

# State of Alaska Teachers' Retirement System

Actuarial Valuation Report as of June 30, 2005



Submitted By: Buck Consultants 1200 Seventeenth Street, Suite 1200 Denver, CO 80202



September 15, 2006

State of Alaska Alaska Retirement Management 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 Teachers' Retirement System has been prepared as of June 30, 2005 by Buck Consultants. The purposes of the report include:

- (1) a presentation of the valuation results of the Plan as of June 30, 2005;
- (2) a review of experience under the Plan for the year ended June 30, 2005;
- (3) a determination of the appropriate contribution rate for all employers in the System which will be applied for the fiscal year ending June 30, 2008; 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(c))
- (3) Schedule of benefit recipients added to and removed from rolls (Section 2.2(i))
- (4) Solvency test (Section 3.3)
- (5) Analysis of financial experience (Section 3.1)

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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 in the financial statements audited by 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 and for 2004. For this valuation, we are recommending additional changes to the assumptions used to value medical benefit liabilities and we reflect corrections to differences between plan provisions and certain calculations included in the prior valuation.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY06 and a fixed 25-year amortization as a level percentage of pay 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 decreased from 62.8% to 60.9% 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.



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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,

David W. Aluskousky

David H. Slishinsky, A.S.A., E.A. Principal, Consulting Actuary

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Michelle Reding DeLange, F.S.A., E.A. Director, Consulting Actuary

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.

Leonard C. "Trey" Sarsfield, A.S.A., M.A.A.A. Senior Consultant, Health & Welfare



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## **Report Highlights**

This report has been prepared by Buck Consultants for the State of Alaska Teachers' Retirement System to:

- (1) Present the results of a valuation of the Alaska Teachers' Retirement System as of June 30, 2005;
- (2) Review experience under the plan for the year ended June 30, 2005;
- (3) Determine the appropriate contribution rate for each employer in the System; and
- (4) Provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into three sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 2005 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:

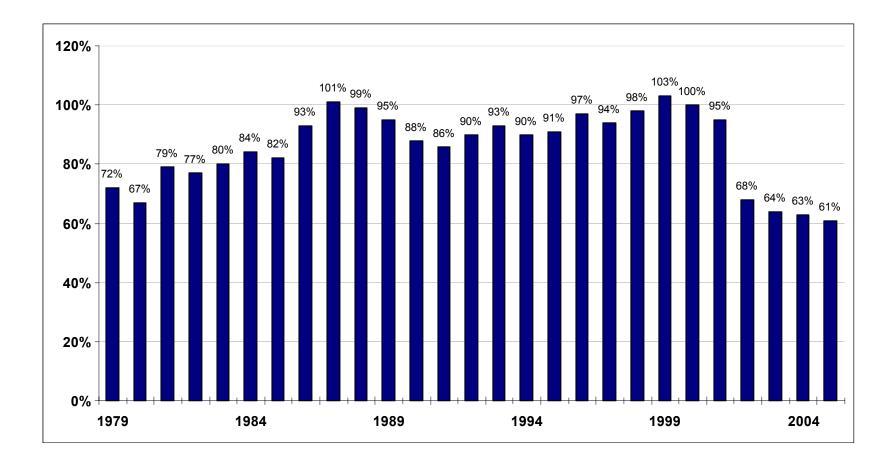
Funding Status as of June 30	2004	2005
(a) Valuation Assets <sup>1</sup>	\$ 3,845,370	\$ 3,958,939
(b) Accrued Liability <sup>1</sup>		
i) Non-medical benefits	\$ 4,216,480	\$ 4,334,585
ii) Total benefits (including medical)	\$ 6,123,600	\$ 6,498,556
(c) Funding Ratio based on Valuation Assets, $(a) \div (b)$	62.8%	60.9%
(d) Market value of Assets <sup>1</sup>	\$ 3,911,515	\$ 4,026,995
(e) Funding Ratio based on Market Assets, $(d) \div (b)$	63.9%	62.0%

<sup>&</sup>lt;sup>1</sup> In thousands.

## **Report Highlights** (continued)

## **TRS Funding Ratio History**

(Based on Valuation Assets)





## Report Highlights (continued)

Employer Contribution Rates for Fiscal Year:	2007	2008
(a) Normal Cost Rate	13.76%	12.56%
(b) Past Service Rate	28.02%	29.70%
(c) Total Employer Contribution Rate $(a) + (b)$	41.78%	42.26%
(d) Board Adopted Employer		
Contribution Rate	26.00%	54.03%



## Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio based on valuation assets as of June 30, 2005 has decreased from 62.8% to 60.9%, a decrease of 1.9%. The total calculated employer contribution rate has increased from 41.78% of payroll for FY07 to 42.26% for FY08, an increase of 0.48%. The reasons for the change in the funded status and calculated contribution rate are explained below.

#### (1) Retiree Medical Costs and Assumptions

The following table summarizes the monthly premium per benefit recipient since 1977.

Time Period	Monthly Premium Per Retiree For Health Coverage	Annual Percentage Change	Average Compound Annual Increase Since FY78
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%
1/1/06-12/31/06	876.00	3%	10%

As you can see from the above table, the monthly retiree medical premium for the January 1, 2006 to December 31, 2006 time period has increased to \$876. Although this represents only a 3% 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 9.6% compounded annually.

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 FY15 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, the health cost trend assumption was being used 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 the 2004 valuation, the assumptions used to value liabilities for retiree medical benefits were changed. The revised methods and assumptions more accurately measured retiree medical liabilities and incorporated the expected impact on System liabilities of changes in the Medicare program. In particular, changes were made to the following elements in calculating medical liabilities:

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

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.

For the 2005 valuation, we updated claim cost and Medicare offset analyses using additional claims and enrollment information and the same methodology as used for 2004. We are recommending re-initializing healthcare trend and retired member contribution rate trend assumptions used for 2004. Methods and assumptions for valuing medical benefits are described in more detail in Section 2.3.

The 2004 and current valuations also reflect the impact of the Medicare Part D subsidy in the projection of the prescription drug benefits. Based on the prior actuary's and our understanding and interpretation of the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) at the time of the 2004 valuation and this valuation, the prescription drug benefits appear to meet the actuarial equivalence requirements and will qualify to receive the federal Part D subsidy.

These opinions do not constitute full actuarial attestations. 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 90 days prior to the start of each plan year to be eligible to receive a subsidy for that plan year.

The combined impact of our recommended method and assumption changes, together with the projected impact of Medicare changes, results in a decrease of 0.8% to the funding ratio, and an increase of 1.47% to the actuarial contribution rate.

#### (2) Investment Experience

The approximate FY05 investment return based on market values was 8.55% compared to the expected investment return of 8.25%. This resulted in a gain of approximately \$11 million to the System from investment experience. The asset valuation method recognizes 20 percent of this gain (\$2.3 million) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY03 investment loss and 20 percent of FY04 investment gain were recognized this year. The net result was an investment gain which increased the funding ratio by 0.1% and decreased the contribution rate by 0.02%.

#### (3) Salary Increase

During the period from June 30, 2004, to June 30, 2005, salary increases for continuing active members 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 was a decrease of 0.26% in employer contribution rates.

#### (4) Demographic Experience

Section 2.2 provides statistics on active and inactive participants. The number of active participants decreased 0.3% from 9,688 at June 30, 2004 to 9,656 at June 30, 2005. The average age of active participants increased from 44.56 to 44.76 and average credited service decreased from 10.65 to 10.58 years.

The number of retirees and beneficiaries increased 3.6% from 8,707 to 9,020, and their average age increased from 63.95 to 64.42. There was a 14.1% increase in the number of vested terminated participants from 724 to 826. Their average age increased from 48.83 to 49.13.

The overall effect of these participant data changes was an actuarial gain to the System, resulting in a decrease in the employer contribution rate of 2.10% of total payroll.



#### (5) Contribution Shortfall Compared to Actuarially Calculated Rate

As of June 30, 2004, the actuarially calculated rate was 41.78% for FY07 employer contributions. Since employer contribution rates are determined two years prior to the fiscal year, the June 30, 2002 adopted employer rate of 16.00% was contributed during FY05. The difference between the two rates, 16.00% and 41.78%, created a contribution shortfall to the System. This shortfall increased the contribution rate by 1.42%.

#### (6) Actuarial Projections

At the Fall 1991 Board Meetings, the TRS Board approved the use of an enhanced actuarial projection system in the valuation report. The same actuarial cost method is used, but the enhanced system projects a 1% population growth pattern until July 1, 2006 and the associated liabilities 30 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 30 years. Section 1.5, Actuarial Projections, contains the results of this analysis.

This type of information can be especially useful to multi-tiered systems, such as TRS. All of the projected new entrants before July 1, 2006, will be covered under the provisions of Tier 2 so that the ultimate effect on plan liabilities can be anticipated. No new plan entrants are anticipated after July 1, 2006. As you can see in Section 1.5, based on the actuarial assumptions and asset valuation method, contributions are expected to increase in the future.



#### Summary

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

1.	Last year's total employer contribution rate	41.78%
2.	Change due to revaluation of plan liabilities as of June 30, 2004	(0.03)%
3.	Change due to:	
	a. Contribution shortfall compared to actuarially calculated rate	1.42%
	b. Investment experience	(0.02)%
	c. Salary increases	(0.26)%
	d. Demographic experience	(2.10)%
	e. Medical assumptions and methodology	1.47%
4.	Total employer contribution rate this year	42.26%

## 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 FY05 and the investment return for FY05. Section 1.1(c) Actuarial value of assets. Section 1.2 Actuarial present values. Section 1.3 Total employer contribution rate for FY08. Section 1.4 Development of actuarial gain or loss for FY05. Section 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 Section 1.5(b) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll After July 1, 2006 Section 1.5(c) Actuarial Projections – Projections at Current Rate Based on DB Only Payroll After July 1, 2006 Section 1.5(d) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll After July 1, 2006 Section 1.5(e) Actuarial Projections – Effect of Economic Scenarios Based on DB Only Payroll After July 1, 2006



## 1.1(a) Statement of Net Assets

As of June 30, 2005 (in thousands)	Pension	Postemployment Healthcare			Total Market Value		
Cash and Cash Equivalents	\$ 428	\$	157	\$	585		
Domestic Equity Pool	1,420,291		120,279		1,540,570		
Domestic Fixed Income Pool	662,788		242,972		905,760		
International Equity Pool	450,569		165,174		615,743		
Real Estate Pool	282,974		103,735		386,709		
International Fixed Income Pool	109,180		40,025		149,205		
Private Equity Pool	129,882		47,613		177,495		
Emerging Markets Equity Pool	52,832		19,368		72,200		
Other Investments Pool	10,862		3,982		14,844		
High Yield Pool	47,363		17,363		64,726		
Absolute Return Pool	72,016		26,401		98,417		
Loans and Mortgages (Net of Reserves)	35		13		48		
Net Accrued Receivables	 507		186		693		
Net Assets	\$ 3,239,727	\$	787,268	\$	4,026,995		



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

Fiscal Year 2005 (in thousands)			Pension		temployment Healthcare	N	Total larket Value
(1)	Net Assets, June 30, 2004 (market value)	\$	3,164,807	\$	746,708	\$	3,911,515
(2)	Additions:						
	(a) Plan Member Contributions		40,973		15,020		55,993
	(b) Employer Contributions		68,448		25,092		93,540
	(c) Interest and Dividend Income		91,377		33,498		124,875
	(d) Net Appreciation in Fair Value of Investments		159,596 7		58,507 <u>3</u>		218,103 10
	<ul><li>(e) Other</li><li>(f) Total Additions</li></ul>	\$	<u>,</u> 360,401	\$	132,120	\$	492,521
(3)	<ul> <li>Deductions:</li> <li>(a) Medical Benefits</li> <li>(b) Retirement Benefits</li> <li>(c) Refunds of Contributions</li> <li>(d) Investment Expenses</li> <li>(e) Administrative Expenses</li> <li>(f) Total Deductions</li> </ul>	\$	0 269,414 3,202 11,380 <u>1,485</u> 285,481	\$	85,670 0 1,174 4,172 <u>544</u> 91,560	\$	85,670 269,414 4,376 15,552 2,029 377,041
(4)	Net Assets, June 30, 2005 (market value)	\$	3,239,727	\$	787,268	\$	4,026,995
	proximate Market Value Investment 05 Net of Expenses	Ret	urn Rate Duri	ng			8.55%



## 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) Def	erral of Investment Return for FY05	
(a)	Market Value, June 30, 2004	\$ 3,911,515
(b)	Contributions for FY05	149,533
	- Weighted for timing	74,767
(c)	Benefit Payments for FY05	359,460
	- Weighted for timing	179,730
(d)	Investment Return (net of expenses)	325,407
(e)	Expected Return Rate (net of expenses)	8.25%
(f)	Expected Return - Weighted for Timing, $[(a. + b c.) x e.]$	314,041
(g)	Investment Gain/(Loss) for the Year $(df.)$	11,366
(h)	Deferred Investment Return <sup>2</sup>	68,056
(2) Act	uarial Value, June 30, 2005	
(a)	Market Value, June 30, 2005	4,026,995
(b)	2005 Deferred Investment Return	68,056
(c)	Preliminary Actuarial Value, June 30, 2005 (a b.)	3,958,939
(d)	Upper Limit: 120% of Market Value, June 30, 2005	4,832,394
(e)	Lower Limit: 80% of Market Value, June 30, 2005	3,221,596
(f)	Actuarial Value, June 30, 2005 (c. limited by d. and e.)	\$ 3,958,939
(g)	Ratio of AVA to MVA	98.31%

<sup>2</sup> The table below shows the development of gain/(loss) to be recognized in the current year.

Plan Year Ended Asset Gain/(Los		t Gain/(Loss)	Gain/(Loss) Recognized in Prior Years		n/(Loss) ed This Year	Gain/(Loss) Deferred to Future Years		
6/30/2003	\$	(187,083)	\$	(74,834)	\$ (37,417)	\$	(74,832)	
6/30/2004	\$	222,993	\$	44,599	\$ 44,599	\$	133,795	
6/30/2005	\$	11,366	\$	0	\$ 2,273	\$	9,093	
Total	\$	47,276	\$	(30,235)	\$ 9,455	\$	68,056	

## 1.2 Actuarial Present Values

As of June 30, 2005 (in thousands	)	Normal Cost	Accrued Liabilities
Active Members			
Retirement Benefits		\$ 61,871	\$ 1,089,376
Termination Benefits		3,918	43,745
Disability Benefits		1,385	17,547
Death Benefits		935	15,536
Return of Contributions		2,903	13,490
Medical Benefits		48,231	670,134
Indebtedness		0	(45,448)
Subtotal		119,243	1,804,380
Inactive Members			
Not Vested			\$ 33,581
Vested Terminations	- Retirement Benefits		81,063
	- Medical Benefits		154,900
	- Indebtedness		(4,387)
Retirees & Beneficiaries	- Retirement Benefits		3,090,082
	- Medical Benefits		<u>1,338,937</u>
Subtotal			4,694,176
Totals		\$ 119,243	\$ 6,498,556



## 1.3 Development of Total Employer Contribution Rate – FY08

Normal Cost Rate	In Thousands
(1) Total Normal Cost	\$ 119,243
(2) Total Salaries	561,038
(3) Normal Cost Rate, $(1) \div (2)$	21.25%
(4) Average Member Contribution Rate	8.69%
(5) Employer Normal Cost Rate, $(3) - (4)$	12.56%
Past Service Rate	
(1) Accrued Liability	\$ 6,498,556
(2) Valuation Assets	3,958,939
(3) Total Unfunded Liability, $(1) - (2)$	2,539,617
(4) Past Service Cost Amortization Payment	166,618
(5) Total Salaries	561,038
(6) Past Service Rate, $(4) \div (5)$	29.70%
Total Employer Contribution Rate	42.26%



## **1.3 Development of Total Employer Contribution Rate – FY08** (continued)

	Amortization Period		Balances					
Charge	Date Created	Years Left		Initial	C	Dutstanding	Be	ginning-of-Year Payment
Initial Unfunded								
Liability	6/30/2002	22	\$	1,722,606	\$	1,796,935	\$	119,563
FY03 Loss	6/30/2003	23		333,376		343,488		22,231
FY04 Loss	6/30/2004	24		164,707		167,321		10,552
FY05 Loss	6/30/2005	25		231,873		231,873		14,272
Total					\$	2,539,617	\$	166,618

## Schedule of Past Service Cost Amortizations

Credit Total	Amortizati	on Period	Ba	alances				
	Date Created	Years Left	Initial	о	utstanding	Beginning-of-Year Payment		
				\$	0	\$	0	
Total				\$	2,539,617	\$	166,618	

The amortization factor for 25 years is 16.246963. The weighted average amortization factor is 15.242153.



		In	In Thousands				
(1) Expec	eted Actuarial Accrued Liability						
(a)	Accrued Liability, June 30, 2004	\$	6,123,600				
(b)	Normal Cost for FY05		117,223				
(c)	Interest on (a) and (b) at 8.25%		514,868				
(d)	Benefit Payments for FY05		355,084				
(e)	Refund of Contributions for FY05		4,376				
(f)	Interest on (d) and (e) at 8.25% for one-half year		14,828				
(g)	Expected Accrued Liability as of June 30, 2005, (a) + (b) + (c) - (d) - (e) - (f)		6,381,403				
(2) Actua	l Accrued Liability, June 30, 2005		6,498,556				
(3) Liabi	lity Gain/(Loss), (1)(g) – (2)	\$	(117,153)				
(4) Expec	ted Actuarial Asset Value						
(a)	Actuarial Asset Value, June 30, 2004		3,845,370				
(b)	Interest on (a) at 8.25%		317,243				
(c)	Employee Contributions for FY05		55,993				
(d)	Employer Contributions for FY05		93,540				
(e)	Interest on (c) and (d) at 8.25% for one-half year		6,168				
(f)	Benefit Payments for FY05		355,084				
(g)	Refund of Contributions for FY05		4,376				
(h)	Interest on (f) and (g) at 8.25% for one-half year		14,828				
(i)	Expected Actuarial Asset Value, June 30, 2005, (a) + (b) + (c) + (d) + (e) - (f) - (g) - (h)		3,944,026				
(5) Actua	rial Asset Value, June 30, 2005		3,958,939				
(6) Actua	nrial Asset Gain/(Loss), (5) - (4)(i )	\$	14,913				
(7) Actua	nrial Gain/(Loss), (3) + (6)	\$	(102,240)				
(8) (Shor	tfall) between Actuarial and Actual Contributions	\$	(129,633)				
(9) FY05	Gain/(Loss) to be Amortized, (7) + (8)	\$	(231,873)				

## 1.4 Development of Actuarial Gain/(Loss) for FY05

## 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006

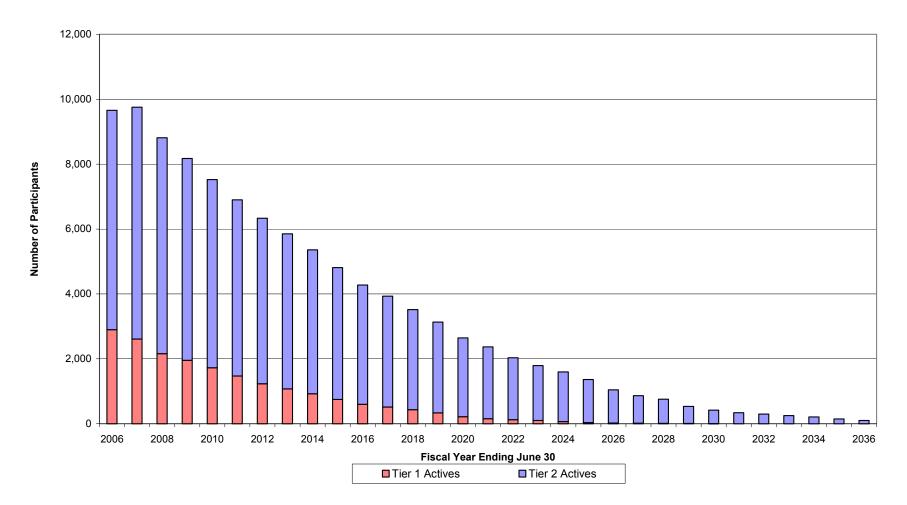
## **Key Assumptions**

- 8.25% investment return in all years
- Actuarial assumptions and methods as described in Section 2.3, except no payroll growth assumption is used to amortize the unfunded actuarial accrued liability beginning with the June 30, 2006 valuation
- The actuarially calculated contribution rate with a two-year lag is adopted each year beginning in FY08
- Annual active population increases 1% until July 1, 2006. No new DB Plan entrants into Tiers 1 and 2 after that date
- Profiles of new entrants to System are based on average new entrant profiles from the prior year



1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 (continued)

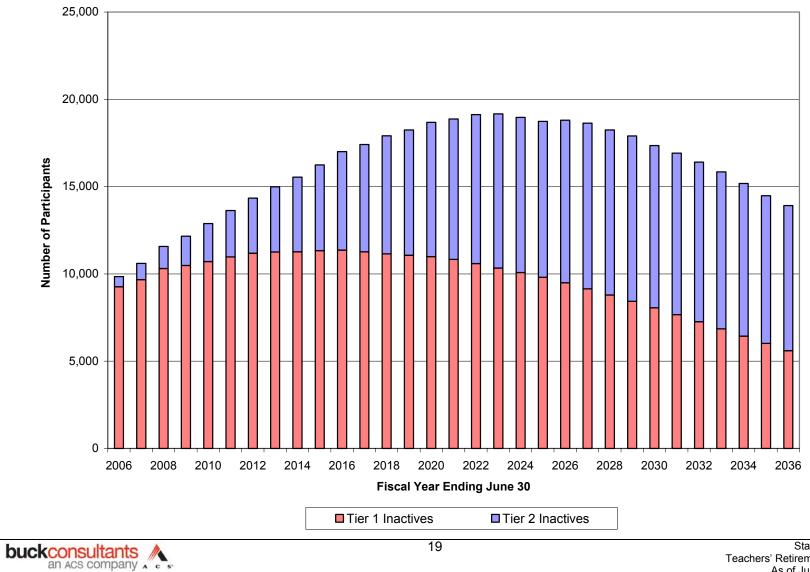
**Projected Active Participant Count** 





1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 (continued)

**Projected Inactive Participant Count** 



## 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 (continued)

### Observations

- Contribution amounts have been shown instead of rates because as the payroll declines, the rates are many multiples of pay. The actual contribution amount provides a more meaningful illustration of the contributions due
- Contributions amounts significantly increase to FY10
- Contribution amounts increase to over \$300 million
- Contribution amounts decline towards end of the projection period upon completion of 25year amortizations of recent losses
- Funding ratios improve through much of the projection period





# \$500 \$450 \$400 **Contribution Amounts (Millions)** \$350 \$300 \$250 \$200 \$150 \$100 \$50 \$0 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2019 2019 2019 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 \$118 \$149 \$227 \$275 \$299 \$296 \$300 \$307 \$310 \$304 \$296 \$306 \$317 \$310 \$293 \$293 \$293 \$312 \$314 \$331 \$324 \$286 \$286 \$387 \$305 \$172 \$166 \$175 \$177 \$177 \$172 \$136 \$109 Contribution Amounts

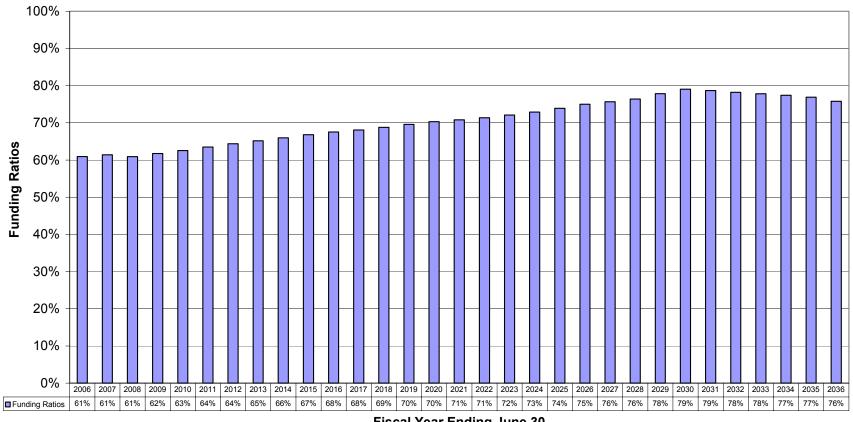
## **Projected Contribution Amounts**

Fiscal Year Ending June 30



## 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 (continued)

## **Projected Funding Ratios**



Fiscal Year Ending June 30



### 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on DB Only Payroll After July 1, 2006 (continued)

#### State of Alaska TRS

Financial Projections (in Thousands)

	Invest	tment Return												
		Valuation Am						Amounts Duri	<u> </u>		Net	<u> </u>	Recognized Asset Gain	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		Actuarial Assets
2006	 3,958,939	 6,498,556	60.92%	(2,539,617)	 560,782	 21.00%	 117,764	48,732	 166,496	405,560	(239,064)	 316,947	 9,455	4,046,277
2007	4,046,277	6,589,243	61.41%	(2,542,965)	572,638	26.00%	148,886	49,762	198,648	433,026	(234,378)	324,341	9,455	4,145,695
2008	4,145,695	6,809,690	60.88%	(2,663,994)	536,417	42.26%	226,690	46,615	273,304	453,022	(179,718)	334,753	46,872	4,347,603
2009	4,347,603	7,042,291	61.74%	(2,694,688)	517,760	53.14%	275,138	44,993	320,131	478,090	(157,959)	352,291	2,273	4,544,208
2010	4,544,208	7,265,509	62.54%	(2,721,301)	493,582	60.01%	296,199	42,892	339,091	502,829	(163,738)	368,277	0	4,748,746
2011	4,748,746	7,478,292	63.50%	(2,729,546)	467,992	63.30%	296,239	40,669	336,907	527,342	(190,435)	384,072	0	4,942,383
2012	4,942,383	7,680,370	64.35%	(2,737,987)	444,041	67.49%	299,683	38,587	338,270	548,569	(210,298)	399,244	0	5,131,329
2013	5,131,329	7,873,739	65.17%	(2,742,410)	424,250	72.28%	306,648	36,867	343,515	577,373	(233,857)	413,879	0	5,311,350
2014	5,311,350	8,049,998	65.98%	(2,738,648)	400,300	77.56%	310,473	34,786	345,259	600,769	(255,511)	427,855	0	5,483,695
2015	5,483,695	8,208,166	66.81%	(2,724,471)	368,986	82.40%	304,044	32,065	336,109	625,223	(289,114)	440,715	0	5,635,296
2016	5,635,296	8,344,813	67.53%	(2,709,517)	336,357	87.91%	295,691	29,229	324,921	642,947	(318,026)	452,053	0	5,769,324
2017	5,769,324	8,472,826	68.09%	(2,703,503)	319,800	95.81%	306,400	27,791	334,191	664,326	(330,135)	462,621	0	5,901,810
2018	5,901,810	8,582,456	68.77%	(2,680,646)	294,942	107.57%	317,269	25,630	342,900	684,604	(341,704)	473,083	0	6,033,189
2019	6,033,189	8,673,836	69.56%	(2,640,647)	269,987	114.71%	309,702	23,462	333,164	705,921	(372,757)	482,667	0	6,143,099
2020	6,143,099	8,739,547	70.29%	(2,596,448)	232,228	126.27%	293,234	20,181	313,415	724,915	(411,500)	490,168	0	6,221,766
2021	6,221,766	8,787,340	70.80%	(2,565,574)	213,429	138.16%	294,874	18,547	313,420	744,528	(431,107)	495,865	0	6,286,524
2022	6,286,524	8,811,474	71.34%	(2,524,950)	189,686	164.26%	311,578	16,484	328,062	759,419	(431,357)	501,197	0	6,356,364
2023	6,356,364	8,818,324	72.08%	(2,461,960)	172,512	181.75%	313,541	14,991	328,532	767,346	(438,814)	506,658	0	6,424,207
2024	6,424,207	8,814,508	72.88%	(2,390,300)	157,581	209.93%	330,810	13,694	344,504	788,475	(443,972)	512,046	0	6,492,281
2025	6,492,281	8,783,001	73.92%	(2,290,719)	137,116	236.48%	324,252	11,915	336,167	806,179	(470,012)	516,609	0	6,538,879
2026	6,538,879	8,720,156	74.99%	(2,181,277)	108,145	264.02%	285,524	9,398	294,922	818,055	(523,133)	518,306	0	6,534,052
2027	6,534,052	8,637,124	75.65%	(2,103,073)	93,559	306.13%	286,412	8,130	294,542	825,015	(530,472)	517,611	0	6,521,190
2028	6,521,190	8,538,095	76.38%	(2,016,905)	84,638	398.56%	337,333	7,355	344,688	831,043	(486,355)	518,334	0	6,553,169
2029	6,553,169	8,416,911	77.86%	(1,863,742)	63,777	477.74%	304,688	5,542	310,230	855,178	(544,947)	518,603	0	6,526,824
2030	6,526,824	8,256,894	79.05%	(1,730,070)	50,612	340.77%	172,471	4,398	176,869	853,999	(677,130)	511,085	0	6,360,779
2031	6,360,779	8,082,619	78.70%	(1,721,840)	41,848	396.06%	165,743	3,637	169,380	853,003	(683,623)	497,124	0	6,174,280
2032	6,174,280	7,894,137	78.21%	(1,719,857)	37,867	462.23%	175,033	3,291	178,323	848,470	(670,147)	482,282	0	5,986,415
2033	5,986,415	7,693,203	77.81%	(1,706,788)	33,538	528.19%	177,144	2,914	180,059	847,858	(667,800)	466,878	0	5,785,494
2034	5,785,494	7,474,835	77.40%	(1,689,341)	28,327	608.13%	172,265	2,462	174,727	847,119	(672,393)	450,117	0	5,563,218
2035	5,563,218	7,236,452	76.88%	(1,673,235)	20,503	662.81%	135,896	1,782	137,678	834,978	(697,300)	430,772	0	5,296,689
2036	5,296,689	6,988,644	75.79%	(1,691,955)	14,061	776.34%	109,161	1,222	110,383	821,893	(711,510)	408,209	0	4,993,388



## 1.5(b) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll After July 1, 2006

## **Key Assumptions**

• All assumptions and methods are the same as Section 1.5(a), except a payroll growth assumption of 4.25% per year is used to amortize the unfunded actuarial accrued liability throughout the projection period.

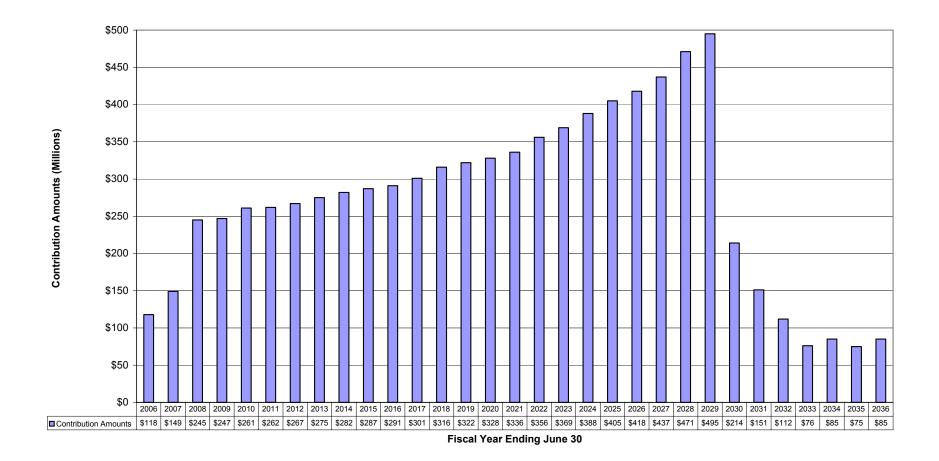
## Observations

- Contribution amounts have been shown instead of rates. The actual contribution amount provides a more meaningful illustration of the contributions due
- Contributions amounts increase significantly by FY08
- Contribution amounts decline towards end of the projection period upon completion of 25year amortizations of recent losses
- Contributions increase to nearly \$500 million by FY29 before declining
- Funding ratios improve over much of the projection period



1.5(b) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

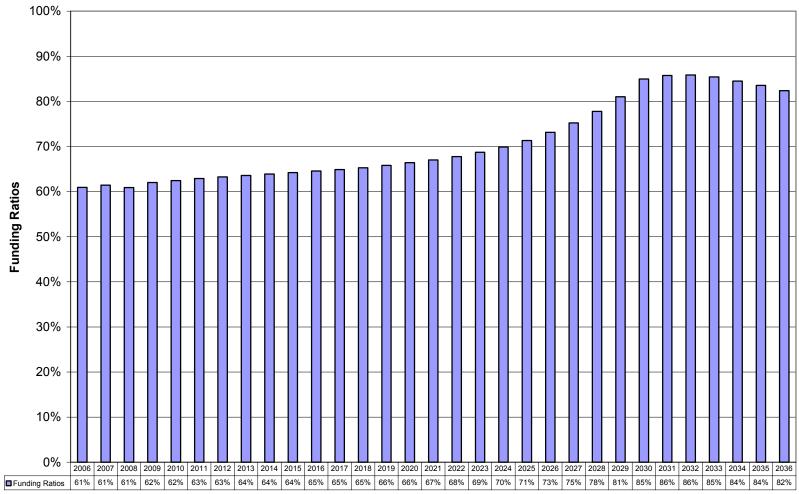
## **Projected Contribution Amounts**





1.5(b) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

## **Projected Funding Ratios**



Fiscal Year Ending June 30



### **1.5(b)** Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

#### State of Alaska TRS

Financial Projections (in Thousands)

	Inves	tment Return			i manetai i	rojections (in								
		Valuation Am						Amounts Duri	<u> </u>				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
2006	 3,958,939	 6,498,556	60.92%	 (2,539,617)	 560,782	 21.00%	 117,764	48,732	 166,496	405,560	(239,064)	 316,947	 9,455	4,046,277
2007	4,046,277	6,589,243	61.41%	(2,542,965)	572,638	26.00%	148,886	49,762	198,648	433,026	(234,378)	324,341	9,455	4,145,695
2008	4,145,695	6,809,690	60.88%	(2,663,994)	578,982	42.26%	244,678	46,615	291,292	453,022	(161,730)	335,481	46,872	4,366,318
2009	4,366,318	7,042,291	62.00%	(2,675,973)	592,567	41.75%	247,397	44,993	292,390	478,090	(185,700)	352,713	2,273	4,535,604
2010	4,535,604	7,265,509	62.43%	(2,729,904)	602,663	43.38%	261,446	42,892	304,338	502,829	(198,491)	366,162	0	4,703,275
2011	4,703,275	7,478,292	62.89%	(2,775,017)	611,638	42.84%	262,050	40,669	302,719	527,342	(224,623)	378,938	0	4,857,590
2012	4,857,590	7,680,370	63.25%	(2,822,780)	621,360	43.00%	267,213	38,587	305,800	548,569	(242,769)	390,935	0	5,005,757
2013	5,005,757	7,873,739	63.58%	(2,867,982)	632,745	43.42%	274,752	36,867	311,620	577,373	(265,753)	402,230	0	5,142,233
2014	5,142,233	8,049,998	63.88%	(2,907,765)	641,337	44.01%	282,276	34,786	317,062	600,769	(283,708)	412,763	0	5,271,289
2015	5,271,289	8,208,166	64.22%	(2,936,877)	646,497	44.47%	287,471	32,065	319,536	625,223	(305,687)	422,522	0	5,388,123
2016	5,388,123	8,344,813	64.57%	(2,956,690)	651,050	44.76%	291,423	29,229	320,653	642,947	(322,294)	431,489	0	5,497,318
2017	5,497,318	8,472,826	64.88%	(2,975,508)	665,315	45.25%	301,066	27,791	328,856	664,326	(335,469)	439,965	0	5,601,814
2018	5,601,814	8,582,456	65.27%	(2,980,642)	674,689	46.80%	315,753	25,630	341,384	684,604	(343,220)	448,272	0	5,706,866
2019	5,706,866	8,673,836	65.79%	(2,966,970)	682,380	47.18%	321,980	23,462	345,442	705,921	(360,479)	456,241	0	5,802,628
2020	5,802,628	8,739,547	66.40%	(2,936,919)	681,050	48.14%	327,830	20,181	348,011	724,915	(376,904)	463,478	0	5,889,202
2021	5,889,202	8,787,340	67.02%	(2,898,139)	690,931	48.64%	336,081	18,547	354,628	744,528	(389,900)	470,094	0	5,969,397
2022	5,969,397	8,811,474	67.75%	(2,842,077)	698,202	50.93%	355,561	16,484	372,045	759,419	(387,374)	476,813	0	6,058,835
2023	6,058,835	8,818,324	68.71%	(2,759,489)	708,571	52.06%	368,873	14,991	383,864	767,346	(383,482)	484,349	0	6,159,702
2024	6,159,702	8,814,508	69.88%	(2,654,806)	719,306	54.00%	388,427	13,694	402,121	788,475	(386,355)	492,554	0	6,265,901
2025	6,265,901	8,783,001	71.34%	(2,517,100)	725,870	55.84%	405,322	11,915	417,237	806,179	(388,942)	501,211	0	6,378,170
2026	6,378,170	8,720,156	73.14%	(2,341,986)	727,567	57.49%	418,282	9,398	427,680	818,055	(390,375)	510,415	0	6,498,210
2027	6,498,210	8,637,124	75.24%	(2,138,914)	740,023	59.06%	437,081	8,130	445,211	825,015	(379,804)	520,746	0	6,639,152
2028	6,639,152	8,538,095	77.76%	(1,898,943)	758,842	62.04%	470,774	7,355	478,129	831,043	(352,914)	533,461	0	6,819,698
2029	6,819,698	8,416,911	81.02%	(1,597,213)	769,624	64.36%	495,292	5,542	500,834	855,178	(354,344)	548,298	0	7,013,653
2030	7,013,653	8,256,894	84.94%	(1,243,242)	776,368	27.55%	213,855	4,398	218,253	853,999	(635,746)	552,921	0	6,930,828
2031	6,930,828	8,082,619	85.75%	(1,151,791)	786,766	19.20%	151,052	3,637	154,688	853,003	(698,314)	543,559	0	6,776,072
2032	6,776,072	7,894,137	85.84%	(1,118,064)	799,312	14.03%	112,163	3,291	115,454	848,470	(733,017)	529,388	0	6,572,444
2033	6,572,444	7,693,203	85.43%	(1,120,759)	810,973	9.41%	76,350	2,914	79,265	847,858	(768,594)	511,150	0	6,315,001
2034	6,315,001	7,474,835	84.48%	(1,159,834)	821,473	10.30%	84,624	2,462	87,086	847,119	(760,034)	490,257	0	6,045,224
2035	6,045,224	7,236,452	83.54%	(1,191,228)	829,846	9.08%	75,322	1,782	77,103	834,978	(757,875)	468,088	0	5,755,438
2036	5,755,438	6,988,644	82.35%	(1,233,206)	838,185	10.11%	84,769	1,222	85,991	821,893	(735,901)	445,069	0	5,464,606
				,							,			



## 1.5(c) Actuarial Projections – Projections at Current Rate Based on DB Only Payroll After July 1, 2006

## **Key Assumptions**

• All assumptions and methods are the same as Section 1.5(a), except adopted contribution rate is maintained at the FY08 level for all future years

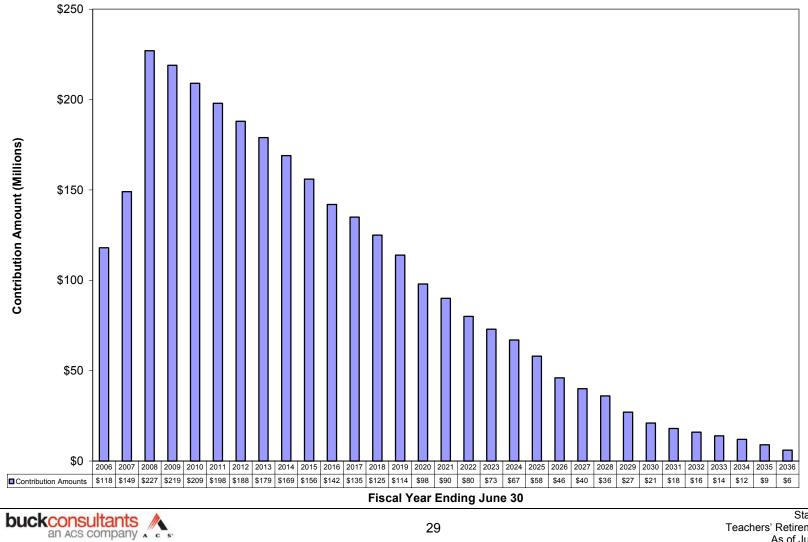
#### Observations

- System funding deteriorates rapidly
- System runs out of assets by 2028



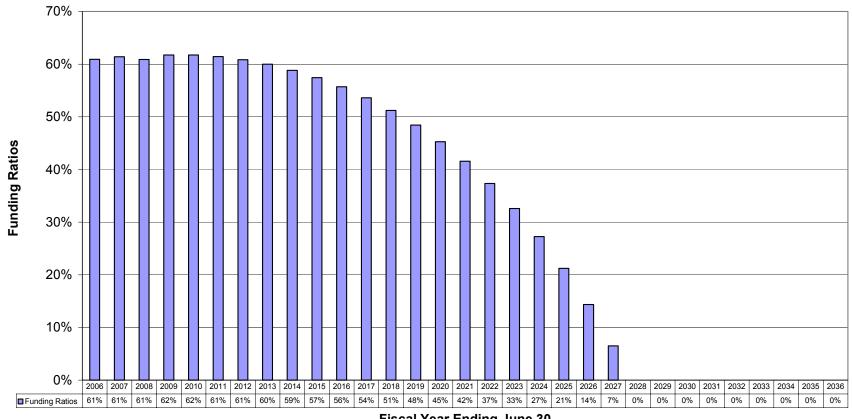
## 1.5(c) Actuarial Projections – Projections at Current Rate Based on DB Only Payroll After July 1, 2006 (continued)

## **Contribution Amounts**



## 1.5(c) Actuarial Projections – Projections at Current Rate Based on DB Only Payroll After July 1, 2006 (continued)

## **Funding Ratio**



**Fiscal Year Ending June 30** 



#### **1.5(c)** Actuarial Projections – Projections at Current Rate Based on DB Only Payroll After July 1, 2006 (continued)

	Invest	tment Return	8 25%		Financial P	rojections (in	Thousands)							
	IIIVES		ounts on July	y 1	Flow Amounts During Following 12 Months									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	Gain 9,455 9,455 46,872 2,273 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Actuarial Assets
2006	3,958,939	6,498,556	 60.92%	(2,539,617)	560,782	21.00%	 117,764	48,732	 166,496	405,560	(239,064)	 316,947		4,046,277
2007	4,046,277	6,589,243	61.41%	(2,542,965)	572,638	26.00%	148,886	49,762	198,648	433,026	(234,378)	324,341	9,455	4,145,695
2008	4,145,695	6,809,690	60.88%	(2,663,994)	536,417	42.26%	226,690	46,615	273,304	453,022	(179,718)	334,753	46,872	4,347,603
2009	4,347,603	7,042,291	61.74%	(2,694,688)	517,760	42.26%	218,805	44,993	263,799	478,090	(214,291)	350,013	2,273	4,485,598
2010	4,485,598	7,265,509	61.74%	(2,779,911)	493,582	42.26%	208,588	42,892	251,480	502,829	(251,349)	359,899	0	4,594,148
2011	4,594,148	7,478,292	61.43%	(2,884,145)	467,992	42.26%	197,773	40,669	238,442	527,342	(288,900)	367,336	0	4,672,584
2012	4,672,584	7,680,370	60.84%	(3,007,787)	444,041	42.26%	187,652	38,587	226,239	548,569	(322,330)	372,456	0	4,722,709
2013	4,722,709	7,873,739	59.98%	(3,151,029)	424,250	42.26%	179,288	36,867	216,155	577,373	(361,217)	375,019	0	4,736,511
2014	4,736,511	8,049,998	58.84%	(3,313,487)	400,300	42.26%	169,167	34,786	203,953	600,769	(396,817)	374,718	0	4,714,412
2015	4,714,412	8,208,166	57.44%	(3,493,754)	368,986	42.26%	155,933	32,065	187,998	625,223	(437,225)	371,261	0	4,648,448
2016	4,648,448	8,344,813	55.70%	(3,696,365)	336,357	42.26%	142,144	29,229	171,374	642,947	(471,573)	364,430	0	4,541,305
2017	4,541,305	8,472,826	53.60%	(3,931,522)	319,800	42.26%	135,147	27,791	162,938	664,326	(501,387)	354,385	0	4,394,303
2018	4,394,303	8,582,456	51.20%	(4,188,153)	294,942	42.26%	124,642	25,630	150,273	684,604	(534,331)	340,926	0	4,200,897
2019	4,200,897	8,673,836	48.43%	(4,472,939)	269,987	42.26%	114,097	23,462	137,558	705,921	(568,362)	323,594	0	3,956,129
2020	3,956,129	8,739,547	45.27%	(4,783,418)	232,228	42.26%	98,140	20,181	118,320	724,915	(606,595)	301,854	0	3,651,388
2021	3,651,388	8,787,340	41.55%	(5,135,952)	213,429	42.26%	90,195	18,547	108,742	744,528	(635,786)	275,533	0	3,291,135
2022	3,291,135	8,811,474	37.35%	(5,520,338)	189,686	42.26%	80,161	16,484	96,645	759,419	(662,774)	244,721	0	2,873,082
2023	2,873,082	8,818,324	32.58%	(5,945,242)	172,512	42.26%	72,904	14,991	87,895	767,346	(679,451)	209,557	0	2,403,188
2024	2,403,188	8,814,508	27.26%	(6,411,320)	157,581	42.26%	66,594	13,694	80,288	788,475	(708,188)	169,629	0	1,864,629
2025	1,864,629	8,783,001	21.23%	(6,918,372)	137,116	42.26%	57,945	11,915	69,861	806,179	(736,319)	124,061	0	1,252,371
2026	1,252,371	8,720,156	14.36%	(7,467,785)	108,145	42.26%	45,702	9,398	55,100	818,055	(762,955)	72,472	0	561,888
2027	561,888	8,637,124	6.51%	(8,075,236)	93,559	42.26%	39,538	8,130	47,668	825,015	(777,346)	14,926	0	0
2028	0	8,538,095	0.00%	(8,538,095)	84,638	42.26%	35,768	7,355	43,123	831,043	(787,920)	0	0	0
2029	0	8,416,911	0.00%	(8,416,911)	63,777	42.26%	26,952	5,542	32,494	855,178	(822,683)	0	0	0
2030	0	8,256,894	0.00%	(8,256,894)	50,612	42.26%	21,389	4,398	25,787	853,999	(828,212)	0	0	0
2031	0	8,082,619	0.00%	(8,082,619)	41,848	42.26%	17,685	3,637	21,322	853,003	(831,681)	0	0	0
2032	0	7,894,137	0.00%	(7,894,137)	37,867	42.26%	16,003	3,291	19,293	848,470	(829,177)	0	0	0
2033	0	7,693,203	0.00%	(7,693,203)	33,538	42.26%	14,173	2,914	17,088	847,858	(830,771)	0	0	0
2034	0	7,474,835	0.00%	(7,474,835)	28,327	42.26%	11,971	2,462	14,433	847,119	(832,687)	0	0	0
2035	0	7,236,452	0.00%	(7,236,452)	20,503	42.26%	8,665	1,782	10,446	834,978	(824,532)	0	0	0
2036	0	6,988,644	0.00%	(6,988,644)	14,061	42.26%	5,942	1,222	7,164	821,893	(814,729)	0	0	0





# 1.5(d) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll After July 1, 2006

# **Key Assumptions**

 All assumptions and methods are the same as Section 1.5(a), except adopted contribution rate is maintained at the FY08 level for all future years, and a payroll growth assumption of 4.25% per year is used to amortize the unfunded actuarial accrued liability throughout the projection period.

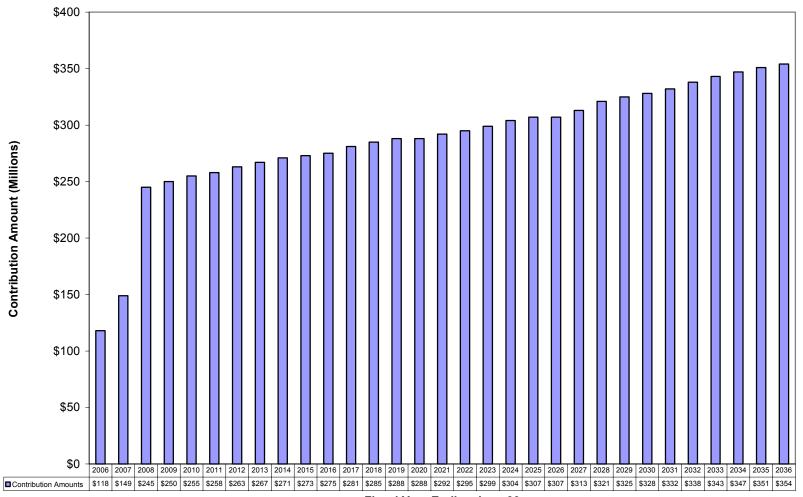
# Observations

- System funding remains relatively stable
- Funding ratios improve slightly over time



1.5(d) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

# **Contribution Amounts**



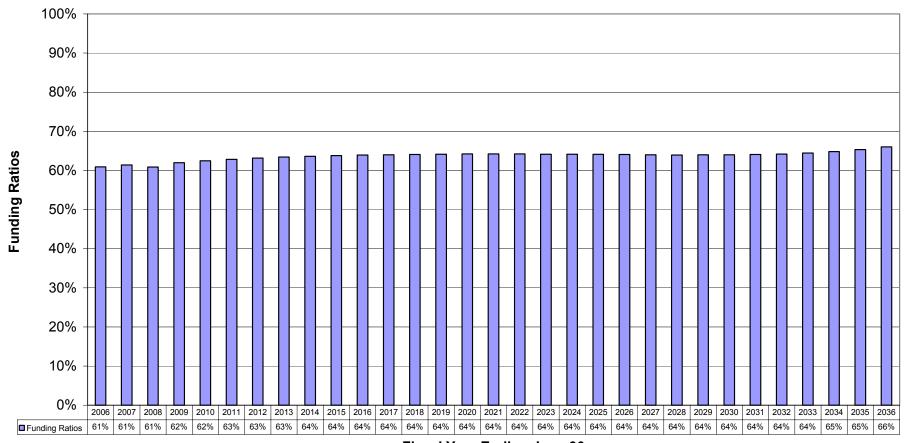




Valuation Results

# 1.5(d) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

# **Funding Ratio**

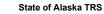


Fiscal Year Ending June 30



# 1.5(d) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll After July 1, 2006 (continued)

					Sta	ate of Alaska I	RS							
					Financial P	rojections (in	Thousands)							
	Invest	tment Return												
A = = = =	Actuarial		nounts on July		Tatal	Franklassan		Amounts Durin	0 0		Net		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	Contribs	Investment Earnings	Asset Gain 	Actuarial Assets 
2006	3,958,939	6,498,556	60.92%	(2,539,617)	560,782	21.00%	117,764	48,732	166,496	405,560	(239,064)	316,947	9,455	4,046,277
2007	4,046,277	6,589,243	61.41%	(2,542,965)	572,638	26.00%	148,886	49,762	198,648	433,026	(234,378)	324,341	9,455	4,145,695
2008	4,145,695	6,809,690	60.88%	(2,663,994)	578,982	42.26%	244,678	46,615	291,292	453,022	(161,730)	335,481	46,872	4,366,318
2009	4,366,318	7,042,291	62.00%	(2,675,973)	592,567	42.26%	250,419	44,993	295,412	478,090	(182,678)	352,835	2,273	4,538,749
2010	4,538,749	7,265,509	62.47%	(2,726,760)	602,663	42.26%	254,685	42,892	297,578	502,829	(205,252)	366,148	0	4,699,645
2011	4,699,645	7,478,292	62.84%	(2,778,647)	611,638	42.26%	258,478	40,669	299,147	527,342	(228,196)	378,494	0	4,849,944
2012	4,849,944	7,680,370	63.15%	(2,830,427)	621,360	42.26%	262,587	38,587	301,174	548,569	(247,395)	390,118	0	4,992,667
2013	4,992,667	7,873,739	63.41%	(2,881,072)	632,745	42.26%	267,398	36,867	304,265	577,373	(273,107)	400,853	0	5,120,412
2014	5,120,412	8,049,998	63.61%	(2,929,586)	641,337	42.26%	271,029	34,786	305,815	600,769	(294,954)	410,508	0	5,235,966
2015	5,235,966	8,208,166	63.79%	(2,972,200)	646,497	42.26%	273,210	32,065	305,275	625,223	(319,949)	419,031	0	5,335,048
2016	5,335,048	8,344,813	63.93%	(3,009,765)	651,050	42.26%	275,134	29,229	304,363	642,947	(338,584)	426,452	0	5,422,916
2017	5,422,916	8,472,826	64.00%	(3,049,911)	665,315	42.26%	281,162	27,791	308,953	664,326	(355,373)	433,022	0	5,500,565
2018	5,500,565	8,582,456	64.09%	(3,081,891)	674,689	42.26%	285,124	25,630	310,754	684,604	(373,850)	438,681	0	5,565,396
2019	5,565,396	8,673,836	64.16%	(3,108,440)	682,380	42.26%	288,374	23,462	311,836	705,921	(394,085)	443,211	0	5,614,522
2020	5,614,522	8,739,547	64.24%	(3,125,025)	681,050	42.26%	287,812	20,181	307,992	724,915	(416,923)	446,341	0	5,643,940
2021	5,643,940	8,787,340	64.23%	(3,143,401)	690,931	42.26%	291,987	18,547	310,534	744,528	(433,993)	448,078	0	5,658,024
2022	5,658,024	8,811,474	64.21%	(3,153,450)	698,202	42.26%	295,060	16,484	311,544	759,419	(447,875)	448,678	0	5,658,827
2023	5,658,827	8,818,324	64.17%	(3,159,497)	708,571	42.26%	299,442	14,991	314,433	767,346	(452,913)	448,541	0	5,654,455
2024	5,654,455	8,814,508	64.15%	(3,160,053)	719,306	42.26%	303,979	13,694	317,673	788,475	(470,803)	447,457	0	5,631,109
2025	5,631,109	8,783,001	64.11%	(3,151,892)	725,870	42.26%	306,753	11,915	318,668	806,179	(487,511)	444,855	0	5,588,452
2026	5,588,452	8,720,156	64.09%	(3,131,703)	727,567	42.26%	307,470	9,398	316,868	818,055	(501,188)	440,783	0	5,528,048
2027	5,528,048	8,637,124	64.00%	(3,109,077)	740,023	42.26%	312,734	8,130	320,864	825,015	(504,151)	435,680	0	5,459,577
2028	5,459,577	8,538,095	63.94%	(3,078,519)	758,842	42.26%	320,687	7,355	328,042	831,043	(503,001)	430,077	0	5,386,653
2029	5,386,653	8,416,911	64.00%	(3,030,258)	769,624	42.26%	325,243	5,542	330,785	855,178	(524,393)	423,196	0	5,285,456
2030	5,285,456	8,256,894	64.01%	(2,971,438)	776,368	42.26%	328,093	4,398	332,491	853,999	(521,508)	414,964	0	5,178,913
2031	5,178,913	8,082,619	64.07%	(2,903,706)	786,766	42.26%	332,487	3,637	336,124	853,003	(516,879)	406,362	0	5,068,396
2032	5,068,396	7,894,137	64.20%	(2,825,741)	799,312	42.26%	337,789	3,291	341,080	848,470	(507,390)	397,628	0	4,958,633
2033	4,958,633	7,693,203	64.45%	(2,734,570)	810,973	42.26%	342,717	2,914	345,632	847,858	(502,227)	388,781	0	4,845,187
2034	4,845,187	7,474,835	64.82%	(2,629,648)	821,473	42.26%	347,154	2,462	349,616	847,119	(497,503)	379,613	0	4,727,296
2035	4,727,296	7,236,452	65.33%	(2,509,156)	829,846	42.26%	350,693	1,782	352,475	834,978	(482,503)	370,493	0	4,615,286
2036	4,615,286	6,988,644	66.04%	(2,373,358)	838,185	42.26%	354,217	1,222	355,439	821,893	(466,454)	361,901	0	4,510,733





Valuation Results

# 1.5(e) Actuarial Projections – Effect of Economic Scenarios Based on DB Only Payroll After July 1, 2006

## **Key Assumptions**

- All assumptions and methods are the same as Section 1.5(a) except:
  - The actuarially calculated contribution rate with a two-year lag is adopted in each year, beginning in FY08
  - 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

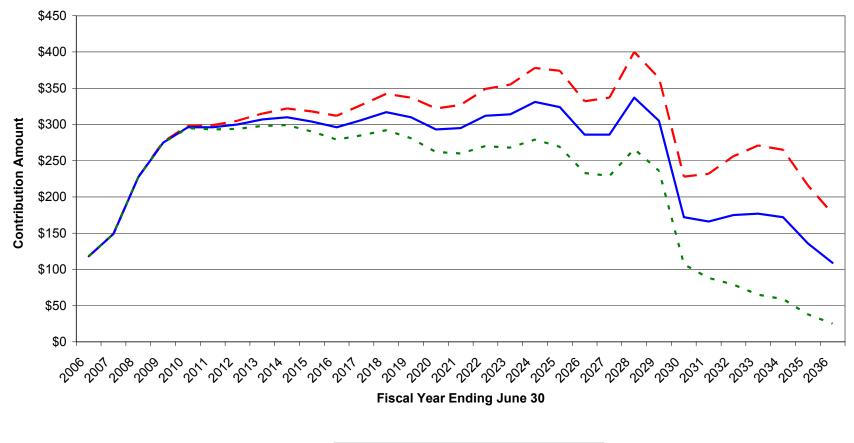
### Observations

• 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(e) Actuarial Projections – Projections at Calculated Rate Effect of Economic Scenarios Based on DB Only Payroll After July 1, 2006 (continued)

# **Contribution Amounts**



- Pessimistic - Base Case - - Optimistic



# 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, or terminate their services, their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, which have been adopted to guide the sponsor in funding the plan in a reasonable and acceptable manner, are described in Section 2.3.



# 2.1 Summary of the Alaska Teachers' Retirement System

### (1) Effective Date

July 1, 1955, with amendments through July 1, 2005. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the TRS before July 1, 1990, are eligible for different benefits than members hired after June 30, 1990.

### (2) Administration of Plan

The Commissioner of Administration is responsible for administering the system. The Attorney General represents the system in legal proceedings.

For the Fiscal Year ending June 30, 2005, the Teachers' Retirement Board prescribed policies and adopted regulations and performed other activities necessary to carry out the provisions of the system. The Alaska State Pension Investment Board, Department of Revenue, Treasury Division was responsible for investing TRS funds.

Subsequent to the date of this valuation, Senate Bill 141, enacted as Chapter 9, 2005 Session laws of Alaska, replaced the Teachers' Retirement Board and the Alaska State Pension Investment Board with the Alaska Retirement Management Board.

### (3) Employers Included

Currently, there are 58 employers participating in the TRS, including the State of Alaska, 53 school districts, and four other eligible organizations.

# (4) Membership

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

- certificated full-time and part-time elementary and secondary teachers, certificated school nurses, and certificated employees in positions requiring teaching certificates;
- positions requiring a teaching certificate as a condition of employment in the Department of Education and Early Development and the Department of Labor and Workforce Development;
- University of Alaska full-time and part-time teachers, and full-time administrative employees in positions requiring academic standing if approved by the TRS administrator;
- certain full-time or part-time teachers of Alaska Native language or culture who have elected to be covered under the TRS;
- members on approved sabbatical leave under AS 14.20.310;
- certain State legislators who have elected to be covered under the TRS; and
- a teacher who has filed for worker's compensation benefits due to an on the job assault and who, as a result of the physical injury, is placed on leave without pay.

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

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

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

# (5) Credited Service

TRS members receive a year of membership credit if they work a minimum of 172 days during the school year (July 1 through June 30 of the following year). Fractional credit is determined based on the number of days worked. Part-time members who work at least 50% of full-time receive membership credit for each day in proportion to full-time service. Credit is granted for all Alaskan public school service.

Members may claim other types of service, including:

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

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

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

Members whose survivors are receiving occupational death benefits continue to earn TRS credit while occupational survivor benefits are being paid.

# (6) Employer Contributions

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

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

The consolidated rate is a uniform rate for all participating employers (less the value of members' contributions).

The past service rate is a uniform rate for all participating employers to amortize the unfunded past service liability with payments that are level as a percentage of pay over fixed 25-year periods.

Employer rates cannot be less than the consolidated normal cost rate.

### (7) Member Contributions

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

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

<u>1% Supplemental Contributions:</u> Members who joined the system before July 1, 1982, and elected to participate in the supplemental contributions provision, are required to contribute an additional 1% of their salaries. Supplemental contributions are deducted from gross salaries after federal income taxes are withheld. Under the supplemental provision, an eligible spouse or dependent child will receive a survivor's allowance or spouse's pension if the member dies (see (12) below).

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

<u>Refund of Contributions:</u> Terminated members may receive refunds of their member contribution accounts, which includes their mandatory contributions, indebtedness payments, and interest earned. Terminated members' accounts may be attached to satisfy claims under Alaska Statute 09.38.065, federal income tax levies, and valid Qualified Domestic Relations Orders.

<u>Reinstatement of Contributions:</u> Refunded accounts and the corresponding TRS service may be reinstated upon reemployment in the TRS prior to July 1, 2010. 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.



Basis of the Valuation

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

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

### <u>Eligibility:</u>

- (a) Members, including deferred vested members, are eligible for normal retirement at age  $60^3$ , or early retirement at age 55, if they have at least:
  - (i) eight years of paid-up membership service;
  - (ii) 15 years of paid-up creditable service, the last five years of which are membership service, and they were first hired under the TRS before July 1, 1975;
  - (iii) five years of paid-up membership service and three years of paid-up Alaska Bureau of Indian Affairs service;
  - (iv) 12 years of combined part-time and full-time paid-up membership service;
  - (v) two years of paid-up membership service if they are vested in the Public Employees' Retirement System (PERS); or
  - (vi) one year of paid-up membership service if they are retired from the PERS.
- (b) Members may retire at any age when they have:
  - (i) 25 years of paid-up creditable service, the last five years of which are membership service;
  - (ii) 20 years of paid-up membership service;
  - (iii) 20 years of combined paid-up membership and Alaska Bureau of Indian Affairs service, the last five years of which are membership service; or
  - (iv) 20 years of combined paid-up part-time and full-time membership service.

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

<sup>&</sup>lt;sup>3</sup> Members participating before July 1, 1990, are eligible for normal retirement at age 55 or early retirement at age 50.



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

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

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

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

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

### (9) Reemployment of Retired Members

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

Under the Standard Option, retirement and retiree healthcare benefits are suspended while retired members are reemployed under the TRS. During reemployment, members earn additional TRS service and contributions are withheld from their wages.

If an Alaska school district has established that there is a shortage of teachers in a particular discipline or specialty and has passed a resolution to that effect, a retiree returning to work in a permanent full-time or part-time TRS position with that school district may exercise the Waiver Option. The Waiver Option allows a retiree who retired under a Normal Retirement to reemploy with a TRS employer and continue to receive a retirement benefit by signing a waiver of participation in the TRS. The Waiver Option first became effective July 1, 2005 and applies to reemployment periods after that date. The Waiver Option is no longer available after June 30, 2009.

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

### Basis of the Valuation

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

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

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

Employers make contributions to the unfunded liability of the plan on behalf of rehired retired members at the rate the employer is making contributions to the unfunded liability of the plan for other members.

### (10) Postemployment Healthcare Benefits

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

### (11) Disability Benefits

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

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

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

### (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 supplemental contributions provision or occupational and nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

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

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

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

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

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

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

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

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

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

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who were first hired before July 1, 1990, if the CPI increases and the funding ratio is at least 105%.

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. The following benefit recipients are eligible:

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

# 2.2(a) Participant Census Information – Total TRS

As of June 30	2001	2002	2003	2004	2005
Active Members					
(1) Number	9,815	9,690	9,873	9,688	9,656
(2) Average Age	44.19	44.15	44.28	44.56	44.76
(3) Average Credited Service	10.62	10.33	10.39	10.65	10.58
(4) Average Annual Earnings	\$ 50,544	\$ 52,535	\$ 53,948	\$ 53,925	\$ 55,493
(5) Number Vested	5,499	5,224	5,289	5,174	5,254
(6) Percent Who Are Vested	56.0%	53.9%	53.6%	53.4%	54.4%
Retirees and Beneficiaries					
(1) Number	7,333	7,804	8,312	8,707	9,020
(2) Average Age	63.17	63.30	63.60	63.95	64.42
(3) Average Monthly Benefit:					
Base	\$ 1,903	\$ 1,936	\$ 1,983	\$ 1,970	\$ 1,968
C.O.L.A.	119	122	125	122	122
P.R.P.A.	448	474	455	458	457
Adjustment	0	0	0	0	0
Total	2,470	2,532	2,563	2,550	2,547
Vested Terminations					
(1) Number	767	783	708	724	826
(2) Average Age	49.15	48.97	48.57	48.83	49.13
(3) Average Monthly Benefit	\$ 1,217	\$ 1,129	\$ 974	\$ 993	\$ 1,072
Non-Vested Terminations With A	Account Balar	nces			
(1) Number	2,207	2,447 <sup>4</sup>	2,327	2,746 <sup>4</sup>	2,874
(2) Average Account Balance	\$ 10,142	\$ 10,964	\$ 11,916	\$11,710	\$ 11,684

<sup>4</sup> Includes deceased participants with account balances.

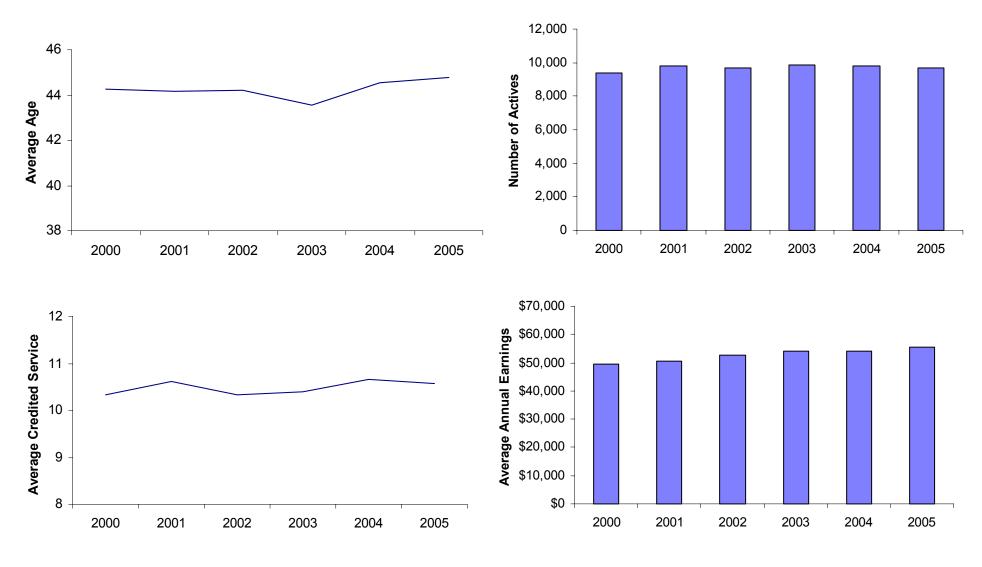


# 2.2(a) Participant Census Information – Total TRS (continued)

As of June 30, 2005	Tier 1	Tier 2	Total
Retirees and Beneficiaries			
(1) Number	8,794	226	9,020
(2) Average Age	64.50	61.52	64.42
(3) Average Monthly Benefit:			
Base	\$ 1,991	\$ 1,080	\$ 1,968
C.O.L.A.	124	29	122
P.R.P.A.	468	37	457
Adjustment	0	0	0
Total	2,583	1,146	2,547



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



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# 2.2(b) Distribution of Active Participants

	Number of	Total Annual	Average Annual	Years of	Number of	Total Annual	Average Annual
Age	People	Earnings	Earnings	Service	People	Earnings	Earnings
0 – 19	0	\$ 0	\$ 0	0	147	\$ 3,023,327	\$ 20,567
20 – 24	110	4,047,019	36,791	1	660	27,540,237	41,728
25 – 29	751	30,474,950	40,579	2	564	25,050,543	44,416
30 – 34	1,133	51,057,036	45,064	3	693	31,369,687	45,267
35 – 39	1,258	63,854,612	50,759	4	554	25,689,562	46,371
40 – 44	1,347	73,638,398	54,668	0 – 4	2,618	112,673,356	43,038
45 – 49	1,653	97,125,621	58,757	5 – 9	2,496	127,106,791	50,924
50 – 54	1,842	113,353,695	61,538	10 – 14	1,705	101,278,568	59,401
55 – 59	1,139	73,256,267	64,316	15 – 19	1,371	89,488,434	65,272
60 – 64	341	23,417,364	68,673	20 – 24	942	65,810,182	69,862
65 – 69	65	4,374,139	67,294	25 – 29	380	27,894,977	73,408
70 – 74	14	1,056,384	75,456	30 – 34	110	8,501,216	77,284
75+	3	181,098	60,366	35 – 39	32	2,828,227	88,382
				40+	2	254,832	127,416
Total	9,656	\$535,836,583	\$ 55,493	Total	9,656	\$535,836,583	\$ 55,493

#### Annual Earnings by Age

# Annual Earnings by Credited Service

#### Years of Credited Service by Age

Years of Service													
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total			
0 – 19	0	0	0	0	0	0	0	0	0	0			
20 – 24	110	0	0	0	0	0	0	0	0	110			
25 – 29	654	97	0	0	0	0	0	0	0	751			
30 – 34	535	553	45	0	0	0	0	0	0	1,133			
35 – 39	345	531	325	57	0	0	0	0	0	1,258			
40 – 44	271	380	378	271	47	0	0	0	0	1,347			
45 – 49	252	352	350	379	281	39	0	0	0	1,653			
50 – 54	252	317	333	390	335	190	25	0	0	1,842			
55 – 59	142	201	208	214	199	105	59	11	0	1,139			
60 – 64	43	52	54	54	63	36	23	15	1	341			
65 – 69	9	12	11	4	14	8	3	4	0	65			
70 – 74	4	1	1	1	2	2	0	2	1	14			
75+	1	0	0	1	1	0	0	0	0	3			
Total	2,618	2,496	1,705	1,371	942	380	110	32	2	9,656			



# 2.2(c) Schedule of Active Member Valuation Data

Valuation		Annual Earnings	Annual Average	Percent Increase/ (Decrease) in Average	Number of Participating
Date	Number	(000's)	Earnings	Earnings	Employers
June 30, 2005	9,656	\$ 535,837	\$ 55,493	2.9%	58
June 30, 2004	9,688	522,421	53,925	0.0%	58
June 30, 2003	9,873	532,630	53,948	2.7%	57
June 30, 2002	9,690	509,437	52,535	3.9%	57
June 30, 2001	9,815	496,188	50,544	1.8%	60
June 30, 1999	9,396	466,414	49,640	(2.1)%	61
June 30, 1998	9,262	469,433	50,684	(0.4)%	61
June 30, 1997	9,164	466,455	50,901	1.3%	61
June 30, 1996	9,259	465,182	50,241	(0.5)%	61
June 30, 1995	9,452	477,205	50,487	0.6%	61



# 2.2(d) Statistics on New Benefit Recipients

During the Year Ending June 30	2001		2002		2003	 2004		2005	
Service									
(1) Number		967	529		548	446		393	
(2) Average Age at Commencement	53	3.88	54.80		55.13	55.09		56.43	
(3) Average Monthly Benefit	\$2,	303 \$	2,556	\$	2,751	\$ 2,384	\$	2,261	
Survivor (including surviving spo	use an	d QDROs	5						
(1) Number		70	50		43	35		46	
(2) Average Age at Commencement	60	).66	65.09		60.60	58.30		60.88	
(3) Average Monthly Benefit	\$ 1,	286 \$	1,270	\$	1,242	\$ 1,050	\$	1,263	
Disability									
(1) Number		20	10		8	10		7	
(2) Average Age at Commencement	50	).78	48.28		47.76	49.85		53.64	
(3) Average Monthly Benefit	\$3,	068 \$	2,800	\$	3,635	\$ 2,887	\$	2,627	
Total									
(1) Number	1,	057	589		599	491		446	
(2) Average Age at Commencement	54	1.25	55.56		55.42	55.21		56.57	
(3) Average Monthly Benefit	\$ 2,	238 \$	2,451	\$	2,654	\$ 2,299	\$	2,164	



				Years	of Cr	edited S	Servic	е			
	 0 - 4	5 - 9	1	0 - 14	1	5 - 19	2	0 - 24	2	5 - 29	30+
Period 7/1/04 – 6/30/05:* Average Monthly Benefit Number of Recipients	\$ 1,287 119	\$ 1,106 24	\$	1,575 33	\$	2,255 69	\$	2,932 105	\$	3,534 31	\$ 4,018 16
Period 7/1/03- 6/30/04: Average Monthly Benefit Number of Recipients	\$ 251 21	\$ 896 51	\$	1,243 75	\$	2,044 85	\$	2,782 178	\$	3,640 64	\$ 4,860 17
Period 7/1/02- 6/30/03: Average Monthly Benefit Number of Recipients	\$ 236 16	\$ 899 40	\$	1,153 69	\$	2,350 91	\$	2,835 264	\$	3,969 87	\$ 5,133 32
Period 7/1/01- 6/30/02: Average Monthly Benefit Number of Recipients	\$ 532 4	\$ 795 36	\$	1,168 62	\$	1,706 78	\$	2,455 180	\$	3,126 137	\$ 3,915 92
Period 7/1/99- 6/30/01: Average Monthly Benefit Number of Recipients	\$ 1,514 2	\$ 1,021 33	\$	1,488 101	\$	1,935 237	\$	2,435 374	\$	2,551 201	\$ 2,864 109
Period 7/1/98- 6/30/99: Average Monthly Benefit Number of Recipients	\$ 1,230 23	\$ 820 43	\$	1,152 67	\$	1,691 81	\$	2,510 176	\$	3,285 153	\$ 3,756 55
Period 7/1/97- 6/30/98: Average Monthly Benefit Number of Recipients	\$ 1,051 26	\$ 850 51	\$	1,095 80	\$	1,842 105	\$	2,590 240	\$	3,443 154	\$ 4,280 57
Period 7/1/96- 6/30/97: Average Monthly Benefit Number of Recipients	\$ 996 19	\$ 828 42	\$	1,042 71	\$	1,692 77	\$	2,493 151	\$	3,353 153	\$ 3,812 52
Period 7/1/95- 6/30/96: Average Monthly Benefit Number of Recipients	\$ 952 15	\$ 836 24	\$	1,145 40	\$	1,731 31	\$	2,389 115	\$	3,138 86	\$ 3,317 30

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

\*Does not include beneficiaries.

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

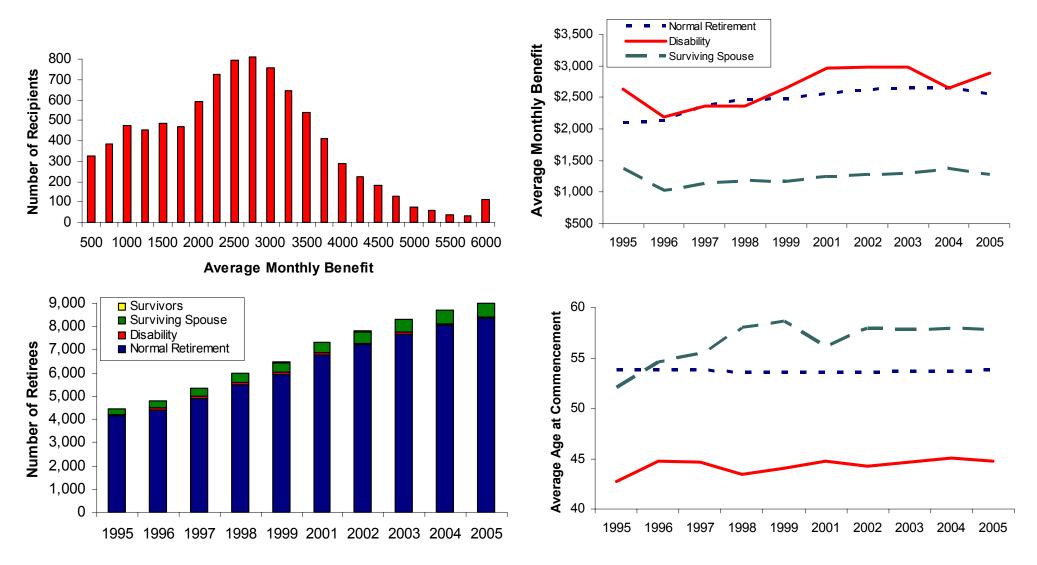


Basis of the Valuation

# 2.2(f) Statistics on All Benefit Recipients

As of June 30	2001	2002	2003	2004	2005
Service					
(1) Number, Fiscal Year Start	5,924	6,754	7,201	7,680	8,052
(2) Net Change	830	447	479	372	299
(3) Number, Fiscal Year End	6,754	7,201	7,680	8,052	8,351
(4) Average Age at Commencement	53.52	53.53	53.64	53.68	53.77
(5) Average Current Age	63.12	63.27	63.50	63.85	64.32
(6) Average Monthly Benefit	\$ 2,549	\$ 2,618	\$ 2,648	\$ 2,649	\$ 2,537
Surviving Spouse's Benefits (Includes	GDROS)				
(1) Number, Fiscal Year Start	414	469	501	549	576
(2) Net Change	55	32	48	27	26
(3) Number, Fiscal Year End	469	501	549	576	602
(4) Average Age at Commencement	56.06	57.86	57.78	57.86	57.75
(5) Average Current Age	66.48	66.88	66.96	68.12	67.31
(6) Average Monthly Benefit	\$ 1,246	\$ 1,279	\$ 1,297	\$ 1,367	\$ 1,270
Survivor's Benefits (other than spous	e's)				
(1) Number, Fiscal Year Start	37	9 <sup>5</sup>	17	1	3
(2) Net Change	(28)	8	(16)	2	(2)
(3) Number, Fiscal Year End	<b>9</b> <sup>5</sup>	17	1	3	1
(4) Average Age at Commencement	49.80	46.06	49.77	47.59	35.52
(5) Average Current Age	54.66	53.71	51.35	52.09	35.77
(6) Average Monthly Benefit	\$ 545	\$ 549	\$ 1,113	\$ 581	\$ 448
Disabilities					
(1) Number, Fiscal Year Start	111	101	85	82	76
(2) Net Change	(10)	(16)	(3)	(6)	(10)
(3) Number, Fiscal Year End	101	85	82	76	66
(4) Average Age at					
Commencement	44.72	44.22	44.68	45.09	44.74
(5) Average Current Age	52.04	50.95	51.21	51.12	51.31
(6) Average Monthly Benefit	\$ 2,969 <sup>6</sup>	\$ 2,974 <sup>6</sup>	\$ 2,976 <sup>6</sup>	\$ 2,655 <sup>6</sup>	\$ 2,891
Total Number of	- 000	<b>-</b> 00 -	0.045		
Benefit Recipients	7,333	7,804	8,312	8,707	9,020

<sup>5</sup> Includes surviving dependents only. <sup>6</sup> Includes benefit increases due to dependents.



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



#### Basis of the Valuation

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

	Number of	Total Annual	Average Annual			Years Since	Number of		Total Annual	Α	verage nnual
Age	People	Benefit		Benefit		commencement	People	-	Benefit		enefit
0 – 19	0	\$0	\$	\$ 0		0	401	\$	10,652,739	\$	26,565
20 – 24	0	0		0		1	503		12,687,128		25,223
25 – 29	0	0		0		2	470		11,981,256		25,492
30 – 34	0	0		0		3	630		18,121,298		28,764
35 – 39	5	128,622		25,724		4	370		9,149,399		24,728
40 – 44	33	886,147		26,853		0-4	2,374		62,591,819		26,366
45 – 49	212	5,862,917		27,655		5 – 9	2,723		79,622,096		29,241
50 – 54	837	23,771,713		28,401		10 – 14	1,269		37,513,828		29,562
55 – 59	2,092	58,656,518		28,038		15 – 19	1,487		51,312,859		34,508
60 – 64	2,195	65,471,105		29,827		20 – 24	616		19,761,147		32,080
65 – 69	1,473	45,723,388		31,041		25 – 29	420		11,438,241		27,234
70 – 74	953	29,807,764		31,278		30 – 34	118		3,093,112		26,213
75+	1,220	35,437,976		29,048		35 – 39	13		413,048		31,773
_						40+	0		0		0
Total	9,020	\$265,746,150	\$	29,462		Total	9,020	\$2	65,746,150	\$	29,462

#### Annual Benefit by Age

#### Annual Benefit by Years Since Commencement

#### Years Since Benefit Commencement by Age

					ce Comme					
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	0	0	0	0	0	0	0	0	0	0
30 – 34	0	0	0	0	0	0	0	0	0	0
35 – 39	3	2	0	0	0	0	0	0	0	5
40 – 44	29	4	0	0	0	0	0	0	0	33
45 – 49	153	54	4	0	0	0	1	0	0	212
50 – 54	505	299	30	2	1	0	0	0	0	837
55 – 59	982	826	196	80	6	1	1	0	0	2,092
60 – 64	460	981	381	352	15	5	1	0	0	2,195
65 – 69	149	363	388	461	100	9	3	0	0	1,473
70 – 74	51	132	157	374	197	37	3	2	0	953
75+	42	62	113	218	297	368	109	11	0	1,220
Total	2,374	2,723	1,269	1,487	616	420	118	13	0	9,020

#### Years Since Commencement



Amount of	Number of	Ту	pe of Benefit	t		<b>Option Se</b>	lected	
Monthly Benefit	Recipients	1	2	3	1	2	3	4
\$ 1 \$ 300	143	116	27	0	73	32	28	10
301 – 600	305	235	70	0	170	58	65	12
601 – 900	553	445	108	0	296	120	110	27
901 – 1,200	548	443	105	0	325	125	85	13
1,201 – 1,500	577	489	88	0	328	105	128	16
1,501 – 1,800	585	491	93	1	328	115	126	16
1,801 – 2,100	779	729	41	9	410	154	189	26
2,101 – 2,400	916	872	31	13	497	171	229	19
2,401 – 2,700	974	950	14	10	529	172	245	28
2,701 – 3,000	904	883	13	8	524	134	232	14
3,001 – 3,300	750	735	5	10	450	101	186	13
3,301 – 3,600	593	588	4	1	349	71	161	12
3,601 – 3,900	456	448	2	6	286	48	118	4
3,901 – 4,200	270	266	1	3	156	30	79	5
Over \$4,200	667	661	1	5	389	67	192	19
Totals	9,020	8,351	603	66	5,110	1,503	2,173	234

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

### **Type of Benefit**

### **Option Selected**

- 1. Normal retirement
- 1. Whole Life Annuity
- 2. Survivor payment
- 3. Disability

- 2. 75% Joint and Contingent Annuity
- 3. 50% Joint and Contingent Annuity
- 4. 66 2/3% Joint and Survivor Annuity



2.2(i)	Schedule of Benefit Recipients Added to and Removed from Rolls
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	Ado	led to Rolls	Remove	d from Rolls	Rolls – End of Year		Percent	
Year Ended	No. <sup>7</sup>	Annual Benefits <sup>7</sup>	No. <sup>7</sup>	Annual Benefits <sup>7</sup>	No.	Annual Benefits	Increase in Annual Benefits	Average Annual Benefit
June 30, 2005	446	\$11,243,448	121	\$13,053,612	9,020	\$265,746,150	(0.68)%	\$29,462
June 30, 2004	491	17,867,366	96	5,503,666	8,707	267,556,314	4.84%	30,729
June 30, 2003	599	21,475,421	91	3,377,352	8,312	255,192,614	7.63%	30,702
June 30, 2002	589	24,789,896	118	4,966,397	7,804	237,094,545	9.12%	30,381
June 30, 2001	1,057	39,213,327	210	7,790,727	7,333	217,271,046	16.91%	29,629
June 30, 1999	598	19,014,567	91	2,893,521	6,486	185,848,446	9.50%	28,654
June 30, 1998	674	24,479,595	38	1,380,155	5,979	169,727,400	15.75%	28,387
June 30, 1997	583	29,988,351 <sup>8</sup>	43	2,211,834 <sup>8</sup>	5,343	146,627,960	23.37%	27,443
June 30, 1996	376	8,410,895	32	441,353	4,803	118,851,443	7.19%	24,745
June 30, 1995	368	10,386,432	43	94,443	4,459	110,881,901	10.23%	24,867

<sup>7</sup> Numbers are estimated, and include other internal transfers.
 <sup>8</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 the June 30, 2005 valuation are described below. Unless noted otherwise, these assumptions were recommended by Mercer Human Resource Consulting at the Fall 2000 TRS Board Meeting and adopted by the Board in December 2000. These assumptions were the result of an experience study performed in the Fall of 2000. For this valuation, Buck 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.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

### 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 based on a 4.25% payroll growth assumption. The payroll growth assumption will be reviewed next year to reflect plan changes that become effective after the valuation date. 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 <u>Accrued Liability</u> is calculated at the valuation date as the present value of benefits credited with respect to service to that date.

The <u>Unfunded Liability</u> 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 <u>Past Service Cost.</u>

The <u>Normal Cost</u> 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.



Investment Return / Discount Rate	8.25% per year, compounded annually, net of expenses.
Salary Scale	Inflation – 3.5% per year
	Merit (first 5 years of employment) $-1.5\%$ per year.
	Productivity $-0.5\%$ per year
Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.5% annually.
Mortality	1994 Group Annuity Mortality Basic Table for males and females, 1994 Base Year. All deaths are assumed to result from non-occupational causes.
Total Turnover	Select and ultimate rates based upon the 1997-99 actual withdrawal experience. (See Table 1).
Disability	Incidence rates based upon the 1991-95 actual experience, in accordance with Table 2. Post-disability mortality in accordance with the 1979 Pension Benefit Guaranty Corporation Disability Mortality Table to reflect mortality of those receiving disability benefits under Social Security. All disabilities are assumed to result from non-occupational causes.
Retirement	Retirement rates based upon the 1997-99 actual experience in accordance with Table 3. Deferred vested members are assumed to retire at their earliest retirement date.
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 married 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.
COLA	Of those benefit recipients who are eligible for the COLA, 65% are assumed to remain in Alaska and receive the COLA

### (B) Actuarial Assumptions

### (B) Actuarial Assumptions

Sick Leave	4.7 days of unused sick leave for each year of service are assumed to be available to be credited once the member is retired.					
Post-Retirement Pension Adjustment	50% and 75% of assumed inflation, or 1.75% and 2.625% respectively, is valued for the annual automatic Post-Retirement Pension Adjustment (PRPA) as specified in the statute.					
Expenses	Expenses are covered in the investment return assumption.					
Part-time Status	Part-time employees are assumed to earn 0.550 years of credited service per year.					
Per Capita Claims Cost	Sample cla shown belo		es for FY06 m	nedical ben	efits are	
		Ме	dical		Rx	
		Total	Medicare	Total	Medicare	
	Age 65	\$8,328	\$6,821	\$1,936	\$414*	
	-	ed until Janı	e of Medicar ary 1, FY06		-	



Health Cost Trend		Medical	Rx
	FY06	9.5%	14%
	FY07	9.0%	13%
	FY08	8.5%	12%
	FY09	8.0%	11%
	FY10	7.5%	10%
	FY11	7.0%	9%
	FY12	6.5%	8%
	FY13	6.0%	7%
	FY14	5.5%	6%
	FY15	5.0%	5%
	FY16 and later	5.0%	5%

Note, graded Health Cost Trend Rates were reinitialized for the June 30, 2005 valuation such that FY05 trend used in the June 30, 2004 valuation (9.5% for Medical and 14% for Rx) is assumed for FY06 in the current valuation. FY06 trend used in the prior valuation (9.0% for Medical and 13% for Rx) is assumed for FY07 in the current valuation, and so on. This conservative adjustment addresses concerns regarding claim costs and past trend rates derived from analysis of aggregate claim data versus potential results obtained if data disaggregated into pre-Medicare, Medicare A &B and Medicare B only categories were available.

### (B) Actuarial Assumptions

Aging Factors	Age	Medical	Rx		
	00-44	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	Currently contributions are required for TRS members				
for Medical Benefits	who are under age 60 and have less than 30 years of service. Eligible Tier 1 members are exempt from				

who are under age 60 and have less than 30 years of service. Eligible Tier 1 members are exempt from contribution requirements. An annual contribution of \$10,356 for FY06 is assumed to be paid for those required, equal to the annualized average of \$850 and \$876 per month for calendar 2005 and 2006, respectively.



Trend Rate for Retired	FY06	6.9%	
Member Contribution	FY07	10.2%	
	FY08	9.6%	
	FY09	8.9%	
	FY10	8.3%	
	FY11	7.6%	
	FY12	7.0%	
	FY13	6.3%	
	FY14	5.7%	
	FY15	5.0%	
	FY16 and later	5.0%	

Note, graded Trend Rates for Retired Member Medical Contributions were reinitialized for the June 30, 2005 valuation such that FY05 trend of 6.9% used in the June 30, 2004 valuation is assumed for FY06 in the current valuation. FY06 trend of 10.2% used in the prior valuation is assumed for FY07 in the current valuation, and so on. This conservative adjustment addresses concerns described above regarding aggregated claims data and also better reflects recent Retired Member Medical Contribution increases.

### (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 financial statements audited by KPMG LLP. Valuation assets are constrained to 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 Teachers' 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 2002 through May 2005 were tabulated and an average annual amount determined. Next, three adjustments were applied:

- 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 benefits.

To this, estimated administrative costs were added. The result is total projected costs for the period July 1, 2005 to June 30, 2006



	Medical	Rx
Paid Claims (6/02 – 5/03)	\$133,794,131	\$49,761,201
Paid Claims (6/03 – 5/04)	143,042,729	61,583,420
Paid Claims (6/04 – 5/05)	163,039,365	73,932,659
Estimated annual paid claims	\$146,625,408	\$61,759,093
Population Adjustment <sup>9</sup>	1.0935	1.0803
Trend Adjustment (25 months) <sup>10</sup>	1.2081	1.3139
Incurred Adjustment <sup>10</sup>	1.0229	1.0000
Projected incurred claims	\$198,146,866	\$87,657,508
Projected incurred claims Administrative costs <sup>11</sup>	9,685,363	C
Projected Plan Costs	\$207,832,229	\$87,657,508

#### Detailed Development of Claims Cost For the Period July 1, 2005 through June 30, 2006

<sup>9</sup> 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; retirees:	28,310	28,310
Average enrollment during experience period:	25,890	26,206
$^{70}$ Trend:	9.5%	14.0%
Months of Trend:	25.0	25.0
Incurred Adjustment:	3.0	0.0
<sup>11</sup> Administrative Fees	\$28.51	\$0.00



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:

Age	Medical	Prescription Drug
45	\$4,612	\$ 1,021
50	5,218	1,213
55	5,904	1,441
60	7,012	1,670
65	1,507	1,936
70	1,833	2,086
75	2,231	2,247
80	2,403	2,304

# Distribution of Per Capita Claims Cost by Age for the Period July 1, 2005 through June 30, 2006



# Table 1 Alaska TRS Total Turnover Assumptions

Select Rates of Turnover During the First 8 Years of Employment		Ultimate Rates After the First 8 Yea	
Year of Employment	Rate	A gos	Rate
Employment	Kate	Ages	Kate
1	.10	20+	.04
2	.10		
3	.09		
4	.09		
5	.08		
6	.07		
7	.06		
8	.05		



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

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



# Table 3 Alaska TRS Retirement Rates

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

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



Other Historical Information

# Section 3

- Section 3.1 Analysis of financial experience.
- Section 3.2(a) Summary of accrued and unfunded accrued liabilities.
- Section 3.2(b) Schedule of Employer Contributions
- Section 3.2(c) Actuarial Assumptions, Method and Additional Information
- Section 3.3 Solvency test.



# 3.1 Analysis of Financial Experience

		Change in Employer Contribution Rate During Fiscal Year					
Туре	Type of Gain or Loss		2002	2003	2004	2005	
(1)	Health Experience	0.00%	3.85%	0.00%	0.00%	1.47%	
(2)	Salary Experience	(1.68)%	(0.11)%	0.10%	0.54%	(0.26)%	
(3)	Investment Experience	1.35%	15.03%	0.43%	0.06%	(0.02)%	
(4)	Demographic Experience	2.66%	4.21%	1.35%	(0.85)%	(2.10)%	
(5)	Contribution Shortfall	0.00%	0.00%	1.40%	1.24%	1.42%	
(6)	(Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	2.33%	22.98%	3.28%	0.99%	0.51%	
(7)	Asset Valuation Method	0.00%	0.03%	0.00%	0.00%	0.00%	
(8)	Past Service Amortization Change	0.00%	(9.08)%	0.00%	0.00%	0.00%	
(9)	Assumption Changes	0.00%	6.84%	0.00%	1.94%	0.00%	
(10)	System Benefit Changes	0.17%	0.00%	0.00%	0.00%	0.00%	
(11)	Administrative System Changes	3.49%	0.00%	0.00%	0.00%	0.00%	
(12)	Ad hoc PRPA	0.16%	0.36%	0.00%	0.00%	0.00%	
(13)	Change due to revaluation of plan liabilities as of June 30, 2004	0.00%	0.00%	0.00%	0.00%	(0.03)%	
(14)	Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10) + (11) + (12) + (13)	6.15%	21.13%	3.28%	2.93%	0.48%	
(15)	Beginning Total Employer Contribution Rate	8.29%	14.44%	35.57%	38.85%	41.78%	
(16)	Ending Total Employer Contribution Rate, $(14) + (15)$	14.44%	35.57%	38.85%	41.78%	42.26%	
(17)	Fiscal Year Above Rate is Applied	FY04	FY05	FY06	FY07	FY08	

### Change in Employer Contribution Rate Due to Gains and Losses in Accrued Liabilities During the Last Five Fiscal Years

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#### 3.2(a) Summary of Accrued and Unfunded Accrued Liabilities

Valuation Date	Aggregate Accrued Liability (000's)	Valuation Assets (000's)	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL) (000's)	Annual Active Member Payroll (000's)	UAL as a Percent of Annual Active Member Payroll
June 30, 2005	\$ 6,498,556	\$ 3,958,939	60.9%	\$ 2,539,617	\$ 535,837	474.0%
June 30, 2004 <sup>13</sup>	6,123,600	3,845,370	62.8%	2,278,230	522,421	436.1%
June 30, 2003	5,835,609	3,752,285	64.3%	2,083,324	532,630	391.1%
June 30, 2002 <sup>12 13 14</sup>	5,411,642	3,689,036	68.2%	1,722,606	509,437	338.1%
June 30, 2001	4,603,147	4,372,229	95.0%	230,918	496,188	46.5%
June 30, 2000 <sup>12 13 14</sup>	4,198,868	4,184,015	99.6%	14,853	482,571	3.1%
June 30, 1999	3,720,954	3,815,633	102.5%	N/A	466,414	N/A
June 30, 1998	3,528,757	3,446,070	97.7%	82,687	469,433	17.6%
June 30, 1997	3,320,069	3,120,044	94.0%	200,025	466,455	42.9%
June 30, 1996 <sup>13</sup>	2,940,437	2,858,756	97.2%	81,681	465,182	17.6%

<sup>12</sup> Change in Asset Valuation Method
 <sup>13</sup> Change of Assumptions
 <sup>14</sup> Change in Methods



### Other Historical Information

Year Ended June 30	Total Annual Required Contribution	Total Percentage Contributed			
2005	\$ 207,951	45%			
2004	82,660	83%			
2003	47,370	133%			
2002	39,576	155%			
2001	56,391	114%			
2000	67,874	92%			
1999	53,901	114%			
1998	76,504	80%			
1997	77,001	80%			
1996	63,608	96%			

# 3.2(b) Schedule of Employer Contributions

# 3.2(c) Actuarial Assumptions, Method and Additional Information

Valuation Date	June 30, 2005
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level percentage of pay, closed
Equivalent Single Amortization Period	23 years
Asset Valuation Method	5-year smoothed market
Actuarial Assumptions:	
Investment rate of return*	8.25%
Projected salary increases	5.5% for first 5 years of service, 4.0% thereafter
*Includes inflation at	3.5%
Cost-of-living adjustment	Post-retirement Pension Adjustment as described in Section 2.1, item (13)



### Other Historical Information

# 3.3 Solvency Test

	Aggregate Accrued Liability For:				Portion of Accrued Liabilities Covered by Assets		
Valuation Date	(1) Active Member Contributions (000's)	(2) Inactive Members (000's)	(3) Active Members (Employer- Financed Portion) (000's)	Valuation Assets (000's)	(1)	(2)	(3)
June 30, 2005	\$ 589,169	\$ 4,694,176	\$ 1,215,211	\$ 3,958,939	100%	71.8%	0.0%
June 30, 2004 <sup>16</sup>	569,435	4,423,036	1,131,129	3,845,370	100%	74.1%	0.0%
June 30, 2003	548,947	4,105,445	1,181,217	3,752,285	100%	78.0%	0.0%
June 30, 2002 <sup>15 16 17</sup>	523,142	3,755,882	1,132,618	3,689,036	100%	84.3%	0.0%
June 30, 2001	533,752	3,213,431	855,964	4,372,229	100%	100%	73.0%
June 30, 2000 <sup>15 16 17</sup>	490,176	2,872,250	836,442	4,184,015	100%	100%	98.2%
June 30, 1999	469,068	2,571,345	680,541	3,815,633	100%	100%	100%
June 30, 1998	449,383	2,344,263	735,111	3,446,070	100%	100%	88.8%
June 30, 1997	483,735	2,095,843	780,491	3,120,044	100%	100%	69.2%
June 30, 1996 <sup>16</sup>	451,249	1,689,636	799,552	2,858,756	100%	100%	89.8%

<sup>15</sup> Change in Asset Valuation Method
 <sup>16</sup> Change of Assumptions
 <sup>17</sup> Change in Methods

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