ACTUARIAL SECTION

Alaska Division of Retirement and Benefits

TRS

Teachers' Retirement System

buckconsultants A Xerox Company

July 19, 2013

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Certification of Actuarial Valuation

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Teachers' Retirement System (TRS) as of June 30, 2012 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2012. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the System.

The State of Alaska Teachers' Retirement System is funded by Employer, State, and Member Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for the State of Alaska Teachers' Retirement System is to pay required contributions that remain level as a percent of total TRS Compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, System expenses, and amortize the Unfunded Actuarial Accrued Liability as a level dollar amount over a closed 25-year period. The Board changed the amortization method used for funding from the level percentage of payroll method to the level dollar method in June 2012 effective June 30, 2012. The compensation used to determine required contributions is the total compensation of all active members in TRS, including those hired after July 1, 2006 who are members of the Defined Contribution Retirement (DCR) Plan. This objective is currently being met and is projected to continue to be met.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the System. The actuary performs an analysis of System experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience.

The last full experience analysis was performed in 2010. A review of the healthcare assumptions was performed for this actuarial valuation and changes were made to the healthcare cost trend rates and the per capita claims cost rates, effective June 30, 2012, to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in this report.

The assumptions and methods used to determine the Annual Required Contributions (ARC) of the Employers to the State of Alaska Teachers' Retirement System as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the Schedule of Funding Progress, Schedule of Employer Contributions, and trend data schedules under GASB Nos. 25 and 43 that are included in the Financial Section of the CAFR. We have also prepared the member data tables shown in Section 5 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions, solvency test, and analysis of financial experience for the Actuarial Section of the CAFR.

The undersigned are Enrolled Actuaries, a Fellow and an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

BUCK CONSULTANTS, LLC

David H. Slishinsky

David H. Slishinsky, ASA, EA, MAAA, FCA
Principal, Consulting Actuary

Lee James

Lee James, FSA, EA, MAAA, FCA
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 A. Bissett

Melissa Bissett, FSA, MAAA
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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.

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 dollar amount and represents a change from the level percentage of payroll amortization methods effective June 30, 2012. 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 payroll of active members. The actuarial accrued liability for active members (the portion of 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.

B. **Valuation of Assets**

Effective June 30, 2002, the asset valuation method recognizes 20% of the difference between actual and expected investment return in each of the current and preceding four years. This method was phased in over the next five years. All assets are valued at fair 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 fair value of assets.

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Changes in Methods from the Prior Valuation

There was one change in valuation methods as well as any changes described in the healthcare sections below. Amortization of any funding surpluses or unfunded accrued liability was changed from a level percent of pay amount to a level dollar amount.

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 annual experience rate update for the period July 1, 2012 to June 30, 2013.

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 claim data is not available by individual, nor is this status incorporated into historical claim data.

We analyzed HealthSmart and Premera management level reporting for fiscal 2009 through April 2012, as well as HealthSmart and Premera claim level data for the same period 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 was used to augment cost 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 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 smaller the no-Part A population, the more accrued liabilities will decrease.

   Based on census data received from HealthSmart, 0.5% of the current retiree population was identified as having coverage only under Medicare Part B. For future retirees, we assume their Part A eligible status based on a combination of date of hire and/or re-hire, date of birth, tier, etc.

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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 fiscal 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 utilized incurred claim data projected from each historical data period to the valuation year using a weighted average of national and Alaska-specific trend factors and developed weighted average incurred claims cost rates. We used estimated June 2012 reserve data to complete fiscal year 2012 claim costs.

5. Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact of the following provisions; however, none of the impacts have been included in the valuation results.

   - Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We reviewed the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

   - The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the time of disclosure, Buck estimated the year in which the tax would potentially affect Alaska to be sufficiently far into the future to produce a minimal impact. Buck determined the impact to be immaterial based on a blend of pre-Medicare and Medicare retirees.

   We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

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June 30, 2012 Valuation – FY 2013 Claims Cost Rates

	Medical		
	Pre-Medicare	Medicare A&B	Medicare B Only
Fiscal 2009 Incurred Claims	**$207,452,753**	**$43,988,895**	**$4,422,726**
Membership	32,943	24,624	539
Paid Claims Cost Rate	$6,297	$1,786	$8,204
Trend to FY2013	1.317	1.317	1.317
FY2013 Paid Cost Rate	$8,295	$2,353	$10,806
Paid to Incurred Factor	1.000	1.000	1.000
FY 2013 Incurred Cost Rate	**$8,295**	**$2,353**	**$10,806**
Fiscal 2010 Incurred Claims	**$233,601,103**	**$60,082,942**	**$1,421,948**
Membership	32,026	27,915	156
Paid Claims Cost Rate	$7,294	$2,152	$9,115
Trend to FY2013	1.220	1.220	1.220
FY2013 Paid Cost Rate	$8,896	$2,625	$11,117
Paid to Incurred Factor	1.000	1.000	1.000
FY 2013 Incurred Cost Rate	**$8,896**	**$2,625**	**$11,117**
Fiscal 2011 Incurred Claims	**$232,542,851**	**$55,569,969**	**$848,494**
Membership	31,362	29,997	138
Paid Claims Cost Rate	$7,415	$1,852	$6,149
Trend to FY2013	1.079	1.079	1.079
FY2013 Paid Cost Rate	$8,001	$1,999	$6,634
Paid to Incurred Factor	1.000	1.000	1.000
FY 2013 Incurred Cost Rate	**$8,001**	**$1,999**	**$6,634**
Fiscal 2012 Incurred Claims	**$240,584,988**	**$73,566,159**	**$1,636,834**
Membership	29,438	33,560	208
Paid Claims Cost Rate	$8,173	$2,192	$7,869
Trend to FY2013	1.004	1.004	1.004
FY2013 Paid Cost Rate	$8,209	$2,202	$7,905
Paid to Incurred Factor	1.000	1.000	1.000
FY 2013 Incurred Cost Rate	**$8,209**	**$2,202**	**$7,905**
Weighted Average 7/1/2012-6/30/2013 Incurred Claims Cost Rates:			
At average age	$8,298	$2,228	$8,511
At age 65	$9,856	$1,628	$6,219

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June 30, 2012 Valuation – FY2013 Claims Cost Rates (cont.)

	Prescription Drugs			
	Pre-Medicare	**Medicare A&B**	**Medicare B Only**	**Total**
Fiscal 2009 Incurred Claims	**$65,158,106**	**$64,232,955**	**$1,507,666**	**$386,763,101**
Membership	32,943	24,624	539	58,106
Paid Claims Cost Rate	$1,978	$2,609	$2,797	$6,656
Trend to FY2013	1.235	1.235	1.235	
FY2013 Paid Cost Rate	$2,442	$3,221	$3,453	$8,581
Paid to Incurred Factor	1.000	1.000	1.000	
FY2013 Incurred Cost Rate	**$2,442**	**$3,221**	**$3,454**	**$8,582**
Fiscal 2010 Incurred Claims	**$59,287,225**	**$69,463,204**	**$394,011**	**$424,250,433**
Membership	32,026	27,915	156	60,097
Paid Claims Cost Rate	$1,851	$2,488	$2,526	$7,059
Trend to FY2013	1.143	1.143	1.143	
FY2013 Paid Cost Rate	$2,116	$2,845	$2,887	$8,446
Paid to Incurred Factor	1.000	1.000	1.000	
FY2013 Incurred Cost Rate	**$2,117**	**$2,845**	**$2,888**	**$8,446**
Fiscal 2011 Incurred Claims	**$48,384,466**	**$85,599,757**	**$393,794**	**$423,339,331**
Membership	31,362	29,997	138	61,497
Paid Claims Cost Rate	$1,543	$2,854	$2,854	$6,884
Trend to FY2013	1.043	1.043	1.043	
FY2013 Paid Cost Rate	$1,609	$2,977	$2,977	$7,349
Paid to Incurred Factor	1.000	1.000	1.000	
FY2013 Incurred Cost Rate	**$1,610**	**$2,977**	**$2,977**	**$7,350**
Fiscal 2012 Incurred Claims	**$50,683,151**	**$95,740,056**	**$583,392**	**$462,804,580**
Membership	29,438	33,560	208	63,206
Paid Claims Cost Rate	$1,722	$2,853	$2,853	$7,322
Trend to FY2013	1.002	1.002	1.002	
FY2013 Paid Cost Rate	$1,725	$2,858	$2,858	$7,559
Paid to Incurred Factor	1.000	1.000	1.000	
FY2013 Incurred Cost Rate	**$1,725**	**$2,859**	**$2,859**	**$7,559**
Weighted Average 7/1/2012-6/30/2013 Incurred Claims Cost Rates:				
At average age	$1,874	$2,974	$3,020	$7,839
At age 65	$2,736	$2,736	$2,736	$8,214

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

Distribution of Per Capita Claims Cost by Age
for the Period July 1, 2012 through June 30, 2013

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare Retiree Drug Subsidy
45	$ 5,458	$ 5,458	$ 1,443	$ —
50	6,176	6,176	1,714	—
55	6,987	6,987	2,036	—
60	8,298	8,298	2,360	—
65	1,628	6,219	2,736	535
70	1,981	7,566	2,947	576
75	2,352	8,984	3,144	615
80	2,534	9,679	3,223	630

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Summary of Actuarial Assumptions and Changes in Assumptions

The demographic and economic assumptions used in the June 30, 2012 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2010. These assumptions were the result of an experience study performed as of June 30, 2009.

1. Investment Return / Discount Rate	8.00% per year (geometric), compounded annually, net of expenses.
2. Salary Scale	Inflation – 3.12% per year. Productivity – 0.5% per year. See Table 1 for salary scale rates.
3. Payroll Growth	3.62% per year. (Inflation + Productivity).
4. Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
5. Mortality (Pre-termination)*	Based upon the 2005-2009 actual experience. (See Table 2). 1994 Group Annuity Mortality (GAM) Sex-distinct Table 1994 Base Year without margin projected to 2013 using Projection Scale AA, adjusted 55% for females and 45% for males. Deaths are assumed to result from non-occupational causes 85% of the time.
6. Mortality (Post-termination)*	Based upon the 2005-2009 actual experience. (See Table 3). The 1994 GAM Sex-distinct Table 1994 Base Year without margin projected to 2013 using Projection Scale AA, with a 3-year setback for females and 4-year setback for males.
7. Turnover	Select and ultimate rates based upon the 2005-2009 actual withdrawal experience. (See Table 4).
8. Disability	Incidence rates based upon the 2005-2009 actual experience in accordance with Table 5. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table.
9. Retirement	Retirement rates based upon the 2005-2009 actual experience, in accordance with Table 6. Deferred vested members are assumed to retire at their earliest unreduced retirement date.
10. 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.
11. 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.
12. Contribution Refunds	10% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with nonvested benefits are assumed to have their contributions refunded.
13. COLA	Of those benefit recipients who are eligible for the COLA, 60% are assumed to remain in Alaska and receive the COLA.

*The mortality assumptions include an allowance for future mortality improvement. The mortality table used was set in 2010 with an Actual Deaths to Expected Deaths ratio of 117%.

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14. 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, terminates or dies.

15. Post-Retirement Pension Adjustment — 50% and 75% of assumed inflation, or 1.56% and 2.34% respectively, is valued for the annual automatic Post-Retirement Pension Adjustment (PRPA) as specified in the statute.

16. Expenses — All expenses are net of the investment return assumption.

17. Part-time Status — Part-time employees are assumed to earn 0.60 years of credited service per year.

18. Re-Employment Option — We assume all re-employed retirees return to work under the Standard Option.

19. 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.

20. Final Average Earnings — Final Average Earnings is provided on the data for active members. This amount is used as a minimum in the calculation of the average earnings in the future.

21. Modified Cash Refund — Benefits for active members are valued using a 3-year certain and life form of payment to account for modified cash refund. For deferred vested and retired members, the certain period equals their account balance divided by their pension benefit amount.

22. Per Capita Claims Cost — Sample claims cost rates adjusted to age 65 for FY13 medical benefits are shown below:

	Medical	Prescription Drugs
Pre-Medicare	$ 9,856	$ 2,736
Medicare Parts A & B	1,628	2,736
Medicare Part B Only	6,219	2,736
Medicare Part D	N/A	535

23. Third Party Administrator Fees — $163.52 per person per year; assumed trend rate of 5% per year.

24. Medicare Part B Only — For actives and retirees not yet Medicare-eligible, participation is set based on whether the employee/retiree will have 40 quarters of employment after March 31, 1986, depending upon date of hire and/or re-hire.

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25. 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, 9.0% is applied to the FY13 pre-medical claims costs to get the FY14 medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs
FY13	9.0%	6.5%	6.4%
FY14	8.7	6.4	6.3
FY15	8.5	6.3	6.2
FY16	8.0	6.3	6.2
FY17	7.5	6.2	6.1
FY18	7.0	6.1	6.0
FY19	6.6	6.1	5.8
FY25	6.0	6.0	5.8
FY50	5.0	5.0	5.0
FY100	4.5	4.5	4.5

For the June 30, 2012 valuations and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model effectively begins estimating trend amounts beginning in 2012 and projects out to 2100. The model has been populated with assumptions that are specific to the State of Alaska. The model asks the user to input estimated baseline cost for year 2015. Using this value as the base cost, the model projects per-person expenditures and growth rates through 2100 using a set of equations and assumptions developed by the author with the assistance of an SOA working group. The user can then use the model input cells to specify alternative assumptions regarding responsiveness to external trends, income growth, and other factors to arrive at alternative projections. The model provisionally uses default short term annual projected by CMS for year 2011-2015 (4% to 6%), but users may input their own estimates for this model years. In this model, cost controls can be simulated in two ways: by specifying a Share Restriction Point, a percentage of GDP represented by healthcare and above which the current trends will be reduced; or by specifying a limit year after which the rate of growth in health care costs will be reduced to match the rate of growth in per capita income (as both CMS and CBO assume).While this model is not directly applicable, it was used for a reference point in the ultimate pharmacy trend. We set pharmacy trend based upon recent plan industry experience and grade down slowly in the select period (similar to post-65 medical trend) to an ultimate trend rate based upon what we are seeing for medical trend and consistent within the industry.

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The following table compares plan-specific inputs and the model's baseline assumptions for key assumptions as of June 30,2012:

		Alaska-Specific Values	
Key Assumption	Base Line Value	Pre-Medicare Medical	Medicare Medical
HCCTR 2012-2013	4.6%	9.0%	6.1%
HCCTR 2013-2014	7.4%	8.0%	5.8%
HCCTR 2014-2015	5.0%	7.0%	5.5%
2015 GDP % of healthcare	18.3%	17.9%	17.9%
2015 PCCC	$10,000	$10,295	$2,596
CPI	2.5%	2.5%	2.5%
Real GDP	1.7%	1.5%	1.5%
Income Multiplier	1.40	1.30	1.30
Taste/Technology	1.1%	1.1%	1.1%
Max GDP as % of healthcare	25.0%	25.0%	25.0%
Year reached	2075	2075	2075

Future (2026+) assumptions for inflation (2.4% for 2026-3025 and 2.3% thereafter), real GDP (1.5%), income multiplier (1.05 for 2026-3025 and 1.00 thereafter) and technology (0.9% for 2026-3025 and 0.8% thereafter) were not changed from the baseline inputs.

26. Aging Factors

Age	Medical	Prescription Drugs
0-44	2.0%	4.5%
45-54	2.5	3.5
55-64	3.5	3.0
65-73	4.0	1.5
74-83	1.5	0.5
84-93	0.5	—
94+	—	—

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27. Retired Member Contributions for Medical Benefits

Currently contributions are required for TRS members who are under age 60 and have less than 25 years of service. Eligible Tier 1 members are exempt from contribution requirements. Annual FY13 contributions based on monthly rates shown below for calendar 2012 and 2013 are assumed based on the coverage category for current retirees. The retiree only rate shown is used for current active and inactive members in Tier 2 who are assumed to retire prior to age 60 with less than 25 years of service and who are not disabled and are projected to have single coverage. The retiree and spouse rate shown below is used for those projected to have a covered spouse:

Coverage Category	Calendar 2013 Annual Contribution	Calendar 2013 Monthly Contribution	Calendar 2012 Monthly Contribution
Retiree Only	$ 9,876	$ 823	$ 807
Retiree and Spouse	19,764	1,647	1,615
Retiree and Child(ren)	13,956	1,163	1,140
Retiree and Family	23,844	1,987	1,948
Composite	14,676	1,223	1,200

Contribution rates for all coverage tiers and weighted average are provided for reference purposes.

28. 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, 8.4% is applied to the FY13 retired member medical contributions to get the FY14 retired member medical contributions.

FY13	8.4%
FY14	8.2
FY15	8.0
FY16	7.6
FY17	7.2
FY18	6.7
FY19	6.4
FY25	5.9
FY50	5.0
FY100	4.5

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2012 valuation. Note that actual FY13 retired member medical contributions are reflected in the valuation so trend on such contribution during FY13 is not applicable.

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29. Healthcare Participation	100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 10% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 100% of those who retired prior to age 60 and actually declined coverage, or who are assumed to decline non-system-paid coverage, are assumed to re-enroll at age 60 (when all coverage is system-paid for retirees included in this report).

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 1
Alaska TRS Salary Scale

Year of Employment	Unisex Rates
1-6	6.11%
7	5.94
8	5.78
9	5.61
10	5.44
11	5.28
12	5.11
13	4.94
14	4.78
15	4.61
16	4.45
17	4.28
18	4.11
19	3.95
20	3.78
21+	3.62

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 2
Alaska TRS Mortality Table (Pre-termination)

Age	Male	Female
20	0.017%	0.012%
21	0.018	0.012
22	0.019	0.012
23	0.021	0.013
24	0.024	0.013
25	0.026	0.013
26	0.030	0.014
27	0.032	0.014
28	0.033	0.015
29	0.034	0.016
30	0.035	0.017
31	0.036	0.019
32	0.037	0.020
33	0.037	0.021
34	0.037	0.022
35	0.037	0.023
36	0.038	0.024
37	0.039	0.025
38	0.041	0.027
39	0.042	0.029
40	0.045	0.032
41	0.047	0.034
42	0.050	0.037
43	0.053	0.039
44	0.056	0.041
45	0.060	0.042
46	0.064	0.044
47	0.069	0.047
48	0.075	0.051
49	0.081	0.055
50	0.088	0.061
51	0.097	0.068
52	0.106	0.078
53	0.118	0.090
54	0.131	0.102
55	0.149	0.116
56	0.170	0.135
57	0.195	0.157
58	0.224	0.181
59	0.253	0.208
60	0.284	0.239
61	0.326	0.274
62	0.368	0.314
63	0.425	0.359
64	0.479	0.410

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 3
Alaska TRS Mortality Table (Post-termination)

Age	Male	Female
50	0.142%	0.085%
51	0.153	0.092
52	0.166	0.100
53	0.181	0.111
54	0.196	0.124
55	0.215	0.143
56	0.235	0.163
57	0.263	0.185
58	0.291	0.212
59	0.331	0.246
60	0.377	0.285
61	0.433	0.328
62	0.499	0.378
63	0.561	0.434
64	0.631	0.498
65	0.725	0.570
66	0.819	0.653
67	0.944	0.745
68	1.064	0.844
69	1.196	0.948
70	1.362	1.052
71	1.512	1.150
72	1.634	1.242
73	1.787	1.342
74	1.915	1.434
75	2.094	1.583
76	2.298	1.726
77	2.518	1.918
78	2.748	2.094
79	3.061	2.338
80	3.361	2.669
81	3.788	2.985
82	4.292	3.327
83	4.868	3.707
84	5.510	4.136
85	6.214	4.625

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 4
Alaska TRS Turnover Assumptions

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

Year of Employment	Unisex Rate
1	17.00%
2	17.00
3	14.00
4	12.00
5	10.00
6	9.00
7	7.50
8	6.00

Ultimate Rates of Turnover
After the First 8 Years of Employment

Age	Male	Female	Age	Male	Female
15	4.4584%	4.3747%	40	4.3189%	4.2658%
16	4.4528	4.3714	41	4.3065	4.2559
17	4.4483	4.3692	42	4.2908	4.2460
18	4.4438	4.3681	43	4.2762	4.2372
19	4.4415	4.3670	44	4.2570	4.2262
20	4.4067	4.3351	45	4.2357	4.2130
21	4.4044	4.3351	46	4.2132	4.2009
22	4.3999	4.3340	47	4.1850	4.1844
23	4.3965	4.3340	48	4.1524	4.1657
24	4.3909	4.3329	49	4.1187	4.1470
25	4.3864	4.3329	50	4.0804	4.1250
26	4.3819	4.3318	51	4.0354	4.0997
27	4.3774	4.3307	52	3.9825	4.0700
28	4.3729	4.3274	53	3.9240	4.0348
29	4.3684	4.3241	54	3.8588	3.9974
30	4.3650	4.3208	55	3.7845	3.9523
31	4.3628	4.3186	56	3.6945	3.8940
32	4.3594	4.3142	57	3.5843	3.8192
33	4.3572	4.3109	58	3.4639	3.7345
34	4.3560	4.3065	59	3.3188	3.6267
35	4.3538	4.3021	60	3.1557	3.5046
36	4.3504	4.2955	61	2.9745	3.3682
37	4.3459	4.2900	62	2.7642	3.2131
38	4.3380	4.2823	63	2.5245	3.0360
39	4.3290	4.2746	64	2.2647	2.8435
			65+	4.5000	4.4000

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 5
Alaska TRS Disability Table

Age	Male	Female
20	0.0224%	0.0202%
21	0.0224	0.0202
22	0.0232	0.0209
23	0.0232	0.0209
24	0.0240	0.0216
25	0.0240	0.0216
26	0.0240	0.0216
27	0.0248	0.0223
28	0.0256	0.0230
29	0.0264	0.0238
30	0.0272	0.0245
31	0.0272	0.0245
32	0.0280	0.0252
33	0.0288	0.0259
34	0.0296	0.0266
35	0.0304	0.0274
36	0.0320	0.0288
37	0.0328	0.0295
38	0.0344	0.0310
39	0.0352	0.0317
40	0.0368	0.0331
41	0.0384	0.0346
42	0.0408	0.0367
43	0.0432	0.0389
44	0.0472	0.0425
45	0.0520	0.0468
46	0.0560	0.0504
47	0.0608	0.0547
48	0.0664	0.0598
49	0.0712	0.0641
50	0.0768	0.0691
51	0.0832	0.0749
52	0.0912	0.0821
53	0.1016	0.0914
54	0.1136	0.1022
55	0.1280	0.1152
56	0.1472	0.1325
57	0.1712	0.1541
58	0.1952	0.1757
59	0.2304	0.2074
60	0.2696	0.2426
61	0.3120	0.2808
62	0.3616	0.3254
63	0.4176	0.3758
64	0.4768	0.4291

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 6
Alaska TRS Retirement Table

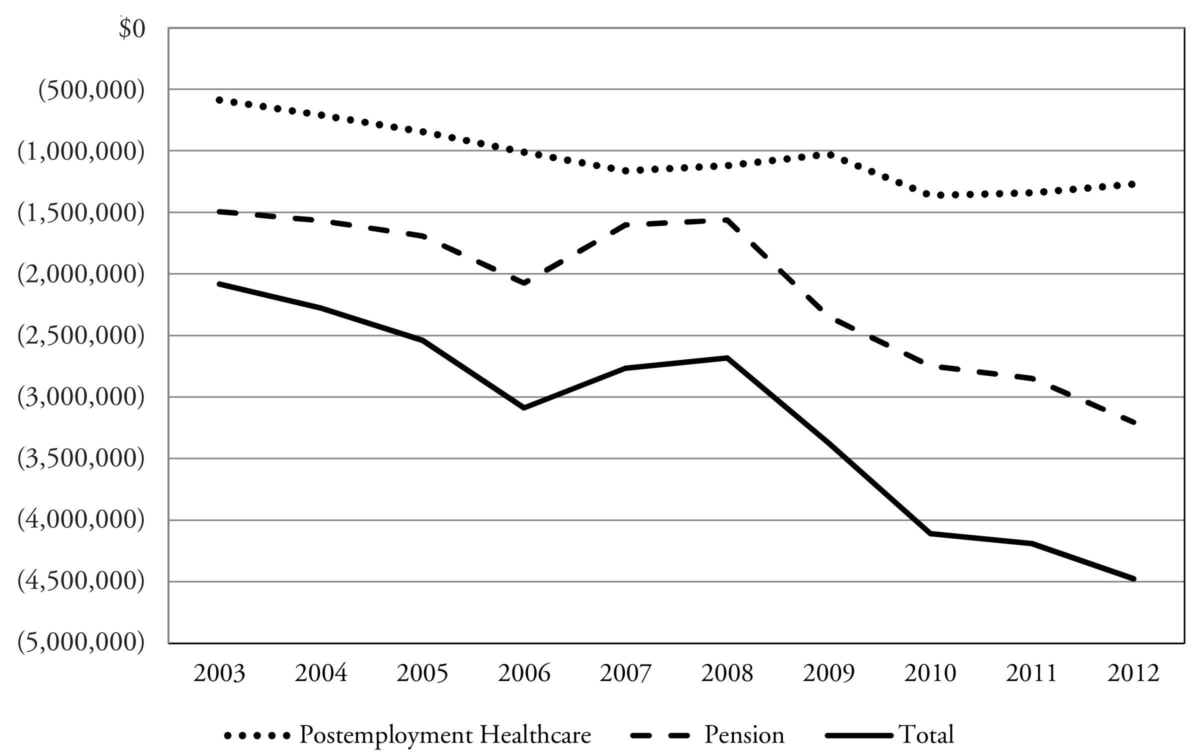
	Retirement Rate		
Age at Retirement	**Reduced**	**Unreduced**	
	Unisex Rates	**Male**	**Female**
<50	N/A	10.00%	10.00%
50	8.00%	13.00	13.00
51	8.00	12.00	12.00
52	8.00	12.00	12.00
53	6.00	13.00	13.00
54	12.00	16.00	16.00
55	8.00	18.00	20.00
56	8.00	17.00	15.00
57	8.00	13.00	17.50
58	8.00	17.50	18.00
59	12.00	15.00	17.50
60	N/A	17.50	20.00
61	N/A	17.50	20.00
62	N/A	11.00	25.00
63	N/A	20.00	25.00
64	N/A	25.00	20.00
65	N/A	30.00	20.00
66	N/A	25.00	20.00
67	N/A	25.00	20.00
68	N/A	25.00	20.00
69	N/A	25.00	20.00
70-84	N/A	50.00	50.00
85		100.00	100.00

Changes in Actuarial Assumptions Since the Prior Valuation

There have been no changes in assumptions since the prior valuation, except for the assumption regarding healthcare cost trend rates. The updated healthcare cost trend assumption reflects differences in Medicare eligibility and non-Medicare eligible medical costs, maintains a distinct prescription drug cost rend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated participant contributions to reflect the new non-Medicare and pharmacy benefits cost trend on a weighted average basis.

Teachers' Retirement System Defined Benefit Retirement Plan Funding Excess/(Unfunded Liability) (In thousands)				
Actuarial Valuation Year Ended June 30	Postemployment Healthcare	Pension	Total Funding Excess/ (Unfunded Liability)	Funded Ratio
2003	$ (587,139)	$ (1,496,185)	$ (2,083,324)	64.3%
2004	(709,527)	(1,568,703)	(2,278,230)	62.8
2005	(845,674)	(1,693,934)	(2,539,608)	60.9
2006	(1,012,540)	(2,075,617)	(3,088,157)	57.3
2007	(1,163,423)	(1,601,581)	(2,765,004)	61.5
2008	(1,120,634)	(1,561,568)	(2,682,202)	64.8
2009	(1,026,288)	(2,348,268)	(3,374,556)	57.0
2010	(1,361,547)	(2,747,113)	(4,108,660)	53.6
2011	(1,340,703)	(2,850,155)	(4,190,858)	54.1
2012	(1,272,507)	(3,204,783)	(4,477,290)	52.1

10-YEAR TREND OF UNFUNDED LIABILITY
(In thousands)



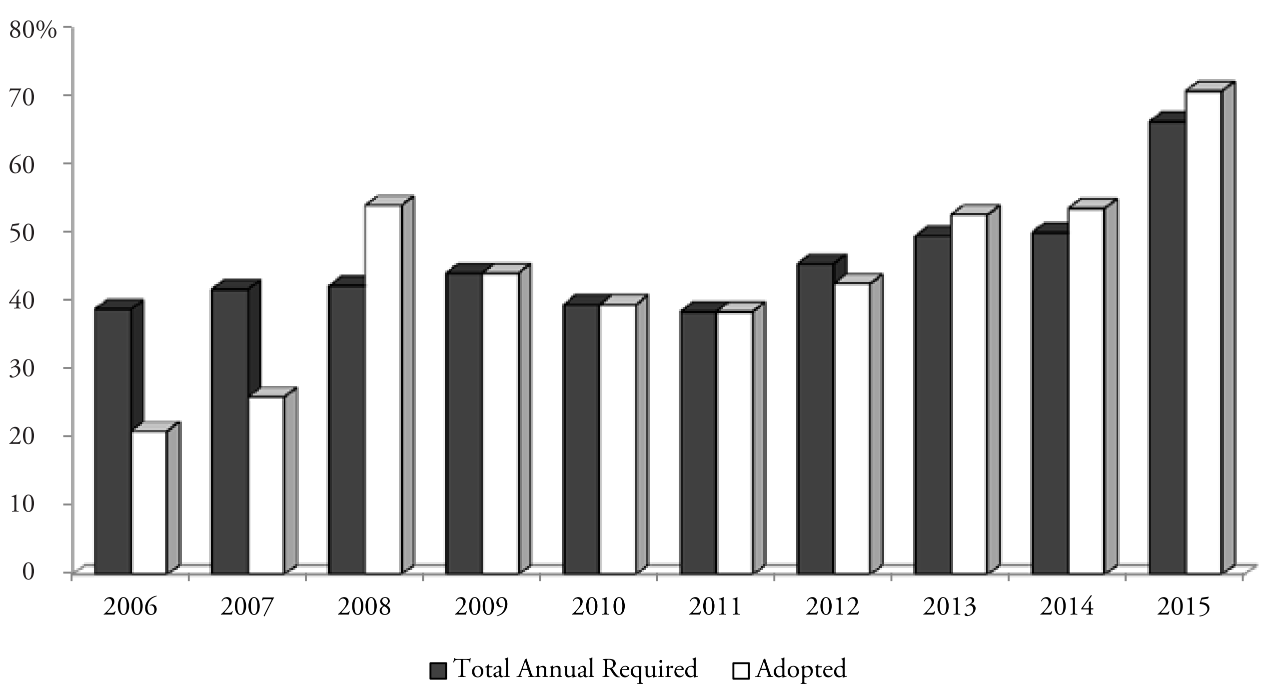
Teachers' Retirement System Defined Benefit Retirement Plan Employer Contribution Rates					
	Actuarially Determined				
Year Ended June 30	Actuarial Valuation Year Ended June 30	Normal Cost[1]	Past Service	Total Annual Required	Adopted
2006	2003	14.28%	24.57%	38.85%	21.00%
2007	2004	13.76	28.02	41.78	26.00
2008	2005	12.56	29.70	42.26	54.03[2]
2009	2006	9.37	34.80	44.17	44.17
2010	2007	7.59	31.94	39.53	39.53
2011	2008	7.56	31.00	38.56	38.56
2012	2009	6.57	36.04	42.61	45.55
2013	2010	7.47	42.09	49.56	52.67
2014	2011	6.59	43.51	50.10	53.62
2015	2012	6.40	59.91	66.31	70.75

[1] Also referred to as the consolidated rate.

[2] The ARMB recognized the fact that the Plan becomes a closed Plan on July 1, 2006, and set a rate reflecting no payroll growth.

Valuations are used to set contribution rates in future years.

10-YEAR COMPARISON OF EMPLOYER CONTRIBUTION RATES



Teachers' Retirement System Defined Benefit Retirement Plan Schedule of Active Member Valuation Data					
Valuation Date	Number	Annual Earnings (In thousands)	Annual Average Earnings	Percent Increase In Average Earnings	Number of Participating Employers
June 30, 2012	6,845	$529,468	$77,351	3.6%	58
June 30, 2011	7,303	545,155	74,648	3.5	58
June 30, 2010	7,832	564,887	72,125	6.5	58
June 30, 2009	8,226	557,026	67,715	5.2	58
June 30, 2008	8,531	549,148	64,371	5.8	58
June 30, 2007	9,107	554,245	60,859	2.9	58
June 30, 2006	9,710	574,409	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

Teachers' Retirement System Defined Benefit Retirement Plan Schedule of Pension Benefit Recipients Added to and Removed from Rolls								
	Added to Rolls		Removed from Rolls		Rolls – End of Year			
Year Ended	No.*	Annual Pension Allowances*	No.*	Annual Pension Allowances*	No.	Annual Pension Allowances	Percent Increase / (Decrease) In Annual Pension Allowances	Average Annual Pension Allowances
June 30, 2012	473	$17,104,564	188	$ (617,561)	11,301	$378,424,736	4.91%	$33,486
June 30, 2011	564	19,546,369	146	1,464,766	11,016	360,702,611	5.28	32,744
June 30, 2010	533	16,980,817	190	5,495,399	10,598	342,621,008	3.47	32,329
June 30, 2009	368	9,788,639	139	(2,857,118)	10,255	331,135,590	3.97	32,290
June 30, 2008	481	14,265,236	133	806,945	10,026	318,489,833	4.41	31,766
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

*Numbers are estimated, and include other internal transfers.

Valuation Date	Pension Aggregate Accrued Liability For: (1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)	Pension Valuation Assets	Portion of Accrued Liabilities Covered by Assets: (1)	(2)	(3)
June 30, 2012	$727,435	$4,532,982	$1,139,360	$3,194,994	100.0%	54.4%	— %
June 30, 2011	717,819	4,352,035	1,126,250	3,345,949	100.0	60.4	—
June 30, 2010[1]	716,675	4,153,119	1,137,187	3,259,868	100.0	61.2	—
June 30, 2009	692,105	3,815,020	956,862	3,115,719	100.0	63.5	—
June 30, 2008	654,662	3,700,812	876,180	3,670,086	100.0	81.5	—
June 30, 2007	638,420	3,567,894	837,134	3,441,867	100.0	78.6	—
June 30, 2006[1 2]	615,207	3,432,703	811,426	3,296,934	100.0	78.1	—
June 30, 2005	589,169	3,200,339	545,077	3,184,976[3]	100.0	81.1	—

Teachers' Retirement System
Defined Benefit Retirement Plan
Pension Solvency Test
(In thousands)

[1] Change in Assumptions

[2] Change in Methods

[3] The pension and postemployment healthcare valuation assets were allocated using a ratio of fair value of assets as of June 30, 2005

Teachers' Retirement System Defined Benefit Retirement Plan Postemployment Healthcare Solvency Test (In thousands)							
	Postemployment Healthcare Aggregate Accrued Liability For:				Portion of Accrued Liabilities Covered by Assets:		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)	Post-Employment Healthcare Valuation Assets	(1)	(2)	(3)
June 30, 2012	$ —	$1,933,288	$1,013,379	$1,674,160	100.0%	86.6%	— %
June 30, 2011	—	1,879,564	1,053,127	1,591,988	100.0	84.7	—
June 30, 2010[1]	—	1,755,961	1,084,846	1,479,260	100.0	84.2	—
June 30, 2009	—	1,477,788	905,739	1,357,239	100.0	91.8	—
June 30, 2008[1]	—	1,480,864	906,660	1,266,890	100.0	85.6	—
June 30, 2007	—	1,344,131	801,824	982,532	100.0	73.1	—
June 30, 2006[1 2]	—	1,493,219	877,296	844,766	100.0	56.6	—
June 30, 2005	—	1,493,837	670,134	773,963[3]	100.0	51.8	—

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

[1] Change in Assumptions

[2] Change in Methods

[3] The pension and postemployment healthcare valuation assets were allocated using a ratio of fair value of assets as of June 30, 2005

Teachers' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience					
Change in Employer/State Contribution Rate Due to (Gains) and Losses in Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience					
Type of (Gain) or Loss	**Change in Employer/State Contribution Rate During Fiscal Year**				
	2012	**2011**	**2010**	**2009**	**2008**
Health Experience	(2.02)%	(0.72)%	0.19%	(2.67)%	(1.22)%
Salary Experience	—	(0.03)	0.59	0.29	0.43
Investment Experience	4.18	(0.46)	0.05	7.23	(0.85)
Demographic Experience	(0.36)	(0.03)	(0.75)	(0.54)	(0.33)
Contribution Shortfall	0.71	0.86	0.01	(0.26)	(0.98)
(Gain) or Loss During Year From Experience	2.51	0.54	0.09	4.05	(2.95)
Non-recurring changes					
Asset Valuation Method	—	—	—	—	—
Past Service Amortization Change	13.07	—	—	—	—
Assumption and Method Changes	0.63	—	6.86	—	1.98
System Benefit Changes	—	—	—	—	—
Composite (Gain) or Loss During Year	16.21	0.54	6.95	4.05	(0.97)
Beginning Total Employer/State Contribution Rate	50.10	49.56	42.61	38.56	39.53
Ending Total Employer/State Contribution Rate	66.31	50.10	49.56	42.61	38.56
Board Adopted Contribution Rate	70.75%	53.62%	52.67%	45.55%	38.56%
Fiscal Year Above Rate is Applied	FY15	FY14	FY13	FY12	FY11
*Includes change in rate by using total payroll.					

Teachers' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience						
Change in Employer/State Contribution Rate Due to (Gains) and Losses in Accrued Liabilities During the Last Three Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience						
Type of (Gain) or Loss	**Change in Employer/State Contribution Rate During Fiscal Year**					
	Pension			**Healthcare**		
	2012	**2011**	**2010**	**2012**	**2011**	**2010**
Health Experience	N/A	N/A	N/A	(2.02)%	(0.72)%	0.19%
Salary Experience	—%	(0.03)%	0.59%	N/A	N/A	N/A
Investment Experience	3.47	0.18	(0.34)	0.71	0.28	0.39
Demographic Experience	(0.36)	(0.03)	(0.75)	N/A	N/A	N/A
Contribution Shortfall	0.52	0.75	0.46	0.19	(0.11)	(0.45)
(Gain) or Loss During Year From Experience	3.63	0.87	(0.04)	(1.12)	(0.33)	0.13
Non-recurring changes						
Asset Valuation Method	—	—	—	—	—	—
Past Service Amortization Change	9.52	—	—	3.55	—	—
Assumption and Method Changes	—	—	3.96	0.63	—	2.90
System Benefit Changes	—	—	—	—	—	—
Composite (Gain) or Loss During Year	13.15	0.87	3.92	3.06	(0.33)	3.03
Beginning Total Employer/State Contribution Rate	31.40	30.53	26.61	18.70	19.03	16.00
Ending Total Employer/State Contribution Rate	44.55%	31.40%	30.53%	21.76%	18.70%	19.03%
Fiscal Year Above Rate is Applied	FY15	FY14	FY13	FY15	FY14	FY13

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Plan Provisions and Changes in Plan Provisions

1. Effective Date

July 1, 1955, with amendments through June 30, 2012. 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.

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Benefit Retirement Plan
Summary of Plan Provisions and Changes in Plan Provisions

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.

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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 dollar amount over fixed 25-year periods.

Employer rates cannot be less than the normal cost rate.

7. Additional State Contribution

Pursuant to AS14.25.070 effective July 1, 2008, the State shall contribute an amount (in addition to the State contribution as an employer) that when combined with the employer contribution (12.56%) will be sufficient to pay the total contribution rate adopted by The State of Alaska Retirement Management Board.

8. Member Contributions

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

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

1% Supplemental Contributions: Members who joined the system before July 1, 1982 and elected to participate in the supplemental contributions provision are required to contribute an additional 1% of their salaries. Supplemental contributions are deducted from gross salaries 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 13 below). Supplemental contributions are only refundable upon death (see 13 below).

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

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

Reinstatement of Contributions: Refunded accounts and the corresponding TRS service may be reinstated upon reemployment in the TRS prior to July 1, 2010. Interest accrues on refunds until paid in full or members retire.

9. 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;

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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.

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

Members may select joint and survivor options 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.

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

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

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

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10. Reemployment of Retired Members

Retirees who return to work in a permanent full-time or part-time TRS position after a Normal Retirement are eligible to return under the Standard 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.

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.

11. 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 their surviving spouses and (2) members and their surviving spouses 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) and their surviving spouses may receive major medical benefits prior to age sixty by paying premiums.

12. 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.

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13. Death Benefits

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

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

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

Lump Sum Benefit: Upon the death of an active member who has less than one year of service or an inactive member who is not vested, the designated beneficiary receives the member's contribution account, which includes mandatory contributions, indebtedness payments, and interest earned. Any supplemental contributions will also be refunded. If the member has more than one year of TRS service 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.

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

a. **Survivor's Allowance:** If the member is survived by dependent children, the surviving spouse and dependent children are entitled to a survivor's allowance. The allowance for the spouse is equal to 35% of the member's base salary at the time of death or disability, plus 10% for each dependent child up to a maximum of 40%. The allowance terminates and a spouse's pension becomes payable when there is no longer an eligible dependent child.

b. **Spouse's Pension:** The spouse's pension is equal to 50% of the retirement benefit that the deceased member was receiving or 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.

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

14. Postretirement Pension Adjustments

Postretirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage increases during the preceding calendar year. PRPAs are calculated by multiplying the recipient's base benefit, including past PRPAs, excluding the Alaska COLA, 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.

15. 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.

Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

buckconsultants A Xerox Company

July 19, 2013

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Certification of Actuarial Valuation

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan as of June 30, 2012 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2012. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the Plan.

The State of Alaska Teachers' Retirement System DCR Plan is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for the State of Alaska Teachers' Retirement System DCR Plan is to pay required contributions that remain level as a percent of TRS DCR Compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of TRS DCR Compensation over a closed 25-year period. This objective is currently being met and is projected to continue to be met.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed in 2010. A review of the healthcare assumptions was performed for this actuarial valuation and changes were made to the healthcare cost trend rates and the per capita claims cost rates, effective June 30, 2012, to better reflect expected future healthcare experience. Changes were also made to expected healthcare benefit participation, lower initial relative values of DCR healthcare, and increased employer sharing of medical cost trend as a result of recent plan decision discussions. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in this report.

The assumptions and methods used to determine the Annual Required Contributions (ARC) of the Employers to the State of Alaska Teachers' Retirement System DCR Plan as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the Schedule of Funding Progress, Schedule of Employer Contributions, and trend data schedules under GASB Nos. 25 and 43 that are included in the Financial Section of the CAFR. We have also prepared the member data tables shown in Section 4 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions and solvency test for the Actuarial Section of the CAFR.

The undersigned are Enrolled Actuaries, a Fellow and an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

BUCK CONSULTANTS, LLC

David H. Slishinsky

Lee James

David H. Slishinsky, ASA, EA, MAAA, FCA
Principal, Consulting Actuary

Lee James, FSA, EA, MAAA, FCA
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 A. Bissett

Melissa Bissett, FSA, MAAA
Senior Consultant, Health & Productivity

buckconsultants

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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 implemented effective June 30, 2006.

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 percentage of expected payroll. However, in keeping with GASB requirements, the net amortization period will not exceed 30 years.

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death and disability benefits (constant dollar amount for retiree medical benefits), from the assumed entry age to the last age with a future benefit 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 DCR Plan payroll of active members. The actuarial accrued liability for active members (the portion of 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 beneficiaries and disabled members currently receiving benefits (if any) 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.

B. Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method will be phased in over five years. Fair Value of Assets were $0 as of June 30, 2006. All assets are valued at fair 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 fair value of assets.

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C. Valuation of Retiree Medical Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 6.2(c) of the State of Alaska Teachers' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2012.

Due to the lack of experience for the DCR Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2012 for TRS with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, FY12 claims costs were reduced 11.9% for medical and 7.1% for prescription drugs. Retiree out-of-pocket amounts were indexed 0.2% each year to reflect the effect of the deductible leveraging on trend and other plan design features.

No implicit subsidies are assumed. Employees projected to retire with 30 years of service prior to Medicare are valued with commencement deferred to Medicare eligibility, as such members will be required to pay the full plan premium. Explicit subsidies for disabled and normal retirement are determined using the plan-defined percentages of total projected plan costs, again with no implicit subsidy assumed.

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to the following provisions; however, none of the impacts have been included in the valuation results.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We did look at the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the time of disclosure Buck estimated the year in which the tax would potentially affect Alaska to be sufficiently far into the future to produce a minimal impact. Buck determined the impact to be immaterial based on a blend of pre-Medicare and Medicare retirees.

We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

Changes in Methods From the Prior Valuation

There have been no changes in methods since the prior valuation.

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Summary of Actuarial Assumptions and Changes in Assumptions

The demographic and economic assumptions used in the June 30, 2012 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2010. These assumptions were the result of an experience study performed for the DB Plan as of June 30, 2009.

1. Investment Return / Discount Rate	8.00% per year (geometric), compounded annually, net of expenses.
2. Salary Scale	Inflation – 3.12% per year. Productivity – 0.5% per year. See Table 1 for salary scale rates.
3. Payroll Growth	3.62% per year.
4. Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
5. Mortality (Pre-termination)*	Based upon the 2005-2009 actual experience of the TRS DB Plan. (See Table 2). 55% of the 1994 Group Annuity Mortality (GAM) Table, 1994 Base Year without margin projected to 2013 using Projection Scale AA for females and 45% for males. 15% of deaths are assumed to result from occupational causes.
6. Mortality (Post-termination)*	Based upon the 2005-2009 actual experience of the TRS DB Plan. (See Table 3). 3-year setback of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 using Projection Scale AA for females and 4-year setback for males.
7. Turnover	Select rates were estimated and ultimate rates were set to the TRS DB Plan's rates loaded by 10%. (See Table 4).
8. Disability	Incidence rates based upon the 2005-2009 actual experience of the TRS DB Plan, in accordance with Table 5. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table. 15% of disabilities are assumed to result from occupational causes.
9. Retirement	Retirement rates were estimated in accordance with Table 6.
10. 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.
11. Part-time Status	Part-time employees are assumed to earn 0.60 years of credited service per year.

*The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2010 with an Actual Deaths to Expected Deaths ratio of 117%.

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12. Expenses — All expenses are net of the investment return assumption.

13. Per Capita Claims Cost — Sample claims cost rates adjusted to age 65 for FY13 medical benefits are shown below:

	Medical	Prescription Drugs
Pre-Medicare	$ 9,856	$ 2,736
Medicare Parts A & B	1,628	2,736
Medicare Part B Only	6,219	2,736
Medicare Part D	N/A	535

14. Third Party Administrator Fees — $163.52 per person per year; assumed trend rate of 5% per year.

15. Base Claims Cost Adjustments — Due to higher initial copays, deductibles, out-of-pocket limits and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:

- 0.881 for the medical plan.
- 0.929 for the prescription drug plan.
- 0.998 for the annual indexing of member cost sharing.

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16. 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, 9.0% is applied to the FY13 pre-medical claims costs to get the FY14 medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs
FY13	9.0%	6.5%	6.4%
FY14	8.7	6.4	6.3
FY15	8.5	6.3	6.2
FY16	8.0	6.3	6.2
FY17	7.5	6.2	6.1
FY18	7.0	6.1	6.0
FY19	6.6	6.1	5.8
FY25	6.0	6.0	5.8
FY50	5.0	5.0	5.0
FY100	4.5	4.5	4.5

For the June 30, 2012 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model effectively begins estimating trend amounts beginning in 2012 and projects out to 2100. The model has been populated with assumptions that are specific to the State of Alaska. The model asks the user to input estimated baseline costs for year 2015. Using this value as the base cost, the model projects per-person expenditures and growth rates through 2100 using a set of equations and assumptions developed by the author with the assistance of an SOA working group. The user can then use the model input cells to specify alternative assumptions regarding responsiveness to external trends, income growth, and other factors to arrive at alternative projections. The model provisionally uses default short term annual projected by CMS for years 2011-2015 (4% to 6%), but users may input their own estimates for these model years. In this model, cost controls can be simulated in two ways: by specifying a Share Restriction Point, a percentage of GDP represented by healthcare and above which the current trends will be reduced; or by specifying a limit year after which the rate of growth in health care costs will be reduced to match the rate of growth in per capita income (as both CMS and CBO assume). While this model is not directly applicable, it was used for reference point in the ultimate pharmacy trend. We set pharmacy trend based upon recent plan and industry experience and grade down slowly in the selected period (similar to post-65 medical trend) to an ultimate trend rate based upon what we are seeing for medical trend and consistent within the industry.

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The following tables compares plan-specific inputs and the model's baseline assumptions for key assumptions as of June 30, 2012:

Key Assumption	Base Line Value	Alaska-Specific Values: Pre-Medicare Medical	Alaska-Specific Values: Medicare Medical
HCCTR 2012-2013	4.6%	9.0%	6.1%
HCCTR 2013-2014	7.4%	8.0%	5.8%
HCCTR 2014-2015	5.0%	7.0%	5.5%
2015 GDP % of healthcare	18.3%	17.9%	17.9%
2015 PCCC	$10,000	$10,295	$2,596
CPI	2.5%	2.5%	2.5%
Real GDP	1.7%	1.5%	1.5%
Income Multiplier	1.40	1.30	1.30
Taste/Technology	1.1%	1.1%	1.1%
Max GDP as % of healthcare	25.0%	25.0%	25.0%
Year reached	2075	2075	2075

Future (2026+) assumptions for inflation (2.4% for 2026-3025 and 2.3% thereafter), real GDP (1.5%), income multiplier (1.05 for 2026-3025 and 1.00 thereafter) and technology (0.9% for 2026-3025 and 0.8% thereafter) were not changed from the baseline inputs.

17. Aging Factors

Age	Medical	Prescription Drugs
0-44	2.0%	4.5%
45-54	2.5	3.5
55-64	3.5	3.0
65-73	4.0	1.5
74-83	1.5	0.5
84-93	0.5	—
94+	—	—

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18. Retiree Medical Participation

Decrement due to disability		Decrement due to retirement		
Age	Percent participation	Age	Years of Service	Percent participation
<56	73.00%	<55		40.0%
56	77.50	56		50.0
57	79.75	57		55.0
58	82.00	58		60.0
59	84.25	59		65.0
60	86.50	60		70.0
61	88.75	61		75.0
62	91.00	62		80.0
63	93.25	63		85.0
64	95.50	64		90.0
65+	94.00	65+		
			<15	70.5%
			15-19	75.2
			20-24	79.9
			25-29	89.3
			30+	94.0

*Updated participation rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market.

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Table 1
Alaska TRS DCR Plan
Salary Scale

Year of Employment	Unisex Rates
1-6	6.11%
7	5.94
8	5.78
9	5.61
10	5.44
11	5.28
12	5.11
13	4.94
14	4.78
15	4.61
16	4.45
17	4.28
18	4.11
19	3.95
20	3.78
21+	3.62

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 2
Alaska TRS DCR Plan
Mortality Table (Pre-termination)

Age	Male	Female
20	0.017%	0.012%
21	0.018	0.012
22	0.019	0.012
23	0.021	0.013
24	0.024	0.013
25	0.026	0.013
26	0.030	0.014
27	0.032	0.014
28	0.033	0.015
29	0.034	0.016
30	0.035	0.017
31	0.036	0.019
32	0.037	0.020
33	0.037	0.021
34	0.037	0.022
35	0.037	0.023
36	0.038	0.024
37	0.039	0.025
38	0.041	0.027
39	0.042	0.029
40	0.045	0.032
41	0.047	0.034
42	0.050	0.037
43	0.053	0.039
44	0.056	0.041
45	0.060	0.042
46	0.064	0.044
47	0.069	0.047
48	0.075	0.051
49	0.081	0.055
50	0.088	0.061
51	0.097	0.068
52	0.106	0.078
53	0.118	0.090
54	0.131	0.102
55	0.149	0.116
56	0.170	0.135
57	0.195	0.157
58	0.224	0.181
59	0.253	0.208
60	0.284	0.239
61	0.326	0.274
62	0.368	0.314
63	0.425	0.359
64	0.479	0.410

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 3
Alaska TRS DCR Plan
Mortality Table (Post-termination)

Age	Male	Female
50	0.142%	0.085%
51	0.153	0.092
52	0.166	0.100
53	0.181	0.111
54	0.196	0.124
55	0.215	0.143
56	0.235	0.163
57	0.263	0.185
58	0.291	0.212
59	0.331	0.246
60	0.377	0.285
61	0.433	0.328
62	0.499	0.378
63	0.561	0.434
64	0.631	0.498
65	0.725	0.570
66	0.819	0.653
67	0.944	0.745
68	1.064	0.844
69	1.196	0.948
70	1.362	1.052
71	1.512	1.150
72	1.634	1.242
73	1.787	1.342
74	1.915	1.434
75	2.094	1.583
76	2.298	1.726
77	2.518	1.918
78	2.748	2.094
79	3.061	2.338
80	3.361	2.669
81	3.788	2.985
82	4.292	3.327
83	4.868	3.707
84	5.510	4.136
85	6.214	4.625

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 4
Alaska TRS DCR Plans
Turnover Assumptions

Select Rates of Turnover During the First 5 Years of Employment:

Year of Employment	Rate
0	18.00%
1	17.00
2	14.00
3	12.00
4	10.00

Ultimate Rates of Turnover
After the First 5 Years of Employment

Age	Male	Female	Age	Male	Female
15	4.9042%	4.8122%	40	4.7508%	4.6924%
16	4.8981	4.8085	41	4.7372	4.6815
17	4.8931	4.8061	42	4.7199	4.6706
18	4.8882	4.8049	43	4.7038	4.6609
19	4.8857	4.8037	44	4.6827	4.6488
20	4.8474	4.7686	45	4.6593	4.6343
21	4.8448	4.7686	46	4.6345	4.6210
22	4.8399	4.7674	47	4.6035	4.6028
23	4.8362	4.7674	48	4.5676	4.5823
24	4.8300	4.7662	49	4.5306	4.5617
25	4.8250	4.7662	50	4.4884	4.5375
26	4.8201	4.7650	51	4.4389	4.5097
27	4.8151	4.7638	52	4.3808	4.4770
28	4.8102	4.7601	53	4.3164	4.4383
29	4.8052	4.7565	54	4.2447	4.3971
30	4.8015	4.7529	55	4.1630	4.3475
31	4.7991	4.7505	56	4.0640	4.2834
32	4.7953	4.7456	57	3.9427	4.2011
33	4.7929	4.7420	58	3.8103	4.1080
34	4.7916	4.7372	59	3.6507	3.9894
35	4.7892	4.7323	60	3.4713	3.8551
36	4.7854	4.7251	61	3.2720	3.7050
37	4.7805	4.7190	62	3.0406	3.5344
38	4.7718	4.7105	63	2.7770	3.3396
39	4.7619	4.7021	64	2.4912	3.1279
			65+	4.9500	4.8400

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 5
Alaska TRS DCR Plan
Disability Table

Age	Male	Female
20	0.022%	0.020%
21	0.022	0.020
22	0.023	0.021
23	0.023	0.021
24	0.024	0.022
25	0.024	0.022
26	0.024	0.022
27	0.025	0.022
28	0.026	0.023
29	0.026	0.024
30	0.027	0.025
31	0.027	0.025
32	0.028	0.025
33	0.029	0.026
34	0.030	0.027
35	0.030	0.027
36	0.032	0.029
37	0.033	0.030
38	0.034	0.031
39	0.035	0.032
40	0.037	0.033
41	0.038	0.035
42	0.041	0.037
43	0.043	0.039
44	0.047	0.043
45	0.052	0.047
46	0.056	0.050
47	0.061	0.055
48	0.066	0.060
49	0.071	0.064
50	0.077	0.069
51	0.083	0.075
52	0.091	0.082
53	0.102	0.091
54	0.114	0.102
55	0.128	0.115
56	0.147	0.133
57	0.171	0.154
58	0.195	0.176
59	0.230	0.207
60	0.270	0.243
61	0.312	0.281
62	0.362	0.325
63	0.418	0.376
64	0.477	0.429

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Actuarial Assumptions and Changes in Assumptions

Table 6
Alaska TRS DCR Plan
Retirement Table

Age	Rate
<55	2%
55-59	3
60	5
61	5
62	10
63	5
64	5
65	25
66	25
67	25
68	20
69	20
70	100

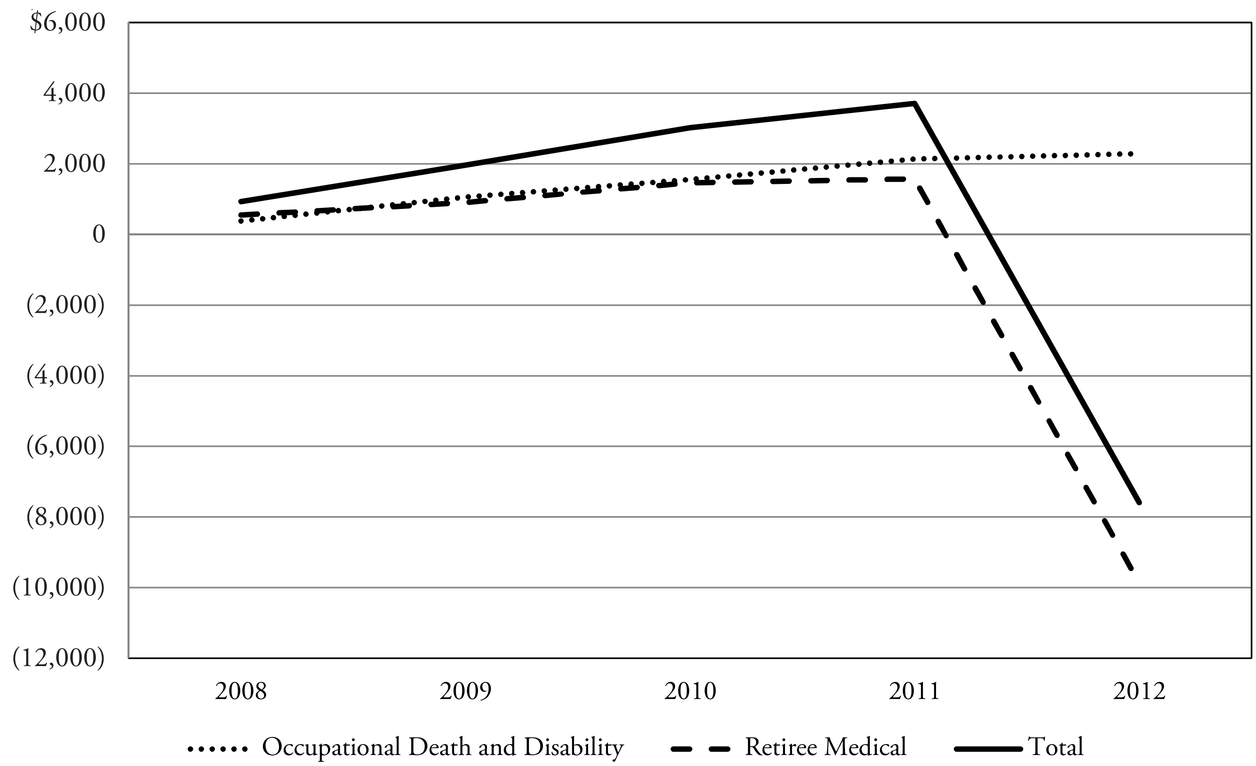
Changes in Actuarial Assumptions Since the Prior Valuation

There have been changes in assumptions since the prior valuation regarding healthcare cost trend rates and the DCR retiree medical plan adjustments. The updated healthcare cost trend assumption reflects differences in Medicare eligibile and non-Medicare eligible medical costs, maintains a distinct prescription drug cost trend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated member contributions to reflect the new non-Medicare and pharmacy benefit cost trend on a weighted average basis.

To account for anticipated plan design features, FY12 claims costs adjustments were changed from 5.9% for medical and 0.7% for prescription drugs to 11.9% and 7.1% respectively. Retiree out-of-pocket amounts were indexed 0.2% each year, compared to 4.8% last year. Participation rates were reduced to reflect the proportion of retirees expected to have access to alternative options in the Medicare market as well as the time from retirement to Medicare-eligibility where a member pays full cost.

Teachers' Retirement System Defined Contribution Retirement Plan For Occupational Death and Disability and Retiree Medical Benefits Funding Excess/(Unfunded Liability) (In thousands)				
Actuarial Valuation Year Ended June 30	**Occupational Death and Disability**	**Retiree Medical**	**Total Funding Excess/ (Unfunded Liability)**	**Funded Ratio**
2008	$ 376	$ 551	$ 927	215.73%
2009	1,057	907	1,964	234.5
2010	1,559	1,465	3,024	223.5
2011	2,136	1,572	3,708	196.1
2012	2,285	(9,874)	(7,589)	55.0

5-YEAR TREND OF FUNDING EXCESS
(In thousands)



Teachers' Retirement System Defined Contribution Retirement Plan For Occupational Death and Disability and Retiree Medical Benefits Employer Contribution Rates					
Fiscal Year	**Actuarial Valuation Year Ended June 30**	**Occupational Death and Disability**	**Retiree Medical**	**Total Annual Required**	**Adopted**
2007	N/A	N/A	1.75%	1.75%	1.75%
2008	N/A	0.56 %	0.99	1.55	1.55
2009	N/A	0.62	0.99	1.61	1.61
2010	2007	0.32	1.03	1.35	1.35
2011	2008	0.28	0.68	0.96	0.96
2012	2009	—	0.58	0.58	0.58
2013	2010	—	0.49	0.49	0.49
2014	2011	—	0.47	0.47	0.47
2015	2012	—	2.04	2.04	2.04

Valuations are used to set contribution rates in future years.

Teachers' Retirement System Defined Contribution Retirement Plan For Occupational Death and Disability and Retiree Medical Benefits Schedule of Active Member Valuation Data					
Valuation Date	**Number**	**Annual Earnings[1] (In thousands)**	**Annual Average Earnings**	**Percent Increase/ (Decrease) in Average Earnings**	**Number of Participating Employers**
June 30, 2012	3,057	$178,761	$58,476	4.7%	58
June 30, 2011	2,708	151,269	55,860	5.6	58
June 30, 2010	2,246	118,813	52,900	5.7	58
June 30, 2009	1,792	89,708	50,061	6.4	58
June 30, 2008	1,198	56,369	47,053	6.2	58
June 30, 2007	641	28,410	44,322	—	58
June 30, 2006	—	—	—	—	58

[1] Annual earnings are the annualized earnings for the fiscal year ending on the valuation date.

Teachers' Retirement System Defined Contribution Retirement Plan Occupational Death and Disability Solvency Test (In thousands)							
	Occupational Death and Disability Aggregate Accrued Liability For:				Portion of Accrued Liabilities Covered by Assets:		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)	Occupational Death and Disability Valuation Assets	(1)	(2)	(3)
June 30, 2012	$ —	$ —	$63	$2,348	100.0%	100.0%	100.0%
June 30, 2011	—	—	57	2,193	100.0	100.0	100.0
June 30, 2010[1]	—	—	18	1,577	100.0	100.0	100.0
June 30, 2009[1]	—	—	14	1,071	100.0	100.0	100.0
June 30, 2008	—	—	44	420	100.0	100.0	100.0
June 30, 2007	—	—	16	—	100.0	100.0	0.0
June 30, 2006	—	—	—	—	N/A	N/A	N/A

[1] Change in Assumptions

Teachers' Retirement System Defined Contribution Retirement Plan Retiree Medical Solvency Test (In thousands)							
	Retiree Medical Aggregate Accrued Liability For:				Portion of Accrued Liabilities Covered by Assets:		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)	Retiree Medical Valuation Assets	(1)	(2)	(3)
June 20,2012	$ —	$ —	$16,811	$6,937	100.0%	100.0%	41.3%
June 30, 2011	—	—	3,801	5,373	100.0	100.0	100.0
June 30, 2010[1]	—	—	2,430	3,895	100.0	100.0	100.0
June 30, 2009[1]	—	—	1,446	2,353	100.0	100.0	100.0
June 30, 2008[1]	—	—	757	1,308	100.0	100.0	100.0
June 30, 2007	—	—	358	597	100.0	100.0	100.0
June 30, 2006	—	—	—	—	N/A	N/A	N/A

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

[1] Change in Assumptions

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Plan Provisions and Changes in Plan Provisions

1. Effective Date

July 1, 2006, with amendments through June 30, 2012.

2. Administration of Plan

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

The Alaska Retirement Management Board prescribes policies, adopts regulations, invests the funds, and performs other activities necessary to carry out the provisions of the Plan.

3. Employers Included

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

4. Membership

An employee of a participating employer who first enters service on or after July 1, 2006, or a member of the defined benefit plan who works for an employer who began participation on or after July 1, 2006, and meets the following criteria is a participant in the Plan:

- Permanent full-time or part-time elementary or secondary teachers, school nurses, or a person in a position requiring a teaching certificate as a condition of hire in a public school of the State of Alaska, the Department of Education and Early Development or in the Department of Labor and Workforce Development.

- Full-time or part-time teachers at the University of Alaska or persons occupying full-time administrative positions requiring academic standing who are not in the University's Optional Retirement Plan.

Members can convert to the DCR Plan if they are an eligible nonvested member of the TRS defined benefit plan whose employer consents to transfers to the defined contribution plan and they elect to transfer his or her account balance to the TRS DCR Plan.

5. Member Contributions

There are no member contributions for the occupational death & disability and retiree medical benefits.

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Plan Provisions and Changes in Plan Provisions

6. Retiree Medical

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal retirement eligibility is the earlier of a) 30 years of service or b) Medicare eligible and 10 years of service.
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until they are Medicare eligible.
- Coverage cannot be denied except for failure to pay premium.
- Members who are receiving disability benefits or survivors who are receiving monthly survivor benefits are not eligible until the member meets, or would have met if he/she had lived, the normal retirement eligibility requirements.
- The plan's coverage is supplemental to Medicare.
- The Medicare-eligible premium will be based on the member's years of service. The percentage of premium paid by the member is as follows:

Years of Service	Percent of Premium Paid by Member
Less than 15 years	30%
15 – 19	25
20 – 24	20
25 – 29	15
30 years or more	10

7. Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- There is no increase in the benefit after commencement.
- Member earns service while on occupational disability.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service.
- No retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

STATE OF ALASKA
TEACHERS' RETIREMENT SYSTEM
Defined Contribution Retirement Plan
Summary of Plan Provisions and Changes in Plan Provisions

8. Occupational Death Benefits

- Benefit is 40% of salary.
- There is no increase in the benefit after commencement.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Changes Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.