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# State of Alaska Teachers' Retirement System

Actuarial Valuation Report as of June 30, 2007



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



February 26, 2008

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, 2007 by Buck Consultants. The purposes of the report include:

- (1) a presentation of the valuation results of the Plan as of June 30, 2007;
- (2) a review of experience under the Plan for the year ended June 30, 2007;
- (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, 2010; 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)
- (6) Summary of GASB No. 25 and 43 disclosure information (Section 3.2)

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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. The employee 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 and adopted by the Board in October 2006. Actuarial methods, medical cost trend, and assumed blended medical premiums were also reviewed and revised during the experience study.

The contribution requirements are determined as a percentage of payroll, and reflect the cost of benefits accruing in FY08 and a fixed 25-year amortization as a level percentage of payroll of the initial unfunded accrued liability and subsequent gains/losses. The payroll used to determine the contribution rates is the total payroll of all active members in the system, including those hired after July 1, 2006 who are in the Defined Contribution Retirement (DCR) Plan. The amortization period is set by the Board. Contribution levels are recommended by the Actuary and adopted by the Board each year. The ratio of valuation assets to liabilities increased from 57.3% to 61.5% during the year. This report provides an analysis of the factors that led to the increase. 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:

- 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 43.



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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 H. Slishinsky, ASA, EA, MAAA Principal, Consulting Actuary Michelle Reding DeLange, FSA, EA, MAAA 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 her qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.

Melissa Krumholz, ASA, MAAA Senior Consultant, Health & Productivity



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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, 2007;
- (2) Review experience under the plan for the year ended June 30, 2007;
- (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 Fiscal Year 2007, 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 <sup>1</sup>	2006	2007
(a) Valuation Assets <sup>2</sup>	\$ 4,141,700	\$ 4,424,399
(b) Accrued Liability <sup>2</sup>	\$ 7,229,851	\$ 7,189,403
(c) Unfunded Accrued Liability <sup>2</sup>	\$ 3,088,151	\$ 2,765,004
(d) Funding Ratio based on Valuation Assets, $(a) \div (b)$	57.3%	61.5%
(e) Market Value of Assets <sup>2</sup>	\$ 4,299,971	\$ 4,893,114
(f) Funding Ratio based on Market Assets, $(e) \div (b)$	59.5%	68.1%

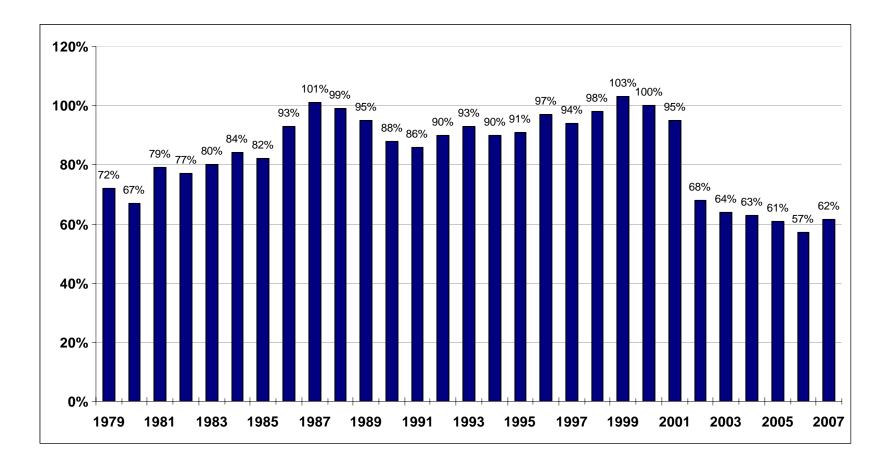
<sup>&</sup>lt;sup>1</sup> Includes pension and postemployment healthcare benefits.

<sup>&</sup>lt;sup>2</sup> In thousands.

# **Report Highlights** (continued)

# **TRS Funding Ratio History**

(Based on Valuation Assets)



# Report Highlights (continued)

Total Employer Contribution Rates for Fiscal Year:	2009	<b>2010</b> <sup>1</sup>
(a) Employer Normal Cost Rate	9.37%	7.59%
(b) Past Service Rate	34.80%	31.94%
(c) Total Employer Contribution Rate $(a) + (b)$	44.17%	39.53%
(d) Board Recommended Employer Contribution Rate	44.17%	TBD
Employer Contribution Rates for Pension for Fiscal Year:	2009	<b>2010</b> <sup>1</sup>
(a) Employer Normal Cost Rate	2.96%	2.71%
(b) Past Service Rate	17.61%	18.24%
(c) Total Employer Contribution Rate $(a) + (b)$	20.57%	20.95%
(d) Board Recommended Employer Contribution Rate	20.57%	TBD
Employer Contribution Rates for Postemployment		
Healthcare for Fiscal Year:	2009	2010 <sup>1</sup>
(a) Normal Cost Rate	6.41%	4.88%
(b) Past Service Rate	17.19%	13.70%
(c) Total Employer Contribution Rate $(a) + (b)$	23.60%	18.58%
(d) Board Recommended Employer Contribution Rate	23.60%	TBD

The rates shown above are for funding purposes which differ from the Annual Required Contribution for GASB No. 43 reporting purposes. Under GASB No. 43, postemployment healthcare liabilities are gross of the retiree drug subsidy and are calculated with a discount rate for a partially funded plan.

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<sup>&</sup>lt;sup>1</sup> Contribution rates are based on salary for both DB plan members and DCR members, combined.

#### Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio based on valuation assets as of June 30, 2007 has increased from 57.3% to 61.5%, an increase of 4.2%. The total calculated employer contribution rate has decreased from 44.17% of payroll for FY09 to 39.53% for FY10, a decrease of 4.64%. 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%
1/1/07-12/31/07	876.00	0%	10%
1/1/08-12/31/08	876.00	0%	9%

As shown in the above table, the monthly retiree medical premium for the January 1, 2008 to December 31, 2008 time period will remain at \$876. Although this represents no change from the previous year's medical premium, our expectation is that medical costs will increase at higher rates in the future. The health cost trend rates used for this valuation are 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 9.1% compounded annually.

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 due to 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 2007 valuation, we updated claims cost and Medicare offset analyses using additional claims and enrollment information, and the same methodology as used for the 2005 Experience Analysis. This methodology differs from that used for the 2005 valuation to better reflect Medicare offsets based on eligibility for Medicare Parts A and B. We developed assumptions regarding the number of members with Medicare Part B only coverage and associated claims costs. A lower average claims cost was applied to retirees assumed to be covered by both Medicare Part A and B vs. retirees assumed to be covered only by Medicare Part B. The assumed lag used to adjust claims data from a paid to incurred basis reflects the results of our June 30, 2007 lag study. Assumed lag from incurred date to paid claim is approximately 2.3 months for medical claims and 0.6 months for prescription claims. Composite lag for combined medical and prescription claims is about 2.0 months, similar to the 2-month composite lag assumption used for our 2006 valuation. The trend assumption varies by year, declining to an ultimate rate equal to inflation (3.5%) plus 1.5%, or 5%, for FY15 and later. We recommend no changes to the healthcare trend assumption used for 2005 and 2006, nor the contribution trend rate assumption used for 2006.



Individual claim level detail from Aetna and Premera were obtained for calendar years 2004, 2005 and 2006. This data was reviewed and compared to management level reporting supplied by both Aetna and Premera. For the 2007 valuation, we have not modified any management level reporting information used to develop per capita claim cost rates. However, we will continue to compare data from both sources and potentially modify future claims cost rate derivation to reflect salient information at the individual claimant level that may enhance global management level data. We used individual claimant detail to develop age-graded cost rates for the 2004-2006 period and compared these to the morbidity assumptions in place from the 2004 valuation. For the 2007 valuation, we do not recommend any changes to morbidity assumptions used to project increasing claims costs as members age. However, we will continue to compare agebased claims costs derived from individual claimant data to the current morbidity curve and potentially modify the assumed aging impact on claims costs in future valuations. The portion of retirees assumed to be eligible for Medicare Parts A and B and for Part B only was modified based on analysis of individual claims, decreasing the Part B only proportion of all Medicare retirees from 7.5% to 5.0%. Finally, explicit thirdparty administration (TPA) costs were added to medical and prescription claims cost rates. Per-member TPA costs are derived from the current Premera contract and are projected to increase at the assumed rate of 5%.

Since 2004, the funding valuation also reflects the impact of the Medicare Part D Retiree Drug Subsidy (RDS) in the projection of prescription drug benefit costs. Buck's actuaries have attested that the prescription drug benefits meet the actuarial equivalence requirements and the plan qualifies to receive the RDS under the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) for calendar 2007 and 2008. Based on current plan provisions and utilization data, we anticipate the plan will continue to qualify for RDS payments. The State has received RDS payments for calendar 2006; final reconciliation of all such payments for calendar 2006 is underway. In future valuations, reconciled RDS amounts will be used to refine our assumptions of base year and future RDS payments. Please note, Part D subsidies are not reflected for accounting purposes under GASB No. 43.

Utilization and claims cost data indicate that healthcare experience emerging since the prior valuation is significantly favorable. Part of this favorable experience is attributable to greater hospital and other provider discounts included in the Premera network effective July 1, 2006, as compared to Aetna contracted amounts reflected in claims data for prior periods. While improved provider discounts were anticipated, we explicitly excluded any claims cost reduction assumptions in this regard from the 2006 valuation and recommended a wait-and-see approach instead. Improved provider discounts are now reflected in the most recent 12 months of the data used to estimate claims costs. This most recent experience period also includes favorable utilization rates and patterns as compared to prior years. As with the 2005 Experience Analysis and 2006 valuation methodology, the 2007 valuation mitigates recent favorable experience by equally weighting each of the four 12-month experience periods used. In future valuations, as Premera-specific data gains credibility, we will assess giving more recent experience greater weight in the overall claims cost rate development process. While continuing to

explicitly dampen weighting given to more recent experience periods, we have modified trend rates used to roll prior data forward to the valuation date, thereby more closely reflecting Alaska-specific experience. In the 2006 valuation, we used only the set of trend assumptions historically used for projection purposes to bring prior year data forward to the valuation year. For 2007, we averaged these national trend assumptions with more favorable Alaska-specific trend during the experience period. In total, favorable claim experience and assumption changes drive most of the 4.86% decrease in the employer contribution rate from the 2006 valuation.

The following table summarizes data sources and assumptions and the relative impact changes in each have on healthcare cost projections for 2007 as compared to 2006:

Healthcare Cost Rate Data Source or Assumption Change, 2007 vs. 2006	Gain / Loss Impact on 2007 Valuation Results
Claim lag specific to medical and prescription experience (2.3 months for medical and 0.6 months for Rx versus 2.0 months combined)	Negligible
Individual claims level data	<ul> <li>No impact on cost data used for 2007, though potentially a source of future modifications</li> </ul>
	<ul> <li>No impact on morbidity assumptions used for 2007, though potentially a source of future modifications</li> </ul>
	<ul> <li>Moderate loss from decreasing the assumed Part B only proportion of all Medicare retirees from 7.5% to 5.0%</li> </ul>
Explicit TPA fees	Modest loss
Actual RDS payments received (final reconciliation in process)	No impact on cost data used for 2007, though potentially a source of future modifications
Favorable Premera provider discounts and favorable utilization July 2006 through June 2007	Significant gain
Weighting of prior experience periods used to derive base claims during the valuation year (equal weighting for all four periods is unchanged from 2006)	Dampens the gain from favorable provider discounts and utilization since June 2006 but may be modified in future valuations
Averaging Alaska-specific trend during the experience period with Health Care Cost Trend Rates (HCCTR) used to bring prior data forward to the valuation year	Moderate gain

#### (2) Investment Experience

The approximate FY07 investment return based on market values was 18.5% compared to the expected investment return of 8.25%. This resulted in a gain of approximately \$431.0 million to the System from investment experience. The asset valuation method recognizes 20 percent of this gain (\$86.2 million) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY03 investment loss, 20 percent of the FY04 investment gain, 20 percent of the FY05 investment gain and 20 percent of the FY06 investment gain were recognized this year. The approximate FY07 investment return based on actuarial values was 11.9% compared to the expected investment return of 8.25%. The net result was an investment gain which increased the funding ratio by 1.80% and decreased the contribution rate by 1.37%.

#### (3) Salary Increase

During the period from June 30, 2006, to June 30, 2007, salary increases for continuing active members were less than anticipated in the valuation assumptions. Lower accrued liabilities caused the funding ratio to increase by 0.10%. The net effect of the salary gain was a decrease of 0.27% in employer contribution rates.

#### (4) Demographic Experience

Section 2.2 provides statistics on active and inactive participants. The number of active participants decreased 6.21% from 9,710 at June 30, 2006 to 9,107 at June 30, 2007 due to the closure of the plan to new entrants as of July 1, 2006. The average age of active participants increased from 45.02 to 45.84 and average credited service increased from 10.87 to 11.70 years.

The number of retirees and beneficiaries increased 3.11% from 9,386 to 9,678, and their average age increased from 64.83 to 65.33. There was a 6.42% increase in the number of vested terminated participants from 795 to 846. Their average age increased from 48.80 to 49.03.

The overall effect of these participant data changes, the healthcare experience and using total payroll was an actuarial gain to the System, resulting in a decrease in the employer contribution rate of 2.27% of total payroll. The gain/loss by decrement on the accrued liability is shown on the summary page.



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

As of June 30, 2006, the actuarially calculated rate was 44.17% for FY09 employer contributions. Since employer contribution rates are determined two years prior to the fiscal year, the June 30, 2004 adopted employer rate of 26.00% was contributed during FY07. The difference between the two rates, 26.00% and 44.17%, created a contribution shortfall to the System. This shortfall increased the contribution rate by 1.31%.

#### (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 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. No new plan entrants are anticipated.

#### (7) Changes in Methods from the Prior Valuation

There were no changes in asset or valuation methods from the prior valuation.

#### (8) Changes in Assumptions from the Prior Valuation

There were no changes in assumptions from the prior valuation, except for assumptions regarding future net healthcare benefit costs to the plan described above in item (1), which are:

- Decreasing the assumed Part B only proportion of all Medicare retirees from 7.5% to 5.0%.
- Addition of explicit TPA fees, assumed to increase with inflation.

#### (9) Changes in Derivation of Base-Year Healthcare Claims Costs

There were no changes in the derivation of base year claims costs from the prior valuation, except for changes described above in item (1), which are:

- Use of 2.3 months lag for medical claims and 0.6 months lag for prescription claims vs. 2.0 months for both types of claims combined.
- Partially reflecting Alaska-specific trend during the experience period used to develop base-year claims cost rates.

#### (10) Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation. SB 123 was passed in 2007 which clarified and revised statutory language to comply with federal law and created the Alaska retiree health care trust.



#### Summary

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

		<b>Pension</b>	Healthcare	<u>Total</u>
1.	Last year's total employer contribution rate	20.57%	23.60%	44.17%
2.	Change due to:			
	a. Change in rate by using total payroll	(1.08)%	(0.96)%	(2.04)%
	b. Contribution shortfall compared to actuarially calculated rate	0.42%	0.89%	1.31%
	c. Investment experience	(0.32)%	(1.05)%	(1.37)%
	d. Salary increases	(0.27)%	N/A	(0.27)%
	e. Demographic and medical experience <sup>1</sup>	1.63%	(3.90)%	(2.27)%
3.	Total employer contribution rate this year	20.95%	18.58%	39.53%

The following table shows the gain/(loss) on total accrued liability (in thousands):	4	<u>Amount</u>
- Retirement Experience	\$	6,810
- Termination Experience		(3,543)
- Mortality Experience		(10,807)
<ul> <li>Disability Experience</li> </ul>		180
- Other Demographic Experience		(29,860)
- Salary Increases		21,351
- Medical Experience		<u>359,958</u>
– Total	\$	344,089

<sup>&</sup>lt;sup>1</sup> Includes changes in healthcare assumptions.

## 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 FY07 and the investment return for FY07.
- Section 1.1(c) Actuarial value of assets.
- Section 1.2 Actuarial present values.
- Section 1.3 Total employer contribution rate for FY10.
- Section 1.4 Development of actuarial gain or loss for FY07.
- Section 1.5(a) Actuarial Projections Projections at Calculated Rate. Based on Total DB and DCR Payroll.
- Section 1.5(b) Actuarial Projections Projections at Current Rate. Based on Total DB and DCR Payroll.
- Section 1.5(c) Actuarial Projections Effect of Economic Scenarios. Based on Total DB and DCR Payroll.



# 1.1(a) Statement of Net Assets

As of June 30, 2007 (in thousands)		Pension	stemployment Healthcare	Μ	Total arket Value
Cash and Cash Equivalents	\$	8,224	\$ 3,720	\$	11,944
Domestic Equity Pool		1,651,292	111,819		1,763,111
Domestic Fixed Income Pool		600,204	271,473		871,677
International Equity Pool		568,060	256,934		824,994
Real Estate Pool		368,349	166,604		534,953
International Fixed Income Pool		61,959	28,024		89,983
Private Equity Pool		225,259	101,885		327,144
Emerging Markets Equity Pool		87,248	39,463		126,711
Other Investments Pool		39,260	17,758		57,018
High Yield Pool		59,386	26,860		86,246
Absolute Return Pool		129,977	58,789		188,766
Loans and Mortgages (Net of Reserves)		19	8		27
Net Accrued Receivables		7,257	 3,283		10,540
Net Assets	\$	3,806,494	\$ 1,086,620	\$	4,893,114



# 1.1(b) Statement of Changes in Net Assets

Fiscal Year 2007 (in thousands)		Pension	stemployment Healthcare	N	Total Iarket Value
(1)	Net Assets, June 30, 2006 (market value)	\$ 3,422,923	\$ 877,048	\$	4,299,971
(2)	Additions:				
	(a) Plan Member Contributions	38,346	17,343		55,689
	(b) Employer Contributions	105,775	47,843		153,618
	(c) Interest and Dividend Income	113,383	51,283		164,666
	(d) Net Appreciation in Fair Value of Investments	431,298	195,077		626,375
	(e) Other	 15	 6		21
	(f) Total Additions	\$ 688,817	\$ 311,552	\$	1,000,369
(3)	Deductions:				
	(a) Medical Benefits	0	96,544		96,544
	(b) Retirement Benefits	293,224	0		293,224
	(c) Refunds of Contributions	3,123	1,412		4,535
	(d) Investment Expenses	7,250	3,279		10,529
	(e) Administrative Expenses	 1,649	 745		2,394
	(f) Total Deductions	\$ 305,246	\$ 101,980	\$	407,226
(4)	Net Assets, June 30, 2007 (market value)	\$ 3,806,494	\$ 1,086,620	\$	4,893,114

Approximate Market Value Investment Return Rate During FY07 Net of All Expenses

18.5%



# 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 FY07	
(a)	Market Value, June 30, 2006	\$ 4,299,971
(b)	Contributions for FY07	209,307
	- Weighted for timing	104,654
(c)	Benefit Payments for FY07	394,303
	- Weighted for timing	197,152
(d)	Actual Investment Return (net of expenses)	778,139
(e)	Expected Return Rate (net of expenses)	8.25%
(f)	Expected Return - Weighted for Timing, $[(a. + b c.) x e.]$	347,117
(g)	Investment Gain/(Loss) for the Year $(df.)$	431,022
(h)	Deferred Investment Return <sup>1</sup>	468,715
(2) Act	uarial Value, June 30, 2007	
(a)	Market Value, June 30, 2007	\$ 4,893,114
(b)	2007 Deferred Investment Return	468,715
(c)	Preliminary Actuarial Value, June 30, 2007 (a b.)	4,424,399
(d)	Upper Limit: 120% of Market Value, June 30, 2007	5,871,737
(e)	Lower Limit: 80% of Market Value, June 30, 2007	3,914,491
(f)	Actuarial Value, June 30, 2007 (c. limited by d. and e.)	\$ 4,424,399
(g)	Ratio of Actuarial Value of Assets to Market Value of Assets	90.42%
(h)	Pension Actuarial Value of Assets	3,441,867
(i)	Healthcare Actuarial Value of Assets	982,532
(j)	Approximate Actuarial Value Investment Return Rate During FY07 Net of All Expenses	11.9%

<sup>1</sup> The table below shows the development of gain/(loss) to be recognized in the current year.

Plan Year Ended	Asse	t Gain/(Loss)	ss) Recognized Prior Years	n/(Loss) ed This Year	ss) Deferred to are Years
6/30/2003	\$	(187,083)	\$ (149,668)	\$ (37,415)	\$ 0
6/30/2004	\$	222,993	\$ 133,797	\$ 44,599	\$ 44,597
6/30/2005	\$	11,366	\$ 4,546	\$ 2,273	\$ 4,547
6/30/2006	\$	124,587	\$ 24,917	\$ 24,917	\$ 74,753
6/30/2007	\$	431,022	\$ 0	\$ 86,204	\$ 344,818
Total	\$	602,885	\$ 13,592	\$ 120,578	\$ 468,715

# 1.2 Actuarial Present Values

As of June 30, 2007 (in thousands	5)		Normal Cost	Accrued Liabilities
Active Members				
<b>Retirement Benefits</b>		\$	48,837	\$ 1,515,015
Termination Benefits			5,087	31,167
Disability Benefits			1,296	17,948
Death Benefits			281	8,018
Return of Contributions			11,634	(48,102)
Medical and Prescription	Drug Benefits		32,293	849,786
Medicare Part D Subsidy			(2,373)	(47,962)
Indebtedness			N/A	(48,492)
Subtotal		\$	97,055	\$ 2,277,378
nactive Members				
Not Vested				\$ 38,582
Vested Terminations	- Retirement Benefit	S		83,146
	- Medical and Prescr	iption Dru	g Benefits	132,462
	- Medicare Part D Su	ıbsidy		(7,804)
	- Indebtedness			(4,706)
Retirees & Beneficiaries	- Retirement Benefit	S		3,450,872
	- Medical and Prescr	iption Dru	g Benefits	1,331,130
	- Medicare Part D Su	ıbsidy		(111,657)
Subtotal				\$ 4,912,025
Fotal		\$	97,055	\$ 7,189,403
Total Pension		\$	67,135	\$ 5,043,448
Total Medical, Net of Part D Su	ıbsidv	\$	29,920	\$ 2,145,955



# **1.2 Actuarial Present Values**

(continued)

As of June 30, 2007 (in thousands)		Normal Cost	Accrued Liabilities
By Tier			
Tier 1			
- Pension	\$	21,329	\$ 4,324,971
- Medical, Net of Part D Subsidy		6,484	1,637,399
Tier 2			
- Pension		45,806	718,477
- Medical, Net of Part D Subsidy	-	23,436	 508,556
Total	\$	97,055	\$ 7,189,403



# 1.3 Development of Total Employer Contribution Rate – FY10 (in thousands)

Nor	mal Cost Rate	F	Pension Healthcare				Total		
(1)	Total Normal Cost	\$	67,135	\$	29,920	\$	97,055		
(2)	DB Member Salaries		582,743		582,743		582,743		
(3)	DCR Member Salaries		30,113		30,113		30,113		
(4)	Total Salaries		612,856		612,856		612,856		
(5)	Normal Cost Rate								
	a. Based on DB Member Salaries, (1) ÷ (2)		11.52%		5.13%		16.65%		
	b. Based on Total Salaries, $(1) \div (4)$		10.96%		4.88%		15.84%		
(6)	Average Member Contribution Rate <sup>1</sup>		8.25%		0.00%		8.25%		
(7)	Employer Normal Cost Rate, (5b) – (6)		2.71%		4.88%		7.59%		
Pas	t Service Rate								
(1)	Accrued Liability	\$	5,043,448	\$	2,145,955	\$	7,189,403		
(2)	Valuation Assets		3,441,867		982,532		4,424,399		
(3)	Total Unfunded Liability, $(1) - (2)$		1,601,581		1,163,423		2,765,004		
(4)	Past Service Cost Amortization Payment <sup>2</sup>		111,825		83,950		195,775		
(5)	Total Salaries		612,856		612,856		612,856		
(6)	Past Service Rate, $(4) \div (5)$		18.24%		13.70%		31.94%		
Tota	al Employer Contribution Rate		20.95%		18.58%		39.53%		
Nor	mal Cost Rate by Tier (Total Employer a	nd M	lember)						
	Tier 1 <sup>3</sup>		11.89%		3.62%		15.51%		
	Tier 2 <sup>3</sup>		11.35%		5.81%		17.16%		

<sup>1</sup> Assumes no member contribution from members in the DCR plan, 9.65% contributions for Tier 1 members who elected supplemental coverage and 8.65% for the remaining members.

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<sup>&</sup>lt;sup>2</sup> Amortized on a level percentage of pay basis.

<sup>&</sup>lt;sup>3</sup> Rate determined considering the pay for members of the plan in this tier. DCR payroll is excluded from these calculations.

# **1.3 Development of Total Employer Contribution Rate – FY10** (continued)

	Amortizati	on Period	Bala	ince	s		
	Date Created	Years Left	 Initial	(	Dutstanding	Ве	ginning-of-Year Payment
Initial Unfunded							
Liability <sup>1</sup>	6/30/2002	20	\$ 871,526	\$	924,873	\$	66,733
FY03 Loss <sup>1</sup>	6/30/2003	21	168,666		177,513		12,418
FY04 Loss <sup>1</sup>	6/30/2004	22	83,331		86,791		5,900
FY05 Loss <sup>1</sup>	6/30/2005	23	117,313		120,680		7,985
Change in							
Assumptions/Methods <sup>1</sup>	6/30/2006	24	284,349		288,405		18,612
FY06 Gain <sup>1</sup>	6/30/2006	24	(21,576)		(21,884)		(1,412)
FY07 Loss	6/30/2007	25	25,203		25,203		1,589
Total				\$	1,601,581	\$	111,825

#### Schedule of Past Service Cost Amortizations - Pension

#### Schedule of Past Service Cost Amortizations - Healthcare

	Amortizati	on Period	Bala	nce			
	Date Created	Years Left	 Initial	c	Outstanding	Ве	ginning-of-Year Payment
Initial Unfunded							
Liability <sup>1</sup>	6/30/2002	20	\$ 851,080	\$	903,176	\$	65,167
FY03 Loss <sup>1</sup>	6/30/2003	21	164,710		173,349		12,127
FY04 Loss <sup>1</sup>	6/30/2004	22	81,376		84,755		5,761
FY05 Loss <sup>1</sup>	6/30/2005	23	114,560		117,851		7,799
Change in							
Assumptions/Methods <sup>1</sup>	6/30/2006	24	277,678		281,638		18,175
FY06 Gain <sup>1</sup>	6/30/2006	24	(21,071)		(21,372)		(1,379)
FY07 Gain	6/30/2007	25	(375,974)		(375,974)		(23,700)
Total				\$	1,163,423	\$	83,950

<sup>1</sup> The pension and healthcare split was done using a ratio of unfunded accrued liability as of June 30, 2006.



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# **1.3 Development of Total Employer Contribution Rate – FY10** (continued)

	Amortizati	on Period		Bala				
	Date Created	Years Left	_	Initial	C	Dutstanding	Be	ginning-of-Year Payment
Initial Unfunded								
Liability	6/30/2002	20	\$	1,722,606	\$	1,828,049	\$	131,900
FY03 Loss	6/30/2003	21		333,376		350,862		24,545
FY04 Loss	6/30/2004	22		164,707		171,546		11,661
FY05 Loss	6/30/2005	23		231,873		238,531		15,784
Change in								
Assumptions/Methods	6/30/2006	24		562,027		570,043		36,787
FY06 Gain	6/30/2006	24		(42,647)		(43,256)		(2,791)
FY07 Gain	6/30/2007	25		(350,771)		(350,771)		(22,111)
Total					\$	2,765,004	\$	195,775

#### **Schedule of Past Service Cost Amortizations - Total**

The amortization factor for 25 years is 15.864073. The weighted average amortization factor is 14.123376. The amortization method is level percentage of pay.

The equivalent single amortization period is 21 years.



# 1.4 Development of Actuarial Gain/(Loss) for FY07 (in thousands)

	Pensio	n Healthcare	Total
(1) Expected Actuarial Accrued Liability			
(a) Accrued Liability, June 30, 2006	\$ 4,859,	336 \$ 2,370,515	\$ 7,229,851
(b) Normal Cost for FY07	70,	133 38,640	108,773
(c) Interest on $(a)$ and $(b)$ at 8.25%	406,	681 198,755	605,436
(d) Benefit Payments for FY07	293,	224 96,544	389,768
(e) Refund of Contributions for FY07	3,	123 1,412	4,535
(f) Interest on ( <i>d</i> ) and ( <i>e</i> ) at 8.25% for one-half year	12,	224 4,041	16,265
(g) Expected Accrued Liability as of June 30, 2007 (a) + (b) + (c) - (d) - (e) - (f)	5,027,	579 2,505,913	7,533,492
(2) Actual Accrued Liability, June 30, 2007	5,043,	448 2,145,955	7,189,403
(3) Liability Gain/(Loss), $(1)(g) - (2)$	\$ (15,	869) \$ 359,958	\$ 344,089
(4) Expected Actuarial Asset Value			
(a) Actuarial Asset Value, June 30, 2006	3,296,	934 844,766	4,141,700
(b) Interest on (a) at 8.25%	271,	997 69,693	341,690
(c) Employee Contributions for FY07	38,	346 17,343	55,689
(d) Employer Contributions for FY07	105,	775 47,843	153,618
(e) Interest on (c) and (d) at 8.25% for one-half year	5,	945 2,689	8,634
(f) Benefit Payments for FY07	293,	224 96,544	389,768
(g) Refund of Contributions for FY07	3,	123 1,412	4,535
(h) Interest on (f) and (g) at 8.25% for one-half year	12,	224 4,041	16,265
<ul> <li>(i) Expected Actuarial Asset Value, June 30, 2007</li> <li>(a) + (b) + (c) + (d) + (e) - (f) - (g) - (h)</li> </ul>	3,410,	426 880,337	4,290,763
(5) Actuarial Asset Value, June 30, 2007	3,441,	867 982,532	4,424,399
(6) Actuarial Asset Gain/(Loss), $(5) - (4)(i)$	\$31,	441 \$ 102,195	\$ 133,636
(7) Actuarial Gain/(Loss), $(3) + (6)$	\$15,	572 \$ 462,153	\$ 477,725
<ul> <li>(8) (Shortfall) between Actuarial and Actual Contributions</li> <li>(9) FY07 Gain/(Loss) to be Amortized, (7) + (8)</li> </ul>	\$ (40, \$ (25,	775) \$ (86,179) 203) \$ 375,974	\$ (126,954) \$ 350,771

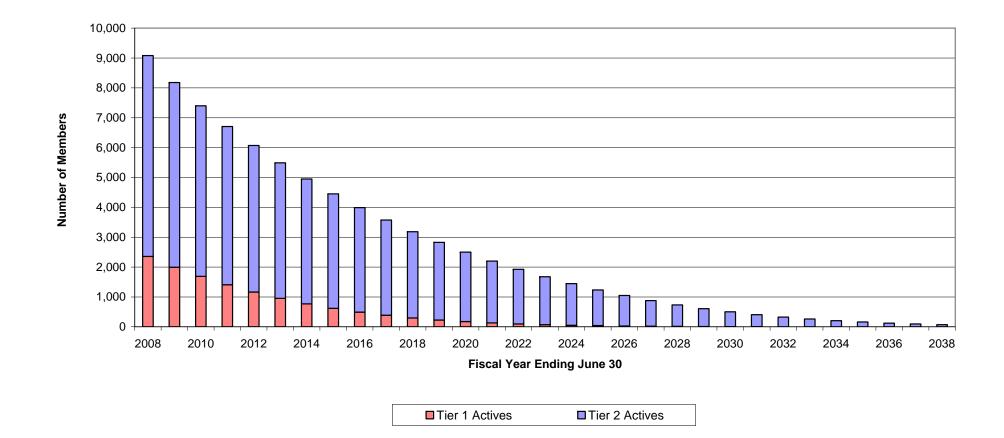
# 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll

#### **Key Assumptions**

- 8.25% investment return on the Market Value of Assets in all years.
- The Actuarial Value of Assets reflects the deferred gains and losses generated by the smoothing method. The current deferred amounts are recognized in the first four years of the projections.
- Actuarial assumptions and methods as described in Section 2.3.
- The actuarially calculated contribution rate with a two-year lag is adopted each year.
- No new DB Plan entrants into Tiers 1 and 2.

**1.5(a)** Actuarial Projections – Projections at Calculated Rate Based Total DB and DC Payroll (continued)

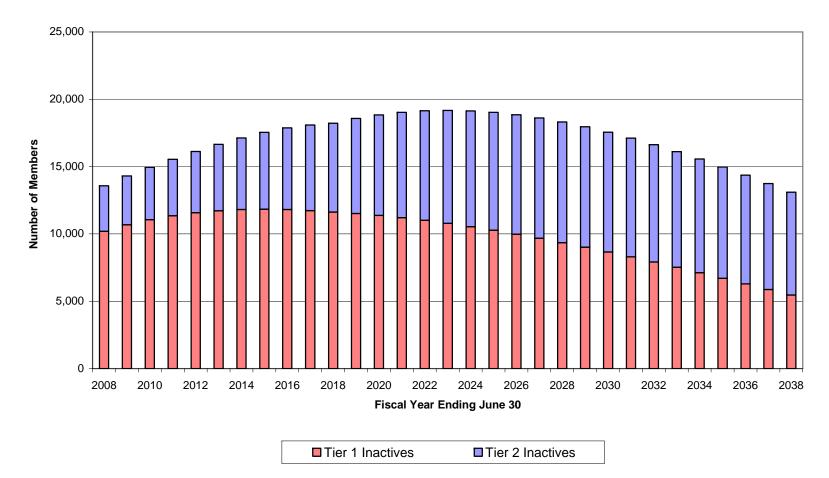
#### **Projected Active Member Count**





**1.5(a)** Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll (continued)

#### **Projected Inactive Member Count**





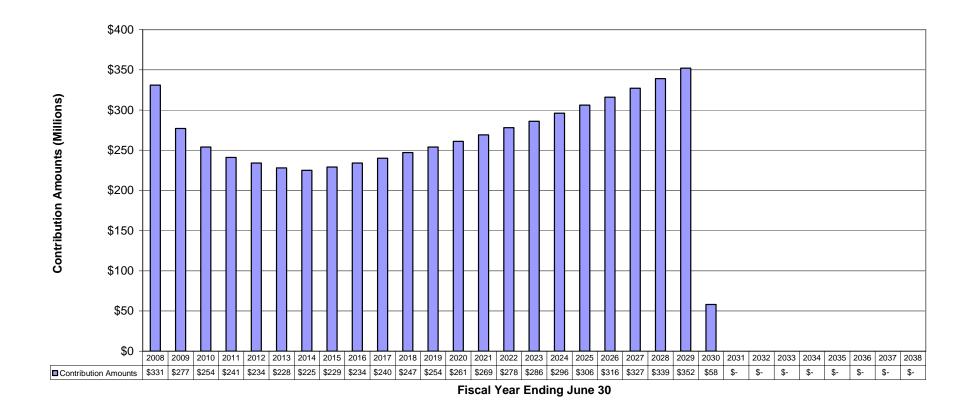
# 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll

#### Observations

- Contribution amounts have been shown instead of rates. The actual contribution amount provides a more meaningful illustration of the contributions due.
- Contributions decrease until FY14 and then increase until FY29 before dropping off significantly because the June 30, 2002 unfunded liability amortization base is paid off.
- Contributions become \$0 towards the end of the projection period upon completion of 25year amortizations of recent losses.
- Funding ratios improve through the projection period.

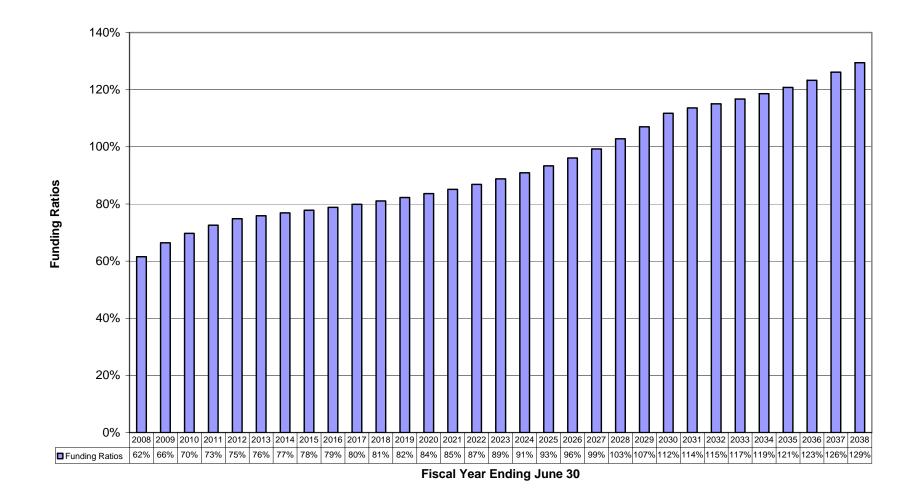
1.5(a) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll (continued)

#### **Projected Contribution Amounts**



#### 1.5(a) Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll (continued)

## **Projected Funding Ratios**





#### **1.5(a)** Actuarial Projections – Projections at Calculated Rate Based on Total DB and DC Payroll (continued)

State of Alaska TRS

Financial Projections (in Thousands)

		Investment Return 8.25% aluation Amounts on July 1 (Beginning of Fiscal Year) Flow Amounts During Following 12 Months									Recognized	Ending		
Fiscal Year End	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
2008	 \$4,424,399	 \$7,189,403	 61.54%	 (\$2,765,004)	 \$612,856	 54.03%	\$331,126	\$50,582	 \$381,708	 \$425,679	 (\$43,971)	 \$402,129	 \$157,994	 \$4,940,551
2009	4,946,110	7,446,214	66.42%	(2,500,104)	626,264	44.17%	276,621	47,406	324,027	456,540	(132,513)	428,566	113,395	5,355,557
2010	5,361,367	7,688,399	69.73%	(2,327,033)	643,163	39.53%	254,220	44,654	298,873	482,658	(183,785)	451,407	111,122	5,740,110
2011	5,746,181	7,916,540	72.58%	(2,170,359)	662,015	36.39%	240,910	42,107	283,016	508,259	(225,243)	472,321	86,204	6,079,464
2012	6,085,808	8,130,538	74.85%	(2,044,730)	683,010	34.21%	233,639	39,737	273,375	533,911	(260,536)	491,813	0	6,317,085
2013	6,323,715	8,329,825	75.92%	(2,006,110)	705,676	32.32%	228,072	37,365	265,437	559,437	(294,000)	510,099	0	6,539,814
2014	6,546,742	8,513,557	76.90%	(1,966,815)	730,075	30.85%	225,244	34,968	260,212	584,050	(323,839)	527,305	0	6,750,209
2015	6,757,448	8,681,347	77.84%	(1,923,898)	756,520	30.30%	229,188	32,554	261,742	607,346	(345,604)	543,822	0	6,955,666
2016	6,963,231	8,833,175	78.83%	(1,869,944)	784,973	29.82%	234,082	30,112	264,194	629,735	(365,541)	560,006	0	7,157,696
2017	7,165,602	8,969,349	79.89%	(1,803,747)	816,624	29.39%	239,980	27,917	267,897	651,751	(383,854)	575,976	0	7,357,724
2018	7,365,986	9,089,345	81.04%	(1,723,359)	850,535	29.02%	246,859	25,765	272,624	672,204	(399,580)	591,538	0	7,557,944
2019	7,557,944	9,191,236	82.23%	(1,633,292)	887,143	28.63%	254,002	23,693	277,694	687,249	(409,555)	606,971	0	7,755,360
2020	7,755,360	9,275,182	83.61%	(1,519,821)	925,596	28.23%	261,303	21,670	282,972	707,373	(424,401)	622,658	0	7,953,617
2021	7,953,617	9,340,887	85.15%	(1,387,270)	966,032	27.88%	269,323	19,686	289,009	727,955	(438,946)	638,426	0	8,153,097
2022	8,153,097	9,386,638	86.86%	(1,233,541)	1,008,734	27.52%	277,592	17,789	295,381	747,724	(452,343)	654,341	0	8,355,095
2023	8,355,095	9,411,777	88.77%	(1,056,682)	1,053,912	27.18%	286,476	15,973	302,449	766,291	(463,842)	670,541	0	8,561,794
2024	8,561,794	9,416,110	90.93%	(854,315)	1,101,557	26.87%	295,950	14,231	310,180	784,965	(474,785)	687,151	0	8,774,161
2025	8,774,161	9,398,068	93.36%	(623,907)	1,151,018	26.55%	305,646	12,587	318,233	803,763	(485,530)	704,237	0	8,992,868
2026	8,992,868	9,355,896	96.12%	(363,028)	1,203,314	26.26%	315,968	11,044	327,012	820,454	(493,442)	721,961	0	9,221,387
2027	9,221,387	9,290,042	99.26%	(68,655)	1,258,414	26.00%	327,142	9,577	336,720	835,300	(498,580)	740,606	0	9,463,412
2028	9,463,412	9,200,594	102.86%	262,818	1,316,788	25.74%	338,970	8,226	347,197	850,180	(502,983)	760,395	0	9,720,823
2029	9,720,823	9,085,865	106.99%	634,958	1,378,624	25.50%	351,535	7,049	358,584	862,552	(503,968)	781,591	0	9,998,446
2030	9,998,446	8,946,723	111.76%	1,051,723	1,442,890	3.99%	57,503	5,985	63,488	872,664	(809,176)	792,155	0	9,981,425
2031	9,981,425	8,783,758	113.64%	1,197,668	1,509,961	-1.40%	0	5,043	5,043	880,169	(875,126)	788,084	0	9,894,384
2032	9,894,384	8,597,933	115.08%	1,296,451	1,580,141	-4.97%	0	4,216	4,216	883,385	(879,169)	780,740	0	9,795,954
2033	9,795,954	8,392,027	116.73%	1,403,927	1,653,695	-8.04%	0	3,469	3,469	885,747	(882,278)	772,493	0	9,686,169
2034	9,686,169	8,165,470	118.62%	1,520,700	1,730,813	-13.86%	0	2,826	2,826	883,520	(880,694)	763,500	0	9,568,976
2035	9,568,976	7,921,521	120.80%	1,647,455	1,810,697	-11.25%	0	2,278	2,278	875,816	(873,538)	754,121	0	9,449,559
2036	9,449,559	7,664,590	123.29%	1,784,968	1,894,567	-9.29%	0	1,818	1,818	865,641	(863,823)	744,662	0	9,330,397
2037	9,330,397	7,396,348	126.15%	1,934,049	1,982,035	-8.28%	0	1,434	1,434	853,512	(852,078)	735,306	0	9,213,625
2038	9,213,625	7,118,035	129.44%	2,095,590	2,073,840	-7.47%	0	1,121	1,121	835,654	(834,533)	726,382	0	9,105,474



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#### 1.5(b) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll

#### **Key Assumptions**

• All assumptions and methods are the same as Section 1.5(a), except adopted contribution rate is maintained at the FY10 level for all future years.

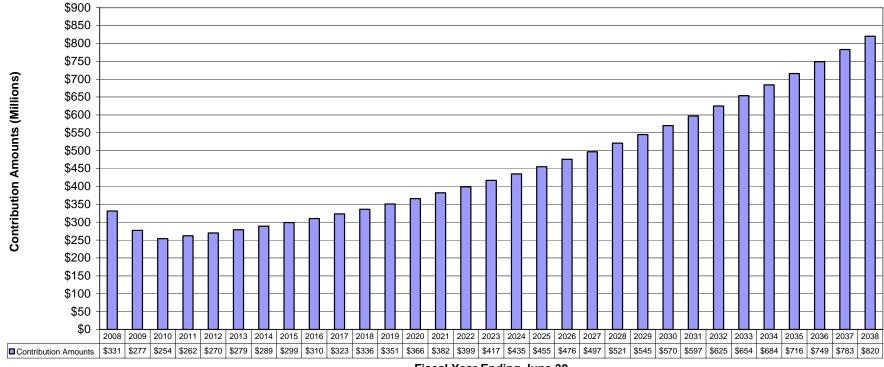
#### Observations

- Contribution amounts increase through the projection period.
- Funding ratios improve through the projection period.



#### **1.5(b)** Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll (continued)

#### **Contribution Amounts**

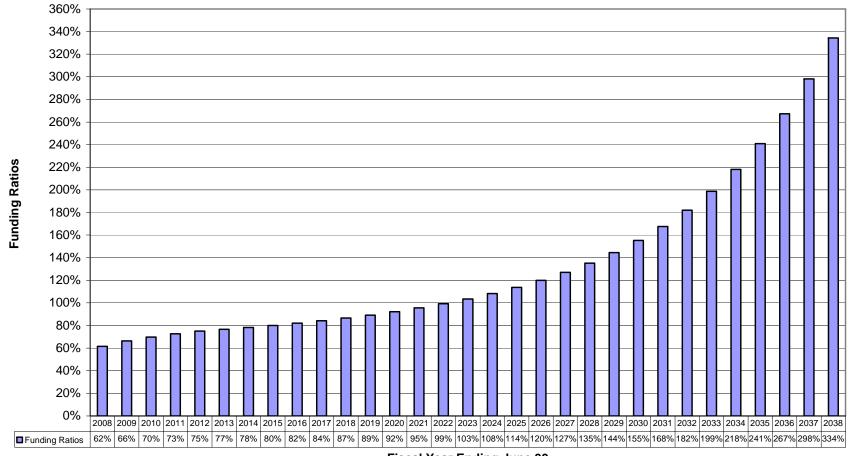


Fiscal Year Ending June 30



## 1.5(b) Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll (continued)

# **Funding Ratio**



Fiscal Year Ending June 30



#### **1.5(b)** Actuarial Projections – Projections at Current Rate Based on Total DB and DC Payroll (continued)

#### State of Alaska TRS

Financial Projections (in Thousands)

		estment Return Amounts on July		f Fiscal Year)	Flow Amounts During Following 12 Months									Ending
Fiscal Year End	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	Recognized Asset Gain	Actuarial Assets
2008	 \$4,424,399	 \$7,189,403	 61.54%	 (\$2,765,004)	 \$612,856	 54.03%	 \$331,126	 \$50,582	 \$381,708	 \$425,679	(\$43,971)	 \$402,129	 \$157,994	 \$4,940,551
2009	4,946,110	7,446,214	66.42%	(2,500,104)	626,264	44.17%	276,621	47,406	324,027	456,540	(132,513)	428,566	113,395	5,355,557
2010	5,361,367	7,688,399	69.73%	(2,327,033)	643,163	39.53%	254,242	44,654	298,896	482,658	(183,762)	451,408	111,122	5,740,134
2011	5,746,205	7,916,540	72.58%	(2,170,336)	662,015	39.53%	261,695	42,107	303,801	508,259	(204,458)	473,163	86,204	6,101,115
2012	6,107,459	8,130,538	75.12%	(2,023,080)	683,010	39.53%	269,994	39,737	309,730	533,911	(224,181)	495,069	0	6,378,347
2013	6,384,977	8,329,825	76.65%	(1,944,848)	705,676	39.53%	278,954	37,365	316,319	559,437	(243,118)	517,211	0	6,659,070
2014	6,665,997	8,513,557	78.30%	(1,847,560)	730,075	39.53%	288,599	34,968	323,567	584,050	(260,484)	539,705	0	6,945,219
2015	6,952,459	8,681,347	80.09%	(1,728,888)	756,520	39.53%	299,052	32,554	331,606	607,346	(275,740)	562,735	0	7,239,454
2016	7,247,019	8,833,175	82.04%	(1,586,156)	784,973	39.53%	310,300	30,112	340,412	629,735	(289,323)	586,501	0	7,544,197
2017	7,552,102	8,969,349	84.20%	(1,417,246)	816,624	39.53%	322,811	27,917	350,728	651,751	(301,022)	611,211	0	7,862,291
2018	7,870,553	9,089,345	86.59%	(1,218,792)	850,535	39.53%	336,216	25,765	361,981	672,204	(310,222)	636,778	0	8,197,108
2019	8,197,108	9,191,236	89.18%	(994,128)	887,143	39.53%	350,688	23,693	374,380	687,249	(312,869)	663,611	0	8,547,851
2020	8,547,851	9,275,182	92.16%	(727,331)	925,596	39.53%	365,888	21,670	387,558	707,373	(319,815)	692,267	0	8,920,302
2021	8,920,302	9,340,887	95.50%	(420,585)	966,032	39.53%	381,872	19,686	401,558	727,955	(326,397)	722,728	0	9,316,633
2022	9,316,633	9,386,638	99.25%	(70,004)	1,008,734	39.53%	398,753	17,789	416,542	747,724	(331,182)	755,232	0	9,740,683
2023	9,740,683	9,411,777	103.49%	328,906	1,053,912	39.53%	416,611	15,973	432,584	766,291	(333,707)	790,114	0	10,197,090
2024	10,197,090	9,416,110	108.29%	780,980	1,101,557	39.53%	435,445	14,231	449,676	784,965	(335,289)	827,703	0	10,689,504
2025	10,689,504	9,398,068	113.74%	1,291,437	1,151,018	39.53%	454,997	12,587	467,585	803,763	(336,178)	868,292	0	11,221,618
2026	11,221,618	9,355,896	119.94%	1,865,722	1,203,314	39.53%	475,670	11,044	486,714	820,454	(333,740)	912,289	0	11,800,167
2027	11,800,167	9,290,042	127.02%	2,510,125	1,258,414	39.53%	497,451	9,577	507,028	835,300	(328,272)	960,241	0	12,432,136
2028	12,432,136	9,200,594	135.12%	3,231,543	1,316,788	39.53%	520,526	8,226	528,753	850,180	(321,427)	1,012,655	0	13,123,364
2029	13,123,364	9,085,865	144.44%	4,037,499	1,378,624	39.53%	544,970	7,049	552,019	862,552	(310,533)	1,070,122	0	13,882,953
2030	13,882,953	8,946,723	155.17%	4,936,230	1,442,890	39.53%	570,374	5,985	576,360	872,664	(296,304)	1,133,363	0	14,720,012
2031	14,720,012	8,783,758	167.58%	5,936,255	1,509,961	39.53%	596,888	5,043	601,931	880,169	(278,238)	1,203,151	0	15,644,925
2032	15,644,925	8,597,933	181.96%	7,046,993	1,580,141	39.53%	624,630	4,216	628,846	883,385	(254,539)	1,280,415	0	16,670,801
2033	16,670,801	8,392,027	198.65%	8,278,774	1,653,695	39.53%	653,706	3,469	657,175	885,747	(228,572)	1,366,099	0	17,808,327
2034	17,808,327	8,165,470	218.09%	9,642,858	1,730,813	39.53%	684,190	2,826	687,017	883,520	(196,503)	1,461,242	0	19,073,066
2035	19,073,066	7,921,521	240.78%	11,151,545	1,810,697	39.53%	715,769	2,278	718,046	875,816	(157,770)	1,567,149	0	20,482,445
2036	20,482,445	7,664,590	267.23%	12,817,855	1,894,567	39.53%	748,922	1,818	750,740	865,641	(114,901)	1,685,156	0	22,052,700
2037	22,052,700	7,396,348	298.16%	14,656,352	1,982,035	39.53%	783,498	1,434	784,932	853,512	(68,580)	1,816,575	0	23,800,695
2038	23,800,695	7,118,035	334.37%	16,682,660	2,073,840	39.53%	819,789	1,121	820,910	835,654	(14,744)	1,962,961	0	25,748,913



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Valuation Results

## 1.5(c) Actuarial Projections – Effect of Economic Scenarios Based on Total DB and DC Payroll

#### **Key Assumptions**

• All assumptions and methods are the same as Section 1.5(a) except investment returns on the Market Value of Assets 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

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 discount rate for determining liabilities.

#### Observations

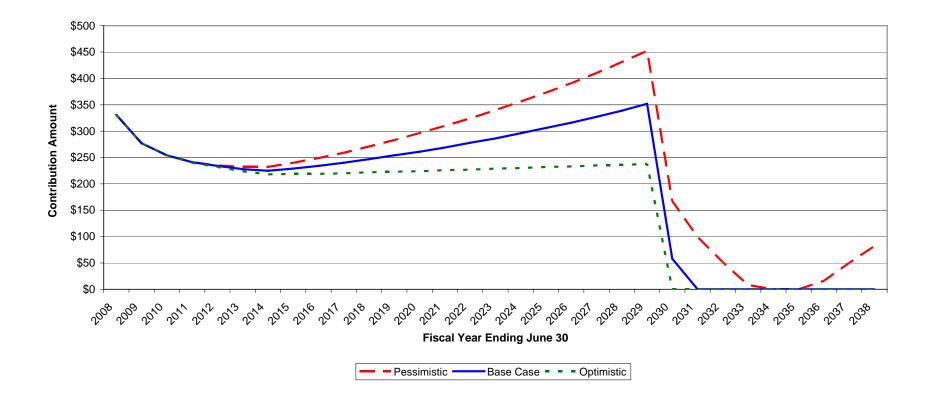
- As expected, lower investment returns would yield higher contribution requirements and higher investment returns would yield lower contribution requirements.
- In all scenarios, contribution amounts decrease towards end of the projection period upon completion of 25-year amortizations of recent losses.



Valuation Results

1.5(c) Actuarial Projections – Projections at Calculated Rate Effect of Economic Scenarios Based on Total DB and DC Payroll (continued)

### **Contribution Amounts**





## 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.



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

July 1, 1955, with amendments through June 30, 2007. 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 (Tier 1) are eligible for different benefits than members hired after June 30, 1990 (Tier 2). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006.

#### (2) Administration of Plan

The Commissioner of Administration or the Commissioner's designee is the administrator of the system. The Attorney General of the state is the legal counsel for the system and shall advise the administrator and represent the system in legal proceedings.

Prior to 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.

On July 27, 2005, 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 hired before July 1, 2006:

- 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.

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.

Senate Bill 141, signed into law on July 27, 2005, closes the plan effective July 1, 2006 to new members first hired on or after July 1, 2006.

#### (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.

Survivors who are receiving occupational death benefits continue to earn TRS service 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 Plan Provisions *(continued)*

The normal cost 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 a level percentage of pay amount over fixed 25-year periods.

Employer rates cannot be less than the 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 (5) 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.



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

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

#### Eligibility:

- (a) Members, including deferred vested members, are eligible for normal retirement at age 55 or early retirement at age 50 if they were hired before July 1, 1990 (Tier 1) and age 60 or early retirement at age 55 if they were hired on or after July 1, 1990 (Tier 2). Additionally, they must 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.

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. Indebtedness balances may also be created when a member purchases qualified claimed service.

#### (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).

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 (Tier 1) 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 (Tier 2) 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.

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

<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 or is vested, 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 the unreduced retirement benefit that the deceased member 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 Plan Provisions (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) **Postretirement Pension Adjustments**

Postretirement 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 (Tier 1) 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 (Tier 1) and their survivors;
- (b) members who were first hired under the TRS after June 30, 1990 (Tier 2) and their survivors if they are at least age 65; and
- (c) all disabled members.

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

### **Changes in Benefit Provisions Since the Prior Valuation**

There have been no changes in benefit provisions since the prior valuation. SB 123 was passed in 2007 which clarified and revised statutory language to comply with federal law and created the Alaska retiree health care trust.



## 2.2(a) Member Census Information – Total TRS

As of June 30		2003		2004		2005		2006		2007
Active Members										
(1) Number		9,873		9,688		9,656		9,710		9,107
(2) Average Age		44.28		44.56		44.76		45.02		45.84
(3) Average Credited Service		10.39		10.65		10.58		10.87		11.70
(4) Average Entry Age		33.89		33.91		34.18		34.15		34.14
(5) Average Annual Earnings	\$ \$	53,948	\$	53,925	\$	55,493	\$	59,156	\$	60,859
(6) Number Vested		5,289		5,174		5,254		5,462		5,571
(7) Percent Who Are Vested		53.6%		53.4%		54.4%		56.3%		61.2%
Retirees and Beneficiaries										
(1) Number		8,312		8,707		9,020		9,386		9,678
(2) Average Age		63.60		63.95		64.42		64.83		65.33
(3) Average Monthly Pension Benefit										
Base	\$	1,983	\$	1,970	\$	1,968	\$	1,962	\$	1,977
C.O.L.A.		125		122		122		122		123
P.R.P.A.		455		458		457		469		483
Adjustment		0		0		0		0		0
Total	\$	2,563	\$	2,550	\$	2,547	\$	2,554	\$	2,583
Vested Terminations (vested at time of te	ermi	nation, no	ot re	funded co	ontrik	outions o	r co	mmence	ed be	enefit)
(1) Number		708		724		826		795		846
(2) Average Age		48.57		48.83		49.13		48.80		49.03
(3) Average Monthly Pension Benefit	\$	974	\$	993	\$	1,072	\$	1,051	\$	1,094
Non-Vested Terminations (not vested at	terr	nination,	not	refunded	cont	ributions	5)			
(1) Number		2,327		2,746 <sup>1</sup>		2,874		3,085		3,044
(2) Average Account Balance	\$	11,916	\$	11,710	\$	11,684	\$	12,057	\$	12,675

<sup>1</sup> Includes deceased participants with account balances.

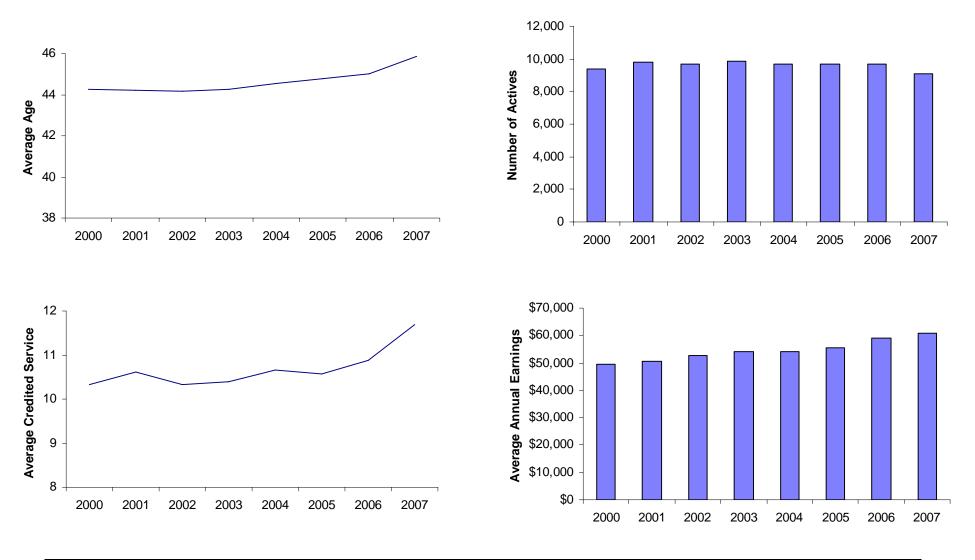


## 2.2(a) Member Census Information – Total TRS (continued)

As of June 30, 2007	Tier 1	Tier 2	Total
Retirees and Beneficiaries			
(1) Number	9,337	341	9,678
(2) Average Age	65.44	62.32	65.33
(3) Average Monthly Pension Benefit			
Base	\$ 2,006	\$ 1,174	\$ 1,977
C.O.L.A.	127	27	123
P.R.P.A.	499	58	483
Adjustment	0	0	0
Total	\$ 2,632	\$ 1,259	\$ 2,583



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



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**Annual Earnings by Credited Service** 

## 2.2(b) Distribution of Active Members

#### Annual Earnings by Age

		Total	Average		Years		Total	Average
		Annual	Annual		of		Annual	Annual
Age	Number	Earnings	Earnings		Service	Number	Earnings	Earnings
0 – 19	-	\$ 0	\$ 0	_	0	9	\$ 313,306	\$ 34,812
20 – 24	25	1,038,133	41,525		1	178	7,742,169	43,495
25 – 29	585	26,542,363	45,372		2	627	29,923,072	47,724
30 – 34	954	48,126,708	50,447		3	522	25,951,527	49,716
35 – 39	1,254	69,681,663	55,568		4	509	25,523,090	50,144
40 - 44	1,266	75,543,451	59,671	_	0 – 4	1,845	89,453,164	48,484
45 – 49	1,495	94,116,627	62,954		5 – 9	2,576	141,813,112	55,052
50 – 54	1,688	110,884,723	65,690		10 – 14	1,710	107,161,214	62,667
55 – 59	1,266	86,106,599	68,015		15 – 19	1,500	103,620,653	69,080
60 - 64	456	32,887,721	72,122		20 – 24	848	62,470,375	73,668
65 – 69	98	7,809,664	79,690		25 – 29	456	35,170,272	77,128
70 – 74	16	1,257,657	78,604		30 – 34	129	10,768,380	83,476
75+	4	249,477	62,369		35 – 39	36	3,072,930	85,359
					40+	7	714,686	102,098
Total	9,107	\$554,244,786	\$ 60,859		Total	9,107	\$554,244,786	\$ 60,859

#### 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	25	0	0	0	0	0	0	0	0	25			
25 – 29	460	125	0	0	0	0	0	0	0	585			
30 – 34	360	534	60	0	0	0	0	0	0	954			
35 – 39	275	571	360	48	0	0	0	0	0	1,254			
40 - 44	199	353	362	322	30	0	0	0	0	1,266			
45 – 49	187	342	320	373	226	47	0	0	0	1,495			
50 – 54	171	319	280	397	303	194	24	0	0	1,688			
55 – 59	116	231	238	269	197	141	62	12	0	1,266			
60 - 64	45	81	76	77	64	60	35	17	1	456			
65 – 69	4	16	13	13	26	11	5	5	5	98			
70 – 74	2	3	1	0	1	3	3	2	1	16			
75+	1	1	0	1	1	0	0	0	0	4			
Total	1,845	2,576	1,710	1,500	848	456	129	36	7	9,107			

Total annual earnings are the annualized earnings for the fiscal year ending on the valuation date.



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

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2007	9,107	\$ 554,245	\$ 60,859	2.9%	58
June 30, 2006	9,710	574,409 <sup>1</sup>	59,156	6.6%	58
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

<sup>&</sup>lt;sup>1</sup> Prior to June 30, 2006, unannualized earnings were used. Starting June 30, 2006, annualized earnings are used.

## 2.2(d) Statistics on New Benefit Recipients

During the Year Ending June 30		2003	 2004	 2005	 2006	 2007
Service						
(1) Number		548	446	393	425	368
(2) Average Age at Commencement		55.13	55.09	56.43	56.52	56.73
(3) Average Monthly Pension Benefit	\$	2,751	\$ 2,384	\$ 2,261	\$ 2,290	\$ 2,556
Survivor (including surviving spouse and G	DROs	3)				
(1) Number		43	35	46	57	61
(2) Average Age at Commencement		60.60	58.30	60.88	63.29	65.32
(3) Average Monthly Pension Benefit	\$	1,242	\$ 1,050	\$ 1,263	\$ 1,288	\$ 1,338
Disability						
(1) Number		8	10	7	5	3
(2) Average Age at Commencement		47.76	49.85	53.64	44.41	54.76
(3) Average Monthly Pension Benefit	\$	3,635	\$ 2,887	\$ 2,627	\$ 2,855	\$ 2,844
Total						
(1) Number		599	491	446	487	432
(2) Average Age at Commencement		55.42	55.21	56.57	57.19	57.93
(3) Average Monthly Pension Benefit	\$	2,654	\$ 2,299	\$ 2,164	\$ 2,179	\$ 2,386



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

				Years	of Cr	edited S	ervic	е			
	0 - 4	5 - 9	1	0 - 14	15	5 - 19	20	) - 24	2	5 - 29	30+
Period 7/1/06 – 6/30/07: <sup>1</sup> Average Monthly Pension Benefit Number of Recipients	\$ 214 9	\$ 798 41	\$	1,249 54	\$	2,250 69	\$	2,909 102	\$	3,709 68	\$ 5,109 28
Period 7/1/05- 6/30/06: <sup>1</sup> Average Monthly Pension Benefit Number of Recipients	\$ 1,078 9	\$ 960 50	\$	1,110 63	\$	1,982 90	\$	2,695 124	\$	3,388 68	\$ 4,563 26
Period 7/1/04- 6/30/05: <sup>1</sup> Average Monthly Pension 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 Pension 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 Pension 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 Pension 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 Pension 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 Pension 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 Pension Benefit Number of Recipients	\$ 1,051 26	\$ 850 51	\$	1,095 80	\$	1,842 105	\$	2,590 240	\$	3,443 154	\$ 4,280 57

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

<sup>1</sup> Does not include beneficiaries.



# DRAFT

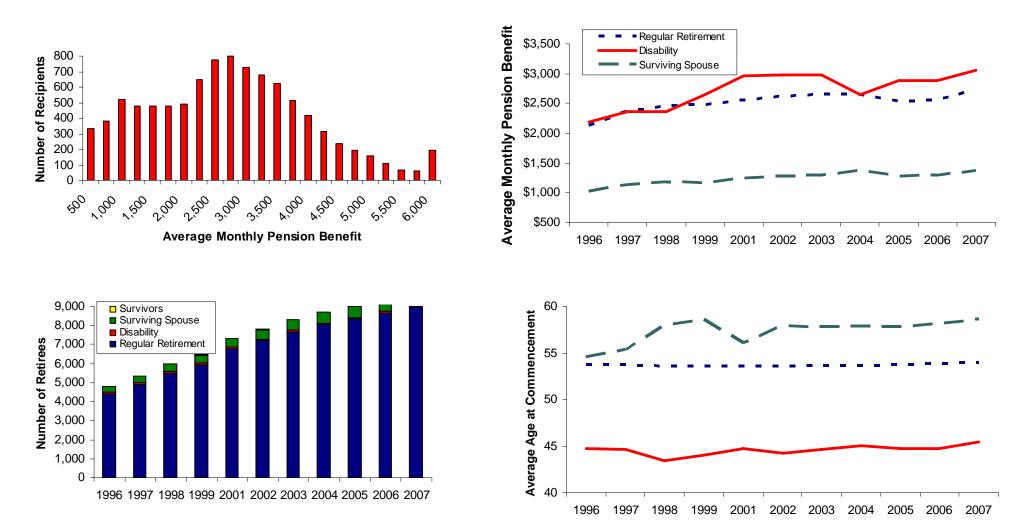
Basis of Valuation

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

As of June 30	2	003	20	04	2	2005	2	2006		2007
Service										
(1) Number, Fiscal Year Start		7,201	7	,680		8,052		8,351		8,67
(2) Net Change		479		372		299		324		25
(3) Number, Fiscal Year End		7,680	8	,052		8,351		8,675		8,92
(4) Average Age at Commencement		53.64	5	3.68		53.77		53.81		53.9
(5) Average Current Age		63.50	6	3.85		64.32		64.72		65.1
(6) Average Monthly Pension Benefit	\$	2,648	\$2	,649	\$	2,537	\$	2,558	\$	2,72
Surviving Spouse's Benefits (includes Q	DROs)									
(1) Number, Fiscal Year Start		501		549		576		602		64
(2) Net Change		48		27		26		45		4
(3) Number, Fiscal Year End		549		576		602		647		69
(4) Average Age at Commencement		57.78	5	7.86		57.75		58.16		58.6
(5) Average Current Age		66.96	6	8.12		67.31		67.71		68.1
(6) Average Monthly Pension Benefit	\$	1,297	\$1	,367	\$	1,270	\$	1,292	\$	1,36
ivor's Benefits (other than spouses)										
(1) Number, Fiscal Year Start		17		1		3		1		
(2) Net Change		(16)		2		(2)		0		
(3) Number, Fiscal Year End		1		3		1		1		
(4) Average Age at Commencement		49.77	4	7.59		35.52		35.52		35.5
(5) Average Current Age		51.35	5	2.09		35.77		36.77		37.7
(6) Average Monthly Pension Benefit	\$	1,113	\$	581	\$	448	\$	451	9	\$ 46
Disabilities										
(1) Number, Fiscal Year Start		85		82		76		66		6
(2) Net Change		(3)		(6)		(10)		(3)		(8
(3) Number, Fiscal Year End		82		76		66		63		5
(4) Average Age at Commencement		44.68	4	5.09		44.74		44.76		45.4
(5) Average Current Age		51.21		1.12		51.31		51.03		51.7
(6) Average Monthly Pension Benefit	\$	2,976 <sup>1</sup>	\$2,	,655 <sup>1</sup>	\$	2,891	\$	2,885	\$	3,06
Total										
(1) Number, Fiscal Year Start		7,804	8	,312		8,707		9,020		9,38
(2) Net Change		508		395		313		366		29
(3) Number, Fiscal Year End		8,312	8	,707		9,020		9,386		9,67
(4) Average Age at Commencement		53.82		3.88		53.97		54.05		54.2
(5) Average Current Age		63.61		4.02		64.42		64.83		65.3
(6) Average Monthly Pension Benefit	\$	2,562	\$2	,564	\$	2,455	\$	2,473	\$	2,62

<sup>1</sup> Includes benefit increases due to dependents.

Basis of the Valuation



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



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

#### Annual Pension Benefit by Age

#### Annual Pension Benefit by Years Since Commencement

		Total Annual Pension	Average Annual Pension			Years Since			Total Annual Pension	Α	verage nnual ension
Age	Number	Benefit	E	Benefit	С	ommencement	Numbe	er	Benefit	В	enefit
0 – 19	0	\$0	\$	0		0	417	\$	11,950,602	\$	28,659
20 – 24	0	0		0		1	451		12,657,461		28,065
25 – 29	0	0		0		2	455		13,115,155		28,825
30 – 34	0	0		0		3	497		13,398,810		26,959
35 – 39	4	76,952		19,238		4	463		12,649,441		27,321
40 - 44	22	616,347		28,016		0-4	2,283		63,771,469		27,933
45 – 49	168	4,908,511		29,217		5 – 9	2,472		73,522,895		29,742
50 – 54	682	20,697,188		30,348		10 – 14	2,128		71,659,512		33,675
55 – 59	1,994	58,992,293		29,585		15 – 19	1,090		36,524,517		33,509
60 - 64	2,446	76,057,649		31,095		20 – 24	1,082		41,473,429		38,330
65 – 69	1,834	60,691,877		33,093		25 – 29	397		11,815,433		29,762
70 – 74	1,109	38,078,740		34,336		30 – 34	208		5,761,302		27,699
75+	1,419	44,911,985		31,650		35 – 39	16		434,501		27,156
_						40+	2		68,484		34,242
Total	9,678	\$305,031,542	\$	31,518		Total	9,678	\$	305,031,542	\$	31,518

#### Years Since Benefit Commencement by Age

			١	ears Sinc	e Comme	ncement				
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	2	2	0	0	0	0	0	0	0	4
40 - 44	16	4	2	0	0	0	0	0	0	22
45 – 49	136	27	4	1	0	0	0	0	0	168
50 – 54	402	224	53	2	0	0	0	1	0	682
55 – 59	924	692	326	46	3	2	1	0	0	1,994
60 - 64	503	943	695	220	79	5	0	1	0	2,446
65 – 69	194	382	647	376	223	9	2	1	0	1,834
70 – 74	51	120	276	264	337	51	7	3	0	1,109
75+	55	78	125	181	440	330	198	10	2	1,419
Total	2,283	2,472	2,128	1,090	1,082	397	208	16	2	9,678

2.2(h)	Schedule of Pension	Benefit Recipients by	<b>Type of Pension</b>	Benefit and Option Selected
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Amount of	Number of	Туре о	f Pension Be	enefit		<b>Option Se</b>	lected	
Monthly Pension Benefit	Recipients	1	2	3	1	2	3	4
\$ 1 \$ 300	154	121	33	0	83	33	28	10
301 – 600	315	248	67	0	164	68	66	17
601 – 900	569	449	120	0	306	121	116	26
901 – 1,200	588	486	102	0	345	132	90	21
1,201 – 1,500	569	462	107	0	306	115	126	22
1,501 – 1,800	567	482	85	0	315	111	125	16
1,801 – 2,100	648	572	72	4	343	136	151	18
2,101 – 2,400	854	802	44	8	441	181	206	26
2,401 – 2,700	973	934	29	10	497	193	251	32
2,701 – 3,000	878	857	13	8	461	161	239	17
3,001 – 3,300	812	791	13	8	443	126	222	21
3,301 – 3,600	718	706	5	7	423	112	173	10
3,601 – 3,900	562	559	3	0	312	64	177	9
3,901 – 4,200	392	386	3	3	218	53	116	5
Over \$4,200	1,079	1,071	1	7	596	126	328	29
Totals	9,678	8,926	697	55	5,253	1,732	2,414	279

#### **Type of Pension Benefit**

#### **Option Selected**

- 1. Regular 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 Pension Benefit Recipients Added to and Removed from Rolls

	Ad	ded to Rolls	Remov	ved from Rolls	Rolls –	End of Year	Percent	
Year Ended	No. <sup>1</sup>	Annual Pension Allowances <sup>1</sup>	No. <sup>1</sup>	Annual Pension Allowances <sup>1</sup>	No.	Annual Pension Allowances	Increase in Annual Pension Allowances	Average Annual Pension Allowance
June 30, 2007	432	\$12,388,703	140	\$-14,114,559	9,678	\$305,031,542	9.52%	\$31,518
June 30, 2006	487	12,731,292	121	-50,838	9,386	278,528,280	4.81%	29,675
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>2</sup>	43	2,211,834 <sup>2</sup>	5,343	146,627,960	23.37%	27,443



<sup>&</sup>lt;sup>1</sup> Numbers are estimated, and include other internal transfers.

<sup>2</sup> Includes additional benefits to current retirees from a one-time retroactive ad hoc Postretirement Pension Adjustment.

### 2.3 Summary of Actuarial Assumptions and Methods

The demographic and economic assumptions used in the June 30, 2007 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in October 2006. These assumptions were the result of an experience study performed as of June 30, 2005. The funding method used in this valuation was adopted by the Board in October 2006. 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 – Entry Age Actuarial Cost.

Liabilities and contributions shown in the report are computed using the Entry Age Actuarial Cost method of funding. Any funding surpluses or unfunded accrued liability is amortized over 25 years as a level percent of pay amount. Payroll is assumed to increase 4.0% per year for this purpose. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit and defined contribution member payroll combined. However, for GASB disclosure requirements, the net amortization period will not exceed 30 years and the level dollar amortization method is used since the defined benefit plan membership was closed effective July 1, 2006.

Projected pension and postemployment healthcare benefits were determined for all active members. Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for pension benefits (constant dollar amount for healthcare benefits) from the assumed entry age to the assumed retirement age were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for retired members and their beneficiaries currently receiving benefits, terminated vested members and disabled members not yet receiving benefits was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.



#### **Changes in Methods from the Prior Valuation**

There were no changes in methods from the prior valuation, except for any described in the healthcare sections below.

#### (B) 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 was 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.

#### (C) Valuation of Medical Benefits

This section outlines the detailed methodology used to develop the initial per capita claims cost rates for the State of Alaska Teachers' Retirement System postemployment healthcare plan. Note that methodology reflects the results of our Experience Study for the period July 1, 2001 to June 30, 2005.

Base claims cost rates are incurred healthcare costs expressed as a rate per member per year. Ideally, claims cost rates should be derived for each significant component of cost that can be expected to require differing projection assumptions or methods, i.e., medical claims, prescription drug claims, administrative costs, etc. Separate analysis is limited by the availability and credibility of cost and enrollment data for each component of cost. This valuation reflects non-prescription claims separated by Medicare status, including eligibility for free Part A coverage. Prescription costs are analyzed separately as in prior valuations. Administrative costs are assumed in the final per capita claims cost rates used for valuation purposes, as described below. Analysis to date on Medicare Part A coverage is limited since Part A coverage is not available by individual, nor is this status incorporated into historical claim data.

We analyzed Aetna and Premera management level reporting for calendar 2003 through fiscal 2007, as well as Aetna and Premera claim level data for calendar 2004, 2005 and 2006, and derived recommended base claims cost rates as described in the following steps:

- 1. Based on analysis described in our Experience Study, dental, vision and audio claims (DVA) are excluded from data analyzed for this valuation.
- 2. Available management level reporting does not show claims or enrollment separately for Medicare and non-Medicare plan participants, but does include overall statistics as to the percentage of claims and enrollment attributable to both groups. Claim level reporting and the State's approved RDS listing from Medicare were used to augment cost and enrollment data by Medicare status.



3. Alaska retirees who do not have 40 quarters of Medicare-covered compensation do not qualify for Medicare Part A coverage free of charge. This is a relatively small and closed group. Medicare was applied to State employment for all employees hired after March 31, 1986. For these "no-Part A" individuals, the State is the primary payer for hospital bills and other Part A services. Thus, claims costs are higher for the no-Part A group. To date, claim and enrollment experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. Therefore, higher no-Part A claims are spread across the entire retired population and have been applied to future claims of current active employees projected to retire in the future. To the extent that no-Part A claims can be isolated and applied strictly to the appropriate closed group, actuarial accrued liability will be more accurate and will be lower. The larger the no-Part A population, the more accurate liabilities will decrease.

Current retiree census does not include date of hire, although the Tier indicator does imply that Tier I TRS retirees should probably be considered as no-Part A retirees. After analysis of active employee data, including individual claim records, and accounting for retirees who return to work and therefore pay Medicare taxes, we assume that 5.0% of the active and inactive workforce will not qualify for free Part A coverage when they retire. Similarly, we assume 5.0% of the current Medicare retiree population does not receive Part A coverage.

We are working with the State to compile census records for no-Part A members to build an historic claim database isolating no-Part A members.

All claims cost rates developed from management level reporting have been compared to similar rates developed from claim level data.

4. The steps above result in separate paid claims cost rates for medical and prescription benefits for non-Medicare, Medicare Part B only and Medicare Part A&B members for the past four calendar years. Medical claims cost rates reflect differing average ages and levels of Medicare coordination for each group. Prescription claims cost rates reflect differing average ages. We converted paid claim data to incurred cost rates projected from each historical data period to the valuation year using an average of national and Alaska-specific trend factors and developed weighted average incurred claims cost rates. The assumed lag between medical claim incurred and paid dates is approximately 2.3 months for medical claims and 0.6 months for prescription claims. This "trend and blend" methodology differs mechanically from the method used for 2004 and 2005 that essentially averaged three years of paid claims before projecting forward to an incurred basis for the valuation year. During transition to a trended blended average basis, we recommend weighting each year's data in the 4-year experience period at 25%. We also incorporated actual administrative costs that are projected to increase at 5%.



				Medical			Prescription Drugs				-			
					I	Medicare B				•	Ν	Medicare B	-	
	P	Pre-Medicare	Me	edicare A&B		Only	Р	re-Medicare	M	edicare A&B		Only		Total
Calendar 2004 Paid Claims	\$	125,222,188	\$	20,330,785	\$	2,955,315	\$	37,938,758	\$	29,894,935	\$	1,689,411	\$	218,031,392
Membership		32,858		17,558		924		32,858		17,558		924		51,340
Paid Claims Cost Rate	\$	3,811	\$	1,158	\$	3,198	\$	1,155	\$	1,703	\$	1,828	\$	4,247
Trend to FY2008		1.286		1.286		1.286		1.400		1.400		1.400		
FY 2008 Paid Cost Rate	\$	4,901	\$	1,489	\$	4,112	\$	1,616	\$	2,383	\$	2,559	\$	5,615
Paid to Incurred Factor**		1.013		1.013		1.013		1.004		1.004		1.004		
FY 2008 Incurred Cost Rate	\$	4,966	\$	1,509	\$	4,167	\$	1,622	\$	2,391	\$	2,568	\$	5,671
Calendar 2005 Paid Claims	\$	146,356,647	\$	25,618,571	\$	3,976,509	\$	42,812,358	\$	35,481,585	\$	1,999,302	\$	256,244,972
Membership		33,343		18,603		979		33,343		18,603		979		52,925
Paid Claims Cost Rate	\$	4,389	\$	1,377	\$	4,061	\$	1,284	\$	1,907	\$	2,042	\$	4,842
Trend to FY2008		1.188		1.188		1.188		1.258		1.258		1.258		
FY 2008 Paid Cost Rate	\$	5,214	\$	1,636	\$	4,824	\$	1,615	\$	2,399	\$	2,569	\$	5,857
Paid to Incurred Factor**		1.013		1.013		1.013		1.004		1.004		1.004		
FY 2008 Incurred Cost Rate	\$	5,283	\$	1,657	\$	4,888	\$	1,621	\$	2,408	\$	2,578	\$	5,917
Fiscal 2006 Paid Claims	\$	150,287,171	\$	24,546,905	\$	4,079,223	\$	45,461,356	\$	39,644,399	\$	2,235,948	\$	266,255,002
Membership		33,473		19,490		1,026		33,473		19,490		1,026		53,989
Paid Claims Cost Rate	\$	4,490	\$	1,259	\$	3,977	\$	1,358	\$	2,034	\$	2,180	\$	4,932
Trend to FY2008		1.142		1.142		1.142		1.195		1.195		1.195		
FY 2008 Paid Cost Rate	\$	5,128	\$	1,438	\$	4,542	\$	1,622	\$	2,430	\$	2,604	\$	5,717
Paid to Incurred Factor**		1.013		1.013		1.013		1.004		1.004		1.004		
FY 2008 Incurred Cost Rate	\$	5,196	\$	1,458	\$	4,602	\$	1,628	\$	2,439	\$	2,613	\$	5,774
Fiscal 2007 Paid Claims	\$	129,762,975	\$	22,677,328	\$	3,524,812	\$	46,176,199	\$	42,348,638	\$	2,391,089	\$	246,881,041
Membership		33,446		20,315		1,069		33,446		20,315		1,069		54,830
Paid Claims Cost Rate	\$	3,880	\$	1,116	\$	3,297	\$	1,381	\$	2,085	\$	2,236	\$	4,503
Trend to FY2008		1.063		1.063		1.063		1.083		1.083		1.083		
FY 2008 Paid Cost Rate	\$	4,122	\$	1,186	\$	3,503	\$	1,495	\$	2,257	\$	2,421	\$	4,817
Paid to Incurred Factor**		1.013		1.013		1.013		1.004		1.004		1.004		
FY 2008 Incurred Cost Rate	\$	4,177	\$	1,202	\$	3,549	\$	1,500	\$	2,265	\$	2,430	\$	4,864
Weighted Average 7/1/2007-6/30/2008 Incu	rred	Claims Cost Ra	ates:				_							
At average age	\$	4,905	\$	1,456	\$	4,302	\$	1,593	\$	2,376	\$	2,547	\$	5,517
At age 65*	\$	7,196	\$	1,151	\$	2,805	\$	2,173	\$	2,173	\$	2,173	\$	7,131

June 30, 2007 Valuation – FY 2008 Claims Cost Rates

\* Methodology prior to 2006 did not include separate Part B only analysis; applicable rates above are determined so that the composite Medicare rate equates to separate A&B and B only rates based on the 5.0% of Medicare membership assumed to lack Part A.

\*\* As data specific to Medicare and Pre-Medicare retirees is provided, lag factors specific to Medicare status will be reflected.



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 and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug and Medicare Retiree Drug Subsidy
45	\$ 3,928	\$ 3,928	\$ 1,169
50	4,444	4,444	1,388
55	5,077	5,077	1,641
60	6,030	6,030	1,902
65	1,151	2,805	1,708
70	1,400	3,413	1,840
75	1,663	4,053	1,962
80	1,791	4,366	2,012

#### Distribution of Per Capita Claims Cost by Age for the Period July 1, 2007 through June 30, 2008



#### (D) Actuarial Assumptions

Investment Return / Discount Rate	8.25% per year, compounded annually, net of expenses.
Salary Scale	Inflation – 3.5% per year
	Merit– 2.0% per year for first 5 years of employment grading down to 0% after 15 years.
	Productivity $-0.5\%$ per year
Payroll Growth	4.0% 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 (Preretirement)	Based upon the 2001-2005 actual experience. (See Table 1). 60% of the 1994 Group Annuity Table 1994 Base Year for females and 55% for males. All deaths are assumed to result from non-occupational causes.
Mortality (Postretirement)	Based upon the 2001-2005 actual experience. (See Table 2). 1-year setback of the 1994 Group Annuity Table 1994 Base Year for females and 3-year setback for males.
Turnover	Select and ultimate rates based upon the 2001-2005 actual withdrawal experience. (See Table 3).
Disability	Incidence rates based upon the 2001-2005 actual experience, in accordance with Table 4. 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.
Retirement	Retirement rates based upon the 2001-2005 actual experience in accordance with Table 5. Deferred vested members are assumed to retire at their earliest retirement date.
Marriage and Age Difference	Wives are assumed to be three years younger than husbands. 85% of male members and 75% of female members are assumed to be married.
Dependent Children	Benefits to dependent children have been valued assuming members who are married and between the ages of 25 and 45 have two dependent children.
Contribution Refunds	10% of those terminating are assumed to have their contributions refunded.
COLA	Of those benefit recipients who are eligible for the COLA, 60% are assumed to remain in Alaska and receive the COLA.

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.				
Postretirement Pension Adjustment	50% and 75% of assumed inflation, or 1.75% and 2.625% respectively, is valued for the annual automatic Postretirement Pension Adjustment (PRPA) as specified in the statute.				
Expenses	All expenses are net of the	investment ret	urn assumption.		
Part-time Status	Part-time employees are assumed to earn 0.55 years of credited service per year.				
Re-employment Option	We assume all re-employe the Standard Option.	d retirees returi	n to work under		
Service	Total credited service is provided by the State. We assume that this service is the only service that should be used to calculate benefits. Additionally, the State provides claimed service (including Bureau of Indian Affairs Service). Claimed service is used for vesting and eligibility purposes as described in Section 2.1.				
Per Capita Claims Cost	Sample claims cost rates for FY08 medical benefits are shown below:				
		Medical	Prescription Drugs		
	Total	\$ 7,196	\$ 2,173		
	Medicare Parts A & B	\$ 1,151 \$ 2,173			
	Medicare Part B Only	\$ 2,805 \$ 2,173			
	Medicare Part D N/A \$ 465				
Third Party Administrator Fees	\$146.18 per person per year; assumed trend rate of 5% per year.				

### (D) Actuarial Assumptions (continued)



#### (D) Actuarial Assumptions (continued)

Health Cost Trend	The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 8.5% is applied to the FY08 rate claims costs to
	get the FY09 claims costs.

		Prescription
	Medical	Drugs
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%

For the June 30, 2005 valuation, graded Healthcare Cost Trend Rates (HCCTR) were reinitialized. A survey of healthcare trends in the past year has revealed a general lowering of HCCTR. No reinitialization is required this year, so the trend rates will follow the same pattern as for the 2005 and 2006 valuations.

Aging Factors			Prescription
	Age	Medical	Drugs
	0-44	2.0%	4.5%
	45-54	2.5%	3.5%
	55-64	3.5%	3.0%
	65-74	4.0%	1.5%
	75-84	1.5%	0.5%
	85+	0.5%	0.0%



### (D) Actuarial Assumptions (continued)

Retired Member Contributions for Medical Benefits	Currently contributions are required for TRS members who are under age 60 and have less than 30 years of service. Eligible Tier 1 members are exempt from contribution requirements. Annual FY08 contributions based on monthly rates shown below for calendar 2007 and 2008 are assumed based on the coverage category for current retirees. The composite rate shown is used for current active and inactive members assumed to retire prior to age 60 with less than 30 years of service:
	Calendar 2008 Calendar 2007

Coverage Category	FY08 Annual Contribution	Calendar 2008 Monthly Contribution	Calendar 2007 Monthly Contribution
Retiree Only	\$ 7,080	\$ 590	\$ 590
Retiree and Spouse	\$ 14,148	\$ 1,179	\$ 1,179
Retiree and Child(ren)	\$ 9,996	\$ 833	\$ 833
Retiree and Family	\$ 17,076	\$ 1,423	\$ 1,423
Composite	\$ 10,512	\$ 876	\$ 876



Trend Rate for Retired Member Medical Contribution	The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 7.7% is applied to the FY08 retired member medical contributions to get the FY09 retired member medical contributions.	
	FY08	7.7%
	FY09	7.3%
	FY10	7.0%
	FY11	6.7%
	FY12	6.3%
	FY13	6.0%
	FY14	5.7%
	FY15	5.3%
	FY16	5.0%
	FY17 and later	5.0%

#### (D) Actuarial Assumptions (continued)

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2005 valuation. A study of the required contribution history along with assumptions related to the impact of recent accounting regulations leads us to recommend the new assumptions above for the contribution trends. Note that actual FY07 retired member medical contributions are reflected in the valuation so trend on such contribution during FY07 is not applicable.



#### Table 1 Alaska TRS Mortality Table (Preretirement)

Age	Male	<u>Female</u>
20	.030%	.018%
21	.031	.019
22	.033	.019
23	.035	.019
24	.037	.019
25	.039	.019
26	.041	.019
27	.043	.019
28	.045	.020
29	.046	.021
30	.047	.023
31	.049	.024
32	.050	.026
33	.050	.027
34	.050	.029
35	.050	.031
36	.051	.033
37	.053	.036
38	.056	.039
39	.059	.042
40	.063	.046
41	.068	.050
42	.074	.053
43	.080	.057
44	.086	.060
45	.093	.063
46	.102	.067
47	.112	.072
48	.124	.078
49	.138	.085
50	.153	.092
51	.170	.101
52	.190	.112
53	.212	.123
54	.235	.135
55	.262	.148
56	.293	.165
57	.330	.188
58	.373	.217
59	.419	.249
60	.472	.286
61	.532	.329
62	.600	.376
63	.678	.431
64	.765	.492

#### Table 2 Alaska TRS Mortality Table (Postretirement)

Age	Male	<u>Female</u>
50	.204%	.141%
51	.226	.154
52	.250	.169
53	.277	.186
54	.309	.205
55	.346	.224
56	.385	.247
57	.428	.276
58	.476	.314
59	.532	.361
60	.600	.415
61	.677	.477
62	.762	.548
63	.858	.627
64	.966	.718
65	1.091	.819
66	1.233	.929
67	1.391	1.042
68	1.563	1.157
69	1.746	1.265
70	1.939	1.367
71	2.135	1.476
72	2.336	1.608
73	2.552	1.775
74	2.791	1.972
75	3.063	2.192
76	3.355	2.439
77	3.661	2.723
78	4.001	3.050
79	4.393	3.412
80	4.857	3.802
81	5.399	4.236
82	6.007	4.726
83	6.670	5.285
84	7.378	5.899
85	8.122	6.557



#### Table 3 Alaska TRS Turnover Assumptions

#### Select Rates of Turnover During the First 8 Years of Employment

Year of		
Employment	Male	Female
1	15%	13%
2	15	13
3	13	12
4	13	11
5	12	11
6	10	09
7	09	08
8	07	07

#### Ultimate Rates of Turnover After the First 8 Years of Employment

Age	Male	Female	Age	Male	Female
15	4.9538%	4.3747%	40	4.7988%	4.2658%
16	4.9475	4.3714	41	4.7850	4.2559
17	4.9425	4.3692	42	4.7675	4.2460
18	4.9375	4.3681	43	4.7513	4.2372
19	4.9350	4.3670	44	4.7300	4.2262
20	4.8963	4.3351	45	4.7063	4.2130
21	4.8938	4.3351	46	4.6813	4.2009
22	4.8888	4.3340	47	4.6500	4.1844
23	4.8850	4.3340	48	4.6138	4.1657
24	4.8788	4.3329	49	4.5763	4.1470
25	4.8738	4.3329	50	4.5338	4.1250
26	4.8688	4.3318	51	4.4838	4.0997
27	4.8638	4.3307	52	4.4250	4.0700
28	4.8588	4.3274	53	4.3600	4.0348
29	4.8538	4.3241	54	4.2875	3.9974
30	4.8500	4.3208	55	4.2050	3.9523
31	4.8475	4.3186	56	4.1050	3.8940
32	4.8438	4.3142	57	3.9825	3.8192
33	4.8413	4.3109	58	3.8488	3.7345
34	4.8400	4.3065	59	3.6875	3.6267
35	4.8375	4.3021	60	3.5063	3.5046
36	4.8338	4.2955	61	3.3050	3.3682
37	4.8288	4.2900	62	3.0713	3.2131
38	4.8200	4.2823	63	2.8050	3.0360
39	4.8100	4.2746	64	2.5163	2.8435
			65+	5.0000	4.4000

#### Table 4 Alaska TRS Disability Table

Age	Male	Female
20	.028%	.025%
21	.028	.025
22	.029	.026
23	.029	.026
24	.030	.027
25	.030	.027
26	.030	.027
27	.031	.028
28	.032	.029
29	.033	.030
30	.034	.031
31	.034	.031
32	.035	.032
33	.036	.032
34	.037	.033
35	.038	.034
36	.040	.036
37	.041	.037
38	.043	.039
39	.044	.040
40	.046	.041
41	.048	.043
42	.051	.046
43	.054	.049
44	.059	.053
45	.065	.059
46	.070	.063
47	.076	.068
48	.083	.075
49	.089	.080
50	.096	.086
51	.104	.094
52	.114	.103
53	.127	.114
54	.142	.128
55	.160	.144
56	.184	.166
57	.214	.193
58	.244	.220
59	.288	.259
60	.337	.303
61	.390	.351
62	.452	.407
63	.522	.470
64	.596	.536

Age at		Retirem	ent Rate	
Retirement	Red	uced		educed
	Male	Female	Male	Female
<50	N/A	N/A	5.60%	5.70%
50	6.00%	6.30%	20.00	12.50
51	6.80	6.80	17.50	15.00
52	6.80	6.70	20.00	15.00
53	7.90	8.90	15.00	20.00
54	7.80	10.00	25.00	20.00
55	5.90	7.20	22.50	22.50
56	5.80	7.10	19.50	19.50
57	5.50	6.90	17.50	17.50
58	6.20	8.50	17.50	20.00
59	6.30	8.30	25.00	20.00
60	N/A	N/A	20.00	20.00
61	N/A	N/A	20.00	20.00
62	N/A	N/A	12.50	25.00
63	N/A	N/A	25.50	29.75
64	N/A	N/A	34.00	34.00
65	N/A	N/A	25.00	50.00
66	N/A	N/A	20.00	30.00
67	N/A	N/A	20.00	30.00
68	N/A	N/A	20.00	25.00
69	N/A	N/A	20.00	30.00
70	N/A	N/A	100.00	100.00

#### Table 5 Alaska TRS Retirement Table



## **Changes in Actuarial Assumptions Since the Prior Valuation**

	June 30, 2006	June 30, 2007
Healthcare	Included effect of Medicare Part A & B vs. Medicare Part B only. Active employees hired after April 1, 1986 are assumed to be covered by Medicare Parts A & B. 7.5% of current retirees are assumed to be covered by Part B only. Change assumed lag between medical claim incurred and paid dates from 3 months to 2 lag months. Changed trend rate table for retiree medical contributions to start at 8.0% and grade down to 5%.	5.0% of current retirees are assumed to be covered by Part B only. Change assumed lag between medical claim incurred and paid dates from 2 months for medical and prescription combined to 2.3 months for medical and 0.6 months for prescription. Added explicit TPA fees based on current admin contract and assumed to increase at 5%. Partially reflected Alaska-specific trend rates to bring forward experience period claims to the base year.

## 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, Methods and Additional Information Under GASB.
- Section 3.3 Solvency test.



## 3.1 Analysis of Financial Experience

Change in Employer Contribution Rate Due to Gains and Losses in Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience									
		Change in	Employer Contribu	ition Rate During Fise	cal Year				
		Pens	ion	Health	care				
Туре	e of Gain or Loss	2006	2007	2006	2007				
(1)	Health Experience	N/A	N/A	(2.52)%	(3.90)%				
(2)	Salary Experience	0.79%	(0.27)%	0.00%	0.00%				
(3)	Investment Experience	0.10%	(0.32)%	(0.46)%	(1.05)%				
(4)	Demographic Experience	(0.27)%	1.63%	N/A	N/A				
(5)	Contribution Shortfall	(0.41)%	0.42%	1.62%	0.89%				
(6)	(Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	0.21%	1.46%	(1.36)%	(4.06)%				
(7)	Asset Valuation Method	0.00%	0.00%	0.00%	0.00%				
(8)	Past Service Amortization Change	0.00%	0.00%	0.00%	0.00%				
(9)	Assumption and Method Changes*	2.96%	(1.08)%	0.10%	(0.96)%				
(10)	System Benefit Changes	0.00%	0.00%	0.00%	0.00%				
(11)	Administrative System Changes	0.00%	0.00%	0.00%	0.00%				
(12)	Ad hoc PRPA	0.00%	0.00%	0.00%	0.00%				
(13)	Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10) + (11) + (12)	3.17%	0.38%	(1.26)%	(5.02)%				
(14)	Beginning Total Employer Contribution Rate	17.40%	20.57%	24.86%	23.60%				
(15)	Ending Total Employer Contribution Rate, (13) + (14)	20.57%	20.95%	23.60%	18.58%				
(16)	Fiscal Year Above Rate is Applied	FY09	FY10	FY09	FY10				
` '	11								

\*Includes change in rate by using total payroll.



# 3.1 Analysis of Financial Experience (continued)

		Chang	Change in Employer Contribution Rate During Fiscal Yea						
Type of Gain or Loss		2003	2004	2005	2006	2007			
(1)	Health Experience	0.00%	0.00%	1.47%	(2.52)%	(3.90)%			
(2)	Salary Experience	0.10%	0.54%	(0.26)%	0.79%	(0.27)%			
3)	Investment Experience	0.43%	0.06%	(0.02)%	(0.36)%	(1.37)%			
(4)	Demographic Experience	1.35%	(0.85)%	(2.10)%	(0.27)%	1.63%			
5)	Contribution Shortfall	1.40%	1.24%	1.42%	1.21%	1.31%			
6)	(Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	3.28%	0.99%	0.51%	(1.15)%	(2.60)%			
7)	Asset Valuation Method	0.00%	0.00%	0.00%	0.00%	0.00%			
8)	Past Service Amortization Change	0.00%	0.00%	0.00%	0.00%	0.00%			
9)	Assumption and Method Changes*	0.00%	1.94%	0.00%	3.06%	(2.04)%			
10)	System Benefit Changes	0.00%	0.00%	0.00%	0.00%	0.00%			
11)	Administrative System Changes	0.00%	0.00%	0.00%	0.00%	0.00%			
12)	Ad hoc PRPA	0.00%	0.00%	0.00%	0.00%	0.00%			
(13)	Change due to revaluation of plan liabilities as of June 30, 2004	0.00%	0.00%	(0.03)%	0.00%	0.00%			
14)	Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10) + (11) + (12) + (13)	3.28%	2.93%	0.48%	1.91%	(4.64)%			
15)	Beginning Total Employer Contribution Rate	35.57%	38.85%	41.78%	42.26%	44.17%			
16)	Ending Total Employer Contribution Rate, (14) + (15)	38.85%	41.78%	42.26%	44.17%	39.53%			
17)	Fiscal Year Above Rate is Applied	FY06	FY07	FY08	FY09	FY10			

### Change in Employer Contribution Rate

# Due to Gains and Losses in Accrued Liabilities During the Last Five Fiscal Years

\*Includes change in rate by using total payroll.



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

The exhibit below shows the pension disclosure under GASB No. 25.

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, 2007	\$ 5,043,448	\$ 3,441,867	68.2%	\$ 1,601,581	\$ 554,245	289.0%	
June 30, 2006	\$ 4,859,336	\$ 3,296,934	67.8%	\$ 1,562,402	\$ 574,409	272.0%	

The exhibit below shows the postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43.

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, 2007	\$ 4,059,573	\$ 982,532	24.2%	\$ 3,077,041	\$ 554,245	555.2%	
June 30, 2006	\$ 4,288,707	\$ 844,766	19.7%	\$ 3,443,941	\$ 574,409	599.6%	

For illustration, the exhibit below shows the postemployment healthcare disclosure without regard to the Medicare Part D subsidy discounted at 8.25% and at 4.50% per annum under GASB No. 43. These values show the minimum and maximum accrued liability amounts depending on the portion of ARC actually contributed.

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, 2007 – 8.25%	\$ 2,313,378	\$ 982,532	42.5%	\$ 1,330,846	\$ 554,245	240.1%
June 30, 2007 – 4.50%	\$ 4,059,573	\$ 982,532	24.2%	\$ 3,077,041	\$ 554,245	555.2%



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

The exhibit below shows the combined pension and postemployment healthcare disclosure under GASB No. 25, prior to 2006.

Valuation Date			d Assets		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>2</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>1 2 3</sup>	\$	5,411,642	\$	3,689,036	68.2%	\$	1,722,606	\$	509,437	338.1%	
June 30, 2001	\$	4,603,147	\$	4,372,229	95.0%	\$	230,918	\$	496,188	46.5%	
June 30, 2000 <sup>1 2 3</sup>	\$	4,198,868	\$	4,184,015	99.6%	\$	14,853	\$	482,571	3.1%	
June 30, 1999	\$	3,720,954	\$	3,815,633	102.5%	\$	N/A	\$	466,414	N/A	
June 30, 1998	\$	3,528,757	\$	3,446,070	97.7%	\$	82,687	\$	469,433	17.6%	
June 30, 1997	\$	3,320,069	\$	3,120,044	94.0%	\$	200,025	\$	466,455	42.9%	

<sup>1</sup> Change in Asset Valuation Method <sup>2</sup> Change of Assumptions

<sup>3</sup> Change in Methods

# 3.2(b) Schedule of Employer Contributions

The exhibit below shows the combined pension and postemployment healthcare disclosure under GASB No. 25 and 26 for fiscal years ending in 2006 and before.

Fiscal Year Ended June 30	Total Percentage Contributed		
2006	\$ 236,738	54.0%	
2005	207,951	45.0%	
2004	82,660	83.0%	
2003	47,370	133.0%	
2002	39,576	155.0%	
2001	56,391	114.0%	
2000	67,874	92.0%	
1999	53,901	114.0%	
1998	76,504	80.0%	

The following shows pension disclosure under GASB No. 25 for fiscal year ending 2007.

Fiscal Year Ended June 30	Total Annual Required Contribution	Total Percentage Contributed		
2007	\$169,974	62.0%		

The following shows postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43 for fiscal year ending 2007.

Fiscal Year Ended June 30	Total Annual Required Contribution	Total Percentage Contributed		
2007	\$76,879	62.0%		

# 3.2(b) Schedule of Employer Contributions (continued)

The exhibit below shows the annual required contribution as a percentage of pay for pension and healthcare.

	_		ARC (% of Pay)	
Valuation Date	Fiscal Year	Pension	Healthcare	Total
June 30, 2005	FY08	22.73%	54.45%	77.18%
June 30, 2006	FY09	26.89%	52.20%	79.09%
June 30, 2007	FY10	28.61%	52.42%	81.03%



# 3.2(c) Actuarial Assumptions, Methods and Additional Information Under GASB

Valuation Date	June 30, 2007		
Actuarial Cost Method	Entry Age Normal Level Percentage of Pay for Pension; Leve		
	Dollar for Healthcare		
Amortization Method	Level dollar, closed		
Equivalent Single Amortization Period	21 years		
Asset Valuation Method	5-year smoothed market		
Actuarial Assumptions:			
Investment rate of return*	8.25% for pension, 4.50% for healthcare		
Projected salary increases	6.0% for first 5 years of service grading down to 4.0% after		
	15 years		
*Includes inflation at	3.5%		
Cost-of-living adjustment	Postretirement Pension Adjustment as described in Section		
	2.1, item (13)		

GASB 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

The State of Alaska Teachers Retirement System's retiree healthcare benefits are partially funded. GASB outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on 1) the funded ratio and 2) the percentage of the annual required contribution (ARC) actually being contributed to the plan. The State of Alaska has utilized the second methodology to develop a discount rate of 4.50% as of June 30, 2007, to be used for fiscal 2008 disclosure.

The development of the discount rate used for the healthcare liabilities valuation is summarized below:

Invest	<u>nent Returns</u>		
Plan A	ssets (Long-Term Return)	=	8.25%
Employ	yer Assets (Estimated Short-Term Return)	=	4.50%
Based	on Percentage of ARC Contributed*		
1.	Contribution Allocated to Healthcare	=	4.93%
2.	Annual Required Contribution, Funding Assumptions	=	21.58%
3.	Pay-as-you-go Contribution	=	11.23%
4.	Portion of ARC Contributed: $[(1-3) / (2-3), \text{ not less than } 0\%]$	=	0.00%
5.	Multiplied by long-term investment return	=	0.00%
6.	Portion of ARC not Contributed: [100% - (4)]	=	100.00%
7.	Multiplied by short-term investment return	=	4.50%
8.	Total: $(5) + (7)$	=	4.50%

\*It is assumed that fiscal 2003 contributions allocated to healthcare ARC for funding purposes and pay-as-you-go contributions are used to derive the GASB 43 discount rate applied to the June 30, 2005 valuation (fiscal 2006), which in turn drives the fiscal 2008 GASB 43 ARC.

Using the GASB 43 discount rate determined above and disregarding future Medicare Part D payments, the fiscal 2008 employer ARC rate for accounting purposes is 54.45% of pay for healthcare benefits and 77.18% of pay for healthcare and pension benefits combined.

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## 3.3 Solvency Test – Pension and Healthcare

	Aggr	ggregate 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, 2007	\$ 638,420	\$ 4,912,025	\$ 1,638,958	\$ 4,424,399	100%	77.1%	0.0%
June 30, 2006 <sup>23</sup>	615,207	4,925,922	1,688,722	4,141,700	100%	71.6%	0.0%
June 30, 2005	589,169	4,694,176	1,215,211	3,958,939	100%	71.8%	0.0%
June 30, 2004 <sup>2</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>123</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>123</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%	100.0%
June 30, 1998	449,383	2,344,263	735,111	3,446,070	100%	100%	88.8%

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

<sup>2</sup> Change in Assumptions

<sup>3</sup> Change in Methods

Healthcare liabilities are calculated using the funding assumptions (i.e., 8.25% investment return and net of Medicare Part D subsidy).

