(67,567)

Section 1.4(b)
SOURCES OF ACTUARIAL GAIN/(LOSS) FOR FY89 (in thousands)

Actuarial Gains

Investment	\$ 31,073
Salary Increases	18,146
Mortality and Disability	<u>457</u>
Total Actuarial Gains	\$ 49,676

Actuarial Losses

Retiree Medical Insurance	\$ 75,955
Expenses	4,172
New Entrants	10,222
Retirement, Turnover and Benefit Payments	20,863
Miscellaneous	<u>6,031</u>
Total Actuarial Losses	\$117,243

Net Actuarial Gain/(Loss) for FY89 \$ (67,567)

Section 1.5
DISCLOSURE FOR G.A.S.B STATEMENT NO. 5

STATE OF ALASKA - T. R. S.

Disclosure for G.A.S.B. Statement No. 5 ('000 Omitted)

Totals For All Employers

***** Projected Benefit Obligation *****					
Valuation Date	Current	***** Current Employees *****			Total
	Retirees & Terminated	Contribs With Int	***Employer Vested	Financed*** Non-Vested	
June 30, 1987	578,468	210,493	353,326	68,622	1,210,909
June 30, 1988	688,090	228,217	381,726	49,826	1,347,859
June 30, 1989	779,296	253,436	436,431	88,480	1,557,643

Valuation Date	***** 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, 1987	1,225,009	(14,100)	101 %	1,303,464	(92,555)	108 %
June 30, 1988	1,331,905	15,954	99 %	1,356,575	(8,716)	101 %
June 30, 1989	1,480,389	77,254	95 %	1,545,877	11,766	99 %

Table 1

State of Alaska TRS
Financial Projections ('000 omitted)

	Investment Return 9.00% (nominal)			Salary Increases 6.04% (6.5/5.5 assumed)							
As of June 30	--Valuation Amounts on July 1--	Accrued Liability	Surplus* (Deficit)	-----Flow Amounts During Following 12 Months-----	Employer Contributions	Employee Contributions	Total Contributions	Benefit Payments	Net Contributions	Investment Earnings	Ending Asset Valuation
	Total Assets			Total Salaries							
1989	1,480,389	1,557,643	(77,254)	380,267	60,639	32,281	92,919	83,168	9,751	139,669	1,629,810
1990	1,629,810	1,701,068	(71,258)	403,235	60,124	30,968	91,093	86,498	4,595	153,490	1,787,895
1991	1,787,895	1,855,811	(67,915)	427,591	63,042	32,753	95,795	90,010	5,785	168,412	1,962,092
1992	1,962,092	2,026,276	(64,184)	453,417	66,118	34,641	100,759	93,718	7,041	184,852	2,153,985
1993	2,153,985	2,213,998	(60,014)	480,803	69,360	36,637	105,997	97,635	8,362	202,959	2,365,305
1994	2,365,305	2,420,657	(55,352)	509,844	72,775	38,748	111,523	101,776	9,747	222,896	2,597,947
1995	2,597,947	2,648,085	(50,137)	540,638	76,371	40,980	117,352	106,159	11,193	244,841	2,853,981
1996	2,853,981	2,898,286	(44,305)	573,293	80,157	43,341	123,498	110,797	12,700	268,988	3,135,669
1997	3,135,669	3,173,450	(37,781)	607,920	84,139	45,837	129,976	120,756	9,220	295,325	3,440,214
1998	3,440,214	3,470,698	(30,484)	644,638	88,326	48,477	136,803	125,241	11,562	324,072	3,775,848
1999	3,775,848	3,798,196	(22,348)	683,574	92,729	51,268	143,997	133,646	10,351	355,584	4,141,783
2000	4,141,783	4,155,055	(13,272)	724,862	97,356	54,365	151,721	141,245	10,476	390,006	4,542,266
2001	4,542,266	4,545,434	(3,168)	768,644	102,218	57,648	159,866	145,947	13,919	427,826	4,984,011
2002	4,984,011	4,975,940	8,071	815,070	106,175	61,130	167,305	150,136	17,169	469,519	5,470,699
2003	5,470,699	5,451,319	19,379	864,300	110,035	64,823	174,858	159,165	15,693	515,225	6,001,617
2004	6,001,617	5,971,188	30,429	916,504	114,351	68,738	183,089	166,416	16,673	565,202	6,583,492

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

As of June 30	Funding Ratio	-----As % of Salaries-----				--As % of Assets--	
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings
1989	95.0	15.95%	8.49%	24.44%	21.87%	0.63%	9.00%
1990	95.8	14.91%	7.68%	22.59%	21.45%	0.27%	9.00%
1991	96.3	14.74%	7.66%	22.40%	21.05%	0.31%	9.00%
1992	96.8	14.58%	7.64%	22.22%	20.67%	0.34%	9.00%
1993	97.3	14.43%	7.62%	22.05%	20.31%	0.37%	9.00%
1994	97.7	14.27%	7.60%	21.87%	19.96%	0.39%	9.00%
1995	98.1	14.13%	7.58%	21.71%	19.64%	0.41%	9.00%
1996	98.5	13.98%	7.56%	21.54%	19.33%	0.42%	9.00%
1997	98.8	13.84%	7.54%	21.38%	19.86%	0.28%	9.00%
1998	99.1	13.70%	7.52%	21.22%	19.43%	0.32%	9.00%
1999	99.4	13.57%	7.50%	21.07%	19.55%	0.26%	9.00%
2000	99.7	13.43%	7.50%	20.93%	19.49%	0.24%	9.00%
2001	99.9	13.30%	7.50%	20.80%	18.99%	0.29%	9.00%
2002	100.2	13.03%	7.50%	20.53%	18.42%	0.33%	9.00%
2003	100.4	12.73%	7.50%	20.23%	18.42%	0.27%	9.00%
2004	100.5	12.48%	7.50%	19.98%	18.16%	0.27%	9.00%

Table 2

State of Alaska TRS
Financial Projections ('000 omitted)

	Investment Return 10.00% (nominal)			Salary Increases			6.04% (6.5/5.5 assumed)				
	--Valuation Amounts on July 1--			-----Flow Amounts During Following 12 Months-----							Ending
As of June 30	Total Assets	Accrued Liability	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	Asset Valuation
1989	1,480,389	1,557,643	(77,254)	380,267	60,639	32,281	92,919	83,168	9,751	155,928	1,646,069
1990	1,646,069	1,701,068	(54,999)	403,235	58,606	30,968	89,574	86,498	3,076	172,991	1,822,136
1991	1,822,136	1,855,811	(33,674)	427,591	59,844	32,753	92,597	90,010	2,587	191,454	2,016,177
1992	2,016,177	2,026,276	(10,099)	453,417	61,066	34,641	95,707	93,718	1,990	211,798	2,229,965
1993	2,229,965	2,213,998	15,966	480,803	59,989	36,637	96,626	97,635	(1,009)	234,096	2,463,052
1994	2,463,052	2,420,657	42,395	509,844	57,606	38,748	96,354	101,776	(5,422)	258,349	2,715,978
1995	2,715,978	2,648,085	67,894	540,638	55,675	40,980	96,655	106,159	(9,504)	284,703	2,991,177
1996	2,991,177	2,898,286	92,892	573,293	54,109	43,341	97,450	110,797	(13,348)	313,406	3,291,236
1997	3,291,236	3,173,450	117,786	607,920	52,829	45,837	98,666	120,756	(22,090)	344,475	3,613,621
1998	3,613,621	3,470,698	142,923	644,638	51,769	48,477	100,245	125,241	(24,996)	378,180	3,966,805
1999	3,966,805	3,798,196	168,610	683,574	50,873	51,268	102,141	133,646	(31,505)	414,939	4,350,239
2000	4,350,239	4,155,055	195,185	724,862	50,080	54,365	104,444	141,245	(36,800)	454,935	4,768,374
2001	4,768,374	4,545,434	222,940	768,644	49,338	57,648	106,987	145,947	(38,960)	498,731	5,228,145
2002	5,228,145	4,975,940	252,205	815,070	48,592	61,130	109,722	150,136	(40,414)	546,935	5,734,666
2003	5,734,666	5,451,319	283,346	864,300	47,775	64,823	112,597	159,165	(46,568)	599,812	6,287,909
2004	6,287,909	5,971,188	316,721	916,504	46,825	68,738	115,563	166,416	(50,853)	657,688	6,894,744

- Surpluses reduce employer contributions over 5 years
- Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

As of June 30	Funding Ratio	-----As % of Salaries-----				--As % of Assets--	
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings
1989	95.0	15.95%	8.49%	24.44%	21.87%	0.63%	10.00%
1990	96.8	14.53%	7.68%	22.21%	21.45%	0.18%	10.00%
1991	98.2	14.00%	7.66%	21.66%	21.05%	0.14%	10.00%
1992	99.5	13.47%	7.64%	21.11%	20.67%	0.09%	10.00%
1993	100.7	12.48%	7.62%	20.10%	20.31%	-0.04%	10.00%
1994	101.8	11.30%	7.60%	18.90%	19.96%	-0.21%	10.00%
1995	102.6	10.30%	7.58%	17.88%	19.64%	-0.33%	10.00%
1996	103.2	9.44%	7.56%	17.00%	19.33%	-0.43%	10.00%
1997	103.7	8.69%	7.54%	16.23%	19.86%	-0.64%	10.00%
1998	104.1	8.03%	7.52%	15.55%	19.43%	-0.66%	10.00%
1999	104.4	7.44%	7.50%	14.94%	19.55%	-0.76%	10.00%
2000	104.7	6.91%	7.50%	14.41%	19.49%	-0.81%	10.00%
2001	104.9	6.42%	7.50%	13.92%	18.99%	-0.78%	10.00%
2002	105.1	5.96%	7.50%	13.46%	18.42%	-0.74%	10.00%
2003	105.2	5.53%	7.50%	13.03%	18.42%	-0.78%	10.00%
2004	105.3	5.11%	7.50%	12.61%	18.16%	-0.77%	10.00%

Table 3

State of Alaska TRS

Financial Projections ('000 omitted)

Investment Return 9.00% (nominal) Salary Increases 5.04% (5.5/4.5 assumed)

As of June 30	--Valuation Amounts on July 1--			Flow Amounts During Following 12 Months--			Ending		
	Total Assets	Accrued Liability	Surplus*	Total Employer Salaries	Employee Contribs	Total Contribs	Net Investment	Earnings	Asset Valuation
1989	1,480,389	1,557,643	(77,254)	380,267	60,639	32,281	92,919	83,168	139,669
1990	1,629,810	1,695,744	(65,934)	399,432	59,123	30,676	89,799	86,194	153,446
1991	1,786,861	1,843,866	(57,004)	419,564	60,958	32,139	93,097	89,368	168,222
1992	1,958,812	2,006,222	(47,410)	440,710	62,866	33,670	96,536	92,701	184,399
1993	2,147,046	2,184,138	(37,092)	462,922	64,848	35,275	100,122	96,204	202,106
1994	2,353,071	2,379,053	(25,983)	486,253	66,904	36,955	103,859	99,889	221,485
1995	2,578,525	2,592,538	(14,012)	510,760	69,035	38,716	107,751	103,769	242,690
1996	2,825,197	2,826,299	(1,102)	536,502	71,243	40,560	111,803	107,854	265,887
1997	3,095,033	3,082,200	12,833	563,542	71,699	42,491	114,190	117,206	290,952
1998	3,382,970	3,356,995	25,975	591,945	72,365	44,514	116,880	121,026	317,982
1999	3,696,805	3,658,442	38,363	621,779	73,399	46,633	120,033	128,703	347,294
2000	4,035,430	3,985,201	50,228	653,116	74,756	48,984	123,740	135,505	379,003
2001	4,402,667	4,340,913	61,754	686,033	76,402	51,452	127,855	139,338	413,554
2002	4,804,738	4,731,620	73,117	720,609	78,307	54,046	132,353	142,579	451,425
2003	5,245,936	5,161,444	84,492	756,928	80,440	56,770	137,210	150,575	492,779
2004	5,725,350	5,629,307	96,043	795,077	82,774	59,631	142,405	156,702	537,826

* Surpluses reduce employer contributions over 5 years
 * Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

As of June 30	Funding Ratio	-----As % of Salaries-----			-----As % of Assets-----		
		Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Investment	Earnings
1989	95.0	15.95%	8.49%	24.44%	21.87%	0.63%	9.00%
1990	96.1	14.80%	7.68%	22.48%	21.58%	0.21%	9.00%
1991	96.9	14.53%	7.66%	22.19%	21.30%	0.20%	9.00%
1992	97.6	14.26%	7.64%	21.90%	21.03%	0.19%	9.00%
1993	98.3	14.01%	7.62%	21.63%	20.78%	0.17%	9.00%
1994	98.9	13.76%	7.60%	21.36%	20.54%	0.16%	9.00%
1995	99.5	13.52%	7.58%	21.10%	20.32%	0.15%	9.00%
1996	100.0	13.28%	7.56%	20.84%	20.10%	0.13%	9.00%
1997	100.4	12.72%	7.54%	20.26%	20.80%	-0.09%	9.00%
1998	100.8	12.23%	7.52%	19.75%	19.30%	-0.12%	9.00%
1999	101.0	11.80%	7.50%	19.30%	20.70%	-0.22%	9.00%
2000	101.3	11.45%	7.50%	18.95%	20.75%	-0.28%	9.00%
2001	101.4	11.14%	7.50%	18.64%	20.31%	-0.25%	9.00%
2002	101.5	10.87%	7.50%	18.37%	19.79%	-0.20%	9.00%
2003	101.6	10.63%	7.50%	18.13%	19.89%	-0.24%	9.00%
2004	101.7	10.41%	7.50%	17.91%	19.71%	-0.24%	9.00%

Table 4

State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return		10.00% (nominal)		Salary Increases		5.04% (5.5/4.5 assumed)		Ending Asset Valuation
	Total Assets	Accrued Liability	Surplus* (Deficit)	Flow Amounts During Following 12 Months	Employee Contribs	Employer Contribs	Net Benefit Payments	Investment Earnings	
1989	1,480,389	1,557,643	(77,254)	380,267	60,639	32,281	92,919	83,168	1,646,069
1990	1,646,069	1,695,744	(49,675)	399,432	57,604	30,676	88,281	86,194	1,821,097
1991	1,821,097	1,843,866	(22,768)	419,564	57,761	32,139	89,899	89,368	2,012,871
1992	2,012,871	2,006,222	6,648	440,710	56,870	33,670	90,540	92,701	2,221,953
1993	2,221,953	2,184,138	37,815	462,922	52,464	35,275	87,739	96,204	2,446,370
1994	2,446,370	2,379,053	67,316	486,253	48,600	36,955	85,555	99,889	2,688,187
1995	2,688,187	2,592,538	95,650	510,760	45,166	38,716	83,882	103,769	2,949,566
1996	2,949,566	2,826,299	123,267	536,502	42,066	40,560	82,626	107,854	3,232,780
1997	3,232,780	3,082,200	150,580	563,542	39,209	42,491	81,700	117,206	3,534,941
1998	3,534,941	3,356,995	177,946	591,945	36,521	44,514	81,035	121,026	3,864,120
1999	3,864,120	3,658,442	205,678	621,779	33,936	46,633	80,569	128,703	4,219,312
2000	4,219,312	3,985,201	234,111	653,116	31,385	48,984	80,368	135,505	4,604,447
2001	4,604,447	4,340,913	263,534	686,033	28,810	51,452	80,262	139,338	5,025,883
2002	5,025,883	4,731,620	294,263	720,609	26,146	54,046	80,192	142,579	5,488,095
2003	5,488,095	5,161,444	326,650	756,928	23,323	56,770	80,093	150,575	5,990,338
2004	5,990,338	5,629,307	361,031	795,077	20,273	59,631	79,904	156,702	6,538,685

* Surpluses reduce employer contributions over 5 years

* Deficits increase employer contributions over 25 years

PERCENTAGE RATIO RELATIONSHIPS OF ABOVE DATA

As of June 30	Funding Ratio		As % of Salaries		Benefit Payments		As % of Assets	
	Ratio	Ratio	Employer Contribs	Employee Contribs	Total Contribs	Net Benefit Payments	Contribs	Investment Earnings
1989	95.0	15.95%	8.49%	24.44%	21.87%	0.63%	10.00%	10.00%
1990	97.1	14.42%	7.68%	22.10%	21.58%	0.12%	10.00%	10.00%
1991	98.8	13.77%	7.66%	21.43%	21.30%	0.03%	10.00%	10.00%
1992	100.3	12.90%	7.64%	20.54%	21.03%	-0.10%	10.00%	10.00%
1993	101.7	11.33%	7.62%	18.95%	20.78%	-0.36%	10.00%	10.00%
1994	102.8	9.99%	7.60%	17.59%	20.54%	-0.56%	10.00%	10.00%
1995	103.7	8.84%	7.58%	16.42%	20.32%	-0.71%	10.00%	10.00%
1996	104.4	7.84%	7.56%	15.40%	20.10%	-0.82%	10.00%	10.00%
1997	104.9	6.96%	7.54%	14.50%	20.80%	-1.05%	10.00%	10.00%
1998	105.3	6.17%	7.52%	13.69%	20.45%	-1.08%	10.00%	10.00%
1999	105.6	5.46%	7.50%	12.96%	20.70%	-1.19%	10.00%	10.00%
2000	105.9	4.81%	7.50%	12.31%	20.75%	-1.25%	10.00%	10.00%
2001	106.1	4.20%	7.50%	11.70%	20.31%	-1.23%	10.00%	10.00%
2002	106.2	3.63%	7.50%	11.13%	19.79%	-1.19%	10.00%	10.00%
2003	106.3	3.08%	7.50%	10.58%	19.89%	-1.23%	10.00%	10.00%
2004	106.4	2.55%	7.50%	10.05%	19.71%	-1.23%	10.00%	10.00%

Section 2
BASIS OF THE 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 2.1 and participant census information is shown in Section 2.2.

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 2.3.

Section 2.1

SUMMARY OF THE ALASKA TEACHERS' RETIREMENT SYSTEM

(1) Effective Date

June 30, 1955, as amended through June 30, 1989.

(2) Administration of Plan

The Commissioner of Administration is responsible for administration of the System; the Alaska Teachers' Retirement Board adopts rules and regulations to carry out provisions of the Act; and the Commissioner of Revenue invests the funds. The Attorney General is the attorney for the System and represents it in legal proceedings.

(3) Membership

Membership in the Alaska TRS is compulsory for the following employees:

- certificated full-time and part-time elementary and secondary teachers, certificated school nurses, and certificated employees in positions requiring teaching certificates;
- the Commissioner of the Alaska Department of Education and certificated supervisors employed by the Department of Education in permanent positions requiring teaching certificates;
- University of Alaska full-time and part-time teachers, and full-time administrative employees in positions requiring academic standing if approved by the TRS administrator (employees who elect to participate in the University of Alaska's retirement program are excluded);
- certain full-time or part-time teachers of Alaska Native language or culture who have elected to be covered under the TRS;
- members on approved sabbatical leave under AS 14.20.310; and
- certain State legislators who have elected to be covered under the TRS.

TRS members who receive TRS disability benefits are also covered under the TRS and earn membership service while they are on disability.

(4) Credited Service

A year of membership service is defined to be the same as a school term which is currently a minimum of 172 days, and fractional service credit is on a daily rate basis. Credit is granted for all Alaskan public school service. Credit is granted for accrued, unused sick leave as reflected by the records of the last employer once a member has been on retirement an equal amount of time, meets eligibility requirements and has completed an application for the credit.

(5) Contributions by Teachers

Effective July 1, 1970, each teacher shall contribute 7% of base salary earned from July 1 to the following June 30.

(6) Voluntary Supplemental Contributions

If a teacher who first joined the system before July 1, 1982 wishes to make his or her spouse or minor children eligible for a spouse's pension and/or survivor's allowance, the teacher may elect to make supplemental contributions of an additional 1% of base salary commencing not later than 90 days after marriage, or the birth or adoption of a child, or upon re-entry into the system provided there was at least a twelve (12) month break in service.

(7) Service That May Be Claimed

TRS members may claim TRS credit for the following service:

- Outside teaching service. Members may claim up to ten years of outside service for their employment in out-of-state schools or Alaska private schools. Outside service includes employment as:
 - (1) certificated full-time elementary and secondary teachers and certificated full-time employees in positions which require teaching certificates as a condition of employment with out-of-state public schools and approved or accredited nonpublic schools either inside or outside of the United States supported by U.S. funds;
 - (2) full-time employees in out-of-state institutions of higher learning requiring academic standing and accreditation; or
 - (3) full-time teachers in approved or accredited nonpublic institutions of higher learning in Alaska.

Contributions are required for service which is claimed. For teachers first hired after June 30, 1978, the full actuarial cost of providing benefits for the service will be borne by the teacher. Credit for fractional years of outside service is not allowed.

- Military service. Members may claim up to five years of military service; however, the combined total of outside and military service may not exceed ten years, unless entry into the military is immediately preceded by TRS service and following discharge is continued by TRS service within one year. Contributions are required for service which is claimed. Credit for fractional years of military service is allowed.
- Bureau of Indian Affairs (BIA) service in Alaska. Members may claim their Alaska BIA service as professional educators and certificated full-time teachers in positions requiring teaching certificates. Contributions are required for service which is claimed. Credit for fractional years of BIA service is allowed.
- Retroactive service. Members may claim their earlier Alaskan service that was not creditable at the time it occurred but later became creditable because of legislative change. Retroactive contributions are required for earlier service; however, contributions are not required for service that was rendered before July 1, 1955.
- Unused sick leave. Members may claim their unused sick leave after they retire. Contributions are not required.
- Leave of absence without pay. Members may claim their employer-approved leave of absence without pay. Contributions are required.

(8) Employers' and State's Contributions

The employer contributes an amount required, in addition to member contributions, to finance the benefits of the System.

(9) Rate of Interest

The amount deposited in a member account will be credited with interest at the rate established for a school year at the end of such school year. Effective June 30, 1974, the interest rate was increased to 4-1/2%.

(10) Withdrawal of Mandatory Contributions

If a member terminates TRS employment, the balance of the member's contribution account (mandatory contributions, indebtedness payments and interest earned on the account) may be withdrawn by the member or may be attached to satisfy claims made under Alaska Statute 09.38.065.

(11) Reinstatement of Contributions

If mandatory contributions are withdrawn, the member must return to TRS employment in order to reinstate the refunded service. Upon reemployment, the member will be indebted to the TRS fund for the amount of the refund. Mandatory contributions that are attached to satisfy claims under Alaska Statute 09.38.065 may be reinstated at any time; the member is not required to return to TRS employment. The indebtedness will accrue interest until it is paid in full or the member retires, whichever occurs first.

(12) Normal Retirement Eligibility

Meeting the requirement of either (a) or (b) below:

(a) Upon attaining age 55 and meeting one of the following service requirements:

- (1) Eight years of fully-paid membership service, or
- (2) 15 years of fully-paid creditable service, the last five of which have been membership service; (if hired after June 30, 1975 a new member needs eight years of fully-paid membership service); or
- (3) Five years of fully-paid membership service and three years of fully-paid Alaska B.I.A. service;

or;

(b) At any age after meeting one of the following service requirements:

- (1) 25 years of fully-paid creditable service, the last five of which are membership service; or
- (2) 20 years of fully-paid membership service; or
- (3) 20 years of fully-paid combined membership service and Alaska B.I.A. service, the last five of which are membership service.
- (4) 20 part-time years of fully-paid membership service (at least one-half year each).

A retired teacher who has been receiving a disability retirement benefit shall be eligible for a service retirement benefit upon satisfying normal retirement eligibility.

(13) Early Retirement Eligibility

Upon attaining age 50 and meeting one of the following service requirements:

- (1) Eight years of fully-paid membership service, or
- (2) 15 years of fully-paid creditable service, the last five of which have been membership service; (after June 30, 1975 a new member needs eight years of fully-paid membership service); or

- (3) Five years of fully-paid membership service and three years of fully-paid Alaska B.I.A. service.

(14) Computation of Average Base Salary

A teacher's average base salary is determined by averaging the teacher's highest base salary which the teacher received for any three years of membership service during which the teacher received compensation for at least two-thirds of each school year.

(15) Normal Retirement Benefit

The normal retirement benefit is 2% of the teacher's Average Base Salary multiplied by the total number of years of creditable service, subject to a minimum benefit of \$25 per month for each year of creditable service.

(16) Early Retirement Benefit

A teacher who meets the service requirements for normal retirement, but not the age requirements, may elect to have reduced payments commence as early as age 50. The reduced Early Retirement Benefit is equal to the actuarial equivalent of the normal retirement benefit.

(17) Indebtedness Owing At Retirement

If on the date of appointment to retirement, a teacher has not paid the full amount of his indebtedness including interest to the Retirement Fund, the retirement benefit will be reduced for life by an amount equal to the actuarial equivalent of the outstanding indebtedness at the time of retirement.

(18) Re-employment of a Retired Teacher

If a retired teacher is reemployed in a position covered under the System, the retirement benefit will be suspended during the period of reemployment.

During such period of reemployment, retirement contributions are mandatory.

(19) Disability Retirement Benefits

A disability retirement benefit may be paid if a teacher has become permanently disabled before 55 and has at least five years of fully-paid membership service.

The benefit will be equal to 50% of the disabled teacher's base salary immediately prior to becoming disabled. This benefit will be increased by 10% of the teacher's base salary for each minor child up to a maximum of 40%.

When the disabled teacher becomes eligible for normal retirement, the disability benefit will automatically terminate. A normal retirement benefit will be computed as if the teacher had been in membership service during the period of disability, and a service retirement will be granted.

(20) Cost-of-Living Allowance

An eligible retired teacher who remains in Alaska is entitled to receive an additional cost-of-living allowance equal to 10% of the base retirement benefit.

(21) Post-Retirement Pension Adjustment

When the administrator determines that the cost of living has increased and that the financial condition of the retirement fund permits, all retirement benefits may be increased. The amount of the increase shall be not more than the lesser of 4% compounded for each year of retirement, or the cost-of-living increase since the date of retirement, reduced by prior Post-Retirement Pension Adjustments.

(22) Non-Occupational and Occupational Death Benefit

Upon a non-occupational death of a member who has made no supplemental contributions or who made supplemental contributions for less than one year and has completed less than one year of membership service, a lump-sum benefit shall be paid to the designated beneficiary. The lump-sum benefit is the teacher's accumulated member contribution account. If the teacher is in active service at the time of death after completing at least one year of membership service but before becoming a vested member, an additional death benefit equal to \$1,000 plus \$100 for each year of membership service (the total not to exceed \$3,000), plus \$500 if the teacher is survived by one or more minor children is also payable.

Upon a nonoccupational death of a vested member or deferred vested member who has not made the required supplemental contributions, the surviving spouse may elect to receive the benefits described in the previous paragraph or a 50% joint and survivor option based on the member's average base salary and credited service to the date of death.

Upon an occupational death of a member who has not made the required supplemental contributions, a monthly survivor's pension equal to 40% of the base salary at the time of death or disability, if earlier, may be payable. At the member's Normal Retirement Date, the benefit converts to a Normal Retirement benefit based on the member's average base salary at date of disability or death and credited service, including period from date of disability or death to Normal Retirement Date.

If the teacher had received a retirement benefit prior to his death, payment shall be his accumulated contributions, plus interest, minus all benefits paid. However, if the teacher elected one of the joint and survivor options (50%, 66-2/3% or 75%) at retirement, an eligible spouse would receive a continuing monthly benefit for the rest of his or her life.

(23) Survivor's Allowance

If a teacher has made supplemental contributions for at least one year and dies while in membership service, or while receiving a disability benefit, or if a teacher has made supplemental contributions for at least five years and dies while on retirement or in deferred retirement status, and is survived by one or more minor children, his surviving spouse and/or minor children are entitled to the survivor's allowance. The amount of the benefit is 35% of the teacher's base salary immediately prior to his death or becoming disabled for his spouse and 10% for each minor child up to a maximum of 40%. The survivor's allowance commences the month following the member's death. When there is no longer an eligible minor child, this allowance ceases and a Spouse's Pension becomes payable.

(24) Spouse's Pension

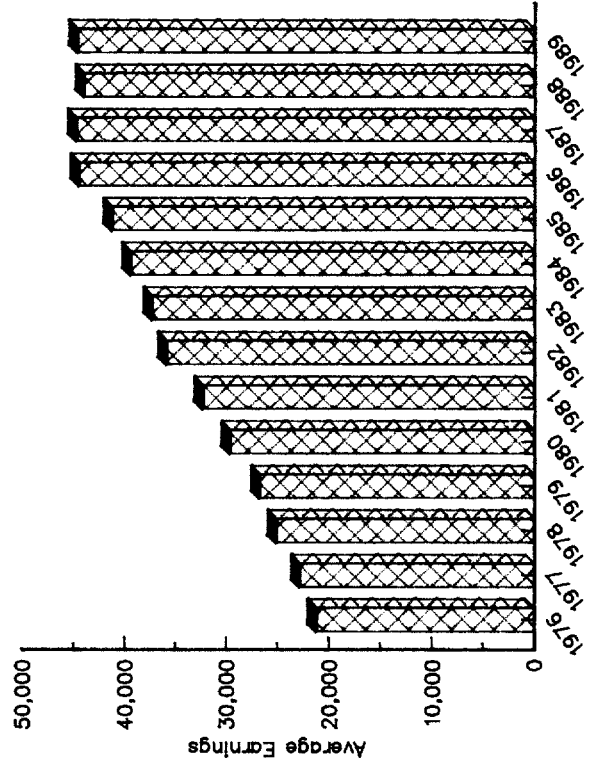
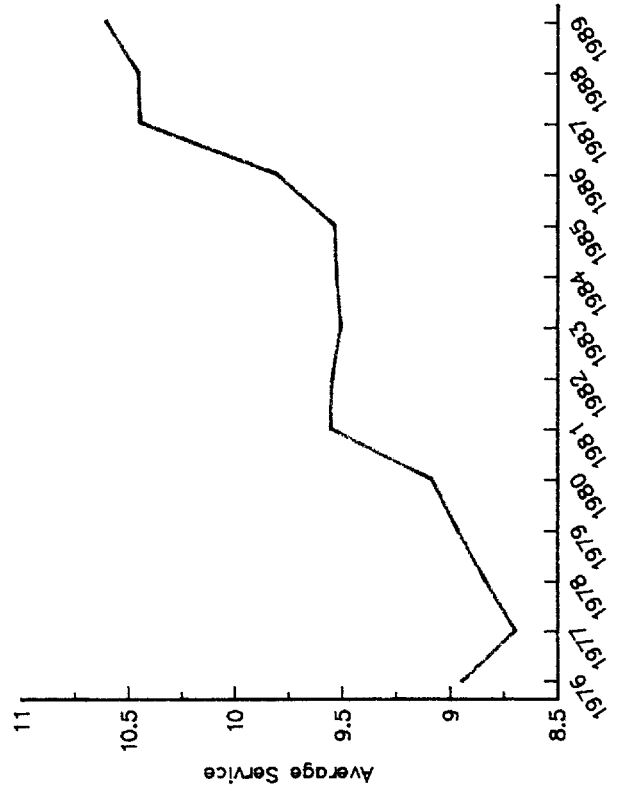
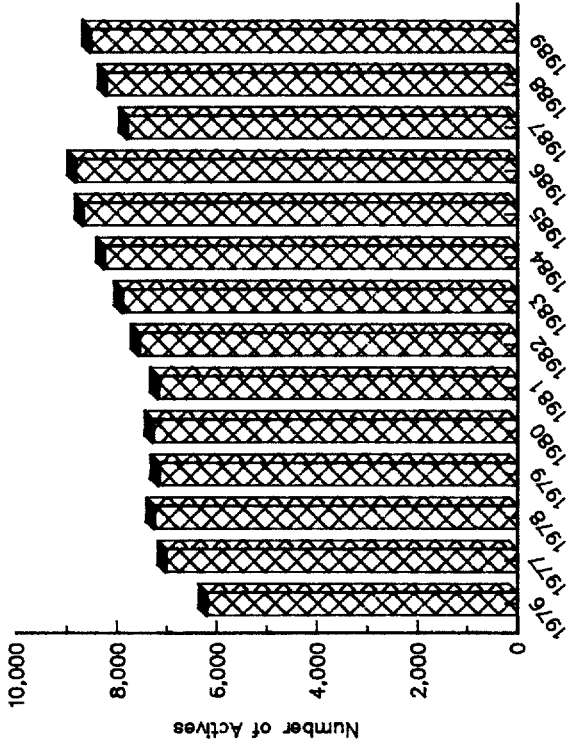
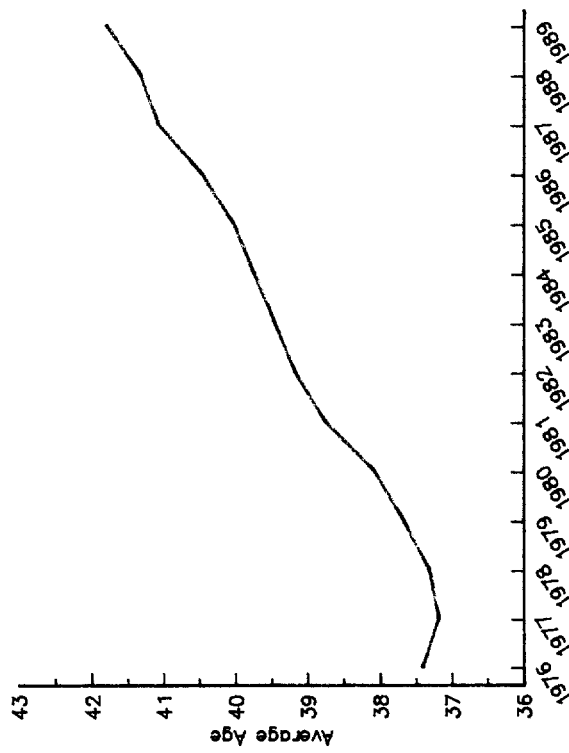
If a teacher has made supplemental contributions for at least one year and dies while in membership service, or while receiving a disability benefit, or if a teacher has made supplemental contributions for at least five years and dies while on retirement or in deferred retirement status, the surviving spouse is entitled to receive the Spouse's Pension. The amount of the benefit is 50% of the service retirement benefit that the deceased teacher was receiving or would have received. The Spouse's Pension commences the month following the member's death or cessation of the survivor's allowance. The payment ceases when the spouse dies.

Section 2.2(a)
PARTICIPANT CENSUS INFORMATION AS OF JUNE 30

	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
<u>Active Members</u>					
(1) Number	8,684	8,824	7,797	8,218	8,527
(2) Number Vested	N/A	4,233	4,196	4,053	4,787
(3) Average Age	40.04	40.48	41.09	41.34	41.82
(4) Average Credited Service	9.54	9.81	10.45	10.46	10.61
(5) Average Annual Salary	\$41,238	\$44,440	\$44,710	\$43,966	\$44,596
<u>Retirees and Beneficiaries</u>					
(1) Number	2,022	2,098	2,376	2,972	3,098
(2) Average Age	62.75	63.18	62.83	61.41	61.85
(3) Average Monthly Benefit					
Base	\$ 1,176	\$ 1,205	\$ 1,304	\$ 1,460	\$ 1,476
C.O.L.A.	\$ 79	\$ 79	\$ 87	\$ 102	\$ 102
P.R.P.A.	\$ 279	\$ 258	\$ 268	\$ 208	\$ 234
Total	\$ 1,534	\$ 1,542	\$ 1,659	\$ 1,770	\$ 1,812
<u>Vested Terminations</u>					
(1) Number	335	481	777	408	508
(2) Average Age	45.49	47.74	47.92	44.26	45.11
(3) Average Monthly Benefit	\$ 850	\$ 1,178	\$ 1,391	\$ 847	\$ 957
<u>Non-Vested Terminations With Account Balances</u>					
(1) Number	1,093	869	1,529	938	943
(2) Average Account Balance	\$ 6,649	\$ 8,356	\$ 9,421	\$ 9,773	\$ 9,765

Note that any differences between the numbers shown above and those shown in the TRS financial statements reflect data changes following publication of the financial statements.

State of Alaska — TRS Actives



Section 2.2(b)
DISTRIBUTIONS OF ACTIVE PARTICIPANTS

STATE OF ALASKA - TRS - ALL ACTIVES

VALUATION DATE 6/30/1989

----- ANNUAL EARNINGS BY AGE-----

AGE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0-19	1	32194.	32194.
20-24	45	1298943.	28865.
25-29	446	14514674.	32544.
30-34	1085	39616184.	36513.
35-39	1931	81221152.	42062.
40-44	2216	102804952.	46392.
45-49	1653	81339568.	49207.
50-54	758	39050548.	51518.
55-59	275	14273519.	51904.
60-64	91	4753745.	52239.
65-69	19	1050597.	55295.
70-74	5	234100.	46820.
75-79	2	77117.	38559.
80+	0	0.	0.
TOTAL	8527	380267328.	44596.

---- ANNUAL EARNINGS BY SERVICE----

SERVICE GROUP	NUMBER OF PEOPLE	TOTAL ANNUAL EARNINGS	AVERAGE ANNUAL EARNINGS
0	1422	52569444.	36969.
1	1142	44766892.	39200.
2	379	17276648.	45585.
3	471	21500200.	45648.
4	691	30443946.	44058.
0- 4	4105	166557424.	40574.
5- 9	2380	109963168.	46203.
10-14	1265	62979288.	49786.
15-19	596	30981090.	51982.
20-24	168	8938366.	53205.
25-29	10	685975.	68598.
30-34	3	162288.	54096.
35-39	0	0.	0.
40+	0	0.	0.
TOTAL	8527	380267648.	44596.

SERVICE GROUPS BY AGE GROUPS

S E R V I C E G R O U P

AGE	0- 4	5- 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19	1	0	0	0	0	0	0	0	0	1
20-24	45	0	0	0	0	0	0	0	0	45
25-29	409	37	0	0	0	0	0	0	0	446
30-34	776	289	20	0	0	0	0	0	0	1085
35-39	1050	603	252	26	0	0	0	0	0	1931
40-44	898	681	437	185	15	0	0	0	0	2216
45-49	556	456	338	232	70	1	0	0	0	1653
50-54	235	207	139	112	59	6	0	0	0	758
55-59	93	73	59	28	17	3	2	0	0	275
60-64	32	25	15	11	7	0	1	0	0	91
65-69	7	8	3	1	0	0	0	0	0	19
70-74	2	1	1	1	0	0	0	0	0	5
75-79	1	0	1	0	0	0	0	0	0	2
80+	0	0	0	0	0	0	0	0	0	0
TOTAL	4105	2380	1265	596	168	10	3	0	0	8527

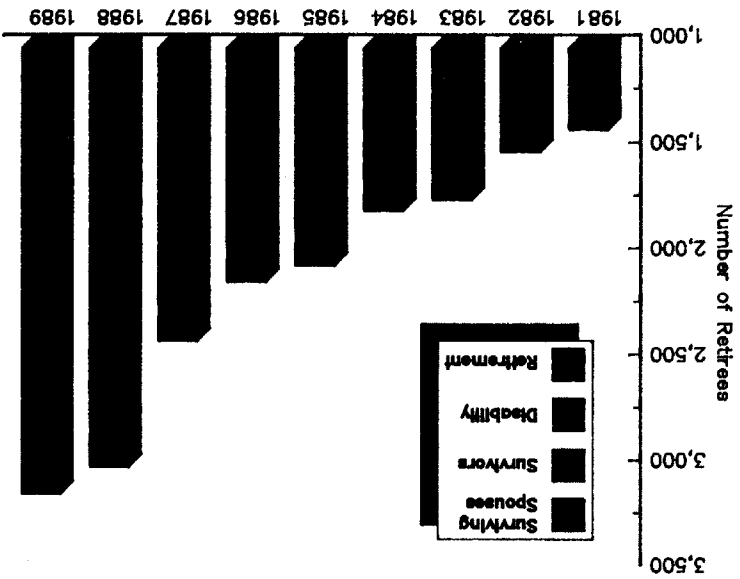
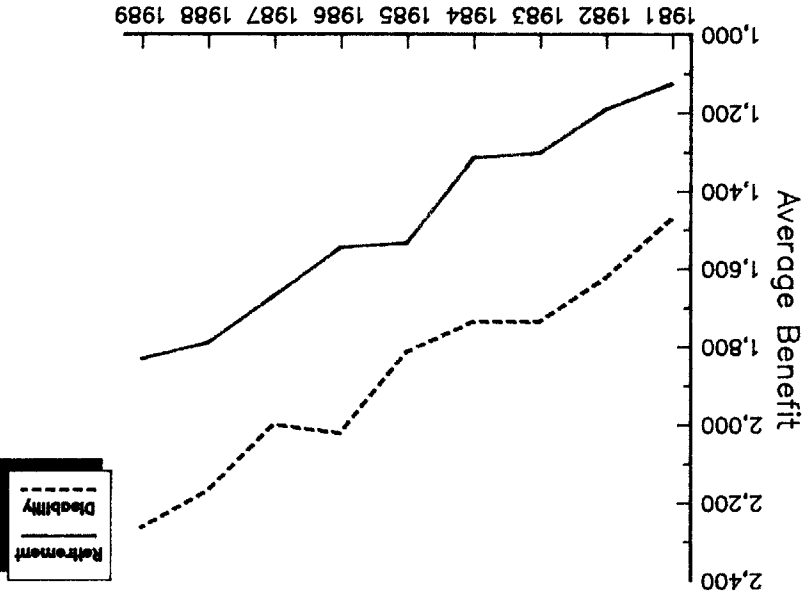
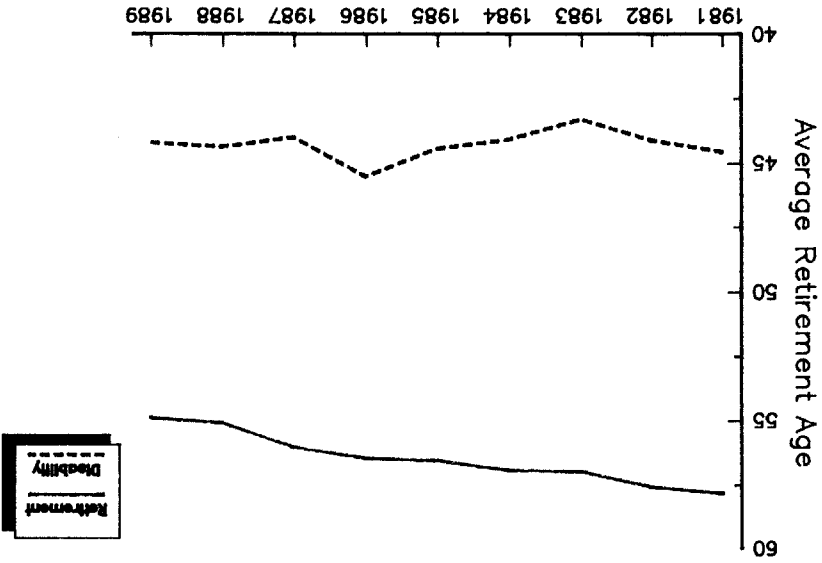
Section 2.2(c)
STATISTICS ON NEW RETIREES DURING THE YEAR ENDING JUNE 30

	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
<u>Service</u>					
Number	279	179	285	621	187
Average Age At Retirement	54.95	56.06	53.83	52.07	51.82
Average Monthly Benefit	\$ 2,011	\$ 1,968	\$ 2,124	\$ 2,224	\$ 1,943
<u>Disability</u>					
Number	6	7	13	15	12
Average Age At Retirement	48.57	43.48	45.14	46.28	46.24
Average Monthly Benefit	\$ 2,500	\$ 2,648	\$ 2,321	\$ 2,743	\$ 2,618
<u>Survivor</u>					
Number	4	3	3	3	2
Average Age At Retirement	46.78	45.47	46.43	47.39	43.81
Average Monthly Benefit	\$ 2,452	\$ 1,942	\$ 1,208	\$ 1,143	\$ 2,318
<u>Total</u>					
Number	289	189	301	639	201
Average Age At Retirement	54.70	55.43	53.38	51.91	51.41
Average Monthly Benefit	\$ 2,027	\$ 1,992	\$ 2,123	\$ 2,231	\$ 1,987

Section 2.2(d)
STATISTICS ON ALL RETIREES AS OF JUNE 30

	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
<u>Service Retirements</u>					
Number, Prior Year	1,627	1,855	1,922	2,194	2,760
Net Change During Year	228	67	272	566	110
Number, This Year	1,855	1,922	2,194	2,760	2,870
Average Age At Retirement	56.57	56.47	56.06	55.11	54.91
Average Age Now	63.49	64.01	63.52	61.84	62.25
Average Monthly Benefit	\$1,537	\$1,549	\$1,672	\$1,793	\$1,834
<u>Surviving Spouse's Benefits</u>					
Number, Prior Year	40	64	69	70	85
Net Change During Year	24	5	1	15	18
Number, This Year	64	69	70	85	103
Average Age At Retirement	57.29	54.52	53.93	55.83	55.56
Average Age Now	66.20	63.98	63.49	66.74	67.26
Average Monthly Benefit	\$ 953	\$ 833	\$ 750	\$708	\$ 738
<u>Survivor's Benefits</u>					
Number, Prior Year	37	38	34	32	36
Net Change During Year	1	(4)	(2)	4	(5)
Number, This Year	38	34	32	36	31
Average Age At Retirement	36.23	35.29	39.04	36.15	35.42
Average Age Now	41.84	43.08	46.77	44.66	43.73
Average Monthly Benefit	\$1,501	\$1,584	\$1,746	\$1,513	\$1,652
<u>Disabilities</u>					
Number, Prior Year	60	65	73	80	91
Net Change During Year	5	8	7	11	3
Number, This Year	65	73	80	91	94
Average Age At Retirement	44.46	44.55	44.00	44.39	44.22
Average Age Now	50.30	50.64	49.93	49.87	49.71
Average Monthly Benefit	\$2,026	\$2,003	\$2,075	\$2,125	\$2,267

State of Alaska - TRS Retirees



Section 2.2(e)
DISTRIBUTIONS OF ANNUAL BENEFITS OF RETIRED PARTICIPANTS

STATE OF ALASKA - TRS - ALL RETIREES

VALUATION DATE 6/30/1989

----- ANNUAL BENEFIT BY AGE-----				---- ANNUAL BENEFIT BY SERVICE----			
AGE	NUMBER	TOTAL	AVERAGE	SERVICE	NUMBER	TOTAL	AVERAGE
GROUP	OF	ANNUAL	ANNUAL	GROUP	OF	ANNUAL	ANNUAL
	PEOPLE	BENEFIT	BENEFIT		PEOPLE	BENEFIT	BENEFIT
0-19	3	14464.	4821.	0	50	1076175.	21524.
20-24	1	6667.	6667.	1	29	738504.	25466.
25-29	0	0.	0.	2	45	1118536.	24856.
30-34	1	33372.	33372.	3	37	928755.	25101.
35-39	6	190869.	31811.	4	53	1192769.	22505.
40-44	67	1497654.	22353.	0- 4	214	5054740.	23620.
45-49	277	7061748.	25494.	5- 9	361	7768899.	21520.
50-54	482	11975779.	24846.	10-14	726	14400648.	19836.
55-59	615	14502962.	23582.	15-19	1013	20832360.	20565.
60-64	538	11700550.	21748.	20-24	455	11287926.	24809.
65-69	445	8806890.	19791.	25-29	199	4940761.	24828.
70-74	304	5453604.	17939.	30-34	75	1626640.	21689.
75-79	175	2912072.	16640.	35-39	35	937562.	26787.
80+	184	3107701.	16890.	40+	20	414800.	20740.
TOTAL	3098	67264336.	21744.	TOTAL	3098	67264336.	21744.

SERVICE GROUPS BY AGE GROUPS

S E R V I C E G R O U P										
AGE	0- 4	5- 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19	0	3	0	0	0	0	0	0	0	3
20-24	0	0	1	0	0	0	0	0	0	1
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	5	0	0	1	0	0	0	0	0	6
40-44	18	16	13	16	4	0	0	0	0	67
45-49	37	64	48	65	60	3	0	0	0	277
50-54	49	76	131	99	100	26	1	0	0	482
55-59	45	89	166	156	95	47	17	0	0	615
60-64	18	69	156	142	82	39	24	8	0	538
65-69	12	28	121	144	57	53	15	12	3	445
70-74	8	13	61	143	35	23	9	8	4	304
75-79	16	3	24	107	8	1	8	3	5	175
80+	5	0	5	140	14	7	1	4	8	184
TOTAL	214	361	726	1013	455	199	75	35	20	3098

Section 2.3
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 liability is amortized over 25 years. Any funded 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. Salary Scale | 6.5% per year for the first five years of employment and 5.5% per year thereafter. |
| 3. Health Inflation | 9% per year. |

4. Mortality

1984 Unisex Pension Mortality Table set back 1-1/2 years. All deaths are assumed to result from nonoccupational causes.
5. Turnover

Based upon the 1981-85 actual total turnover experience. (See Table 1).
6. Disability

Incidence rates in accordance with Table 2. Post-disability mortality in accordance with rates published by the Pension Benefit Guaranty Corporation to reflect mortality of those receiving disability benefits under Social Security.
7. Retirement Age

Retirement rates based on actual experience in accordance with Table 3.
8. Spouse's Age

Wives are assumed to be four years younger than husbands.
9. Dependent Children

Benefits to dependent children have been valued assuming members who are not single have one dependent child.
10. Contribution Refunds

100% of those terminating after age 35 with eight or more years of membership service, or with at least five years of membership service and at least three years of B.I.A. service will leave their contributions in the fund and thereby retain their deferred vested benefit. All others who terminate are assumed to have their contributions refunded.
11. C.O.L.A.

54% of those receiving retirement benefits will be eligible for C.O.L.A.
12. Sick Leave

4.7 days of unused sick leave for each year of service will be available to be credited once the member is retired.
13. Expenses

Expenses are covered in the interest assumption.

Valuation of Assets

Based upon the five-year average ratio between actuarial and book values of the System's assets. The actuarial value of assets equals the market value, except that fixed income investments are carried at book value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements provided by Coopers & Lybrand. Valuation assets cannot be outside the range of book and actuarial values.

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) were assumed such that the total rate for all retirees equals the present premium rate. These medical premiums are then increased with the health inflation assumption. The actuarial cost method used for funding retirement benefits is also used to fund health benefits.

For FY90, the pre-65 monthly premium is \$330.51 and the post-65 premium is \$125.91, based on a total blended premium of \$252.83. For FY91, the pre-65 monthly premium is \$318.94 and the post-65 premium is \$121.50, based on a total blended premium of \$243.98. These rates and the pre-65/post-65 split were provided by Deloitte & Touche.

TABLE 1
ALASKA TRS
TOTAL TURNOVER ASSUMPTIONS

Select Rates of Turnover
During the First 10 Years
of Employment

<u>Year of Employment</u>	<u>Rate</u>
1	.17
2	.15
3	.12
4	.12
5	.11
6	.09
7	.07
8	.07
9	.07
10	.06

Ultimate Rates of Turnover
After the First 10 Years
of Employment

<u>Ages</u>	<u>Rate</u>
20-39	.03
40+	.02

TABLE 2
ALASKA TRS
DISABILITY RATES
ANNUAL RATES PER 1,000 EMPLOYEES

William M. Mercer, Incorporated

<u>Age</u>	<u>Rate</u>
20	.42
21	.43
22	.43
23	.44
24	.44
25	.45
26	.46
27	.47
28	.48
29	.49
30	.50
31	.52
32	.53
33	.54
34	.56
35	.58
36	.59
37	.62
38	.64
39	.67
40	.69
41	.72
42	.76
43	.82
44	.89
45	.97
46	1.06
47	1.15
48	1.24
49	1.34
50	1.44
51	1.56
52	1.72
53	1.91
54	2.13
55	2.40
56	2.75
57	3.20
58	3.66
59	4.32
60	5.06
61	5.85
62	6.78
63	7.83
64	8.94

TABLE 3
ALASKA TRS
RETIREMENT RATES

<u>Age at Retirement</u>	<u>Retirement Rate</u>
50	.063
51	.063
52	.063
53	.063
54	.063
55	.117
56	.117
57	.117
58	.117
59	.117
60	.260
61	.180
62	.210
63	.240
64	.270
65	.540
66	.820
67	1.000

For ages less than 50, teachers are assumed to retire two years after the earliest age they are eligible to retire.