

**State of Alaska
Teachers' Retirement System**

**Actuarial Valuation Report
as of June 30, 1995**

Prepared by:

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February 5, 1996

State of Alaska
Teachers' Retirement Board
Department of Administration
Division of Retirement & Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Dear Members of the Board:

Actuarial Certification

The actuarial valuation required for the State of Alaska Teachers' Retirement System has been prepared as of June 30, 1995 by William M. Mercer, Incorporated. The purposes of the report include:

- (1) a review of experience under the Plan for the year ended June 30, 1995;
- (2) a determination of the appropriate contribution rate for each employer in the System;
- (3) the provision of reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us by the System's staff and financial information provided by the audited report from KPMG Peat Marwick, to determine a sound value for the System liability. This data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior years' data. The actuarial assumptions are based on the results of experience studies presented to the Board in October 1991 and October 1994.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY96 and a 25-year rolling amortization of the unfunded accrued liability. The amortization period is set by the Board. Contribution levels are recommended by the Actuary and adopted by the Board each year. The ratio of assets to liabilities increased from 89.6% to 90.9% during the year, primarily due to favorable actuarial experience. Over the years, progress has been made toward achieving the funding objectives of the System.

Teachers' Retirement Board
February 5, 1996
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There were no significant changes in the actuarial assumptions or actuarial methods used in the determination of system liabilities this year. The assumptions and methods, when applied in combination, fairly represent past and anticipated future experience of the System.

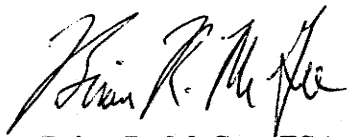
Future contribution requirements may differ from those determined in the valuation because of:

- (1) differences between actual experience and anticipated experience based on the assumptions;
- (2) changes in actuarial assumptions or methods;
- (3) changes in statutory provisions; or
- (4) differences between the contribution rates determined by the valuation and those adopted by the Board.

The undersigned are members of the American Academy of Actuaries and are fully qualified to provide actuarial services to the State of Alaska.

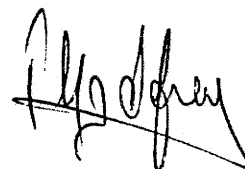
We believe that this report conforms with the requirements of the Alaska statutes, and where applicable, other federal and accounting laws, regulations and rules, as well as generally accepted actuarial principles and practices.

Sincerely,



Brian R. McGee, FSA, MAAA
Managing Director

JWJ/BRM/jls



Peter L. Godfrey, FIA, MAAA
Principal

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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 Teachers' Retirement System as of June 30, 1995;
- (2) review experience under the plan for the year ended June 30, 1995;
- (3) determine the appropriate contribution rate for each employer in the System;
- (4) provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into three sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 1995 Fiscal 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.

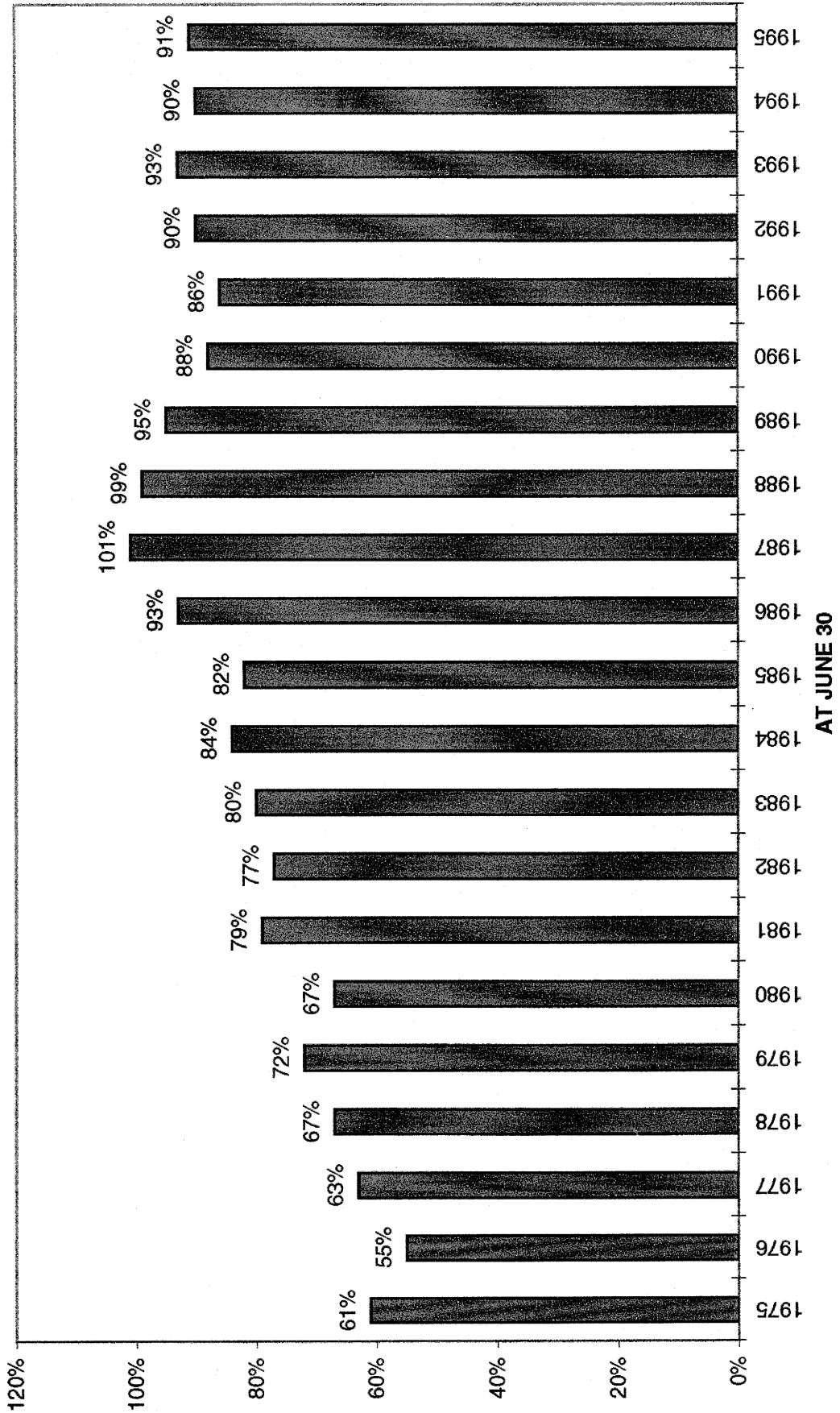
Section 3 contains additional exhibits showing historical information on system experience, unfunded liabilities, and the value of accumulated benefits.

The principle results are as follows:

	<u>1994</u>	<u>1995</u>
Funding Status as of June 30:		
(a) Valuation Assets*	\$ 2,472,957	\$ 2,647,392
(b) Accrued Liability*		
i) Non-Medical Benefits	2,281,178	2,396,911
ii) Total Benefits (including medical)	2,761,409	2,913,467
(c) Funding Ratio, (a) / (b)		
i) Non-Medical Benefits	108.4%	110.5%
ii) Total Benefits (including medical)	89.6%	90.9%

* In thousands.

STATE OF ALASKA TRS FUNDING RATIO HISTORY



Employer Contribution Rates
for Fiscal Year:

	<u>1997</u>	<u>1998</u>
(a) Normal Cost Rate	9.70%	10.10%
(b) Past Service Rate	5.26%	4.84%
(c) Total Contribution Rate	14.96%	14.94%
(d) Actuarial Projection Rate	12.00%	12.00%

Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio as of June 30, 1995 has increased from 89.6% to 90.9%, an increase of 1.3%. The total employer contribution rate has decreased from 14.96% of payroll for FY97 to 14.94% for FY98, a decrease of 0.02% of payroll. The reasons for the change in the funded status and contribution rate are explained below.

(1) Retiree Medical Insurance

The following table summarizes the monthly premium per benefit recipient since retiree medical benefits have been provided under PERS and 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	23%	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%
1992	243.98	0%	11%
1993	226.90	- 7%	10%
1994	309.72	37%	11%
1995	336.05	9%	11%
1996	350.50	4%	11%
1997	350.50	0%	10%

As you can see from the above table, the monthly retiree medical premium for the 1997 fiscal year has remained level at \$350.50. Since FY87, annual premium rate changes have ranged from 51% up to 15% down, but the average annual increase has been about 8%.

Last year, in an attempt to better predict the long-term increase in medical premiums, the Board adopted a health cost trend assumption which varies by year, declining to an ultimate rate equal to inflation plus 1.5%, or 5.5% for FY99 and later. If the long-term assumption remains reasonable, short-term gains and losses from the annually-determined medical premium rate will offset each other over time.

To help avoid the volatility in the funding and solvency of the System from bringing large health-related gains and losses into the System every year, we have been using the health cost trend assumption to determine actuarial liabilities for retiree medical benefits. The difference between the assumed rate and the actual rate will be tracked annually and reduced if the gap becomes too wide. Also, adjustments will be made, if necessary, to the assumed medical premium rate every four to five years when a formal experience analysis is performed.

Because no adjustments were made to the assumed medical premium rate this year, the total employer contribution rate was unaffected by medical cost experience.

(2) Investment Performance

The Asset Valuation Method was changed last year to smooth over five years the difference between actual and expected investment return. One purpose of this change was to adopt a method which better accomplished the goal of smoothing volatility in investment returns. Over the past two fiscal years, the equity and bond markets have shown very diverse returns. For FY94 and FY95, the approximate return on the market values were 2.41% and 15.47%, respectively. However, for FY94 and FY95, the return on the smoothed valuation assets were 7.68% and 8.11%, respectively, demonstrating the effectiveness of the new method.

The approximate rate of return in FY95 based on valuation assets was 0.11% higher than the 8.00% investment return assumption. This produced a gain of approximately \$2,688,000 to the System from investment performance, which increased the funding ratio by 0.1% and lowered the total employer contribution rate by 0.05% of total payroll.

(3) Salary Increases

In recent years salary increases have been less than anticipated in the valuation assumptions. This was again true last year. Salary experience resulted in an actuarial gain which generated a reduction in the total employer contribution rate equal to .29% of total payroll.

(4) Employee Data

Section 2.2 provides statistics on active and inactive participants. The number of active participants decreased 0.4% from 9,489 at June 30, 1994 to 9,452 at June 30, 1995. This was less than the expected population increase scenario reviewed last year, and produced a loss to the System from fewer Tier 2 actives entering the System than expected. The average age of active participants increased from 43.32 to 43.68 and average credited service increased from 11.06 to 11.30 years.

The number of retirees and beneficiaries increased 7.9% from 4,134 to 4,459, and their average age increased from 62.73 to 62.83. There was a 7.6% decrease in the number of vested terminated participants from 930 to 859. Their average age decreased from 48.10 to 48.08.

The overall effect of these participant data changes was an actuarial loss to the System, resulting in an increase in the contribution rate equal to .32% of total payroll.

(5) Actuarial Projections

At the Fall 1991 Board Meetings, the TRS Board approved the use of an enhanced actuarial projection system in the valuation report this year. The same actuarial cost method is used, but the enhanced system projects population growth patterns and their associated liabilities 25 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 25 years. Section 1.6, Actuarial Projections, contains the results of this analysis.

This type of information can be especially useful to two-tiered systems, such as TRS. All of the projected new entrants will be covered under the cost savings provisions of the second tier, so that the ultimate effect of the second tier on plan liabilities can be anticipated. As you can see in Section 1.6, based on the actuarial assumptions and cost method, future contribution rates are expected to decline, and then level out in 15 to 20 years.

Provided the Board adopts a long-term strategy consistent with the nature of the System, sound actuarial principles would support leveling out this contribution pattern to anticipate the second tier provisions coming into effect. In this way, a more stable contribution pattern could be adopted to help the employers better budget retirement expenses. This enhanced projection technique would be used annually so that a continuous tracking of the contribution rate to the requirements could be made. Appropriate adjustments to the rate would still be proposed annually, but they should be much smaller than those seen in the past.

We recommend that the employer contribution rate adopted for FY98 remain 12.00% under this approach.

This rate includes a degree of conservatism for the following reasons:

- (a) Actuarial valuations are based on several assumptions, and the projection technique adds more. Actual system experience will vary from that assumed, so a degree of margin is appropriate when adopting a longer term rate.
- (b) Sound actuarial principles also suggest that retirement systems should fund employees' benefits while they are working. By leveling out the two-tier phenomenon, intergenerational inequities could occur. Since current contribution requirements are higher, the level rate is set higher than it theoretically needs to be, to allocate proportionately more of the cost to current generations and thus reduce the inequities.

Summary

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

Last year's total employer contribution rate	14.96%
Change due to:	
Retiree medical insurance	0.00%
Investment performance	(0.05%)
Salary increases	(0.29%)
Demographic experience	0.32%
Total employer contribution rate this year	14.94%
Effect of enhanced Actuarial Projection system	(2.94%)
Proposed employer contribution rate	12.00%

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, 1995.

Section 1.1(b) shows the transactions of the plan's fund during FY95.

Section 1.1(c) develops the expected valuation assets and investment return as of June 30, 1995.

Section 1.1(d) develops the actual valuation assets as of June 30, 1995.

Section 1.2 shows the actuarial present values as of June 30, 1995.

Section 1.3 calculates the total contribution rate for FY98.

Section 1.4 calculates the actuarial gain or loss for FY95.

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

Section 1.6 contains the financial projections.

1.1(a) Statement of Net Assets as of June 30, 1995 (in thousands)

	<u>Book Value</u>	<u>Market Value</u>
Cash and Cash Equivalents	\$ 18,926	\$ 18,926
United States Government Bonds	478,527	539,386
Other United States Government Securities	47,742	49,016
Corporate Bonds	568,223	599,757
Commercial Paper	19,915	19,915
United States Common Stocks	968,759	1,151,269
International Stocks	184,384	201,598
Emerging Markets Stocks	21,147	20,856
Real Estate Equities	81,013	59,357
Mortgages (net of reserves)	2,649	2,649
Net Accrued Receivables	<u>25,722</u>	<u>25,722</u>
Total Assets	\$ 2,417,007	\$ 2,688,451

1.1(b) Changes in Net Assets During Fiscal Year 1995 (in thousands)

(1)	Net Assets, June 30, 1994, (market value)		\$ 2,351,719
(2)	Additions:		
(a)	Employee Contributions	\$ 47,477	
(b)	Employer Contributions	60,018	
(c)	Interest and Dividend Income	127,276	
(d)	Realized Gain/(Loss)	72,620	
(e)	Unrealized Gain (Loss) on Investments	169,313	
(f)	Other	<u>(6)</u>	476,698
(3)	Deductions:		
(a)	Medical Benefits	\$ 18,264	
(b)	Retirement Benefits	111,498	
(c)	Refunds of Contributions	2,819	
(d)	Administrative Expenses	<u>7,385</u>	<u>139,966</u>
(4)	Net Assets, June 30, 1995, (market value)		\$ 2,688,451
Approximate Market Value Investment Return Rate During the Year, Net of Administrative Expenses			15.47%

**1.1(c) Development of Expected Valuation Assets
as of June 30, 1995 (in thousands)**

(1)	June 30, 1994 Valuation Assets	\$ 2,472,957
(2)	Total Contributions for FY95, (Item (2a) + (2b) from 1.1(b))	107,495
(3)	Total Benefit Payments for FY95, (Item (3a) + (3b) + (3c) from 1.1(b))	132,581
(4)	Expected Investment Return, Net of Expenses, for the period July 1, 1994 through June 30, 1995 $((1) + .5 \times [(2) - (3)]) \times 8.0\%$	196,833
(5)	Actual Investment Return, Net of Expenses, for the period July 1, 1994 through June 30, 1995 [Item (2c) + (2d) + (2e) + (2f) - (3d) from 1.1(b)]	361,818
(6)	Total Investment Gain/(Loss) (5) - (4)	164,985
(7)	Expected Valuation Assets, (1) + (2) - (3) + (4)	2,644,704

**1.1(d) Development of Valuation Assets as of June 30, 1995
(in thousands)**

	A	B	C
	Total Investment <u>Gain/(Loss)</u>	Gain/(Loss) Recognized in <u>Prior Fiscal Years</u>	Gain/(Loss) Recognized this Fiscal Year <u>(A ÷ 5)</u>
(1) Fiscal Year ending June 30, 1995	\$ 164,985	\$ 0	\$ 32,997
(2) Fiscal Year ending June 30, 1994	(151,547)	(30,309)	(30,309)
(3) Total Gain/(Loss) Recognized this Fiscal Year			2,688
(4) Expected Valuation Assets, June 30, 1995, (Item (7) from 1.1(c))			\$ 2,644,704
(5) Valuation Assets at June 30, 1995, (3) + (4), but not outside a corridor of 80% to 120% of the market value of assets			\$ 2,647,392
Approximate Valuation Assets Investment Return Rate During the Year, Net of Administrative Expenses			8.11%

1.2 Actuarial Present Values as of June 30, 1995 (in thousands)

	<u>Normal Cost</u>	<u>Accrued Liabilities</u>
<u>Active Members</u>		
Retirement Benefits	\$ 61,553	\$ 1,035,417
Termination Benefits	3,019	35,078
Disability Benefits	1,442	35,766
Death Benefits	1,395	23,896
Return of Contributions	3,386	19,302
Medical Benefits	19,197	265,892
Indebtedness	<u>0</u>	<u>(33,290)</u>
Subtotal	\$ 89,992	\$ 1,382,061
<u>Inactive Members</u>		
Not Vested	\$ 0	\$ 13,868
Vested Terminations - Retirement Benefits	0	102,936
- Medical Benefits	0	45,381
Retirees & Beneficiaries - Retirement Benefits	0	1,163,938
- Medical Benefits	<u>0</u>	<u>205,283</u>
Subtotal	\$ 0	\$ 1,531,406
<u>Totals</u>	\$ 89,992	\$ 2,913,467

1.3 Development of Total Employer Contribution Rate - FY98 (in thousands)

Normal Cost Rate

(1)	Total Normal Cost	\$ 89,992
(2)	Total Salaries	477,205
(3)	Normal Cost Rate, (1) / (2)	18.86%
(4)	Average Member Contribution Rate	8.76%
(5)	Employer Normal Cost Rate, (3) - (4)	10.10%

Past Service Rate

(1)	Accrued Liability	\$ 2,913,467
(2)	Valuation Assets	2,647,392
(3)	Total Unfunded Liability, (1) - (2)	266,075
(4)	Amortization Factor (25 year)	11.528758
(5)	Past Service Cost, (3) / (4)	23,079
(6)	Total Salaries	477,205
(7)	Past Service Rate, (5) / (6)	4.84%

<u>Total Employer Contribution Rate</u>	14.94%
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1.4 Development of Actuarial Gain/(Loss) for FY95 (in thousands)

(1) Unfunded Liability, June 30, 1994	\$ 288,452
(2) Normal Cost for FY95	87,942
(3) Interest on (1) and (2) at 8%	30,112
(4) Employee Contributions for FY95	47,477
(5) Employer Contributions for FY95	60,018
(6) Interest on (4) and (5) at 8% for one-half year	4,300
(7) Expected Unfunded Liability, June 30, 1995, (1) + (2) + (3) - (4) - (5) - (6)	294,711
(8) Actual Unfunded Liability, June 30, 1995	266,075
(9) Actuarial Gain/(Loss) for the Year, (7) - (8)	\$ 28,636

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

State of Alaska - T.R.S.

Disclosure for G.A.S.B. Statement 5 ('000 Omitted)

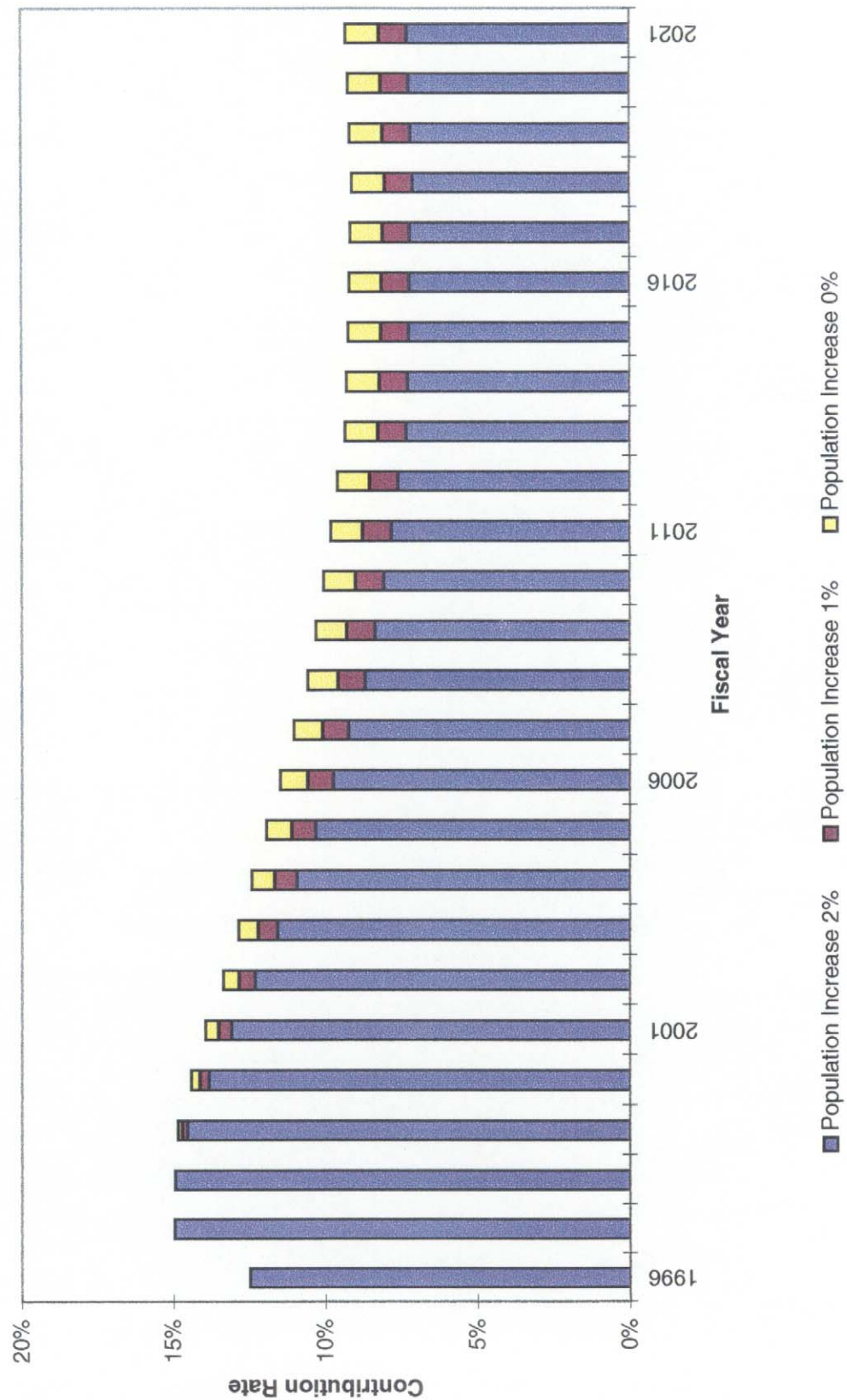
Totals For All Employers

***** Projected Benefit Obligation *****					
<u>Valuation Date</u>	<u>Current Retirees & Terminated</u>	***** Current Employees *****			<u>Total</u>
		<u>Contribs With Int</u>	<u>**** Employer Vested</u>	<u>Financed **** Non-Vested</u>	
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
June 30, 1990	940,475	269,491	587,835	97,229	1,895,030
June 30, 1991	1,056,453	293,136	598,527	127,289	2,075,405
June 30, 1992	1,110,981	341,204	655,821	123,740	2,231,746
June 30, 1993	1,223,220	370,667	746,208	89,361	2,429,456
June 30, 1994	1,419,506	398,990	870,309	72,604	2,761,409
June 30, 1995	1,531,406	437,089	855,506	89,466	2,913,467

<u>Valuation Date</u>	***** Valuation Assets *****			***** Market Value Assets *****		
	<u>Net Assets Available For Benefits</u>	<u>Unfunded PBO</u>	<u>Assets as Percent of PBO</u>	<u>Net Assets Available For Benefits</u>	<u>Unfunded PBO</u>	<u>Assets as Percent of PBO</u>
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%
June 30, 1990	1,662,242	232,788	88%	1,706,346	188,684	90%
June 30, 1991	1,779,579	295,826	86%	1,824,663	250,742	88%
June 30, 1992	2,001,864	229,882	90%	2,031,938	199,808	91%
June 30, 1993	2,261,082	168,374	93%	2,306,503	122,953	95%
June 30, 1994	2,472,957	288,452	90%	2,351,719	409,690	85%
June 30, 1995	2,647,392	266,075	91%	2,688,451	225,016	92%

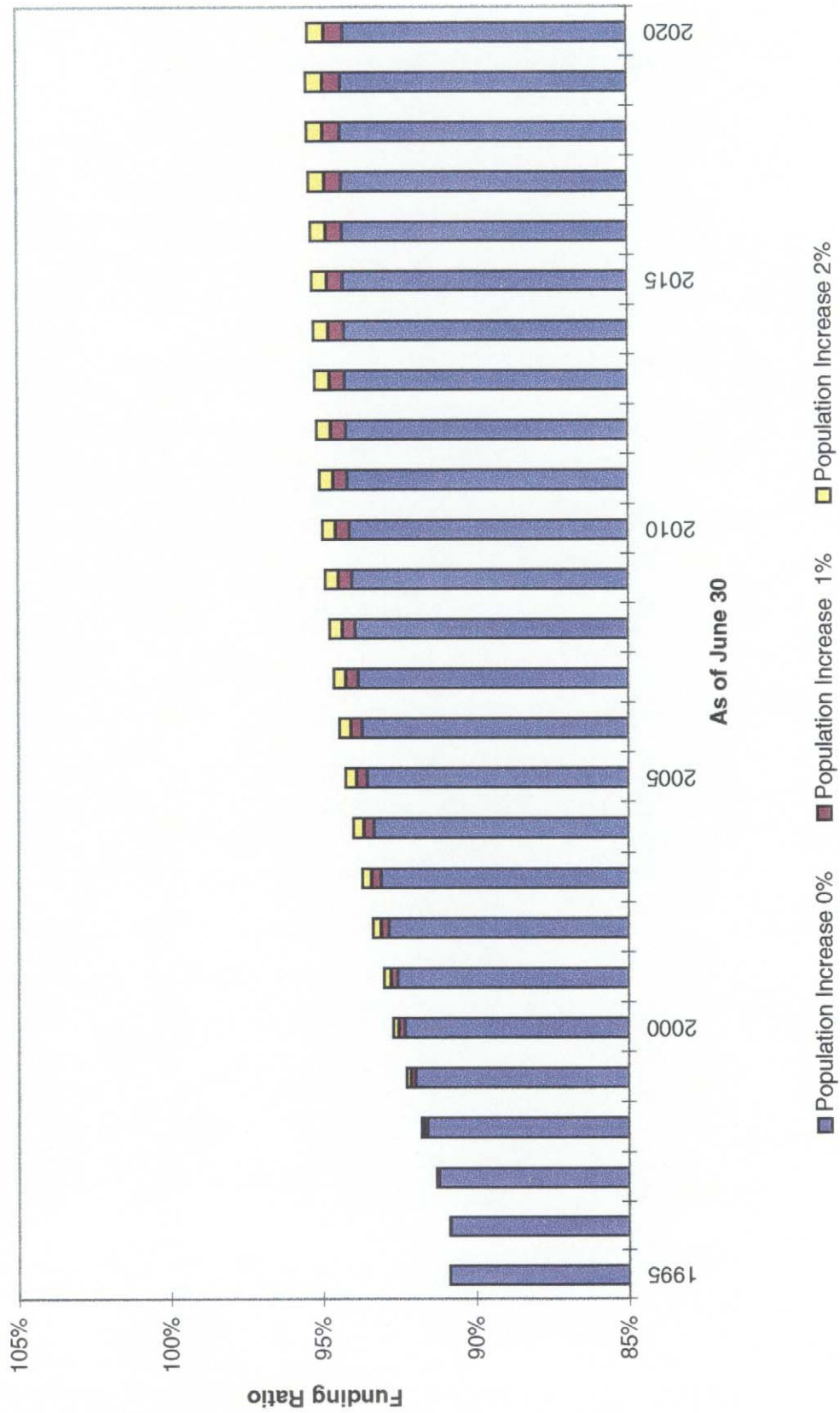
1.6 Actuarial Projections

State of Alaska TRS Projected Contribution Rates



1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Funding Ratios



1.6 Actuarial Projections (continued)

Table 1
State of Alaska TRS
Financial Projections ('000 omitted)

Investment Return		8.00%				Annual Population Increase							0.00%	
As of June 30	Total Assets	Valuation Amounts on July 1				Flow Amounts During Following 12 Months							Ending Asset Value	
		Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings		
1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.48%	60,301	42,327	102,627	158,149	(55,521)	209,571	2,801,441	
1996	2,801,441	3,084,093	90.8%	(282,652)	489,154	14.96%	74,072	43,324	117,397	167,125	(49,729)	222,126	2,973,839	
1997	2,973,839	3,260,838	91.2%	(286,999)	501,117	14.94%	75,740	44,295	120,036	181,088	(61,052)	235,465	3,148,251	
1998	3,148,251	3,437,646	91.6%	(289,395)	512,508	14.86%	76,990	45,242	122,231	196,665	(74,434)	248,883	3,322,701	
1999	3,322,701	3,612,974	92.0%	(290,273)	523,953	14.42%	76,368	46,189	122,557	214,217	(91,659)	262,150	3,493,191	
2000	3,493,191	3,783,817	92.3%	(290,626)	535,438	13.93%	75,606	47,261	122,866	232,120	(109,254)	275,085	3,659,022	
2001	3,659,022	3,953,809	92.5%	(294,786)	549,767	13.37%	74,435	48,453	122,888	248,651	(125,763)	287,691	3,820,951	
2002	3,820,951	4,116,263	92.8%	(295,312)	564,096	12.85%	73,435	49,643	123,077	267,875	(144,798)	299,884	3,976,037	
2003	3,976,037	4,270,909	93.1%	(294,872)	578,425	12.41%	72,663	50,829	123,493	288,204	(164,711)	311,495	4,122,821	
2004	4,122,821	4,417,649	93.3%	(294,828)	592,754	11.93%	71,568	52,013	123,581	307,116	(183,535)	322,484	4,261,770	
2005	4,261,770	4,556,554	93.5%	(294,784)	607,083	11.46%	70,708	53,430	124,138	326,351	(202,212)	332,853	4,392,410	
2006	4,392,410	4,687,867	93.7%	(295,457)	626,870	11.02%	70,172	55,080	125,252	345,239	(219,986)	342,593	4,515,018	
2007	4,515,018	4,812,004	93.8%	(296,986)	646,656	10.56%	69,346	56,726	126,072	362,898	(236,826)	351,728	4,629,920	
2008	4,629,920	4,929,550	93.9%	(299,629)	666,443	10.29%	69,571	58,435	128,007	378,670	(250,663)	360,367	4,739,624	
2009	4,739,624	5,041,262	94.0%	(301,638)	686,229	10.04%	69,889	60,145	130,034	394,120	(264,086)	368,606	4,844,144	
2010	4,844,144	5,148,068	94.1%	(303,924)	706,015	9.81%	70,613	62,175	132,788	408,948	(276,159)	376,485	4,944,470	
2011	4,944,470	5,251,068	94.2%	(306,598)	733,222	9.59%	71,624	64,526	136,150	422,922	(286,772)	384,087	5,041,784	
2012	5,041,784	5,351,532	94.2%	(309,748)	760,429	9.34%	72,285	66,876	139,162	435,491	(296,329)	391,490	5,136,945	
2013	5,136,945	5,450,903	94.2%	(313,958)	787,636	9.28%	74,349	69,227	143,576	446,894	(303,318)	398,823	5,232,450	
2014	5,232,450	5,550,794	94.3%	(318,344)	814,843	9.23%	76,460	71,578	148,038	456,738	(308,701)	406,248	5,329,998	
2015	5,329,998	5,652,989	94.3%	(322,991)	842,050	9.19%	79,060	74,291	153,351	465,872	(312,521)	413,899	5,431,376	
2016	5,431,376	5,759,443	94.3%	(328,067)	877,657	9.16%	82,060	77,368	159,428	473,493	(314,065)	421,947	5,539,258	
2017	5,539,258	5,872,284	94.3%	(333,025)	913,265	9.09%	84,681	80,444	165,125	479,158	(314,033)	430,579	5,655,805	
2018	5,655,805	5,993,809	94.4%	(338,004)	948,872	9.17%	88,631	83,521	172,152	487,509	(315,357)	439,850	5,780,298	
2019	5,780,298	6,126,488	94.3%	(346,190)	984,480	9.24%	92,565	86,597	179,163	495,960	(316,797)	449,752	5,913,253	
2020	5,913,253	6,272,961	94.3%	(359,708)	1,020,087	9.30%	96,557	89,729	186,286	504,594	(318,308)	460,328	6,055,273	

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

1.6 Actuarial Projections (continued)

Table 2

State of Alaska TRS
Financial Projections ('000 omitted)

Investment Return	8.00%				Annual Population Increase								Ending Asset Value
	Valuation Amounts on July 1-----				Flow Amounts During Following 12 Months-----				1.00%				
	As of June 30	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	
1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.48%	60,533	42,489	103,022	158,149	(55,126)	209,586	2,801,852
1996	2,801,852	3,084,161	90.8%	(282,309)	492,874	14.96%	74,935	43,829	118,764	167,125	(48,361)	222,214	2,975,705
1997	2,975,705	3,261,319	91.2%	(285,615)	508,934	14.94%	77,244	45,175	122,419	181,150	(58,731)	235,707	3,152,681
1998	3,152,681	3,438,897	91.7%	(286,216)	524,818	14.70%	78,326	46,531	124,857	196,814	(71,957)	249,336	3,330,060
1999	3,330,060	3,615,427	92.1%	(285,367)	541,181	14.12%	77,629	47,926	125,555	214,475	(88,920)	262,848	3,503,988
2000	3,503,988	3,787,991	92.5%	(284,002)	558,039	13.51%	76,818	49,531	126,349	232,516	(106,167)	276,072	3,673,893
2001	3,673,893	3,960,255	92.8%	(286,362)	579,300	12.82%	75,644	51,324	126,968	249,213	(122,244)	289,022	3,840,670
2002	3,840,670	4,125,717	93.1%	(285,047)	600,561	12.20%	74,548	53,113	127,660	268,631	(140,971)	301,615	4,001,315
2003	4,001,315	4,284,219	93.4%	(282,905)	621,822	11.65%	73,697	54,897	128,594	289,193	(160,599)	313,681	4,154,397
2004	4,154,397	4,435,799	93.7%	(281,402)	643,083	11.09%	72,524	56,677	129,201	308,297	(179,096)	325,188	4,300,489
2005	4,300,489	4,580,690	93.9%	(280,201)	664,344	10.56%	71,758	58,829	130,588	327,741	(197,153)	336,153	4,439,489
2006	4,439,489	4,719,319	94.1%	(279,830)	694,305	10.08%	71,472	61,353	132,825	346,847	(214,022)	346,598	4,572,066
2007	4,572,066	4,852,308	94.2%	(280,242)	724,266	9.57%	70,738	63,871	134,609	364,746	(230,136)	356,560	4,698,489
2008	4,698,489	4,980,473	94.3%	(281,984)	754,227	9.26%	71,259	66,459	137,719	380,787	(243,069)	366,156	4,821,577
2009	4,821,577	5,104,825	94.5%	(283,248)	784,188	8.99%	71,880	69,048	140,928	396,546	(255,617)	375,501	4,941,461
2010	4,941,461	5,226,570	94.5%	(285,109)	814,149	8.75%	73,084	72,148	145,233	411,728	(266,495)	384,657	5,059,623
2011	5,059,623	5,347,107	94.6%	(287,485)	855,952	8.52%	74,735	75,760	150,495	426,106	(275,611)	393,745	5,177,757
2012	5,177,757	5,468,033	94.7%	(290,276)	897,756	8.25%	75,830	79,372	155,202	439,133	(283,932)	402,863	5,296,689
2013	5,296,689	5,591,136	94.7%	(294,447)	939,560	8.20%	78,720	82,984	161,704	451,063	(289,360)	412,161	5,419,490
2014	5,419,490	5,718,400	94.8%	(298,910)	981,364	8.15%	81,656	86,596	168,252	461,533	(293,281)	421,828	5,548,037
2015	5,548,037	5,852,004	94.8%	(303,967)	1,023,168	8.12%	85,312	90,827	176,139	471,395	(295,256)	432,033	5,684,814
2016	5,684,814	5,994,321	94.8%	(309,507)	1,079,320	8.09%	89,575	95,679	185,254	479,858	(294,604)	443,001	5,833,211
2017	5,833,211	6,147,919	94.9%	(314,708)	1,135,472	8.01%	93,187	100,531	193,718	486,487	(292,769)	454,946	5,995,388
2018	5,995,388	6,315,560	94.9%	(320,173)	1,191,625	8.08%	98,533	105,382	203,915	496,243	(292,328)	467,938	6,170,997
2019	6,170,997	6,500,202	94.9%	(329,205)	1,247,777	8.14%	103,836	110,234	214,069	506,408	(292,339)	481,986	6,360,645
2020	6,360,645	6,704,996	94.9%	(344,352)	1,303,929	8.19%	109,260	115,194	224,454	517,087	(292,633)	497,146	6,565,158

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

1.6 Actuarial Projections (continued)

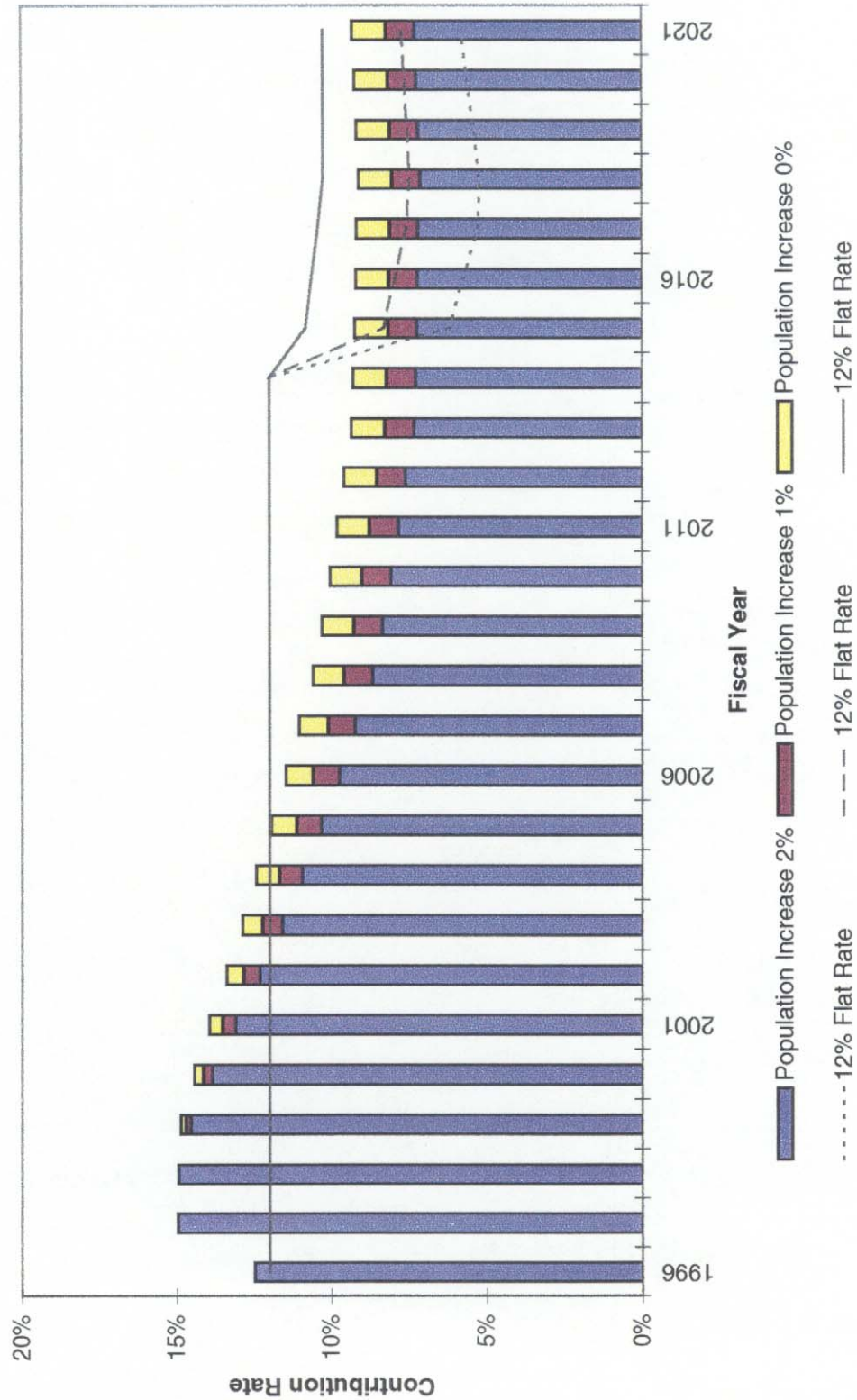
Table 3
State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return	8.00%					Annual Population Increase					2.00%					Ending Asset Value
		Valuation Amounts on July 1					Flow Amounts During Following 12 Months					Net					
		Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Investment Earnings	Net Contribs	Benefit Payments			
1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.48%	60,765	42,652	103,417	158,149	209,602	(54,731)	158,149	2,802,263			
1996	2,802,263	3,084,229	90.9%	(281,966)	496,594	14.96%	75,804	44,337	120,141	167,125	222,302	(46,984)	167,125	2,977,580			
1997	2,977,580	3,261,802	91.3%	(284,221)	516,828	14.94%	78,772	46,069	124,841	181,213	235,952	(56,372)	181,213	3,157,160			
1998	3,157,160	3,440,159	91.8%	(282,999)	537,373	14.54%	79,681	47,853	127,535	196,965	249,796	(69,430)	196,965	3,337,525			
1999	3,337,525	3,617,917	92.2%	(280,392)	558,925	13.84%	78,899	49,725	128,624	214,737	263,557	(86,113)	214,737	3,514,970			
2000	3,514,970	3,792,255	92.7%	(277,285)	581,547	13.09%	78,046	51,919	129,964	232,921	277,079	(102,957)	232,921	3,689,092			
2001	3,689,092	3,966,804	93.0%	(277,712)	610,614	12.30%	76,877	54,388	131,264	249,793	290,386	(118,528)	249,793	3,860,950			
2002	3,860,950	4,135,405	93.4%	(274,455)	639,680	11.56%	75,656	56,851	132,507	269,420	303,399	(136,913)	269,420	4,027,437			
2003	4,027,437	4,298,005	93.7%	(270,568)	668,747	10.93%	74,683	59,309	133,992	290,232	315,945	(156,239)	290,232	4,187,143			
2004	4,187,143	4,454,777	94.0%	(267,634)	697,814	10.30%	73,403	61,761	135,164	309,552	327,996	(174,388)	309,552	4,340,751			
2005	4,340,751	4,606,126	94.2%	(265,375)	726,881	9.73%	72,750	64,778	137,528	329,233	339,592	(191,705)	329,233	4,488,637			
2006	4,488,637	4,752,684	94.4%	(264,047)	769,139	9.21%	72,769	68,358	141,127	348,592	350,792	(207,465)	348,592	4,631,965			
2007	4,631,965	4,895,313	94.6%	(263,348)	811,398	8.66%	72,114	71,930	144,044	366,772	361,648	(222,728)	366,772	4,770,886			
2008	4,770,886	5,035,105	94.8%	(264,220)	853,656	8.34%	72,974	75,581	148,555	383,132	372,288	(234,577)	383,132	4,908,597			
2009	4,908,597	5,173,379	94.9%	(264,783)	895,914	8.06%	73,940	79,233	153,172	399,257	382,844	(246,084)	399,257	5,045,357			
2010	5,045,357	5,311,685	95.0%	(266,328)	938,173	7.82%	75,717	83,677	159,395	414,860	393,410	(255,466)	414,860	5,183,301			
2011	5,183,301	5,451,801	95.1%	(268,500)	998,803	7.59%	78,146	88,916	167,061	429,723	404,158	(262,662)	429,723	5,324,796			
2012	5,324,796	5,595,734	95.2%	(270,938)	1,059,432	7.31%	79,699	94,154	173,853	443,301	415,206	(269,448)	443,301	5,470,554			
2013	5,470,554	5,745,721	95.2%	(275,167)	1,120,062	7.27%	83,584	99,393	182,977	455,866	426,729	(272,889)	455,866	5,624,394			
2014	5,624,394	5,904,228	95.3%	(279,834)	1,180,692	7.23%	87,504	104,631	192,135	467,086	438,953	(274,952)	467,086	5,788,396			
2015	5,788,396	6,073,949	95.3%	(285,553)	1,241,322	7.20%	92,460	110,894	203,354	477,824	452,093	(274,470)	477,824	5,966,019			
2016	5,966,019	6,257,808	95.3%	(291,789)	1,325,660	7.19%	98,311	118,180	216,491	487,299	466,449	(270,807)	487,299	6,161,660			
2017	6,161,660	6,458,958	95.4%	(297,298)	1,409,999	7.10%	103,066	125,467	228,533	495,091	482,271	(266,558)	495,091	6,377,373			
2018	6,377,373	6,680,781	95.5%	(303,408)	1,494,338	7.17%	110,196	132,754	242,950	506,483	499,649	(263,533)	506,483	6,613,489			
2019	6,613,489	6,926,888	95.5%	(313,400)	1,578,676	7.23%	117,235	140,041	257,276	518,636	518,625	(261,361)	518,636	6,870,753			
2020	6,870,753	7,201,120	95.4%	(330,367)	1,663,015	7.29%	124,482	147,523	272,005	531,686	539,273	(259,681)	531,686	7,150,345			

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

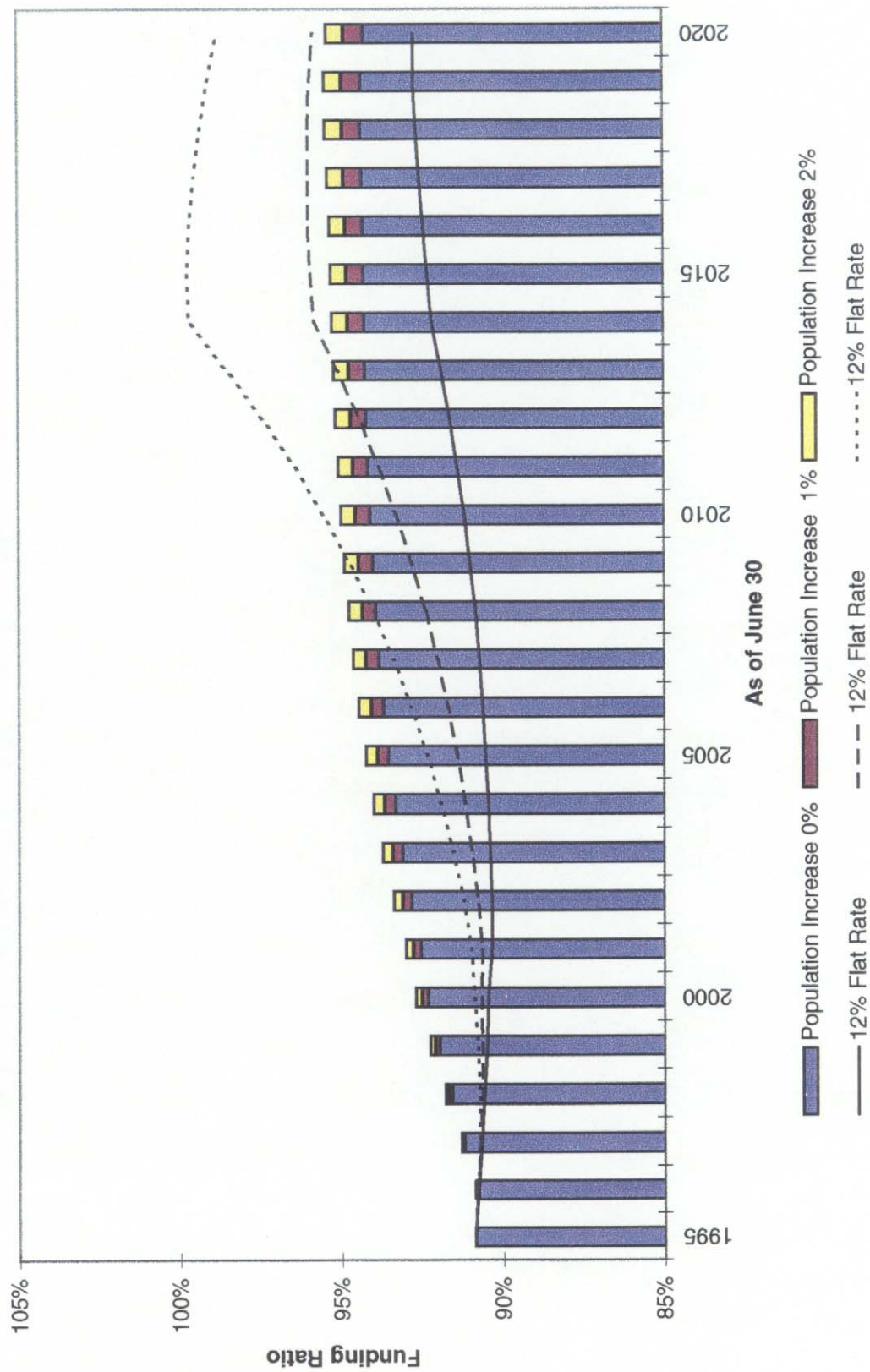
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Contribution Rates



1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Funding Ratios



1.6 Actuarial Projections (continued)

Table 4
State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return		Valuation Amounts on July 1				Annual Population Increase				Flow Amounts During Following 12 Months				Ending Asset Value	
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Cth Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	Ending Asset Value			
1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.00%	57,982	42,278	100,260	158,149	(57,889)	209,476	2,798,979			
1996	2,798,979	3,084,093	90.8%	(285,114)	489,154	12.00%	59,416	43,275	102,691	167,125	(64,434)	221,341	2,955,886			
1997	2,955,886	3,260,838	90.6%	(304,952)	501,117	12.00%	60,817	44,245	105,062	181,088	(76,026)	233,430	3,113,290			
1998	3,113,290	3,437,646	90.6%	(324,357)	512,508	12.00%	62,188	45,190	107,377	196,665	(89,288)	245,492	3,269,494			
1999	3,269,494	3,612,974	90.5%	(343,480)	523,953	12.00%	63,563	46,136	109,700	214,217	(104,517)	257,379	3,422,356			
2000	3,422,356	3,783,817	90.4%	(361,461)	535,438	12.00%	65,112	47,206	112,319	232,120	(119,802)	268,996	3,571,551			
2001	3,571,551	3,953,809	90.3%	(382,258)	549,767	12.00%	66,832	48,397	115,229	248,651	(133,422)	280,387	3,718,516			
2002	3,718,516	4,116,263	90.3%	(397,747)	564,096	12.00%	68,551	49,585	118,137	267,875	(149,738)	291,492	3,860,270			
2003	3,860,270	4,270,909	90.4%	(410,639)	578,425	12.00%	70,271	50,771	121,041	288,204	(167,162)	302,135	3,995,243			
2004	3,995,243	4,417,649	90.4%	(422,406)	592,754	12.00%	71,990	51,953	123,943	307,116	(183,173)	312,292	4,124,362			
2005	4,124,362	4,556,554	90.5%	(432,191)	607,083	12.00%	74,037	53,368	127,406	326,351	(198,945)	321,991	4,247,408			
2006	4,247,408	4,687,867	90.6%	(440,459)	626,870	12.00%	76,412	55,016	131,428	345,239	(213,811)	331,240	4,364,838			
2007	4,364,838	4,812,004	90.7%	(447,166)	646,656	12.00%	78,786	56,726	135,512	362,898	(227,386)	340,092	4,477,543			
2008	4,477,543	4,929,550	90.8%	(452,006)	666,443	12.00%	81,160	58,435	139,596	378,670	(239,074)	348,640	4,587,109			
2009	4,587,109	5,041,262	91.0%	(454,152)	686,229	12.00%	83,535	60,145	143,680	394,120	(250,441)	356,951	4,693,620			
2010	4,693,620	5,148,068	91.2%	(454,448)	706,015	12.00%	86,354	62,175	148,529	408,948	(260,418)	365,073	4,798,274			
2011	4,798,274	5,251,068	91.4%	(452,794)	733,222	12.00%	89,619	64,526	154,145	422,922	(268,777)	373,111	4,902,608			
2012	4,902,608	5,351,532	91.6%	(448,924)	760,429	12.00%	92,884	66,876	159,760	435,491	(275,730)	381,179	5,008,057			
2013	5,008,057	5,450,903	91.9%	(442,846)	787,636	12.00%	96,149	69,227	165,376	446,894	(281,518)	389,384	5,115,923			
2014	5,115,923	5,550,794	92.2%	(434,871)	814,843	10.82%	89,612	71,578	161,190	456,738	(295,549)	397,452	5,217,827			
2015	5,217,827	5,652,989	92.3%	(435,162)	842,050	10.61%	91,265	74,291	165,556	465,872	(300,316)	405,413	5,322,924			
2016	5,322,924	5,759,443	92.4%	(436,519)	877,657	10.40%	93,168	77,368	170,535	473,493	(302,958)	413,716	5,433,682			
2017	5,433,682	5,872,284	92.5%	(438,601)	913,265	10.25%	95,439	80,444	175,883	479,158	(303,275)	422,564	5,552,971			
2018	5,552,971	5,993,809	92.6%	(440,838)	948,872	10.24%	98,993	83,521	182,513	487,509	(304,996)	432,038	5,680,013			
2019	5,680,013	6,126,488	92.7%	(446,475)	984,480	10.24%	102,616	86,597	189,213	495,960	(306,747)	442,131	5,815,398			
2020	5,815,398	6,272,961	92.7%	(457,563)	1,020,087	10.24%	106,319	89,729	196,049	504,594	(308,545)	452,890	5,959,742			

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

1.6 Actuarial Projections (continued)

Table 5
State of Alaska TRS
Financial Projections ('000 omitted)

Investment Return	As of June 30	Valuation Amounts on July 1-----				Flow Amounts During Following 12 Months-----					Annual Population Increase		Ending Asset Value	
		Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer	Employer	Employee	Total	Benefit Payments	Net Contribs		
							Ctb Rate	Contribs	Contribs					Contribs
	1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.00%	58,205	42,441	100,646	158,149	(57,503)	209,491	2,799,380
	1996	2,799,380	3,084,161	90.8%	(284,781)	492,874	12.00%	60,108	43,779	103,887	167,125	(63,238)	221,421	2,957,563
	1997	2,957,563	3,261,319	90.7%	(303,756)	508,934	12.00%	62,025	45,123	107,148	181,150	(74,001)	233,645	3,117,207
	1998	3,117,207	3,438,897	90.6%	(321,690)	524,818	12.00%	63,960	46,478	110,437	196,814	(86,377)	245,921	3,276,752
	1999	3,276,752	3,615,427	90.6%	(338,675)	541,181	12.00%	65,953	47,871	113,824	214,475	(100,650)	258,114	3,434,216
	2000	3,434,216	3,787,991	90.7%	(353,775)	558,039	12.00%	68,240	49,474	117,715	232,516	(114,802)	270,145	3,589,559
	2001	3,589,559	3,960,255	90.6%	(370,697)	579,300	12.00%	70,792	51,265	122,057	249,213	(127,156)	282,078	3,744,481
	2002	3,744,481	4,125,717	90.8%	(381,236)	600,561	12.00%	73,343	53,051	126,394	268,631	(142,237)	293,869	3,896,114
	2003	3,896,114	4,284,219	90.9%	(388,105)	621,822	12.00%	75,894	54,834	130,728	289,193	(158,465)	305,351	4,043,000
	2004	4,043,000	4,435,799	91.1%	(392,800)	643,083	12.00%	78,446	56,612	135,057	308,297	(173,240)	316,510	4,186,270
	2005	4,186,270	4,580,690	91.4%	(394,420)	664,344	12.00%	81,519	58,762	140,280	327,741	(187,461)	327,403	4,326,212
	2006	4,326,212	4,719,319	91.7%	(393,107)	694,305	12.00%	85,114	61,282	146,396	346,847	(200,450)	338,079	4,463,841
	2007	4,463,841	4,852,308	92.0%	(388,467)	724,266	12.00%	88,710	63,871	152,580	364,746	(212,165)	348,621	4,600,296
	2008	4,600,296	4,980,473	92.4%	(380,176)	754,227	12.00%	92,305	66,459	158,764	380,787	(222,023)	359,143	4,737,416
	2009	4,737,416	5,104,825	92.8%	(367,409)	784,188	12.00%	95,900	69,048	164,948	396,546	(231,597)	369,729	4,875,548
	2010	4,875,548	5,226,570	93.3%	(351,021)	814,149	12.00%	100,206	72,148	172,354	411,728	(239,374)	380,469	5,016,644
	2011	5,016,644	5,347,107	93.8%	(330,464)	855,952	12.00%	105,223	75,760	180,983	426,106	(245,123)	391,527	5,163,047
	2012	5,163,047	5,468,033	94.4%	(304,986)	897,756	12.00%	110,239	79,372	189,611	439,133	(249,522)	403,063	5,316,588
	2013	5,316,588	5,591,136	95.1%	(274,548)	939,560	12.00%	115,255	82,984	198,239	451,063	(252,824)	415,214	5,478,978
	2014	5,478,978	5,718,400	95.8%	(239,422)	981,364	8.29%	83,080	86,596	169,676	461,533	(291,857)	426,644	5,613,766
	2015	5,613,766	5,852,004	95.9%	(238,238)	1,023,168	7.93%	83,381	90,827	174,208	471,395	(297,187)	437,214	5,753,792
	2016	5,753,792	5,994,321	96.0%	(240,528)	1,079,320	7.56%	83,752	95,679	179,431	479,858	(300,427)	448,286	5,901,652
	2017	5,901,652	6,147,919	96.0%	(246,267)	1,135,472	7.45%	86,704	100,531	187,234	486,487	(299,253)	460,162	6,062,561
	2018	6,062,561	6,315,560	96.0%	(252,999)	1,191,625	7.52%	91,771	103,382	197,154	496,243	(299,090)	473,041	6,236,513
	2019	6,236,513	6,500,202	95.9%	(263,689)	1,247,777	7.62%	97,165	110,234	207,399	506,408	(299,009)	486,961	6,424,464
	2020	6,424,464	6,704,996	95.8%	(280,532)	1,303,929	7.71%	102,740	115,194	217,935	517,087	(299,152)	501,991	6,627,303

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

1.6 Actuarial Projections (continued)

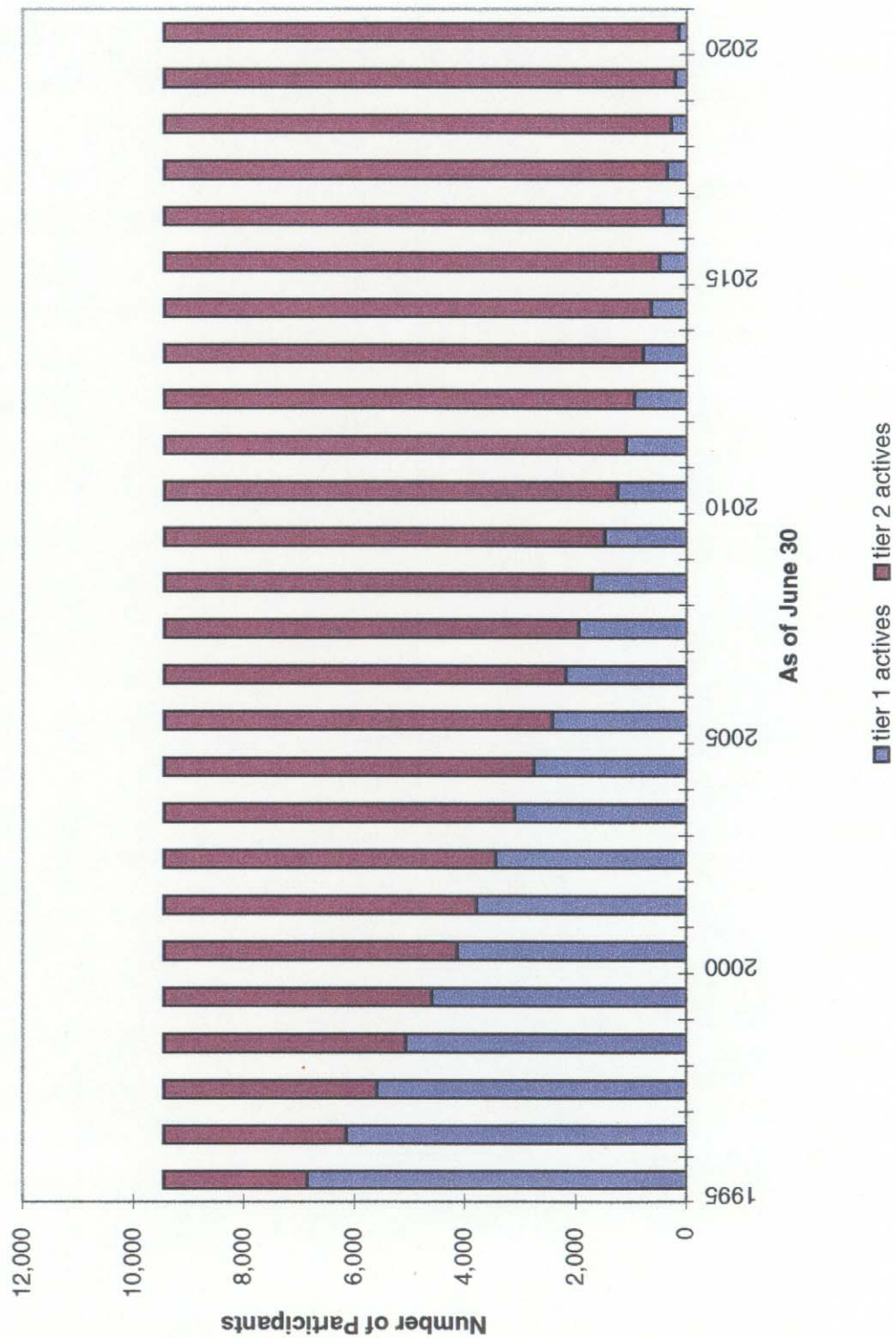
Table 6
State of Alaska TRS
Financial Projections ('000 omitted)

Investment Return		Valuation Amounts on July 1			Flow Amounts During Following 12 Months				Annual Population Increase				2.00%	
As of June 30	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	Ending Asset Value	
1995	2,647,392	2,913,467	90.9%	(266,075)	477,205	12.00%	58,428	42,604	101,032	158,149	(57,117)	209,507	2,799,782	
1996	2,799,782	3,084,229	90.8%	(284,448)	496,594	12.00%	60,805	44,287	105,092	167,125	(62,034)	221,501	2,959,249	
1997	2,959,249	3,261,802	90.7%	(302,552)	516,828	12.00%	63,252	46,016	109,268	181,213	(71,945)	233,862	3,121,167	
1998	3,121,167	3,440,159	90.7%	(318,992)	537,373	12.00%	65,778	47,799	113,576	196,965	(83,388)	246,358	3,284,136	
1999	3,284,136	3,617,917	90.8%	(333,781)	558,925	12.00%	68,428	49,668	118,096	214,737	(96,641)	258,865	3,446,360	
2000	3,446,360	3,792,255	90.9%	(345,895)	581,547	12.00%	71,530	51,859	123,389	232,921	(109,533)	271,328	3,608,155	
2001	3,608,155	3,966,804	91.0%	(358,649)	610,614	12.00%	75,018	54,325	129,343	249,793	(120,450)	283,834	3,771,540	
2002	3,771,540	4,135,405	91.2%	(363,865)	639,680	12.00%	78,506	56,786	135,291	269,420	(134,129)	296,358	3,933,769	
2003	3,933,769	4,298,005	91.5%	(364,235)	668,747	12.00%	81,994	59,240	141,234	290,232	(148,997)	308,742	4,093,513	
2004	4,093,513	4,454,777	91.9%	(361,264)	697,814	12.00%	85,482	61,689	147,171	309,552	(162,381)	320,986	4,252,118	
2005	4,252,118	4,606,126	92.3%	(354,007)	726,881	12.00%	89,761	64,703	154,464	329,233	(174,769)	333,179	4,410,528	
2006	4,410,528	4,752,684	92.8%	(342,156)	769,139	12.00%	94,832	68,279	163,111	348,592	(185,480)	345,423	4,570,471	
2007	4,570,471	4,895,313	93.4%	(324,843)	811,398	12.00%	99,903	71,930	171,834	366,772	(194,939)	357,840	4,733,372	
2008	4,733,372	5,035,105	94.0%	(301,733)	853,656	12.00%	104,974	75,581	180,556	383,132	(202,576)	370,567	4,901,363	
2009	4,901,363	5,173,379	94.7%	(272,016)	895,914	12.00%	110,045	79,233	189,278	399,257	(209,979)	383,710	5,075,094	
2010	5,075,094	5,311,685	95.5%	(236,591)	938,173	12.00%	116,219	83,677	199,896	414,860	(214,965)	397,409	5,257,538	
2011	5,257,538	5,451,801	96.4%	(194,263)	998,803	12.00%	123,494	88,916	212,410	429,723	(217,313)	411,911	5,452,136	
2012	5,452,136	5,595,734	97.4%	(143,599)	1,059,432	12.00%	130,770	94,154	224,924	443,301	(218,377)	427,436	5,661,194	
2013	5,661,194	5,745,721	98.5%	(84,527)	1,120,062	12.00%	138,045	99,393	237,438	455,866	(218,428)	444,158	5,886,925	
2014	5,886,925	5,904,228	99.7%	(17,303)	1,180,692	6.18%	74,878	104,631	179,509	467,086	(287,577)	459,451	6,058,798	
2015	6,058,798	6,073,949	99.8%	(15,151)	1,241,322	5.73%	73,511	110,894	184,405	477,824	(293,419)	472,967	6,238,347	
2016	6,238,347	6,257,808	99.7%	(19,461)	1,325,660	5.26%	71,930	118,180	190,110	487,299	(297,188)	487,180	6,428,338	
2017	6,428,338	6,458,958	99.5%	(30,620)	1,409,999	5.21%	75,628	125,467	201,095	495,091	(293,996)	502,507	6,636,849	
2018	6,636,849	6,680,781	99.3%	(43,932)	1,494,338	5.39%	82,817	132,754	215,572	506,483	(290,912)	519,311	6,865,249	
2019	6,865,249	6,926,888	99.1%	(61,639)	1,578,676	5.59%	90,644	140,041	230,685	518,636	(287,951)	537,702	7,115,000	
2020	7,115,000	7,201,120	98.8%	(86,120)	1,663,015	5.78%	98,766	147,523	246,288	531,686	(285,398)	557,784	7,387,386	

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

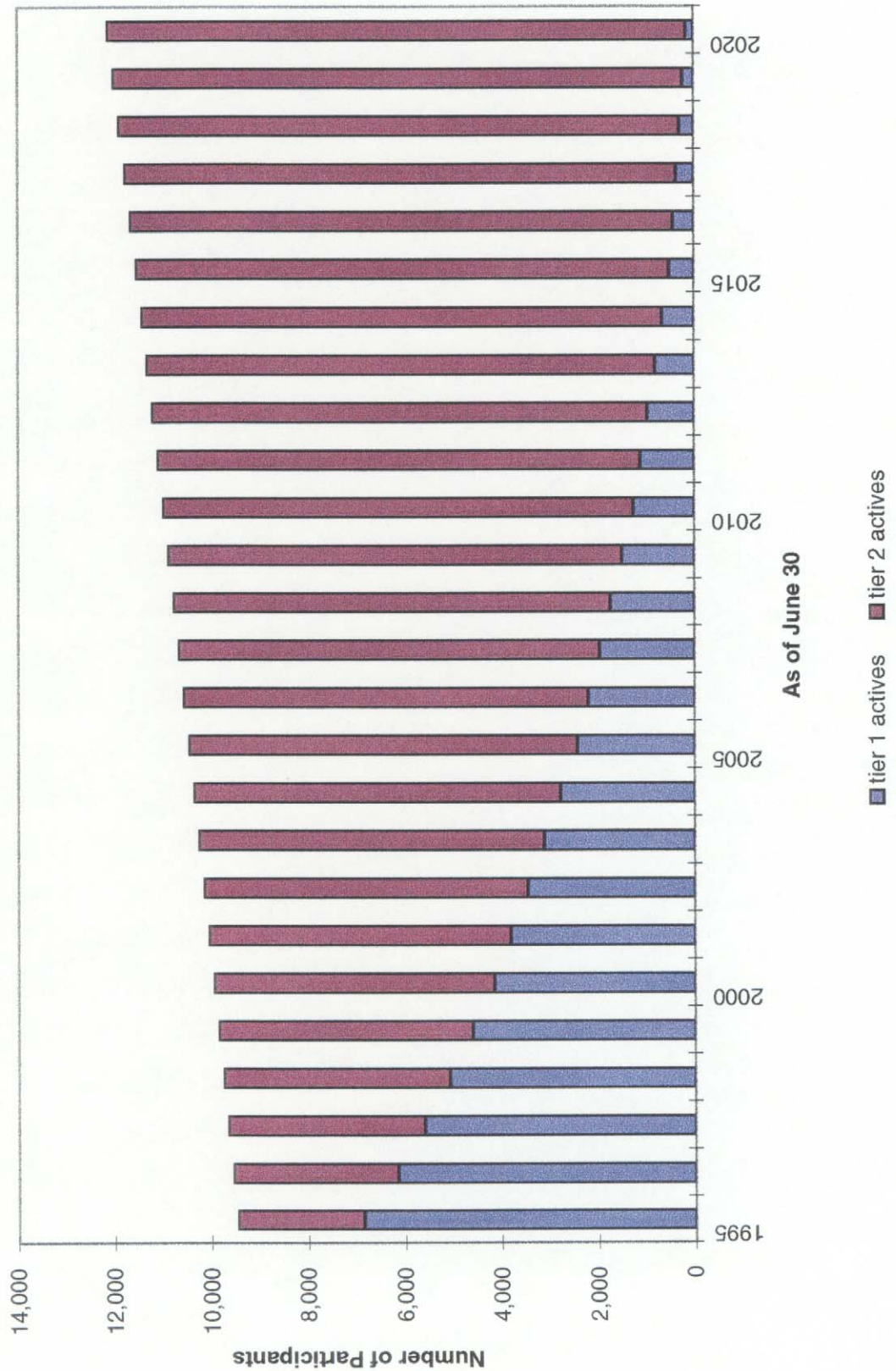
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Active Participant Count Annual Population Increase of 0%



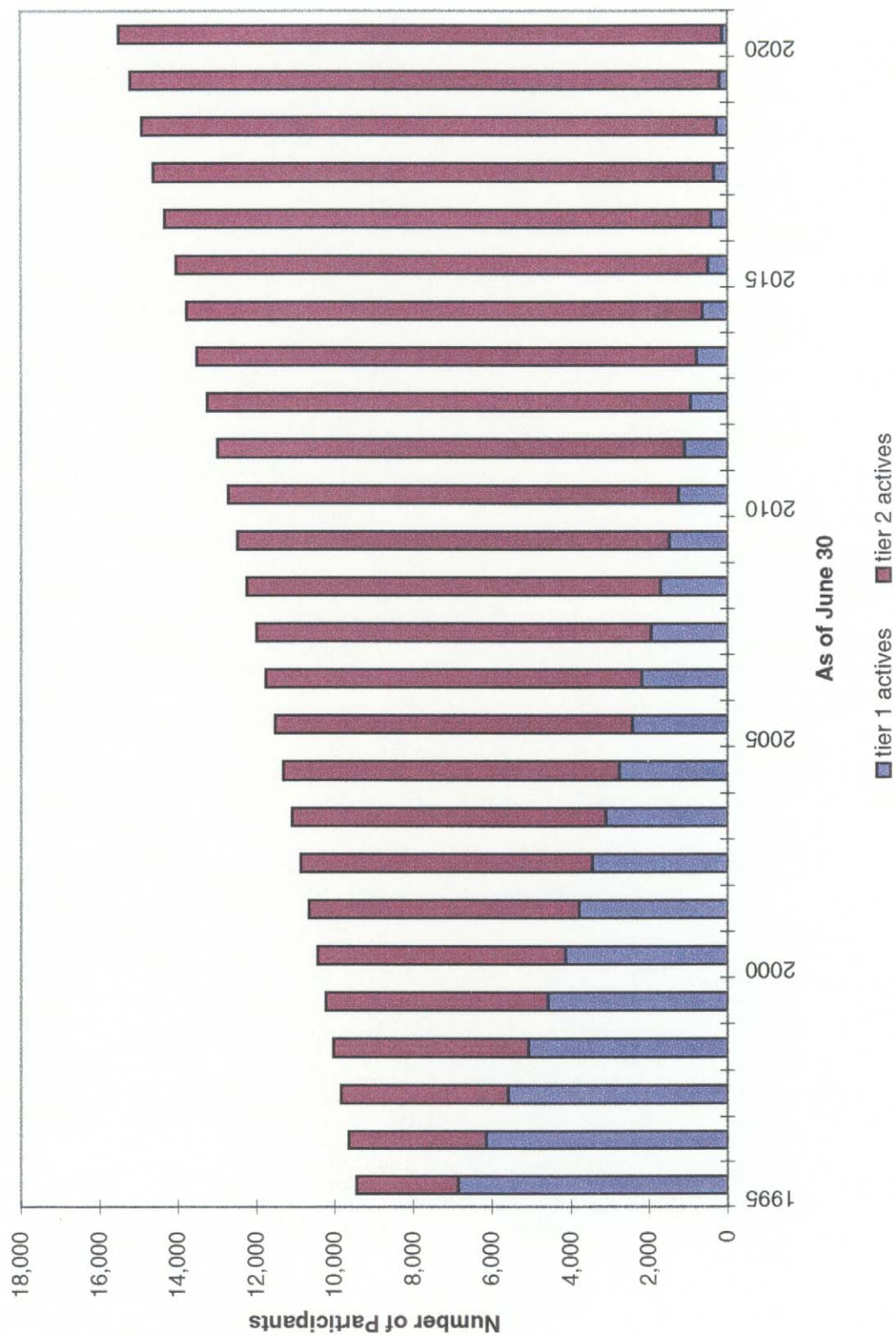
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Active Participant Count Annual Population Increase of 1%



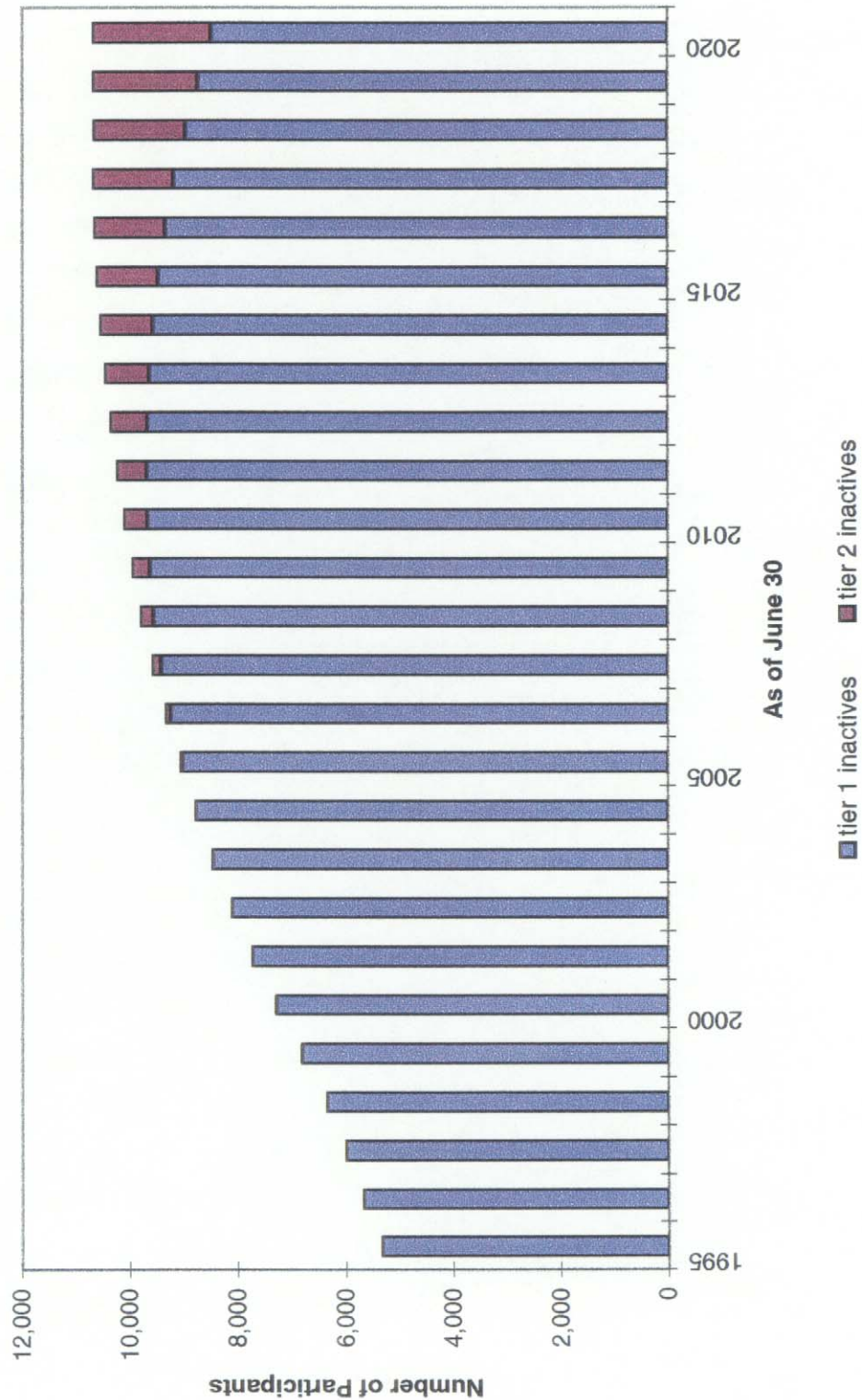
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Active Participant Count Annual Population Increase of 2%



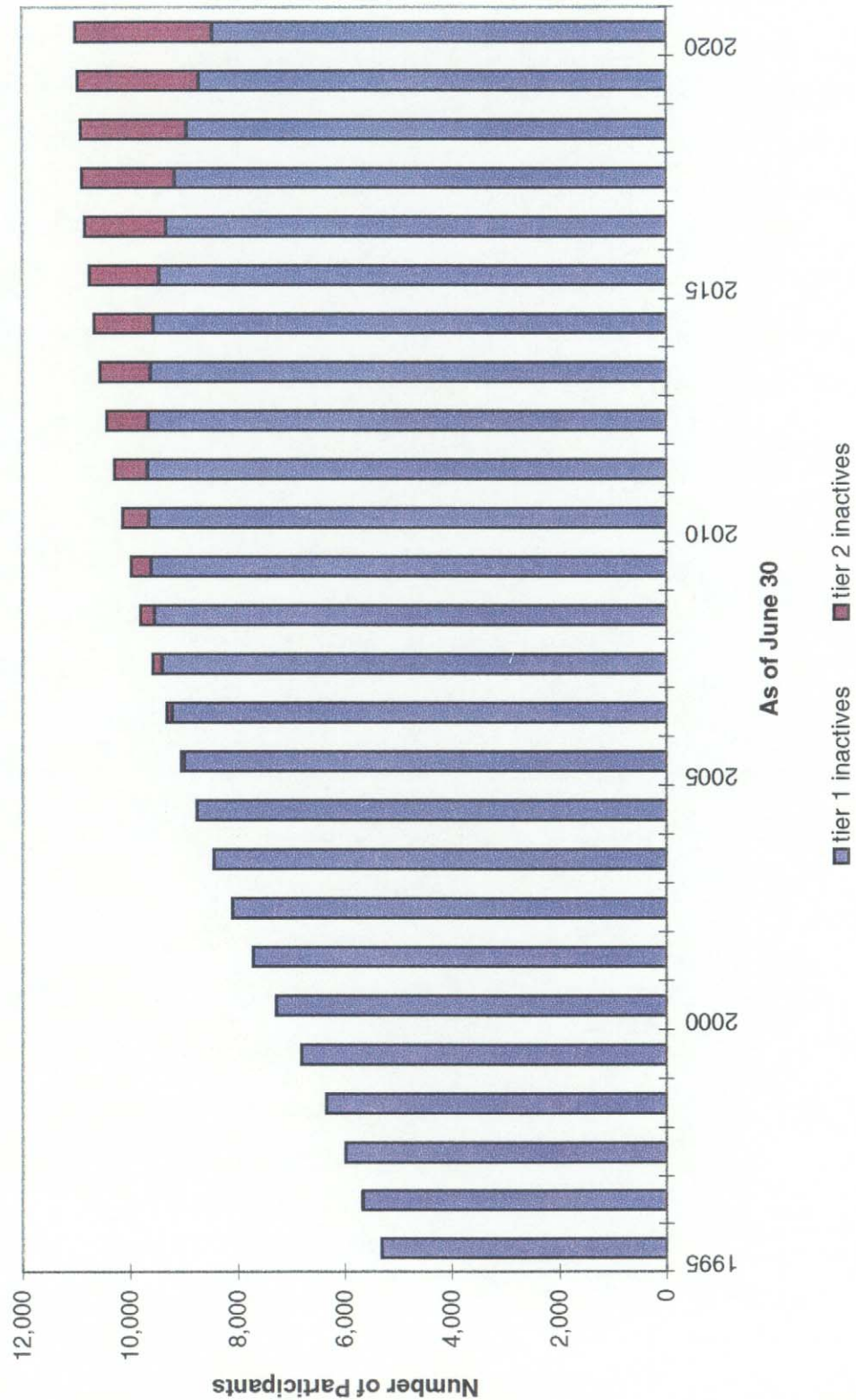
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Inactive Participant Count Annual Population Increase of 0%



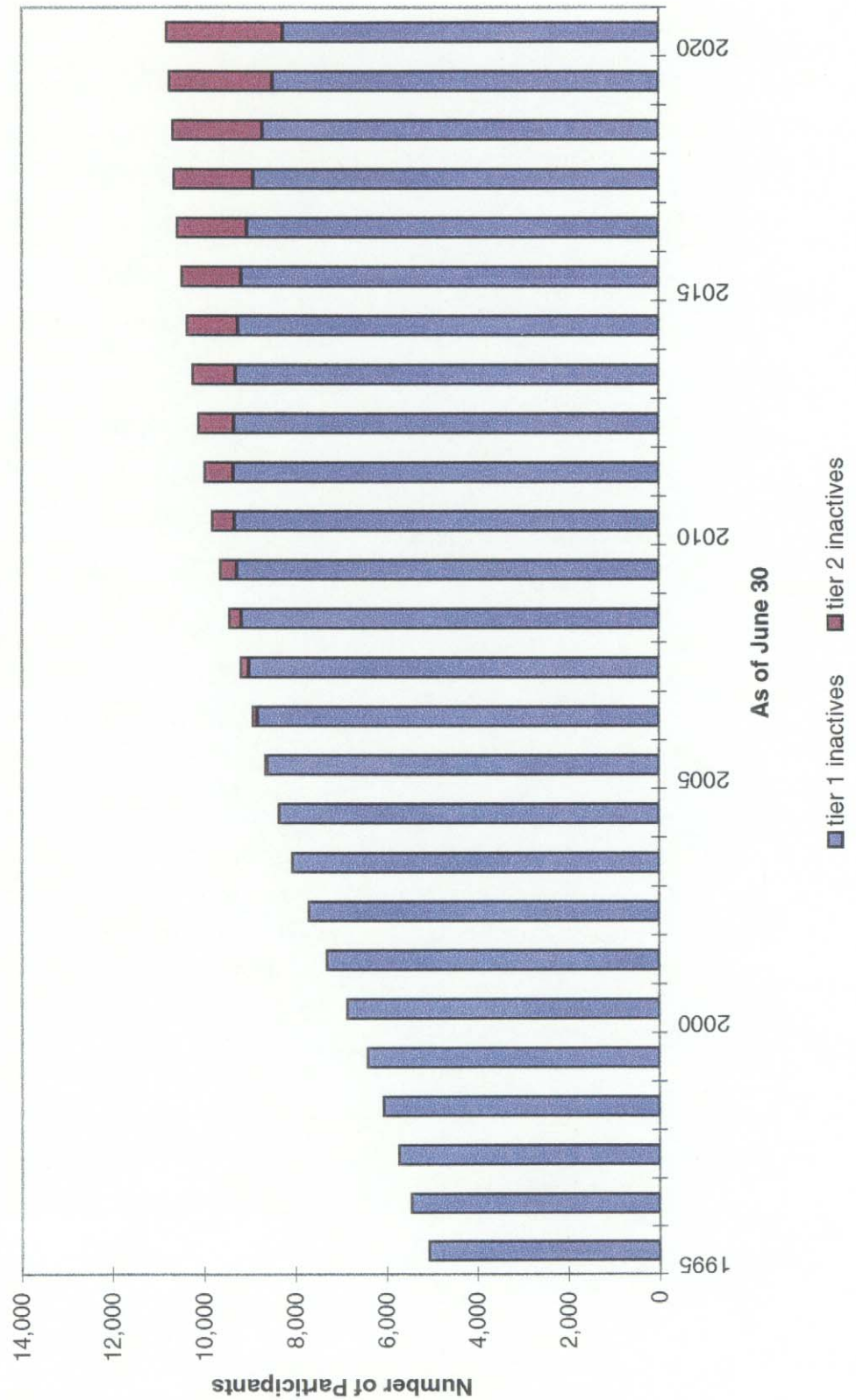
1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Inactive Participant Count Annual Population Increase of 1%



1.6 Actuarial Projections (continued)

State of Alaska TRS Projected Inactive Participant Count Annual Population Increase of 2%



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.

2.1 Summary of the Alaska Teachers' Retirement System

(1) Effective Date

July 1, 1955, with amendments through June 30, 1995. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the TRS before July 1, 1990, are eligible for different benefits than members hired after June 30, 1990.

(2) Administration of Plan

The Commissioner of Administration is responsible for administering the system. The Teachers' Retirement Board prescribes policies and regulations and performs other activities necessary to carry out the provisions of the system. The Alaska State Pension Investment Board, Department of Revenue, Treasury Division is responsible for investing TRS funds. The Attorney General represents the system in legal proceedings.

(3) Membership

Membership in the Alaska TRS is mandatory 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;
- 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.

Employees participating in the University of Alaska's Optional Retirement Plan or other retirement plans funded by the State are not covered by the TRS.

Employees who work half-time in the TRS and Public Employees' Retirement System (PERS) simultaneously are eligible for half-time TRS and PERS credit.

(4) Credited Service

TRS members receive a year of membership credit if they work a minimum of 172 days during the school year (July 1 through June 30 of the following year). Fractional credit is determined based on the number of days worked. Members receive one-half membership credit for each day of part-time service. Credit is granted for all Alaskan public school service.

Members may claim other types of service, including:

- Outside teaching service in out-of-state schools or Alaska private schools (not more than ten years may be claimed);
- Military service (not more than five years of military service or ten years of combined outside and military service may be claimed);
- Alaska Bureau of Indian Affairs (BIA) service;
- Retroactive Alaskan service that was not creditable at the time it occurred, but later became creditable because of legislative change;
- Unused sick leave credit after members retire; and
- Leave of absence without pay.

Except for retroactive Alaska service that occurred before July 1, 1955, and unused sick leave, contributions are required for all claimed service.

Members receiving TRS disability benefits continue to earn TRS credit while disabled.

(5) Employer Contributions

TRS employers contribute the amounts required, in addition to employees' contributions, to fund the benefits of the system.

(6) Member Contributions

Mandatory Contributions: Members are required to contribute 8.65% of their base salaries. Members' contributions are deducted from gross salaries before federal income taxes are withheld.

Contributions for Claimed Service: Member contributions are also required for most of the claimed service described in (4) above.

1% Supplemental Contributions: Members who joined the system before July 1, 1982, and elected to participate in the supplemental contributions provision, are required to contribute an additional 1% of their salaries. Under the supplemental provision, an eligible spouse or dependent child will receive a survivor's allowance or spouse's pension if the member dies (see (10) below).

Interest: Members' contributions earn 4.5% interest, compounded annually on June 30.

Refund of Contributions: Terminated members may receive refunds of their member contribution accounts, which includes their mandatory contributions, indebtedness payments, and interest earned. Terminated members' accounts may be attached to satisfy claims under Alaska Statute 09.38.065, federal income tax levies, and valid qualified domestic relations orders.

Reinstatement of Contributions: Refunded accounts and the corresponding TRS service may be reinstated upon reemployment in the TRS. Accounts attached to satisfy claims under Alaska Statute 09.38.065 or a federal tax levy may be reinstated at any time. Interest accrues on refunds until paid in full or members retire.

(7) Retirement Benefits

Eligibility:

- (a) Members, including deferred vested members, are eligible for normal retirement at age 60*, or early retirement at age 55, if they have at least:
 - (i) eight years of paid-up membership service;
 - (ii) 15 years of paid-up creditable service, the last five years which are membership service, and they were first hired under the TRS before July 1, 1975;
 - (iii) five years of paid-up membership service and three years of paid-up Alaska Bureau of Indian Affairs service;
 - (iv) 12 years of combined part-time and full-time paid-up membership service; or
 - (v) two years of paid-up membership service if they are vested in the Public Employees' Retirement System (PERS).

* Members participating before July 1, 1990, are eligible for normal retirement at age 55 or early retirement at age 50.

(b) Members may retire at any age when they have:

- (i) 25 years of paid-up creditable service, the last five years which are membership service;
- (ii) 20 years of paid-up membership service;
- (iii) 20 years of combined paid-up membership and Alaska Bureau of Indian Affairs service, the last five years which are membership service; or
- (iv) 20 years of combined paid-up part-time and full-time membership service.

Benefit Type: Lifetime benefits are paid to members. Eligible members may receive normal, unreduced benefits when they (1) reach normal retirement age and complete the service required; or (2) satisfy the minimum service requirements to retire at any age under (b) above. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Members may also select joint and survivor options. Under those options and early retirement, benefits are actuarially adjusted so that members receive the actuarial equivalents of their normal benefit amounts.

Benefit Calculation: Retirement benefits are calculated by multiplying the average base salary (ABS) times the total TRS service times the percentage multiplier. The ABS is determined by averaging the salaries earned during the three highest school years. Members must earn at least 115 days of credit in a school year to include it in the ABS calculation. The TRS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

The percentage multipliers are 2% for the first 20 years and 2.5% for all remaining service. Service before July 1, 1990, is calculated at 2%.

Indebtedness: Members who terminate and refund their TRS contributions are not eligible to retire, unless they return to TRS employment and pay back their refunds, plus interest, or accrue additional service which qualifies them for retirement. TRS refunds must be paid in full if the corresponding service is to count toward the minimum service requirements for retirement. Refunded TRS service is included in total service for the purpose of calculating retirement benefits. However, when refunds are not completely paid before retirement, benefits are actuarially reduced for life.

(8) Reemployment of Retired Members

Retirement benefits are suspended while retired members are reemployed under the TRS. During reemployment, members earn additional TRS service and contributions are withheld from their wages.

Members retired under the Retirement Incentive Programs (RIPs) who return to employment under the TRS, Public Employees' Retirement System (PERS), or the University of Alaska's Optional Retirement Plan will:

- (a) forfeit the three years of incentive credits that they received;
- (b) owe the TRS 110% of the benefits that they received under the RIP, which may include costs for health insurance, excluding amounts that they paid to participate; and
- (c) be charged 7% interest from the date that they are reemployed until their indebtedness is paid in full or they retire again. If the indebtedness is not completely paid, future benefits will be actuarially reduced for life.

(9) Disability Benefits

Monthly disability benefits are paid to permanently disabled members until they die, recover or become eligible for normal retirement. To be eligible, members must have at least five years of paid-up membership service.

Disability benefits are equal to 50% of the member's base salary at the time of disability. The benefit is increased by 10% of the base salary for each minor child, up to a maximum of 40%. Members continue to earn TRS service until eligible for normal retirement.

Members are appointed to normal retirement on the first of the month after they become eligible.

(10) Death Benefits

Monthly death benefits may be paid to a spouse or dependent children upon the death of a member. If monthly benefits are not payable under the supplemental contributions provision or occupational and nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

Occupational Death: When an active member dies from occupational causes, a monthly survivor's pension may be paid to the spouse, unless benefits are payable under the supplemental contributions provision (below). The pension equals 40% of the member's base salary on the date of death or disability, if earlier. If there is no spouse, the pension may be paid to the member's dependent children. On the member's normal retirement date, the benefit converts to a normal retirement benefit. The normal benefit is based on the member's average base salary as existed on the date of death and service, including service accumulated from the date of the member's death to the normal retirement date.

Nonoccupational Death: When a vested member dies from nonoccupational causes, the surviving spouse may elect to receive a monthly 50% joint and survivor benefit or a lump sum benefit, unless benefits are payable under the supplemental contributions provision (below). The monthly benefit is calculated on the member's average base salary and TRS service accrued at the time of death.

Lump Sum Benefit: Upon the death of an active member who has less than one year of service or an inactive member who is not vested, the designated beneficiary receives the member's contribution account, which includes mandatory contributions, indebtedness payments, and interest earned. Any supplemental contributions will also be refunded. If the member has more than one year of TRS service, the beneficiary also receives \$1,000 and \$100 for each year of TRS service, up to a maximum of \$3,000. An additional \$500 may be payable if the member is survived by dependent children.

Supplemental Contributions Provision: Members are eligible for supplemental coverage if they joined the TRS before July 1, 1982, elected to participate in the supplemental provision, and made the required contributions. A survivor's allowance or spouse's pension (below) may be payable if the member made supplemental contributions for at least one year and dies while in membership service or while disabled under the TRS. In addition, the allowance and pension may be payable if the member dies while retired or in deferred vested status if supplemental contributions were made for at least five years.

- (a) Survivor's Allowance: If the member is survived by dependent children, the surviving spouse and dependent children are entitled to a survivor's allowance. The allowance for the spouse is equal to 35% of the member's base salary at the time of death or disability, plus 10% for each dependent child up to a maximum of 40%. The allowance terminates and a spouse's pension becomes payable when there is no longer an eligible dependent child.
- (b) Spouse's Pension: The spouse's pension is equal to 50% of the retirement benefit that the deceased member was receiving or would have received if retired at the time of death. The spouse's pension begins on the first of the month after the member's death or termination of the survivor's allowance.

Death After Retirement: If a joint and survivor option was selected at retirement, the eligible spouse receives continuing, lifetime monthly benefits after the member dies. A survivor's allowance or spouse's pension may be payable if the member participated in the supplemental contributions provision. If a joint and survivor option was not selected and benefits are not payable under the supplemental contributions provision, the designated beneficiary receives the member's contribution account, less any benefits already paid.

(11) Post Retirement Pension Adjustments

Post retirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the consumer price index (CPI) increases during the preceding calendar year. PRPAs are calculated by multiplying the recipient's base benefit, including past PRPAs, times:

- (a) 75% of the CPI increase in the preceding calendar year or 9%, whichever is less, if the recipient is at least age 65 or on TRS disability; or
- (b) 50% of the CPI increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60, or under age 60 if the recipient has been receiving benefits for at least eight years.

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who were first hired before July 1, 1990, if the CPI increases and the financial condition of the fund will permit an increase.

(12) Alaska Cost of Living Allowance

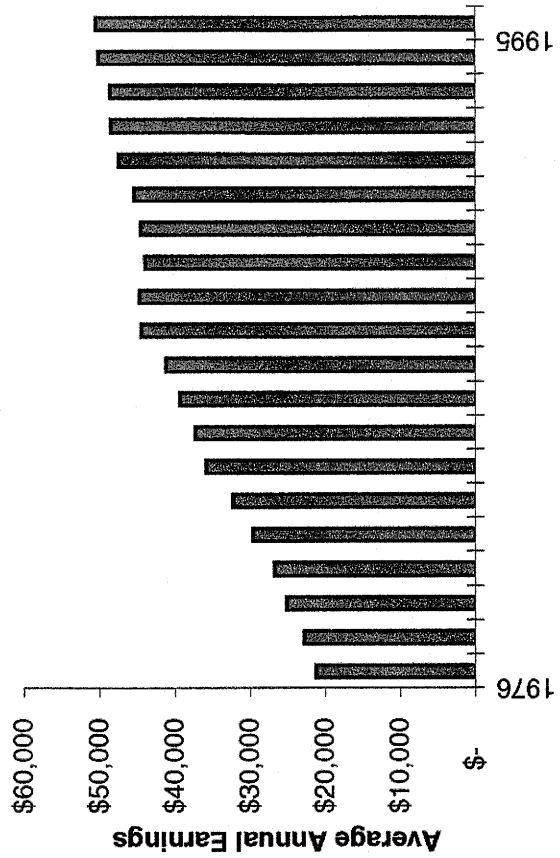
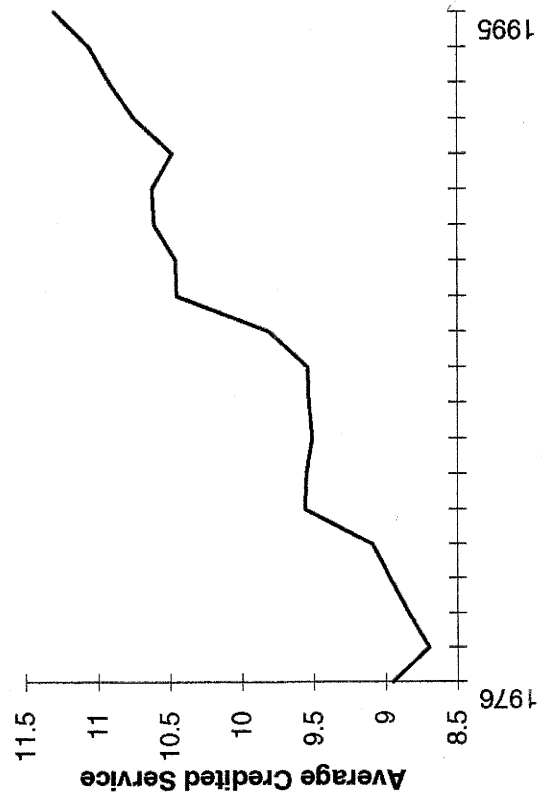
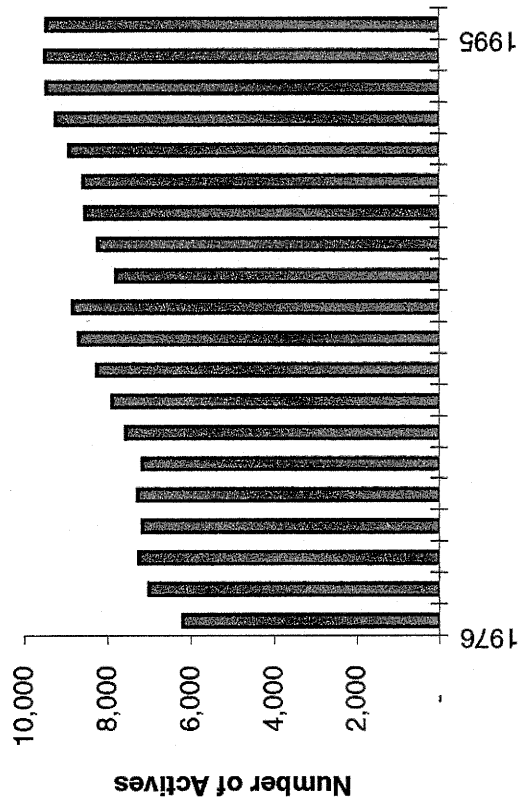
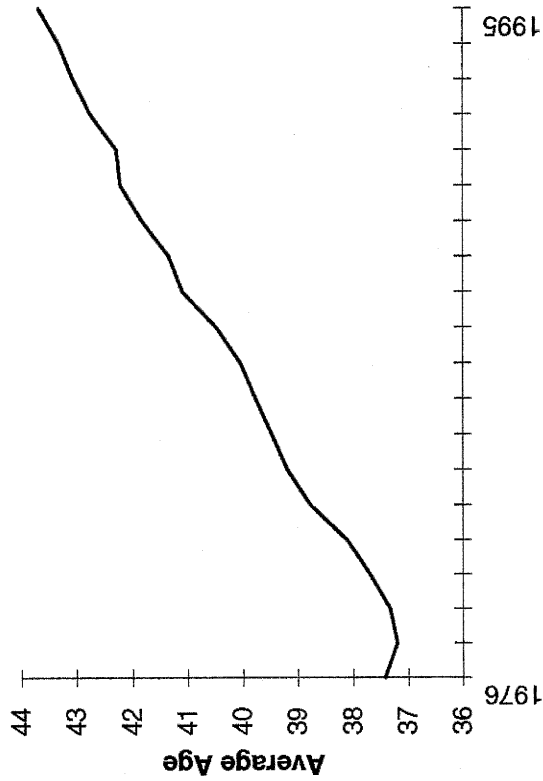
Eligible benefit recipients who reside in Alaska receive an Alaska cost of living allowance (COLA) equal to 10% of their base benefits. The following benefit recipients are eligible:

- (a) members who were first hired under the TRS before July 1, 1990, and their survivors;
- (b) members who were first hired under the TRS after June 30, 1990, and their survivors if they are at least age 65; and
- (c) all disabled members.

2.2(a) Participant Census Information as of June 30

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
Active Members					
(1) Number	8,903	9,238	9,459	9,489	9,452
(2) Average Age	42.28	42.74	43.06	43.32	43.68
(3) Average Credited Service	10.48	10.75	10.92	11.06	11.30
(4) Average Annual Salary	\$ 47,473	\$ 48,515	\$ 48,604	\$ 50,174	\$ 50,487
(5) Number Vested	5,069	5,422	5,604	5,562	5,578
(6) Percent Who Are Vested	57.0%	58.7%	59.2%	58.6%	59.0%
Retirees and Beneficiaries					
(1) Number	3,544	3,602	3,891	4,134	4,459
(2) Average Age	61.64	61.97	62.47	62.73	62.83
(3) Average Monthly Benefit:					
Base	\$ 1,587	\$ 1,601	\$ 1,598	\$ 1,643	\$ 1,694
C.O.L.A.	\$ 105	\$ 102	\$ 98	\$ 102	\$ 105
P.R.P.A.	\$ 238	\$ 297	\$ 280	\$ 283	\$ 274
Adjustment	N/A	N/A	\$ 0	\$ 0	\$ -1
Total	\$ 1,930	\$ 2,000	\$ 1,976	\$ 2,028	\$ 2,072
Vested Terminations					
(1) Number	645	710	823	930	859
(2) Average Age	45.57	46.22	47.51	48.10	48.08
(3) Average Monthly Benefit	\$ 897	\$ 1,087	\$ 1,236	\$ 1,294	\$ 1,233
Non-Vested Terminations With Account Balances					
(1) Number	1,003	1,057	1,013	1,090	1,140
(2) Average Account Balance	\$ 10,270	\$ 10,411	\$ 11,208	\$ 11,807	\$ 12,165

State of Alaska - TRS Actives



2.2(b) Distribution of Active Participants

----- Annual Earnings By Age -----			
Age Groups	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0
20-24	46	1,540,793	33,495
25-29	580	21,154,290	36,473
30-34	916	37,452,556	40,887
35-39	1,402	63,436,336	45,247
40-44	2,129	107,087,224	50,299
45-49	2,311	125,731,265	54,406
50-54	1,401	80,680,824	57,588
55-59	480	28,689,936	59,771
60-64	152	9,311,811	61,262
65-69	29	1,762,197	60,765
70-74	4	231,902	57,975
75-79	1	80,561	80,561
80+	1	44,875	44,875
Total	9,452	\$ 477,204,570	\$ 50,487

----- Annual Earnings By Credited Service -----			
Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0	142	\$ 5,133,182	\$ 36,149
1	571	21,384,748	37,451
2	550	21,241,662	38,621
3	543	21,835,280	40,212
4	573	24,026,480	41,931
0- 4	2,379	93,621,352	39,353
5- 9	2,191	103,562,520	47,267
10-14	2,274	124,068,018	54,560
15-19	1,646	96,500,824	58,627
20-24	678	41,407,696	61,073
25-29	249	15,607,284	62,680
30-34	31	2,146,296	69,235
35-39	4	290,580	72,645
40+	0	0	0
Total	9,452	\$ 477,204,570	\$ 50,487

Years of Credited 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	46	0	0	0	0	0	0	0	0	46
25-29	497	83	0	0	0	0	0	0	0	580
30-34	477	362	77	0	0	0	0	0	0	916
35-39	428	478	420	76	0	0	0	0	0	1,402
40-44	413	495	662	493	66	0	0	0	0	2,129
45-49	297	425	619	608	294	68	0	0	0	2,311
50-54	147	220	339	340	224	118	13	0	0	1,401
55-59	58	76	114	103	72	44	11	2	0	480
60-64	15	43	35	21	15	16	7	0	0	152
65-69	1	6	8	4	5	3	0	2	0	29
70-74	0	1	0	1	2	0	0	0	0	4
75-79	0	1	0	0	0	0	0	0	0	1
80+	0	1	0	0	0	0	0	0	0	1
Total	2,379	2,191	2,274	1,646	678	249	31	4	0	9,452

2.2(c) Schedule of Active Member Valuation Data

Valuation Date	Number	Annual Payroll (000's)	Annual Average Pay	Percent Increase In Average Pay
June 30, 1995	9,452	\$ 477,205	\$ 50,487	.6%
June 30, 1994	9,489	476,098	50,174	3.2%
June 30, 1993	9,459	459,746	48,604	.2%
June 30, 1992	9,238	448,186	48,515	2.2%
June 30, 1991	8,903	422,655	47,473	4.6%
June 30, 1990	8,586	389,702	45,388	1.8%
June 30, 1989	8,527	380,267	44,596	1.4%
June 30, 1988	8,218	361,310	43,966	-1.7%
June 30, 1987	7,797	348,606	44,710	.6%
June 30, 1986	8,824	392,136	44,440	7.8%

2.2(d) Statistics on New Retirees During the Year Ending June 30

		<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
Service						
(1)	Number	507	110	158	267	359
(2)	Average Age At Retirement	51.56	53.04	52.62	54.14	53.88
(3)	Average Monthly Benefit	\$ 2,133	\$ 1,926	\$ 2,086	\$ 2,349	\$ 2,358
Disability						
(1)	Number	8	8	4	6	3
(2)	Average Age At Retirement	45.46	43.81	48.69	48.31	48.58
(3)	Average Monthly Benefit	\$ 2,448	\$ 3,230	\$ 2,431	\$ 2,870	\$ 3,353
Survivor (including surviving spouse)						
(1)	Number	4	2	3	7	6
(2)	Average Age At Retirement	45.40	49.46	49.37	44.47	52.86
(3)	Average Monthly Benefit	\$ 435	\$ 620	\$ 930	\$ 2,554	\$ 1,522
Total						
(1)	Number	519	120	165	280	368
(2)	Average Age At Retirement	51.42	52.37	52.47	53.77	53.82
(3)	Average Monthly Benefit	\$ 2,124	\$ 1,991	\$ 2,073	\$ 2,365	\$ 2,352

2.2(e) Schedule of Average Benefit Payments - New Retirees

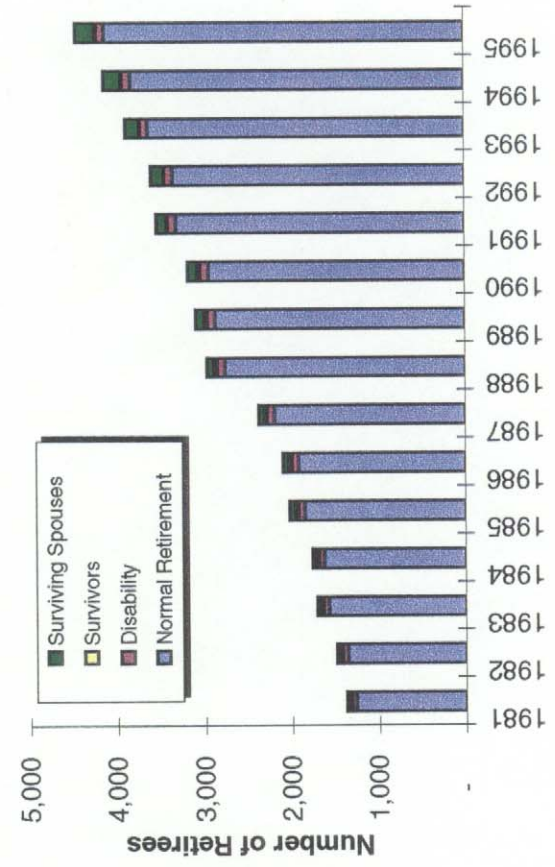
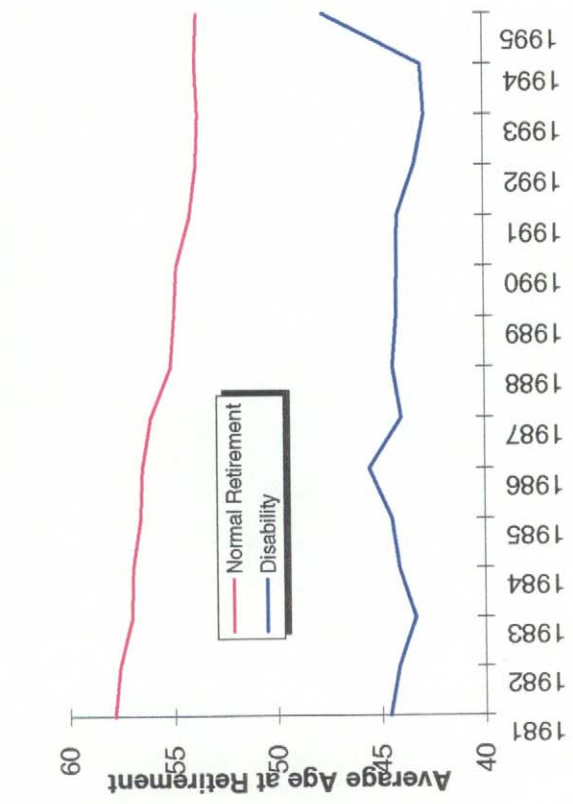
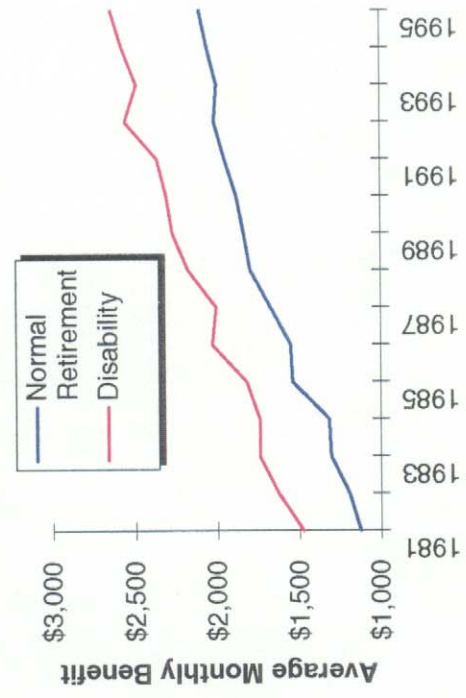
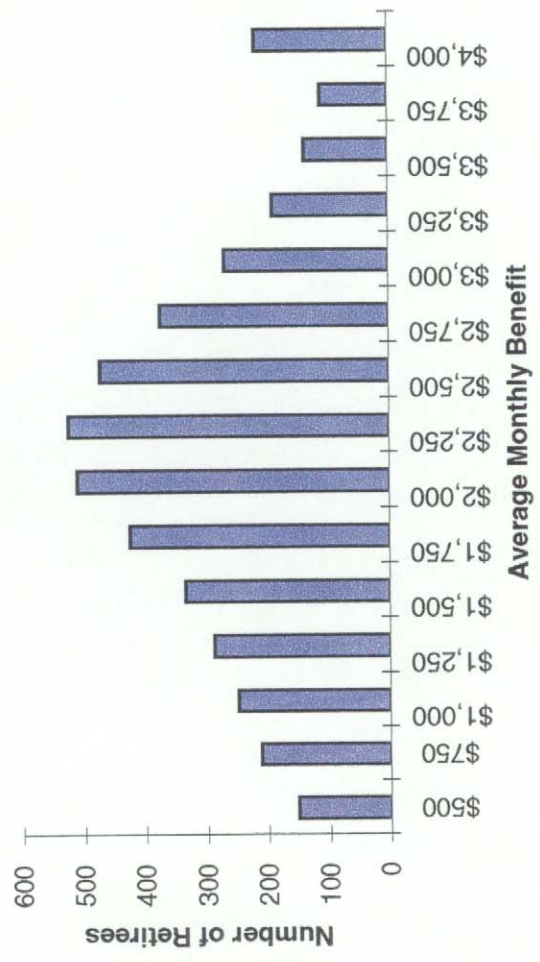
	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +
Period 7/1/94 - 6/30/95:							
Average Monthly Benefit	\$ 1,204	\$ 748	\$ 1,033	\$ 1,716	\$ 2,398	\$ 3,041	\$ 3,958
Number of Active Retirees	7	22	47	36	129	89	38
Period 7/1/93 - 6/30/94:							
Average Monthly Benefit	\$ 1,161	\$ 576	\$ 1,151	\$ 1,605	\$ 2,354	\$ 3,176	\$ 3,685
Number of Active Retirees	7	11	35	24	107	72	24
Period 7/1/92 - 6/30/93:							
Average Monthly Benefit	\$ 408	\$ 1,002	\$ 1,015	\$ 1,561	\$ 2,258	\$ 3,090	\$ 3,043
Number of Active Retirees	7	17	23	9	62	37	10
Period 7/1/91 - 6/30/92:							
Average Monthly Benefit	\$ 819	\$ 1,205	\$ 1,941	\$ 2,256	\$ 2,290	\$ 3,159	\$ 3,930
Number of Active Retirees	4	27	25	17	38	8	1
Period 7/1/90 - 6/30/91:							
Average Monthly Benefit	\$ 949	\$ 1,093	\$ 1,689	\$ 2,085	\$ 2,540	\$ 2,944	\$ 4,173
Number of Active Retirees	14	53	95	155	160	37	5
Period 7/1/89 - 6/30/90:							
Average Monthly Benefit	\$ 1,161	\$ 1,215	\$ 1,551	\$ 2,295	\$ 2,394	\$ 3,852	\$ 3,733
Number of Active Retirees	6	36	33	70	55	6	2
Period 7/1/88 - 6/30/89:							
Average Monthly Benefit	\$ 1,174	\$ 1,327	\$ 1,491	\$ 2,249	\$ 2,312	\$ 2,817	\$ 0
Number of Active Retirees	3	33	33	61	68	3	0

"Average Monthly Benefit" includes post-retirement pension adjustments and cost-of-living increases.

2.2(f) Statistics on All Retirees as of June 30

	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>
Service Retirements					
(1) Number, Fiscal Year Start	2,948	3,322	3,352	3,636	3,831
(2) Net Change During FY	374	30	284	195	299
(3) Number, Fiscal Year End	3,322	3,352	3,636	3,831	4,130
(4) Average Age At Retirement	54.14	53.83	53.75	53.85	53.78
(5) Average Age Now	61.82	62.15	62.60	63.00	63.04
(6) Average Monthly Benefit	\$ 1,950	\$ 2,013	\$ 1,998	\$ 2,052	\$ 2,099
Surviving Spouse's Benefits					
(1) Number, Fiscal Year Start	108	125	150	161	200
(2) Net Change During FY	17	25	11	39	29
(3) Number, Fiscal Year End	125	150	161	200	229
(4) Average Age At Retirement	54.44	54.04	53.91	51.51	52.04
(5) Average Age Now	65.95	65.90	66.72	64.25	65.06
(6) Average Monthly Benefit	\$ 1,093	\$ 1,339	\$ 1,187	\$ 1,299	\$ 1,373
Survivor's Benefits (other than spouses)					
(1) Number, Fiscal Year Start	31	1	2	0	9
(2) Net Change During FY	(30)	1	(2)	9	(1)
(3) Number, Fiscal Year End	1	2	0	9	8
(4) Average Age At Retirement	23.81	50.47	--	37.25	28.14
(5) Average Age Now	41.68	59.01	--	42.87	36.03
(6) Average Monthly Benefit	\$ 544	\$ 3,013	--	\$ 2,166	\$ 1,822
Disabilities					
(1) Number, Fiscal Year Start	97	96	98	94	94
(2) Net Change During FY93	(1)	2	(4)	0	(2)
(3) Number, Fiscal Year End	96	98	94	94	92
(4) Average Age At Retirement	44.15	43.30	42.85	42.98	42.71
(5) Average Age Now	50.33	49.97	49.97	50.28	50.36
(6) Average Monthly Benefit	\$ 2,358	\$ 2,552	2,484	\$ 2,569	\$ 2,637
Total Number of Retirees	3,544	3,602	3,891	4,134	4,459

State of Alaska - TRS Retirees



2.2(g) Distribution of Annual Benefits for Benefit Recipients

----- Annual Benefit By Age -----

Age Groups	Number of People	Total Annual Benefit	Average Annual Benefit
0-19	3	\$ 15,950	\$ 5,317
20-24	2	8,665	4,332
25-29	0	0	0
30-34	0	0	0
35-39	4	46,787	11,697
40-44	28	790,897	28,246
45-49	258	6,848,312	26,544
50-54	746	19,833,127	26,586
55-59	950	23,918,098	25,177
60-64	834	20,895,794	25,055
65-69	616	15,711,719	25,506
70-74	437	10,218,723	23,384
75-79	291	6,595,115	22,664
80+	290	5,998,714	20,685
Total	4,459	\$ 110,881,901	\$ 24,867

--- Annual Benefit By Years Since Retirement ---

Years Since Retirement	Number of People	Total Annual Benefit	Average Annual Benefit
0	368	\$ 10,387,648	\$ 28,227
1	281	7,966,832	28,352
2	169	4,164,680	24,643
3	128	2,934,012	22,922
4	524	13,162,709	25,120
0- 4	1,470	38,615,881	26,269
5- 9	1,364	36,002,975	26,395
10-14	733	17,527,764	23,912
15-19	606	13,035,764	21,511
20-24	224	4,336,287	19,358
25-29	46	957,461	20,814
30-34	15	382,482	25,499
35-39	0	0	0
40+	1	23,287	23,287
Total	4,459	\$ 110,881,901	\$ 24,867

Years Since Retirement By Age

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	1	0	2	0	0	0	0	0	0	3
20-24	0	0	1	1	0	0	0	0	0	2
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	3	0	0	0	1	0	0	0	0	4
40-44	25	2	1	0	0	0	0	0	0	28
45-49	193	55	7	2	1	0	0	0	0	258
50-54	498	217	19	9	3	0	0	0	0	746
55-59	450	397	92	9	2	0	0	0	0	950
60-64	204	392	200	34	2	2	0	0	0	834
65-69	75	189	202	139	8	2	1	0	0	616
70-74	18	91	131	177	19	1	0	0	0	437
75-79	2	17	63	166	43	0	0	0	0	291
80+	1	4	15	69	145	41	14	0	1	290
Total	1,470	1,364	733	606	224	46	15	0	1	4,459

2.2(h) Schedule of Retired Members by Type of Retirant and Option Selected - June 30, 1995

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			Option Selected #			
		1	2	3	Opt. 1	Opt. 2	Opt. 3	Opt. 4
\$ 1 - \$ 300	54	39	15	0	43	5	6	0
301 - 600	186	149	37	0	156	16	10	4
601 - 900	267	219	48	0	212	32	13	10
901 - 1200	313	281	31	1	257	35	16	5
1201 - 1500	413	378	32	3	354	28	26	5
1501 - 1800	513	494	14	5	447	36	27	3
1801 - 2100	635	608	14	13	550	44	35	6
2101 - 2400	617	595	10	12	549	33	28	7
2401 - 2700	476	456	4	16	426	24	24	2
2701 - 3000	333	306	11	16	291	21	15	6
over 3000	652	605	21	26	593	29	21	9
Totals	4,459	4,130	237	92	3,878	303	221	57

Type of Retirement

- 1 - Normal retirement
- 2 - Survivor payment
- 3 - Disability retirement

- Option 1 - Whole Life Annuity
- Option 2 - 75% Joint and Contingent Annuity
- Option 3 - 50% Joint and Contingent Annuity
- Option 4 - 66% Joint and Survivor Annuity

2.2(i) Schedule of Retirants and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percent Increase in Annual Allowances	Average Annual Allowance
	No. *	Annual Allowances*	No. *	Annual Allowances*	No.	Annual Allowances		
June 30, 1995	368	\$ 10,386,432	43	\$ 94,443	4,459	\$ 110,881,901	10.23%	\$ 24,867
June 30, 1994	280	8,923,551	37	616,360	4,134	100,589,912	9.00%	24,332
June 30, 1993	344	6,874,777	55	1,044,709	3,891	92,282,721	6.74%	23,717
June 30, 1992	120	5,799,044	62	1,436,106	3,602	86,452,653	5.31%	24,001
June 30, 1991	519	14,827,829	159	3,535,365	3,544	82,089,715	15.95%	23,163
June 30, 1990	208	6,181,779	122	2,648,864	3,184	70,797,251	5.25%	22,235
June 30, 1989	201	5,730,311	75	1,593,075	3,098	67,264,336	6.55%	21,712
June 30, 1988	639	16,668,442	43	856,302	2,972	63,127,100	33.42%	21,241
June 30, 1987	301	8,922,546	23	425,546	2,376	47,314,960	21.89%	19,914
June 30, 1986	189	3,685,188	113	2,079,652	2,098	38,817,960	4.31%	18,502

* Numbers are estimated, and include other internal transfers.

2.3 Actuarial Basis

The demographic assumptions used in this valuation were adopted at the Fall 1991 TRS Board Meeting. Economic assumptions were adopted as a result of a presentation to the Board in October 1994. The funding method used in this valuation was adopted June 30, 1985. The five-year smoothing method used to determine valuation assets was changed effective June 30, 1994.

Valuation of Liabilities

- A. **Actuarial Method - Projected Unit Credit (no change).** Liabilities and contributions shown in the report are computed using the Projected Unit Credit method of funding. The unfunded accrued liability is amortized over a rolling 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. Investment Return | 8% per year, compounded annually, net of expenses. |
| 2. Salary Scale | Inflation - 4.0% per year
Productivity - 0.5% per year
Merit (first 5 years of employment) - 1.0% per year |

- | | | |
|-----|----------------------|---|
| 3. | Total Inflation | Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 4% annually. |
| 4. | Health Cost Trend | FY96 - 8.5%
FY97 - 7.5%
FY98 - 6.5%
FY99 and later - 5.5% |
| 5. | Mortality | 1984 Unisex Pension Mortality Table, set forward one year for male members and set backward four years for female members. All deaths are assumed to result from nonoccupational causes. |
| 6. | Turnover | Based upon the 1986-90 actual total turnover experience. (See Table 1). |
| 7. | Disability | Incidence rates based upon the 1986-90 actual experience, 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. |
| 8. | Retirement Age | Retirement rates based upon the 1986-90 actual experience in accordance with Table 3. |
| 9. | Spouse's Age | Wives are assumed to be four years younger than husbands. |
| 10. | Dependent Children | Benefits to dependent children have been valued assuming members who are not single have one dependent child. |
| 11. | Contribution Refunds | 100% of those terminating after age 35 who are vested 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. |

- | | |
|------------------|--|
| 12. C.O.L.A. | Of those benefit recipients who are eligible for the C.O.L.A., 66% are assumed to remain in Alaska and receive the C.O.L.A. |
| 13. New Entrants | Growth projections are made for the active TRS population under three scenarios:

Pessimistic: 0% per year
Median: 1% per year
Optimistic: 2% per year |
| 14. 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. |
| 15. Expenses | Expenses are covered in the investment return assumption. |

Valuation of Assets

Effective June 30, 1994, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. All assets are valued at market value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements provided by KPMG Peat Marwick. Valuation assets cannot be outside a range of 80% to 120% of the market value of assets.

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 present premium rate assumption. 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 FY97, the pre-65 monthly premium is \$497.12 and the post-65 premium is \$189.37, based on an assumed total blended premium of \$380.29. For FY97, the actual blended premium is \$350.50. The FY97 blended premium was provided by the State of Alaska Division of Retirement and Benefits.

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	.26
2	.24
3	.16
4	.12
5	.11
6	.10
7	.09
8	.09
9	.09
10	.09

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

<u>Age</u>	<u>Rate</u>
20	.14
21	.14
22	.14
23	.15
24	.15
25	.15
26	.15
27	.15
28	.16
29	.16
30	.16
31	.17
32	.17
33	.25
34	.34
35	.44
36	.53
37	.64
38	.75
39	.87
40	.99
41	1.12
42	1.25
43	1.39
44	1.53
45	1.68
46	1.84
47	2.00
48	2.17
49	2.34
50	2.52
51	2.70
52	2.89
53	3.08
54	3.29
55	3.49
56	3.70
57	3.92
58	4.14
59	4.37
60	4.61
61	4.84
62	5.09
63	5.34
64	5.60

Table 3

**Alaska TRS
Retirement Rates**

<u>Age at Retirement</u>	<u>Retirement Rate</u>
50	.10
51	.07
52	.07
53	.07
54	.07
55	.16
56	.16
57	.16
58	.16
59	.13
60	.13
61	.13
62	.13
63	.13
64	.10
65	.47
66	.82
67	1.00

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

Section 3

Other Historical Information

3.1 shows the analysis of financial experience.

3.2 shows the summary of accrued and unfunded accrued liabilities.

3.3 shows the solvency test.

3.4 shows the statement of actuarial present value of accumulated plan benefits.

3.1 Analysis of Financial Experience

Change in Contribution Rate Due to Gains and Losses in Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience						
Type of Gain or Loss	Change in Contribution Rate During Fiscal Year					
	95	94	93	92	91	
(1) Health Experience	0%	0.25%	0%	0%	-3.01%	
(2) Salary Experience	-0.29%	-0.20%	-0.45%	-0.34%	-0.20%	
(3) Investment Experience	-0.05%	0.55%	-1.66%	0%	0.70%	
(4) Demographic Experience	0.32%	0.47%	1.23%	-0.59%	0.96%	
(5) Miscellaneous	0%	0%	0%	0%	0%	
(6) Gain (or Loss) During Year From Experience, (1)+(2)+(3)+(4)+(5)	-0.02%	1.07%	-0.88%	-0.93%	-1.55%	
Non-recurring Changes						
(7) Contribution Rate Smoothing Method	0%	0%	0%	0%	1.21%	
(8) Projection Valuation Method	0%	0%	0%	-1.36%	-4.80%	
(9) Asset Valuation Method	0%	-0.89%	0%	-1.30%	0%	
(10) Assumption Changes	0%	2.30%	0%	0%	-2.51%	
(11) Plan Changes	0%	0%	0%	0%	0%	
Composite Gain (or Loss) During Year, (6)+(7)+(8)+(9)+(10)+(11)	-0.02%	2.48%	-0.88%	-3.59%	-7.65%	

3.2 Summary of Accrued and Unfunded Accrued Liabilities

Valuation Date	Aggregate Accrued Liability ('000's)	Valuation Assets ('000's)	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL) ('000's)	Annual Active Member Payroll ('000's)	UAL as a Percent of Annual Active Member Payroll
June 30, 1995	\$ 2,913,467	\$ 2,647,392	90.9%	\$ 266,075	\$ 477,205	55.8%
June 30, 1994 ⁽¹⁾⁽²⁾	2,761,409	2,472,957	89.6%	288,452	476,098	60.6%
June 30, 1993	2,429,456	2,261,082	93.1%	168,374	459,746	36.6%
June 30, 1992 ⁽¹⁾	2,231,746	2,001,864	89.7%	229,882	448,186	51.3%
June 30, 1991 ⁽²⁾	2,075,405	1,779,579	85.7%	295,826	422,655	70.0%
June 30, 1990 ⁽³⁾	1,895,030	1,662,242	87.7%	232,788	389,702	59.7%
June 30, 1989 ⁽¹⁾	1,557,643	1,480,389	95.0%	77,254	380,267	20.3%
June 30, 1988 ⁽²⁾	1,347,859	1,331,905	98.8%	15,954	361,310	4.4%
June 30, 1987	1,210,909	1,225,009	101.2%	0	348,606	0%
June 30, 1986	1,115,773	1,040,173	93.2%	75,600	392,136	19.3%
⁽¹⁾ Change in Asset Valuation Method.						
⁽²⁾ Change of Assumptions.						
⁽³⁾ Change in Plan Provisions.						

3.3 Solvency Test

Valuation Date	Aggregate Accrued Liability For:			Valuation Assets ('000's)	Portion of Accrued Liabilities Covered by Assets		
	(1) Active Member Contributions ('000's)	(2) Inactive Members ('000's)	(3) Active Members (Employer-Financed Portion) ('000's)		(1)	(2)	(3)
June 30, 1995	\$ 437,089	\$ 1,531,406	\$ 944,972	\$ 2,647,392	100%	100%	71.8%
June 30, 1994 ⁽¹⁾⁽²⁾	398,990	1,419,506	942,913	2,472,957	100%	100%	69.4%
June 30, 1993	370,667	1,223,220	835,569	2,261,082	100%	100%	79.8%
June 30, 1992 ⁽¹⁾	341,204	1,110,981	779,561	2,001,864	100%	100%	70.5%
June 30, 1991 ⁽²⁾	293,136	1,056,453	725,816	1,779,579	100%	100%	59.2%
June 30, 1990 ⁽³⁾	269,491	940,475	685,064	1,662,242	100%	100%	66.0%
June 30, 1989 ⁽¹⁾	253,436	779,296	524,911	1,480,389	100%	100%	85.3%
June 30, 1988 ⁽²⁾	228,217	688,090	431,552	1,331,905	100%	100%	96.3%
June 30, 1987	210,493	578,468	421,948	1,225,009	100%	100%	100%
June 30, 1986	214,192*	426,333	475,248*	1,040,173	100%	100%	84.1%
* Estimated ⁽¹⁾ Change in Asset Valuation Method. ⁽²⁾ Change of Assumptions. ⁽³⁾ Change in Plan Provisions.							

3.4 Statement of Actuarial Present Value of Accumulated Plan Benefits

Actuarial Present Value of Accumulated Plan Benefits
at June 30, 1995 (000's)

Retired participants and beneficiaries of deceased participants	\$ 1,369,221
Terminated participants with deferred benefits	162,185
Active participants - Vested	989,765
Active participants - Non-vested	79,950
Total Actuarial Present Value of Accumulated Plan Benefits	2,601,121

Notes to the Statement of Accumulated Plan Benefits.

1. The actuarial present value of accumulated plan benefits presented in this statement was determined using the following assumptions:
 - a. Future salary was not considered.
 - b. Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
 - c. Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability, and investment return.
2. Accumulated employee contributions with interest total \$437,089(000).

3.4 Statement of Actuarial Present Value of Accumulated Plan Benefits (continued)

3. As with many of the comparative plan financial relationships otherwise available, an examination, over periods of time, of the relationship between the *value of accumulated plan benefits* and the *value of plan assets* may give an indication of the progress being made toward the funding of plan benefits. However, in the context of a "going concern" environment, a point in time comparison of these two values *should not be construed to be indicative of the expected ability of the plan to pay future benefits when due*. Furthermore, *that comparison is not valid for assessing a plan termination situation*. Consideration of inflation in the assumed return on plan assets while ignoring inflation's effect on future benefit levels *produces a significant understatement of the value of accumulated plan benefits* when applying going concern concepts. *The accumulated plan benefit value presented in this statement should not be confused with information presented elsewhere regarding funding requirements.*

4. The change in the Present Value of Accumulated Plan Benefits during the prior fiscal year is as follows:

A.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1994, (000's)	\$ 2,481,459
B.	Increase (Decrease) Attributable to:	
	i. Additional Benefits Accumulated, including Actuarial Experience	59,030
	ii. Increase due to Decrease in the Discount Period	193,213
	iii. Benefits Paid to Participants	(132,581)
	iv. Material System Change	0
	v. Change in Assumptions	<u>0</u>
C.	Actuarial Present Value of Accumulated Plan Benefits at June 30, 1995 (000's)	\$ 2,601,121