



State of Alaska

Public Employees' Retirement System

Actuarial Valuation Report as of June 30, 2004

As Approved by the Alaska Retirement Management Board  
on October 12, 2005

**MERCER**

Human Resource Consulting

March 22, 2005

State of Alaska  
Public Employees' Retirement Board  
Department of Administration  
Division of Retirement and 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 Public Employees' Retirement System has been prepared as of June 30, 2004 by Mercer Human Resource Consulting. The purposes of the report include:

- (1) a presentation of the valuation results of the Plan as of June 30, 2004;
- (2) a review of experience under the Plan for the year ended June 30, 2004;
- (3) a determination of the appropriate contribution rate for each employer in the System which will be applied for the fiscal year ending June 30, 2007; and
- (4) 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(d) and (f))
- (3) Schedule of benefit recipients added to and removed from rolls (Section 2.2(p) and 2.2(q))
- (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 Division of Retirement and Benefits 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. For this valuation, we are recommending changes to the assumptions and methods used to value medical benefit liabilities.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY04 and a fixed 25-year level percentage of payroll 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 valuation assets to liabilities changed from 72.8% to 70.2% during the year. This report provides an analysis of the factors that led to the decrease. This report also provides a history of the funding ratio 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, are fully qualified to provide actuarial services to the State of Alaska, and are available to answer questions regarding this report.

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,



Robert M. Reynolds, ASA, MAAA



Marcia L. Chapman, FSA, EA, MAAA



Samuel G. Martin, ASA, EA, MAAA

Public Employees' Retirement Board  
March 22, 2005  
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The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms his qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.

A handwritten signature in black ink, appearing to read "Brad J. Lawson", with a long horizontal flourish extending to the right.

Brad J. Lawson, FSA, MAAA

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## Report Highlights

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

- (1) Present the results of a valuation of the Alaska Public Employees' Retirement System as of June 30, 2004;
- (2) Review experience under the plan for the year ended June 30, 2004;
- (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.

This report is divided into three sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 2004 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:

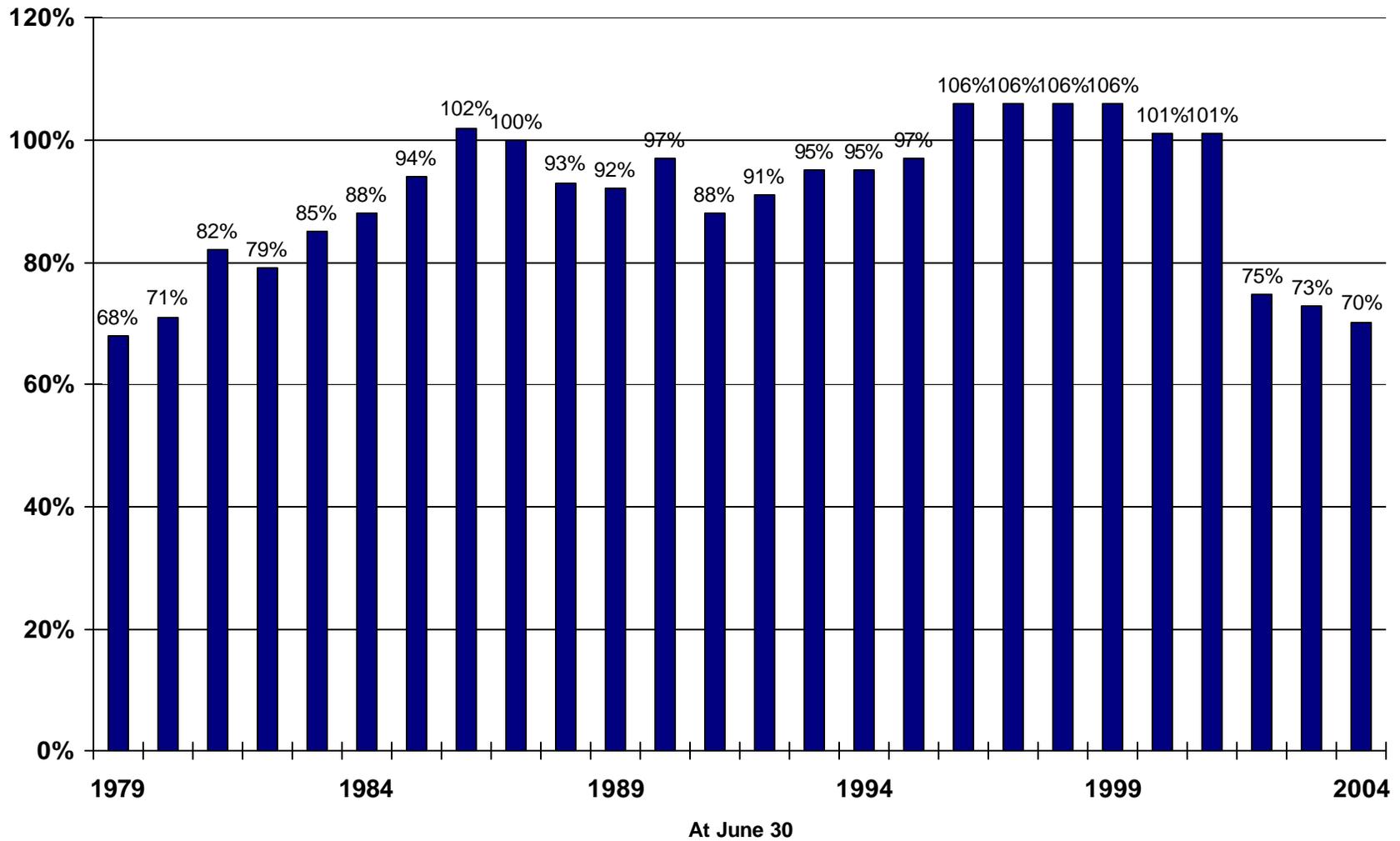
<b>Funding Status as of June 30</b>	<b>2003</b>	<b>2004</b>
(a) Valuation Assets <sup>1</sup>	\$ 7,687,281	\$ 8,030,414
(b) Accrued Liability <sup>1</sup>		
i) Non-medical benefits	6,330,541	6,711,507
ii) Total benefits (including medical)	10,561,653	11,443,916
(c) Funding Ratio based on Valuation Assets, (a) ÷ (b)		
i) Non-medical benefits	121.4%	119.7%
ii) Total benefits (including medical)	72.8%	70.2%
(d) Market value of assets	7,391,455	8,177,306
(e) Funding Ratio based on Market Assets, (d) ÷ (b)		
i) Non-medical benefits	116.8%	121.8%
ii) Total benefits (including medical)	70.0%	71.5%

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<sup>1</sup> In thousands.

Report Highlights (continued)

PERS Funding Ratio History  
(Based on Valuation Assets)



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**Report Highlights** *(continued)*

<b>Employer Contribution Rates for Fiscal Year:</b>	<b>2006</b>	<b>2007</b>
(a) Consolidated Rate	13.24%	13.32%
(b) Average Past Service Rate	12.39%	14.87%
(c) Average Employer Contribution Rate <i>(a) + (b)</i>	25.63%	28.19%
(d) Board Adopted Average Employer Contribution Rate	16.77%	21.77%

## Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio based on valuation assets as of June 30, 2004 has decreased from 72.8% to 70.2%, a decrease of 2.6%. The average calculated employer contribution rate has increased from 25.63% of payroll for FY06 to 28.19% for FY07, an increase of 2.56% of payroll. The reasons for the change in the funded status and average contribution rate are explained below.

### (1) Retiree Medical Costs and Assumptions

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%
1/1/04-12/31/04	806.00	12%	10%
1/1/05-12/31/05	850.00	5%	10%

As you can see from the above table, the monthly retiree medical premium for the January 1, 2005 to December 31, 2005 time period has increased to \$850.00. Although this represents only a 5% increase over the previous year's medical premium, our expectation is that medical costs will increase at higher rates in the future. The health cost trend used for this valuation is described in Section 2.3. Over the last 10 years, annual premium rate changes have ranged from no change to up 20%. Also, over the last ten years, the increase in the premium rate has been about 9.3% compounded annually.

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## Analysis of the Valuation *(continued)*

Effective June 30, 2002, 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.

Effective with this valuation, we are recommending changes to the assumptions and methods used to value liabilities for retiree medical benefits. The new methods and assumptions will enable us to more accurately determine retiree medical liabilities and incorporate the expected impact on System liabilities of changes in the Medicare program. In particular, we are recommending changes to the following elements in calculating medical liabilities:

- Claims cost methodology and development
- Offset for Medicare
- Aging factors
- Trend rates

Past valuations have based liabilities on the medical premium for that year. For this valuation, an analysis of medical costs was completed based on claims information provided by Aetna and enrollment data provided by the Division of Retirement and Benefits. Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs. An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. Average medical claims were then distributed across the population based on expected increases in medical expenses that occur with age. Methods and assumptions for valuing medical benefits are described in more detail in Section 2.3.

The current valuation also reflects the impact of the Medicare Part D subsidy in the projection of the prescription drug benefits. Based on our understanding and interpretation of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) at the time of this valuation, the prescription drug benefits appear to meet the actuarial equivalence requirements and will qualify to receive the federal Part D subsidy.

This opinion does not constitute a full actuarial attestation. A full actuarial attestation of the plan's actuarial equivalence status based on final regulations and guidance will need to be included with a subsidy application to the Centers for Medicare and Medicaid Services, which must be submitted no later than September 30, 2005 to be eligible to receive a subsidy in 2006.

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

Additional impacts associated with the MMA have also been included in the current valuation, resulting in projected increases to medical costs due to increased physician reimbursement rates in Alaska.

The combined impact of our recommended method and assumption changes, together with the projected impact of Medicare changes, results in a decrease of 0.3% to the funding ratio, and an increase of 1.03% to the actuarial contribution rate.

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

The approximate FY04 investment return based on market values was 14.60% compared to the expected investment return of 8.25%. This resulted in a gain of approximately \$461.0 million to the System from investment experience. The asset valuation method recognizes 20 percent of this gain (\$92 million) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY03 investment loss was recognized this year. The net result was a slight investment loss which decreased the funding ratio by 0.1% and increased the average employer contribution rate by 0.02%.

### **(3) Salary Increase**

During the period from June 30, 2003, to June 30, 2004, salary increases were less than anticipated in the valuation assumptions. Lower accrued liabilities caused the funding ratio to increase by 0.1%. The net effect of lower normal cost and lower payroll upon which to calculate contribution rates, however, was an increase of 0.08% in the average employer contribution rate.

### **(4) Demographic Experience**

Section 2.2 provides statistics on active participants. The number of active participants decreased 1.3%, from 34,065 at June 30, 2003 to 33,612 at June 30, 2004. The average age of active participants increased from 44.23 to 44.64 and average credited service increased from 8.51 to 8.70 years.

The number of benefit recipients increased 6.2%, from 18,431 to 19,572, and their average age increased from 64.81 to 64.99. There was a 2.1% increase in the number of vested terminated participants, from 5,841 to 5,965. Their average age increased from 47.85 to 48.13.

The overall effect of these participant data changes was an actuarial loss to the System, resulting in an increase in the average employer contribution rate equal to 0.54% of total payroll.

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

### **(5) Contribution Shortfall Compared to Average Employer Calculated Rate**

As of June 30, 2003 the average employer calculated rate was 25.63% for FY06 employer contributions. Since average employer contribution rates are determined two years prior to the fiscal year, the June 30, 2001 average employer rate of 6.77% was contributed during FY04. The difference between the two calculated rates, 6.77% and 25.63%, created a contribution shortfall to the System. This shortfall increased the average employer contribution rate by 0.89%.

### **(6) Actuarial Projections**

At the Fall 1991 Board Meetings, the PERS Board approved the use of an enhanced actuarial projection system. 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 PERS. 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 future.

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## Analysis of the Valuation *(continued)*

### Summary

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

1. Last year's average employer contribution rate	25.63%
2. Change due to:	
a. Contribution shortfall compared to average employer contribution rate	0.89%
b. Investment experience	0.02%
c. Salary increases	0.08%
d. Demographic experience	0.54%
e. Medical assumptions and methodology	1.03%
3. Average employer contribution rate this year	28.19%

## Section 1

This section sets forth the results of the actuarial valuation.

- Section 1.1(a) Statement of net assets.
- Section 1.1(b) Statement of changes in net assets during FY04 and investment return during FY04.
- Section 1.1(c) Actuarial value of assets.
- Section 1.2(a) Actuarial present values for Police/Fire.
- Section 1.2(b) Actuarial present values for Others.
- Section 1.3(a) Average employer contribution rate for Police/Fire for FY07.
- Section 1.3(b) Average employer contribution rate for Others for FY07.
- Section 1.3(c) Average employer contribution rate for all members for FY07.
- Section 1.4 Development of actuarial gain or loss for FY04.
- Section 1.5(a) Actuarial Projections – Projections at Calculated Rate.
- Section 1.5(b) Actuarial Projections – Projections at Current Rate
- Section 1.5(c) Actuarial Projections – Effect of Economic Scenarios

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

<b>As of June 30, 2004 (in thousands)</b>	<b>Pension</b>	<b>Postemployment Healthcare</b>	<b>Total Market Value</b>
Cash and Cash Equivalents	\$ 359	\$ 152	\$ 511
Domestic Equity Pool	2,453,196	845,777	3,298,973
Retirement Fixed Income Pool	1,025,053	434,004	1,459,057
International Equity Pool	958,337	405,757	1,364,094
Real Estate Pool	441,475	186,919	628,394
International Fixed Income Pool	208,994	88,487	297,481
Private Equity Pool	189,148	80,085	269,233
External Domestic Fixed Income Pool	527,115	223,179	750,294
Emerging Markets Equity Pool	69,676	29,501	99,177
Other Investments Pool	5,733	2,427	8,160
Loans and Mortgages (Net of Reserves)	83	36	119
Other Current Assets	5	2	7
Net Accrued Receivables	1,269	537	1,806
<b>Net Assets</b>	<b>\$ 5,880,443</b>	<b>\$ 2,296,863</b>	<b>\$ 8,177,306</b>

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

<b>Fiscal Year 2004 (in thousands)</b>	<b>Pension</b>	<b>Postemployment Healthcare</b>	<b>Total Market Value</b>
(1) Net Assets, June 30, 2003 (market value)	\$ 5,318,390	\$ 2,073,065	\$ 7,391,455
(2) Additions:			
(a) Plan Member Contributions	83,290	35,264	118,554
(b) Employer Contributions	74,178	31,407	105,585
(c) Interest and Dividend Income	170,048	71,997	242,045
(d) Net Appreciation in Fair Value of Investments	<u>591,306</u>	<u>250,357</u>	<u>841,663</u>
(e) Total Additions	\$ 918,822	\$ 389,025	\$ 1,307,847
(3) Deductions:			
(a) Medical Benefits <sup>2</sup>	0	153,636	153,636
(b) Retirement Benefits	329,390	0	329,390
(c) Refunds of Contributions	10,344	4,379	14,723
(d) Investment Expenses	13,314	5,637	18,951
(e) Administrative Expenses	<u>3,721</u>	<u>1,575</u>	<u>5,296</u>
(f) Total Deductions	\$ 356,769	\$ 165,227	\$ 521,996
(4) Net Assets, June 30, 2004 (market value)	\$ 5,880,443	\$ 2,296,863	\$ 8,177,306

Approximate Market Value Investment Return Rate During  
FY04, Net of Expenses

14.60%

<sup>2</sup> Net of transfer in from Retiree Health Fund

### 1.1(c) Actuarial Value of Assets

The actuarial value of assets was set equal to the market value at June 30, 2002. Future investment gains and losses will be recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of market value as of the current valuation date.

	In Thousands
(1) Deferral of Investment Return for FY04	
(a) Market Value, June 30, 2003	\$ 7,391,455
(b) Contributions for FY04	224,139
- Weighted for Timing	112,070
(c) Benefit Payments for FY04 <sup>3</sup>	497,749
- Weighted for Timing	248,875
(d) Investment Return (net of expenses)	1,059,461
(e) Expected Return Rate (net of expenses)	8.25%
(f) Expected Return - Weighted for Timing, [(a. + b. - c.) x e.]	598,509
(g) Investment Gain/(Loss) for the Year (d. - f.)	460,952
(h) Deferred Investment Return <sup>4</sup>	146,892
(2) Actuarial Value, June 30, 2004	
(a) Market Value, June 30, 2004	8,177,306
(b) 2004 Deferred Investment Return	146,892
(c) Preliminary Actuarial Value, June 30, 2004 (a. - b.)	8,030,414
(d) Upper Limit: 120% of Market Value, June 30, 2004	9,812,767
(e) Lower Limit: 80% of Market Value, June 30, 2004	6,541,845
(f) Actuarial Value, June 30, 2004, (c. limited by d. and e.)	\$ 8,030,414

<sup>3</sup> Net of transfer in from Retiree Health Fund

<sup>4</sup> The table below shows the development of gain/(loss) to be recognized in the current year.

Plan Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2003	\$ (369,782)	\$ (73,956)	\$ (73,956)	\$ (221,870)
6/30/2004	\$ 460,952	\$ 0	\$ 92,190	\$ 368,762
<b>Total</b>	<b>\$ 91,170</b>	<b>\$ (73,956)</b>	<b>\$ 18,234</b>	<b>\$ 146,892</b>

## 1.2(a) Actuarial Present Values - Police/Fire

As of June 30, 2004 (in thousands)	Normal Cost	Accrued Liability
<b>Active Members</b>		
Retirement Benefits	\$ 19,530	\$ 301,596
Termination Benefits	1,348	12,089
Disability Benefits	370	9,773
Death Benefits	336	13,331
Return of Contributions	488	2,721
Medical Benefits	12,244	174,713
Indebtedness	0	(7,974)
Subtotal	34,317	506,249
<b>Inactive Members</b>		
Not Vested	\$ 0	\$ 1,108
Vested Terminations		
- Retirement Benefits	0	17,759
- Medical Benefits	0	32,438
- Indebtedness	0	(695)
Retirees & Beneficiaries		
- Retirement Benefits	0	837,785
- Medical Benefits	0	369,067
Subtotal	0	1,257,462
<b>Totals</b>	<b>\$ 34,317</b>	<b>\$ 1,763,711</b>

## 1.2(b) Actuarial Present Values - Others

As of June 30, 2004 (in thousands)	Normal Cost	Accrued Liability
<b>Active Members</b>		
Retirement Benefits	\$ 118,139	\$ 1,773,359
Termination Benefits	15,029	166,398
Disability Benefits	1,055	18,471
Death Benefits	2,440	63,976
Return of Contributions	6,268	33,278
Medical Benefits	119,238	1,291,927
Indebtedness	0	(59,898)
Subtotal	262,169	3,287,511
<b>Inactive Members</b>		
Not Vested	\$ 0	\$ 43,562
Vested Terminations		
- Retirement Benefits	0	414,046
- Medical Benefits	0	891,783
- Indebtedness	0	(11,063)
Retirees & Beneficiaries		
- Retirement Benefits	0	3,081,885
- Medical Benefits	0	1,972,481
Subtotal	0	6,392,694
<b>Totals</b>	<b>\$ 262,169</b>	<b>\$ 9,680,205</b>

**1.3(a) Average Employer Contribution Rate – FY07 Police/Fire**

<b>Consolidated Rate</b>		<b>In Thousands</b>	
(1)	Total Normal Cost	\$	34,317
(2)	Total Salaries		167,317
(3)	Normal Cost Rate for Police/Fire, (1) ÷ (2)		20.51%
(4)	Member Contribution Rate (Police/Fire)		7.50%
(5)	Consolidated Employer Normal Cost Rate For Police/Fire, (3) – (4)		13.01%
<b>Past Service Rate</b>			
(1)	Accrued Liability	\$	1,763,711
(2)	Valuation Assets		1,237,630 <sup>5</sup>
(3)	Unfunded Liability, (1) – (2)		526,081
(4)	Past Service Cost Amortization Payment		33,730
(5)	Total Salaries		167,317
(6)	Past Service Rate, (4) ÷ (5)		20.16%
<b>Average Employer Contribution Rate</b>			<b>33.17%</b>

<sup>5</sup> Allocated between Police/Fire and Others in proportion to accrued liability.

## 1.3(a) Average Employer Contribution Rate – FY07 Police/Fire (continued)

## Schedule of Past Service Cost Amortizations – Police/Fire

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	6/30/2002	23	\$ 404,908	\$ 417,190	\$ 27,000
FY03 Loss	6/30/2003	24	17,917	18,201	1,148
FY04 Loss	6/30/2004	25	90,690	90,690	5,582
<b>Total</b>				<b>\$ 526,081</b>	<b>\$ 33,730</b>

Credit	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
<b>Total</b>				<b>\$ 0</b>	<b>\$ 0</b>
<b>Total</b>				<b>\$ 526,081</b>	<b>\$ 33,730</b>

**1.3(b) Average Employer Contribution Rate – FY07 Others**

<b>Consolidated Rate</b>	<b>In Thousands</b>
(1) Total Normal Cost	\$ 262,169
(2) Total Salaries	1,305,670
(3) Normal Cost Rate for Others, $(1) \div (2)$	20.08%
(4) Member Contribution Rate (Other)	6.75%
(5) Consolidated Employer Normal Cost Rate For Others, $(3) - (4)$	13.33%
<b>Past Service Rate</b>	
(1) Accrued Liability	\$ 9,680,205
(2) Valuation Assets	6,792,784 <sup>6</sup>
(3) Unfunded Liability, $(1) - (2)$	2,887,421
(4) Past Service Cost Amortization Payment	185,297
(5) Total Salaries	1,305,670
(6) Past Service Rate, $(4) \div (5)$	14.19%
<b>Average Employer Contribution Rate</b>	<b>27.52%</b>

<sup>6</sup> Allocated between Police/Fire and Others in proportion to accrued liability.

## 1.3(b) Average Employer Contribution Rate – FY07 Others (continued)

## Schedule of Past Service Cost Amortizations – All Others

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	6/30/2002	23	\$ 2,239,042	\$ 2,306,954	\$ 149,307
FY03 Loss	6/30/2003	24	170,540	173,247	10,926
FY04 Loss	6/30/2004	25	407,220	407,220	25,064
<b>Total</b>				<b>\$ 2,887,421</b>	<b>\$ 185,297</b>

Credit	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
<b>Total</b>				<b>\$ 0</b>	<b>\$ 0</b>
<b>Total</b>				<b>\$ 2,887,421</b>	<b>\$ 185,297</b>

**1.3(c) Average Employer Contribution Rate – FY07 All Members**

<b>Consolidated Rate</b>	<b>In Thousands</b>
(1) Total Normal Cost	\$ 296,486
(2) Total Salaries	1,472,987
(3) Normal Cost Rate All Members, (1) ÷ (2)	20.13%
(4) Member Contribution Rate	6.81%
(5) Consolidated Employer Normal Cost Rate For All Members, (3) – (4)	13.32%
<b>Past Service Rate</b>	
(1) Accrued Liability	\$ 11,443,916
(2) Valuation Assets	8,030,414
(3) Total Unfunded Liability, (1) – (2)	3,413,502
(4) Past Service Cost Amortization Payment	219,027
(5) Total Salaries	1,472,987
(6) Past Service Rate, (4) ÷ (5)	14.87%
<b>Average Employer Contribution Rate</b>	<b>28.19%</b>

**1.3(c) Average Employer Contribution Rate – FY07 All Members (continued)****Schedule of Past Service Cost Amortizations – All Members**

Charge	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	6/30/2002	23	\$ 2,643,950	\$ 2,724,144	\$ 176,307
FY03 Loss	6/30/2003	24	188,457	191,448	12,074
FY04 Loss	6/30/2004	25	497,910	497,910	30,646
<b>Total</b>				<b>\$ 3,413,502</b>	<b>\$ 219,027</b>

Credit	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
<b>Total</b>				<b>\$ 0</b>	<b>\$ 0</b>
<b>Total</b>				<b>\$ 3,413,502</b>	<b>\$ 219,027</b>

**1.4 Development of Actuarial Gain/(Loss) for FY04**

	In Thousands
(1) Expected Actuarial Accrued Liability	
(a) Accrued Liability, June 30, 2003	\$ 10,561,653
(b) Normal Cost for FY04	292,826
(c) Interest on (a) and (b) at 8.25%	895,495
(d) Benefit Payments for FY04	483,026
(e) Refund of Contributions for FY04	14,723
(f) Interest on (d) and (e) at 8.25% for one-half year	20,532
(g) Expected Accrued Liability as of June 30, 2004, (a) + (b) + (c) - (d) - (e) - (f)	11,231,693
(2) Actual Accrued Liability, June 30, 2004	11,443,916
<b>(3) Liability Gain/(Loss), (1)(g) - (2)</b>	<b>\$ (212,223)</b>
(4) Expected Actuarial Asset Value	
(a) Actuarial Asset Value, June 30, 2003	7,687,281
(b) Interest on (a) at 8.25%	634,201
(c) Employee Contributions for FY04	118,554
(d) Employer Contributions for FY04	105,585
(e) Interest on (c) and (d) at 8.25% for one-half year	9,246
(f) Benefit Payments for FY04	483,026
(g) Refund of Contributions for FY04	14,723
(h) Interest on (f) and (g) at 8.25% for one-half year	20,532
(i) Expected Actuarial Asset Value, June 30, 2004, (a) + (b) + (c) + (d) + (e) - (f) - (g) - (h)	8,036,586
(5) Actuarial Asset Value, June 30, 2004	8,030,414
<b>(6) Actuarial Asset Gain/(Loss), (5) - (4)(i)</b>	<b>\$ (6,172)</b>
<b>(7) Actuarial Gain/(Loss), (3) + (6)</b>	<b>\$ (218,395)</b>
<b>(8) Shortfall Between Actuarial and Actual Contributions</b>	<b>\$ (279,515)</b>
<b>(9) FY04 Gain/(Loss) to be Amortized, (7) + (8)</b>	<b>\$ (497,910)</b>

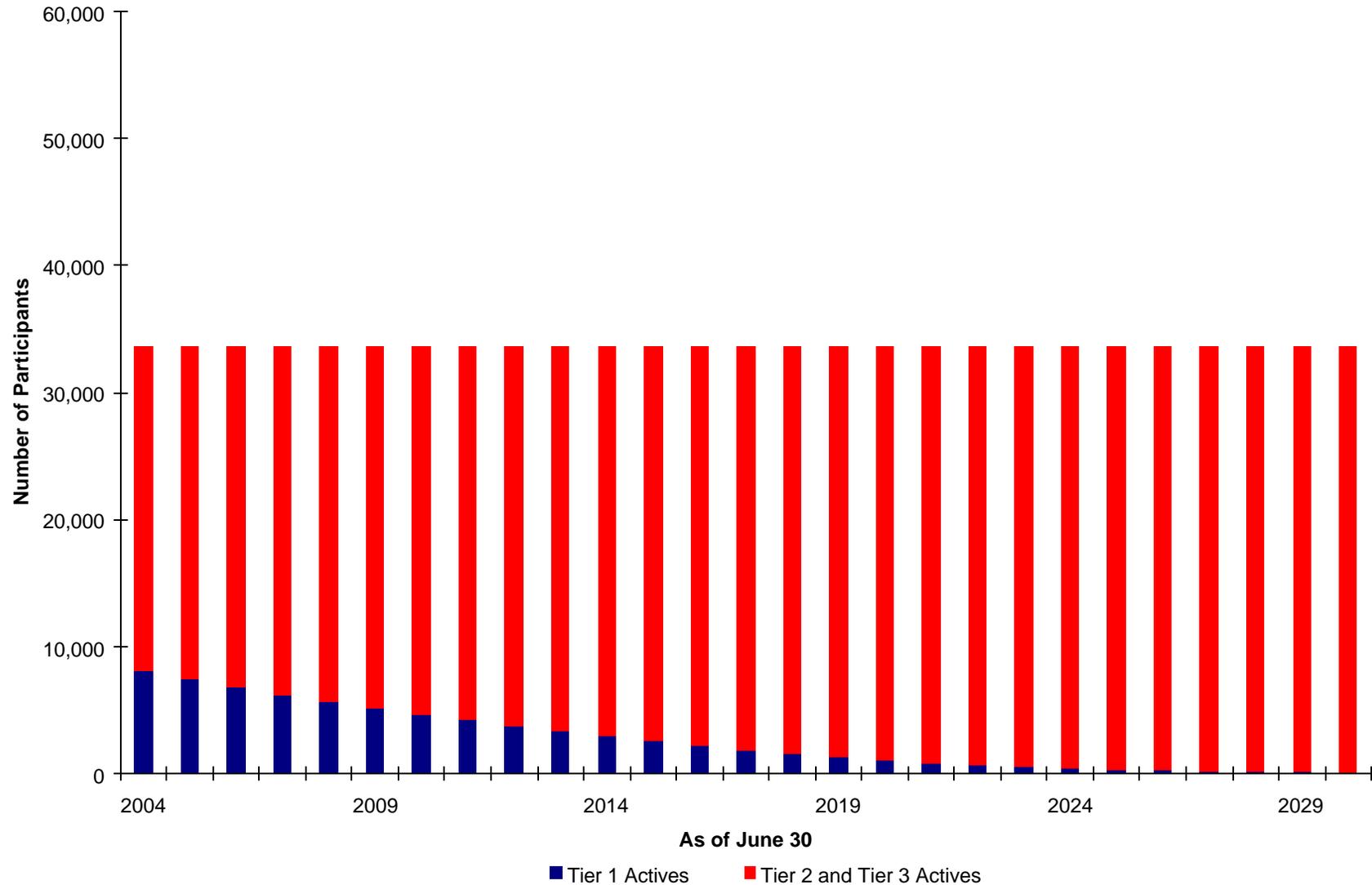
## 1.5(a) Actuarial Projections – Projections at Calculated Rate

### Key Assumptions

- 8.25% investment return in all years
- Actuarial assumptions and methods as described in Section 2.3
- The actuarially calculated contribution rate is adopted each year beginning in FY07, but rates cannot increase by more than 5% per year
- Annual active population increases of 0%, 1% or 2%
- Profiles of new entrants to System are based on average new entrant profiles from prior 3 years

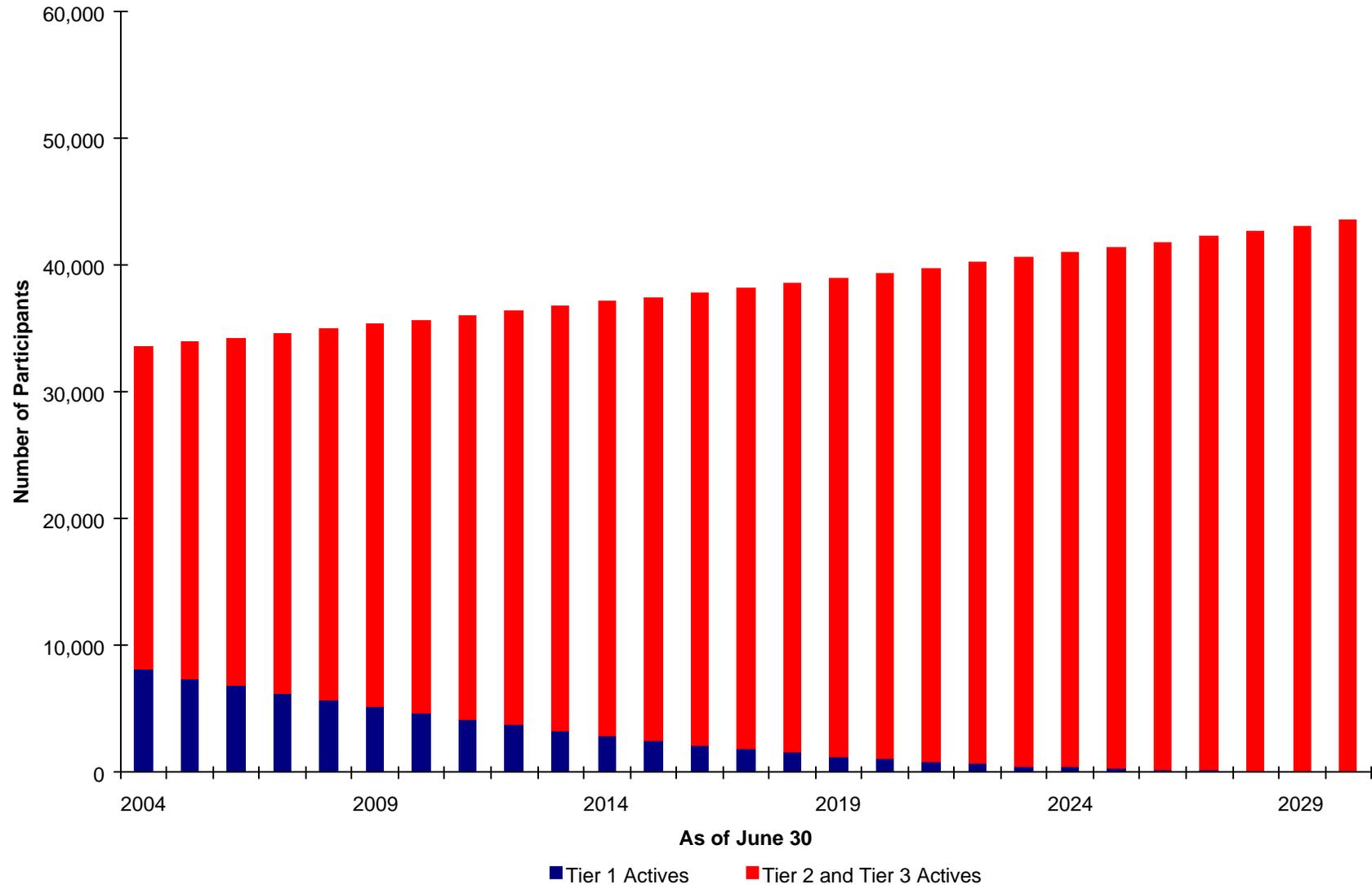
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Active Participant Count  
Annual Population Increase 0%



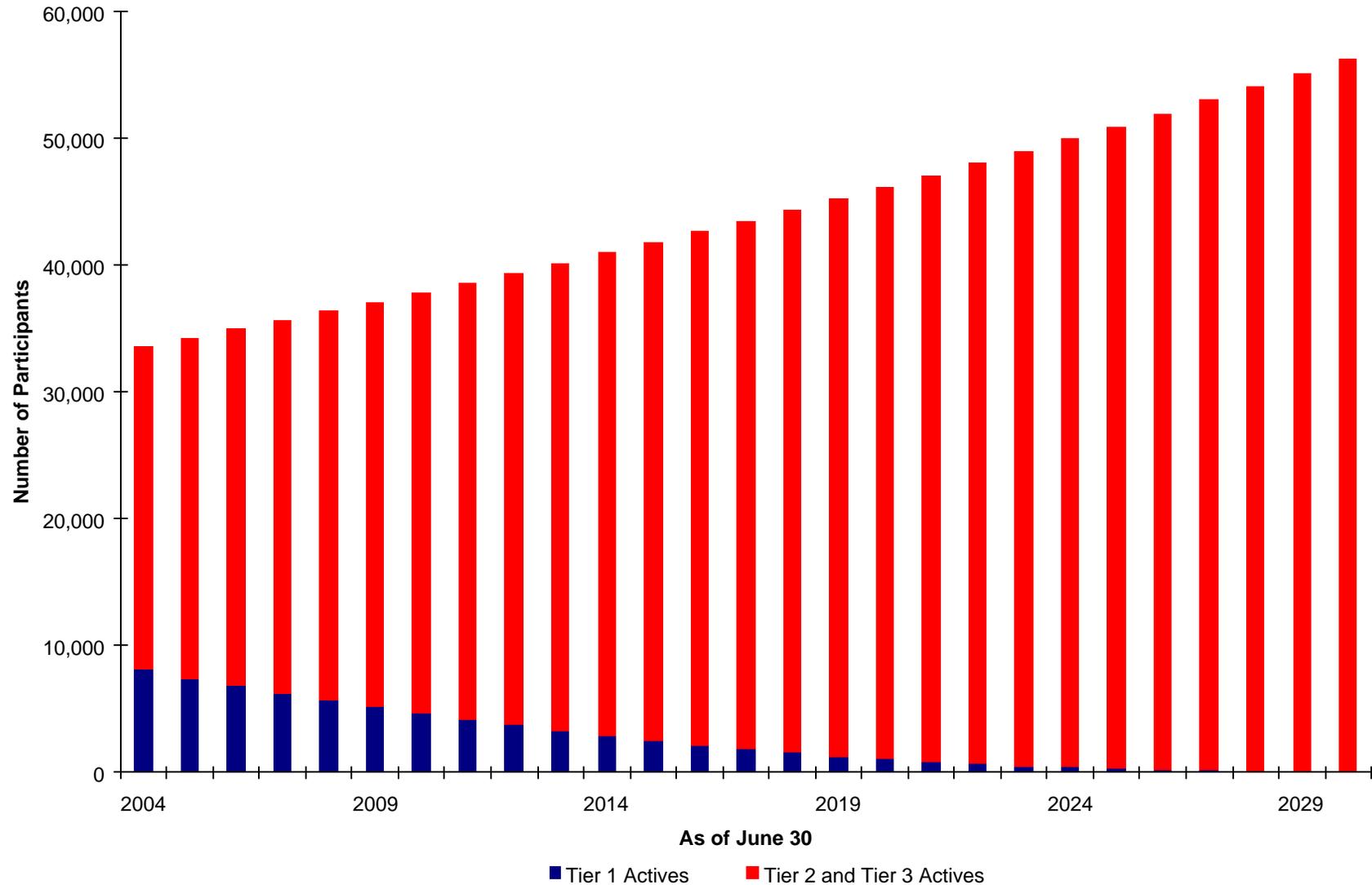
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Active Participant Count  
Annual Population Increase 1%



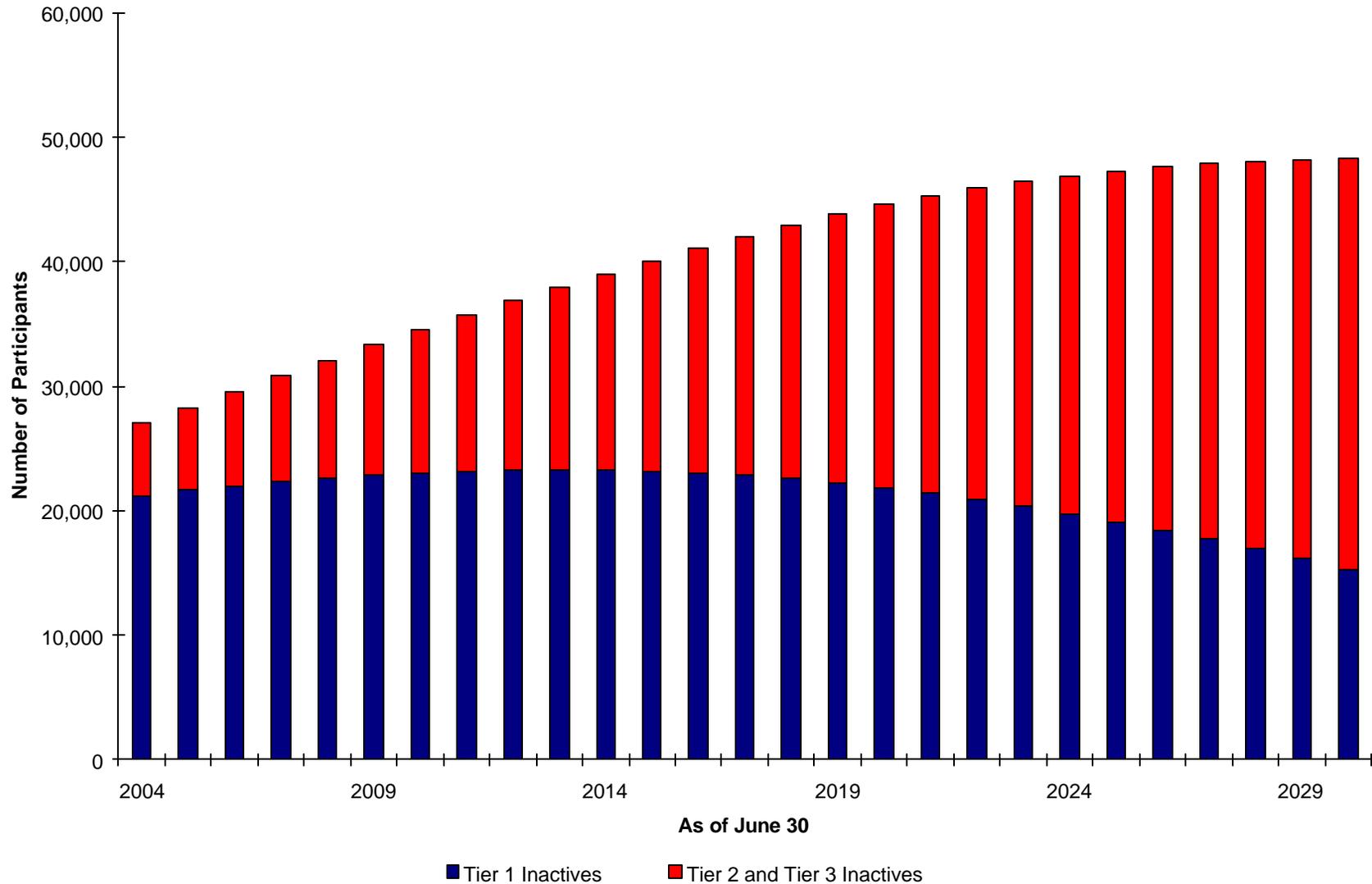
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Active Participant Count  
Annual Population Increase 2%



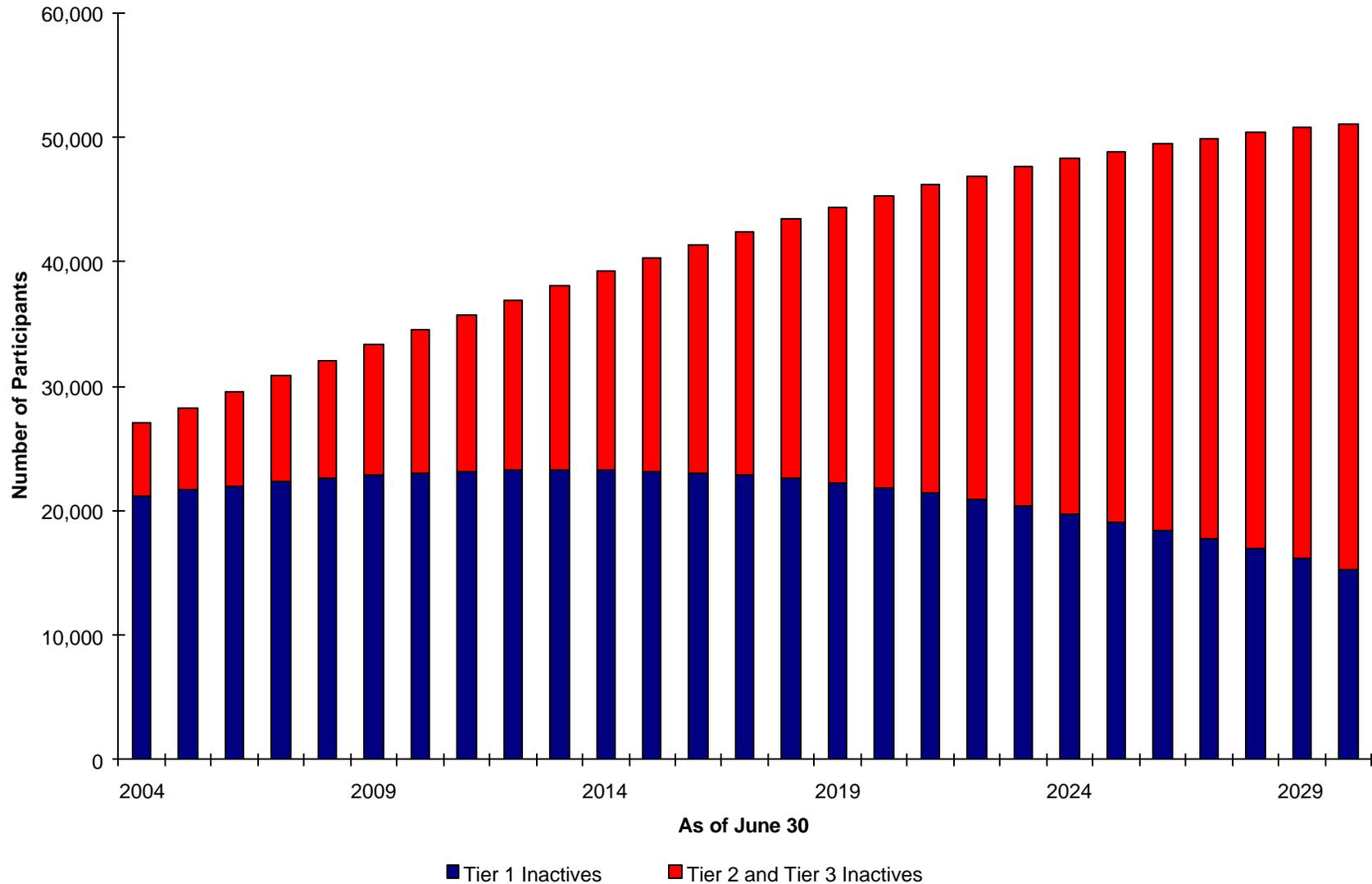
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Inactive Participant Count  
Annual Population Increase 0%



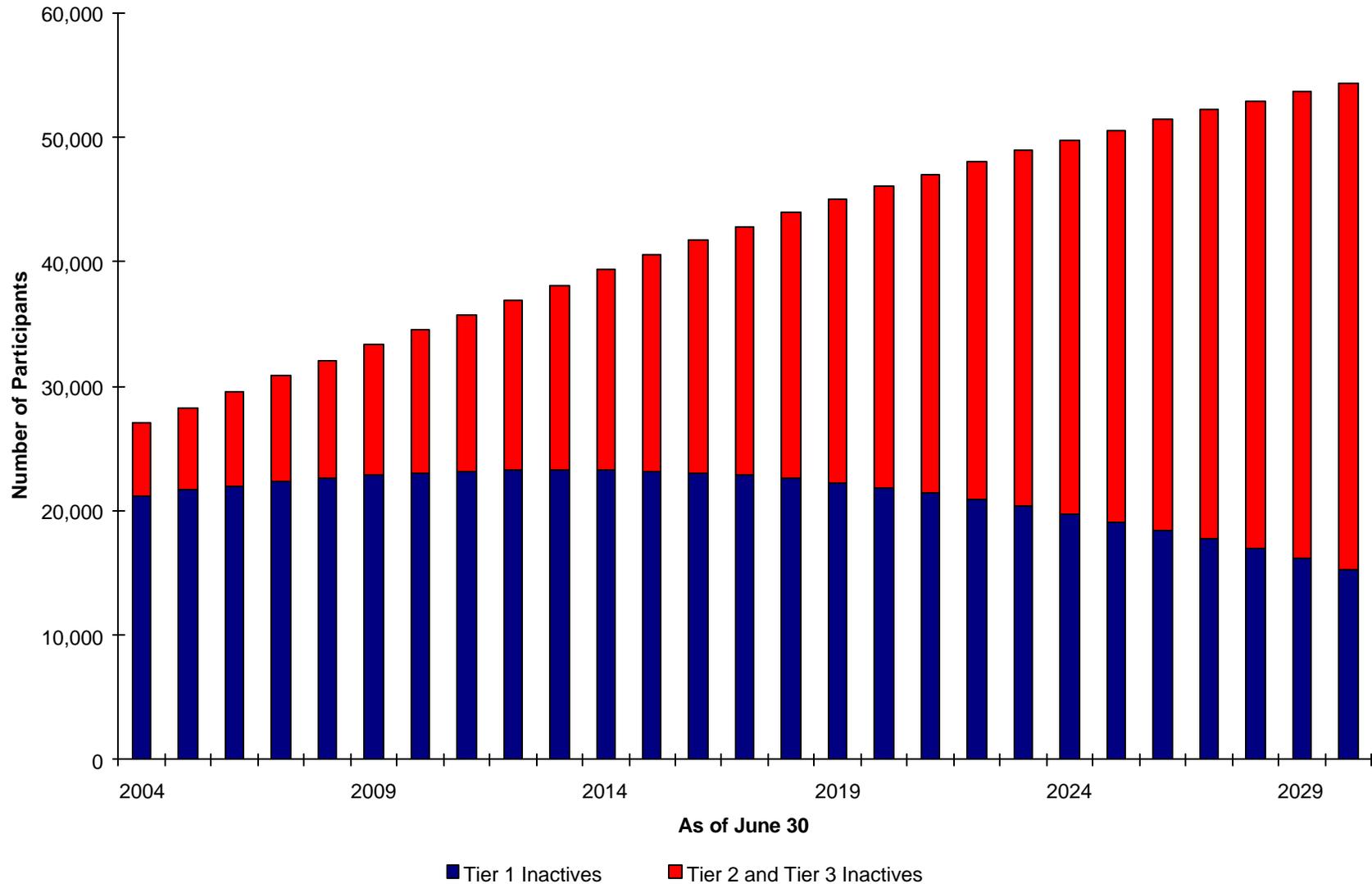
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Inactive Participant Count  
Annual Population Increase 1%



1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Inactive Participant Count  
Annual Population Increase 2%



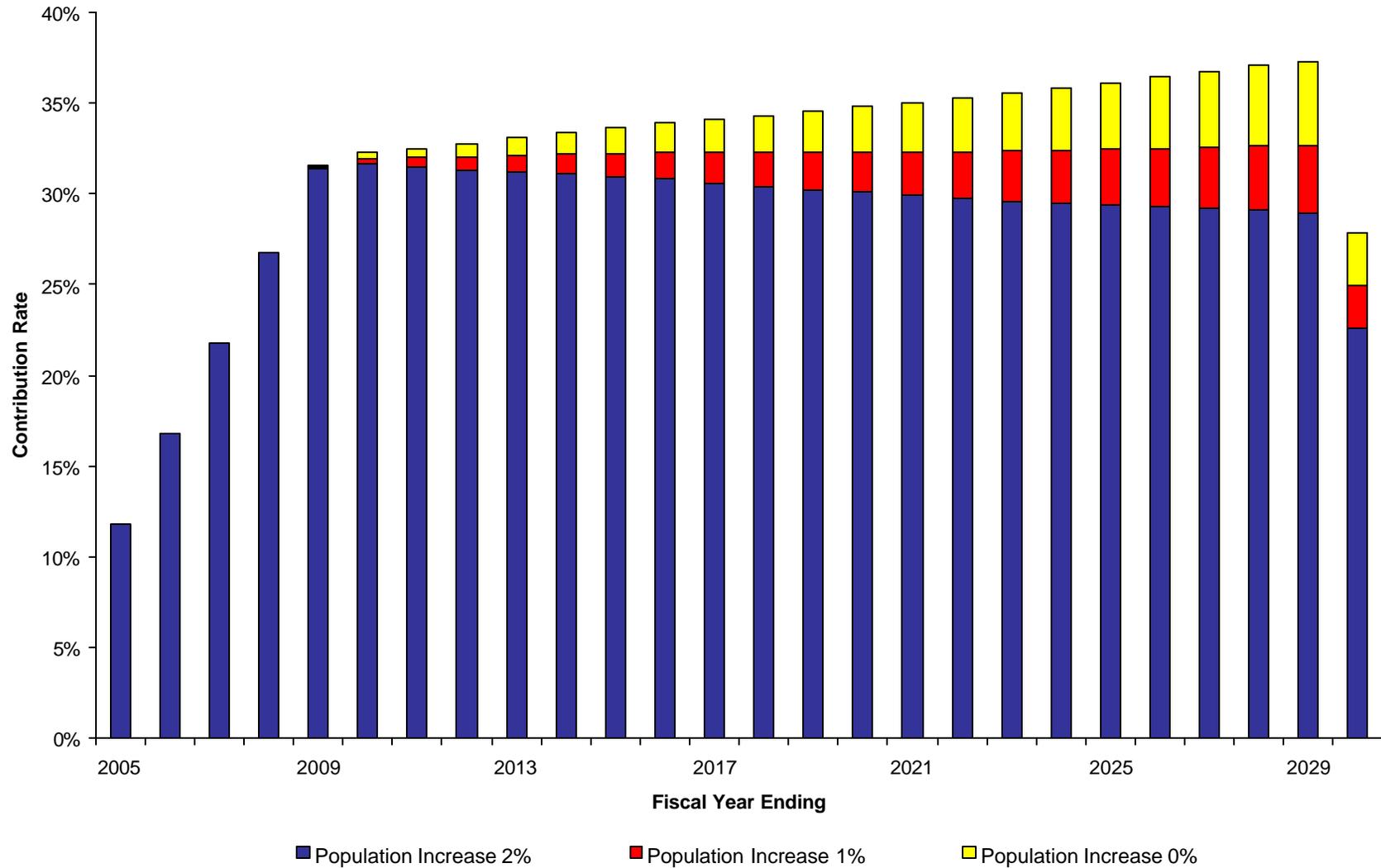
### 1.5(a) Actuarial Projections – Projections at Calculated Rate *(continued)*

#### Observations

- Calculated rates increase for many years under all population scenarios
- Calculated rates only begin to decline towards end of the projection period upon completion of 25-year amortization of recent losses
- Over the past 10 years, the average annual population increase for the PERS has been 0.8%
- Calculated rates increase to above 32% under the 1% population increase scenario
- Factors contributing to the projected rate increases are:
  - Contributions are less than the actuarially calculated rate for the first 5 years of the projection. Contribution shortfalls during this period result in later rate increases.
  - New entrants enter the System at lower pay levels than the exiting members they are replacing, diluting the pay-off of unfunded liabilities. Because new entrants also add additional liability, each new entrant generates a loss.
- Funding ratios reach 100% by the end of the 25-year period, under all 3 population scenarios

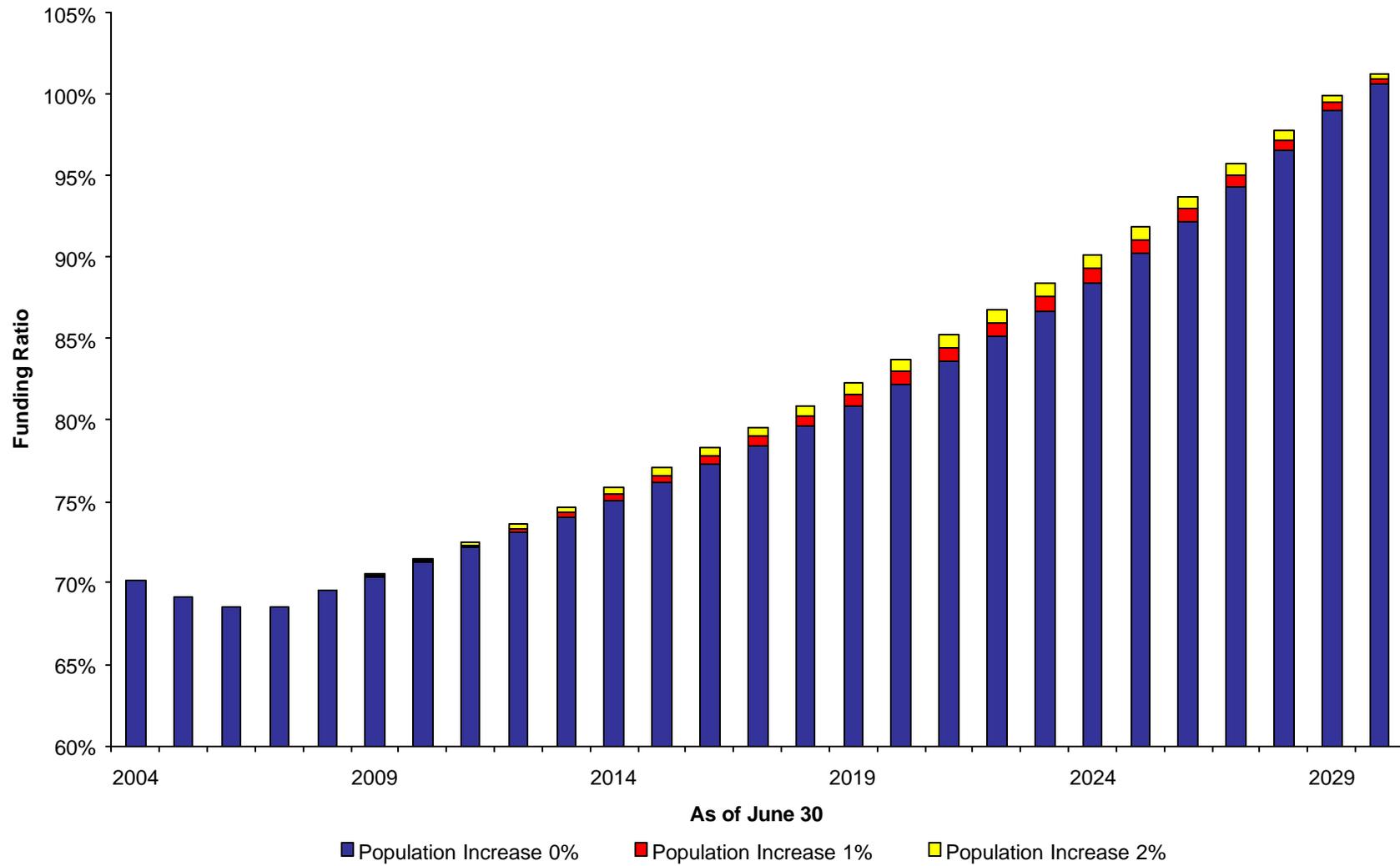
1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Contribution Rates



1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Projected Funding Ratios



## 1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

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

	Investment Return 8.25%				Annual Population Increase 0.00%									
As of June 30	----- Valuation Amounts on July 1 -----				----- Flow Amounts During Following 12 Months -----								Recognized Asset Gain	Ending Actuarial Assets
	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings		
2004	8,030,414	11,443,916	70.2%	(3,413,502)	1,472,987	11.77%	173,371	100,310	273,681	601,937	(328,256)	661,087	18,234	8,381,478
2005	8,381,478	12,122,784	69.1%	(3,741,306)	1,464,824	16.77%	245,651	99,754	345,405	644,520	(299,115)	689,748	18,234	8,790,346
2006	8,790,346	12,821,289	68.6%	(4,030,943)	1,515,638	21.77%	329,954	103,215	433,169	690,017	(256,847)	723,719	18,234	9,275,451
2007	9,275,451	13,534,724	68.5%	(4,259,273)	1,567,600	26.77%	419,647	106,754	526,400	743,087	(216,687)	763,892	92,190	9,914,846
2008	9,914,846	14,259,069	69.5%	(4,344,223)	1,619,132	31.56%	511,035	110,263	621,298	799,355	(178,057)	810,630	0	10,547,419
2009	10,547,419	14,989,558	70.4%	(4,442,139)	1,670,942	32.27%	539,246	113,791	653,037	861,693	(208,656)	861,555	0	11,200,318
2010	11,200,318	15,720,199	71.2%	(4,519,881)	1,723,043	32.49%	559,876	117,339	677,216	924,509	(247,293)	913,825	0	11,866,850
2011	11,866,850	16,448,543	72.1%	(4,581,693)	1,775,325	32.77%	581,734	120,900	702,634	988,290	(285,656)	967,232	0	12,548,426
2012	12,548,426	17,173,011	73.1%	(4,624,585)	1,829,890	33.08%	605,254	124,616	729,870	1,051,333	(321,463)	1,021,985	0	13,248,947
2013	13,248,947	17,893,010	74.0%	(4,644,062)	1,885,797	33.36%	629,141	128,423	757,564	1,114,432	(356,868)	1,078,317	0	13,970,397
2014	13,970,397	18,606,432	75.1%	(4,636,035)	1,943,990	33.61%	653,366	132,386	785,752	1,187,752	(402,000)	1,135,975	0	14,704,372
2015	14,704,372	19,311,660	76.1%	(4,607,288)	2,005,321	33.90%	679,848	136,562	816,410	1,259,464	(443,054)	1,194,835	0	15,456,153
2016	15,456,153	20,007,830	77.3%	(4,551,677)	2,068,258	34.12%	705,599	140,848	846,447	1,326,380	(479,932)	1,255,335	0	16,231,557
2017	16,231,557	20,700,557	78.4%	(4,469,001)	2,134,142	34.33%	732,683	145,335	878,018	1,393,481	(515,463)	1,317,841	0	17,033,934
2018	17,033,934	21,395,234	79.6%	(4,361,300)	2,203,210	34.58%	761,784	150,039	911,823	1,462,120	(550,298)	1,382,600	0	17,866,236
2019	17,866,236	22,089,744	80.9%	(4,223,508)	2,275,614	34.80%	792,010	154,969	946,980	1,531,217	(584,237)	1,449,865	0	18,731,864
2020	18,731,864	22,785,119	82.2%	(4,053,254)	2,350,757	35.04%	823,683	160,087	983,769	1,601,354	(617,585)	1,519,903	0	19,634,183
2021	19,634,183	23,482,420	83.6%	(3,848,237)	2,430,126	35.28%	857,462	165,492	1,022,954	1,671,845	(648,892)	1,593,053	0	20,578,345
2022	20,578,345	24,181,733	85.1%	(3,603,388)	2,514,154	35.55%	893,801	171,214	1,065,015	1,742,919	(677,904)	1,669,750	0	21,570,191
2023	21,570,191	24,884,854	86.7%	(3,314,663)	2,602,927	35.84%	932,836	177,259	1,110,096	1,813,380	(703,284)	1,750,530	0	22,617,437
2024	22,617,437	25,593,153	88.4%	(2,975,716)	2,696,454	36.13%	974,263	183,629	1,157,892	1,880,832	(722,940)	1,836,117	0	23,730,614
2025	23,730,614	26,308,342	90.2%	(2,577,728)	2,795,129	36.42%	1,018,064	190,348	1,208,412	1,946,199	(737,786)	1,927,342	0	24,920,170
2026	24,920,170	27,041,164	92.2%	(2,120,994)	2,900,724	36.76%	1,066,329	197,539	1,263,868	2,011,196	(747,328)	2,025,087	0	26,197,928
2027	26,197,928	27,789,063	94.3%	(1,591,134)	3,012,307	37.06%	1,116,249	205,138	1,321,387	2,075,410	(754,023)	2,130,226	0	27,574,131
2028	27,574,131	28,558,249	96.6%	(984,118)	3,127,877	37.26%	1,165,534	213,008	1,378,543	2,139,056	(760,513)	2,243,495	0	29,057,112
2029	29,057,112	29,349,203	99.0%	(292,091)	3,249,228	27.89%	906,181	221,272	1,127,453	2,202,008	(1,074,555)	2,352,886	0	30,335,443
2030	30,335,443	30,153,049	100.6%	182,394	3,376,188	18.99%	641,163	229,918	871,081	2,263,815	(1,392,734)	2,445,224	0	31,387,933

## 1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

Table 2  
State of Alaska PERS  
Financial Projections (in thousands)

As of June 30	Investment Return 8.25%					Annual Population Increase 1.00%							Recognized Asset Gain	Ending Actuarial Assets
	----- Valuation Amounts on July 1 -----					----- Flow Amounts During Following 12 Months -----								
	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings		
2004	8,030,414	11,443,916	70.2%	(3,413,502)	1,472,987	11.77%	173,371	100,310	273,681	601,937	(328,256)	661,087	18,234	8,381,478
2005	8,381,478	12,123,500	69.1%	(3,742,021)	1,464,824	16.77%	245,651	99,754	345,405	644,523	(299,118)	689,748	18,234	8,790,343
2006	8,790,343	12,824,295	68.5%	(4,033,953)	1,527,758	21.77%	332,593	104,040	436,633	690,127	(253,494)	723,857	18,234	9,278,939
2007	9,278,939	13,541,893	68.5%	(4,262,954)	1,593,097	26.77%	426,472	108,490	534,962	743,385	(208,423)	764,521	92,190	9,927,227
2008	9,927,227	14,272,679	69.6%	(4,345,452)	1,659,336	31.47%	522,120	113,001	635,121	799,919	(164,798)	812,198	0	10,574,628
2009	10,574,628	15,012,355	70.4%	(4,437,727)	1,727,274	31.97%	552,264	117,627	669,892	862,596	(192,704)	864,458	0	11,246,382
2010	11,246,382	15,755,485	71.4%	(4,509,103)	1,797,014	31.98%	574,632	122,377	697,009	925,676	(228,667)	918,394	0	11,936,109
2011	11,936,109	16,500,402	72.3%	(4,564,293)	1,868,553	32.04%	598,717	127,248	725,965	989,775	(263,809)	973,847	0	12,646,146
2012	12,646,146	17,246,272	73.3%	(4,600,125)	1,944,093	32.12%	624,442	132,393	756,835	1,053,200	(296,364)	1,031,082	0	13,380,864
2013	13,380,864	17,993,350	74.4%	(4,612,486)	2,022,803	32.19%	651,069	137,753	788,822	1,116,711	(327,889)	1,090,396	0	14,143,371
2014	14,143,371	18,740,524	75.5%	(4,597,152)	2,105,750	32.21%	678,194	143,402	821,596	1,190,559	(368,964)	1,151,608	0	14,926,016
2015	14,926,016	19,487,195	76.6%	(4,561,179)	2,193,906	32.29%	708,322	149,405	857,727	1,262,954	(405,227)	1,214,681	0	15,735,469
2016	15,735,469	20,233,493	77.8%	(4,498,024)	2,285,874	32.28%	737,912	155,668	893,579	1,330,763	(437,184)	1,280,142	0	16,578,428
2017	16,578,428	20,986,089	79.0%	(4,407,661)	2,383,053	32.28%	769,151	162,286	931,437	1,399,024	(467,587)	1,348,432	0	17,459,273
2018	17,459,273	21,751,509	80.3%	(4,292,236)	2,485,789	32.29%	802,740	169,282	972,022	1,469,074	(497,052)	1,419,887	0	18,382,108
2019	18,382,108	22,528,875	81.6%	(4,146,767)	2,594,418	32.30%	838,033	176,680	1,014,713	1,539,897	(525,184)	1,494,860	0	19,351,784
2020	19,351,784	23,320,551	83.0%	(3,968,767)	2,708,492	32.30%	874,939	184,448	1,059,387	1,612,133	(552,747)	1,573,721	0	20,372,759
2021	20,372,759	24,129,026	84.4%	(3,756,267)	2,829,672	32.31%	914,402	192,701	1,107,103	1,685,229	(578,126)	1,656,905	0	21,451,538
2022	21,451,538	24,955,860	86.0%	(3,504,322)	2,958,569	32.34%	956,887	201,479	1,158,366	1,759,501	(601,136)	1,744,955	0	22,595,357
2023	22,595,357	25,804,388	87.6%	(3,209,031)	3,095,433	32.40%	1,002,992	210,799	1,213,791	1,833,808	(620,018)	1,838,541	0	23,813,881
2024	23,813,881	26,677,594	89.3%	(2,863,713)	3,240,508	32.45%	1,051,538	220,679	1,272,216	1,905,782	(633,566)	1,938,511	0	25,118,826
2025	25,118,826	27,577,619	91.1%	(2,458,793)	3,394,392	32.51%	1,103,449	231,158	1,334,607	1,976,471	(641,864)	2,045,826	0	26,522,788
2026	26,522,788	28,519,220	93.0%	(1,996,432)	3,559,091	32.60%	1,160,435	242,374	1,402,809	2,047,964	(645,155)	2,161,517	0	28,039,150
2027	28,039,150	29,500,644	95.0%	(1,461,494)	3,733,911	32.66%	1,219,580	254,279	1,473,859	2,119,766	(645,907)	2,286,586	0	29,679,830
2028	29,679,830	30,530,294	97.2%	(850,465)	3,917,003	32.65%	1,278,875	266,748	1,545,623	2,192,231	(646,609)	2,421,913	0	31,455,134
2029	31,455,134	31,610,555	99.5%	(155,421)	4,110,532	24.91%	1,023,764	279,927	1,303,691	2,265,253	(961,562)	2,555,384	0	33,048,956
2030	33,048,956	32,727,749	101.0%	321,207	4,314,589	17.70%	763,793	293,824	1,057,617	2,338,128	(1,280,512)	2,673,718	0	34,442,163

## 1.5(a) Actuarial Projections – Projections at Calculated Rate (continued)

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

As of June 30	Investment Return 8.25%					Annual Population Increase 2.00%							Recognized Asset Gain	Ending Actuarial Assets
	Valuation Amounts on July 1					Flow Amounts During Following 12 Months								
	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings		
2004	8,030,414	11,443,916	70.2%	(3,413,502)	1,472,987	11.77%	173,371	100,310	273,681	601,937	(328,256)	661,087	18,234	8,381,478
2005	8,381,478	12,124,216	69.1%	(3,742,737)	1,464,824	16.77%	245,651	99,754	345,405	644,526	(299,121)	689,748	18,234	8,790,339
2006	8,790,339	12,827,316	68.5%	(4,036,977)	1,539,878	21.77%	335,231	104,866	440,097	690,238	(250,141)	723,995	18,234	9,282,427
2007	9,282,427	13,549,141	68.5%	(4,266,714)	1,618,845	26.77%	433,365	110,243	543,608	743,685	(200,077)	765,153	92,190	9,939,694
2008	9,939,694	14,286,522	69.6%	(4,346,828)	1,700,338	31.37%	533,414	115,793	649,207	800,491	(151,285)	813,784	0	10,602,193
2009	10,602,193	15,035,686	70.5%	(4,433,492)	1,785,288	31.68%	565,591	121,578	687,169	863,519	(176,350)	867,407	0	11,293,250
2010	11,293,250	15,791,815	71.5%	(4,498,564)	1,873,942	31.49%	590,178	127,615	717,794	926,883	(209,089)	923,068	0	12,007,230
2011	12,007,230	16,554,111	72.5%	(4,546,881)	1,966,456	31.34%	616,282	133,916	750,198	991,327	(241,130)	980,650	0	12,746,750
2012	12,746,750	17,322,587	73.6%	(4,575,837)	2,065,193	31.21%	644,605	140,640	785,244	1,055,169	(269,924)	1,040,472	0	13,517,298
2013	13,517,298	18,098,476	74.7%	(4,581,178)	2,169,503	31.08%	674,237	147,743	821,980	1,119,138	(297,158)	1,102,919	0	14,323,060
2014	14,323,060	18,881,810	75.9%	(4,558,751)	2,280,643	30.92%	705,069	155,312	860,381	1,193,571	(333,190)	1,167,908	0	15,157,778
2015	15,157,778	19,673,200	77.0%	(4,515,422)	2,399,786	30.80%	739,132	163,425	902,557	1,266,719	(364,161)	1,235,495	0	16,029,111
2016	16,029,111	20,473,982	78.3%	(4,444,871)	2,525,759	30.60%	772,931	172,004	944,935	1,335,511	(390,576)	1,306,290	0	16,944,826
2017	16,944,826	21,292,137	79.6%	(4,347,312)	2,660,114	30.41%	809,036	181,154	990,190	1,405,045	(414,855)	1,380,835	0	17,910,806
2018	17,910,806	22,135,618	80.9%	(4,224,812)	2,803,406	30.25%	847,992	190,912	1,038,904	1,476,649	(437,745)	1,459,585	0	18,932,645
2019	18,932,645	23,005,119	82.3%	(4,072,474)	2,956,267	30.08%	889,187	201,322	1,090,509	1,549,382	(458,873)	1,543,015	0	20,016,787
2020	20,016,787	23,904,722	83.7%	(3,887,935)	3,118,520	29.90%	932,564	212,371	1,144,935	1,623,948	(479,013)	1,631,626	0	21,169,400
2021	21,169,400	24,838,776	85.2%	(3,669,376)	3,292,132	29.75%	979,499	224,194	1,203,693	1,699,936	(496,243)	1,726,005	0	22,399,163
2022	22,399,163	25,810,816	86.8%	(3,411,654)	3,478,034	29.61%	1,029,877	236,854	1,266,731	1,777,769	(511,038)	1,826,851	0	23,714,975
2023	23,714,975	26,826,271	88.4%	(3,111,295)	3,676,793	29.50%	1,084,479	250,390	1,334,869	1,856,372	(521,503)	1,934,973	0	25,128,446
2024	25,128,446	27,890,369	90.1%	(2,761,923)	3,889,062	29.38%	1,142,730	264,845	1,407,576	1,933,426	(525,850)	2,051,405	0	26,654,001
2025	26,654,001	29,006,311	91.9%	(2,352,310)	4,115,825	29.29%	1,205,444	280,288	1,485,732	2,010,127	(524,394)	2,177,324	0	28,306,930
2026	28,306,930	30,193,729	93.8%	(1,886,799)	4,359,520	29.22%	1,273,779	296,883	1,570,662	2,088,959	(518,297)	2,313,942	0	30,102,575
2027	30,102,575	31,452,566	95.7%	(1,349,991)	4,619,910	29.13%	1,345,563	314,616	1,660,179	2,169,385	(509,206)	2,462,458	0	32,055,827
2028	32,055,827	32,794,394	97.7%	(738,567)	4,895,529	28.98%	1,418,787	333,386	1,752,173	2,251,927	(499,754)	2,623,991	0	34,180,064
2029	34,180,064	34,224,594	99.9%	(44,530)	5,189,166	22.60%	1,172,704	353,382	1,526,086	2,336,544	(810,458)	2,786,424	0	36,156,030
2030	36,156,030	35,725,188	101.2%	430,841	5,501,450	16.77%	922,646	374,649	1,297,295	2,422,254	(1,124,959)	2,936,468	0	37,967,538

## **1.5(b) Actuarial Projections – Projections at Current Rate**

### **Key Assumptions**

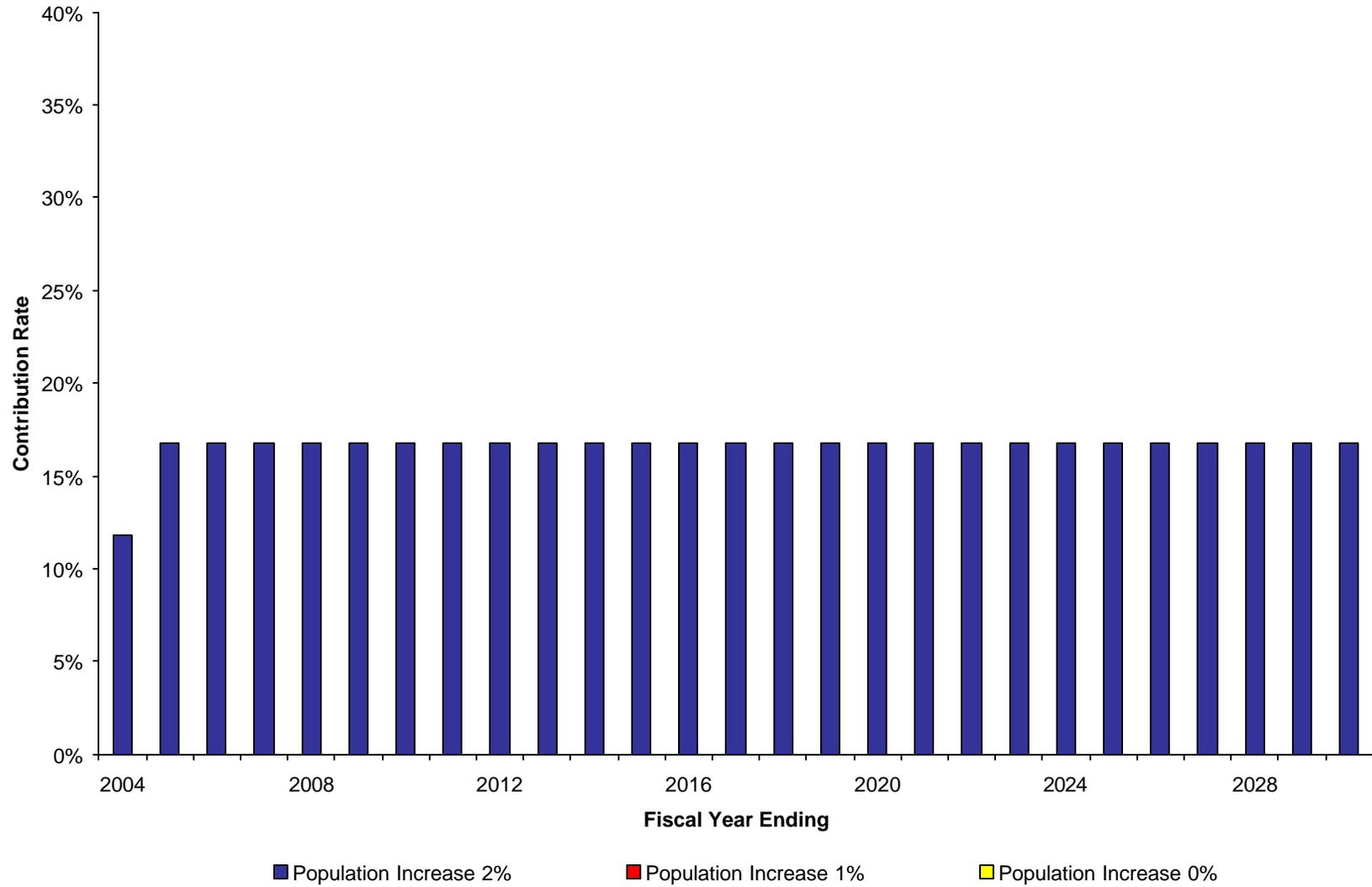
- All assumptions and methods are the same as Section 1.5(a), except
- Adopted contribution rate is maintained at the FY06 level for all future years

### **Observations**

- System funding deteriorates under all three population scenarios

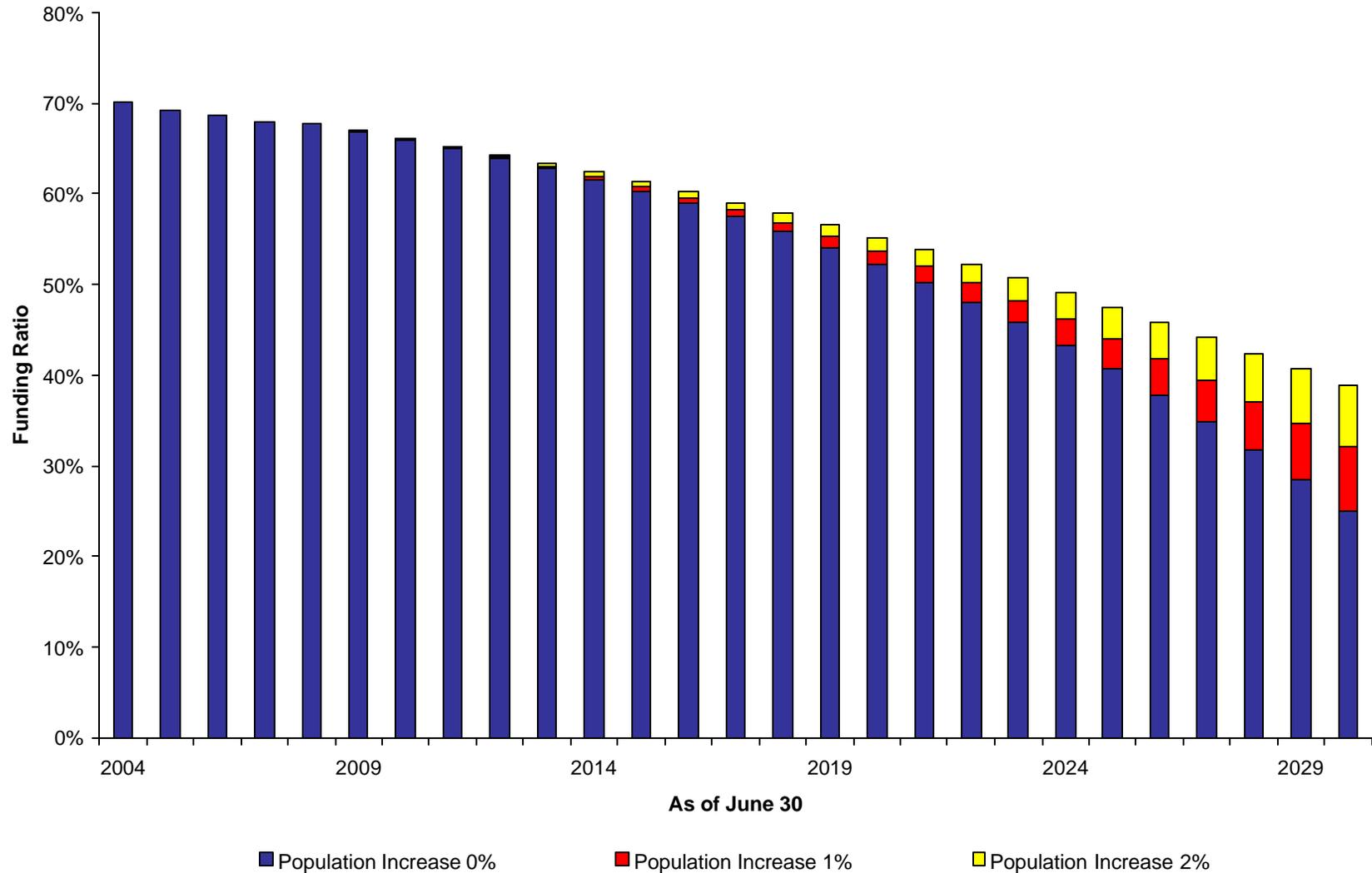
1.5(b) Actuarial Projections – Projections at Current Rate (continued)

Contribution Rate



1.5(b) Actuarial Projections – Projections at Current Rate (continued)

Funding Ratio



## 1.5(b) Actuarial Projections – Projections at Current Rate (continued)

Table 4  
State of Alaska PERS  
Financial Projections (in thousands)

	Investment Return 8.25%				Annual Population Increase 1.00%									
	----- Valuation Amounts on July 1 -----				----- Flow Amounts During Following 12 Months -----								Recognized	Ending
As of June 30	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs	Investment Earnings	Asset Gain	Actuarial Assets
2004	8,030,414	11,443,916	70.2%	(3,413,502)	1,472,987	11.77%	173,371	100,310	273,681	601,937	(328,256)	661,087	18,234	8,381,478
2005	8,381,478	12,123,500	69.1%	(3,742,021)	1,464,824	16.77%	245,651	99,754	345,405	644,523	(299,118)	689,748	18,234	8,790,343
2006	8,790,343	12,824,295	68.5%	(4,033,953)	1,527,758	16.77%	256,205	104,040	360,245	690,127	(329,882)	720,706	18,234	9,199,400
2007	9,199,400	13,541,893	67.9%	(4,342,493)	1,593,097	16.77%	267,162	108,490	375,652	743,385	(367,733)	751,387	92,190	9,675,245
2008	9,675,245	14,272,679	67.8%	(4,597,434)	1,659,336	16.77%	278,271	113,001	391,271	799,919	(408,647)	781,351	0	10,047,949
2009	10,047,949	15,012,355	66.9%	(4,964,407)	1,727,274	16.77%	289,664	117,627	407,291	862,596	(455,304)	810,174	0	10,402,819
2010	10,402,819	15,755,485	66.0%	(5,352,666)	1,797,014	16.77%	301,359	122,377	423,736	925,676	(501,940)	837,528	0	10,738,407
2011	10,738,407	16,500,402	65.1%	(5,761,996)	1,868,553	16.77%	313,356	127,248	440,605	989,775	(549,170)	863,265	0	11,052,502
2012	11,052,502	17,246,272	64.1%	(6,193,770)	1,944,093	16.77%	326,024	132,393	458,417	1,053,200	(594,783)	887,297	0	11,345,016
2013	11,345,016	17,993,350	63.1%	(6,648,334)	2,022,803	16.77%	339,224	137,753	476,977	1,116,711	(639,734)	909,575	0	11,614,857
2014	11,614,857	18,740,524	62.0%	(7,125,667)	2,105,750	16.77%	353,134	143,402	496,536	1,190,559	(694,023)	929,597	0	11,850,431
2015	11,850,431	19,487,195	60.8%	(7,636,765)	2,193,906	16.77%	367,918	149,405	517,323	1,262,954	(745,631)	946,903	0	12,051,703
2016	12,051,703	20,233,493	59.6%	(8,181,790)	2,285,874	16.77%	383,341	155,668	539,009	1,330,763	(791,754)	961,606	0	12,221,555
2017	12,221,555	20,986,089	58.2%	(8,764,535)	2,383,053	16.77%	399,638	162,286	561,924	1,399,024	(837,100)	973,748	0	12,358,202
2018	12,358,202	21,751,509	56.8%	(9,393,307)	2,485,789	16.77%	416,867	169,282	586,149	1,469,074	(882,925)	983,131	0	12,458,409
2019	12,458,409	22,528,875	55.3%	(10,070,466)	2,594,418	16.77%	435,084	176,680	611,764	1,539,897	(928,133)	989,533	0	12,519,809
2020	12,519,809	23,320,551	53.7%	(10,800,742)	2,708,492	16.77%	454,214	184,448	638,662	1,612,133	(973,471)	992,729	0	12,539,067
2021	12,539,067	24,129,026	52.0%	(11,589,959)	2,829,672	16.77%	474,536	192,701	667,237	1,685,229	(1,017,992)	992,481	0	12,513,556
2022	12,513,556	24,955,860	50.1%	(12,442,304)	2,958,569	16.77%	496,152	201,479	697,631	1,759,501	(1,061,871)	988,566	0	12,440,251
2023	12,440,251	25,804,388	48.2%	(13,364,137)	3,095,433	16.77%	519,104	210,799	729,903	1,833,808	(1,103,905)	980,785	0	12,317,130
2024	12,317,130	26,677,594	46.2%	(14,360,463)	3,240,508	16.77%	543,433	220,679	764,112	1,905,782	(1,141,670)	969,069	0	12,144,529
2025	12,144,529	27,577,619	44.0%	(15,433,089)	3,394,392	16.77%	569,240	231,158	800,398	1,976,471	(1,176,073)	953,411	0	11,921,867
2026	11,921,867	28,519,220	41.8%	(16,597,353)	3,559,091	16.77%	596,860	242,374	839,234	2,047,964	(1,208,730)	933,694	0	11,646,831
2027	11,646,831	29,500,644	39.5%	(17,853,814)	3,733,911	16.77%	626,177	254,279	880,456	2,119,766	(1,239,310)	909,742	0	11,317,262
2028	11,317,262	30,530,294	37.1%	(19,213,032)	3,917,003	16.77%	656,881	266,748	923,629	2,192,231	(1,268,602)	881,344	0	10,930,005
2029	10,930,005	31,610,555	34.6%	(20,680,551)	4,110,532	16.77%	689,336	279,927	969,263	2,265,253	(1,295,990)	848,266	0	10,482,281
2030	10,482,281	32,727,749	32.0%	(22,245,468)	4,313,624	16.77%	723,395	293,758	1,017,152	2,338,128	(1,320,976)	810,298	0	9,971,603

## 1.5(c) Actuarial Projections – Effect of Economic Scenarios

### Key Assumptions

- All assumptions and methods are the same as Section 1.5(a) except
  - Results are shown only under the 1% population growth scenario
  - The actuarially calculated contribution rate is adopted in each year beginning in FY07, but rate cannot increase by more than 5% per year.
  - Investment returns are assumed as follows:

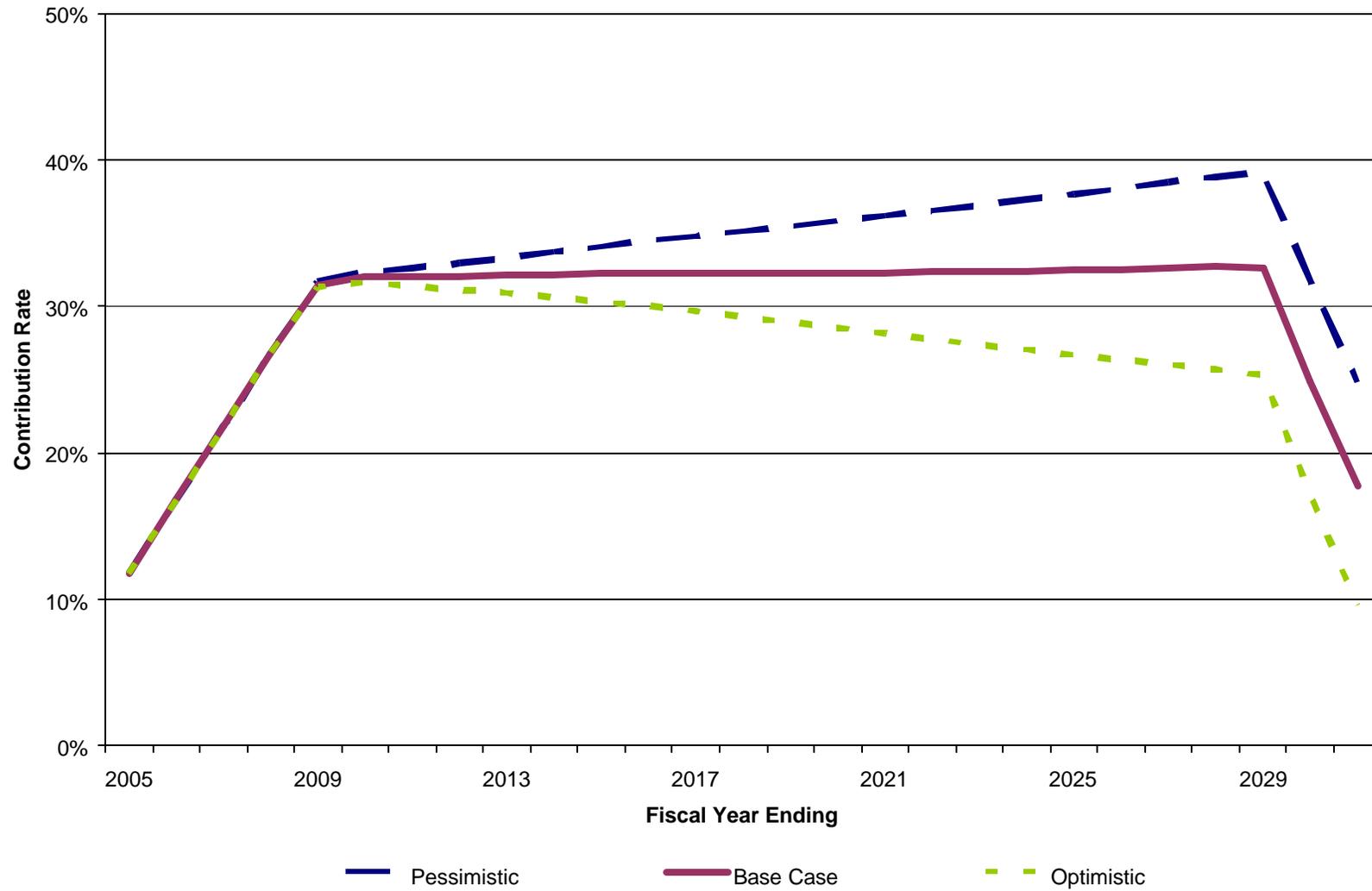
Base Case:	8.25% for all future years
Optimistic:	9.00% for all future years
Pessimistic:	7.50% for all future years

### Observations

- In all cases, liabilities have been projected using 8.25% as the discount rate for future benefit payments. These scenarios are intended to illustrate the impact if investment rates are different than the 8.25% assumed investment return. They do not illustrate the effect of changing the assumed investment return for determining liabilities.

1.5(c) Actuarial Projections – Effect of Economic Scenarios (continued)

Contribution Rate



## **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 Public Employees' Retirement System**

### **(1) Effective Date**

January 1, 1961, with amendments through June 30, 2003. Chapter 82, 1986 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the PERS before July 1, 1986, are eligible for different benefits than members hired after June 30, 1986. Chapter 4, 1996 Session Laws of Alaska created a third tier. Members who were first hired after June 30, 1996 have a 10-year requirement for system paid health benefits and non-Police/Fire members have a different Final Average Earnings calculation than members from the other tiers.

### **(2) Administration of Plan**

The Commissioner of Administration is responsible for administering the system. The Public Employees' Retirement Board prescribes policies and adopts 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 PERS funds. The Attorney General represents the system in legal proceedings.

### **(3) Employers Included**

Currently there are 161 employers participating in the PERS, including the State of Alaska and 160 political subdivisions and public organizations.

### **(4) Membership**

PERS membership is mandatory for all permanent full-time and part-time employees of the State of Alaska and participating political subdivisions and public organizations, unless they are specifically excluded by Alaska Statute or employer participation agreements. Employees participating in the University of Alaska's Optional Retirement Plan or other retirement plans funded by the State are not covered by the PERS. Elected officials may waive PERS membership.

Certain members of the Alaska Teachers' Retirement System (TRS) are eligible for PERS retirement benefits for their concurrent elected public official service with municipalities. In addition, employees who work half-time in the PERS and TRS simultaneously are eligible for half-time PERS and TRS credit.

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

### **(5) Credited Service**

Permanent employees who work at least 30 hours a week earn full-time credit; part-time employees working between 15 and 30 hours a week earn partial credit based upon the number of hours worked. Members receiving PERS occupational disability benefits continue to earn PERS credit while disabled.

- Members may claim other types of service, including:
  - part-time State of Alaska service rendered after December 31, 1960, and before January 1, 1976;
  - service with the State, former Territory of Alaska, or U.S. Government in Alaska before January 1, 1961;
  - past peace officer, correctional officer, fire fighter, and special officer service after January 1, 1961;
  - military service (not more than five years may be claimed);
  - temporary service after December 31, 1960;
  - elected official service before January 1, 1981;
  - Alaska Bureau of Indian Affairs service;
  - past service rendered by employees who worked half-time in the PERS and Teachers' Retirement System (TRS) simultaneously;
  - leave without pay service after June 13, 1987, while receiving Workers' Compensation;
  - Village Public Safety Officer service; and
  - service as a temporary employee of the legislature before July 1, 1979, but this service must be claimed no later than July 1, 2003, or by the date of retirement, if sooner (not more than 10 years may be claimed).

Except for service before January 1, 1961, with the State, former Territory of Alaska, or U.S. Government in Alaska, contributions are required for all past service.

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

Past employment with participating political subdivisions that occurred before the employers joined the PERS is creditable if the employers agree to pay the required contributions.

At the election of certain PERS members, certain service may be credited in the same fashion as members in the State of Alaska Teachers' Retirement System (TRS).

Members employed as dispatchers or within a state correctional facility may, at retirement, elect to convert their dispatcher or correctional facility service from "all other" service to police/fire service and retire under the 20 year retirement option. Members pay the full actuarial cost of conversion.

### **(6) Employer Contributions**

Individual contribution rates are established for PERS employers based upon their consolidated and past service rates.

The consolidated rate is a uniform rate for all participating employers, amortized to include future service liabilities (less the value of members' contributions) for the members' future service.

The past service rate is determined separately for each employer to amortize their unfunded past service liability with payments that are level as a percentage of pay over fixed 25-year periods.

### **(7) Member Contributions**

Mandatory Contributions: Police/Fire members are required to contribute 7.5% of their compensation; all Others contribute 6.75%. Those all Others who have elected to have their service calculated under the Teachers' Retirement System rules contribute 9.6% of their compensation. Members' contributions are deducted from gross wages before federal income taxes are withheld.

Contributions for Claimed Service: Member contributions are also required for most of the claimed service described in (5) above.

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

Voluntary Contributions: Members may voluntarily contribute up to 5% of their salary. Voluntary contributions are recorded in a separate account and are payable to the:

- (a) member in lump sum payment upon termination of employment;
- (b) member's beneficiary if the member dies; or
- (c) member in a lump sum, life annuity, or payments over a designated period of time when the member retires.

Interest: Members' contributions earn 4.5% interest, compounded semiannually on June 30 and December 31.

Refund of Contributions: Terminated members may receive refunds of their member contribution accounts, which includes their mandatory and voluntary 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 PERS service may be reinstated upon reemployment in the PERS. 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.

### **(8) Retirement Benefits**

Eligibility:

- (a) Members, including deferred vested members, are eligible for normal retirement at age 60<sup>7</sup>, or early retirement at age 55, if they have at least:
  - (i) five years of paid-up PERS service;
  - (ii) 60 days of paid-up PERS service as employees of the legislature during each of five legislative sessions and they were first hired under the PERS before May 30, 1987;

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<sup>7</sup> Members participating before July 1, 1986 are eligible for normal retirement at age 55 or early retirement at age 50.

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

- (iii) 80 days of paid-up PERS service as employees of the legislature during each of five legislative sessions and they were first hired under the PERS after May 29, 1987;
  - (iv) two years of paid-up PERS service and they are vested in the Teachers' Retirement System; or
  - (v) two years of paid-up PERS service and a minimum three years of TRS service to qualify for a public service benefit.
- (b) Members may retire at any age when they have:
- (i) 20 paid-up years of PERS police/fire service; or
  - (ii) 30 paid-up years of PERS "all other" or "elected official" 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 under the "20 and out" or "30 and out" provisions. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Members may elect an early retirement or a joint and survivor option. Members who entered the PERS prior to July 1, 1986 may also select a level income option. Under these options and early retirement, benefits are actuarially adjusted so that members receive the actuarial equivalents of their normal benefit amounts.

Benefit Calculations: Retirement benefits are calculated by multiplying the average monthly compensation (AMC) times credited PERS service times the percentage multiplier. The AMC is determined by averaging the salaries earned during the five highest (three highest for Police/Fire members or members hired prior to July 1, 1996) consecutive payroll years. Members must earn at least 115 days of credit in the last year worked to include it in the AMC calculation. The PERS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

The percentage multipliers for police/fire members are 2% for the first ten years of service and 2.5% for all service over 10 years.

The percentage multipliers for all Others are 2% for the first ten years, 2.25% for the next ten years, and 2.5% for all remaining service earned on or after July 1, 1986. All service before that date is calculated at 2%.

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

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

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

Retirement benefits are suspended while retired members are reemployed under the PERS. During reemployment, members earn additional PERS service and contributions are withheld from their wages. A member who retired with a normal retirement benefit can elect to waive payment of PERS contributions. The waiver allows the member to continue receiving the retirement benefit during the period of reemployment. Members who elect the waiver option do not earn additional PERS service. The Waiver Option is not available to members who retired early or under the Retirement Incentive Programs (RIPs).

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

- (a) forfeit the three years of incentive credits that they received;
- (b) owe the PERS 150% of the benefits that they received for state and political subdivision members, and 110% for school district employees, under the 1996-2000 RIP, which may include costs for health insurance, excluding amounts that they paid to participate for the 1986 and 1989 RIPs. Under prior RIPs, the penalty is 110% of the benefits received; 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.

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

### **(10) Postemployment Healthcare Benefits**

Major medical benefits are provided to retirees by the PERS for all employees hired before July 1, 1986. Employees hired after June 30, 1986 with five years of credited service (or ten years of credited service for those first hired after June 30, 1996) must pay the full monthly premium if they are under age sixty and will receive benefits paid by the PERS if they are over age sixty. In addition, peace officers with twenty-five years of peace officer service and other employees with thirty years of membership service receive benefits paid by the PERS, regardless of their age or date of hire.

### **(11) Disability Benefits**

Monthly disability benefits are paid to permanently disabled members until they die, recover or become eligible for normal retirement. Members are appointed to normal retirement on the first of the month after they become eligible.

Occupational Disability: Members are not required to satisfy age or service requirements to be eligible for occupational disability. Monthly benefits are equal to 40% of their gross monthly compensation on the date of their disability. Members on occupational disability continue to earn PERS service until they become eligible for normal retirement. Police/Fire members may elect to retain the disability benefit formula for the calculation of their normal retirement benefits.

Nonoccupational Disability: Members must be vested (five paid-up years of PERS service) to be eligible for nonoccupational disability benefits. Monthly benefits are calculated based on the member's average monthly compensation and PERS service on the date of termination from employment because of disability. Members do not earn PERS service while on nonoccupational disability.

### **(12) 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 occupational and nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

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

Occupational Death: When an active member dies from occupational causes, a monthly survivor's pension may be paid to the spouse. The pension equals 40% of the member's gross monthly compensation 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 salary on the date of death and service, including service accumulated from the date of the member's death to the normal retirement date. Survivors of Police/Fire members receive the greater of 50% of the member's gross monthly compensation on the date of death or disability, or 75% of the member's monthly normal retirement benefit (including service projected to Normal Retirement).

Death after Occupational Disability: When a member dies while occupationally disabled, benefits are paid as described above in Occupational Death.

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. The monthly benefit is calculated on the member's average monthly compensation and PERS service at the time of termination or death.

Lump Sum Benefit: Upon the death of a member who has less than one year of service, the designated beneficiary receives the member's contribution account, which includes mandatory and voluntary contributions, indebtedness payments, and interest earned. If the member has more than one year of PERS service, the beneficiary also receives \$1,000 and \$100 for each year of PERS service.

Death After Retirement: When a retired member dies, the designated beneficiary receives the member's contribution account, less any benefits already paid and the member's last benefit check. If the member selected a survivor option at retirement, the eligible spouse receives continuing, lifetime monthly benefits.

### **(13) 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 PERS 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 has been receiving benefits for at least five years.

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

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who first entered the PERS before July 1, 1986, 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.

### **(14) 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 or \$50, whichever is more. The following benefit recipients are eligible:

- (a) members who first entered the PERS before July 1, 1986, and their survivors;
- (b) members who first entered the PERS after June 30, 1986, and their survivors if they are at least age 65; and
- (c) all disabled members.

**2.2(a) Participant Census Information – Total PERS**

As of June 30	1999	2001	2002	2003	2004
<b>Active Members</b>					
(1) Number	32,214	32,441	33,242	34,065	33,612
(2) Average Age	43.55	43.75	43.99	44.23	44.64
(3) Average Credited Service	8.53	8.49	8.47	8.51	8.70
(4) Average Annual Earnings	\$ 39,844	\$ 41,935	\$ 42,196	\$ 42,882	\$ 43,823
(5) Number Vested	19,035	18,569	18,569	18,108	18,337
(6) Percent Who Are Vested	59.1%	57.2%	56.1%	53.2%	54.6%
<b>Retirees and Beneficiaries</b>					
(1) Number	14,185	16,274	17,215	18,431	19,572
(2) Average Age	64.67	64.55	64.70	64.81	64.99
(3) Average Monthly Benefit:					
Base	\$ 1,031	\$ 1,083	\$ 1,110	\$ 1,139	\$ 1,163
C.O.L.A.	73	76	77	79	80
P.R.P.A.	199	214	231	221	224
Adjustment	0	1	1	1	1
Total	1,303	1,374	1,419	1,440	1,468
<b>Vested Terminations</b>					
(1) Number	5,395	6,187	5,702	5,841	5,965
(2) Average Age	46.69	47.54	47.86	47.85	48.13
(3) Average Monthly Benefit	\$ 749	\$ 867	\$ 796	\$ 772	\$ 779
<b>Non-Vested Terminations With Account Balances</b>					
(1) Number <sup>8</sup>	7,500	11,403	11,301	10,798	11,860
(2) Average Account Balance	\$ 4,631	\$ 2,649	\$ 4,188	\$ 3,618	\$ 3,766

<sup>8</sup> Includes deceased participants with account balances.

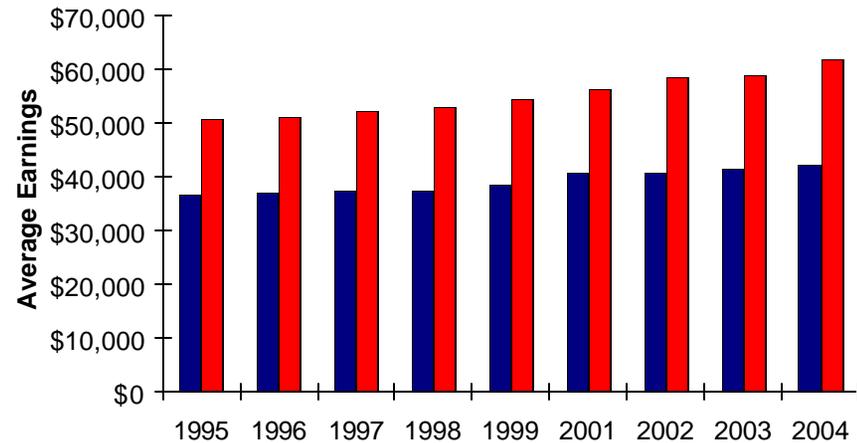
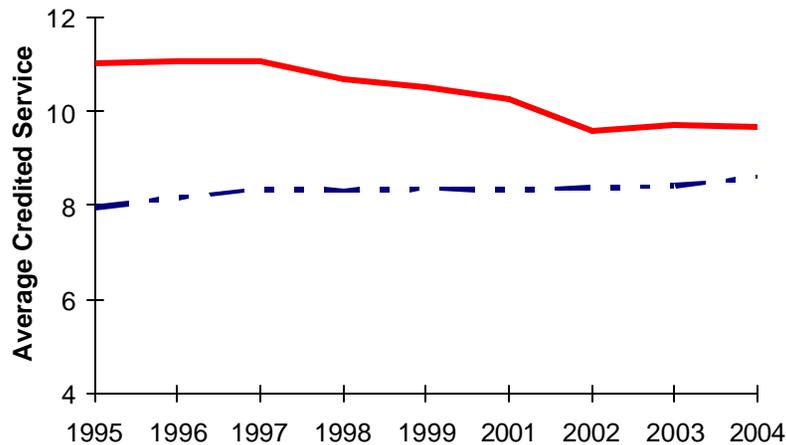
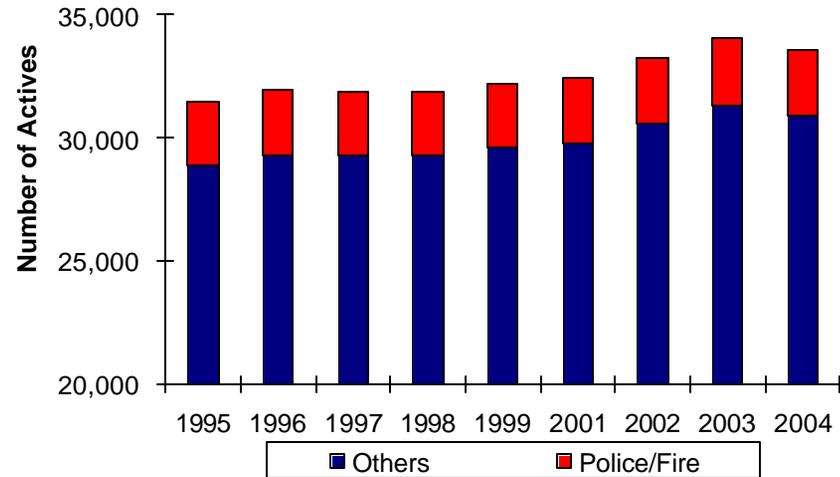
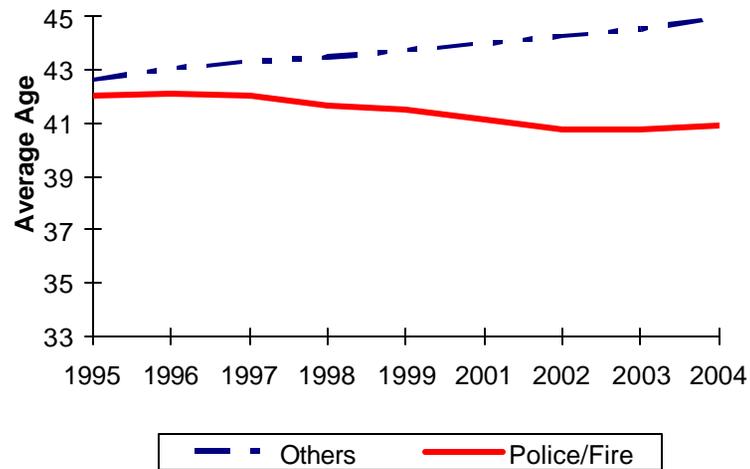
**2.2(a) Participant Census Information – Total PERS (continued)**

<b>As of June 30, 2004</b>	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Total</b>
<b>Retirees and Beneficiaries</b>				
(1) Number	17,522	1,964	86	19,572
(2) Average Age	65.22	63.19	58.98	64.99
(3) Average Monthly Benefit:				
Base	\$ 1,221	\$ 674	\$ 644	\$ 1,163
C.O.L.A.	87	24	24	80
P.R.P.A.	246	34	12	224
Adjustment	1	0	0	1
Total	1,555	732	680	1,468

**2.2(b) Additional Information – Active Participants**

<b>As of June 30</b>	<b>1999</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Police/Fire</b>					
(1) Number	2,624	2,683	2,695	2,727	2,705
(2) Average Age	41.51	41.11	40.77	40.72	40.89
(3) Average Credited Service	10.50	10.26	9.60	9.70	9.68
(4) Average Annual Earnings	\$ 54,437	\$ 56,542	\$ 58,490	\$ 58,945	\$ 61,855
(5) Number Vested	1,781	1,814	1,715	1,739	1,730
(6) Percent Who Are Vested	67.9%	67.6%	63.6%	63.8%	64.0%
 <b>Others</b>					
(1) Number	29,590	29,758	30,547	31,338	30,907
(2) Average Age	43.73	43.99	44.27	44.53	44.97
(3) Average Credited Service	8.35	8.33	8.37	8.41	8.61
(4) Average Annual Earnings	\$ 38,550	\$ 40,618	\$ 40,759	\$ 41,484	\$ 42,245
(5) Number Vested	17,254	16,755	16,944	16,369	16,607
(6) Percent Who Are Vested	58.3%	56.3%	55.5%	52.2%	53.7%

2.2(b) Additional Information – Active Participants (continued)



## 2.2(c) Distribution of Active Participants – Police/Fire

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	61	\$ 2,820,343	\$ 46,235
20 – 24	48	2,371,790	49,412	1	174	7,869,606	45,228
25 – 29	270	14,983,782	55,495	2	219	11,223,150	51,247
30 – 34	482	29,034,355	60,237	3	213	11,844,208	55,607
35 – 39	477	30,264,416	63,447	4	174	10,095,875	58,022
40 – 44	445	28,146,975	63,252	0 – 4	841	43,853,182	52,144
45 – 49	420	26,789,925	63,786	5 – 9	703	44,108,877	62,744
50 – 54	336	21,429,717	63,779	10 – 14	445	30,031,384	67,486
55 – 59	179	11,370,401	63,522	15 – 19	388	25,998,889	67,007
60 – 64	44	2,669,720	60,675	20 – 24	235	16,592,266	70,605
65 – 69	4	255,950	63,988	25 – 29	78	5,631,336	72,197
70 – 74	0	0	0	30 – 34	11	801,853	72,896
75+	0	0	0	35 – 39	4	299,244	74,811
				40+	0	0	0
<b>Total</b>	<b>2,705</b>	<b>\$167,317,031</b>	<b>\$ 61,855</b>	<b>Total</b>	<b>2,705</b>	<b>\$167,317,031</b>	<b>\$ 61,855</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	48	0	0	0	0	0	0	0	0	48
25 – 29	204	66	0	0	0	0	0	0	0	270
30 – 34	214	222	46	0	0	0	0	0	0	482
35 – 39	147	158	130	42	0	0	0	0	0	477
40 – 44	111	113	92	96	33	0	0	0	0	445
45 – 49	70	63	76	102	92	16	1	0	0	420
50 – 54	31	49	59	74	77	41	5	0	0	336
55 – 59	11	25	34	61	23	19	4	2	0	179
60 – 64	4	7	7	12	9	2	1	2	0	44
65 – 69	1	0	1	1	1	0	0	0	0	4
70 – 74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>841</b>	<b>703</b>	<b>445</b>	<b>388</b>	<b>235</b>	<b>78</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>2,705</b>

**2.2(d) Schedule of Active Member Valuation Data – Police/Fire**

<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, 2004	2,705	\$ 167,317	\$ 61,855	4.9%	161
June 30, 2003	2,727	160,743	58,945	0.8%	160
June 30, 2002	2,695	157,632	58,490	3.4%	161
June 30, 2001	2,683	151,701	56,542	3.9%	158
June 30, 1999	2,624	142,843	54,437	2.7%	148
June 30, 1998	2,617	138,653	52,982	1.0%	148
June 30, 1997	2,587	135,702	52,455	2.8%	156
June 30, 1996	2,634	134,362	51,011	0.2%	156
June 30, 1995	2,557	130,204	50,921	(1.7%)	153
June 30, 1994	2,481	128,456	51,776	2.8%	155

**2.2(e) Distribution of Active Participants – Others****Annual Earnings by Age**

Age	Number of People	Total Annual Earnings	Average Annual Earnings
0 – 19	45	\$ 1,174,719	\$ 26,105
20 – 24	841	24,400,334	29,013
25 – 29	1,890	63,206,450	33,443
30 – 34	2,616	98,572,236	37,681
35 – 39	3,135	122,664,754	39,128
40 – 44	4,884	197,719,477	40,483
45 – 49	6,246	274,358,056	43,925
50 – 54	6,097	287,198,604	47,105
55 – 59	3,423	160,568,849	46,909
60 – 64	1,348	60,315,789	44,745
65 – 69	290	12,178,846	41,996
70 – 74	68	2,719,342	39,990
75+	24	592,751	24,698
<b>Total</b>	<b>30,907</b>	<b>\$1,305,670,207</b>	<b>\$ 42,245</b>

**Annual Earnings by Credited Service**

Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0	1,627	\$ 52,691,100	\$ 32,385
1	3,230	102,189,514	31,638
2	2,941	96,349,549	32,761
3	2,572	90,810,751	35,307
4	2,154	81,527,557	37,849
0 – 4	12,524	423,568,471	33,821
5 – 9	6,968	284,888,913	40,885
10 – 14	4,621	216,226,821	46,792
15 – 19	3,303	172,324,172	52,172
20 – 24	2,240	129,957,790	58,017
25 – 29	1,050	65,479,432	62,361
30 – 34	185	12,058,650	65,182
35 – 39	16	1,165,958	72,872
40+	0	0	0
<b>Total</b>	<b>30,907</b>	<b>\$1,305,670,207</b>	<b>\$ 42,245</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	45	0	0	0	0	0	0	0	0	45
20 – 24	827	14	0	0	0	0	0	0	0	841
25 – 29	1,679	208	3	0	0	0	0	0	0	1,890
30 – 34	1,797	700	112	7	0	0	0	0	0	2,616
35 – 39	1,639	941	412	136	7	0	0	0	0	3,135
40 – 44	2,004	1,246	842	558	221	13	0	0	0	4,884
45 – 49	1,862	1,456	1,156	858	642	263	9	0	0	6,246
50 – 54	1,378	1,317	1,053	937	830	497	85	0	0	6,097
55 – 59	804	724	700	557	382	187	62	7	0	3,423
60 – 64	370	278	273	194	128	76	24	5	0	1,348
65 – 69	81	68	57	46	22	11	1	4	0	290
70 – 74	23	13	10	9	6	3	4	0	0	68
75+	15	3	3	1	2	0	0	0	0	24
<b>Total</b>	<b>12,524</b>	<b>6,968</b>	<b>4,621</b>	<b>3,303</b>	<b>2,240</b>	<b>1,050</b>	<b>185</b>	<b>16</b>	<b>0</b>	<b>30,907</b>

**2.2(f) Schedule of Active Member Valuation Data – Others**

<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, 2004	30,907	\$ 1,305,670	\$ 42,245	1.8%	161
June 30, 2003	31,338	1,300,041	41,484	1.8%	160
June 30, 2002	30,547	1,245,055	40,759	0.3%	161
June 30, 2001	29,758	1,208,700	40,618	5.4%	158
June 30, 1999	29,590	1,140,706	38,550	3.0%	148
June 30, 1998	29,293	1,096,786	37,442	0.2%	148
June 30, 1997	29,267	1,093,433	37,361	0.7%	156
June 30, 1996	29,326	1,087,504	37,083	1.3%	156
June 30, 1995	28,893	1,057,840	36,612	0.9%	153
June 30, 1994	28,883	1,048,541	36,303	2.3%	155

**2.2(g) Statistics on New Benefit Recipients – Police/Fire**

During the Year Ending June 30	1999	2000/2001	2002	2003	2004
<b>Service</b>					
(1) Number	142	275	128	114	150
(2) Average Age at Commencement	52.47	51.49	51.17	51.72	52.43
(3) Average Monthly Benefit	\$ 2,410	\$ 2,562	\$ 2,681	\$ 2,835	\$ 2,761
<b>Survivor (including surviving spouse and QDROs)</b>					
(1) Number	14	36	26	19	19
(2) Average Age at Commencement	55.79	52.79	52.78	56.54	57.46
(3) Average Monthly Benefit	\$ 1,088	\$ 1,256	\$ 1,435	\$ 1,265	\$ 1,544
<b>Disability</b>					
(1) Number	7	17	3	10	5
(2) Average Age at Commencement	45.37	48.90	43.30	49.86	47.50
(3) Average Monthly Benefit	\$ 2,725	\$ 1,697	\$ 1,684	\$ 1,945	\$ 1,938
<b>Total</b>					
(1) Number	163	328	157	143	174
(2) Average Age at Commencement	52.45	51.50	51.28	52.23	52.84
(3) Average Monthly Benefit	\$ 2,310	\$ 2,374	\$ 2,456	\$ 2,564	\$ 2,604

**2.2(h) Schedule of Average Benefit Payments – New Benefit Recipients – Police/Fire**

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/03 - 6/30/04:							
Average Monthly Benefit	\$ 1,644	\$ 2,392	\$ 2,298	\$ 2,093	\$ 2,435	\$ 2,895	\$ 2,546
Number of Recipients	4	78	46	43	61	30	8
Period 7/1/02 - 6/30/03:							
Average Monthly Benefit	\$ 1,594	\$ 697	\$ 1,131	\$ 2,043	\$ 3,013	\$ 4,079	\$ 4,313
Number of Recipients	1	9	20	20	79	11	3
Period 7/1/01 - 6/30/02:							
Average Monthly Benefit	\$ 1,903	\$ 466	\$ 1,056	\$ 1,561	\$ 2,567	\$ 3,447	\$ 5,996
Number of Recipients	1	6	12	19	85	32	2
Period 7/1/99 - 6/30/01:							
Average Monthly Benefit	\$ 1,416	\$ 927	\$ 1,249	\$ 1,704	\$ 2,824	\$ 2,892	\$ 2,702
Number of Recipients	2	13	34	61	143	57	18
Period 7/1/98 - 6/30/99:							
Average Monthly Benefit	\$ 1,879	\$ 698	\$ 1,214	\$ 1,808	\$ 2,849	\$ 3,713	\$ 4,097
Number of Recipients	22	8	23	29	61	17	3
Period 7/1/97 - 6/30/98:							
Average Monthly Benefit	\$ 1,472	\$ 723	\$ 1,177	\$ 2,091	\$ 3,199	\$ 3,548	\$ 3,380
Number of Recipients	13	8	13	40	64	22	4
Period 7/1/96 - 6/30/97:							
Average Monthly Benefit	\$ 1,263	\$ 592	\$ 957	\$ 1,719	\$ 2,811	\$ 3,545	\$ 4,733
Number of Recipients	10	12	18	40	68	15	3
Period 7/1/95 - 6/30/96:							
Average Monthly Benefit	\$ 1,938	\$ 757	\$ 1,708	\$ 1,852	\$ 2,916	\$ 3,375	\$ 3,870
Number of Recipients	3	6	5	11	39	10	2
Period 7/1/94 - 6/30/95:							
Average Monthly Benefit	\$ 0	\$ 893	\$ 851	\$ 1,608	\$ 3,002	\$ 3,107	\$ 0
Number of Recipients	0	8	10	18	42	10	0

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

## 2.2(i) Statistics on New Benefit Recipients – Others

During the Year Ending June 30	1999	2000/2001	2002	2003	2004
<b>Service</b>					
(1) Number	921	2,031	942	1,247	1,155
(2) Average Age at Commencement	56.07	56.20	56.58	56.85	57.16
(3) Average Monthly Benefit	\$ 1,450	\$ 1,389	\$ 1,481	\$ 1,525	\$ 1,526
<b>Survivor (including surviving spouse and QDROs)</b>					
(1) Number	97	214	144	136	151
(2) Average Age at Commencement	63.58	61.10	62.12	63.24	60.54
(3) Average Monthly Benefit	\$ 837	\$ 845	\$ 842	\$ 879	\$ 758
<b>Disability</b>					
(1) Number	35	97	49	62	40
(2) Average Age at Commencement	48.24	48.31	49.55	49.53	43.22
(3) Average Monthly Benefit	\$ 1,263	\$ 1,258	\$ 1,445	\$ 1,396	\$ 1,268
<b>Total</b>					
(1) Number	1,053	2,342	1,135	1,445	1,346
(2) Average Age at Commencement	56.50	56.32	56.98	57.10	57.12
(3) Average Monthly Benefit	\$ 1,388	\$ 1,334	\$ 1,398	\$ 1,457	\$ 1,432

**2.2(j) Schedule of Average Benefit Payments – New Benefit Recipients – Others**

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/03 - 6/30/04:							
Average Monthly Benefit	\$ 659	\$ 745	\$ 806	\$ 968	\$ 917	\$ 1,163	\$ 1,488
Number of Recipients	28	300	231	218	234	109	58
Period 7/1/02 - 6/30/03:							
Average Monthly Benefit	\$ 984	\$ 678	\$ 1,022	\$ 1,601	\$ 2,201	\$ 3,116	\$ 4,004
Number of Recipients	202	379	290	219	179	99	77
Period 7/1/01 - 6/30/02:							
Average Monthly Benefit	\$ 488	\$ 500	\$ 886	\$ 1,428	\$ 2,020	\$ 2,663	\$ 3,653
Number of Recipients	15	283	246	227	198	94	72
Period 7/1/99 - 6/30/01:							
Average Monthly Benefit	\$ 602	\$ 577	\$ 791	\$ 1,129	\$ 1,392	\$ 1,771	\$ 1,949
Number of Recipients	8	174	289	594	542	438	297
Period 7/1/98 - 6/30/99:							
Average Monthly Benefit	\$ 653	\$ 518	\$ 894	\$ 1,477	\$ 2,129	\$ 2,853	\$ 3,813
Number of Recipients	55	237	249	225	157	86	44
Period 7/1/97 - 6/30/98:							
Average Monthly Benefit	\$ 943	\$ 511	\$ 935	\$ 1,512	\$ 2,090	\$ 3,007	\$ 3,700
Number of Recipients	107	246	281	282	175	86	42
Period 7/1/96 - 6/30/97:							
Average Monthly Benefit	\$ 905	\$ 481	\$ 872	\$ 1,507	\$ 2,086	\$ 2,821	\$ 3,308
Number of Recipients	43	254	223	191	112	54	27
Period 7/1/95 - 6/30/96:							
Average Monthly Benefit	\$ 652	\$ 483	\$ 855	\$ 1,385	\$ 1,920	\$ 2,624	\$ 3,473
Number of Recipients	46	179	188	143	87	35	24
Period 7/1/94 - 6/30/95:							
Average Monthly Benefit	\$ 754	\$ 483	\$ 890	\$ 1,523	\$ 2,087	\$ 2,688	\$ 2,607
Number of Recipients	5	148	154	132	76	25	21

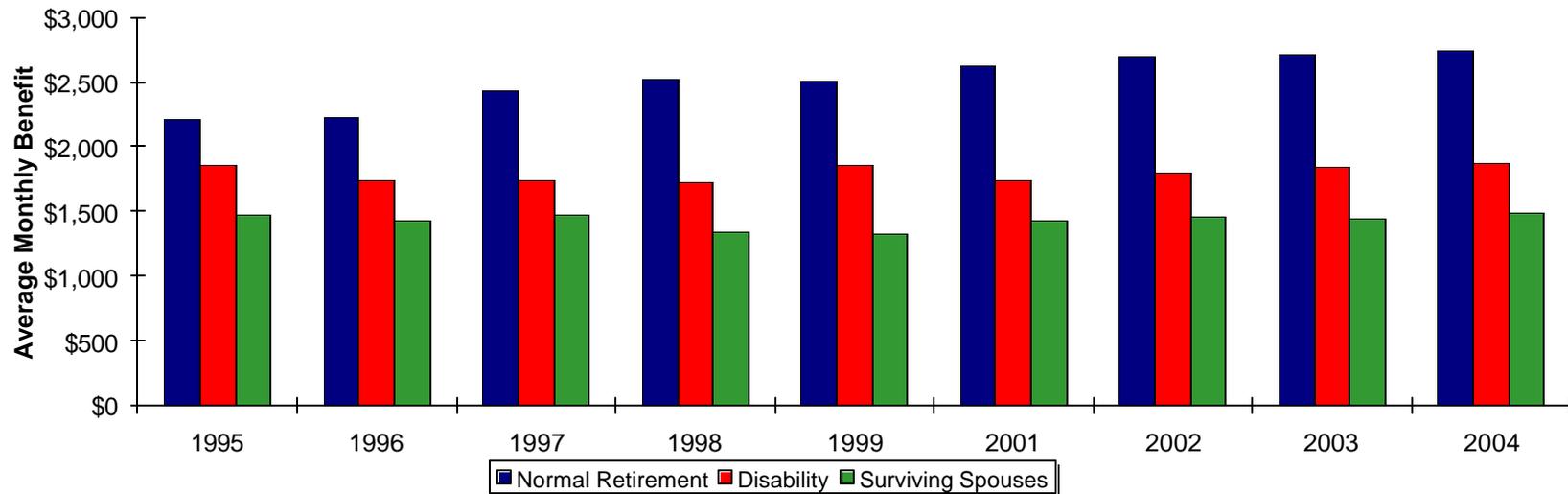
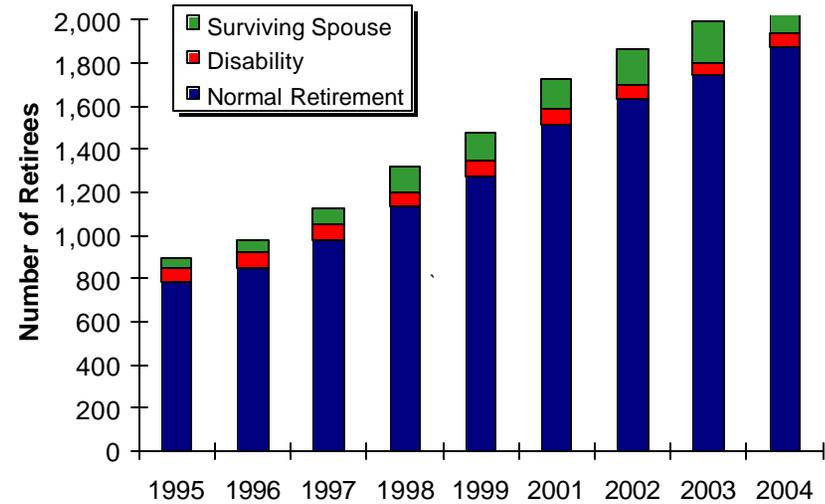
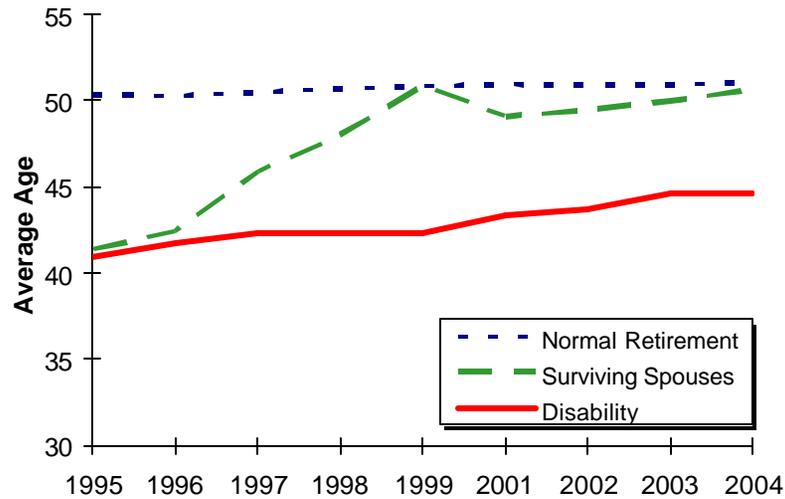
“Average Monthly Benefit” includes post-retirement pension adjustments and cost-of-living increases.

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

	<u>Police/Fire</u>	<u>Others</u>
<b>Service Retirements</b>		
(1) Number, June 30, 2003	1,741	14,604
(2) Net Change During FY04	136	916
(3) Number, June 30, 2004	1,877	15,520
(4) Average Age At Commencement	51.04	56.57
(5) Average Current Age	59.67	65.93
(6) Average Monthly Benefit	\$ 2,749	\$ 1,373
<b>Survivors (including surviving spouses and QDROs)</b>		
(1) Number, June 30, 2003	186	1,440
(2) Net Change During FY04	16	91
(3) Number, June 30, 2004	202	1,531
(4) Average Age At Commencement	50.67	57.41
(5) Average Current Age	58.00	66.89
(6) Average Monthly Benefit	\$ 1,486	\$ 842
<b>Disabilities</b>		
(1) Number, June 30, 2003	64	396
(2) Net Change During FY04	(3)	(15)
(3) Number, June 30, 2004	61	381
(4) Average Age At Commencement	44.59	45.23
(5) Average Current Age	51.21	51.19
(6) Average Monthly Benefit	\$ 1,868	\$ 1,492
<b>Total Number of Benefit Recipients</b>	<b>2,140</b>	<b>17,432</b>

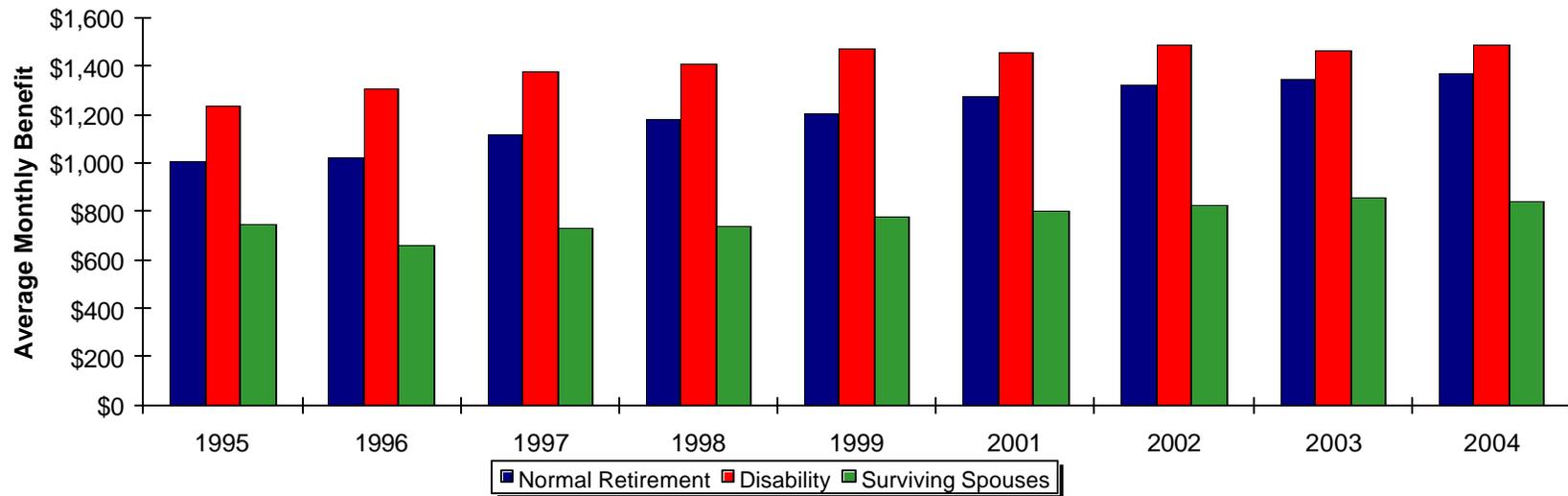
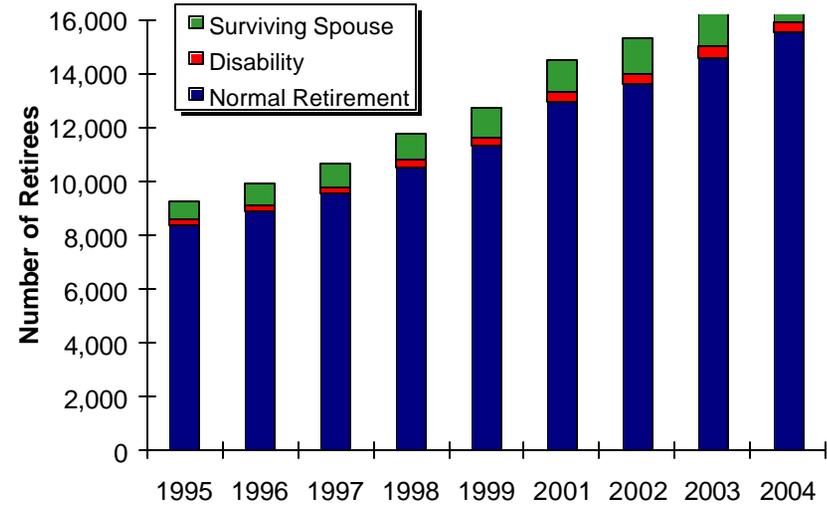
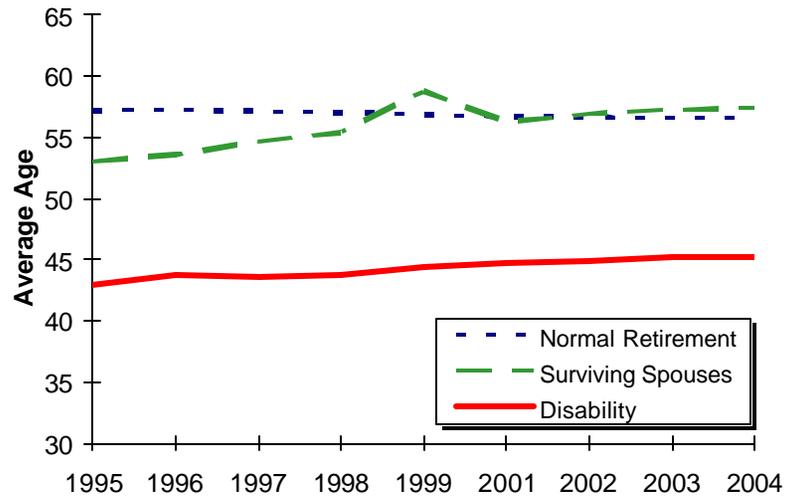
2.2(k) Statistics on All Benefit Recipients (continued)

Police/Fire



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

Others



**2.2(I) Distribution of Annual Benefits for Benefit Recipients – Police/Fire****Annual Benefit by Age**

Age	Number of People	Total Annual Benefit	Average Annual Benefit
0 – 19	0	\$ 0	\$ 0
20 – 24	0	0	0
25 – 29	0	0	0
30 – 34	2	40,189	20,095
35 – 39	2	37,161	18,581
40 – 44	30	761,835	25,395
45 – 49	172	5,727,149	33,297
50 – 54	412	13,651,391	33,134
55 – 59	543	18,485,654	34,044
60 – 64	486	14,299,658	29,423
65 – 69	261	7,360,317	28,200
70 – 74	126	3,908,986	31,024
75+	106	2,618,475	24,703

**Annual Benefit by Years Since Commencement**

Years Since Commencement	Number of People	Total Annual Benefit	Average Annual Benefit
0	92	\$ 3,085,241	\$ 33,535
1	156	4,662,534	29,888
2	161	4,723,528	29,339
3	148	4,573,281	30,901
4	135	4,078,576	30,212
0 – 4	692	21,123,160	30,525
5 – 9	722	22,247,736	30,814
10 – 14	332	10,008,096	30,145
15 – 19	246	9,119,841	37,073
20 – 24	90	2,926,842	32,520
25 – 29	47	1,197,323	25,475
30 – 34	11	267,817	24,347
35 – 39	0	0	0
40+	0	0	0

Total 2,140 \$ 66,890,815 \$ 31,257

Total 2,140 \$66,890,815 \$ 31,257

**Years Since Benefit Commencement 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	0
20 – 24	0	0	0	0	0	0	0	0	0	0	0
25 – 29	0	0	0	0	0	0	0	0	0	0	0
30 – 34	1	1	0	0	0	0	0	0	0	0	2
35 – 39	1	1	0	0	0	0	0	0	0	0	2
40 – 44	24	4	2	0	0	0	0	0	0	0	30
45 – 49	129	33	7	2	1	0	0	0	0	0	172
50 – 54	239	145	23	2	1	1	1	0	0	0	412
55 – 59	187	241	72	34	4	3	2	0	0	0	543
60 – 64	77	216	124	63	4	0	2	0	0	0	486
65 – 69	21	65	71	80	18	3	3	0	0	0	261
70 – 74	6	11	26	45	31	7	0	0	0	0	126
75+	7	5	7	20	31	33	3	0	0	0	106
Total	692	722	332	246	90	47	11	0	0	0	2,140

## 2.2(m) Schedule of Benefit Recipients by Type of Benefit and Option Selected – Police/Fire

Amount of Monthly Benefit		Number of Recipients	Type of Benefit			Option Selected				
			1	2	3	1	2	3	4	5
\$ 1	\$ 300	31	19	12	0	14	9	1	0	7
301	– 600	115	87	27	1	44	33	17	10	11
601	– 900	100	65	31	4	56	27	5	7	5
901	– 1,200	131	99	27	5	58	26	17	7	23
1,201	– 1,500	125	105	17	3	48	34	12	15	16
1,501	– 1,800	123	94	18	11	48	32	17	14	12
1,801	– 2,100	149	110	23	16	63	48	14	12	12
2,101	– 2,400	169	147	11	11	45	73	24	11	16
2,401	– 2,700	212	191	13	8	57	90	36	15	14
2,701	– 3,000	173	164	9	0	37	92	22	14	8
3,001	– 3,300	175	171	3	1	40	85	18	21	11
3,301	– 3,600	151	146	5	0	28	80	24	11	8
3,601	– 3,900	142	140	1	1	30	67	19	14	12
3,901	– 4,200	114	114	0	0	17	69	8	12	8
Over \$ 4,200		230	225	5	0	47	134	26	14	9
Totals		2,140	1,877	202	61	632	899	260	177	172

**Type of Benefit**

1. Normal retirement
2. Survivor payment
3. Disability

**Option Selected**

1. Whole Life Annuity
2. 75% Joint and Contingent Annuity
3. 50% Joint and Contingent Annuity
4. 66 2/3% Joint and Survivor Annuity
5. Level Income Option

## 2.2(n) Distribution of Annual Benefits for Benefit Recipients – Others

Annual Benefit by Age				Annual Benefit by Years Since Commencement			
Age	Number of People	Total Annual Benefit	Average Annual Benefit	Years Since Commencement	Number of People	Total Annual Benefit	Average Annual Benefit
0 – 19	0	\$ 0	\$ 0	0	682	\$ 12,940,175	\$ 18,974
20 – 24	0	0	0	1	1,340	23,523,331	17,555
25 – 29	0	0	0	2	1,227	20,321,280	16,562
30 – 34	3	41,726	13,909	3	1,110	18,005,902	16,222
35 – 39	11	101,109	9,192	4	956	14,425,400	15,089
40 – 44	50	630,617	12,612	0 – 4	5,315	89,216,088	16,786
45 – 49	151	2,153,534	14,262	5 – 9	5,089	87,317,439	17,158
50 – 54	1,127	17,082,463	15,157	10 – 14	2,878	40,475,028	14,064
55 – 59	3,543	65,529,179	18,495	15 – 19	2,379	36,962,323	15,537
60 – 64	3,911	65,824,216	16,831	20 – 24	1,091	15,176,313	13,910
65 – 69	3,146	47,565,457	15,119	25 – 29	604	7,797,134	12,909
70 – 74	2,382	35,579,009	14,937	30 – 34	73	977,038	13,384
75+	3,108	43,492,637	13,994	35 – 39	2	59,252	29,626
				40+	1	19,332	19,332
Total	17,432	\$277,999,947	\$ 15,948	Total	17,432	\$277,999,947	\$ 15,948

## Years Since Benefit Commencement by Age

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	0	0	0	0	0	0	0	0	0	0
30 – 34	3	0	0	0	0	0	0	0	0	3
35 – 39	5	4	2	0	0	0	0	0	0	11
40 – 44	26	15	6	3	0	0	0	0	0	50
45 – 49	78	50	16	5	2	0	0	0	0	151
50 – 54	883	167	49	25	3	0	0	0	0	1,127
55 – 59	2,322	1,160	33	18	6	4	0	0	0	3,543
60 – 64	1,184	1,936	688	83	12	7	1	0	0	3,911
65 – 69	516	987	1,031	574	22	13	2	1	0	3,146
70 – 74	164	559	602	828	204	20	4	1	0	2,382
75+	134	211	451	843	842	560	66	0	1	3,108
Total	5,315	5,089	2,878	2,379	1,091	604	73	2	1	17,432

## 2.2(o) Schedule of Benefit Recipients by Type of Benefit and Option Selected – Others

Amount of Monthly Benefit		Number of Recipients	Type of Benefit			Option Selected				
			1	2	3	1	2	3	4	5
\$ 1	\$ 300	1,553	1,266	278	9	675	313	215	63	287
301	– 600	3,405	2,937	414	54	1,643	798	504	212	248
601	– 900	2,781	2,453	290	38	1,327	674	381	202	197
901	– 1,200	2,269	2,023	194	52	1,026	570	330	169	174
1,201	– 1,500	1,700	1,503	138	59	697	466	257	117	163
1,501	– 1,800	1,384	1,252	87	45	553	389	200	107	135
1,801	– 2,100	1,032	929	52	51	364	320	171	83	94
2,101	– 2,400	796	738	28	30	273	265	121	58	79
2,401	– 2,700	568	536	17	15	185	176	105	46	56
2,701	– 3,000	502	482	14	6	167	173	84	35	43
3,001	– 3,300	372	355	10	7	103	140	52	32	45
3,301	– 3,600	263	256	5	2	70	109	43	20	21
3,601	– 3,900	223	216	2	5	65	98	31	15	14
3,901	– 4,200	166	164	0	2	42	82	26	13	3
Over \$4,200		418	410	2	6	120	170	67	34	27
Totals		17,432	15,520	1,531	381	7,310	4,743	2,587	1,206	1,586

**Type of Benefit**

1. Normal retirement
2. Survivor payment
3. Disability

**Option Selected**

1. Whole Life Annuity
2. 75% Joint and Contingent Annuity
3. 50% Joint and Contingent Annuity
4. 66 2/3% Joint and Survivor Annuity
5. Level Income Option

## 2.2(p) Schedule of Benefit Recipients Added to and Removed from Rolls – Police/Fire

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Allowances	Average Annual Allowance
	No. <sup>9</sup>	Annual Allowances <sup>9</sup>	No. <sup>9</sup>	Annual Allowances <sup>9</sup>	No.	Annual Allowances		
June 30, 2004	174	\$ 6,388,270	25	\$ 904,311	2,140	\$66,890,815	8.9%	\$ 31,257
June 30, 2003	143	4,923,581	21	802,499	1,991	61,406,855	7.2%	30,842
June 30, 2002	157	6,155,365	19	744,917	1,869	57,285,773	10.4%	30,650
June 30, 2001	328	12,637,854	75	2,889,753	1,731	51,875,325	23.1%	29,986
June 30, 1999	163	4,761,117	8	233,673	1,478	42,127,224	12.0%	28,503
June 30, 1998	195	6,096,918	2	62,532	1,323	37,599,780	19.1%	28,420
June 30, 1997	161	6,672,261 <sup>10</sup>	9	372,984 <sup>10</sup>	1,130	31,565,394	24.9%	27,934
June 30, 1996	88	2,217,256	2	50,392	978	25,266,117	9.4%	25,834
June 30, 1995	95	2,697,924	3	85,198	892	23,099,253	12.8%	25,896

<sup>9</sup> Numbers are estimated, and include other internal transfers.

<sup>10</sup> Includes additional benefits to current retirees from a one time retroactive ad hoc Post-Retirement Pension Adjustment

## 2.2(q) Schedule of Benefit Recipients Added to and Removed from Rolls – Others

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Allowances	Average Annual Allowance
	No. <sup>11</sup>	Annual Allowances <sup>11</sup>	No. <sup>11</sup>	Annual Allowances <sup>11</sup>	No.	Annual Allowances		
June 30, 2004	1,346	\$ 27,617,383	354	\$ 6,823,010	17,432	\$ 277,999,947	8.1%	\$ 15,948
June 30, 2003	1,445	27,802,265	351	6,507,821	16,440	257,205,574	9.0%	15,645
June 30, 2002	1,135	27,484,388	332	8,039,486	15,346	235,911,130	9.0%	15,373
June 30, 2001	2,342	46,880,694	506	10,128,792	14,543	216,466,228	20.5%	15,071
June 30, 1999	1,053	19,402,623	124	2,284,829	12,707	179,714,326	10.5%	14,143
June 30, 1998	1,219	25,116,364	113	2,328,260	11,778	162,596,532	16.3%	13,805
June 30, 1997	830	23,255,081 <sup>12</sup>	101	2,829,835 <sup>12</sup>	10,672	139,808,955	7.2%	13,100
June 30, 1996	702	8,803,872	40	501,645	9,943	119,383,182	7.5%	12,007
June 30, 1995	561	8,327,484	123	850,316	9,281	111,080,955	7.2%	11,969

<sup>11</sup> Numbers are estimated, and include other internal transfers.

<sup>12</sup> Includes additional benefits to current retirees from a one-time retroactive ad hoc Post-Retirement Pension Adjustment.

## **2.3 Summary of Actuarial Assumptions and Methods**

The demographic and non-health economic assumptions used in this valuation were recommended by Mercer Human Resource Consulting and were adopted at the Fall 2000 PERS Board Meeting. These assumptions were the result of an experience study performed in the Fall of 2000. For this valuation, Mercer is recommending changes to the assumptions and methods used to value medical benefit liabilities. 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 as a level percentage of pay. However, in keeping with GASB requirements, the net amortization period for all gains and losses will not exceed 30 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 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 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 Police/Fire: Merit (first 5 years of employment) – 1.5% per year. Productivity – 1.0% per year Others: Merit (first 10 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.
Mortality	1994 Group Annuity Mortality Basic Table for males and females, 1994 Base Year. Deaths are assumed to be occupational 85% of the time for Police/Fire, 35% of the time for Others.
Total Turnover	Based upon the 1997-99 actual withdrawal experience. (See Table 1).
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.

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

### (B) Actuarial Assumptions

C.O.L.A.	Of those benefit recipients who are eligible for the C.O.L.A., 68% are assumed to remain in Alaska and receive the C.O.L.A.												
New Entrants	Growth projections are made for the active PERS population under three scenarios: Pessimistic: 0% per year Median: 1% per year Optimistic: 2% per year												
Post-Retirement Pension Adjustment	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 0.600 years of credited service per year.												
Per Capita Claims Cost	Sample claims cost rates for FY05 medical and prescription are shown below:  <table border="1"> <thead> <tr> <th></th> <th><u>Medical</u></th> <th><u>Medicare</u></th> <th><u>Rx</u></th> <th><u>Medicare</u></th> </tr> </thead> <tbody> <tr> <td>Age 65</td> <td>\$7,730</td> <td>\$6,331</td> <td>\$1,668</td> <td>\$357*</td> </tr> </tbody> </table> <p>*Represents FY05 value of Medicare Part D subsidy. Rate is not applied until January 1, 2006 as subsidy is not available until then.</p>				<u>Medical</u>	<u>Medicare</u>	<u>Rx</u>	<u>Medicare</u>	Age 65	\$7,730	\$6,331	\$1,668	\$357*
	<u>Medical</u>	<u>Medicare</u>	<u>Rx</u>	<u>Medicare</u>									
Age 65	\$7,730	\$6,331	\$1,668	\$357*									
Health Cost Trend		<b>Medical</b>	<b>Rx</b>										
	FY05	9.5%	14%										
	FY06	9.0%	13%										
	FY07	8.5%	12%										
	FY08	8.0%	11%										
	FY09	7.5%	10%										
	FY10	7.0%	9%										
	FY11	6.5%	8%										
	FY12	6.0%	7%										
	FY13	5.5%	6%										
	FY14	5.0%	5%										
	FY15 and later	5.0%	5%										

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

### (B) Actuarial Assumptions

Aging Factors	<u>Age</u>	<u>Medical</u>	<u>Rx</u>
	0-44	2.0%	4.5%
	45-54	2.5%	3.5%
	55-64	3.5%	3.0%
	65-74	4.0%	1.5%
	75-84	1.5%	0.5%
	85+	0.5%	0.0%
Retired Member Contributions for Medical Benefits	Currently contributions are required for PERS members who are under age 60 and have less than 30 years of service (25 for Police/Fire). Eligible Tier 1 members are exempt from contribution requirements. A contribution of \$9,936 is assumed to be paid for those required.		
Trend Rate for Retired Member Medical Contributions	FY05	6.9%	
	FY06	10.2%	
	FY07	9.6%	
	FY08	8.9%	
	FY09	8.3%	
	FY10	7.6%	
	FY11	7.0%	
	FY12	6.3%	
	FY13	5.7%	
	FY14	5.0%	
	FY15 and later	5.0%	

## **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**

This section outlines the detailed methodology used to develop the initial per capita claims cost for the State of Alaska Public Employees' Retirement System postemployment healthcare benefits.

The analysis is separated into two phases:

- Development of total projected claims cost; and
- Development of the distribution of per capita claims cost by age.

To determine total projected costs for the valuation period, an analysis of claims experience for the State of Alaska PERS and TRS was completed based on information provided by its administrators. This analysis is presented on the following page, "Detailed Development of Claims Cost."

Paid claims for the period from June 2001 through May 2004 were tabulated and an average annual amount determined. Next, four adjustments were applied:

- An adjustment to restate paid claims for plan changes, if any, effective June 30, 2004.
- A participation adjustment to account for differences in exposures between the experience period and the current census.
- A factor to trend historical claims from the midpoint of the experience period to the midpoint of the valuation period.
- An adjustment to restate paid claims on an incurred basis, assuming that claims are paid on average three months after the date incurred for medical and vision and one month after the date incurred for prescription drugs.

To this, estimated administrative costs were added. The result is total projected costs for the period July 1, 2004 to June 30, 2005.

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

### (D) Valuation of Medical Benefits

#### Detailed Development of Claims Cost For the period July 1, 2004 through June 30, 2005

	Medical	Rx
Paid Claims (6/01 - 5/02)	115,904,729	42,174,073
Paid Claims (6/02 - 5/03)	133,794,131	49,761,201
Paid Claims (6/03 - 5/04)	143,042,729	61,583,420
Estimated annual paid claims	130,913,863	51,172,898
Population adjustment <sup>1</sup>	1.1169	1.1033
Trend Adjustment (25.0 months) <sup>2</sup>	1.2081	1.3139
Incurred Adjustment <sup>2</sup>	1.0229	1.0000
Medicare Reform Physician Fee Adj	1.0341	
Projected incurred claims	186,866,203	74,182,318
Administrative costs <sup>3</sup>	9,254,688	0
<b>Projected Plan Costs</b>	<b>\$196,120,892</b>	<b>\$74,182,318</b>

#### Notes:

1 - Adjusts for exposure differences between the current census and the experience period from which the claims were derived. To calculate an appropriate per capita claims cost, the number of employees used below includes all actives, not just those eligible for retiree health care benefits.

Current census:	27,051	27,051
Avg. enrollment during experience period:	24,221	24,517
2 - Trend:	9.5%	14.0%
Months of Trend	25.0	25.0
Incurred adjustment	3.0	0.0
3 - Administrative Fees	\$28.51	\$0.00

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

### **(D) Valuation of Medical Benefits**

Following the development of total projected costs, a distribution of per capita claims cost was developed. This was accomplished by allocating total projected costs to the population census used in the valuation. The allocation was done separately for each of prescription drugs and medical costs for the Medicare eligible and pre-Medicare populations. The allocation weights were developed using participant counts by age and assumed morbidity and aging factors. Results were tested for reasonableness based on historical trend and external benchmarks for costs paid by Medicare.

Below are the results of this analysis:

Distribution of Per Capita Claims Cost by Age  
for the Period July 1, 2004 through June 30, 2005

Age	Medical	Prescription Drug
45	\$4,281	\$ 880
50	4,844	1,045
55	5,480	1,241
60	6,509	1,439
65	1,349	1,668
70	1,702	1,797
75	2,071	1,936
80	2,231	1,985

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

**Table 1**  
**Alaska PERS**  
**Total Turnover Assumptions**

<u>Select Rates of Turnover</u> <u>During the First 5 Years of Employment</u>			<u>Ultimate Rates of Turnover</u> <u>After the First 5 Years of Employment</u>	
<b>Police/Fire:</b>				
<u>Year of</u> <u>Employment</u>	<u>Rate</u>		<u>Age</u>	<u>Rate</u>
1	.12		20+	.03
2	.10			
3	.08			
4	.07			
5	.06			
 <b>Others:</b>				
<u>Year of</u> <u>Employment</u>	<u>----Age at Hire----</u>		<u>Age</u>	<u>Rate</u>
	<u>20-34</u>	<u>35+</u>		
1	.25	.15	20-34	.11
2	.23	.15	35-39	.08
3	.20	.13	40-44	.06
4	.16	.12	45+	.05
5	.15	.11		

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

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

<u>Age</u>	<u>Police/Fire Rate</u>	<u>Other Member Rate</u>
20	.88	.28
21	.89	.28
22	.90	.29
23	.91	.29
24	.93	.30
25	.94	.30
26	.95	.30
27	.98	.31
28	1.00	.32
29	1.03	.33
30	1.05	.34
31	1.08	.34
32	1.10	.35
33	1.13	.36
34	1.16	.37
35	1.20	.38
36	1.24	.40
37	1.29	.41
38	1.34	.43
39	1.39	.44
40	1.44	.46
41	1.50	.48
42	1.59	.51
43	1.70	.54
44	1.85	.59
45	2.03	.65
46	2.20	.70
47	2.39	.76
48	2.59	.83
49	2.79	.89
50	3.00	.96
51	3.25	1.04
52	3.58	1.14
53	3.98	1.27
54	4.44	1.42
55	5.00	1.60
56	5.74	1.84
57	6.68	2.14
58	7.63	2.44
59	9.00	2.88
60	10.54	3.37

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

**Table 3**  
**Alaska PERS**  
**Retirement Rates**

<u>Age</u>	<u>Police/Fire Rate</u>	<u>Other Member Rate</u>
50	.10	.05
51	.10	.05
52	.10	.05
53	.05	.06
54	.05	.06
55	.20	.10
56	.13	.10
57	.13	.10
58	.13	.10
59	.13	.10
60	.20	.10
61	.25	.10
62	.25	.15
63	.25	.15
64	.25	.15
65	1.00	.20
66	1.00	.20
67	1.00	.20
68 & Up	1.00	1.00

Police/Fire members retiring at ages under 50 are assumed to retire immediately upon attaining 21 years of service.

Others members retiring at ages under 50 are assumed to retire immediately upon attaining 31 years of service.

Members currently under age 50 who have already attained 21 years of service (31 years for Others) are assumed to retire 1 year after the valuation date.

**Section 3**

- Section 3.1            Analysis of financial experience.
- Section 3.2(a)        Summary of accrued and unfunded accrued liabilities for Police/Fire.
- Section 3.2(b)        Summary of accrued and unfunded accrued liabilities for Others.
- Section 3.3            Solvency test.

### 3.1 Analysis of Financial Experience

**Change in Average 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**

Type of Gain or Loss	Change in Average Contribution Rate During Fiscal Year				
	2000	2001	2002	2003	2004
(1) Health Experience	0.00%	0.00%	3.68%	0.00%	0.00%
(2) Salary Experience	0.00%	(1.03%)	(0.20%)	(0.19%)	0.08%
(3) Investment Experience	(0.12%)	0.11%	7.24%	0.31%	0.02%
(4) Demographic Experience	(0.81%)	0.77%	1.21%	0.40%	0.54%
(5) Contribution Shortfall	0.00%	0.00%	0.00%	1.10%	0.89%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(0.93%)	(0.15%)	11.93%	1.62%	1.53%
<b>Non-recurring Changes</b>					
(7) Asset Valuation Method	(2.67%)	0.00%	4.11%	0.00%	0.00%
(8) Past Service Amortization Change	0.00%	0.00%	(5.06%)	0.00%	0.00%
(9) Assumption Changes	3.09%	0.00%	6.98%	0.00%	1.03%
(10) System Benefit Changes	0.00%	0.17%	0.04%	0.00%	0.00%
(11) Addition of 102% Target Funding Ratio	0.00%	0.57%	0.00%	0.00%	0.00%
(12) Elimination of 102% Target Funding Ratio	0.00%	0.00%	0.00%	(0.90%)	0.00%
(13) Ad hoc PRPA	0.07%	0.06%	0.14%	0.00%	0.00%
(14) Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10) + (11) + (12) + (13)	(0.44%)	0.65%	18.14%	0.72%	2.56%
(15) Beginning Average Employer Contribution Rate	6.56%	6.12%	6.77%	24.91%	25.63%
(16) Ending Average Employer Contribution Rate, (14) + (15)	6.12%	6.77%	24.91%	25.63%	28.19%
(17) Fiscal Year Above Rate is Applied	FY03	FY04	FY05	FY06	FY07

## 3.2(a) Summary of Accrued and Unfunded Accrued Liabilities – Police/Fire

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, 2004 <sup>(2)(3)</sup>	\$ 1,763,711	\$ 1,237,630	70.2%	\$ 526,081	\$ 167,317	314.4%
June 30, 2003	1,577,251	1,147,999	72.8%	429,252	160,742	267.0%
June 30, 2002 <sup>(1)(2)(3)</sup>	1,509,947	1,135,238	75.2%	374,709	157,632	237.7%
June 30, 2001	1,293,448	1,305,478	100.9%	N/A	151,701	N/A
June 30, 2000 <sup>(2)(3)</sup>	1,196,821	1,209,451	101.1%	N/A	140,045	N/A
June 30, 1999	1,008,404	1,064,168	105.5%	N/A	142,843	N/A
June 30, 1998 <sup>(1)(2)(3)</sup>	926,249	981,127	105.9%	N/A	138,653	N/A
June 30, 1997	811,651	863,184	106.3%	N/A	135,702	N/A
June 30, 1996	733,303	776,196	105.8%	N/A	134,362	N/A
June 30, 1995	785,082	757,221	96.5%	27,861	130,204	21.4%

<sup>(1)</sup> Change in Asset Valuation Method

<sup>(2)</sup> Change of Assumptions

<sup>(3)</sup> Change in Methods

## 3.2(b) Summary of Accrued and Unfunded Accrued Liabilities – Others

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, 2004 <sup>(2)(3)</sup>	\$ 9,680,205	\$ 6,792,784	70.2%	\$ 2,887,421	\$ 1,305,670	221.1%
June 30, 2003	8,984,402	6,539,282	72.8%	2,445,120	1,300,041	188.1%
June 30, 2002 <sup>(1)(2)(3)</sup>	8,349,644	6,277,595	75.2%	2,072,049	1,245,055	166.4%
June 30, 2001	6,575,126	6,636,278	100.9%	N/A	1,208,700	N/A
June 30, 2000 <sup>(2)(3)</sup>	6,180,091	6,245,307	101.1%	N/A	1,181,435	N/A
June 30, 1999	5,640,269	5,952,172	105.5%	N/A	1,140,706	N/A
June 30, 1998 <sup>(1)(2)(3)</sup>	5,277,742	5,590,435	105.9%	N/A	1,096,786	N/A
June 30, 1997	4,722,465	5,022,304	106.3%	N/A	1,093,433	N/A
June 30, 1996 <sup>(2)</sup>	4,246,655	4,495,057	105.8%	N/A	1,087,504	N/A
June 30, 1995	4,186,090	4,037,533	96.5%	148,557	1,057,840	14.0%

<sup>(1)</sup> Change in Asset Valuation Method

<sup>(2)</sup> Change of Assumptions

<sup>(3)</sup> Change in Methods

### 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, 2004 <sup>(2)</sup>	\$ 1,070,268	\$ 7,650,156	\$ 2,723,492	\$ 8,030,414	100%	91.0%	0.0%
June 30, 2003	1,026,730	6,860,834	2,674,089	7,687,281	100%	97.1%	0.0%
June 30, 2002 <sup>(1)(2)(3)</sup>	967,045	6,301,095	2,591,451	7,412,833	100%	100%	5.6%
June 30, 2001	920,702	5,059,386	1,888,486	7,941,756	100%	100%	100%
June 30, 2000 <sup>(2)(3)</sup>	892,949	4,588,201	1,895,762	7,454,758	100%	100%	100%
June 30, 1999	854,497	3,961,063	1,833,113	7,016,340	100%	100%	100%
June 30, 1998 <sup>(1)(2)(3)</sup>	819,226	3,610,352	1,774,413	6,571,562	100%	100%	100%
June 30, 1997	795,170	3,020,608	1,716,338	5,885,488	100%	100%	100%
June 30, 1996 <sup>(2)</sup>	754,679	2,511,953	1,713,326	5,271,253	100%	100%	100%
June 30, 1995	673,196	2,445,870	1,852,106	4,794,754	100%	100%	90.5%

<sup>(1)</sup> Change in Asset Valuation Method

<sup>(2)</sup> Change of Assumptions

<sup>(3)</sup> Change in Methods

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