

State of Alaska  
Teachers' Retirement System  
Actuarial Valuation Report as of June 30, 2002

**MERCER**  
Human Resource Consulting

March 13, 2003

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 annual actuarial valuation required for the State of Alaska Teachers' Retirement System has been prepared as of June 30, 2002 by Mercer Human Resource Consulting. The purposes of the report include:

- (1) a review of experience under the Plan for the year ended June 30, 2002;
- (2) a determination of the appropriate contribution rate for all employers in the System;  
and
- (3) the provision of reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The following schedules that we have prepared are included in this report:

- (1) Summary of actuarial assumptions and methods (Section 2.3)
- (2) Schedule of active member valuation data (Section 2.2(c))
- (3) Schedule of benefit recipients added to and removed from rolls (Section 2.2(i))
- (4) Solvency test (Section 3.3)
- (5) Analysis of financial experience (Section 3.1)

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 LLP, 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 an experience study presented to the Board in October 2000 and adopted in December 2000. Actuarial methods, medical cost trend, and assumed blended medical premiums were reviewed and revised in January 2003. Information regarding these recent changes is included in page 4-7 of this report.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY03 and a fixed 25-year amortization of the initial unfunded accrued liability and subsequent gains/losses. The amortization period is set by the Board. Contribution levels are recommended by the Actuary and adopted by the Board each year. Over time, the contribution rate is expected to remain relatively constant as a percentage of payroll. The ratio of assets to liabilities decreased from 95.0% to 68.2% during the year primarily due to continuing poor equity market performance and a change in the asset valuation method. Over the years, progress has been made toward achieving the funding objectives of the System.

A summary of the actuarial assumptions and methods is presented in Section 2.3 of this report. The assumptions, 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 the Society of Actuaries and are fully qualified to provide actuarial services to the State of Alaska.

We believe that the assumptions and methods used for funding purposes and for the disclosures presented in this report satisfy the parameter requirements set forth in the Government Accounting Standards Board (GASB) Statement Nos. 25 and 27.

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



James W. Jacobson, ASA, MAAA

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## Contents

<b>Report Highlights .....</b>	<b>1</b>
<b>Analysis of the Valuation.....</b>	<b>4</b>
<i>Valuation Results .....</i>	<i>9</i>
1.1(a) Statement of Net Assets .....	10
1.1(b) Statement of Changes in Net Assets .....	11
1.1(c) Actuarial Valuation Assets.....	12
1.2 Actuarial Present Values .....	13
1.3 Development of Total Employer Contribution Rate – FY05 .....	14
1.4 Development of Actuarial Gain/(Loss) for FY02 .....	15
1.5 Actuarial Projections.....	16
<i>Basis of the Valuation .....</i>	<i>30</i>
2.1 Summary of the Alaska Teachers’ Retirement System.....	31
2.2(a) Participant Census Information.....	39
2.2(b) Distribution of Active Participants .....	41
2.2(c) Schedule of Active Member Valuation.....	42
2.2(d) Statistics on New Benefit Recipients .....	43
2.2(e) Schedule of Average Benefit Payments – New Benefit Recipients.....	44
2.2(f) Statistics on All Benefit Recipients as of June 30.....	45
2.2(g) Distribution of Annual Benefits for Benefit Recipients.....	47
2.2(h) Schedule of Benefit Recipients by Type of Benefit and Option Selected .....	48
2.2(i) Schedule of Benefit Recipients Added to and Removed from Rolls .....	49
2.3 Summary of Actuarial Assumptions and Methods .....	50
<i>Other Historical Information .....</i>	<i>57</i>
3.1 Analysis of Financial Experience .....	58
3.2 Summary of Accrued and Unfunded Accrued Liabilities .....	59
3.3 Solvency Test.....	60

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## Report Highlights

This report has been prepared by Mercer Human Resource Consulting for the State of Alaska Teachers' Retirement System to:

- (1) Present the results of a valuation of the Alaska Teachers' Retirement System as of June 30, 2002;
- (2) Review experience under the plan for the year ended June 30, 2002;
- (3) Determine the appropriate contribution rate for each employer in the System; and
- (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 2002 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 and unfunded liabilities.

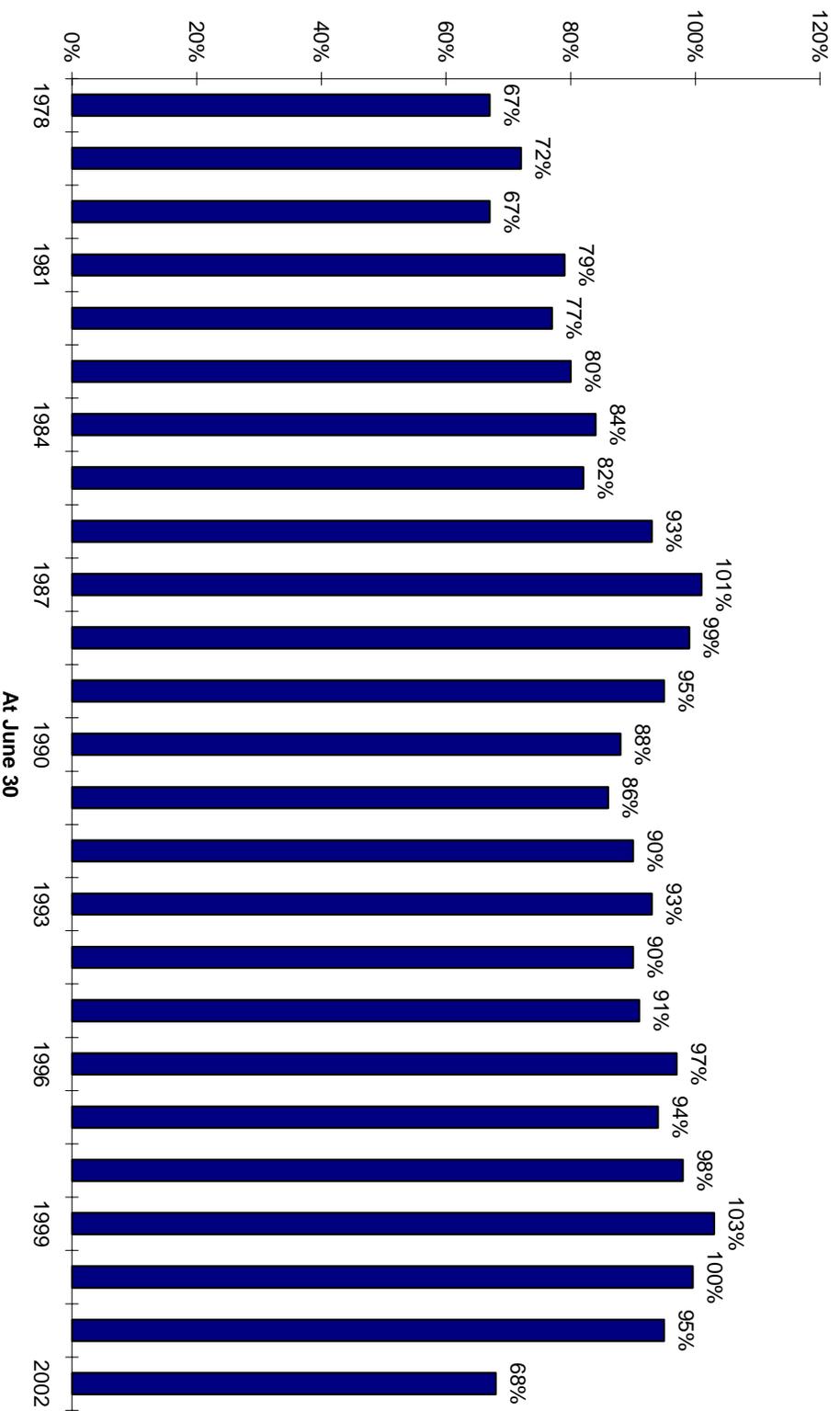
The principal results are as follows:

<b>Funding Status as of June 30</b>	<b>2001</b>	<b>2002</b>
(a) Valuation assets*	\$ 4,372,229	\$ 3,689,036
(b) Accrued liability*		
i) Non-medical benefits	3,651,488	3,959,958
ii) Total benefits (including medical)	4,603,147	5,411,642
(c) Funding Ratio, (a) ÷ (b)		
i) Non-medical benefits	119.7%	93.2%
ii) Total benefits (including medical)	95.0%	68.2%

\* In thousands.

## Report Highlights (continued)

### TRS Funding Ratio History



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**Report Highlights** *(continued)*

<b>Employer Contribution Rates for Fiscal Year:</b>	<b>2004</b>	<b>2005</b>
(a) Normal Cost Rate	10.36%	14.76%
(b) Contribution Rate Adjustment	(0.03%)	N/A
(c) Past Service Rate	4.11%	20.81%
(d) Total Employer Contribution Rate <i>(a) + (b) + (c)</i>	14.44%	35.57%
(e) TRS Board Adopted Employer Contribution Rate	12.00%	16.00%

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## Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio as of June 30, 2002 has decreased from 95.0% to 68.2%, a decrease of 26.8%. The total calculated employer contribution rate has increased from 14.44% of payroll for FY04 to 35.57% for FY05, an increase of 21.13%. The reasons for the change in the funded status and calculated 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.

Time Period	Monthly Premium Per Retiree For Health Coverage	Annual Percentage Change	Average Compound Annual Increase Since FY78
2/1/76-1/31/77	\$ 34.75	--	--
2/1/77-1/31/78	57.64	66%	--
2/1/78-1/31/79	69.10	20%	20%
2/1/79-1/31/80	64.70	-6%	6%
2/1/80-1/31/81	96.34	49%	19%
2/1/81-1/31/82	96.34	0%	14%
2/1/82-1/31/83	115.61	20%	15%
2/1/83-1/31/84	156.07	35%	18%
2/1/84-1/31/85	191.85	23%	19%
2/1/85-1/31/86	168.25	-12%	14%
2/1/86-1/31/87	165.00	-2%	12%
2/1/87-1/31/88	140.25	-15%	9%
2/1/88-1/31/89	211.22	51%	13%
2/1/89-1/31/90	252.83	20%	13%
2/1/90-1/31/91	243.98	-4%	12%
2/1/91-1/31/92	243.98	0%	11%
2/1/92-1/31/93	226.90	-7%	10%
2/1/93-1/31/94	309.72	37%	11%
2/1/94-1/31/95	336.05	9%	11%
2/1/95-1/31/96	350.50	4%	11%
2/1/96-1/31/97	350.50	0%	10%
2/1/97-1/31/98	368.00	5%	10%
2/1/98-12/31/98	368.00	0%	9%
1/1/99-12/31/99	442.00	20%	10%
1/1/00-12/31/00	530.00	20%	10%
1/1/01-12/31/01	610.00	15%	10%
1/1/02-12/31/02	668.00	10%	10%
1/1/03-12/31/03	720.00	8%	10%

As you can see from the above table, the monthly retiree medical premium for the January 1, 2003 to December 31, 2003 time period has increased to \$720.00. Over the last 10 years, annual premium rate changes have ranged from no change to up 37%, but the average compound annual increase has been about 9%.

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## **Analysis of the Valuation** *(continued)*

Effective June 30, 2000, the Board adopted a health cost trend assumption which varies by year, declining to an ultimate rate equal to inflation plus 1.5%, or 5.0% for FY17 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.

On June 30, 2002, the assumed total blended premium was reset to the actual total blended premium for FY03. 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 whenever experience and current trends indicate a change is appropriate. The resetting of the assumed total blended premium decreased the funding ratio by 2.1% and increased the total employer contribution rate by 3.85%.

The average employer contribution rate increased by 6.84% of payroll due to the change in the health cost trend assumption and the funded ratio decreased by 3.6%.

### **(2) Investment Experience**

The approximate FY02 investment return based on market value was (5.68%). Due to the change in the asset valuation method, all prior investment gains and losses were recognized at June 30, 2002. This produced a loss of approximately \$866 million to the system from investment experience, which decreased the funding ratio by 16.0% and increased the average employer contribution rate by 15.03%.

### **(3) Past Service Amortization**

As a result of the Actuarial Audit performed in 2002, effective June 30, 2002, the Board adopted a 25-year fixed period level percentage of pay amortization of the Unfunded (Surplus) Accrued Liability. This change is consistent with the 5-year recognition of gains or losses used in the new asset valuation method [item (4) below].

The change in the Past Service Amortization methodology decreased the average employer contribution rate by 9.08%.

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## **Analysis of the Valuation (continued)**

### **(4) Asset Valuation Method**

As a result of the Actuarial Audit performed in 2002, effective June 30, 2002, the Board adopted an asset valuation method that recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method will be phased in over the next five years.

Due to this change, the accumulated corridor adjustment from the prior method is now included in the amortization of the unfunded liability. Elimination of the corridor adjustment increased the average employer contribution rate by 0.03%.

### **(5) Salary Increase**

During the period from June 30, 2001, to June 30, 2002, salary increases were less than anticipated in the valuation assumptions. Salary experience resulted in an actuarial gain which increased the funding ratio by 0.2% and lowered the total employer contribution rate by 0.11% of total payroll.

### **(6) Employee Data**

Section 2.2 provides statistics on active and inactive participants. The number of active participants decreased 1.3% from 9,815 at June 30, 2001 to 9,690 at June 30, 2002. The average age of active participants decreased from 44.19 to 44.15 and average credited service decreased from 10.62 to 10.33 years.

The number of retirees and beneficiaries increased 6.4% from 7,333 to 7,804, and their average age increased from 63.17 to 63.30. There was a 2.1% increase in the number of vested terminated participants from 767 to 783. Their average age decreased from 49.15 to 48.97.

The overall effect of these participant data changes and methodology adjustments prompted by the actuarial audit was an actuarial loss to the System, resulting in an increase in the total employer contribution rate equal to 4.21% of total payroll.

### **(7) Ad hoc PRPA**

An ad hoc Post Retirement Pension Adjustment (PRPA) was granted during FY02. This increased benefit payments to many Tier I (hired before July 1, 1990) retirees.

The overall effect of the ad hoc PRPA was an actuarial loss to the System of approximately \$19,456,000 which lowered the funding ratio by 0.4% and increased the total employer contribution rate by 0.36% of total payroll.

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## **Analysis of the Valuation** *(continued)*

### **(8) Actuarial Projections**

At the Fall 1991 Board Meetings, the TRS Board approved the use of an enhanced actuarial projection system in the valuation report. The same actuarial cost method is used, but the enhanced system projects population growth patterns and their associated liabilities 20 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 20 years. Section 1.5, Actuarial Projections, contains the results of this analysis.

This type of information can be especially useful to multi-tiered systems, such as TRS. All of the projected new entrants will be covered under the provisions of the current tier, so that the ultimate effect on plan liabilities can be anticipated. As you can see in Section 1.5, based on the actuarial assumptions and asset valuation method, future contribution rates are expected to increase in the immediate future and then remain fairly stable.

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## Analysis of the Valuation *(continued)*

### Summary

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

1. Last year's total employer contribution rate	14.44%
2. Change due to:	
a. Resetting FY03 assumed total blended medical premium	3.85%
b. Health cost trend assumption change	6.84%
c. Asset methodology change – immediate recognition of deferred losses	15.03%
d. Asset methodology change – elimination of corridor adjustment	0.03%
e. Salary increases	(0.11%)
f. Demographic experience	4.21%
g. Ad hoc PRPA	0.36%
h. Past service amortization change	(9.08%)
3. Total employer contribution rate this year	35.57%

**Section 1**

This section sets forth the results of the actuarial valuation.

Section 1.1(a) Statement of net assets.

Section 1.1(b) Changes in net assets during FY02 and the investment return for FY02.

Section 1.1(c) Actuarial valuation assets.

Section 1.2 Actuarial present values.

Section 1.3 Total employer contribution rate for FY05.

Section 1.4 Actuarial gain or loss for FY02.

Section 1.5 Actuarial projections.

**1.1(a) Statement of Net Assets**

<b>As of June 30, 2002 (in thousands)</b>	<b>Pension</b>	<b>Postemployment Healthcare</b>	<b>Total Market Value</b>
Cash and Cash Equivalents	\$ 1,936	\$ 433	\$ 2,369
Domestic Equity Pool	1,066,699	276,234	1,342,933
Retirement Fixed Income Pool	927,721	207,900	1,135,621
International Equity Pool	492,231	110,308	602,539
Real Estate Pool	236,044	52,897	288,941
International Fixed Income Pool	101,170	22,673	123,843
Private Equity Pool	79,259	17,762	97,021
External Domestic Fixed Income Pool	43,485	9,745	53,230
Emerging Markets Equity Pool	30,899	6,924	37,823
Loans and Mortgages (Net of Reserves)	48	11	59
Other Current Assets	10	2	12
Net Accrued Receivables	<u>3,795</u>	<u>850</u>	<u>4,645</u>
Total Assets	\$ 2,983,297	\$ 705,739	\$ 3,689,036

**1.1(b) Statement of Changes in Net Assets**

<b>Fiscal Year 2002 (in thousands)</b>	<b>Pension</b>	<b>Postemployment Healthcare</b>	<b>Total Market Value</b>
(1) Net Assets, June 30, 2001, (market value)	\$ 3,302,567	\$ 784,281	\$ 4,086,848
(2) Additions:			
(a) Plan Member Contributions	41,724	9,350	51,074
(b) Employer Contributions	50,161	11,241	61,402
(c) Interest and Dividend Income	112,193	25,142	137,335
(d) Net Appreciation (Depreciation) in Fair Value of Investments	(289,117)	(64,790)	(353,907)
(e) Net Recognized Mortgage Loan Recovery	<u>69</u>	<u>16</u>	<u>85</u>
(f) Total Additions	\$ (84,970)	\$ (19,041)	\$ (104,011)
(3) Deductions:			
(a) Medical Benefits	0	56,946	56,946
(b) Retirement Benefits	222,897	0	222,897
(c) Refunds of Contributions	2,549	571	3,120
(d) Investment Expenses	7,142	1,601	8,743
(e) Administrative Expenses	<u>1,712</u>	<u>383</u>	<u>2,095</u>
(f) Total Deductions	\$ 234,300	\$ 59,501	\$ 293,801
(4) Net Assets, June 30, 2002, (market value)	\$ 2,983,297	\$ 705,739	\$ 3,689,036

Approximate Market Value Investment Return Rate During FY02,  
Net of Expenses

(5.68%)

### **1.1(c) Actuarial Valuation Assets**

Due to the change in the asset valuation method, all prior investment gains and losses were recognized in the actuarial value of assets. As of June 30, 2002, the actuarial value of assets equals the market value of \$3,689,036. Future investment gains and losses will be recognized 20% per year over 5 years.

## 1.2 Actuarial Present Values

As of June 30, 2002 (in thousands)	Normal Cost	Accrued Liabilities
<b>Active Members</b>		
Retirement Benefits	\$ 64,655	\$ 1,034,985
Termination Benefits	6,580	72,548
Disability Benefits	452	13,240
Death Benefits	686	11,360
Return of Contributions	3,169	15,434
Medical Benefits	44,025	548,704
Indebtedness	0	(40,511)
Retirement Incentive Program Receivable	0	0
Subtotal	119,567	1,655,760
<b>Inactive Members</b>		
Not Vested	\$ 0	\$ 26,828
Vested Terminations		
- Retirement Benefits	0	94,468
- Medical Benefits	0	124,642
- Indebtedness	0	(3,695)
Retirees & Beneficiaries		
- Retirement Benefits	0	2,735,301
- Medical Benefits	0	778,338
Subtotal	0	3,755,882
<b>Totals</b>	<b>\$ 119,567</b>	<b>\$ 5,411,642</b>

### 1.3 Development of Total Employer Contribution Rate – FY05

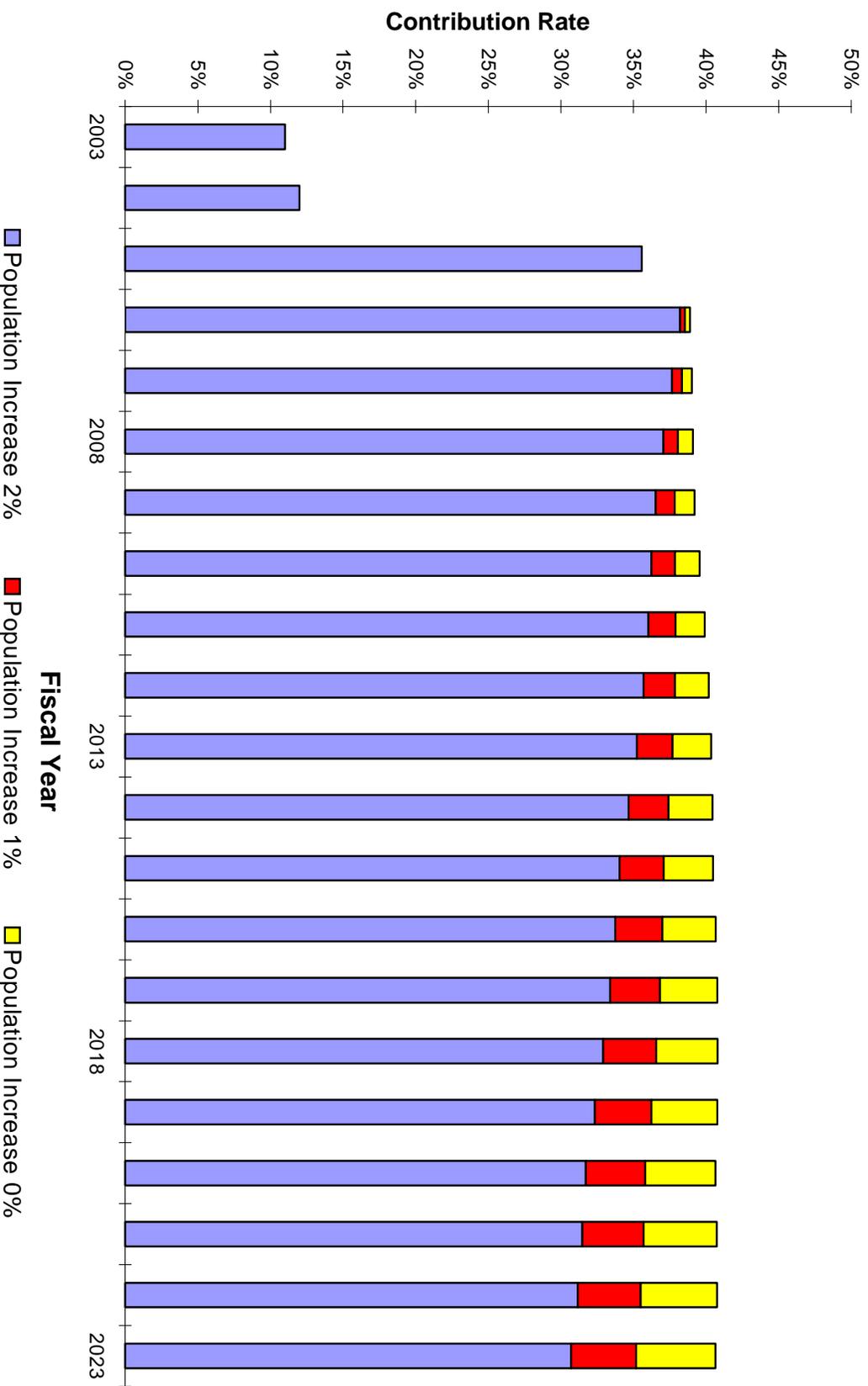
<b>Normal Cost Rate</b>	<b>In Thousands</b>
(1) Total Normal Cost	\$ 119,567
(2) Total Salaries	509,437
(3) Normal Cost Rate, (1) ÷ (2)	23.47%
(4) Average Member Contribution Rate	8.71%
(5) Employer Normal Cost Rate, (3) – (4)	14.76%
<b>Past Service Rate</b>	
(1) Accrued Liability	\$ 5,411,642
(2) Valuation Assets	3,689,036
(3) Total Unfunded Liability, (1) – (2)	1,722,606
(4) Amortization Factor (25 years)	16.246963
(5) Past Service Cost, (3) ÷ (4)	106,026
(6) Total Salaries	509,437
(7) Past Service Rate, (5) ÷ (6)	20.81%
<b>Total Employer Contribution Rate</b>	<b>35.57%</b>

## 1.4 Development of Actuarial Gain/(Loss) for FY02

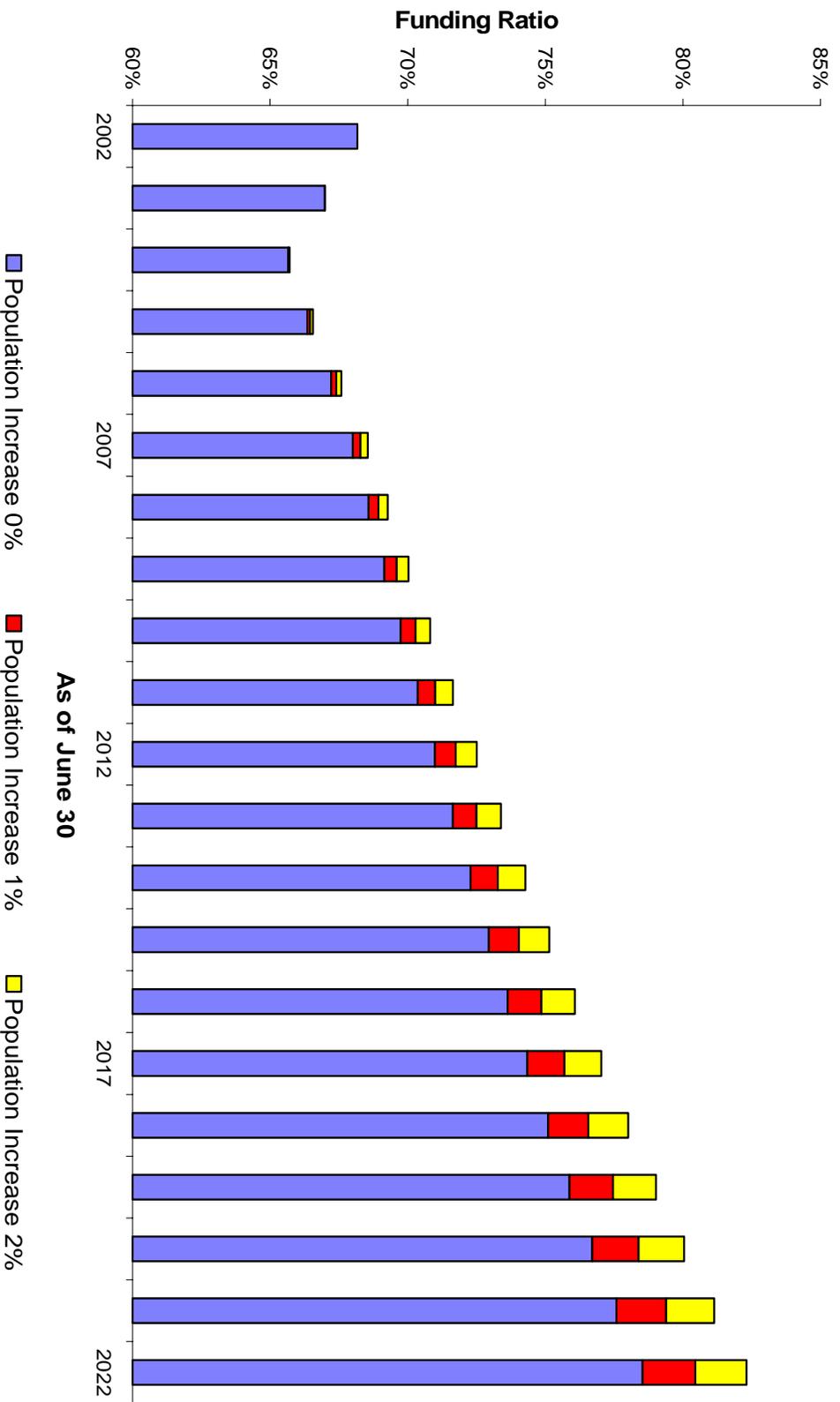
	In Thousands
(1) Expected Actuarial Accrued Liability	
(a) Accrued Liability, June 30, 2001	\$ 4,603,147
(b) Normal Cost for FY02	94,651
(c) Interest on (a) and (b) at 8.25%	387,568
(d) Benefit Payments for FY02	279,843
(e) Refund of Contributions for FY02	3,120
(f) Interest on (d) and (e) at 8.25% for one-half year	11,672
(g) Expected accrued liability before changes, (a) + (b) + (c) - (d) - (e) - (f)	4,790,731
(h) Net Increase in Accrued Liability due to Assumption Changes	419,853
(i) Expected Accrued Liability, June 30, 2002, (g) + (h)	5,210,584
(2) Actual Accrued Liability, June 30, 2002	5,411,642
<b>(3) Liability Gain/(Loss), (1)(i) - (2)</b>	<b>(201,058)</b>
(4) Expected Actuarial Asset Value	
(a) Actuarial Asset Value, June 30, 2001	4,372,229
(b) Interest on (a) at 8.25%	360,709
(c) Employee Contributions for FY02	51,074
(d) Employer Contributions for FY02	61,402
(e) Interest on (c) and (d) at 8.25% for one-half year	4,640
(f) Benefit Payments for FY02	279,843
(g) Refund of Contributions for FY02	3,120
(h) Interest on (f) and (g) at 8.25% for one-half year	11,672
(i) Expected Actuarial Asset Value, June 30, 2002, (a) + (b) + (c) + (d) + (e) - (f) - (g) - (h)	4,555,419
(5) Actuarial Asset Value, June 30, 2002 (before method change)	4,555,419
<b>(6) Actuarial Asset Gain/(Loss), (5) - (4)(i)</b>	<b>0</b>
(7) Effect of asset method change	(866,383)
(8) Actuarial asset value, June 30, 2002	3,689,036
<b>(9) Actuarial Gain/(Loss), (3) + (6)</b>	<b>(201,058)</b>

## 1.5 Actuarial Projections

### Projected Contribution Rates



### 1.5 Actuarial Projections (continued) Projected Funding Ratios



# 1.5 Actuarial Projections (continued)

Table 1  
State of Alaska TRS  
Financial Projections (in thousands)

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 Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs		Benefit Payments	Net Contribs	Investment Earnings	Recognized Gain
2002	3,689,036	5,411,643	68.2%	(1,722,607)	509,437	11.00%	56,580	44,801	101,381	323,997	(222,616)	295,163	0	3,761,583
2003	3,761,583	5,615,683	67.0%	(1,854,100)	519,293	12.00%	62,918	45,616	108,533	348,057	(239,524)	300,450	0	3,822,510
2004	3,822,510	5,821,396	65.7%	(1,998,886)	529,340	35.57%	190,720	46,594	237,314	368,682	(131,368)	309,938	0	4,001,080
2005	4,001,080	6,030,178	66.4%	(2,029,098)	543,023	38.89%	213,955	47,748	261,703	390,822	(129,119)	324,763	0	4,196,723
2006	4,196,723	6,243,640	67.2%	(2,046,917)	557,155	39.02%	220,328	48,955	269,283	413,674	(144,391)	340,274	0	4,392,605
2007	4,392,605	6,459,111	68.0%	(2,066,505)	572,143	39.08%	226,814	50,257	277,072	436,976	(159,904)	355,794	0	4,588,495
2008	4,588,495	6,690,636	68.6%	(2,102,141)	588,538	39.21%	234,112	51,650	285,762	464,196	(178,434)	371,190	0	4,781,252
2009	4,781,252	6,913,891	69.2%	(2,132,639)	605,682	39.56%	243,151	53,170	296,320	490,660	(194,340)	386,437	0	4,973,349
2010	4,973,349	7,130,542	69.7%	(2,157,194)	623,673	39.92%	252,719	54,767	307,486	516,384	(208,898)	401,684	0	5,166,135
2011	5,166,135	7,342,256	70.4%	(2,176,121)	642,610	40.17%	262,174	56,450	318,624	541,381	(222,757)	417,017	0	5,360,395
2012	5,360,395	7,550,698	71.0%	(2,190,303)	662,591	40.35%	271,597	58,228	329,824	565,667	(235,843)	432,504	0	5,557,056
2013	5,557,056	7,757,535	71.6%	(2,200,479)	683,713	40.44%	281,045	60,108	341,153	589,256	(248,102)	448,223	0	5,757,177
2014	5,757,177	7,964,433	72.3%	(2,207,256)	706,076	40.47%	290,569	62,101	352,669	612,161	(259,492)	464,263	0	5,961,948
2015	5,961,948	8,173,058	72.9%	(2,211,111)	729,778	40.66%	301,805	64,213	366,018	634,399	(268,381)	480,790	0	6,174,356
2016	6,174,356	8,385,077	73.6%	(2,210,720)	754,917	40.77%	313,203	66,454	379,657	655,984	(276,327)	497,986	0	6,396,016
2017	6,396,016	8,602,154	74.4%	(2,206,138)	781,591	40.80%	324,681	68,832	393,513	676,929	(283,416)	515,980	0	6,628,580
2018	6,628,580	8,825,957	75.1%	(2,197,377)	809,899	40.76%	336,247	71,355	407,603	697,250	(289,647)	534,910	0	6,873,842
2019	6,873,842	9,058,152	75.9%	(2,184,309)	839,939	40.65%	347,908	74,033	421,941	716,961	(295,020)	554,922	0	7,133,745
2020	7,133,745	9,300,404	76.7%	(2,166,659)	871,809	40.74%	362,041	76,873	438,914	736,077	(297,163)	576,276	0	7,412,858
2021	7,412,858	9,554,380	77.6%	(2,141,522)	905,608	40.74%	376,267	79,885	456,152	754,612	(298,460)	599,249	0	7,713,647
2022	7,713,647	9,821,747	78.5%	(2,108,099)	941,433	40.65%	390,399	83,075	473,475	772,581	(299,106)	624,038	0	8,038,579
2023	8,038,579	10,113,255	79.5%	(2,074,677)	979,384	40.46%	404,388	86,454	490,843	789,998	(299,156)	650,843	0	8,390,266
2024	8,390,266	10,431,520	80.4%	(2,041,254)	1,019,558	40.24%	418,804	90,030	508,834	806,878	(298,044)	679,903	0	8,772,124
2025	8,772,124	10,779,956	81.4%	(2,007,832)	1,062,055	40.02%	433,982	93,810	527,792	823,256	(295,444)	711,513	0	9,188,193
2026	9,188,193	11,162,602	82.3%	(1,974,409)	1,106,971	39.80%	449,961	97,805	547,766	839,086	(291,320)	746,009	0	9,642,882

1.5 Actuarial Projections (continued)

Table 2  
 State of Alaska TRS  
 Financial Projections (in thousands)  
 Investment Return 8.25%  
 Annual Population Increase 1.00%

As of June 30	Valuation Amounts on July 1				Flow Amounts During Following 12 Months						Ending Asset Value			
	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	Recognized Gain
2002	3,689,036	5,411,643	68.2%	(1,722,607)	509,437	11.00%	56,827	44,997	101,824	323,997	(222,173)	295,181	0	3,762,044
2003	3,762,044	5,615,748	67.0%	(1,853,704)	523,782	12.00%	63,739	46,211	109,949	348,057	(238,108)	300,547	0	3,824,483
2004	3,824,483	5,822,159	65.7%	(1,997,676)	538,531	35.57%	194,910	47,618	242,528	368,719	(126,191)	310,314	0	4,008,606
2005	4,008,606	6,032,382	66.5%	(2,023,776)	557,391	38.55%	218,666	49,241	267,908	390,927	(123,019)	323,635	0	4,211,222
2006	4,211,222	6,248,179	67.4%	(2,036,957)	577,201	38.33%	225,314	50,962	276,276	413,884	(137,608)	341,749	0	4,415,363
2007	4,415,363	6,467,053	68.3%	(2,051,689)	598,402	38.06%	232,148	52,828	284,976	437,317	(152,341)	357,983	0	4,621,005
2008	4,621,005	6,703,960	68.9%	(2,082,955)	621,640	37.84%	239,860	54,832	294,692	464,735	(170,042)	374,219	0	4,825,182
2009	4,825,182	6,933,583	69.6%	(2,108,402)	646,152	37.85%	249,450	57,014	306,464	491,368	(184,904)	390,450	0	5,030,728
2010	5,030,728	7,158,079	70.3%	(2,127,351)	672,086	37.91%	259,982	59,325	319,307	517,246	(197,940)	406,870	0	5,239,658
2011	5,239,658	7,379,603	71.0%	(2,139,945)	699,592	37.85%	270,301	61,779	332,079	542,400	(210,321)	423,596	0	5,452,933
2012	5,452,933	7,600,313	71.7%	(2,147,380)	728,819	37.68%	280,470	64,388	344,858	566,860	(222,002)	440,709	0	5,671,641
2013	5,671,641	7,822,367	72.5%	(2,150,726)	759,917	37.42%	290,557	67,165	357,723	590,655	(232,933)	458,302	0	5,897,010
2014	5,897,010	8,047,920	73.3%	(2,150,910)	793,034	37.08%	300,624	70,124	370,748	613,817	(243,069)	476,477	0	6,130,418
2015	6,130,418	8,279,130	74.0%	(2,148,712)	828,321	37.00%	313,421	73,276	386,697	636,374	(249,677)	495,460	0	6,376,201
2016	6,376,201	8,518,154	74.9%	(2,141,952)	865,925	36.83%	326,311	76,636	402,946	658,357	(255,410)	515,501	0	6,636,292
2017	6,636,292	8,767,148	75.7%	(2,130,856)	905,998	36.57%	339,140	80,215	419,355	679,796	(260,441)	536,751	0	6,912,602
2018	6,912,602	9,028,270	76.6%	(2,115,668)	948,687	36.23%	351,917	84,027	435,945	700,722	(264,777)	559,368	0	7,207,193
2019	7,207,193	9,303,676	77.5%	(2,096,483)	994,143	35.81%	364,656	88,085	452,741	721,163	(268,422)	583,521	0	7,522,292
2020	7,522,292	9,595,524	78.4%	(2,073,232)	1,042,515	35.69%	381,291	92,402	473,693	741,152	(267,459)	609,556	0	7,864,389
2021	7,864,389	9,905,970	79.4%	(2,041,580)	1,093,951	35.49%	397,899	96,990	494,890	760,716	(265,827)	637,847	0	8,236,409
2022	8,236,409	10,237,171	80.5%	(2,000,761)	1,148,601	35.11%	414,182	101,863	516,045	779,888	(263,843)	668,620	0	8,641,187
2023	8,641,187	10,601,129	81.5%	(1,959,942)	1,206,615	34.76%	430,080	107,033	537,113	798,696	(261,583)	702,108	0	9,081,711
2024	9,081,711	11,000,834	82.6%	(1,919,123)	1,268,142	34.31%	446,229	112,514	558,742	817,171	(258,429)	738,581	0	9,561,863
2025	9,561,863	11,440,167	83.6%	(1,878,304)	1,333,330	33.87%	463,244	118,317	581,562	835,343	(253,782)	778,385	0	10,086,467
2026	10,086,467	11,923,952	84.6%	(1,837,485)	1,402,331	33.44%	481,176	124,457	605,633	853,243	(247,609)	821,920	0	10,660,777

# 1.5 Actuarial Projections (continued)

Table 3  
State of Alaska TRS  
Financial Projections (in thousands)

As of June 30	Valuation Amounts on July 1			Flow Amounts During Following 12 Months										Ending Asset Value
	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	Recognized Gain	
2002	3,689,036	5,411,643	68.2%	(1,722,607)	509,437	11.00%	57,075	45,193	102,268	323,997	(221,729)	295,199	0	3,762,506
2003	3,762,506	5,615,813	67.0%	(1,853,307)	528,285	12.00%	64,567	46,811	111,378	348,057	(236,679)	300,644	0	3,826,470
2004	3,826,470	5,822,922	65.7%	(1,996,452)	547,831	35.57%	199,173	48,659	247,833	368,755	(120,922)	310,696	0	4,016,244
2005	4,016,244	6,034,602	66.6%	(2,018,358)	572,063	38.20%	223,458	50,775	274,233	391,032	(116,799)	326,522	0	4,225,967
2006	4,225,967	6,252,784	67.6%	(2,026,817)	597,866	37.66%	230,382	53,043	283,426	414,096	(130,670)	343,252	0	4,438,548
2007	4,438,548	6,475,156	68.5%	(2,036,607)	625,734	37.06%	237,585	55,520	293,105	437,665	(144,560)	360,217	0	4,654,206
2008	4,654,206	6,717,932	69.3%	(2,063,727)	656,490	36.52%	245,742	58,200	303,942	465,296	(161,354)	377,316	0	4,870,168
2009	4,870,168	6,954,290	70.0%	(2,084,123)	689,175	36.22%	255,932	61,121	317,053	492,111	(175,058)	394,568	0	5,089,677
2010	5,089,677	7,186,995	70.8%	(2,097,318)	724,028	36.03%	267,545	64,240	331,785	518,159	(186,374)	412,210	0	5,315,514
2011	5,315,514	7,418,809	71.6%	(2,103,296)	761,289	35.69%	278,830	67,578	346,408	543,486	(197,078)	430,400	0	5,548,836
2012	5,548,836	7,652,498	72.5%	(2,103,662)	801,198	35.23%	289,826	71,154	360,980	568,140	(207,160)	449,234	0	5,790,910
2013	5,790,910	7,890,826	73.4%	(2,099,916)	843,993	34.67%	300,607	74,991	375,599	592,169	(216,570)	468,817	0	6,043,157
2014	6,043,157	8,136,557	74.3%	(2,093,400)	889,913	34.03%	311,249	79,109	390,358	615,619	(225,261)	489,268	0	6,307,164
2015	6,307,164	8,392,455	75.2%	(2,085,291)	939,199	33.76%	325,998	83,528	409,527	638,539	(229,013)	510,894	0	6,589,045
2016	6,589,045	8,661,284	76.1%	(2,054,689)	992,089	33.39%	340,753	88,269	429,023	660,976	(231,954)	534,028	0	6,891,120
2017	6,891,120	8,945,809	77.0%	(2,054,689)	1,048,823	32.92%	355,258	93,353	448,611	682,978	(234,367)	558,850	0	7,215,603
2018	7,215,603	9,248,794	78.0%	(2,033,191)	1,109,639	32.35%	369,518	98,801	468,320	704,591	(236,272)	585,541	0	7,564,872
2019	7,564,872	9,573,003	79.0%	(2,008,131)	1,174,778	31.71%	383,554	104,633	488,187	725,864	(237,677)	614,298	0	7,941,492
2020	7,941,492	9,921,201	80.0%	(1,979,709)	1,244,477	31.48%	403,541	110,869	514,410	746,844	(232,434)	645,585	0	8,354,643
2021	8,354,643	10,296,151	81.1%	(1,941,507)	1,318,978	31.16%	423,331	117,532	540,863	767,578	(226,715)	679,906	0	8,807,834
2022	8,807,834	10,700,618	82.3%	(1,892,783)	1,398,519	30.71%	442,457	124,640	567,097	788,114	(221,017)	717,529	0	9,304,347
2023	9,304,347	11,148,406	83.5%	(1,844,059)	1,483,338	30.15%	460,844	132,216	593,060	808,499	(215,440)	758,722	0	9,847,629
2024	9,847,629	11,642,964	84.6%	(1,795,335)	1,573,677	29.55%	479,225	140,279	619,504	828,781	(209,277)	803,797	0	10,442,149
2025	10,442,149	12,188,760	85.7%	(1,746,611)	1,669,773	28.98%	498,643	148,851	647,494	849,008	(201,513)	853,165	0	11,093,800
2026	11,093,800	12,791,687	86.7%	(1,697,887)	1,771,866	28.43%	519,167	157,952	677,119	869,226	(192,107)	907,314	0	11,809,008

Investment Return 8.25%

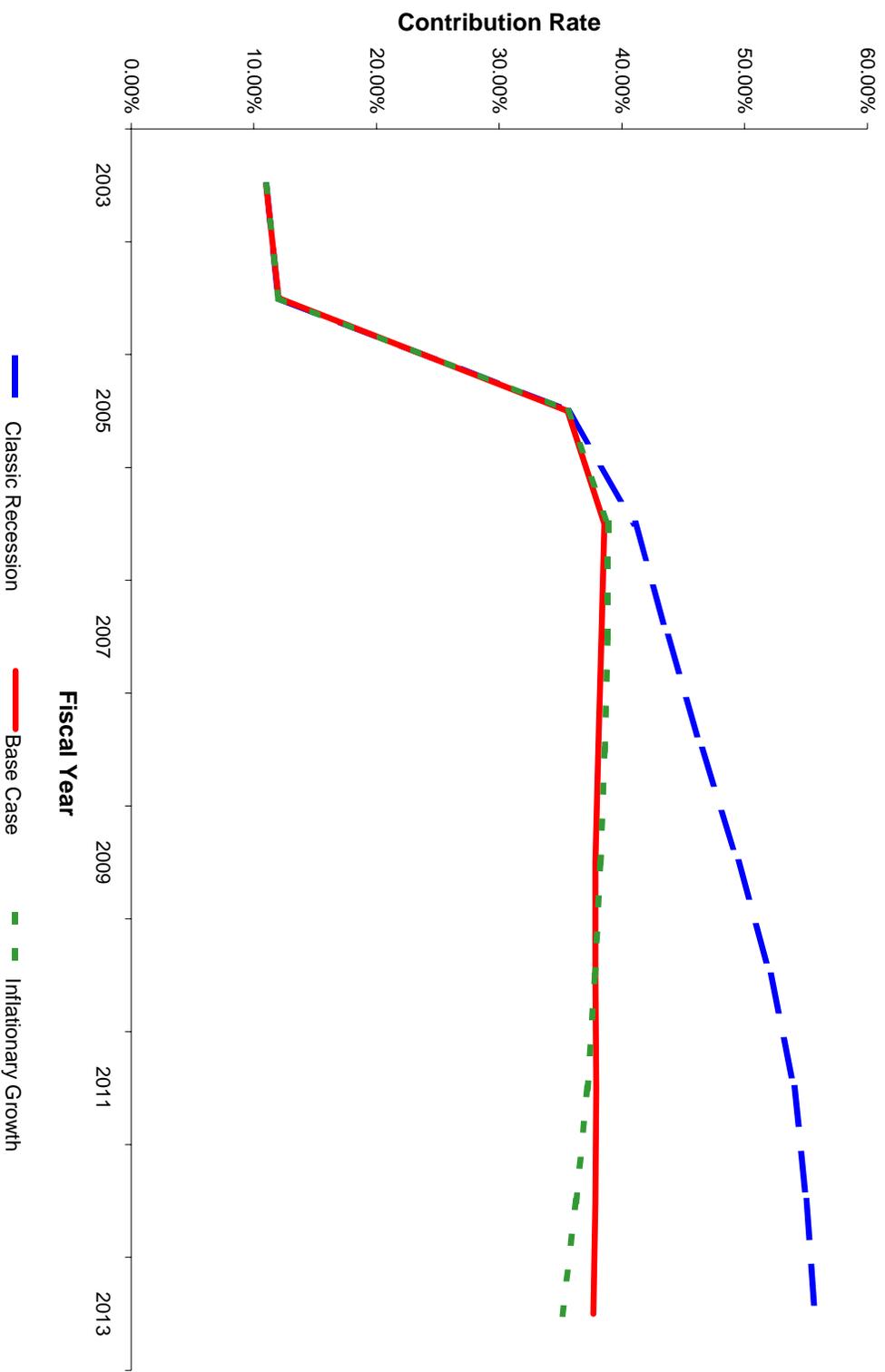
Annual Population Increase 2.00%

1.5 Actuarial Projections (*continued*)

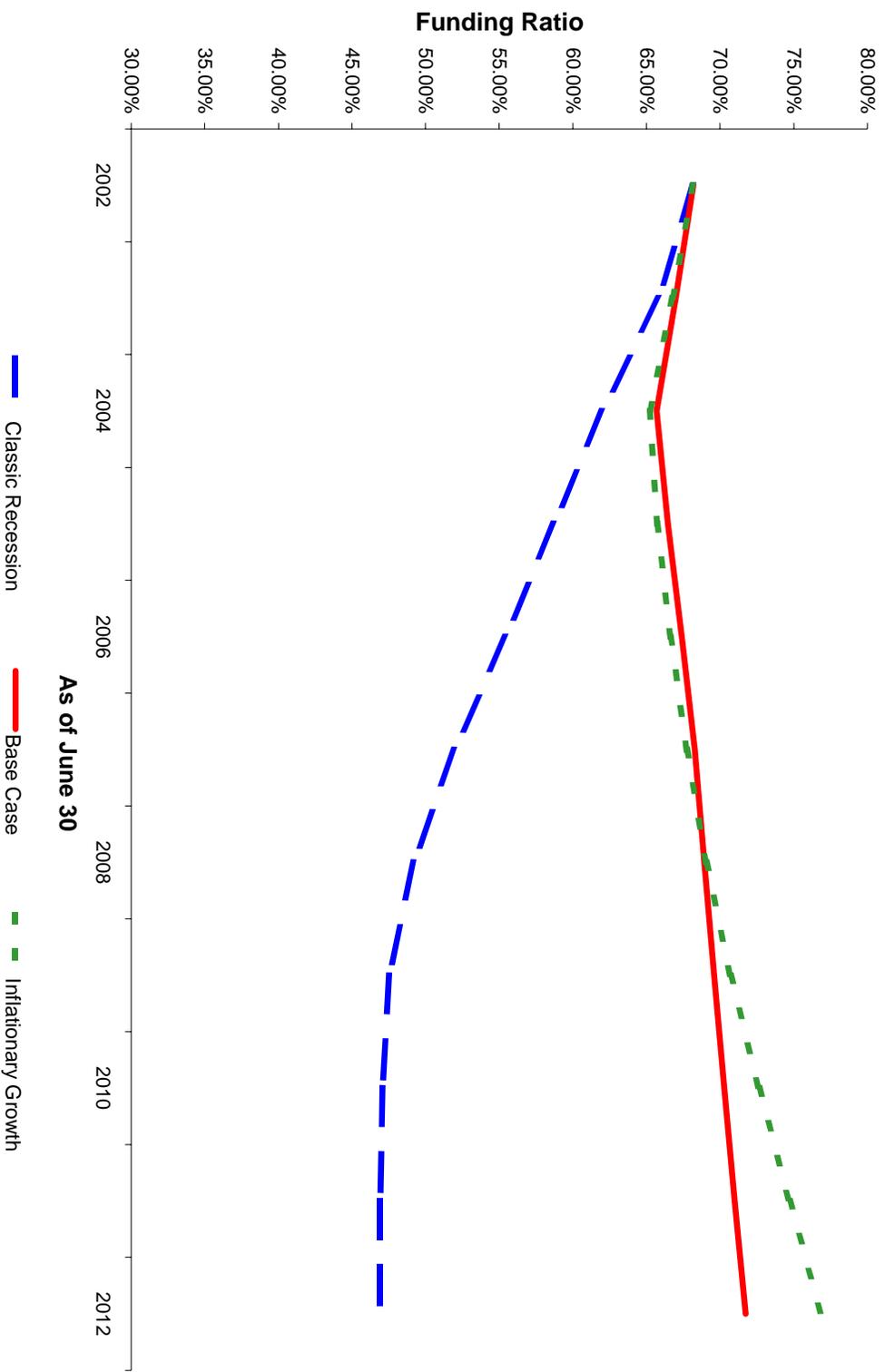
## Total Portfolio Investment Return Under Each Scenario:

Year Ending	<u>Base Case</u>	<u>Inflationary Growth</u>	<u>Classic Recession</u>
2003	8.25%	6.50%	-0.90%
2004	8.25%	8.13%	-3.02%
2005	8.25%	8.41%	-5.00%
2006	8.25%	9.80%	6.05%
2007	8.25%	10.08%	5.98%
2008	8.25%	10.08%	5.98%
2009	8.25%	10.08%	5.98%
2010	8.25%	10.08%	5.98%
2011	8.25%	10.08%	5.98%
2012	8.25%	10.08%	5.98%

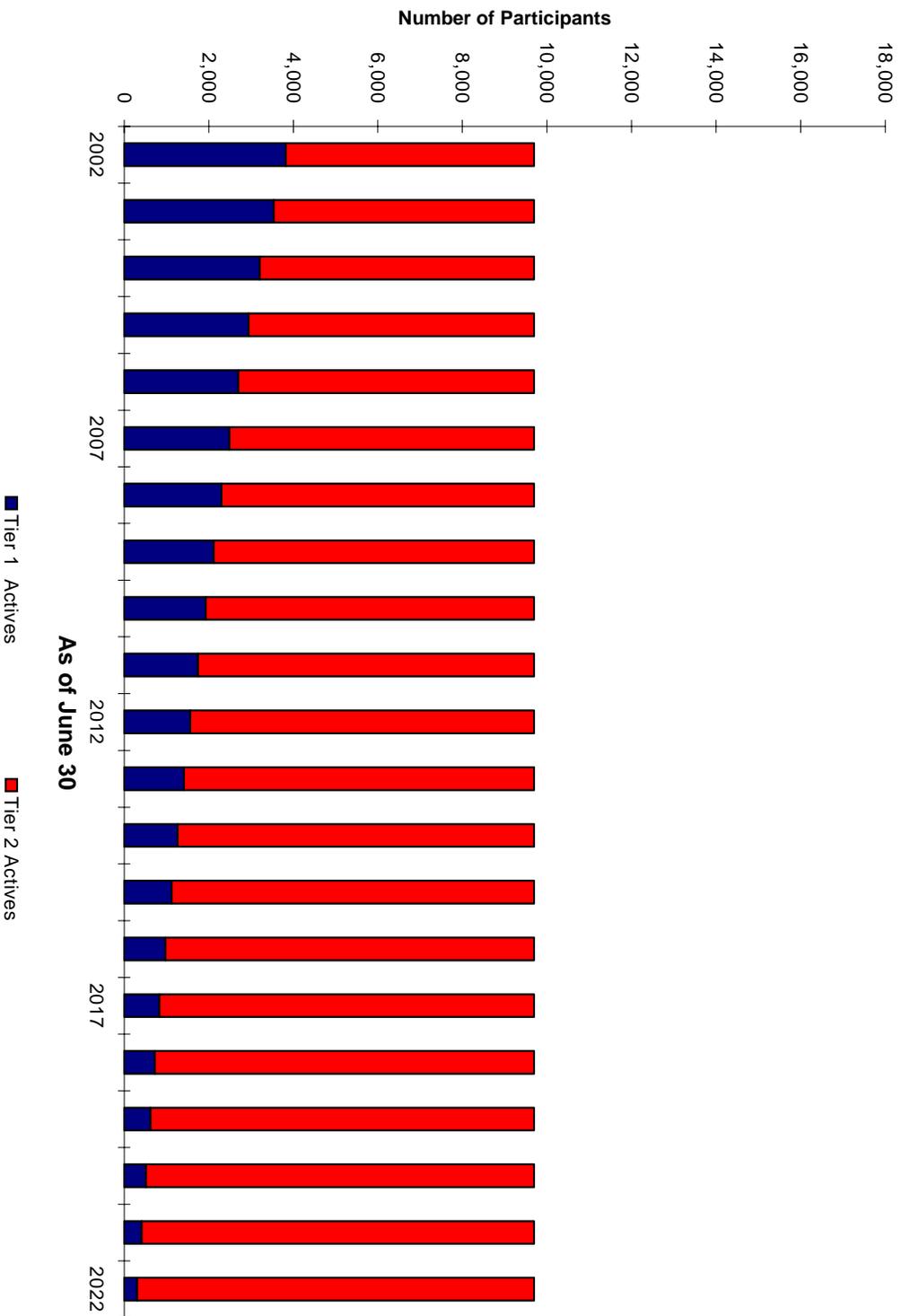
### 1.5 Actuarial Projections (continued) Economic Scenarios – Projected Contribution Rates Annual Population Increase 1%



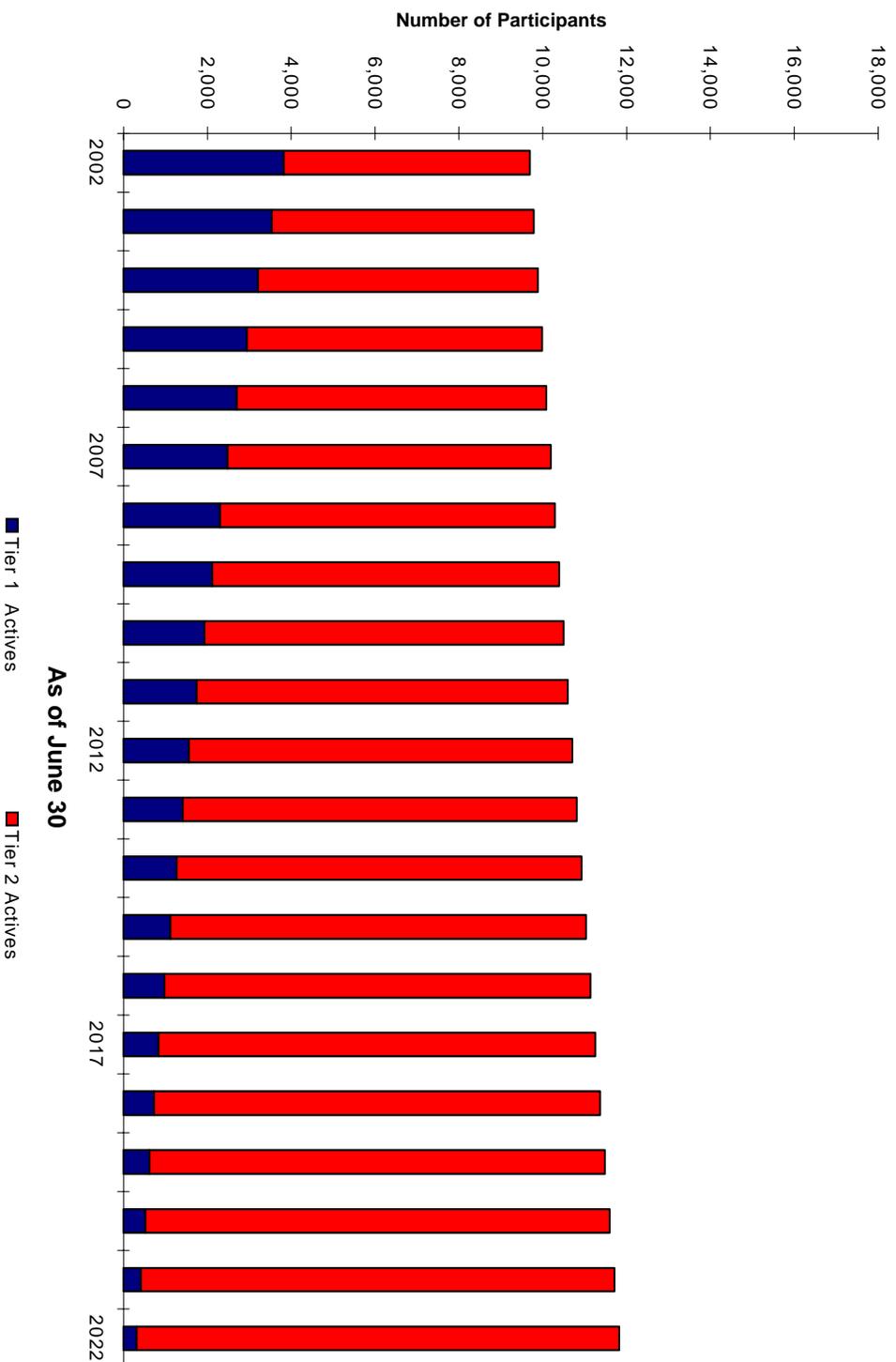
### 1.5 Actuarial Projections (continued) Economic Scenarios – Projected Funding Ratios Annual Population Increase 1%



**1.5 Actuarial Projections (continued)**  
**Projected Active Participant Count**  
**Annual Population Increase 0%**



### 1.5 Actuarial Projections (continued) Projected Active Participant Count Annual Population Increase 1%

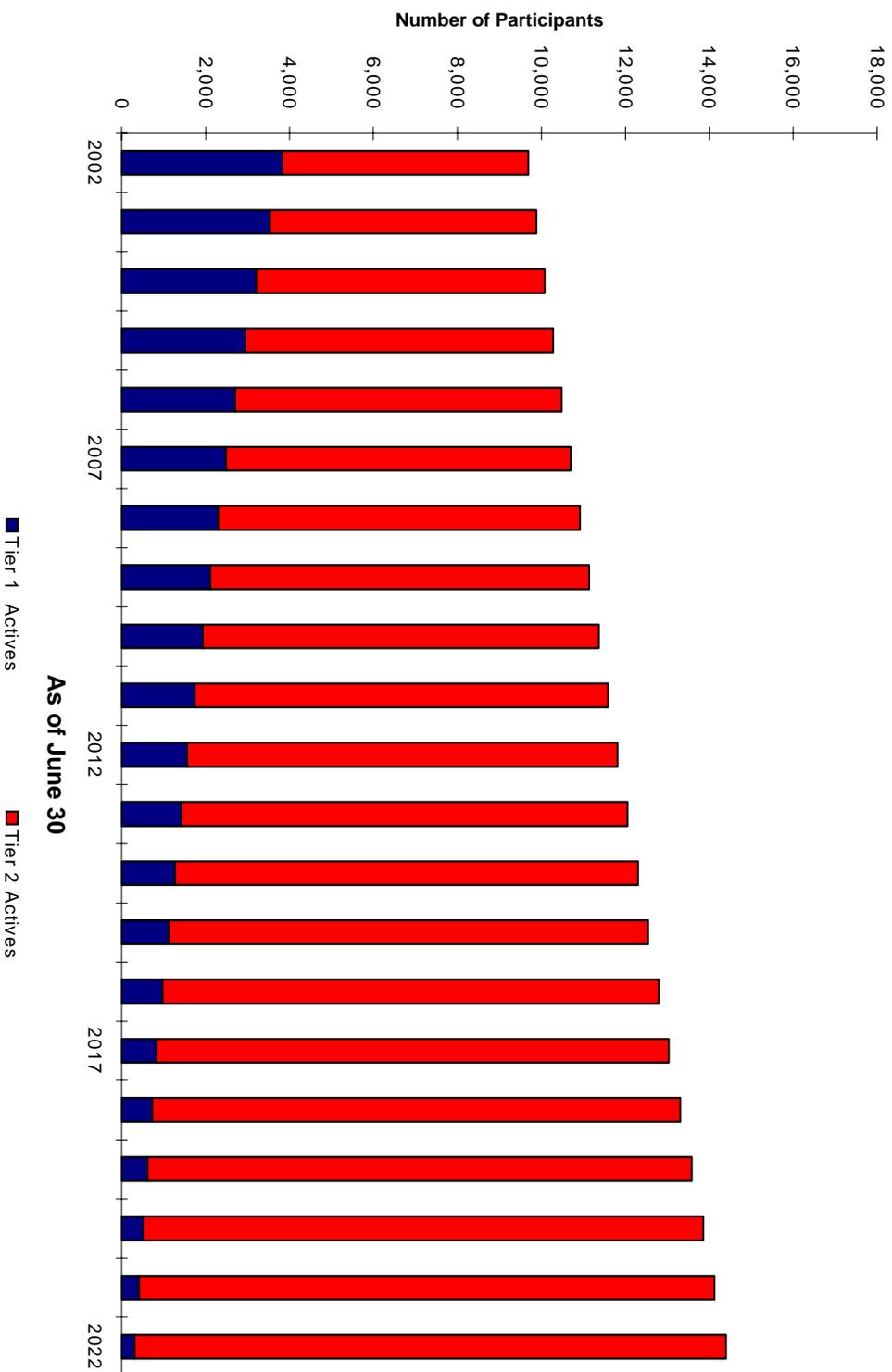


As of June 30

■ Tier 1 Actives

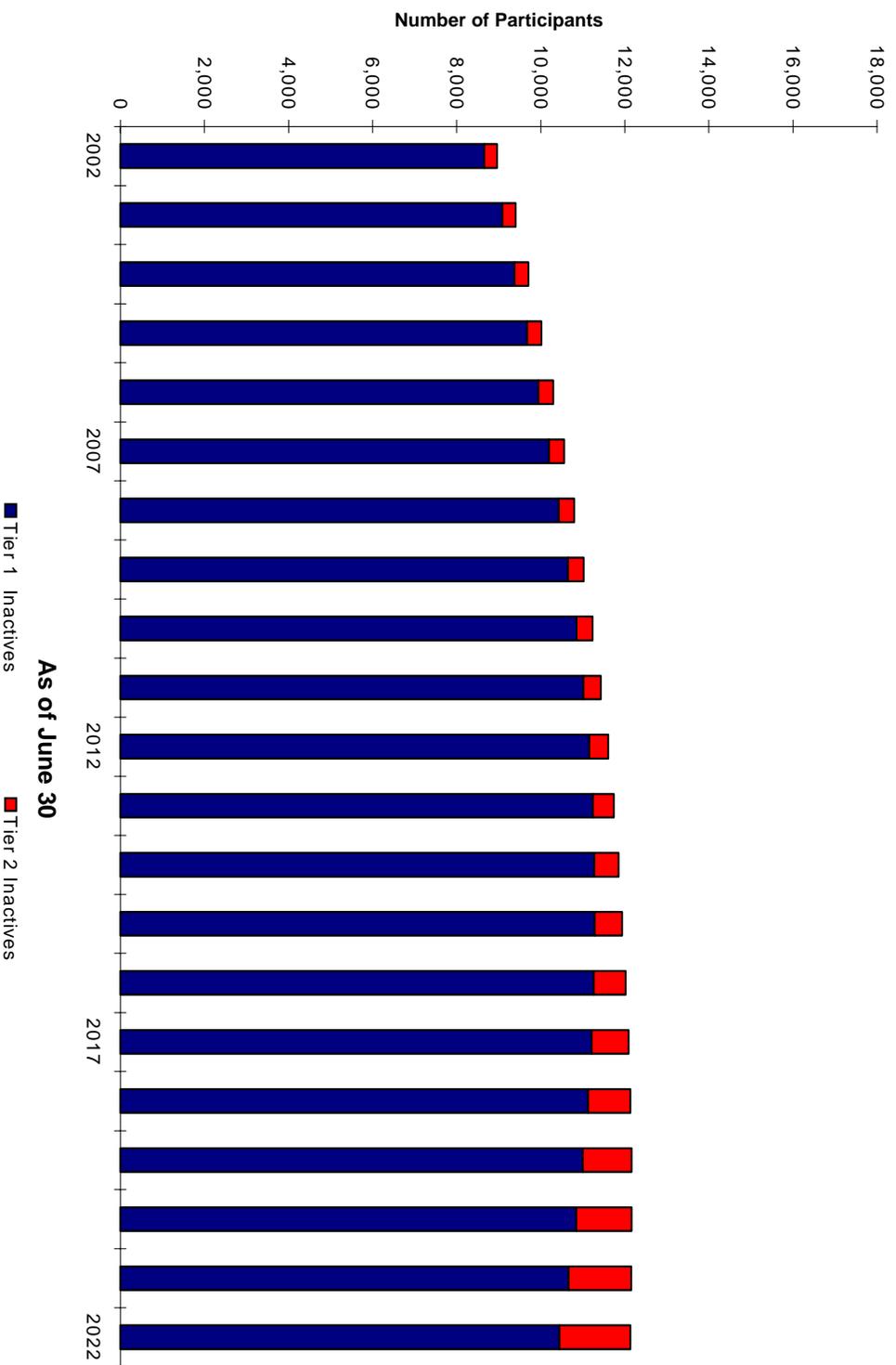
■ Tier 2 Actives

**1.5 Actuarial Projections (continued)**  
**Projected Active Participant Count**  
**Annual Population Increase 2%**

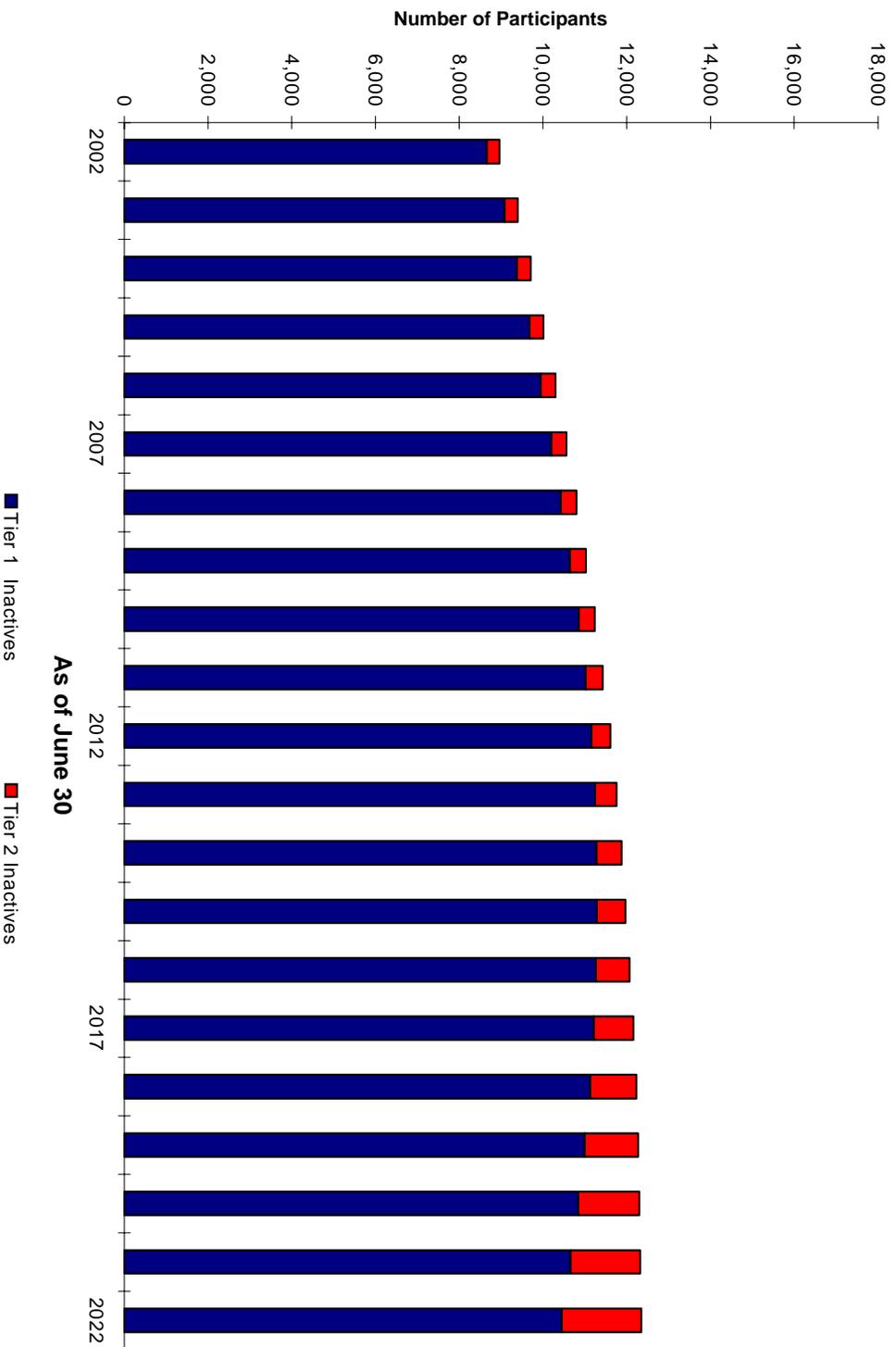


As of June 30

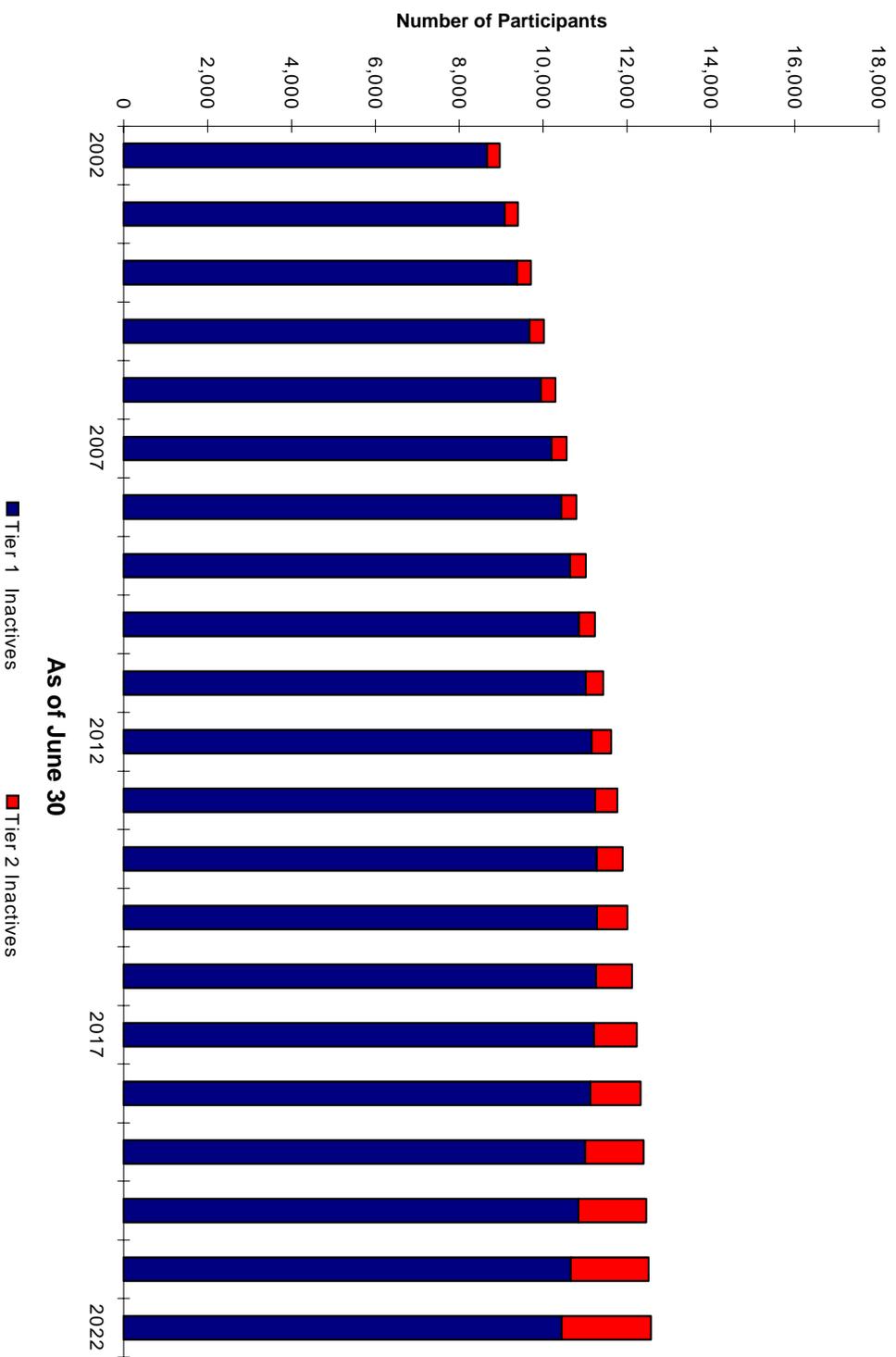
**1.5 Actuarial Projections (continued)**  
**Projected Inactive Participant Count**  
**Annual Population Increase 0%**



**1.5 Actuarial Projections (continued)**  
**Projected Inactive Participant Count**  
**Annual Population Increase 1%**



**1.5 Actuarial Projections (continued)**  
**Projected Inactive Participant Count**  
**Annual Population Increase 2%**



As of June 30

■ Tier 1 Inactives      ■ Tier 2 Inactives

## **Section 2**

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 July 1, 2002. 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;
- positions requiring a teaching certificate as a condition of employment in the Department of Education and Early Development;
- 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;
- certain State legislators who have elected to be covered under the TRS; and
- a teacher who has filed for worker's compensation benefits due to an on the job assault and who, as a result of the physical injury, is placed on leave without pay.

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.

## 2.1 Summary of the Alaska Teachers' Retirement System *(continued)*

### (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. Part-time members receive membership credit for each day in proportion to full-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.

## 2.1 Summary of the Alaska Teachers' Retirement System *(continued)*

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. Supplemental contributions are deducted from gross salaries before federal income taxes are withheld. 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 (11) below).

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

Refund 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<sup>1</sup>, 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 of 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;
  - (v) two years of paid-up membership service if they are vested in the Public Employees' Retirement System (PERS); or
  - (vi) one year of paid-up membership service if they are retired from the PERS.

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<sup>1</sup> Members participating before July 1, 1990, are eligible for normal retirement at age 55 or early retirement at age 50.

## 2.1 Summary of the Alaska Teachers' Retirement System *(continued)*

- (b) Members may retire at any age when they have:
- (i) 25 years of paid-up creditable service, the last five years of 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 of 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 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.

## **2.1 Summary of the Alaska Teachers' Retirement System (continued)**

### **(8) Reemployment of Retired Members**

Retirees who return to work in a permanent full-time or part-time TRS position after a Normal Retirement have two options available, the Standard Option or the Waiver Option.

Under the Standard Option, 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.

If an Alaska school district has established that there is a shortage of teachers in a particular discipline or specialty and has passed a resolution to that effect, a retiree returning to work in a permanent full-time or part-time TRS position with that school district may exercise the Waiver Option. The Waiver Option allows a retiree who retired under a Normal Retirement to reemploy with a TRS employer and continue to receive a retirement benefit by signing a waiver of participation in the TRS. The Waiver Option became effective July 1, 2001 and applies to reemployment periods after that date.

The Waiver Option is not available to members who retired early or under the Retirement Incentive Program (RIP).

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

- (v) forfeit the three years of incentive credits that they received;
- (a)
- (a) 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
  - (b) 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) Postemployment Healthcare Benefits**

When pension benefits begin, major medical benefits are provided by the TRS to (1) all employees first hired before July 1, 1990, and (2) members who have twenty-five years of membership service, are disabled or age sixty or older, regardless of their initial hire dates. Employees first hired after June 30, 1990, may receive major medical benefits prior to age sixty by paying premiums.

## 2.1 Summary of the Alaska Teachers' Retirement System *(continued)*

### (10) 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.

### (11) 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 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.

## 2.1 Summary of the Alaska Teachers' Retirement System *(continued)*

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.

## **2.1 Summary of the Alaska Teachers' Retirement System** *(continued)*

### **(12) 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. In a year where an Ad Hoc PRPA is granted, eligible recipients will receive the higher of the two calculations.

### **(13) 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:

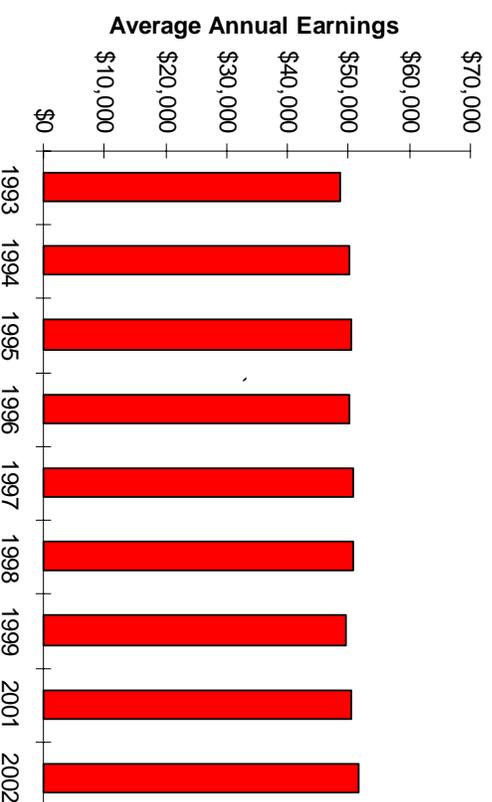
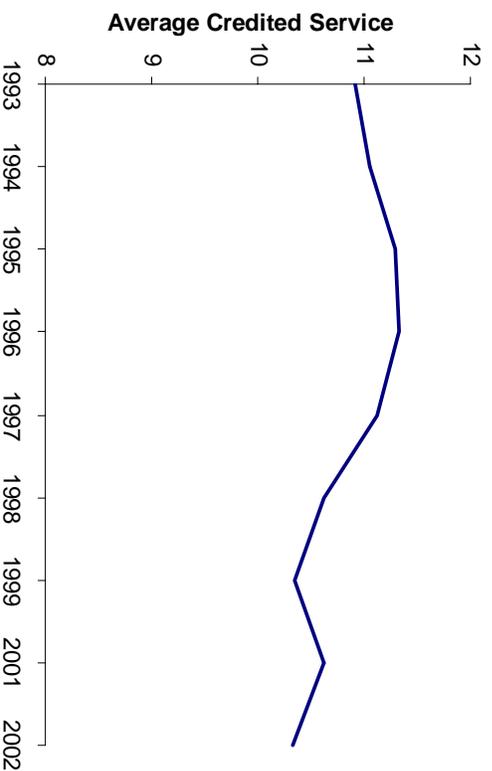
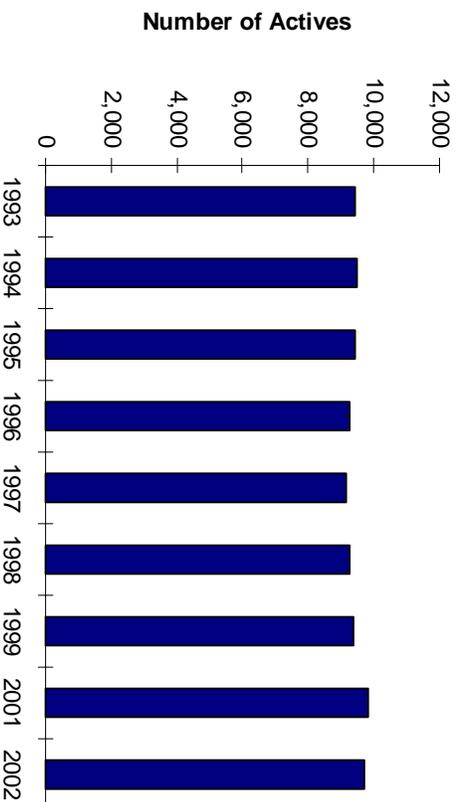
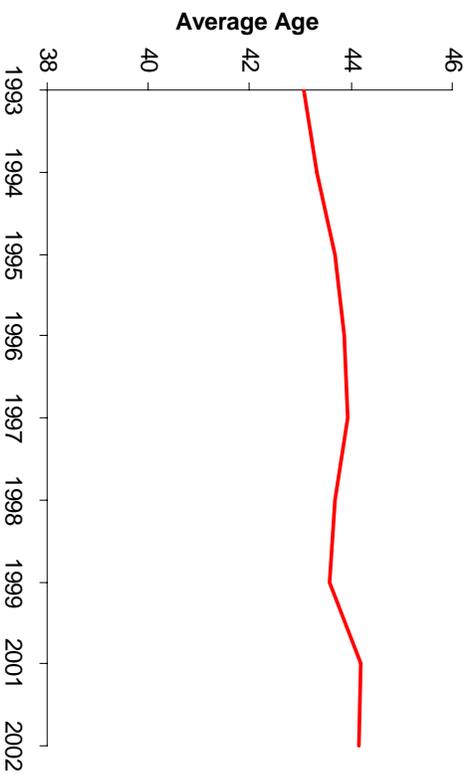
- (a) members who were first hired under the TRS before July 1, 1990, and their survivors;
- (b) members who were first hired under the TRS after June 30, 1990, and their survivors if they are at least age 65; and
- (c) all disabled members.

## 2.2(a) Participant Census Information

As of June 30	1997	1998	1999	2001	2002
<b>Active Members</b>					
(1) Number	9,164	9,262	9,396	9,815	9,690
(2) Average Age	43.93	43.69	43.56	44.19	44.15
(3) Average Credited Service	11.12	10.62	10.34	10.62	10.33
(4) Average Annual Earnings	\$ 50,901	\$ 50,684	\$ 49,640	\$ 50,554	\$ 52,573
(5) Number Vested	5,366	5,285	5,256	5,499	5,224
(6) Percent Who Are Vested	58.6%	57.1%	55.9%	56.0%	53.9%
<b>Members Receiving Benefits</b>					
(1) Number	5,343	5,979	6,486	7,333	7,804
(2) Average Age	62.87	62.67	62.74	63.17	63.30
(3) Average Monthly Benefit:					
Base	\$ 1,750	\$ 1,819	\$ 1,859	\$ 1,903	\$ 1,936
C.O.L.A.	110	115	118	119	122
P.R.P.A.	441	431	411	448	474
Adjustment	-15	1	0	0	0
Total	2,286	2,366	2,388	2,470	2,532
<b>Vested Terminations</b>					
(1) Number	1,279	1,064	1,150	767	783
(2) Average Age	49.62	49.59	49.89	49.15	48.97
(3) Average Monthly Benefit	\$ 1,471	\$ 1,397	\$ 1,447	\$ 1,217	\$ 1,129
<b>Non-Vested Terminations With Account Balances</b>					
(1) Number	1,310	1,285	1,297	2,207	2,447*
(2) Average Account Balance	\$ 14,387	\$ 12,437	\$ 13,108	\$ 10,142	\$ 10,964

\* Includes deceased participants with account balances.

2.2(a) Participant Census Information at June 30 – TRS Active Members (continued)



**2.2(b) Distribution of Active Participants****Annual Earnings By Age**

Age	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0
20-24	70	2,335,364	33,362
25-29	656	25,785,367	39,307
30-34	1,174	50,108,135	42,682
35-39	1,189	56,515,229	47,532
40-44	1,475	75,382,093	51,107
45-49	1,911	105,460,280	55,186
50-54	1,932	112,701,217	58,334
55-59	930	57,936,081	62,297
60-64	298	19,512,565	65,478
65-69	47	3,039,225	64,664
70-74	7	609,142	87,020
75+	1	52,011	52,011
<b>Total</b>	<b>9,690</b>	<b>\$509,436,709</b>	<b>\$ 52,573</b>

**Annual Earnings By Credited Service**

Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0	31	\$ 1,375,432	\$ 44,369
1	812	31,602,281	38,919
2	626	25,842,537	41,282
3	662	27,849,358	42,069
4	669	29,329,930	43,841
0-4	2,800	115,999,538	41,428
5-9	2,296	112,993,871	49,213
10-14	1,826	101,954,817	55,835
15-19	1,418	87,990,114	62,052
20-24	900	58,710,947	65,234
25-29	333	22,883,514	68,719
30-34	92	6,691,999	72,739
35-39	23	1,957,740	85,119
40+	2	254,169	127,085
<b>Total</b>	<b>9,690</b>	<b>\$509,436,709</b>	<b>\$ 52,573</b>

**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	70	0	0	0	0	0	0	0	0	70
25-29	593	63	0	0	0	0	0	0	0	656
30-34	679	456	39	0	0	0	0	0	0	1,174
35-39	367	467	325	30	0	0	0	0	0	1,189
40-44	352	372	422	276	53	0	0	0	0	1,475
45-49	311	384	423	461	295	37	0	0	0	1,911
50-54	266	322	396	411	345	168	24	0	0	1,932
55-59	114	168	163	169	159	99	52	6	0	930
60-64	40	61	47	61	38	25	13	13	0	298
65-69	7	3	9	8	10	4	3	2	1	47
70-74	1	0	1	2	0	0	0	2	1	7
75+	0	0	1	0	0	0	0	0	0	1
<b>Total</b>	<b>2,800</b>	<b>2,296</b>	<b>1,826</b>	<b>1,418</b>	<b>900</b>	<b>333</b>	<b>92</b>	<b>23</b>	<b>2</b>	<b>9,690</b>

**2.2(c) Schedule of Active Member Valuation Data**

<b>Valuation Date</b>	<b>Number</b>	<b>Annual Earnings (000's)</b>	<b>Annual Average Earnings</b>	<b>Percent Increase/ (Decrease) in Average Earnings</b>	<b>Number of Participating Employers</b>
June 30, 2002	9,690	\$ 509,437	\$ 52,573	4.0%	57
June 30, 2001	9,815	496,188	50,544	1.8%	60
June 30, 1999	9,396	466,414	49,640	(2.1%)	61
June 30, 1998	9,262	469,433	50,684	(0.4%)	61
June 30, 1997	9,164	466,455	50,901	1.3%	61
June 30, 1996	9,259	465,182	50,241	(0.5%)	61
June 30, 1995	9,452	477,205	50,487	0.6%	61
June 30, 1994	9,489	476,098	50,174	3.2%	61
June 30, 1993	9,459	459,746	48,604	0.2%	61

**2.2(d) Statistics on New Benefit Recipients**

<b>During the Year Ending June 30</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000/2001</b>	<b>2002</b>
<b>Service</b>					
(1) Number	510	657	525	967	529
(2) Average Age at Commencement	53.68	53.09	53.85	53.88	54.80
(3) Average Monthly Benefit	\$ 2,488	\$ 2,551	\$ 2,521	\$ 2,303	\$ 2,556
<b>Disability</b>					
(1) Number	8	9	17	20	10
(2) Average Age at Commencement	44.02	44.96	48.51	50.78	48.28
(3) Average Monthly Benefit	\$ 2,409	\$ 2,065	\$ 2,577	\$ 3,068	\$ 2,800
<b>Survivor (including surviving spouse and QDROs)</b>					
(1) Number	47	47	56	70	50
(2) Average Age at Commencement	60.37	61.39	58.11	60.66	65.09
(3) Average Monthly Benefit	\$ 1,226	\$ 1,128	\$ 1,095	\$ 1,286	\$ 1,270
<b>Total</b>					
(1) Number	565	713	598	1,057	589
(2) Average Age at Commencement	54.10	53.52	54.10	54.25	55.56
(3) Average Monthly Benefit	\$ 2,382	\$ 2,451	\$ 2,389	\$ 2,238	\$ 2,451

## 2.2(e) Schedule of Average Benefit Payments – New Benefit Recipients

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/01 - 6/30/02:							
Average Monthly Benefit	\$ 532	\$ 795	\$ 1,168	\$ 1,706	\$ 2,455	\$ 3,126	\$ 3,915
Number of Recipients	4	36	62	78	180	137	92
Period 7/1/99 - 6/30/01:							
Average Monthly Benefit	\$ 1,514	\$ 1,021	\$ 1,488	\$ 1,935	\$ 2,435	\$ 2,551	\$ 2,864
Number of Recipients	2	33	101	237	374	201	109
Period 7/1/98 - 6/30/99:							
Average Monthly Benefit	\$ 1,230	\$ 820	\$ 1,152	\$ 1,691	\$ 2,510	\$ 3,285	\$ 3,756
Number of Recipients	23	43	67	81	176	153	55
Period 7/1/97 - 6/30/98:							
Average Monthly Benefit	\$ 1,051	\$ 850	\$ 1,095	\$ 1,842	\$ 2,590	\$ 3,443	\$ 4,280
Number of Recipients	26	51	80	105	240	154	57
Period 7/1/96 - 6/30/97:							
Average Monthly Benefit	\$ 996	\$ 828	\$ 1,042	\$ 1,692	\$ 2,493	\$ 3,353	\$ 3,812
Number of Recipients	19	42	71	77	151	153	52
Period 7/1/95 - 6/30/96:							
Average Monthly Benefit	\$ 952	\$ 836	\$ 1,145	\$ 1,731	\$ 2,389	\$ 3,138	\$ 3,317
Number of Recipients	15	24	40	31	115	86	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 Recipients	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 Recipients	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 Recipients	7	17	23	9	62	37	10

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

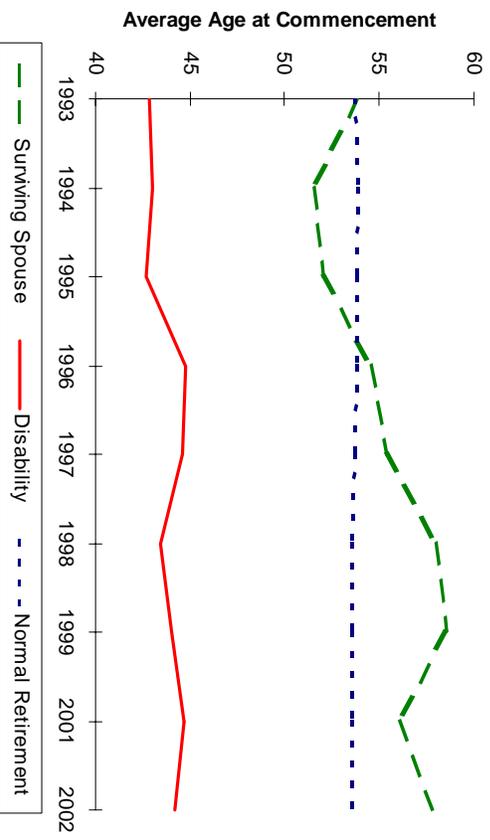
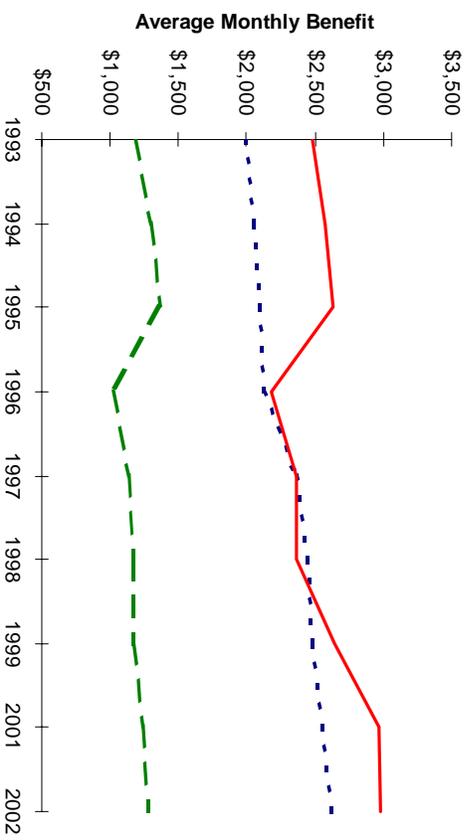
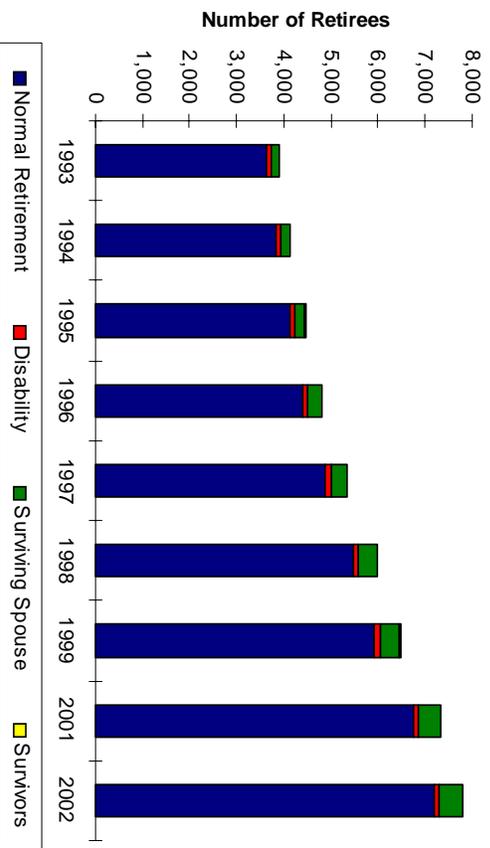
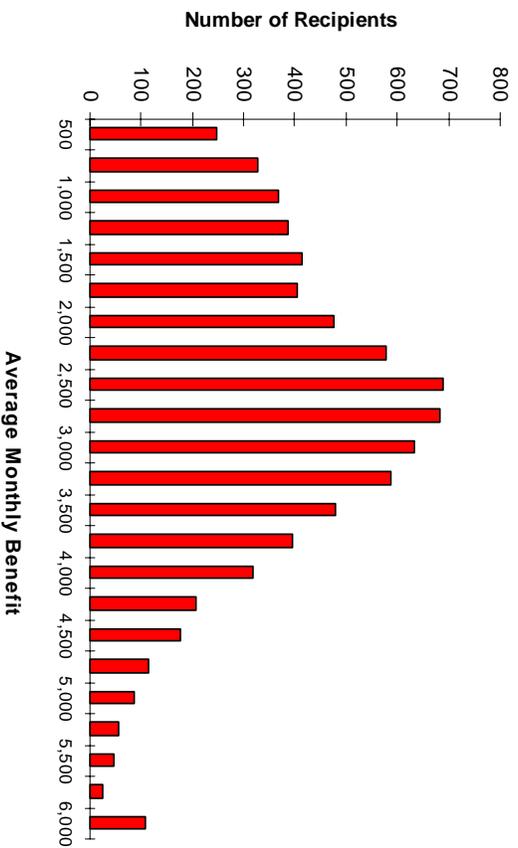
**2.2(f) Statistics on All Benefit Recipients**

As of June 30	1997	1998	1999	2000/2001	2002
<b>Service</b>					
(1) Number, Fiscal Year Start	4,395	4,873	5,467	5,924	6,754
(2) Net Change	478	594	457	830	447
(3) Number, Fiscal Year End	4,873	5,467	5,924	6,754	7,201
(4) Average Age at Commencement	53.70	53.57	53.55	53.52	53.53
(5) Average Age Now	63.07	62.69	62.73	63.12	63.27
(6) Average Monthly Benefit	\$ 2,365	\$ 2,451	\$ 2,479	\$ 2,549	\$ 2,618
<b>Surviving Spouse's Benefits (Includes QDROs)</b>					
(1) Number, Fiscal Year Start	279	334	382	414	469
(2) Net Change	55	48	32	55	32
(3) Number, Fiscal Year End	334	382	414	469	501
(4) Average Age at Commencement	55.37	57.95	58.55	56.06	57.86
(5) Average Age Now	64.61	66.59	67.32	66.48	66.88
(6) Average Monthly Benefit	\$ 1,132	\$ 1,173	\$ 1,168	\$ 1,246	\$ 1,279
<b>Survivor's Benefits (other than spouses)</b>					
(1) Number, Fiscal Year Start	3	3	6	37	9*
(2) Net Change	0	3	31	(28)	8
(3) Number, Fiscal Year End	3	6	37	9*	17
(4) Average Age at Commencement	30.75	33.76	41.55	49.80	46.06
(5) Average Age Now	40.16	47.04	45.48	54.66	53.71
(6) Average Monthly Benefit	\$ 537	\$ 464	\$ 684	\$ 545	\$ 549
<b>Disabilities</b>					
(1) Number, Fiscal Year Start	126	133	124	111	101
(2) Net Change	7	(9)	(13)	(10)	(16)
(3) Number, Fiscal Year End	133	124	111	101	85
(4) Average Age at Commencement	44.60	43.44	44.03	44.72	44.22
(5) Average Age Now	51.66	50.81	51.56	52.04	50.95
(6) Average Monthly Benefit	\$ 2,370	\$ 2,361	\$ 2,644	\$ 2,969**	\$ 2,974**
<b>Total Number of Benefit Recipients</b>	<b>5,343</b>	<b>5,979</b>	<b>6,486</b>	<b>7,333</b>	<b>7,804</b>

\* Includes surviving dependents only. In 1999 all dependents were included.

\*\* Includes benefit increases due to dependents.

2.2(f) Statistics on All Benefit Recipients (continued)



**2.2(g) Distribution of Annual Benefits for Benefit Recipients**

Annual Earnings By Age				Annual Earnings By Credited Service			
Age	Number of People	Total Annual Earnings	Average Annual Earnings	Years Of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0	0	325	\$ 10,370,236	\$31,908
20-24	2	26,292	13,146	1	386	9,799,008	25,386
25-29	0	0	0	2	371	9,520,671	25,662
30-34	1	18,711	18,711	3	622	18,185,361	29,237
35-39	4	86,168	21,542	4	574	17,449,009	30,399
40-44	29	668,547	23,053	0-4	2,278	65,324,285	28,676
45-49	222	6,508,158	29,316	5-9	2,241	69,861,477	31,174
50-54	953	29,219,612	30,661	10-14	1,139	33,871,394	29,738
55-59	1,848	56,425,052	30,533	15-19	1,266	44,774,867	35,367
60-64	1,747	54,831,462	31,386	20-24	498	13,484,420	27,077
65-69	1,158	36,750,687	31,736	25-29	329	8,335,114	25,335
70-74	793	24,099,061	30,390	30-34	46	1,222,899	26,585
75+	1,047	28,460,796	27,183	35-39	6	187,149	31,191
				40+	1	32,941	32,941
<b>Total</b>	<b>7,804</b>	<b>\$237,094,546</b>	<b>\$ 30,381</b>	<b>Total</b>	<b>7,804</b>	<b>\$237,094,546</b>	<b>\$ 30,381</b>

**Years Since Benefit Commencement By Age**

Age	Years Since Commencement									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	2	0	0	0	0	0	0	0	0	2
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	2	2	0	0	0	0	0	0	0	4
40-44	24	3	2	0	0	0	0	0	0	29
45-49	170	49	1	1	0	0	1	0	0	222
50-54	606	293	47	6	1	0	0	0	0	953
55-59	867	692	208	71	9	1	0	0	0	1,848
60-64	395	728	377	231	11	3	2	0	0	1,747
65-69	124	306	293	372	53	7	3	0	0	1,158
70-74	36	112	133	350	131	30	1	0	0	793
75+	51	56	78	235	293	288	39	6	1	1,047
<b>Total</b>	<b>2,278</b>	<b>2,241</b>	<b>1,139</b>	<b>1,266</b>	<b>498</b>	<b>329</b>	<b>46</b>	<b>6</b>	<b>1</b>	<b>7,804</b>

2.2(h) Schedule of Benefit Recipients by Type of Benefit and Option Selected

Amount of Monthly Benefit	Number of Recipients	Type of Benefit			Option Selected				
		1	2	3	1	2	3	4	
\$ 1	300	89	72	17	0	49	19	17	4
301 - 600	252	193	59	0	154	42	44	12	
601 - 900	439	343	96	0	275	81	64	19	
901 - 1200	469	372	97	0	306	86	67	10	
1201 - 1500	492	416	76	0	319	88	73	12	
1501 - 1800	484	407	74	3	333	56	84	11	
1801 - 2100	603	553	42	8	396	94	101	12	
2101 - 2400	797	751	25	21	491	127	163	16	
2401 - 2700	834	800	11	23	513	132	172	17	
2701 - 3000	750	728	10	12	501	87	144	18	
3001 - 3300	691	679	5	7	451	67	162	11	
3301 - 3600	544	532	3	9	337	63	137	7	
3601 - 3900	428	424	2	2	269	42	111	6	
3901 - 4200	285	285	0	0	177	29	74	5	
Over 4,200	647	646	1	0	399	60	172	16	
Totals	7,804	7,201	518	85	4,970	1,073	1,585	176	

Type of Benefit	Option Selected
1. Normal retirement	1. Whole Life Annuity
2. Survivor payment	2. 75% Joint and Contingent Annuity
3. Disability	3. 50% Joint and Contingent Annuity
	4. 66 2/3% Joint and Survivor Annuity

## 2.2(i) Schedule of Benefit Recipients 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, 2002	589	\$24,789,896	118	\$4,966,397	7,804	\$237,094,545	9.12%	\$30,381
June 30, 2001	1,057	39,213,327	210	7,790,727	7,333	217,271,046	16.91%	29,629
June 30, 1999	598	19,014,567	91	2,893,521	6,486	185,848,446	9.50%	28,654
June 30, 1998	674	24,479,595	38	1,380,155	5,979	169,727,400	15.75%	28,387
June 30, 1997	583	29,988,351 <sup>2</sup>	43	2,211,834 <sup>2</sup>	5,343	146,627,960	23.37%	27,443
June 30, 1996	376	8,410,895	32	441,353	4,803	118,851,443	7.19%	24,745
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

\* Numbers are estimated, and include other internal transfers.

<sup>2</sup> Includes additional benefits to current retirees from a one-time retroactive ad hoc Post-Retirement Pension Adjustments

## 2.3 Summary of Actuarial Assumptions and Methods

The demographic and economic assumptions used in this valuation were recommended by Mercer Human Resource Consulting at the Fall 2000 TRS Board Meeting and adopted by the Board in December 2000. These assumptions were result of an experience study performed in the Fall of 2000. The funding method used in this valuation was adopted June 30, 1985 and last reviewed by the Board in January 2003. The asset smoothing method used to determine valuation assets was changed effective June 30, 2002.

### 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 initial unfunded accrued liability and future gains/losses are amortized over a 25 year fixed period level percentage of pay.

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 the 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.

## 2.3 Summary of Actuarial Assumptions and Methods *(continued)*

### (B) Actuarial Assumptions

Investment Return	8.25% per year, compounded annually, net of expenses.	
Salary Scale	Inflation – 3.5% per year Merit (first 5 years of employment) – 1.5% per year. Productivity – 0.5% per year	
Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.5% annually.	
Health Cost Trend	FY03	12.0%
	FY04	12.0%
	FY05	12.0%
	FY06	11.5%
	FY07	11.0%
	FY08	10.5%
	FY09	10.0%
	FY10	9.5%
	FY11	9.0%
	FY12	8.5%
	FY13	8.0%
	FY14	7.5%
	FY15	7.0%
	FY16	6.0%
	FY17 and later	5.0%
Mortality	1994 Group Annuity Mortality Basic Table for males and females, 1994 Base Year. All deaths are assumed to result from non-occupational causes.	
Total Turnover	Select and ultimate rates based upon the 1997-99 actual withdrawal experience. (See Table 1).	

## 2.3 Summary of Actuarial Assumptions and Methods *(continued)*

### (B) Actuarial Assumptions

Disability	Incidence rates based upon the 1991-95 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.
Retirement	Retirement rates based upon the 1997-99 actual experience in accordance with Table 3.
Spouse's Age	Wives are assumed to be four years younger than husbands.
Dependent Children	Benefits to dependent children have been valued assuming members who are not single have one dependent child.
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.
C.O.L.A.	Of those benefit recipients who are eligible for the C.O.L.A., 65% are assumed to remain in Alaska and receive the C.O.L.A.
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
Sick Leave	4.7 days of unused sick leave for each year of service are assumed to be available to be credited once the member is retired.
Post-Retirement Pension	50% and 75% of assumed inflation is valued for the automatic Post-Retirement Pension Adjustment (PRPA) as specified in the statute.
Expenses	Expenses are covered in the investment return assumption.
Part-time Status	Part-time employees are assumed to earn 0.550 years of credited service per year.

## **2.3 Summary of Actuarial Assumptions and Methods** *(continued)*

### **(C) Valuation of Assets**

Effective June 30, 2002, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method will be phased in over the next five 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 LLP. Valuation assets cannot be outside a range of 80% to 120% of the market value of assets.

### **(D) 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 FY03, the pre-65 monthly premium is \$907.18 and the post-65 premium is \$345.59, based on an assumed total blended premium of \$694.00. The assumed total blended premium for FY03 is the average of the 2002 and 2003 calendar year actual blended premium. For the time period January 1, 2003 to December 31, 2003, the actual blended premium as provided by the State of Alaska, Division of Retirement and Benefits, is \$720.00.

**2.3 Summary of Actuarial Assumptions and Methods (continued)**

**Table 1**  
**Alaska TRS**  
**Total Turnover Assumptions**

<b>Select Rates of Turnover During the First 8 Years of Employment</b>		<b>Ultimate Rates of Turnover After the First 8 Years of Employment</b>	
<u>Year of Employment</u>	<u>Rate</u>	<u>Ages</u>	<u>Rate</u>
1	.10	20+	.04
2	.10		
3	.09		
4	.09		
5	.08		
6	.07		
7	.06		
8	.05		

**2.3 Summary of Actuarial Assumptions and Methods (continued)**

**Table 2**  
**Alaska TRS**  
**Disability Rates**  
**Annual Rates Per 1,000 Employees**

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.28	43	.54
21	.28	44	.59
22	.29	45	.65
23	.29	46	.70
24	.30	47	.76
25	.30	48	.83
26	.30	49	.89
27	.31	50	.96
28	.32	51	1.04
29	.33	52	1.14
30	.34	53	1.27
31	.34	54	1.42
32	.35	55	1.60
33	.36	56	1.84
34	.37	57	2.14
35	.38	58	2.44
36	.40	59	2.88
37	.41	60	3.37
38	.43	61	3.90
39	.44	62	4.52
40	.46	63	5.22
41	.48	64	5.96
42	.51		

**2.3 Summary of Actuarial Assumptions and Methods** *(continued)*

**Table 3**  
**Alaska TRS**  
**Retirement Rates**

<u>Age at Retirement</u>	<u>Retirement Rate</u>
50	.05
51	.05
52	.05
53	.05
54	.05
55	.15
56	.13
57	.10
58	.10
59	.10
60	.10
61	.10
62	.10
63	.17
64	.17
65	.50
66 & up	1.00

Teachers retiring at ages under 50 are assumed to retire immediately upon attaining 21 years of service.

**Section 3**

- Section 3.1 Analysis of financial experience.
- Section 3.2 Summary of accrued and unfunded accrued liabilities.
- Section 3.3 Solvency test.

## 3.1 Analysis of Financial Experience

	Change in Employer 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				
	Change in Employer Contribution Rate During Fiscal Year				
	2002	2001	2000	1999	1998
(1) Health Experience	3.85%	0.00%	0.00%	0.00%	0.00%
(2) Salary Experience	(0.11%)	(1.68%)	0.00%	(0.64%)	(0.84%)
(3) Investment Experience	15.03%	1.35%	(3.35%)	(3.73%)	(2.70%)
(4) Demographic Experience	4.21%	2.66%	(0.91%)	0.80%	0.54%
(5) Miscellaneous	0.00%	0.00%	0.00%	0.00%	0.00%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	22.98%	2.33%	(4.26%)	(3.57%)	(3.00%)
Non-recurring Changes					
(7) Asset Valuation Method	0.03%	0.00%	(1.38%)	0.00%	0.00%
(8) Past Service Amortization Change	(9.08%)	0.00%	0.00%	0.00%	0.00%
(9) Assumption Changes	6.84%	0.00%	6.68%	0.00%	0.00%
(10) System Benefit Changes	N/A	0.17%	N/A	N/A	N/A
(11) Administrative System Changes	N/A	3.49%	N/A	N/A	N/A
(12) Ad hoc PRPA	0.36%	0.16%	0.16%	0.11%	0.55%
(13) Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10) + (11) + (12)	21.13%	6.15%	1.20%	(3.46%)	(2.45%)
(14) Beginning Total Employer Contribution Rate	14.44%	8.29%	7.09%	10.55%	13.00%
(15) Ending Total Employer Contribution Rate, (13) + (14)	35.57%	14.44%	8.29%	7.09%	10.55%

### 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, 2002 <sup>(1)(2)(3)</sup>	\$ 5,411,642	\$ 3,689,036	68.2%	\$ 1,722,606	\$ 509,437	338.1%
June 30, 2001	4,603,147	4,372,229	95.0%	230,918	496,188	46.5%
June 30, 2000 <sup>(1)(2)(3)</sup>	4,198,868	4,184,015	99.6%	14,853	482,571	3.1%
June 30, 1999	3,720,954	3,815,633	102.5%	N/A	466,414	N/A
June 30, 1998	3,528,757	3,446,070	97.7%	82,687	469,433	17.6%
June 30, 1997	3,320,069	3,120,044	94.0%	200,025	466,455	42.9%
June 30, 1996 <sup>(2)</sup>	2,940,437	2,858,756	97.2%	81,681	465,182	17.6%
June 30, 1995	2,913,467	2,647,392	90.9%	266,075	477,205	55.8%
June 30, 1994 <sup>(1)(2)</sup>	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%

- (1) Change in Asset Valuation Method
- (2) Change of Assumptions
- (3) Change in Methods

### 3.3 Solvency Test

*Other Historical Information*

Valuation Date	Aggregate Accrued Liability For:			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, 2002 <sup>(1)(2)(3)</sup>	\$523,142	\$3,755,882	\$1,132,618	100%	84.3%	0.0%
June 30, 2001	533,752	3,213,431	855,964	100%	100%	73.0%
June 30, 2000 <sup>(1)(2)(3)</sup>	490,176	2,872,250	836,442	100%	100%	98.2%
June 30, 1999	469,068	2,571,345	680,541	100%	100%	100%
June 30, 1998	449,383	2,344,263	735,111	100%	100%	88.8%
June 30, 1997	483,735	2,095,843	780,491	100%	100%	69.2%
June 30, 1996 <sup>(2)</sup>	451,249	1,689,636	799,552	100%	100%	89.8%
June 30, 1995	437,089	1,531,406	944,972	100%	100%	71.8%
June 30, 1994 <sup>(1)(2)</sup>	398,990	1,419,506	942,913	100%	100%	69.4%
June 30, 1993	370,667	1,223,220	835,569	100%	100%	79.8%

(1) Change in Asset Valuation Method

(2) Change of Assumptions

(3) Change in Methods

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