

# ALASKA

TEACHERS' RETIREMENT SYSTEM



A component unit of the State of Alaska  
**Comprehensive Annual Financial Report**  
Fiscal Year Ended June 30, 2015  
Bill Walker, Governor





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**TEACHERS' RETIREMENT SYSTEM**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT**

**A Component Unit of the State of Alaska**

*For the Fiscal Year Ended June 30, 2015*



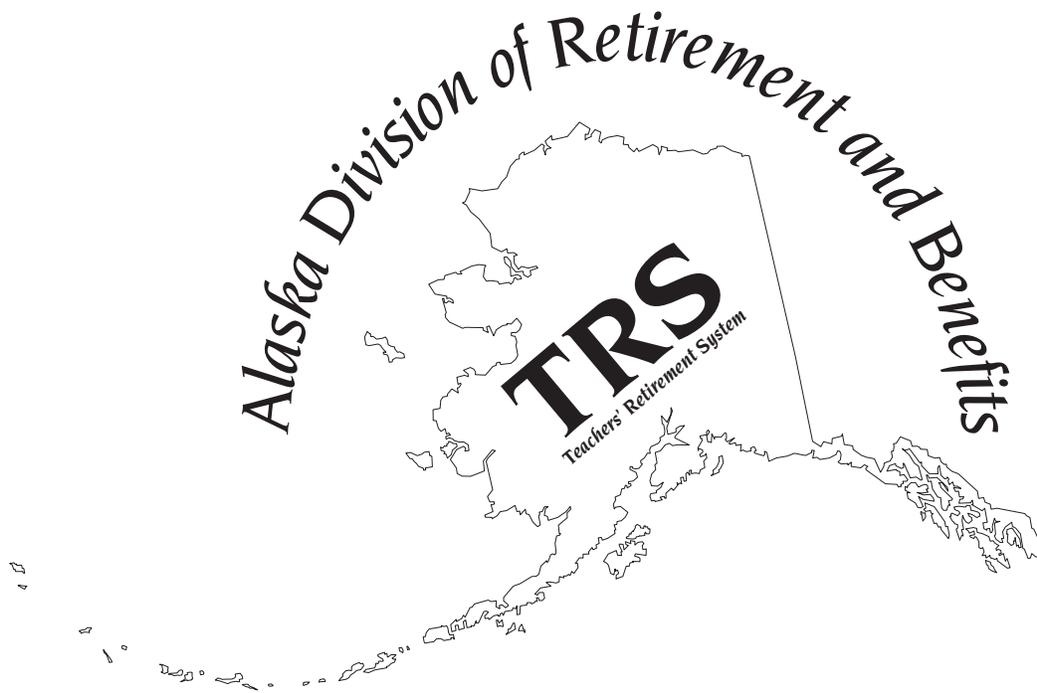
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### Teachers' Retirement System Defined Contribution Retirement Plan

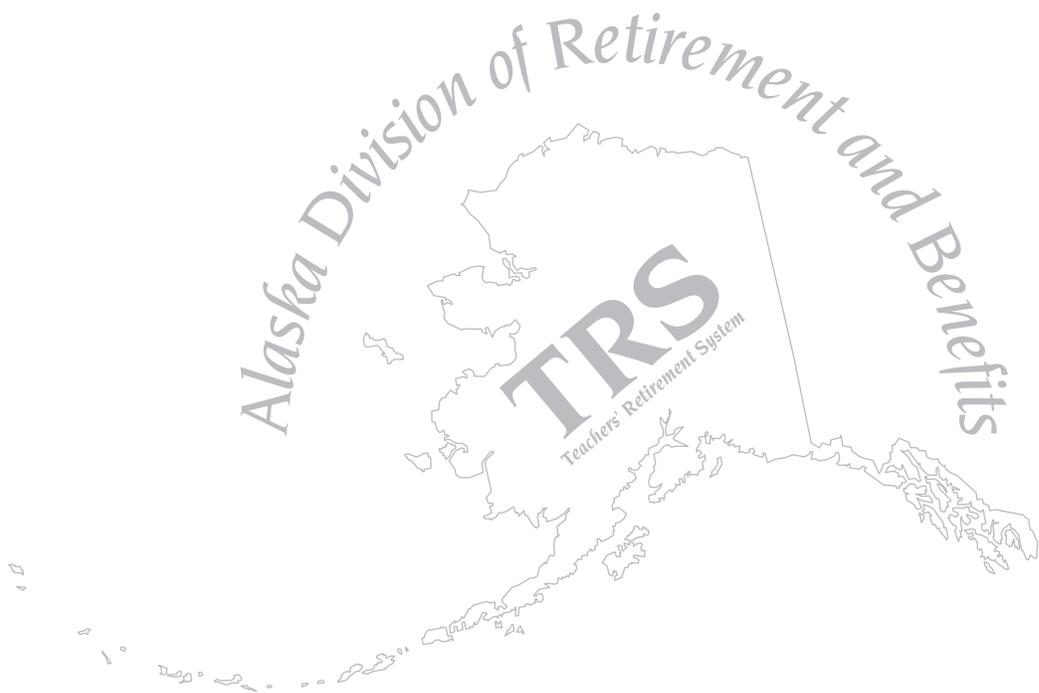
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# INTRODUCTORY SECTION





THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

## Department of Administration

### DIVISION OF RETIREMENT AND BENEFITS

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Toll-Free: (800) 821-2251

## LETTER OF TRANSMITTAL

December 15, 2015

The Honorable Bill Walker, Governor  
Members of the Alaska State Legislature  
Alaska Retirement Management Board  
Employers and Plan Members

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Teachers' Retirement System (TRS) (System) for the fiscal year ended June 30, 2015. The CAFR is intended to fulfill the legal requirements of Alaska Statute (AS) 14.25.004(a)(8).

The CAFR provides comprehensive information on the financial operations of the System for the fiscal year. Responsibility for the accuracy, completeness and fairness of the information presented rests with the management of the System. To the best of our knowledge and belief, the enclosed information is accurate in all material respects and is reported in a manner designed to fairly present the financial position and results of operations of the System for the year ended June 30, 2015. All disclosures necessary to enable the reader to gain an understanding of the System's activities have been included.

KPMG LLP, Certified Public Accountants, have issued an unmodified opinion on the Systems' basic financial statements for the year ended June 30, 2015. The independent auditor's report is located at the front of the Financial Section of this report.

The management's discussion and analysis (MD&A) is also located in the Financial Section of this report. The MD&A provides an analytical overview of the financial statements. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it.

The CAFR is divided into five sections:

- **Introductory Section**, which contains the letter of transmittal, the organizational chart of the Division, and a list of the members serving on the Alaska Retirement Management Board (Board);
- **Financial Section**, which contains the Independent Auditor's Report, MD&A, basic financial statements, required supplementary information, and additional information;

# Introductory Section

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- **Investment Section**, which contains a report prepared by the investment consultant, a report on investment activity, investment results, and various investment schedules;
- **Actuarial Section**, which contains the Actuarial Certification letter and the results of the most current annual actuarial valuation; and
- **Statistical Section**, which includes additional information related to financial trends, demographic and economic information, and operating information.

## Profile of the System

The System was established in 1955 to provide pension benefits to teachers and other eligible participants. Post-employment health care benefits were added in July 1, 1975. Senate Bill 141, signed into law on July 27, 2005, closed the Defined Benefit (DB) Plan effective July 1, 2006, to new members and created a Defined Contribution (DC) Plan for members first hired on or after July 1, 2006. Beginning in fiscal year 2007, the System consists of: (1) the DB Plan and (2) the DC Plan. This report includes both plans. The DB Plan includes the pension plan and the Alaska Retiree Health Care Trust (Tiers I and II). The DC Plan includes the defined contribution retirement trust, occupational death and disability plan, retiree major medical plan, and the health reimbursement arrangement plan (Tier III).

## Reporting Entity

The System is considered a component unit of the State of Alaska (State) for financial reporting purposes. Due to the closeness of the System's relationship to the State, it is included in the State of Alaska CAFR as a fiduciary fund.

The Commissioner of the Department of Administration, appointed by the Governor, is responsible for administering the System. In order to meet the statutory requirements of administering the System, the Commissioner appoints the Plan Administrator of the Division of Retirement and Benefits (Division). The Plan Administrator is responsible for the daily operations of the System.

The Board, constituted effective October 1, 2005, replaced the Teachers' Retirement Board (effective July 1, 2005) and the Alaska State Pension Investment Board (effective October 1, 2005).

The Board is responsible for:

- adopting investment policies and developing investment objectives;
- providing a range of investment options and establishing the rules by which participants can direct their investments among those options, when applicable;
- establishing crediting rates for members' individual contribution accounts, when applicable;
- assisting in prescribing policies for the proper operation of the System;
- coordinating with the System Administrator to have actuarial valuations performed;
- reviewing actuarial assumptions and conducting experience analyses;
- contracting for an independent audit of actuarial valuations and external performance calculations; and
- reporting the financial condition of the Systems to the Governor, Legislature, and individual employers participating in the System.

## **Major Initiatives**

The System continues to make progress on several on-going projects. Most of these efforts are focused on improving customer service, technology, methods for employers to submit information, methods for members to obtain information, and continued compliance with accounting requirements of the Governmental Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB), as applicable.

The System continues to assess and retool its communication efforts, which include printed handbooks, newsletters, and website content. The System strives to ensure that all communication material is clear, accurate, and user-friendly.

The System strives to provide the highest degree of customer service to all members. The Division continues to enhance and develop the central Member Services Section with the goals of improving phone service, provide faster processing of all customer requests, and improving member education services.

The System continues to offer a broad array of fairs and seminars directed toward both active members and employers, with the goal to assist employers with successful marketing of the plans, educating members about all benefits available from early career through to retirement, encouraging healthy living, and how to best use the health plan.

## **Funding Requirements**

The System's consulting actuary, Buck Consultants, presented the results of the June 30, 2014, actuarial valuation report to the Plan Administrator, Division, and the Board. The assumptions and benefits are explained in the Actuarial Section of this report.

Based on the most recent valuation report dated June 30, 2014, the System's DB Plan has a funding ratio (actuarial value of DB Plan assets divided by actuarial liabilities for pension and postemployment healthcare benefits) of 61.2%. The DB Plan's unfunded actuarial accrued liability (actuarial liability minus actuarial value of DB plan assets) totals approximately \$3.8 billion. The unfunded liability continues to be addressed at all levels of the State. The Governor's budget proposes to provide funding to System's employers in order to maintain an appropriate level of employer contributions while also paying the actuarially determined contribution rate adopted by the Board.

## **Investments**

On June 30, 2015, the DB Plan's investment portfolio was valued at \$7.7 billion and earned a 3.30% return for the fiscal year ended June 30, 2015. The DC Plan's investment portfolio was valued at \$327.9 million for the fiscal year ended June 30, 2015. Over the past five years ending June 30, 2015, the DB Plan's investments earned a 10.96% return. The Board has statutory oversight of the System's investments and the Department of Revenue, Treasury Division, provides staff for the Board. Actual investing is performed by investment officers in the Treasury Division or by contracted external investment managers. The Board reviews and updates investment policies and strategies and is responsible for safeguarding invested assets.

# Introductory Section

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## **Accounting System**

This CAFR has been prepared to conform to the principles of accounting and reporting established by the GASB. Specific accounting treatments are detailed in the Notes to the Financial Statements found in the Financial Section of this report.

## **Internal Controls**

Division management is responsible for establishing and maintaining a system of internal controls to protect System assets from loss, theft, or misuse and to ensure adequate accounting data is compiled for the preparation of financial statements in conformity with generally accepted accounting principles. The cost of internal control should not exceed anticipated benefits; the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

## **Awards**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the System for its CAFR for the fiscal year ended June 30, 2014. The Certificate of Achievement is a prestigious national award that recognizes conformance with the highest standards of preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government entity must publish an easily readable and efficiently organized CAFR. This report must satisfy both U.S. generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year. We are confident our current CAFR continues to meet the Certificate of Achievement Program's requirements and are submitting it to the GFOA for consideration.

Additionally, the Public Pension Coordinating Council (PPCC) awarded the Public Pension Standards Award for Funding and Administration certificate for the fiscal year ended June 30, 2015.

The Public Pension Standards Award for Funding and Administration certificate is valid for a period of one year. The Division is confident the System will continue to meet the standards award requirements and will apply to the PPCC for consideration in 2016.

## **Acknowledgements**

The preparation of this report is made possible by the dedicated services of the staff of the Department of Administration, Division of Retirement and Benefits; Department of Law; and the Department of Revenue, Treasury Division. This report is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means of determining responsible stewardship of the System's financial resources.

The report is available on the web at [doa.alaska.gov/drb/trs/trscafr.html](http://doa.alaska.gov/drb/trs/trscafr.html) and mailed to those who submit a formal request. This report forms the link between the System and the membership. The cooperation of the membership contributes significantly to the success of the System. We hope the employers and plan members find this report informative.

# Introductory Section

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We are grateful to the Alaska Retirement Management Board, staff, advisors, and to the many people who have diligently worked to assure the successful operation of the System.

Respectfully submitted,



Sheldon Fisher  
Commissioner



John Boucher  
Deputy Commissioner



Jim Puckett  
Chief Operations Officer



Michele Michaud  
Chief Health Official



Kathy Lea  
Chief Pension Officer



Kevin Worley  
Chief Financial Officer



Government Finance Officers Association

## Certificate of Achievement for Excellence in Financial Reporting

Presented to

### **Alaska Teachers' Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2014**

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2015***

Presented to

***Alaska Teachers' Retirement System***

In recognition of meeting professional standards for  
plan funding and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

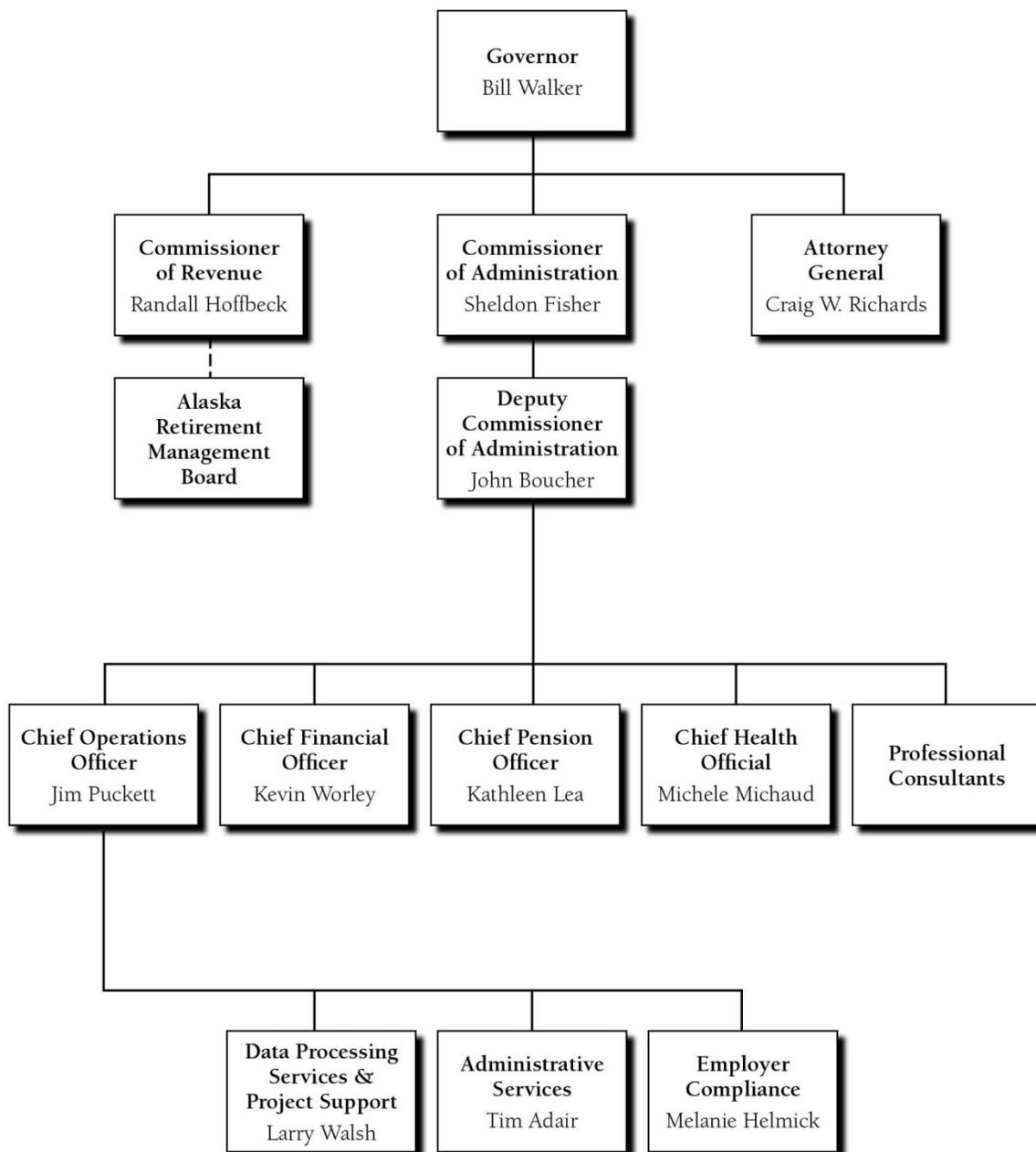
National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is fluid and cursive.

Alan H. Winkle  
Program Administrator

## ORGANIZATION CHART

As of June 30, 2015



## Section Responsibilities

The **Member Services Section** is responsible for providing comprehensive retirement counseling to the participating members and employers in the plan. This section appoints members to retirement and maintains benefit payment information.

The **Health Plan Administration Section** is responsible for the administration of health, disability, and life insurance. This section provides benefits counseling and plan change information to the membership.

The **Financial Services Section** is responsible for maintaining the employee and employer records and accounts in each of the plans administered by the Division, producing financial statements and reports, and assuring compliance with Internal Revenue Service requirements.

The **Data Processing Services and Project Support Section** supports the information systems the System uses. Responsibilities include planning, development, data base design, programming, and operational support of the data processing systems, including the Local Area Network.

The **Administrative Services Section** is responsible for budget preparation, fiscal management of appropriations, procuring professional services, supplies, and equipment. The section manages the System's record center containing the member's physical records and performs other administrative functions such as legislative tracking and personnel management.

Professional Consultants		
<p><b>Consulting Actuary</b> Buck Consultants <i>Denver, Colorado</i> Gabriel Roeder Smith <i>Denver, Colorado</i></p>	<p><b>Third-Party Healthcare Claim Administrator</b> Aetna Life Insurance Company <i>Lexington, Kentucky</i> Moda Health / Delta Dental of Alaska <i>Portland, Oregon</i> PayFlex Systems USA, Inc. <i>Omaha, Nebraska</i> HealthSmart Benefit Solutions, Inc. <i>Charleston, West Virginia</i></p>	<p><b>Consulting Physicians</b> Ward Hurlburt, M.D. Deborah Lessmeir, M.D. Mayanandi Than, M.D. <i>Juneau, Alaska</i> Terrence Tauschek <i>Anchorage, Alaska</i> Thomas Rogers, M.D. <i>Ford, Washington</i> First Medical Advisory Group Inc. <i>Salem, Oregon</i> Michael Fraser <i>San Diego, California</i> Mountain State Orthopedic Consulting <i>Eagle, Idaho</i> Objective Medical Assessments Corp. <i>Seattle, Washington</i></p>
<p><b>Independent Auditors</b> KPMG LLP <i>Anchorage, Alaska</i></p>	<p><b>Legal Counsel</b> Joan Wilkerson Siobhan McIntyre Kevin Dilg Assistant Attorney Generals <i>Juneau, Alaska</i> Ice Miller LLP <i>Indianapolis, Indiana</i></p>	
<p><b>Benefits Consultants</b> Buck Consultants <i>Denver, Colorado</i> Maximus Federal Services <i>Reston, Virginia</i></p>		
<p><b>IT Consultants</b> Computer Task Group Applied Microsystems, Inc. <i>Anchorage, Alaska</i> Alaska IT Group <i>Juneau, Alaska</i></p>		

A list of investment consultants can be found on pages 69-70 and on the Schedule of Investment Management Fees on pages 78-79.

# Introductory Section

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## Alaska Retirement Management Board

As of June 30, 2015

**Gail (Anagick) Schubert, Chair**, is the Chief Executive Officer and General Counsel for the Bering Straits Native Corporation, and President/CEO of several of its subsidiary entities. She is an attorney licensed to practice law in the states of Alaska and New York. Mrs. Schubert serves as Chair of the Alaska Native Heritage Center, Chair of Akeela Treatment Services, Chair of the Alaska Retirement Management Board, Vice Chair of the Alaska Native Justice Center, Vice Chair of Khoanic Broadcast Corporation, Treasurer of the Bering Straits Native Corporation, and as a board member of the Alaska Federation of Natives, and the Alaska Native Arts Foundation. She is also a member of the Alaska Rural Justice and Law Enforcement Commission. Mrs. Schubert received her undergraduate degree from Stanford University, and holds a law degree and master's degree in business administration from Cornell University.

**Sam Trivette, Vice-Chair**, is on the national executive board of the American Federation of Teachers retirees and was formerly President of the Retired Public Employees of Alaska. Mr. Trivette retired from public service after more than 32 years serving as Chief Probation Officer, Director of Community Corrections, Executive Director of the Parole Board, and as a probation and correctional officer. He is President of Quality Corrections Services, and on the board of directors of the Alaska Public Employees Association. Mr. Trivette has also served as an officer in a number of national and statewide professional organizations as well as many not-for-profit organizations around Alaska. He has a bachelor's degree in psychology from the University of Alaska Anchorage and has completed postgraduate work in public administration, law and psychological counseling.

**Gayle W. Harbo, Secretary**, retired after teaching mathematics in Fairbanks for 25 years. She also served as math department chair, as advanced placement coordinator, on the district curriculum, evaluation and budget committees, and twice as chair of the Lathrop Self-Evaluation for Accreditation Committee. Ms. Harbo is a member of Alpha Delta Kappa, AARP, National Retired Teachers of Alaska, Fairbanks Retired Teachers Association, National Council of Teacher Retirement (NCTR) Systems, NCTR Education Committee, and the Alaska Teachers' Retirement Board. She is also a co-manager of a family trust. Ms. Harbo was named Alaska Teacher of the Year in 1989. She holds a Bachelor of Science in mathematics from North Carolina State University, and a master's degree in teaching from the University of Alaska Fairbanks, and has completed an additional 40 hours in mathematics, counseling, law and finance.

**Tom Brice** is the Business Representative for the Alaska District Council of Laborers administering the contracts in Southeast Alaska for Laborers Local 942 and Public Employees Local 71. He was elected to the position of Vice President of Laborers Local 942 in 2011, and has sat on the negotiating team for the state contract with Public Employees Local 71 for the past three contracts. Prior to this position, Mr. Brice was the Apprenticeship Outreach Coordinator for the Alaska Works Partnership. Here he developed and managed a statewide program focused on assisting qualified rural Alaskans to gain entrance to the various registered Alaskan Building Trade apprenticeships. Mr. Brice also served in the Alaska State House of Representatives between the 18th and 21st legislatures. He has a bachelor's degree from the University of Alaska Fairbanks.

**Sheldon Fisher**, Commissioner of the Department of Administration, was appointed by Governor Walker in December 2014. Mr. Fisher was born and raised in Ashland, Oregon, and attended Brigham Young University (BYU), where he graduated with honors with a degree in economics. After BYU, Mr. Fisher went on to receive a law degree from Yale Law School and worked for a time for the law firm of Latham & Watkins. In 1994, Mr. Fisher left Latham & Watkins to pursue a career in telecommunications, working first for Hughes Electronics, and later, as the General Manager of Sprint's Broadband Wireless business. Mr. Fisher came to Alaska in 2004 taking a position as Senior Vice President of Sales and Product Marketing for Alaska Communications Systems, where he was responsible for all customer facing organizations, including all revenue generation. In 2010, Mr. Fisher resigned from ACS in order to run for Congress.

# Introductory Section

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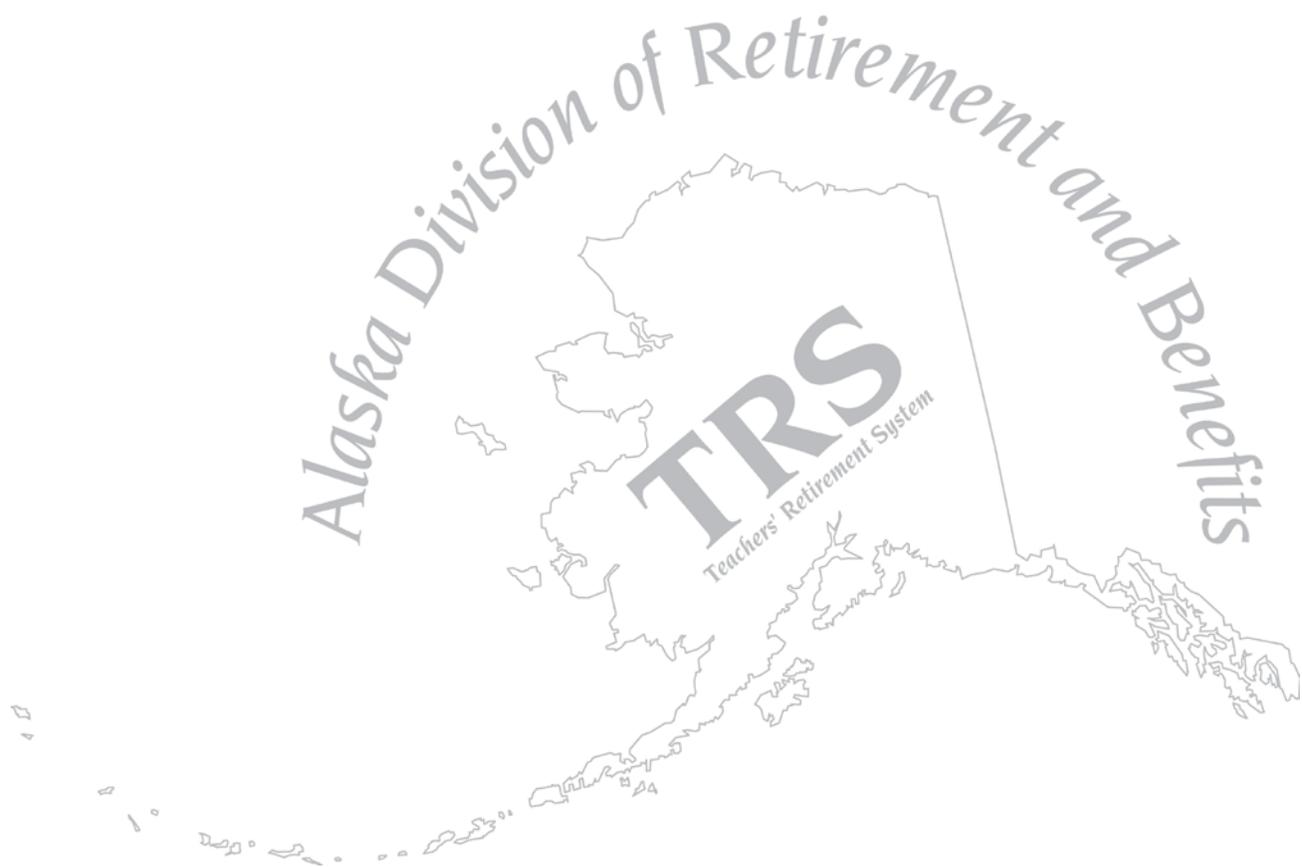
In 2011, Mr. Fisher joined McKinley Capital Management, LLC, as the Chief Operating Officer, where he was responsible for the day to day administrative and general business operations of McKinley Capital. Mr. Fisher brings 20 years of management experience focusing on operations, technology infrastructure and marketing. Mr. Fisher has been married to his wife, Christine, for 26 years, and they are the parents of 7 children.

**Randall Hoffbeck**, Commissioner of the Department of Revenue, was appointed by Governor Walker in December 2014. Mr. Hoffbeck has 30 plus years of experience in tax administration, valuation, and appraisal of real estate, as a contractor to the Tax Division from 1999-2001, and then as Petroleum Property Assessor for the State of Alaska from 2001-2006. In that capacity, he was the lead appraiser in the valuation and administration of tax assessments on all oil and gas properties in the State of Alaska. From 2006-2011 Mr. Hoffbeck served as the Director of Administration and Finance and CFO for the North Slope Borough before being appointed Chief of Staff in 2012. In late 2012 he retired from government service to focus on the completion of a Master of Divinity Degree which was completed in October 2014. Mr. Hoffbeck and his wife Cindy have just returned from serving with a short term Christian medical mission team in Kenya.

**Kristin Erchinger** is currently finance director for the city of Seward, having worked for the city in finance positions since 1994 including a year serving simultaneously as finance director and acting city manager. She became the finance director in 2000. Ms. Erchinger is past president of the Alaska Government Finance Officers Association and represents that organization in the Alaska Municipal League. She also served on the Providence Alaska Region Board, the Graduate Medical Education Committee, the Alaska Municipal League Board, and the Board of the American Society for Public Administration, Alaska Chapter. Ms. Erchinger earned bachelor's degrees in international studies and Japanese language and literature, both from the University of Washington, and a master's degree in public administration from the University of Alaska Anchorage.

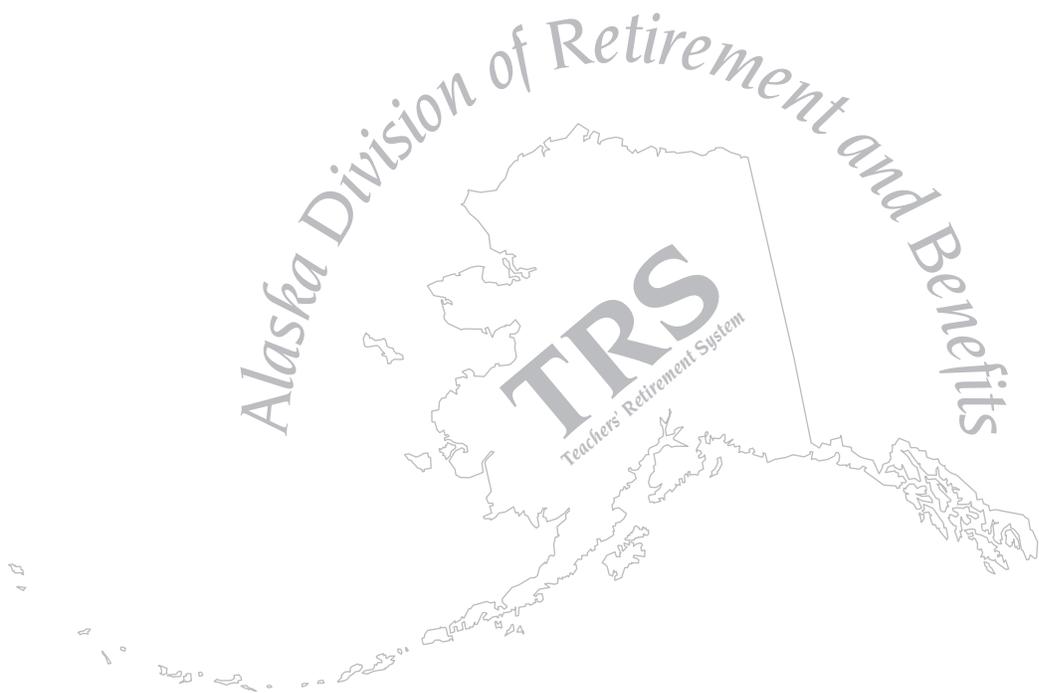
**Martin Pihl** came to Alaska in 1962 to work for Ketchikan Pulp Company, becoming President and General Manager in 1987 until his retirement in 1994. He then served as Acting Executive Director for the Alaska Permanent Fund Corporation in 1994-1995. Mr. Pihl serves as a director of National Bank of Alaska and on Wells Fargo Bank's Alaska Statewide Advisory Board, as Chairman of the Board of Governors of the Alaska Timber Insurance Exchange, and as a regent for Pacific Lutheran University. He is also a member of several advisory boards including Holland America-Westmark- Ketchikan Advisory Board, Ketchikan Ports and Harbors Advisory Board, and Alaska Airlines Southeast Alaska Community Advisory Board. Mr. Pihl holds a bachelor's degree in accounting from the University of Washington and has been a CPA since 1958.

**Sandra Ryan** is a mathematics and tech prep instructor at West Valley High School in Fairbanks, and has been a teacher since 1988. Ms. Ryan teaches Advanced Placement computer science as well as Advanced Placement statistics and accounting. She has worked as a member of two accreditation teams: one for Lathrop High School, the other for West Valley High School. She has served on Professional Learning Teams at West Valley High School, been appointed to the Fairbanks North Star Borough School District Teacher Evaluation team, and was recently nominated as BP Teacher of Excellence. She is a member of the National Education Association Alaska Board of Directors, and a member of the Fairbanks Education Association, serving for the past five years as treasurer. She is also manager of a family trust. Ms. Ryan earned a Bachelor's degree in communication at the University of Texas, Austin, Texas; a Bachelor's degree in mathematics at St. Edward's University, Austin, Texas; and a master's degree in computer science engineering at the University of Alaska Fairbanks. She was appointed by Governor Parnell to a seat reserved for a Teachers' Retirement System representative.





# FINANCIAL SECTION





KPMG LLP  
Suite 600  
701 West Eighth Avenue  
Anchorage, AK 99501

## **Independent Auditors' Report**

The Division of Retirement and Benefits and  
Members of the Alaska Retirement Management Board  
State of Alaska Teachers' Retirement System:

We have audited the accompanying combining statement of fiduciary net position of the State of Alaska Teachers' Retirement System (the System) (a component unit of the State of Alaska) as of June 30, 2015, and the combining statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

# Financial Section

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## *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the State of Alaska Teachers' Retirement System as of June 30, 2015, and the changes in fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.

## *Other Matters*

### *Prior-Year Comparative Information*

We have previously audited the System's 2014 financial statements, and we expressed an unmodified opinion on those financial statements in our report dated December 9, 2014. In our opinion, the summarized comparative information presented herein as of and for the year then ended June 30, 2014 is consistent, in all material respects, with the audited financial statements from which it has been derived.

### *Required Supplementary Information*

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 15-23, and the schedule of changes in employer net pension liability and related ratios, schedule of employer and nonemployer contributions, schedule of investment returns, schedule of funding progress, and schedule of contributions from employers and the state of Alaska on pages 46-62 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the GASB, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Supplemental Schedules*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The supplemental schedules on pages 64-65 are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplemental schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplemental schedules are fairly stated in all material respects in relation to the basic financial statements as a whole.

**KPMG LLP**

December 4, 2015

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**

## **Management's Discussion and Analysis (Unaudited)**

**June 30, 2015**

**(With summarized financial information for June 30, 2014 and 2013)**

This section presents management's discussion and analysis (MD&A) of the Teachers' Retirement System's (System) financial position and performance for the year ended June 30, 2015. This section is presented as a narrative overview and analysis. Please read the MD&A in conjunction with the financial statements, notes to financial statements, required supplementary information, and supplemental schedules to better understand the financial condition and performance of the System during the fiscal year ended June 30, 2015.

### **Financial Highlights**

The System's financial highlights as of June 30, 2015 were as follows:

- The System's fiduciary net position restricted for pension and postemployment healthcare benefits increased by \$1.87 billion during fiscal year 2015.
- The System's plan member and employer contributions increased by \$292,000 during fiscal year 2015.
- The State of Alaska directly appropriated \$2.0 billion during fiscal year 2015.
- The System's net investment income decreased \$761.4 million to \$235.9 million during fiscal year 2015.
- The System's pension benefit expenditures totaled \$416.4 million during fiscal year 2015.
- The System's postemployment healthcare benefit expenditures totaled \$109.7 million in fiscal year 2015.

### **Overview of the Financial Statements**

This discussion and analysis is intended to serve as an introduction to the System's financial statements. The System's financial statements are composed of three components: (1) combining statement of fiduciary net position, (2) combining statement of changes in fiduciary net position, and (3) notes to the financial statements. This report also contains required supplementary information and other supplemental schedules.

*Combining Statement of Fiduciary Net Position* – This statement presents information regarding the System's assets, liabilities, and resulting net position restricted for pension benefits, postemployment healthcare benefits, and individuals. This statement reflects the System's investments at fair market value, along with cash and short-term investments, receivables, and other assets less liabilities at June 30, 2015 and 2014.

*Combining Statement of Changes in Fiduciary Net Position* – This statement presents how the System's net position restricted for pension and postemployment healthcare benefits changed during the fiscal years ended June 30, 2015 and 2014. This statement presents contributions and investment income during the period. Deductions for pension and postemployment healthcare benefits, refunds, and operating deductions are also presented.

The above statements represent resources available for investment and payment of benefits as of June 30, 2015 and the sources and uses of those funds during fiscal year 2015.

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## Management's Discussion and Analysis (Unaudited)

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(With summarized financial information for June 30, 2014 and 2013)

*Notes to Financial Statements* – The notes to the financial statements are an integral part of the financial statements and provide additional detailed information and schedules that are essential to a full understanding of the System's financial statements.

*Required Supplementary Information and Related Notes* – The required supplementary information consists of five schedules and related notes concerning the funded status of the system and actuarial assumptions and methods used in the actuarial valuation.

*Supplemental Schedules* – Supplemental schedules include detailed information on administrative and investment deductions incurred by the System and payments to consultants (other than investment advisors) for professional services.

### Condensed Financial Information (In thousands)

Description	System net position				
	2015	2014	Increase (decrease)		2013
			Amount	Percentage	
<b>Assets:</b>					
Cash and cash equivalents	\$ 159,119	204,330	(45,211)	(22.1)%	\$ 81,133
Due from State of Alaska					
General Fund	8,798	3,933	4,865	123.7	4,177
Contributions receivable	4,039	4,317	(278)	(6.4)	5,711
Other receivables	87	3	84	2,800.0	5
Due from Retiree Health Fund	—	—	—	—	1
Investments, at fair value	8,027,200	6,113,985	1,913,215	31.3	5,283,803
Other assets	711	1,497	(786)	(52.5)	1,179
Total assets	<u>8,199,954</u>	<u>6,328,065</u>	<u>1,871,889</u>	<u>29.6</u>	<u>5,376,009</u>
<b>Liabilities:</b>					
Accrued expenses	4,748	3,989	759	19.0	4,639
Claims payable	14,451	18,979	(4,528)	(23.9)	20,062
Forfeitures payable to employers	7,592	5,997	1,595	26.6	4,498
Due to State of Alaska General Fund	4,425	374	4,051	1,083.2	1,838
Total liabilities	<u>31,216</u>	<u>29,339</u>	<u>1,877</u>	<u>6.4</u>	<u>31,037</u>
Net position	<u>\$ 8,168,738</u>	<u>6,298,726</u>	<u>1,870,012</u>	<u>29.7%</u>	<u>\$ 5,344,972</u>

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## Management's Discussion and Analysis (Unaudited)

June 30, 2015

(With summarized financial information for June 30, 2014 and 2013)

Description	Changes in system net position				
	2015	2014	Increase (decrease)		2013
			Amount	Percentage	
Net position, beginning of year	\$ 6,298,726	5,344,972	953,754	17.8%	\$ 4,783,937
Additions:					
Contributions	163,251	162,959	292	0.2	163,551
Nonemployer contribution - State of Alaska	2,000,000	316,846	1,683,154	531.2	302,777
Net investment income	235,889	997,262	(761,373)	(76.3)	608,251
Other additions	15,441	6,254	9,187	(14.3)	4,173
Total additions	2,414,581	1,483,321	931,260	62.8	1,078,752
Deductions:					
Pension and postemployment healthcare benefits	526,094	513,395	12,699	2.5	501,120
Refund of contributions	9,232	7,739	1,493	19.3	6,405
Administrative	9,243	8,433	810	9.6	6,945
Total deductions	544,569	529,567	15,002	2.8	514,470
Less adjustment to beginning of position	—	—	—	—	3,247
Increase in net position	1,870,012	953,754	916,258	96.1	561,035
Net position, end of year	\$ 8,168,738	6,298,726	1,870,012	29.7%	\$ 5,344,972

### Financial Analysis of the System

The statements of fiduciary net position as of June 30, 2015 and 2014 show net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$8,168,738,000 and \$6,298,726,000, respectively. The entire amount is available to cover the System's obligations to pay pension and postemployment healthcare benefits to its members and their beneficiaries, as well as administrative costs.

During the Twenty-Eighth Alaska State Legislature and as part of the State's Fiscal Year 2015 Capital Budget, Senate Bill 119 appropriated \$2 billion from the Constitutional Budget Reserve Fund to the Department of Administration for deposit in the Defined Benefit Pension and the Alaska Retiree Healthcare Trust funds. In addition, House Bill 385 specified that the level percent of pay methodology based on amortization of the past service liability for a closed term of 25 years would be used in the calculation of the appropriate contribution rate for liquidating the past service liability of the TRS DB Plan.

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These amounts represent an increase in the System's net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$1,870,012,000 or 29.7% from fiscal year 2014 to 2015 and \$953,754,000 or 17.8% from fiscal year 2013 to 2014. Over the long term, plan member, employer, and nonemployer contributions, as well as investment income earned, are expected to sufficiently fund the pension benefit and postemployment healthcare costs of the System.

The investment of pension funds is a long-term undertaking. On an annual basis, the Alaska Retirement Management Board (the Board) reviews and adopts an asset allocation strategy to ensure the asset mix will remain at an optimal risk/return level given the System's constraints and objectives.

### *System Asset Allocation*

During fiscal years 2015 and 2014, the Board adopted the following asset allocation for the Defined Benefit Pension Plan (DB Plan) and Defined Contribution Pension Plan's (DC Plan) retiree major medical insurance fund, health reimbursement, and occupational death and disability fund:

	<u>2015</u>	
	<u>Pension and Healthcare Trust</u>	
	<u>Allocation</u>	<u>Range</u>
Broad domestic equity	26.0%	± 6%
Global equity ex-U.S.	25.0	± 4
Private equity	9.0	± 5
Real assets	17.0	± 8
Absolute return	5.0	± 4
Fixed composite	12.0	± 8
Alternative equity strategies	3.0	-2/4
Cash equivalents	3.0	-3/8
Total	<u>100.0%</u>	
Expected return five-year geometric mean	7.22%	
Projected standard deviation	15.01	
	<u>2014</u>	
	<u>Pension and Healthcare Trust</u>	
	<u>Allocation</u>	<u>Range</u>
Broad domestic equity	26.0%	± 6%
Global equity ex-U.S.	25.0	± 4
Private equity	9.0	± 5
Real assets	17.0	± 8
Absolute return	5.0	± 4
Fixed composite	12.0	± 5
Alternative equity strategies	3.0	± 2
Cash equivalents	3.0	-3/1
Total	<u>100.0%</u>	
Expected return five-year geometric mean	7.16%	
Projected standard deviation	14.81	

For fiscal years 2015 and 2014, the DB Plan's investments generated a 3.30% and 18.46% rate of return, respectively.

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(With summarized financial information for June 30, 2014 and 2013)

### Contributions, Investment Income, and Other Additions

The additions required to fund retirement benefits are accumulated through a combination of employer and plan member contributions, State of Alaska appropriation, investment income, and other additions as follows:

	Additions (In thousands)				
	2015	2014	Increase (decrease)		2013
			Amount	Percentage	
Plan member contributions	\$ 68,002	68,313	(311)	(0.5)%	68,495
Employer contributions	95,249	94,646	603	0.6	95,056
Nonemployer contributions – State of Alaska	2,000,000	316,846	1,683,154	531.2	302,777
Net investment income	235,889	997,262	(761,373)	(76.3)	608,251
Other additions	15,441	6,254	9,187	146.9	4,173
Total	\$ 2,414,581	1,483,321	931,260	62.8%	1,078,752

The System's employer contributions increased from \$94,646,000 in fiscal year 2014 to \$95,249,000 in fiscal year 2015, an increase of \$603,000 or 0.6%. The System's employer contributions decreased from \$95,056,000 in fiscal year 2013 to \$94,646,000 in fiscal year 2014, a decrease of \$410,000 or 0.4%. The decrease in employer contributions is attributable to a decrease in the active DB Plan membership.

The State of Alaska provided \$2 billion for fiscal year 2015 and \$316,846,000 for fiscal year 2014 in nonemployer contributions as required by Alaska Statute (AS) 14.25.085. The employer on-behalf amount (or additional state contribution as defined in AS 14.25.085) is calculated by the System's actuary. It is based on projected payroll and the difference between the actuarially determined contribution rate and the statutory effective rate. The employer effective contribution rate of 12.56% is established in AS 14.25.070(a). In fiscal year 2015, in an effort to bolster the funding levels of both pension and healthcare defined benefit plans, the Alaska legislature appropriated an amount in excess of the actuarially determined contribution rate, in anticipation that this additional funding would decrease future nonemployer contributions.

The System's net investment income in fiscal year 2015 decreased by \$761,373,000 or 76.3% from amounts recorded in fiscal year 2014. The System's net investment income in fiscal year 2014 increased by \$389,011,000 or 64.0% from amounts recorded in fiscal year 2013. Over the long term, investment income has been a major component of additions to System assets.

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The System's investment rates of return at June 30 are as follows:

	Year ended		
	2015	2014	2013
System returns	3.30%	18.46%	12.59%
Domestic equities	7.85	25.45	21.24
International equities	(3.28)	23.41	15.03
Private equity	13.77	24.19	11.68
Real assets	3.69	12.71	10.65
Absolute return	9.24	6.51	8.41
Fixed income	(0.73)	5.14	0.57
Alternative equity	(0.88)	24.55	—
Cash equivalents	0.27	0.26	0.25
Actuarial rate of return	8.00	8.00	8.00

### Benefits and Other Deductions

The primary deduction of the DB Plan is the payment of pension and postemployment healthcare benefits. The primary deduction of the DC Plan is the refund of contributions. These benefit payments, healthcare claims paid, refunds of contributions, and the cost of administering the System comprise the cost of operations as follows:

	Deductions (In thousands)				
	2015	2014	Increase (decrease)		2013
			Amount	Percentage	
Pension benefits	\$ 416,354	396,614	19,740	5.0%	\$ 380,265
Postemployment healthcare benefits	109,740	116,781	(7,041)	(6.0)	120,855
Refund of contributions	9,232	7,739	1,493	19.3	6,405
Administrative	9,243	8,433	810	9.6	6,945
Total	\$ 544,569	529,567	15,002	2.8%	\$ 514,470

The System's pension benefit payments in 2015 increased \$19,740,000 or 5.0% from fiscal year 2014 and increased \$16,349,000 or 4.3% from fiscal year 2013. The increase in pension benefits in fiscal year 2014 is the result of an increase in the number of retirees.

The System's postemployment healthcare benefit payments in fiscal year 2015 decreased \$7,041,000 or 6.0% from fiscal year 2014 and decreased \$4,074,000 or 3.4% from fiscal year 2013. The Division contracted with two new TPAs in January 2014, both of whom use networks to help reduce healthcare benefit costs. Currently, the System's DB healthcare trust is benefiting through the use of the networks provided by the TPAs by seeing lower costs from the prior TPA, as well as reduced annual cost increases percentage wise.

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**June 30, 2015**

**(With summarized financial information for June 30, 2014 and 2013)**

The System's refund of contributions increased \$1,493,000 or 19.3% from fiscal year 2014 and increased \$1,334,000 or 20.8% from fiscal year 2013. The increase in refunds is primarily in the DC Plan, where refunds increased \$1,689,000 between fiscal year 2014 to 2015, and increased \$1,615,000 from fiscal year 2013 to 2014. The System continues to look at ways to retain member contributions by emphasizing the low investment costs to members to maintain funds within the DC Plan, with a number of investment options available.

The System's administrative deductions in 2015 increased \$810,000 or 9.6% from fiscal year 2014 and increased \$1,488,000 or 21.4% from fiscal year 2013. The increase in administrative costs in fiscal year 2014 is related to an increase in contractual services related to data processing and the health insurance third-party administrator transition project member fees.

### **Net Pension Liability**

GASB Statement No. 67, implemented in 2014, requires the DB Plan to report the Total Pension Liability (TPL), Fiduciary Net Position (FNP), and the Net Pension Liability (NPL). The TPL determines the total obligation for the DB Plan's pension benefits related to costs incurred as a result of years of service, changes in benefit terms, changes in actuarial assumptions, and any differences between the actuarial assumptions and actual experience. The DB Plan's FNP determines the assets available to pay the DB Plan's future payment stream. The assets are derived from contributions received from participating employers, plan members, and nonemployer contributions, as well as investment earnings, less benefit payments during the year and the related costs to administer the DB Plan. The difference between the TPL and FNP is the NPL, or the unfunded portion of the TPL. The components of the NPL of the participating employers were as follows (in thousands):

	<b>2015</b>	<b>2014</b>
Total pension liability	\$ 7,107,406	6,770,201
Plan fiduciary net position	(5,246,955)	(3,771,139)
Employers' net pension liability	\$ 1,860,451	2,999,062
Plan fiduciary net position as a percentage of the total pension liability	73.82%	55.70%

# Financial Section

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**Teachers' Retirement System**  
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**Management's Discussion and Analysis (Unaudited)**

**June 30, 2015**

**(With summarized financial information for June 30, 2014 and 2013)**

## **Funding**

Retirement benefits are financed by accumulations from employers, plan members, State of Alaska nonemployer contributions, and income earned on System investments.

- The employer contribution rate is determined by the System's consulting actuary and considered for adoption by the Board annually. AS 14.25.070(a) sets the employer effective contribution rate at 12.56%. The difference between the actuarially determined contribution rate adopted by the Board and the statutory employer effective rate is paid by the State of Alaska as a direct nonemployer contribution per AS 14.25.085.
- AS 14.25.085 requires that additional state contributions are made each July 1 or as soon after July 1 for the ensuing fiscal year that when combined with the total employer contributions are sufficient to pay the System's past service liability at the contribution rate adopted by the Board for that fiscal year.
- Plan member contributions are established by AS 14.25.050 for the DB Plan and AS 14.25.340 for the DC Plan.
- The Board works with an external consultant to determine the proper asset allocation strategy.

## **Legislation**

During fiscal year 2015, the Twenty-Ninth Alaska State Legislature enacted one law that affects the System:

House Bill 2001 appropriates \$130.1 million from the general fund to the Department of Administration for deposit in the System's defined benefit pension fund and the retiree healthcare trust as partial payment of the participating employers' contribution for fiscal year ending June 30, 2016. This appropriation is to fund the difference between the statutory required contribution of 12.56% paid by participating employers for both defined benefit and defined contribution members, and the actuarially determined contribution rate adopted by the Board for that fiscal year, and is specified in Alaska Statute 14.25.085 – Additional State Contributions.

## **Economic Conditions, Future Contribution Rates, and Status of Unfunded Liability**

Fiscal year 2015 was another year of positive, but significantly lower investment returns than fiscal year 2014. Net investment income decreased from \$997,262,000 in fiscal year 2014 to \$235,889,000 in fiscal year 2015, a decrease of \$761,373,000 or 76.3%. The return on the System's investments was less than one-half the actuarially assumed return of 8.00% with the System's rate of return of 3.30% at June 30, 2015. In fiscal year 2014, the System's investments returned 18.56%, more than twice the actuarially assumed return of 8.00%. The Board continues to work with its investment counsel and the Alaska Department of Revenue, Treasury Division, to diversify the portfolio of the System to maintain an optimal risk/return ratio.

The consulting actuary recommended an increase from the System's actuarially determined contribution rate of 53.62% in fiscal year 2014 to 70.75% in fiscal year 2015. The Board adopted the fiscal year 2015 actuarially determined

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June 30, 2015

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contribution rate of 70.75%, which represented an increase of 17.13%. The statutory employer effective contribution rate remained at 12.56% for fiscal years 2015 and 2014.

The June 30, 2014 and 2013 actuarial valuation reports for the DB Plan reported funding ratios based on valuation assets of 61.2% and 51.9%, respectively, as well as unfunded liabilities of \$3.8 billion and \$4.6 billion, respectively.

The System expects a decline in the DB Plan's recommended actuarially determined contribution rate and a corresponding increase in the pension and healthcare funding ratios as of the June 30, 2015 actuarial valuation report with the infusion of \$2 billion appropriated from the Constitutional Budget Reserve Fund during fiscal year 2015. Additionally, due to statutory changes implemented by the Alaska Legislature in conjunction with the \$2 billion infusion to the TRS DB pension and DB healthcare plans, the statute (1) established the level percentage of pay approach as a replacement to the level dollar approach and (2) reset the 25-year amortization period. Beginning July 1, 2014, actuarial projections reflect that the required additional state contribution would be significantly reduced for a period of time.

For fiscal years 2015 and 2014, the DC Plan's employer contribution rate was established by Alaska statute at 12.56%. The DC Plan's actuarially determined occupational death and disability rate was adopted by the Board to be 0.00%. The DC Plan retiree medical plan actuarially determined contribution rate was adopted by the Board to be 2.04% and 0.47%, respectively.

### Requests for Information

This financial report is designed to provide a general overview of the finances for all those with interest in the finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to:

State of Alaska Teachers' Retirement System  
Division of Retirement and Benefits, Finance Section  
P.O. Box 110203  
Juneau, Alaska 99811-0203

Questions concerning any of the investment information provided in this report or requests for additional investment information should be addressed to:

State of Alaska  
Department of Revenue, Treasury Division  
P.O. Box 110405  
Juneau, Alaska 99811-0405

# Financial Section

**State of Alaska**  
**Teachers' Retirement System**  
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**Combining Statement of Fiduciary Net Position**  
**June 30, 2015**  
**(With summarized financial information for June 30, 2014)**  
**(In thousands)**

	Defined Benefit Pension	Defined Contribution Pension	Other Postemployment Benefit Plans				System Total June 30, 2015	System Total June 30, 2014
			Alaska Retiree Healthcare Trust	Occupational Death and Disability	Retiree Medical	Healthcare Reimbursement Arrangement		
<b>Assets:</b>								
Cash and cash equivalents (note 3 and 4):								
Short-term fixed income pool	\$ 90,096	6,188	59,171	74	562	1,567	157,658	200,285
Empower money market fund - nonparticipant directed	—	1,461	—	—	—	—	1,461	4,045
Total cash and cash equivalents	90,096	7,649	59,171	74	562	1,567	159,119	204,330
Receivables:								
Contributions	3,912	54	55	—	8	10	4,039	4,317
Due from State of Alaska General Fund	4,718	2,127	1,388	10	295	260	8,798	3,933
Due from Retiree Health Fund	—	—	—	—	—	—	—	—
Other account receivable	87	—	—	—	—	—	87	3
Total receivables	8,717	2,181	1,443	10	303	270	12,924	8,253
Investments (notes 3, 4, and 5), at fair value:								
Fixed income securities:								
U.S. Treasury fixed income pool	289,689	—	143,232	174	951	3,251	437,297	355,208
Taxable municipal bonds	49,887	—	24,666	30	164	560	75,307	64,052
Tactical fixed income pool	26,799	—	13,250	16	88	301	40,454	—
High yield fixed income pool	136,678	—	67,578	82	448	1,534	206,320	162,623
International fixed income pool	84,365	—	41,713	51	277	947	127,353	108,903
Emerging markets debt pool	35,759	—	17,680	21	117	401	53,978	44,199
Total fixed income securities	623,177	—	308,119	374	2,045	6,994	940,709	734,985
Broad domestic equity:								
Large cap pool	1,171,457	—	579,206	703	3,843	13,147	1,768,356	1,354,893
Small cap pool	253,453	—	125,315	152	832	2,845	382,597	299,834
Total broad domestic equity	1,424,910	—	704,521	855	4,675	15,992	2,150,953	1,654,727
Broad international equity:								
International equity pool	1,091,894	—	539,868	655	3,582	12,255	1,648,254	1,187,789
International equity small cap pool	71,400	—	35,303	43	234	801	107,781	93,986
Frontier market pool	1,196	—	591	1	4	13	1,805	28,425
Emerging markets equity pool	138,606	—	68,531	83	455	1,556	209,231	178,856
Total broad international equity	1,303,096	—	644,293	782	4,275	14,625	1,967,071	1,489,056
Alternative equity:								
Alternative equity	151,623	—	74,967	91	497	1,702	228,880	203,538
Convertible bond pool	43,513	—	21,514	26	143	488	65,684	56,470
Total alternative equity	195,136	—	96,481	117	640	2,190	294,564	260,008
Private equity pool	403,605	—	199,556	242	1,324	4,530	609,257	498,442
Absolute return pool	298,331	—	147,505	179	979	3,348	450,342	236,850
Real assets:								
Real estate pool	291,075	—	143,389	174	952	3,254	438,844	383,978
Real estate investment trust pool	71,955	—	35,577	43	236	808	108,619	104,798
Infrastructure private pool	63,432	—	31,363	38	208	712	95,753	—
Infrastructure public pool	55,358	—	27,371	33	182	621	83,565	47,537
Master limited partnership pool	115,919	—	57,374	70	380	1,301	174,984	140,906
Energy pool	22,456	—	11,103	13	74	252	33,898	30,854
Farmland pool	169,838	—	83,973	102	557	1,906	256,376	204,863
Timber pool	84,662	—	41,859	51	278	950	127,800	103,801
Treasury inflation protected securities pool	29,399	—	14,536	18	96	330	44,379	10,088
Total real assets	904,094	—	446,485	542	2,963	10,134	1,364,218	1,026,825
Other investment funds, at fair value:								
Pooled investment funds	—	132,377	—	—	—	—	132,377	107,675
Collective investment funds	—	117,709	—	—	—	—	117,709	105,417
Total other investment funds	—	250,086	—	—	—	—	250,086	213,092
Total investments	5,152,349	250,086	2,546,960	3,091	16,901	57,813	8,027,200	6,113,985
Other assets	—	—	711	—	—	—	711	1,497
Total assets	5,251,162	259,916	2,608,285	3,175	17,766	59,650	8,199,954	6,328,065
Liabilities:								
Accrued expenses	3,985	76	676	11	—	—	4,748	3,989
Claims payable (note 8)	—	—	14,451	—	—	—	14,451	18,979
Forfeiture payable	—	7,592	—	—	—	—	7,592	5,997
Due to State of Alaska General Fund	222	—	4,192	11	—	—	4,425	374
Total liabilities	4,207	7,668	19,319	22	—	—	31,216	29,339
Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals	\$ 5,246,955	252,248	2,588,966	3,153	17,766	59,650	8,168,738	6,298,726

See accompanying notes to financial statements.

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**  
**Combining Statement of Changes in Fiduciary Net Position**  
**Year Ended June 30, 2015**  
**(With summarized financial information for June 30, 2014)**  
**(In thousands)**

	Defined Benefit Pension	Defined Contribution Pension	Other Postemployment Benefit Plans				System Total June 30, 2015	System Total June 30, 2014
			Alaska Retiree Healthcare Trust	Occupational Death and Disability	Retiree Medical	Healthcare Reimbursement Arrangement		
<b>Additions:</b>								
<b>Contributions:</b>								
Employers	\$ 36,374	17,863	26,922	—	5,670	8,420	95,249	94,646
Plan members	45,506	22,269	227	—	—	—	68,002	68,313
Nonemployer State of Alaska	1,662,700	—	337,300	—	—	—	2,000,000	316,846
Total contributions	1,744,580	40,132	364,449	—	5,670	8,420	2,163,251	479,805
<b>Investment income:</b>								
Net appreciation in fair value	75,069	5,550	36,145	43	230	801	117,838	905,490
Interest	18,195	15	9,502	12	52	203	27,979	22,803
Dividends	68,442	—	35,739	45	198	765	105,189	82,141
Total investment income	161,706	5,565	81,386	100	480	1,769	251,006	1,010,434
Less investment expense	9,145	745	5,212	1	3	11	15,117	13,172
Net investment income	152,561	4,820	76,174	99	477	1,758	235,889	997,262
<b>Other:</b>								
Other	9	—	15,432	—	—	—	15,441	6,254
Total additions	1,897,150	44,952	456,055	99	6,147	10,178	2,414,581	1,483,321
<b>Deductions:</b>								
Pension and postemployment benefits	416,354	—	109,740	—	—	—	526,094	513,395
Refunds of contributions	2,191	7,041	—	—	—	—	9,232	7,739
Administrative	2,789	931	5,484	21	18	—	9,243	8,433
Total deductions	421,334	7,972	115,224	21	18	—	544,569	529,567
Net increase	1,475,816	36,980	340,831	78	6,129	10,178	1,870,012	953,754
<b>Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals:</b>								
Balance, beginning of year	3,771,139	215,268	2,248,135	3,075	11,637	49,472	6,298,726	5,344,972
Balance, end of year	\$ 5,246,955	252,248	2,588,966	3,153	17,766	59,650	8,168,738	6,298,726

See accompanying notes to financial statements.

# Financial Section

State of Alaska  
**Teachers' Retirement System**  
 (A Component Unit of the State of Alaska)

## Notes to Financial Statements

June 30, 2015

(With summarized financial information for June 30, 2014)

**(1) Description**

The State of Alaska Teachers' Retirement System (TRS or the System) is a component unit of the State of Alaska (the State). The System is governed by the Alaska Retirement Management Board (the Board), which consists of nine trustees, as follows: two members, consisting of the commissioner of administration and the commissioner of revenue; two trustees who are members of the general public; one trustee who is employed as a finance officer for a political subdivision participating in either the Public Employees' Retirement System (PERS) or TRS; two trustees who are members of PERS; and two trustees who are members of TRS.

TRS acts as the common investment and administrative agency for the following multiple-employer plans:

Plan name	Type of plan
Defined Benefit Pension	Cost-sharing, Defined Benefit Pension
Defined Contribution Retirement Pension	Defined Contribution Pension
Defined Benefit Other Postemployment Benefits	
Alaska Retiree Healthcare Trust Plan	Cost-sharing, Defined Benefit OPEB
Occupational Death and Disability Plan	Cost-sharing, Defined Benefit OPEB
Retiree Medical Plan	Cost-sharing, Defined Benefit OPEB
Defined Contribution Other Postemployment Benefits	
Healthcare Reimbursement Arrangement Plan	Defined Contribution OPEB

At June 30, 2015 and 2014, the number of participating local government employers and public organizations including the State was as follows:

State of Alaska	1
School districts	53
Other	4
Total employers	58

Inclusion in the Defined Benefit Pension Plan (DB Plan) and Defined Contribution Pension Plan (DC Plan) is a condition of employment for permanent school district, University of Alaska, and State Department of Education employees who meet the eligibility requirements for participation.

**Defined Benefit Pension Plan**

*General*

The DB Plan provides pension benefits for teachers and other eligible members. Benefit and contribution provisions are established by State law and may be amended only by the State Legislature. With the passage of Senate Bill (SB) 141, the DB Plan is closed to all new members effective July 1, 2006.

**State of Alaska**  
**Teachers' Retirement System**  
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**Notes to Financial Statements**

**June 30, 2015**  
**(With summarized financial information for June 30, 2014)**

The DB Plan's membership consisted of the following at June 30, 2015:

Inactive plan members or beneficiaries currently receiving benefits	12,080
Inactive plan members entitled to but not yet receiving benefits	3,156
Active plan members	5,606
	20,842

***Pension Benefits***

Vested members hired prior to July 1, 1990 are entitled to pension benefits beginning at normal retirement age, 55, or early retirement age, 50. For members hired after June 30, 1990, the normal and early retirement ages are 60 and 55, respectively. Members may also retire at any age and receive a normal benefit when they accumulate the required credited service.

The normal annual pension benefit is based on years of service and average base salary. The average base salary is based upon the members' three highest contract years' salaries.

The benefit related to all years of credited service prior to July 1, 1990 and for years of service through a total of 20 years is equal to 2% of the employee's average base salary. The benefit for each year over 20 years of service subsequent to June 30, 1990 is equal to 2.5% of the employee's base salary.

Minimum benefits for members eligible for retirement are \$25 per month for each year of credited service.

Married members must receive their benefits in the form of a joint and survivor annuity unless their spouse consents to another form of benefit or benefits are payable under the 1% supplemental contributions provision.

The DB Plan has two types of postretirement pension adjustments (PRPA). The automatic PRPA is issued annually to all eligible benefit recipients when the cost of living increases in the previous calendar year. The automatic PRPA increase is paid beginning July 1 of each year. The discretionary PRPA may be granted to eligible recipients by the DB Plan's administrator if the cost of living in the previous calendar year rises and the financial condition of the DB Plan's permits. If both an automatic and discretionary PRPA are granted, and a retiree is eligible for both adjustments, the one that provides the retiree the greater increase will be paid.

**State of Alaska**  
**Teachers' Retirement System**  
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## **Notes to Financial Statements**

**June 30, 2015**

**(With summarized financial information for June 30, 2014)**

### ***Contributions***

Contributions requirements of the active plan members and the participating employers are actuarially determined and approved by the Board as an amount that, when combined, is expected to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. The DB Plan members contribute 8.65% of their base salary as required by statute. Employer effective contribution rates are 12.56% of annual payroll. Alaska Statute 14.25.085 requires that additional state contributions made each July 1, or as soon after July 1, for the ensuing fiscal year that when combined with the total employer contributions is sufficient to pay the System's past service liability at the actuarially determined contribution rate adopted by the Board for that fiscal year. Additionally, there is a Defined Benefit Unfunded Liability (DBUL) amount levied against the DCR Plan payroll. The DBUL amount is computed as the difference between:

- (A) The amount calculated for the statutory employer contribution rate of 12.56% on eligible salary less
- (B) The total of the employer contributions for:
  - (1) The defined contribution employer matching amount
  - (2) Major medical
  - (3) Occupational death and disability and
  - (4) Health reimbursement arrangement

The difference is deposited based on an actuarial allocation into the DB Plan's pension and healthcare funds.

### ***Refunds***

DB Plan member contributions may be voluntarily or, under certain circumstances, involuntarily refunded to the employee or a garnishing agency 60 days after termination of employment. Voluntary refund rights are forfeited on July 1 following the member's 75th birthday or within 50 years of the member's last termination date. Members who have had contributions refunded forfeit all retirement benefits, including postemployment healthcare benefits. Members are allowed to reinstate refunded service due to involuntary refunds by repaying the total involuntary refunded balance and accrued interest. Members are allowed to reinstate voluntarily refunded service by repaying the voluntarily refunded balance and accrued interest, as long as they reestablish an employee relationship with a participating DB Plan employer before July 1, 2010. Members who have not reestablished an employee relationship with a participating DB Plan employer by June 30, 2010 will not be eligible to reinstate voluntarily refunded service and will forfeit any claim to DB Plan membership rights. Balances refunded to members accrue interest at the rate of 7.0% per annum, compounded semiannually.

State of Alaska  
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## Notes to Financial Statements

June 30, 2015

(With summarized financial information for June 30, 2014)

### Defined Contribution Retirement Plan

#### *General*

The DC Plan provides retirement benefits for eligible employees hired after July 1, 2006. Benefit and contribution provisions are established by State law and may be amended only by the State Legislature.

At June 30, 2015, membership in the DC Plan consisted of 4,076 members.

#### *Retirement Benefits*

A participating member is immediately and fully vested in that member's contributions and related earnings (losses). A member shall be fully vested in the employer contributions made on that member's behalf, and related earnings (losses), after five years of service. A member is partially vested in the employer contributions made on that member's behalf, and the related earnings, in the ratio of (a) 25% with two years of service; (b) 50% with three years of service; (c) 75% with four years of service; and (d) 100% with five years of service.

#### *Contributions*

Alaska statutes require an 8.00% contribution rate for DC Plan members. Employers are required to contribute 7.00% of the member's compensation.

#### *Participant Distributions*

A member is eligible to elect distribution of their account 60 days after termination of employment.

#### *Participant Accounts*

Participant accounts under the DC Plan are self-directed with respect to investment options. Investment options are disclosed in note 3.

Each participant designates how contributions are to be allocated among the investment options. Each participant's account is credited with the participant's contributions and the appreciation or depreciation in unit value for the investment funds.

Record-keeping/administrative fees consisting of a fixed amount, applied in a lump sum each calendar year, and a variable amount, applied monthly, are deducted from each participant's account, applied pro rata to all the funds in which the employee participates. This fee is for all costs incurred by the record keeper and by the State. The investment management fees are netted out of the funds' performance.

# Financial Section

State of Alaska  
Teachers' Retirement System  
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## Notes to Financial Statements

June 30, 2015

(With summarized financial information for June 30, 2014)

### Defined Benefit Other Postemployment Benefit Plans

#### *Alaska Retiree Healthcare Trust Plan*

Beginning July 1, 2007, the Alaska Retiree Healthcare Trust Plan (ARHCT), a healthcare trust fund of the State, was established. The ARHCT is self-funded and provides major medical coverage to retirees of the System. The System retains the risk of loss of allowable claims for eligible members. The ARHCT began paying member healthcare claims on March 1, 2008. Prior to that, healthcare claims were paid for by the Retiree Health Fund (RHF).

Membership in the plan was as follows as of June 30, 2015:

Inactive plan members or beneficiaries currently receiving benefits	12,080
Inactive plan members entitled to but not yet receiving benefits	3,156
Active plan members	5,606
	<hr/>
	20,842
	<hr/> <hr/>

### OPEB Benefits

When pension benefits begin, major medical benefits are provided without cost to (1) all members first hired before July 1, 1990, (2) members hired after July 1, 1990 with 25 years of membership service, and (3) members who are disabled or age 60 or older, regardless of their initial hire dates. Members first hired after June 30, 1990 may receive major medical benefits prior to age 60 by paying premiums.

### Contributions

Employer contribution rates are actuarially determined and adopted by the Board. The 2015 employer effective contribution rate is 12.56% of member's compensation.

#### *Occupational Death and Disability Plan*

The Occupational Death and Disability Plan provides death benefits for beneficiaries of plan participants and long-term disability benefits to all active members with the System. Members in the Death and Disability Plan consisted of the following at June 30, 2015:

Active plan members	4,076
Participating employers	58
Open claims	—

**State of Alaska**  
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## **Notes to Financial Statements**

**June 30, 2015**

**(With summarized financial information for June 30, 2014)**

### **Death Benefits**

If (1) the death of an employee occurs before the employee's retirement and before the employee's normal retirement date, (2) the proximate cause of death is a bodily injury sustained or a hazard undergone while in the performance and within the scope of the employee's duties, and (3) the injury or hazard is not the proximate result of willful negligence of the employee, a monthly survivor's pension shall be paid to the surviving spouse. If there is no surviving spouse or if the spouse later dies, the monthly survivor's pension shall be paid in equal parts to the dependent children of the employee.

When benefits are payable under the 1% supplemental contribution provision, the DB Plan member's spouse is eligible for a spouse's pension if there is/are no dependent child(ren). If there is/are dependent child(ren), a survivor's allowance may be payable to the DB Plan member's spouse, or guardian of the dependent child(ren). The amount of the pension or allowance is determined by the DB Plan member's base salary. DB Plan members first hired after June 30, 1982 are not eligible to participate in this provision.

If an active DB Plan member dies from occupational causes, the spouse may receive a monthly pension from the DB Plan. When death is due to occupational causes and there is no surviving spouse, the DB Plan member's dependent child(ren) may receive a monthly pension until the child(ren) is/are no longer dependents. If the member does not have a spouse or dependent children at the time of death, a lump-sum death benefit is payable to the named beneficiary(ies). The amount of the occupational death pension is 40% of the member's base salary at the time of death. The amount of the occupational death pension changes on the date the DB Plan member's normal retirement would have occurred if the DB Plan member had lived. The new benefit is based on the DB Plan member's average base salary at the time of death and the credited service that would have accrued had the DB Plan member lived and continued to work until normal retirement. If benefits are payable under the 1% supplemental contribution provision, benefits are not payable under this provision. If the death was from nonoccupational causes, and the DB Plan member was vested, the spouse may receive a monthly 50% joint and survivor option benefit based on the member's credited service and average base salary at the time of death. If the DB Plan member is not married or vested, a lump-sum death benefit is payable to the named beneficiary(ies).

The monthly survivor's pension section for survivors of DC Plan employees is 40% of the employee's monthly compensation in the month in which the employee dies. While the monthly survivor's pension is being paid, the employer shall make contributions on behalf of the employee's beneficiaries based on the deceased employee's gross monthly compensation at the time of occupational death.

### **Disability Benefits**

If a DB Plan member has been in membership service for five or more years for which contributions have been made, is not eligible for normal retirement benefits, and becomes permanently disabled, the DB Plan member is entitled to a monthly benefit. The annual disability benefit is equal to 50% of the base salary at the time of the disability plus an additional 10% of his/her base salary for each dependent child up to a maximum of four children. At normal retirement age, a disabled System member receives normal retirement benefits.

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**(With summarized financial information for June 30, 2014)**

A DC Plan member is eligible for an occupational disability benefit if employment is terminated because of a total and apparently permanent occupational disability before the employee's normal retirement date. The occupational disability benefits accrue beginning the first day of the month following termination of employment as a result of the disability and are payable the last day of the month. If a final determination granting the benefit is not made in time to pay the benefit when due, a retroactive payment shall be made to cover the period of deferment.

### **Contributions**

An employer shall contribute to each member's account based on the member's compensation. For fiscal year 2015, the rate is 7.00%.

### ***Retiree Medical Plan***

The retiree medical plan is established under AS 14.25.480 – Medical benefits. The Department of Administration, Division of Retirement & Benefits, who administers the System's health plans, is in the process of formalizing and finalizing the retiree medical plan. Members will be eligible for the DC Plan's health benefits plan beginning in June 2016. Currently, no members are eligible to use this plan until they have at least 10 years of service.

### **Defined Contribution Other Postemployment Benefit Plan**

The Healthcare Reimbursement Arrangement Plan was established to allow medical expenses to be reimbursed from individual savings accounts established for eligible participants. For each member of the plan, an employer shall contribute an amount equal to 3.0% of the average annual compensation of all employees of all employers in the System. As of June 30, 2015, there were 6,170 members.

## **(2) Summary of Significant Accounting Policies**

### ***Basis of Accounting***

The accompanying financial statements have been prepared using the economic resources measurement focus and on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles (GAAP), as prescribed by the Governmental Accounting Standards Board (GASB). Contributions are due to the System when employee services have been performed and paid. Contributions are recognized as revenues when due pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made.

### ***Use of Estimates***

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from those estimates.

**State of Alaska**  
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## **Notes to Financial Statements**

**June 30, 2015**

**(With summarized financial information for June 30, 2014)**

### ***Defined Benefit Pension and OPEB Investments***

The System owns shares in various investment pools that are administered by the State of Alaska Department of Revenue, Division of Treasury (Treasury). The System's investment in the pools, except for the Short-Term Fixed Income Pool, are reported at fair value based on the net asset value reported by the Treasury.

The Short-Term Fixed Income Pool maintains a share price of \$1. Each participant owns shares in the pool, the number of which fluctuates daily with contributions and withdrawals.

### ***Defined Contribution Participant Directed Investments***

The Board contracts with an external investment manager who is given the authority to invest in a wholly owned pooled environment to accommodate 13 participant-directed funds. Additionally, the Board contracts with external managers who manage a mix of collective investment funds. Income for the Pooled Investment and Collective Investment Funds is credited to the fund's net asset value on a daily basis and allocated to pool participants daily on a pro rata basis.

Pooled Participant Directed Investment Funds, held in trust, are stated at fair value based on the unit value as reported by the Trustees multiplied by the number of units held by the Plan. The unit value is determined by the Trustees based on fair value of the underlying assets. Purchases and sales of securities are recorded on a trade-date basis. Underlying assets comprise domestic and international stocks, investment-grade bonds, federally guaranteed mortgages, money market instruments, and other cash equivalent instruments with maturities of less than one year, which include but are not limited to commercial paper, asset-backed securities, banker acceptances, certificates of deposit with ratings of A1/P1 or better as well as obligations of the U.S. government and its agencies, and repurchase agreements collateralized by U.S. Treasury instruments.

Collective Investment Funds, held in trust, are stated at fair value based on the unit value as reported by the Trustees multiplied by the number of units held by the Plan. The unit value is determined by the Trustees based on fair value of the underlying assets. Purchases and sales of securities are recorded on a trade-date basis. Underlying assets are comprised of commingled investment funds, alongside other investors, through ownership of equity shares.

### ***Contributions Receivable***

Contributions from the System's members and employers for service through June 30 are accrued. These contributions are considered fully collectible, and accordingly, no allowance for uncollectible receivables is reflected in the financial statements.

### ***Administrative Costs***

Administrative costs are paid from investment earnings.

**State of Alaska**  
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**June 30, 2015**

**(With summarized financial information for June 30, 2014)**

***Due from (to) State of Alaska General Fund***

Amounts due from (to) the State of Alaska General Fund represent the net difference between amounts paid by the System on behalf of others and amounts paid by others on behalf of the System.

***Federal Income Tax Status***

The DB Plan and DC Plan are qualified plans under Section 401(a) and 414(d) of the Internal Revenue Code and are exempt from federal income taxes under Section 501(a).

***GASB Statement No. 67***

The System implemented the provisions of GASB Statement No. 67, *Financial Reporting for Pension Plans* during the year ended June 30, 2014. GASB Statement No. 67 requires the disclosures of the total pension liability, fiduciary net position, and net pension liability for single-employer and cost-sharing multiple-employer defined benefit pension plans. GASB Statement No. 67 also requires certain additional note disclosures for defined benefit pension plans including the annual money-weighted rate of return on plan investments. GASB Statement No. 67 revised the reporting requirements for required supplementary information to include schedules which provide trend information related to (1) changes in the net pension liability, (2) the actuarially and contractually determined contributions of employer contributing entities, and (3) the annual money-weighted rate of return on plan investments.

**(3) Investments**

The Board is the investment oversight authority of the System's investments. As the fiduciary, the Board has the statutory authority to invest the assets under the Prudent Investor Rule. Fiduciary responsibility for the Board's Invested Assets is pursuant to Alaska Statutes 37.10.210-390.

Alaska Statute 37.10.071 provides that investments shall be made with the judgment and care under circumstances then prevailing that an institutional investor of ordinary professional prudence, discretion, and intelligence exercises in managing large investment portfolios.

Treasury provides staff for the Board. Treasury has created a pooled environment by which it manages investments of the Board. Additionally, Treasury manages a mix of Pooled Investment Funds and Collective Investment Funds for the DC Participant Directed Pension Plans under the Board's fiduciary responsibility.

Actual investing is performed by investment officers in Treasury or by contracted external investment managers. The Board has developed investment guidelines, policies, and procedures for Treasury staff and external investment managers to adhere to when managing investments. Treasury manages the U.S. Treasury Fixed Income Pool, Dow Jones Dividend 100 Index Fund in the Alternative Equity Strategies Pool, Real Estate Investment Trust Pool, Treasury Inflation Protected Securities (TIPS) Pool, and cash holdings of certain external managers in addition to acting as oversight manager for all externally managed investments. All other investments are managed by external management companies.

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**June 30, 2015**  
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The Short-Term Fixed Income Pool is a State pool managed by Treasury that holds investments on behalf of the Board as well as other state funds.

***Rate of Return***

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. The annual money-weighted rate of return, net of investment expense, for the year ended June 30, 2015 for the defined benefit pension plan is 3.30%.

**(4) Deposit and Investment Risk**

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.

*Short-Term Fixed Income Pool*

As a means of limiting its exposure to fair value losses arising from increasing interest rates, Treasury's investment policy limits individual fixed rate securities to 14 months to maturity or 14 months expected average life upon purchase. Floating rate securities are limited to three years to maturity or three years expected average life upon purchase. At June 30, 2015, the expected average life of individual fixed rate securities ranged from 10 days to 3.3 years and the expected average life of floating rate securities ranged from 10 days to 14.5 years.

*Other Defined Benefit Fixed Income Pools*

Duration is a measure of interest rate risk. It measures a security's sensitivity to a 100-basis-point change in interest rates. The duration of a pool is the average fair value weighted duration of each security in the pool taking into account all related cash flows.

# Financial Section

**State of Alaska**  
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**Notes to Financial Statements**

**June 30, 2015**

**(With summarized financial information for June 30, 2014)**

At June 30, 2015, the effective duration of the DB Plan's fixed income pools was as follows (in years):

Bank loans	(0.05)
Certificate of deposit	0.14
Convertible bonds	0.07
Corporate bonds	4.32
Foreign government bonds	6.26
Mortgage backed	1.75
Municipal bonds	11.15
Other asset backed	0.69
U.S. government agency	7.89
U.S. Treasury bills, notes bonds, and TIPS	4.65
Yankee corporate	4.13
Yankee government	6.18
Total portfolio	4.97

*Defined Contribution Pooled Investment Funds*

The Board contracts with an external investment manager, who is given the authority to invest funds in a wholly owned pooled environment to accommodate 13 participant-directed funds. Through the Board's investment policy, exposure to fair value losses arising from increasing interest rates is managed by limiting the duration as follows:

- Under normal conditions, the Trust will invest in cash equivalent instruments with maturities of less than one year. Additionally, under normal conditions, for government debt, corporate debt, and mortgage-backed securities, duration is limited to  $\pm 0.2$  years of the blended benchmark of 70% Barclays U.S. Intermediate Aggregate Bond Index, 15% Barclays U.S. Floating Rate Note Index, 10% Barclays TIPS Index, and 5% Barclays Long U.S. Treasury Bond Index. Further deviations are acceptable if they do not contribute significantly to the overall risk of the portfolio. In no event at time of purchase shall effective duration exceed  $\pm 0.4$  years relative to the index.
- At June 30, 2015, the duration of the government corporate debt and mortgage-backed securities was 4.00 years and the duration of the blended Barclays Bond Index was 3.98 years.

*Defined Contribution Collective Investment Funds*

The Board does not have a policy to limit interest rate risk for its collective investment funds.

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## Notes to Financial Statements

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### Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The System's ownership held in the investment pools are not separately rated. See the separately issued report on the State of Alaska Retirement and Benefits Plan Invested Assets for credit ratings of investments within the pools.

### *Custodial Credit Risk – Deposits*

Custodial credit risk is the risk that deposits may not be returned in the event of a bank failure. The Board does not have a policy in relation to custodial credit risk for deposits.

### *Foreign Currency Risk*

Foreign Currency Risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. However, through its asset allocation policy, the Board limits total investments in international fixed income, global equity ex-U.S., and private equity to the following:

Fixed income	Global equity ex-U.S.	Private equity pool
20%	29%	14%

### *Concentration of Credit Risk*

At June 30, 2015, the Board's Invested Assets did not have exposure to any one issuer greater than 5% of total invested assets.

### (5) Foreign Exchange, Derivative, and Counterparty Credit Risk

The investment pools for which the System is a part, are exposed to credit risk on underlying investment derivative instruments that are in asset positions. The Board has no policy of requiring collateral or other security to support derivative instruments subject to credit risk. Additionally, the Board has no policy regarding entering into netting arrangements when it enters into derivative instrument transactions with a counterparty, nor does the Board have a policy for contingencies.

The International Equity Pool includes foreign currency forward contracts to buy and sell specified amounts of foreign currencies at specified rates on specified future dates. The counterparties to the foreign currency forward contracts consist of a diversified group of financial institutions. Credit risk exposure exists to the extent of nonperformance by these counterparties; however, the risk of default is considered to be remote. The market risk is limited to the difference between contractual rates and forward rates at the balance sheet date. For additional information on foreign exchange, derivatives and counterparty credit risk see the separately issued report on the State of Alaska Retirement and Benefits Invested Assets.

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June 30, 2015

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**(6) Net Pension Liability – Defined Benefit Pension Plan**

The components of the net pension liability of the participating employers at June 30, 2015 were as follows (in thousands):

Total pension liability	\$ 7,107,406
Plan fiduciary net position	<u>(5,246,955)</u>
Employers' net pension liability	<u>\$ 1,860,451</u>
Plan fiduciary net position as a percentage of the total pension liability	73.82%

***Actuarial Assumptions***

The total pension liability was determined by an actuarial valuation as of June 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement, and rolled forward to the measurement date of June 30, 2015:

Inflation	3.12%
Salary increases	Graded by service, from 8.11% to 3.87%
Rate of return	8.00%, net of pension plan investment expenses. This is based on an average inflation rate of 3.12% and a real rate of return of 4.88%.

Post-termination mortality rates were based on 94% of the male rates and 97% of the female rates of the RP-2000 Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3-year setback for males and 4-year setback for females. The rates for pre-termination mortality were 68% of the male rates and 60% of the female rates of the post-termination mortality rates. Deaths are assumed to result from non-occupational causes 85% of the time.

The actuarial assumptions used in the June 30, 2014 actuarial valuation were based on the results of an actuarial experience study for the period from July 1, 2009 to June 30, 2013, resulting in changes in actuarial assumptions adopted by the Board to better reflect expected future experience.

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The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2015 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset class	Long-term expected real rate of return
Domestic Equity	5.35%
Global Equity (non-U.S.)	5.55
Private Equity	6.25
Fixed Income Composite	0.80
Real Estate	3.65
Alternative Equity	4.70

***Discount Rate***

The discount rate used to measure the total pension liability was 8%. The projection of cash flows used to determine the discount rate assumed that employer and nonemployer State contributions will continue to follow the current funding policy, which meets State statutes. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

***Sensitivity of the Net Pension Liability to Changes in the Discount Rate***

The following presents the net pension liability of the System calculated using the discount rate of 8%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (7%) or one-percentage-point higher (9%) than the current rate:

	1% Decrease (7%)	Current discount rate (8%)	1% Increase (9%)
Net pension liability	\$ 2,685,169	1,860,451	1,169,348

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**(7) Defined Benefit OPEB Funding Status**

The funded status of the occupational death and disability plan, retiree healthcare trust, and retiree medical benefits is as follows (in thousands):

	Actuarial valuation date	Actuarial accrued liability (AAL) entry age	Actuarial valuation assets	Funded ratio	Unfunded actuarial accrued liability (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
Healthcare trust	June 30, 2014	\$ 3,114,113	2,248,135	72.2%	865,978	523,580	165.4%
Occupational death and disability plan	June 30, 2014	23	2,820	12,260.9	(2,797)	229,971	(1.2)
Retiree medical	June 30, 2014	18,290	10,791	59.0	7,499	229,971	3.3

The funding ratio as of June 30, 2014 has increased. The increase in funding ratio is primarily due to the asset returns in fiscal year 2014 of 18.46%, well above the expected return of 8%. This increase was combined with positive experiences in demographic experience and retiree medical costs, which when factored in with other factors resulted in the slight decrease.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and healthcare cost trend. Actuarially determined amounts are subject to continual revisions as actual results are compared with past expectations and new estimates are made about the future. The schedules of funding progress, presented as required supplementary information following the notes to the financial statements, present multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The accompanying schedules of contributions (unaudited) from employers present trend information about the amounts contributed to the plan by employers in comparison to the actuarially required contribution (ARC), an amount that is actuarially determined in accordance with the parameters of GASB Statement No. 43. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost for each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed 30 years.

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Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and the plan members to that point. The actuarial method and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations. Additional information as of the latest actuarial valuation is as follows:

**June 30, 2014**

	<b>Defined Benefit</b>
Actuarial cost method	Entry age normal; level percentage of pay normal cost basis for pension and healthcare
Amortization method	Level percentage of pay, closed
Equivalent single amortization period	25 years
Asset valuation method	5-year smoothed fair value; reinitialized to fair value as of June 30, 2014.
Actuarial assumptions:	
Investment rate of return	8.00% for pension, 5.08% for healthcare; includes price inflation at 3.12%
Projected salary increases	6.11% for first 5 years of service grading down to 3.62% after 20 years
Cost-of-living adjustment	Postretirement pension adjustment

**June 30, 2014**

	<b>ODD and Retiree Medical</b>
Actuarial cost method	Entry age normal; level percentage of pay normal cost basis for occupational death and disability, and retiree medical
Amortization method	Level percentage of pay, closed with bases established annually
Equivalent single amortization period	23 years
Asset valuation method	5-year smoothed market 80%/120% of fair value corridor
Actuarial assumptions:	
Investment rate of return	8.00% for pension, 5.08% for healthcare; includes price inflation at 3.12%
Projected salary increases	8.11% for first 5 years of service grading down to 3.87% after 22 years

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Health cost trend for occupational death and disability, and retiree medical plans is as follows:

Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2015	10.0%	6.0%	6.0%
2016	9.4	5.9	5.7
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

GASB Statement No. 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets, or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

The System's retiree healthcare benefits are partially funded. GASB outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on (1) the funded ratio and (2) the percentage of the ADC actually being contributed to the plan. The State has utilized the second methodology to develop a discount rate of 5.08% as of June 30, 2012, to be used for fiscal 2015 disclosure.

The System's retiree medical benefits are fully funded. Therefore, the 8.00% discount rate used for GASB Statement No. 25 reporting is also applied herein for GASB Statement No. 43 reporting.

Based on GASB accounting rules, the retiree drug subsidy (RDS) the State receives under Medicare Part D has not been recognized for GASB Statement No. 43 disclosure purposes.

Disregarding future Medicare Part D payments, the fiscal 2016 employer ADC for accounting purposes is 2.36% of pay for retiree medical benefits and 2.36% of pay for retiree medical and death and disability benefits combined.

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**(8) Claims Payable**

The liability for claims incurred but not reported represents the estimated amounts necessary to settle all outstanding claims, incurred but not reported, as of the balance sheet date. The ARHT and Retiree Medical Plan's reserve estimates are based primarily on historical development patterns adjusted for current trends that would modify past experience. Claims are reevaluated periodically to consider the effects of inflation, claims settlement trends, and other economic factors. The process of establishing loss reserves is subject to uncertainties that are normal, recurring, and inherent in the healthcare business.

Changes in the balances of claims liabilities are as follows (in thousands):

	<b>2015</b>	<b>2014</b>
Beginning of year:		
Due to State of Alaska General Fund for outstanding warrants	\$ —	—
Incurred but not reported	18,979	20,062
Total, beginning of year	18,979	20,062
Benefit deductions	109,740	116,781
Benefits paid	(110,076)	(117,864)
Total, end of year	\$ 18,643	18,979
End of year:		
Due to State of Alaska General Fund for outstanding warrants	\$ 4,192	—
Incurred but not reported	14,451	18,979
Total, end of year	\$ 18,643	18,979

**(9) Commitments and Contingencies**

***Commitments***

The Board entered into an agreement through external managers to provide capital funding for limited partnerships in the domestic equity, private equity, energy, and real estate portfolios. At June 30, 2015, the Board's unfunded commitments were as follows (in thousands):

<b>Portfolio</b>	<b>Unfunded commitment</b>	<b>Estimated to be paid through</b>
Domestic equity	\$ —	May be canceled annually in December with 90 days' notice
Private equity	415,392	Fiscal year 2026
Energy	26,144	Fiscal year 2023
Real estate	67,850	Fiscal year 2024
	\$ 509,386	

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### *Contingencies*

The Division of Retirement and Benefits (the Division) is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, in the opinion of the Division's counsel, the resolution of these matters will not have a material adverse effect on the financial condition of the Division.

### **(10) Medicare Part D Retiree Drug Subsidy**

One of the provisions of Medicare Part D provides sponsors of pension healthcare plans the opportunity to receive a RDS payment if the sponsor's plan provides a prescription drug benefit that is actuarially equivalent to the Medicare Part D benefit. The RDS is equal to 28% of the amount of eligible prescription drug benefit costs of retirees who are eligible for, but not enrolled in, Medicare Part D, by virtue of continuing to be covered by the sponsor's plan. The ARHT Plan was approved for participation in the Medicare Part D program beginning calendar year 2006.

### **(11) Early Retiree Reinsurance Program**

The Early Retiree Reinsurance Program (ERRP) was a temporary program that provided reimbursement to participating employment-based plans for a portion of the costs of health benefits for retirees age 55 and older who are not eligible for Medicare, and their spouses and surviving spouses and dependents. The amount of the reimbursement to the plan was up to 80% of claims cost for health benefits between \$15,000 and \$90,000. The program was authorized by the Affordable Care Act as part of the U.S. government health reform package. The plan started participation in the ERRP beginning calendar year 2011. The program ended on January 1, 2014.

**REQUIRED SUPPLEMENTARY INFORMATION**  
**(Unaudited)**

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**Required Supplementary Information (Unaudited)**  
**Schedule of Changes in Employer Net Pension Liability and Related**  
**Ratios - Defined Benefit Pension Plan**

(In thousands)

	2015	2014	2013	2012
Total pension liability:				
Service cost	\$ 63,608	64,324	69,113	69,548
Interest	540,981	515,325	517,511	501,252
Changes of benefit terms	—	—	—	—
Differences between expected and actual experience	(5,693)	—	1,108	10,986
Changes of assumptions	156,854	—	—	—
Benefit payments, including refunds of member contributions	(418,545)	(399,001)	(397,956)	(378,113)
Net change in total pension liability	337,205	180,648	189,776	203,673
Total pension liability – beginning	6,770,201	6,589,553	6,399,777	6,196,104
Total pension liability – ending (a)	7,107,406	6,770,201	6,589,553	6,399,777
Plan fiduciary net position:				
Contributions – employer	36,374	37,571	37,372	38,189
Contributions – member	45,506	47,724	50,201	52,020
Contributions – nonemployer entity (State)	1,662,700	208,890	196,945	157,387
Total net investment income	152,561	599,958	373,868	2,190
Other miscellaneous income	9	27	19	17
Benefit payments, including refunds of member contributions	(418,545)	(399,001)	(382,933)	(363,839)
Administrative expenses	(2,789)	(3,160)	(2,989)	(2,847)
Net change in plan fiduciary net position	1,475,816	492,009	272,483	(116,883)
Plan fiduciary net position – beginning	3,771,139	3,279,130	3,006,647	3,123,530
Plan fiduciary net position – ending (b)	5,246,955	3,771,139	3,279,130	3,006,647
Plan's net pension liability (a) - (b)	\$ 1,860,451	2,999,062	3,310,423	3,393,130
Plan fiduciary net position as a percentage of the total pension liability	73.82%	55.70%	49.76%	46.98%
Covered-employee payroll	\$ 490,667	514,035	550,044	561,971
Net pension liability as a percentage of covered-employee payroll	379.17%	583.44%	601.85%	603.79%

This schedule is intended to present information for 10 years. Additional years will be displayed as they become available.

See accompanying notes to required supplementary information (unaudited) and independent auditors' report.

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**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions**  
**Defined Benefit Pension Plan**  
**Last 10 Fiscal Years**

(In thousands)

	<u>2,015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
Actuarially determined contribution	\$ 321,971	240,366	259,786	229,509	167,978
Contributions in relation to the actuarially determined contribution	<u>1,699,074</u>	<u>246,461</u>	<u>234,317</u>	<u>195,576</u>	<u>142,147</u>
Contribution deficiency (excess)	<u>\$ (1,377,103)</u>	<u>(6,095)</u>	<u>25,469</u>	<u>33,933</u>	<u>25,831</u>
Covered-employee payroll	\$ 490,667	514,035	550,044	561,971	584,068
Contributions as a percentage of covered-employee payroll	346.28%	47.95%	42.60%	34.80%	24.34%

See accompanying notes to required supplementary information (unaudited) and independent auditors' report.

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**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions**  
**Defined Benefit Pension Plan**  
**Last 10 Fiscal Years (continued)**

(In thousands)

	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Actuarially determined contribution	\$ 170,788	94,388	134,544	169,974	170,019
Contributions in relation to the actuarially determined contribution	<u>134,275</u>	<u>131,533</u>	<u>142,550</u>	<u>105,775</u>	<u>91,902</u>
Contribution deficiency (excess)	<u>\$ 36,513</u>	<u>(37,145)</u>	<u>(8,006)</u>	<u>64,199</u>	<u>78,117</u>
Covered-employee payroll	\$ 564,887	557,026	549,148	554,245	574,409
Contributions as a percentage of covered-employee payroll	23.77%	23.61%	25.96%	19.08%	16.00%

See accompanying notes to required supplementary information (unaudited) and independent auditors' report.

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**Schedule of Investment Returns**

	<b>2015</b>	<b>2014</b>
Annual money-weighted rate of return, net of investment expense	3.30%	18.41%

This schedule is intended to present information for 10 years. Additional years will be displayed as they become available.

See accompanying notes to required supplementary information (unaudited) and independent auditors' report.

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**Required Supplementary Information (Unaudited)**  
**Schedules of Funding Progress**  
**Defined Benefit OPEB Plans**

June 30, 2015  
(In thousands)

**Alaska Retiree Healthcare Trust Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 4,648,055	1,266,890	27.3%	\$ 3,381,165	549,148	615.7%
2009	4,604,820	1,357,239	29.5	3,247,581	557,026	583.0
2010	3,076,388	1,479,260	48.1	1,597,128	564,887	282.7
2011	3,635,492	1,591,988	43.8	2,043,504	584,068	349.9
2012	5,046,942	1,674,160	33.2	3,372,782	561,971	600.2
2013	5,002,345	1,803,763	36.1	3,198,582	550,044	581.5
2014	3,114,113	2,248,135	72.2	865,978	523,580	165.4

**Occupational Death and Disability Benefits Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 44	420	954.5%	\$ (376)	56,369	(0.7)%
2009	14	1,071	7,650.0	(1,057)	89,708	(1.2)
2010	18	1,577	8,761.1	(1,559)	118,813	(1.3)
2011	57	2,193	3,847.4	(2,136)	170,606	(1.3)
2012	63	2,348	3,727.0	(2,285)	200,043	(1.1)
2013	80	2,532	3,165.0	(2,452)	206,771	(1.2)
2014	23	2,820	12,260.9	(2,797)	229,971	(1.2)

**Retiree Medical Benefits Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 899	1,308	145.5%	\$ (409)	56,369	(0.7)%
2009	1,690	2,353	139.2	(663)	89,708	(0.7)
2010	2,809	3,895	138.7	(1,086)	118,813	(0.9)
2011	4,386	5,373	122.5	(987)	170,606	(0.6)
2012	19,427	6,937	35.7	12,490	200,043	6.2
2013	25,152	8,614	34.2	16,538	206,771	8.0
2014	18,290	10,791	59.0	7,499	229,971	3.3

See accompanying notes to required supplementary information (unaudited) and independent auditors' report.

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**Required Supplementary Information (Unaudited)**

**Schedules of Contributions from Employers and the State of Alaska**

**Defined Benefit OPEB Plans**

June 30, 2015  
 (In thousands)

**Alaska Retiree Healthcare Trust Plan**

Year ended June 30	Actuarial valuation year ended June 30 <sup>(1)</sup>	Annual required contribution	Percentage contributed		
			By employer	By State of Alaska (note 3)	Total percentage contributed (note 3)
2008	2005	\$ 185,271	23.6%	85.7%	109.3%
2009	2006	164,171	28.7	62.1	90.8
2010 <sup>(2)</sup>	2007	312,922	13.6	38.8	52.4
2011	2008	167,686	25.8	51.5	77.3
2012	2009	192,700	18.8	46.6	65.4
2013	2010	330,411	10.7	33.3	44.0
2014	2011	320,797	10.0	35.6	45.6

<sup>(1)</sup> Actuarial valuation related to annual required contribution for fiscal year.

<sup>(2)</sup> In the year ended June 30, 2010, the postemployment healthcare annual required contribution and percentage contributed included the Mercer legal settlement, net of legal fees, as well as the Medicare Part D subsidy contributed by the State to the healthcare fund.

**Occupational Death and Disability Benefits Plan**

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	\$ 408	100.0%
2009	623	100.0
2010	442	100.0
2011	474	100.0
2012	—	100.0
2013	—	100.0
2014	—	100.0

**Retiree Medical Benefits Plan**

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	\$ 763	85.0%
2009	1,162	85.0
2010	1,628	87.0
2011	1,422	81.0
2012	1,420	82.0
2013	1,241	89.0
2014	1,334	89.0

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## **Notes to Required Supplementary Information (Unaudited)**

**June 30, 2015**

**(1) Description of Schedule of Funding Progress**

Each time a new benefit is added, which applies to service already rendered, an “unfunded actuarial accrued liability” is created. Laws governing the System require that these additional liabilities be financed systematically over a period of future years. Also, if actual financial experiences are less favorable than assumed financial experiences, the difference is added to the unfunded actuarial accrued liability.

In an inflationary economy, the value of the dollar is decreasing. This environment results in employee pay increasing in dollar amounts resulting in unfunded actuarial accrued liabilities increasing in dollar amounts, all at a time when the actual value of these items, in real terms, may be decreasing.

**(2) Actuarial Assumptions and Methods**

The actuarial valuation was prepared by Buck Consultants. The significant actuarial assumptions used in the defined benefit pension and postemployment healthcare benefit plan valuation as of June 30, 2014 are as follows:

- (a) Actuarial cost method – Entry Age Actuarial Cost method of funding. Any funding surplus or unfunded accrued liability is amortized over 25 years as a level percentage of payroll amount. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit, and defined contribution member payroll combined.
- (b) Valuation of assets – The actuarial asset value was reinitialized to equal fair value of assets as of June 30, 2014. Beginning in 2015, the asset value method recognizes 20% of the gain or loss each year, for a period of up to five years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements.
- (c) Valuation of medical benefits – 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 nonprescription 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. 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.
- (d) Investment return/discount rate – 8.00% per year (geometric), compounded annually, net of expenses.
- (e) Salary scale – Inflation 3.12% per year and productivity 0.50% per year.
- (f) Payroll growth – 3.62% per year (inflation + productivity).

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**June 30, 2015**

- (g) 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.
- (h) Mortality (pre-termination) – Based upon the 2010–2013 actual experience. 68% of male rates and 60% of female rates of post-termination mortality. Deaths are assumed to result from nonoccupational causes 85% of the time.
- (i) Mortality (post-termination) – Based upon the 2010–2013 actual experience study. 94% of male and 97% of female rates of RP-2000, 2000 base year, projected to 2018 with Projection Scale BB, with a three-year setback for males and a four-year setback for females.
- (j) Turnover – Select and ultimate rates based upon the 2010–2013 actual withdrawal experience.
- (k) Disability – Incidence rates based upon the 2010–2013 actual experience. Postdisability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 base year, projected to 2018 with Projection Scale BB.
- (l) Retirement – Retirement rates based on the 2010–2013 actual experience. Deferred vested members are assumed to retire at their earliest unreduced retirement date.
- (m) 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.
- (n) 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.
- (o) Contribution refunds – 5% 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.
- (p) Cost of living allowance (COLA) – Of those benefit recipients who are eligible for the COLA, 60% are assumed to remain in Alaska and receive the COLA.
- (q) Sick leave – 4.5 days of unused sick leave for each year of service are assumed to be available to be credited once the member retires, terminates, or dies.
- (r) Postretirement pension adjustment (PRPA) – 50% and 75% of assumed inflation, or 1.56% and 2.34%, respectively, is valued for the annual automatic PRPA as specified in the statute.
- (s) Expenses – All expenses are net of investment return assumption.
- (t) Part-time status – Part-time members are assumed to earn 0.75 years of credited service per year.

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

- (u) Reemployment option – All reemployed retirees are assumed to return to work under the Standard Option.
- (v) Service – Total credited service is provided by the State. The actuary assumes 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.
- (w) 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.
- (x) Per capita claims cost – Sample claims cost rates adjusted to age 65 for FY15 medical benefits and prescriptions are shown below:

		<b>Medical</b>	<b>Prescription drugs</b>
Pre-Medicare	\$	12,362	2,624
Medicare Parts A and B		1,657	2,624
Medicare Part B Only		7,920	2,624
Medicare Part D		N/A	507

- (y) Third-party administrator fees – \$193.98 per person per year; assumed trend rate of 5% per year.
- (z) Medicare Part B Only – For actives and retirees not yet Medicare-eligible, participation is set based on whether the member/retiree will have 40 quarters of employment after March 31, 1986, depending upon date of hire and/or rehire.

**State of Alaska**  
**Teachers' Retirement System**  
 (A Component Unit of the State of Alaska)

**Notes to Required Supplementary Information (Unaudited)**

**June 30, 2015**

(aa) 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, 10.0% is applied to the FY15 pre-Medicare medical claims costs to get the FY16 medical claims cost.

<u>Fiscal year</u>	<u>Medical pre-65</u>	<u>Medical post-65</u>	<u>Prescription drugs</u>
2015	10.0%	6.0%	6.0%
2016	9.4	5.9	5.7
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

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. This model has been populated with assumptions that are specific to the State of Alaska.

(bb) Aging factors:

<u>Age</u>	<u>Medical</u>	<u>Prescription drugs</u>
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 +	—	—

# Financial Section

**State of Alaska**  
**Teachers' Retirement System**  
(A Component Unit of the State of Alaska)

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

- (cc) 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 FY15 contributions based on monthly rates shown below for calendar 2014 and 2015 are assumed based on the coverage category for current retirees. The composite 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:

<u>Coverage category</u>	<u>Calendar 2015</u>		<u>Calendar 2014</u>
	<u>Annual contribution</u>	<u>Monthly contribution</u>	<u>Monthly contribution</u>
Retiree only	\$ 9,876	823	823
Retiree and spouse	19,764	1,647	1,647
Retiree and child(ren)	13,956	1,163	1,163
Retiree and family	23,844	1,987	1,987
Composite	14,676	1,223	1,223

- (dd) Trend rate for retired member contributions – The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 7.0% is applied to the FY15 retired member medical contributions to get the FY16 retired member medical contributions.

<u>Fiscal year</u>	
2015	7.0%
2016	6.6
2017	6.2
2018	5.8
2019	5.4
2020	5.0
2025	4.1
2050	4.0
2100	4.0

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2014 valuation. Note that actual FY15 retired member medical contributions are reflected in the valuation, so trend on such contribution during FY15 is not applicable.

- (ee) Healthcare participation – 100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 10% of nonsystem paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**

## **Notes to Required Supplementary Information (Unaudited)**

**June 30, 2015**

The significant actuarial assumptions used in the defined contribution occupational death and disability and retiree medical benefits plan valuation as of June 30, 2014 are as follows:

- (a) Actuarial cost method – Liabilities and contributions are computed using entry age actuarial cost method of funding. Any funding surplus 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.
- (b) Valuation of assets – 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 was \$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 audited financial statements. Valuation assets are constrained to a range of 80% to 120% of fair value of assets
- (c) Valuation of retiree medical benefits – Due to the lack of experience for the DC Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2014 for defined benefit pension and postemployment healthcare benefit plan (TRS DB Plan) with some adjustments. The claim costs were adjusted to reflect the differences between the DC 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, FY14 claim costs were reduced to 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.
- (d) Investment return/discount rate – 8.00% per year (geometric), compounded annually, net of expenses.
- (e) Salary scale – Inflation 3.12% per year. Productivity 0.5% per year.
- (f) Payroll growth – 3.62% per year (inflation + productivity).
- (g) 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.
- (h) Mortality (pre-termination) – Based upon the 2009–2013 actual experience for the TRS DB Plan. 60% of the RP-2000 Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB, for females and 68% for males. 15% of deaths are assumed to result from occupational causes. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 110%.

# Financial Section

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

- (i) Mortality (post-termination) – Based upon the 2009–2013 actual experience of the TRS DB Plan. Three-year setback of the RP-2000 Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB, with a four-year setback for females and three-year setback for males. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 110%.
- (j) Turnover – Select and ultimate rates based upon the 2010–2013 actual withdrawal experience of the TRS DB Plan.
- (k) Disability – Incidence rates based upon the 2010–2013 actual experience of the TRS DB Plan. Disabilities are assumed to result from occupational causes 15% of the time.
- (l) Retirement – Retirement rates based upon the 2010–2013 actual experience of the TRS DB Plan. Deferred vested members are assumed to retire at their earliest unreduced retirement date.

Age	Rate
< 55	2.0%
55–59	3.0
60	5.0
61	5.0
62	10.0
63	5.0
64	5.0
65	25.0
66	25.0
67	25.0
68	20.0
69	20.0
>70	100.0

- (m) 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.
- (n) 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.
- (o) Contribution refunds – 5% 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.
- (p) Expenses – All expenses are net of the investment return assumption.

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

- (q) Per capita claims cost – Sample claims cost rates adjusted to age 65 for FY15 medical benefits are shown below:

	Medical	Prescription drugs
Pre-Medicare	\$ 12,362	2,624
Medicare Parts A and B	1,657	2,624
Medicare Part B Only	7,920	2,624
Medicare Part D	N/A	507

- (r) Third-party administrator fees – \$193.98 per person per year; assumed trend rate of 5% per year.
- (s) 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 were applied to the per capita claims cost rates: 0.881 for medical plan, 0.929 for the prescription drug plan, and 0.998 for the annual indexing for member cost sharing.
- (t) 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, 10.0% is applied to the FY15 pre-Medicare medical claims cost to get the FY16 medical claims costs:

Fiscal year	Medical Pre-65	Medical Post-65	Prescription drugs
2015	10.0%	6.0%	6.0%
2016	9.4	5.9	5.7
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug cost. This model effectively begins estimating trend amounts beginning in 2014 and projects out to 2090. The model has been populated with assumptions that are specific to the State.

# Financial Section

State of Alaska  
Teachers' Retirement System  
(A Component Unit of the State of Alaska)

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

(u) 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 +	—	—

(v) Retiree medical participation:

Decrement due to disability		Decrement due to retirement	
Age	Percentage of participation	Age	Percentage of 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+	Years of service
		<15	70.5%
		15-19	75.2
		20-24	79.9
		25-29	89.3
		30+	94.0

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.

State of Alaska  
Teachers' Retirement System  
(A Component Unit of the State of Alaska)

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

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

#### Defined benefit pension and postemployment healthcare benefit plan

In accordance with Senate Bill 119, signed into law May 28, 2014, and House Bill 385, signed into law on June 23, 2014, the following changes were effective for the June 30, 2014 actuarial valuation report:

- 1) The amortization method used for funding changed from the level dollar amount to the level percentage of payroll method and the amortization period is reinitialized to a closed 25-year period from June 30, 2014.
- 2) The additional state contribution for fiscal year ending June 30, 2015 is \$2 billion.
- 3) The two-year rate setting time lag is intended to be eliminated. The two-year lag in the setting of contribution rates is replaced by a two-year rollforward of liabilities and projected normal costs and a one-year rollforward of June 30, 2015 assets.
- 4) The actuarial value of assets is reset to the fair value as of June 30, 2014; the five-year smoothing method with grow-in will be implemented over the next five years.
- 5) The 20% corridor over/under the fair value of assets is eliminated in the calculation of the actuarial value of assets.

#### Defined contribution occupational death and disability and retiree medical benefits plan

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

**State of Alaska**  
**Teachers' Retirement System**  
(A Component Unit of the State of Alaska)

## Notes to Required Supplementary Information (Unaudited)

June 30, 2015

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

	June 30, 2013	June 30, 2014
Salary scale	Based on actual experience from 2005 to 2009.	Rates adjusted on actual experience from 2010 to 2013.
Pre-termination mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, adjusted 45% for males, and 55% for females.	68% of male rates and 60% of female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB.  Deaths are assumed to result from nonoccupational causes 85% of the time.
Post-termination mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, three year setback for females and a four year setback for males.	94% of male rates and 97% of female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a three year setback for males and a four year setback for females.
Disability mortality	RP-2000 Disabled Retiree Mortality Table.	RP-2000 Disabled Retiree Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB.
Turnover	Based on actual experience from 2005 to 2009.	Select and ultimate rates based upon the 2010–2013 actual withdrawal experience.
Disability	Based on actual experience from 2005 to 2009 and stop rates at earliest retirement age.	Retirement rates based on 2010–2013 experience. Male/female rates increased and changed to Unisex rates.  Disabilities are assumed to result from occupational causes 15% of the time.
Retirement	Rates adjusted based on actual experience from 2005 to 2009.	Retirement rates based on 2010–2013 experience.
Part-time service	0.60 years of credited service per year.	Part-time employees are assumed to earn 0.75 years of credited service per year.

**SUPPLEMENTAL SCHEDULES**

# Financial Section

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**  
**Schedule of Administrative and Investment Deductions**  
**Years ended June 30, 2015 and 2014**  
**(In thousands)**

	Administrative	Investment	Totals	
			2015	2014
Personal services:				
Wages	\$ 1,622	95	1,717	1,662
Benefits	984	39	1,023	951
Total personal services	<u>2,606</u>	<u>134</u>	<u>2,740</u>	<u>2,613</u>
Travel:				
Transportation	18	39	57	62
Per diem	4	18	22	23
Total travel	<u>22</u>	<u>57</u>	<u>79</u>	<u>85</u>
Contractual services:				
Management and consulting	5,096	14,263	19,359	17,098
Accounting and auditing	98	318	416	66
Data processing	527	223	750	1,071
Communications	55	14	69	72
Advertising and printing	22	3	25	35
Rentals/leases	138	21	159	152
Legal	127	35	162	152
Medical specialists	20	—	20	44
Repairs and maintenance	2	3	5	6
Transportation	22	1	23	59
Other professional services	58	16	74	61
Total contractual services	<u>6,165</u>	<u>14,897</u>	<u>21,062</u>	<u>18,816</u>
Patient Protection and Affordable Care Act:				
Transitional Reinsurance Program	378	—	378	—
PCORI Fees	—	—	—	5
Total Patient Protection and Affordable Care Act	<u>378</u>	<u>—</u>	<u>378</u>	<u>5</u>
Other:				
Equipment	17	6	23	19
Supplies	55	23	78	67
Total other	<u>72</u>	<u>29</u>	<u>101</u>	<u>86</u>
Total administrative and investment deductions	<u>\$ 9,243</u>	<u>15,117</u>	<u>24,360</u>	<u>21,605</u>

See accompanying independent auditors' report.

**State of Alaska**  
**Teachers' Retirement System**  
**(A Component Unit of the State of Alaska)**  
**Schedule of Payments to Consultants**  
**Other than Investment Advisors**  
**Years ended June 30, 2015 and 2014**  
**(In thousands)**

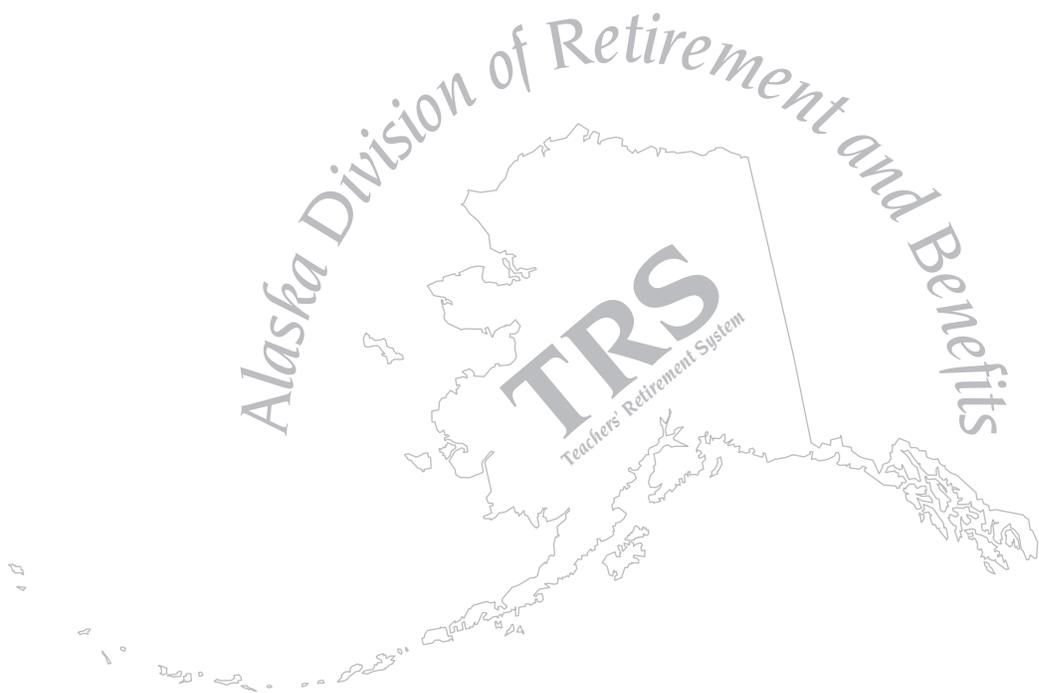
Firm	Services	2015	2014
Buck Consultants, an Xerox Company	Actuarial services	\$ 395	\$ 355
KPMG LLP	Auditing services	107	51
State Street Bank Corporation	Custodian banking services	374	287
Applied Microsystems Inc.	Data processing consultants	203	359
Computer Task Group, Inc.	Data processing consultants	47	51
Mythics Inc.	Data processing consultants	—	4
Wostmann Group LLC	Data processing consultants	101	88
State of Alaska, Department of Law	Legal services	127	123
Michael Silverman	Management consulting services	—	93
The Wilson Agency LLC	Management consulting services	—	1
State of Alaska, Department of Health and Social Services	Medical expertise and counseling	15	44
		\$ 1,369	\$ 1,456

See accompanying independent auditors' report.





# INVESTMENT SECTION





Callan Associates Inc.  
1900 16<sup>th</sup> Street  
Suite 1175  
Denver, CO 80202



September 9, 2015

Alaska Retirement Management Board  
State of Alaska, Department of Revenue  
Treasury Division  
333 Willoughby Avenue, 11<sup>th</sup> Floor  
Juneau, Alaska 99801

Dear Board Members:

This letter reviews the investment performance of the Alaska Retirement Management Board (ARMB) for the fiscal year ended June 30, 2015.

Callan Associates Inc. (Callan) independently calculates time-weighted performance statistics based on underlying custodial data provided by the Board's custodian, State Street Bank and Trust Company. The performance calculations were made using a time-weighted return methodology based upon current market values. ARMB's real estate consultant, the Townsend Group, calculates returns for the real estate segment of the portfolio. Callan incorporates that data into the total plan returns.

Callan serves as ARMB's independent general investment consultant and evaluates ARMB's performance in relation to market benchmarks, appropriate manager peer groups and other public pension systems. The performance calculations were made using methodology similar to Global Investment Performance Standards.

ARMB's primary investment objective is to prudently and expertly invest assets, in accordance with governing law and industry practices, in a manner that will help ensure assets under supervision are sufficient to pay promised benefits to its members and their beneficiaries. In pursuit of this objective, ARMB periodically evaluates liabilities, expected contributions and potential earnings. This analysis is used to consider a wide range of potentially viable investment strategies. The Board selects a strategic investment policy that balances long-term growth potential and acceptable risk. A policy benchmark is constructed that mirrors the Board's strategic asset allocation policy. This policy benchmark is a custom index comprised of equity, fixed income, real estate and other market indices weighted in the same proportions as ARMB's investment policy.

Equity markets in the U.S. climbed steadily higher during the fiscal year 2015. The Russell 3000 Index, a measure of broad U.S. equity, gained 7.29%. Returns for equities outside of the U.S. did not fare as well. International stocks, as measured by the MSCI ACWI ex-U.S. Index, lost 4.85% for the period. A broad measure of the total global equity market (MSCI All Country World Index) rose 1.23%.

# Investment Section

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A flattening yield curve during the period boosted fixed income performance. The Barclays Capital Aggregate Bond Index, a widely used gauge of the investment grade domestic bond market, gained 1.86%. Absolute return strategies, such as hedge fund-of-funds, posted modest gains during the fiscal year. The Callan Absolute Return Hedge Fund-of-Funds Style median return was 2.28% (net-of-fee). Private real estate investments (NCREIF Property Index) turned in another solid year, returning 12.98%. Publicly traded real estate, as measured by the NAREIT Equity Index, did not perform as well and increased only 4.14%.

ARMB's various asset group returns performed as expected.

Domestic stocks	7.84%
Int'l Stocks	-3.32%
Alternative Equity	-0.81%
Fixed Income	-0.73%
Real Assets	3.71%
Private Equity	13.77%
Absolute Return	9.24%

For the fiscal year, the Public Employees Retirement System (PERS) had a time-weighted total return of 3.29% and the Teachers Retirement System (TRS) had a time-weighted total return of 3.30%. Both systems outperformed their strategic policy benchmark target return of 2.74% and the median return for Callan's Public Fund database of 3.21%.

Over longer-term periods, PERS and TRS have closely tracked their target index returns. For example, PERS' 10-year annualized return was 6.69% while TRS's return was slightly higher at 6.73%. These returns were in line, but slightly above, their target return of 6.54%. Over the longest period for which Callan has detailed data (23.75 years), PERS and TRS have achieved annualized total returns of 7.84% and 7.90%, respectively, while the policy benchmark return was 7.80%.

Both systems are well diversified and currently have asset allocation policies that, in our opinion, are consistent with achievement of a long-term "real" return of 4.5% or better.

In summary, fiscal 2015 was a year in which asset class returns were varied and a well-diversified portfolio was able to produce positive results.

Sincerely,



Paul Erlendson  
Senior Vice President

## Department of Revenue Treasury Division Staff As of June 30, 2015

<p><b>Commissioner</b> Randall Hoffbeck</p> <p><b>Deputy Commissioner</b> Jerry Burnett</p> <p><b>Director</b> Pamela Leary, CPA</p>	<p><b>Chief Investment Officer</b> Gary Bader</p> <p><b>Comptroller</b> Scott Jones, CPA</p> <p><b>Cash Management</b> Michelle M. Prebula, MBA, CPA, CCM</p>	<p><b>Investment Officers</b> Bob G. Mitchell Stephen R. Sikes Zachary Hanna Steve Verschoor Shane Carson Sean Howard</p> <p><b>ARMB Liaison Officer</b> Judy Hall</p>	<p>Casey Colton Nicholas Orr Victor Djajalie Joy Wilkinson Alyson Campbell Emily Peyton Paul Hackenmueller</p>
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## External Money Managers and Consultants

### Domestic Equity Large Capitalization

Allianz Global Investors  
*San Francisco, CA*

Analytic Investors LLC  
*Los Angeles, CA*

Barrow, Hanley, Mewhinney & Strauss  
*Dallas, TX*

Capital Guardian Trust Co.  
*Los Angeles, CA*

McKinley Capital Management, Inc.  
*Anchorage, AK*

Relational Investors LLC  
*San Diego, CA*

Quantitative Management Associates  
*Newark, NJ*

State Street Global Advisors  
*San Francisco, CA*

### Domestic Equity Small Capitalization

Barrow, Hanley, Mewhinney & Strauss  
*Dallas, TX*

Frontier Capital Management  
*Boston, MA*

Jennison Associates LLC  
*New York, NY*

Lord Abbett & Co.  
*Jersey City, NJ*

Luther King Capital Management  
*Fort Worth, TX*

State Street Global Advisors  
*San Francisco, CA*

Victory Capital Management  
*St. Louis, MO*

### Domestic Equity MicroCap

DePrince, Race & Zollo, Inc.  
*Winter Park, FL*

Lord Abbett & Co.  
*Jersey City, NJ*

Zebra Capital Management  
*Mitford, CT*

### Domestic Equity Index Fund

State Street Global Advisors  
*San Francisco, CA*

### International Equity – EAFE, Emerging Markets Non U.S. , and Global Equity

Allianz Global Investors  
*San Francisco, CA*

Arrowstreet Capital, LP  
*Boston, MA*

BlackRock  
*San Francisco, CA*

Baillie Gifford Overseas Ltd.  
*Edinburgh, Scotland*

Brandes Investment Partners, L.P.  
*San Diego, CA*

Capital Guardian Trust Co.  
*Los Angeles, CA*

Lazard Asset Management  
*New York, NY*

McKinley Capital Management, Inc.  
*Anchorage, AK*

Parametric Clifton  
*Seattle, WA*

State Street Global Advisors  
*San Francisco, CA*

### International Small Cap

Mondrian Investment Partners  
*London, England*

Schroders Investment Management NA  
*New York, NY*

### Emerging Market Income

Lazard Asset Management  
*New York, NY*

NFJ Investment Group  
*Dallas, TX*

### International Fixed Income

Mondrian Investment Partners  
*London, England*

### High Yield/Convertible Bond/Tactical Bond

MacKay Shields LLC  
*New York, NY*

Advent Capital Management  
*New York, NY*

Pyramis Global Advisors  
*Smithfield, RI*

# Investment Section

## External Money Managers and Consultants (cont.)

### Taxable Municipal Bonds

Guggenheim Partners LLC  
*Santa Monica, CA*  
Western Asset Management Company  
*Pasadena, CA*

### Master Limited Partnerships

Advisory Research  
*St. Louis, MO*  
Tortoise Capital Advisors LLC  
*Leawood, KS*

### Absolute Return

Allianz Global Investors  
*New York, NY*  
Crestline Investors, Inc.  
*Fort Worth, TX*  
Global Assets Management Inc.  
*Los Angeles, CA*  
KKR (formerly Prisma Capital Partners)  
*New York, NY*

### Private Equity

Abbott Capital Management, L.P.  
*New York, NY*  
Pathway Capital Management, LLC  
*Irvine, CA*

### Real Assets – Real Estate Core Separate Accounts

LaSalle Investment Management  
*Chicago, IL*  
Sentinel Real Estate Corporation  
*New York, NY*  
UBS Realty Investors, LLC  
*San Francisco, CA*

### Real Assets – Commingled Real Estate Funds

Almanac Realty Investors  
*Alpharetta, GA*  
BlackRock Realty  
*San Francisco, CA*  
Colony Capital  
*Los Angeles, CA*  
Coventry Real Estate Fund II, LLC  
*New York, NY*  
Clarion Partners  
*New York, NY*  
J.P. Morgan Investment Management Inc.  
*New York, NY*  
Silverpeake Real Estate Partners  
*New York, NY*  
Lowe Hospitality Investment Partners, LLC  
*Los Angeles, CA*  
Sentinel Real Estate Corporation  
*New York, NY*  
Tishman Speyer Properties  
*New York, NY*  
UBS Realty Investors, LLC  
*Hartford, CT*

### Real Assets – Energy

EIG Global Energy Partners  
*Washington, DC*

### Real Assets – Infrastructure

Brookfield Investment Management  
*Encinitas, CA*  
Industry Funds Management  
*New York, NY*  
JP Morgan Asset Management  
*San Francisco, CA*  
Lazard Asset Management  
*New York, NY*

### Real Assets – Farmland and Timber

Hancock Agricultural Investment Group  
*Boston, MA*  
UBS AgriVest, LLC  
*Hartford, CT*  
Hancock Timber Resource Group  
*Charlotte, NC*  
Timberland Investment Resources LLC  
*Brookline, MA*

### Supplemental Benefits System, Deferred Compensation Plan and Defined Contribution Plan

BlackRock  
*San Francisco, CA*  
Allianz Global Investors (formerly RCM)  
*San Francisco, CA*  
State Street Global Advisors  
*Boston, MA*  
T. Rowe Price Investment Services  
*Baltimore, MD*  
Brandes Investment Partners  
*San Diego, CA*

### Global Master Custodian

State Street Bank & Trust Co.  
*Boston, MA*

### Investment Consultants

Callan Associates, Inc.  
*Denver, CO*  
The Townsend Group  
*San Francisco, CA*

### Investment Advisory Council

William Jennings  
*Colorado Springs, CO*  
Jerrold Mitchell  
*Wayland, MA*  
Robert Shaw  
*San Francisco, CA*

### Independent Auditors

KPMG, LLP  
*Anchorage, AK*

### Actuaries

Buck Consultants  
*Denver, CO*  
Gabriel Roeder Smith  
*Denver, CO*

## Teachers' Retirement System Investment Report

### INVESTMENTS

The investment goals of the State of Alaska Teachers' Retirement System (TRS) are the long term return and sustainability of the pension funds under management. Annually, the Alaska Retirement Management Board (ARMB) sets its asset allocation strategy in order to reflect changes in the marketplace while still retaining an expected optimal risk/return level within the set constraints and objectives of the ARMB.

The ARMB categorizes its investments into eight asset classes: domestic equities, global equities ex-U.S., alternative equity strategies, private equity, real assets, fixed income, absolute return, and cash equivalents. The performance of each asset class is compared with a benchmark comprised of one or more market indices. The performance for the total portfolio is compared with its policy portfolio, determined by calculating the weighted performance of the underlying asset class benchmarks at the portfolio's target asset allocation. The asset class benchmarks are illustrated below:

Asset Class	Benchmark
Domestic Equity	Russell 3000 Index
Global Equities Ex-U.S.	MSCI All Country World Ex-U.S. Index
Alternative Equities Strategies	50% S&P 500 Index 30% CBOE Buy Write Index 20% Bank of America Yield Alternative Index
Private Equity	1/3 S&P 500 Index 1/3 Russell 2000 Index 1/3 MSCI EAFE Index
Real Assets	50% NCREIF Property Index 15% Barclays TIPS Index 10% NCREIF Farmland Index 10% NCREIF Timberland Index 5% FTSE NAREIT All Equity REIT Index 10% S&P Global Infrastructure
Fixed Income	80% Barclays Intermediate Treasury Index 10% Bank of America Merrill Lynch US High Yield Master II Constrained Index 7% Citigroup World Gov. Bond Ex-U.S. Index 3% JP Morgan Global Bond Index - Emerging Markets Global Diversified Index
Absolute Return	91 Day Treasury Bill + 5%
Cash Equivalents	91 Day Treasury Bill

The target asset allocation is determined by the ARMB, utilizing capital market assumptions provided by its independent general investment consultant, Callan Associates. During the 2015 fiscal year, ARMB's target asset allocation was 26% domestic equities, 25% global equities ex-U.S., 3% alternative equity strategies, 9% private equity, 17% real assets, 12% fixed income, 5% absolute return, and 3% cash equivalents. The target asset allocation is expected to generate a return of 7.22% with a standard deviation of 15.01%.

# Investment Section

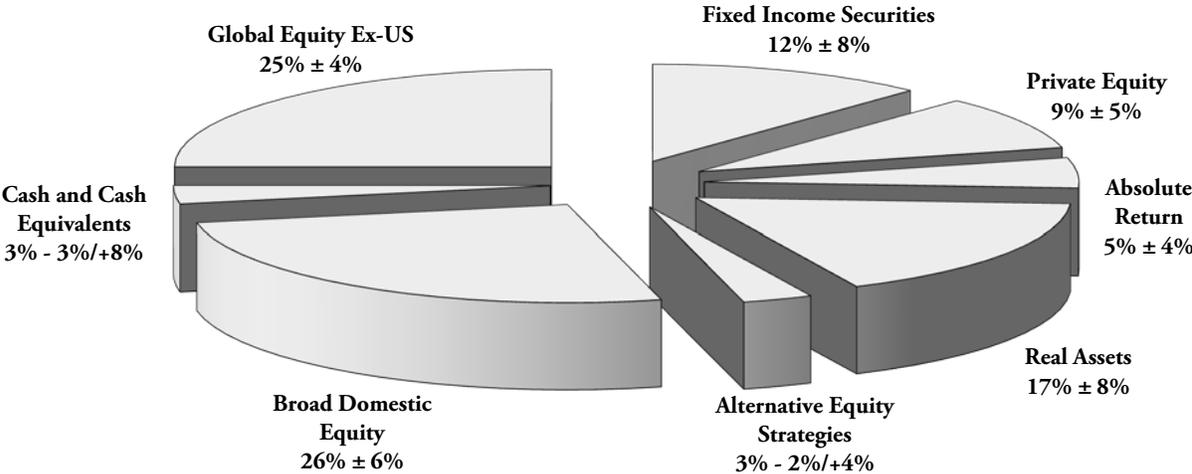
## Teachers' Retirement System Schedule of Investment Results Fiscal Years Ended June 30

	2011	2012	2013	2014	2015	Annualized	
						3 Year	5 Year
<b>Total Fund</b>							
TRS	21.40%	0.51%	12.59%	18.46%	3.30%	11.30%	10.96%
<i>Actuarial Earnings Rate</i>	8.00	8.00	8.00	8.00	8.00	8.00	8.00
<b>U.S. Common Stock Returns</b>							
TRS Domestic Equities	33.38	1.83	21.24	25.45	7.85	18.04	17.44
<i>Custom Composite Index</i>	32.37	3.84	21.46	25.22	7.29	17.73	17.54
<b>Fixed Income</b>							
TRS	5.55	4.82	0.57	5.14	(0.73)	1.63	3.04
<i>Custom Composite Index</i>	5.06	5.08	(0.04)	3.31	0.41	1.22	2.74
<b>Real Assets</b>							
TRS	15.51	10.45	10.65	12.71	3.69	9.13	10.59
<i>Custom Composite Index</i>	12.66	11.41	8.35	10.98	7.99	9.10	10.26
<b>International Stock Returns</b>							
TRS International Equities	28.27	(13.66)	15.03	23.41	(3.28)	11.14	8.74
<i>MSCI ACWI ex-US</i>	30.27	(14.15)	14.14	22.27	(4.85)	9.92	8.23
<b>Private Equity</b>							
TRS	20.12	9.44	11.68	24.19	13.77	16.42	15.71
<i>Custom Composite Index</i>	32.93	(3.61)	21.24	24.01	3.33	15.82	14.76
<b>Absolute Return</b>							
TRS	5.99	(2.05)	8.41	6.51	9.24	8.05	5.54
<i>3-month Treasury Bill +5%</i>	5.16	5.06	5.11	5.05	5.02	5.06	5.08
<b>Alternative Equity</b>							
TRS	—	—	—	24.55	(0.88)	—	—
<i>Custom Composite Index</i>	—	—	—	18.70	4.26	—	—
<b>Cash Equivalents</b>							
TRS	0.46	0.42	0.25	0.26	0.27	0.26	0.33
<i>3-month Treasury Bill</i>	0.16	0.06	0.11	0.05	0.02	0.06	0.08

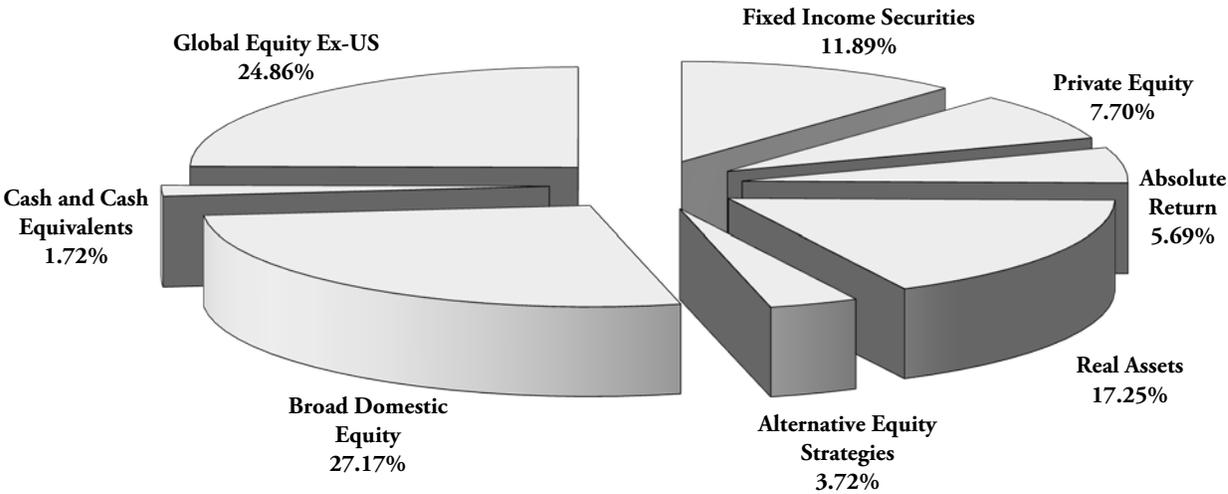
MSCI ACWI =Morgan Stanley Capital International All Country World Index  
Returns for periods longer than one year are reported on an annualized basis.  
Basis of calculation: Time-Weighed rate of return based on the market rate of return.

**Teachers' Retirement System  
Asset Allocation  
June 30, 2015**

**Policy**



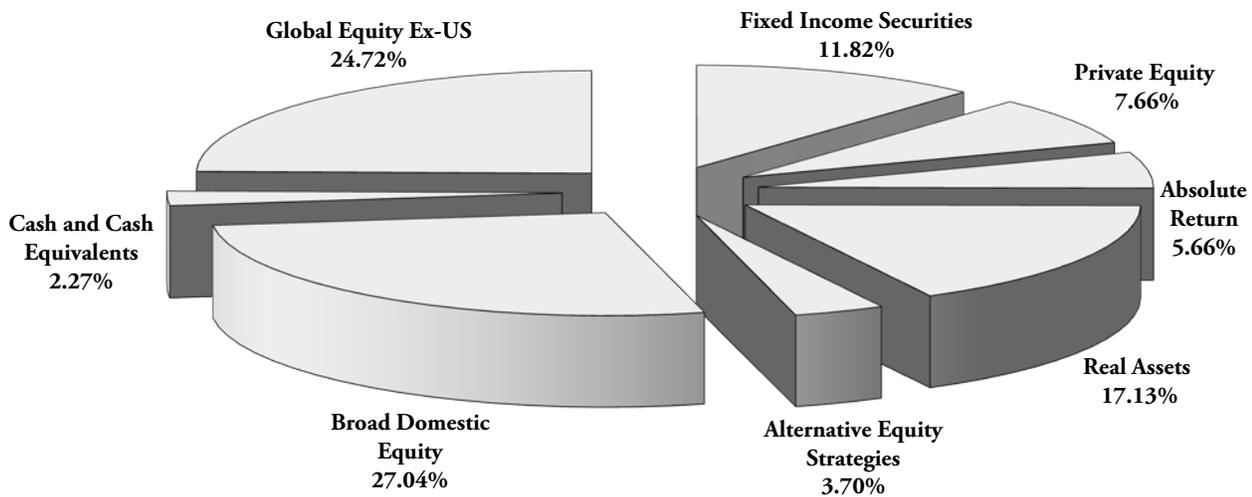
**Actual — Defined Benefit Pension**



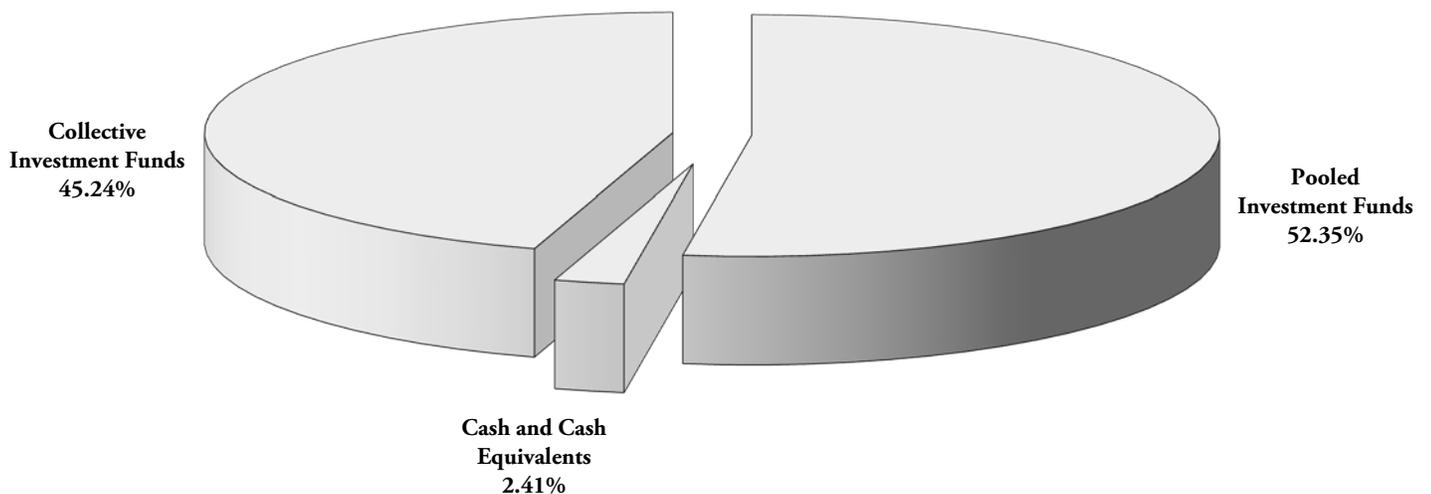
# Investment Section

## Teachers' Retirement System Asset Allocation June 30, 2015

### Actual — Defined Benefit Alaska Retiree Healthcare Trust

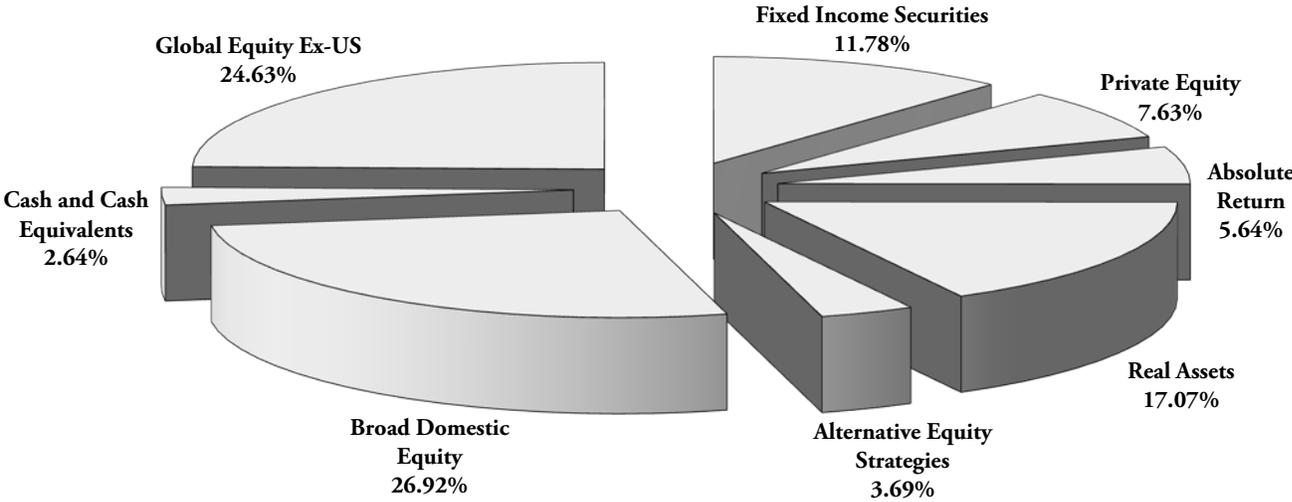


### Actual — Defined Contribution Participant Directed

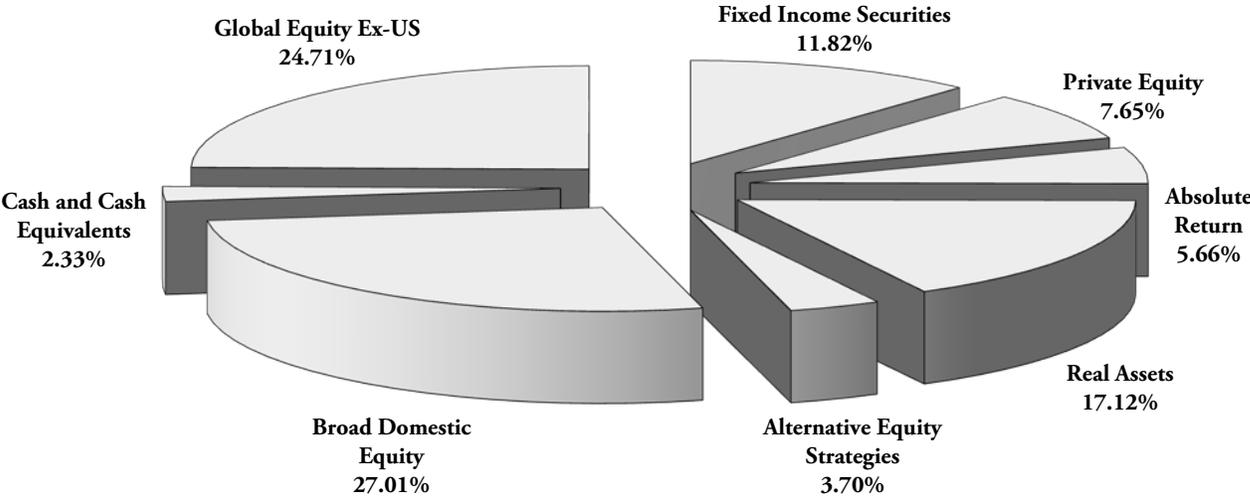


Teachers' Retirement System  
Asset Allocation  
June 30, 2015

Actual — Health Reimbursement Arrangement



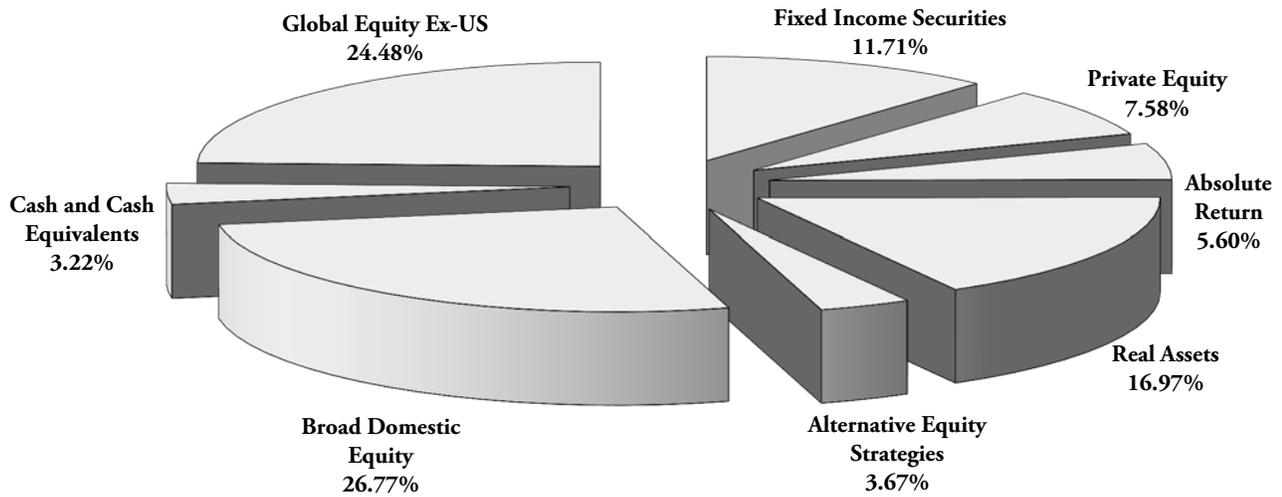
Actual — Occupational Death & Disability



# Investment Section

**Teachers' Retirement System  
Asset Allocation  
June 30, 2015**

**Actual — Retiree Medical Plan**



**Alaska Retirement Management Board**  
**Top Ten Holdings by Asset Type**  
**June 30, 2015**

Invested assets under the fiduciary responsibility of the Alaska Retirement Management Board (ARMB) have been commingled in various investment pools to minimize costs and maximize returns. Treasury Division has created twenty-six different mutual fund-like pools to accomplish the investment asset allocation policies of the ARMB. Using investment pools increases investment efficiency in three ways. First, combining individual funds' cash inflows and outflows to offset each other reduces the amount of cash on hand needed to support daily operations. Second, pooling investments significantly reduces accounting, budgeting, and administrative costs. Finally, the ARMB can achieve economies of scale by making available investment options that could not otherwise be practically provided for smaller retirement funds. Below are the ten largest fixed income and equity holdings.

## Fixed Income

<u>Rank</u>	<u>Largest Fixed Income Holdings</u>	<u>Market Value</u>	<u>Par Value</u>
1	US Treasury 1.750% 9/30/2019	\$61,695,677	\$60,962,241
2	US Treasury 1.375% 2/29/2020	50,417,351	50,858,394
3	US Treasury 0.875% 5/15/2018	49,744,668	49,690,307
4	US Treasury 2.125% 5/15/2025	29,869,536	30,420,915
5	US Treasury 0.750% 4/15/2018	23,922,400	24,048,269
6	US Treasury 1.500% 2/28/2019	23,467,240	23,270,880
7	US Treasury 1.250% 10/31/2018	19,953,120	19,884,756
8	US Treasury 1.500% 8/31/2018	18,806,989	18,564,775
9	US Treasury 1.250% 1/31/2020	11,206,915	11,359,565
10	US Treasury 1.625% 4/30/2019	10,451,050	10,335,581

## Equities

<u>Rank</u>	<u>Largest Equity Holdings</u>	<u>Market Value</u>
1	Apple Inc.	\$61,183,130
2	Microsoft Corp.	35,129,291
3	Exxon Mobil Corp.	29,366,197
4	Wells Fargo & Co.	27,976,852
5	Pfizer Inc.	25,486,103
6	JPMorgan Chase & Co.	25,217,517
7	Johnson & Johnson	24,096,538
8	Citigroup Inc.	20,787,017
9	General Electric Co.	20,762,451
10	Procter & Gamble Co./The	19,877,148

Additional investment information may be obtained from the Department of Revenue, Treasury Division, P.O. Box 110405, Juneau, Alaska 99811-0405.

# Investment Section

## Teachers' Retirement System Schedule of Investment Management Fees Year Ended June 30, 2015

	<u>Total Fair Value</u>	<u>Fees</u>
<b>Fixed Income</b>		
<b>Municipal Bond Pool</b>		
* Guggenheim Partners	\$ 36,943,300	\$ 72,200
* Western Asset Management	38,363,810	78,441
Total Municipal Bond Pool	<u>75,307,110</u>	<u>150,641</u>
<b>High Yield Pool</b>		
* Mackay Shields, LLC	206,319,985	775,142
<b>Tactical Fixed Income</b>		
* Pyramis Global Advisors	40,454,065	88,858
<b>International Fixed Income</b>		
* Mondrian Investment Partners	127,351,428	421,912
<b>Broad Domestic Equity Pools</b>		
* Allianz Global Investors	121,682,556	279,980
* Barrow, Hanley, Mewhinney & Strauss, INC (LC)	119,021,296	350,238
* Barrow, Hanley, Mewhinney & Strauss, INC (SC)	37,266,641	170,833
* DePrince, Race & Zollo Inc.-Micro Cap	29,094,052	278,945
* Frontier Capital Management	35,951,847	256,678
* Jennison Associates LLC	37,437,795	257,757
* Lazard Asset Management	129,807,079	289,163
* Lord Abbett & Co. (Micro)	39,645,513	310,960
* Lord Abbett & Co. (SC)	38,393,921	225,424
* Luther King Cap. Management	36,259,265	169,238
* McKinley Capital	122,341,907	354,659
* Quantitative Management Associates	114,026,545	302,024
* SSgA Future Small Cap	3,990,781	3,283
* SSgA Futures Large Cap	4,717,513	4,032
* SSgA Russell 1000 Growth	389,569,847	40,698
* SSgA Russell 1000 Value	474,895,561	40,966
* SSgA Russell 200	259,322,581	21,110
* SSgA Russell 2000 Growth	6,587,094	2,637
* SSgA Russell 2000 Value	21,639,403	9,181
* SSgA Volatility - Russell 1000	32,972,386	11,753
* SSgA Volatility - Russell 2000	32,745,237	11,530
* Sycamore Capital Management	38,680,185	253,674
* Zebra Capital Management	24,896,008	2,393
Total Domestic Equities	<u>2,150,945,013</u>	<u>3,647,156</u>
<b>Global Equity Ex-U.S.</b>		
* Allianz Global Investors	85,043,704	290,163
* Arrow Street Capital	70,206,866	194,252
* Baillie Gifford Overseas Limited	91,713,356	302,522
* Blackrock ACWI Ex-US IMI	180,377,812	95,838
* Brandes Investment Partners	363,702,479	1,146,307
* Capital Guardian Trust Co.	269,141,856	818,967
* Lazard Freres	134,833,346	172,095
* McKinley Capital Mgmt.	173,699,569	651,386
* Mondrian Investment Partners	51,996,623	320,678
* Schroder Investment Management	55,784,398	361,108
* SSgA	279,535,137	123,046
Total International Equities	<u>1,756,035,146</u>	<u>4,476,362</u>
<b>Alternative Equity Strategies</b>		
<b>Alternative Equity Pool</b>		
* Analytic SSgA Account	94,982,825	104,786
* Quantitative Management Associates MPS	65,719,373	44,831
** Relational Investors, LLC	22,633,846	458,159
Total Alternative Equity	<u>183,336,044</u>	<u>607,776</u>
<b>Convertible Bond Pool</b>		
* Advent Capital	65,684,789	320,002
<b>Private Equity Pool</b>		
* Abbott Capital Management	257,797,867	574,166
** Angelo Gordon & Co.	1,988,690	40,488
** BlumCapital Partners-Strategic	979,142	62,149
** Glendon Opportunities	6,615,238	39,535
** Lexington Partners	15,890,682	137,184
** Merit Capital Partners	4,729,794	94,864
** Neuberger Berman Secondary Opportunities	5,659,212	207,029
** New Mountain Partners	1,803,000	207,745
** NGP XI	741,903	107,342
** Onex Partners	8,114,883	49,274
* Pathway Capital Management	276,971,080	704,404
** Warburg Pincus	14,891,596	168,768
Total Private Equities	<u>596,183,087</u>	<u>2,392,948</u>

**Teachers' Retirement System**  
**Schedule of Investment Management Fees (cont.)**  
**Year Ended June 30, 2013**

	<b>Total Fair Value</b>	<b>Fees</b>
<b>Absolute Return Pool</b>		
** Allianz Global Investors	\$ 70,227,419	\$ 1,512,723
** Crestline Investors Inc.	70,787,701	501,248
** Global Asset Management	125,414,184	834,303
** Prisma Capital Partners	148,897,437	956,777
Total Absolute Return	415,326,741	3,805,051
<b>Real Assets</b>		
<b>Real Estate Pool</b>		
** Almanac Realty Securities IV	740,482	34,811
** Almanac Realty Securities V	5,539,874	76,190
** BlackRock Diamond	5,824,311	86,111
** Colony Investors VIII, L.P.	6,135,709	184,308
** Cornerstone	-	112,050
** Cornerstone Apartment Venture III	75,462	12,247
** Coventry	4,271,540	106,667
** ING Clarion Development Venture III	4,355,522	79,201
** ING Clarion Development Venture 4	3,638,458	1,896
** JPM Strategic	83,654,972	689,711
** KKR	12,431,735	108,700
** LaSalle Separate	49,586,837	270,889
** LaSalle Medical Office Fund II	998,573	25,530
** Lowe Hospitality	588,053	6,723
** Sentinel Separate	67,147,491	325,353
** Silverpeak Real Estate Partners II	14,298,902	160,060
** Silverpeak Real Estate Partners III	2,285,307	54,693
** Tishman Speyer Fund VI	11,998,752	124,889
** Tishman Speyer Fund VII	2,465,621	51,100
** UBS Consolidated	29,119,315	300,116
** UBS Separate	132,453,757	626,119
Total Real Estate	437,610,673	3,437,364
<b>Infrastructure Public Pool</b>		
* Brookfield Investment Management	41,806,267	209,597
* Lazard Asset Management	41,758,765	491,767
Total Infrastructure Public Pool	83,565,032	701,364
<b>Master Limited Partnerships Pool</b>		
* Advisory Research Inc	85,039,208	338,394
* Tortoise MLP	89,944,113	463,127
Total Master Limited Partnerships Pool	174,983,321	801,521
<b>Energy Pool</b>		
** EIG Energy Fund XV	12,270,168	155,167
** EIG Energy Fund XD	2,308,796	26,368
** EIG Energy Fund XIV-A	14,673,144	225,426
** EIG Energy Fund XVI	4,646,611	222,663
Total Energy Pool	33,898,719	629,624
<b>Farmland Pool</b>		
** Hancock Agriculture Investment Group	80,674,508	637,182
** UBS Agrivest	175,702,372	1,349,778
Total Farmland	256,376,880	1,986,960
<b>Timber Pool</b>		
** Hancock Natural Resource Group	33,825,136	235,401
** Timberland Investment Resources	93,974,741	717,621
Total Timber Pool	127,799,877	953,022
<b>Custodian</b>		
* State Street Bank		308,544
<b>Investment Advisory</b>		
* Callan Associates		64,441
* Investment Advisory Council		23,789
* Townsend Group		28,854
Total Investment Advisory		117,084
<b>Investment Performance</b>		
* Callan Associates		77,926
<b>Total External Management Fees</b>		<b>\$ 25,699,257</b>

\*These fees are paid through the Alaska Statewide Accounting System (AKSAS)

\*\*These fees are deducted from earnings by the fund manager and are not directly recorded in AKSAS

# Investment Section

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

Investments (at Fair Value)	Asset Allocation		Fair Market Value	% of Total Assets
	Policy	Range		
<b>Defined Benefit - Pension</b>				
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	3.00%	-3%/+8%	\$ 90,096,133	
Total Cash and Cash Equivalents			<u>90,096,133</u>	1.72%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			289,689,316	
Taxable Municipal Bond Pool			49,887,570	
Tactical Fixed Income			26,798,997	
High Yield Pool			136,677,700	
International Fixed Income Pool			84,364,589	
Emerging Debt Pool			<u>35,759,274</u>	
Total Fixed Income Securities	12.00%	± 8%	<u>623,177,446</u>	11.89%
<b>Broad Domestic Equity</b>				
Large Cap Pool			1,171,457,095	
Small Cap Pool			<u>253,452,741</u>	
Total Broad Domestic Equity	26.00%	± 6%	<u>1,424,909,836</u>	27.17%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			1,091,894,163	
International Equity Small Cap Pool			71,400,075	
Frontier Markets Pool			1,196,068	
Emerging Markets Equity Pool			<u>138,605,300</u>	
Total Global Equity Ex-U.S.	25.00%	± 4%	<u>1,303,095,606</u>	24.86%
<b>Alternative Equity Strategies</b>				
Alternative Equity Strategies			151,622,501	
Convertible Bond Pool			<u>43,513,217</u>	
Total Alternative Equities	3.00%	-2%/+4%	<u>195,135,718</u>	3.72%
<b>Private Equity</b>				
Private Equity Pool			<u>403,605,488</u>	
Total Private Equity	9.00%	± 5%	<u>403,605,488</u>	7.70%
<b>Absolute Return</b>				
Absolute Return Pool			<u>298,331,377</u>	
Total Absolute Return	5.00%	± 4%	<u>298,331,377</u>	5.69%
<b>Real Assets</b>				
Real Estate Pool			291,075,201	
Real Estate Investment Trust Pool			71,955,450	
Infrastructure Private Pool			63,431,701	
Infrastructure Public Pool			55,358,072	
Master Limited Partnership Pool			115,918,573	
Energy Pool			22,456,375	
Farmland Pool			169,838,143	
Timber Pool			84,661,668	
Treasury Inflation Protected Securities Pool			<u>29,398,547</u>	
Total Real Assets	<u>17.00%</u>	± 8%	<u>904,093,730</u>	17.25%
<b>Total Invested Assets</b>	<b><u>100.00%</u></b>		<b><u>\$ 5,242,445,334</u></b>	<b><u>100.00%</u></b>

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

Investments (at Fair Value)	Asset Allocation		Fair Market Value	% of Total Assets
	Policy	Range		
<b>Defined Benefit - Alaska Retiree Health Care Trust</b>				
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	3.00%	-3%/+8%	\$ 59,170,760	
Total Cash and Cash Equivalents			<u>59,170,760</u>	2.27%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			143,231,811	
Taxable Municipal Bond Pool			24,666,036	
Tactical Fixed Income			13,250,296	
High Yield Pool			67,577,897	
International Fixed Income Pool			41,712,593	
Emerging Debt Pool			17,680,547	
Total Fixed Income Securities	12.00%	± 8%	<u>308,119,180</u>	11.82%
<b>Broad Domestic Equity</b>				
Large Cap Pool			579,206,453	
Small Cap Pool			125,315,272	
Total Broad Domestic Equity	26.00%	± 6%	<u>704,521,725</u>	27.04%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			539,867,953	
International Equity Small Cap Pool			35,302,517	
Frontier Markets Pool			591,375	
Emerging Markets Equity Pool			68,530,964	
Total Global Equity Ex-U.S.	25.00%	± 4%	<u>644,292,809</u>	24.72%
<b>Alternative Equity Strategies</b>				
Alternative Equity Strategies			74,967,091	
Convertible Bond Pool			21,514,348	
Total Alternative Equities	3.00%	-2%/+4%	<u>96,481,439</u>	3.70%
<b>Private Equity</b>				
Private Equity Pool			199,555,667	
Total Private Equity	9.00%	± 5%	<u>199,555,667</u>	7.66%
<b>Absolute Return</b>				
Absolute Return Pool			147,504,726	
Total Absolute Return	5.00%	± 4%	<u>147,504,726</u>	5.66%
<b>Real Assets</b>				
Real Estate Pool			143,388,584	
Real Estate Investment Trust Pool			35,577,111	
Infrastructure Private Pool			31,362,695	
Infrastructure Public Pool			27,370,830	
Master Limited Partnership Pool			57,313,909	
Energy Pool			11,103,162	
Farmland Pool			83,973,496	
Timber Pool			41,859,478	
Treasury Inflation Protected Securities Pool			14,535,597	
Total Real Assets	17.00%	± 8%	<u>446,484,862</u>	17.13%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ <u>2,606,131,168</u></b>	<b>100.00%</b>

# Investment Section

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

Investments (at Fair Value)	Asset Allocation		Fair Market Value	% of Total Assets
	Policy	Range		
<b>Defined Contribution - Participant Directed</b>				
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	100.00%	0%	\$ 6,188,350	
Total Cash and Cash Equivalents			<u>6,188,350</u>	2.41%
<b>Pooled Investment Funds (1)</b>				
T. Rowe Price				
Target 2010 Trust			492,947	
Target 2015 Trust			2,304,213	
Target 2020 Trust			5,434,807	
Target 2025 Trust			8,224,217	
Target 2030 Trust			8,843,948	
Target 2035 Trust			13,656,716	
Target 2040 Trust			14,583,592	
Target 2045 Trust			24,371,719	
Target 2050 Trust			33,516,154	
Target 2055 Trust			8,526,511	
Alaska Balanced Fund			1,817,287	
Long-Term Balanced Fund			10,605,257	
Alaska Money Market			1,778,841	
Total Pooled Investment Funds			<u>134,156,209</u>	52.35%
<b>Collective Investment Funds (1)</b>				
State Street Global Advisors				
Money Market Fund			265,867	
S&P Stock Index Fund			13,175,490	
Russell 3000 Index			15,078,390	
Real Estate Investment Trust Index			3,720,312	
World Equity Ex-U.S. Index			10,918,969	
Long U.S. Treasury Bond Index			166,088	
Treasury Inflation Protected Securities Index			1,650,203	
World Government Bond Ex-U.S. Index			3,861,605	
Global Balanced Fund			11,047,922	
Barclays				
Daily Government/Corporate Bond Fund			18,243,408	
Intermediate Bond Fund			115,658	
Brandes Institutional				
Alaska International Equity Fund			15,180,162	
RCM				
Socially Responsible Fund			1,066,828	
T. Rowe Price				
Small-Cap Fund			21,439,157	
Total Collective Investment Funds			<u>115,930,059</u>	45.24%
<b>Total Invested Assets</b>			<u><u>\$ 256,274,618</u></u>	<u><u>100.00%</u></u>

(1) Pooled Investment Funds and Collective Investment Funds are participant directed and therefore are not subject to an asset allocation.

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

<u>Investments (at Fair Value)</u>	<u>Health Reimbursement Arrangement</u>			<u>% of Total Assets</u>
	<u>Asset Allocation</u>		<u>Fair Market Value</u>	
	<u>Policy</u>	<u>Range</u>		
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	3.00%	-3%/+8%	\$ 1,566,780	
Total Cash and Cash Equivalents			<u>1,566,780</u>	2.64%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			3,251,233	
Taxable Municipal Bond Pool			559,897	
Tactical Fixed Income			300,770	
High Yield Pool			1,533,957	
International Fixed Income Pool			946,839	
Emerging Debt Pool			<u>401,332</u>	
Total Fixed Income Securities	12.00%	± 8%	<u>6,994,028</u>	11.78%
<b>Broad Domestic Equity</b>				
Large Cap Pool			13,147,468	
Small Cap Pool			<u>2,844,544</u>	
Total Broad Domestic Equity	26.00%	± 6%	<u>15,992,012</u>	26.92%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			12,254,519	
International Equity Small Cap Pool			801,335	
Frontier Markets Pool			13,424	
Emerging Markets Equity Pool			<u>1,555,592</u>	
Total Global Equity Ex-U.S.	25.00%	± 4%	<u>14,624,870</u>	24.63%
<b>Alternative Equity Strategies</b>				
Alternative Equity Strategies			1,701,686	
Convertible Bond Pool			<u>488,356</u>	
Total Alternative Equities	3.00%	-2%/+4%	<u>2,190,042</u>	3.69%
<b>Private Equity</b>				
Private Equity Pool			<u>4,529,735</u>	
Total Private Equity	9.00%	± 5%	<u>4,529,735</u>	7.63%
<b>Absolute Return</b>				
Absolute Return Pool			<u>3,348,225</u>	
Total Absolute Return	5.00%	± 4%	<u>3,348,225</u>	5.64%
<b>Real Assets</b>				
Real Estate Pool			3,254,792	
Real Estate Investment Trust Pool			807,568	
Infrastructure Private Pool			711,906	
Infrastructure Public Pool			621,293	
Master Limited Partnership Pool			1,300,974	
Energy Pool			252,032	
Farmland Pool			1,906,123	
Timber Pool			950,173	
Treasury Inflation Protected Securities Pool			<u>329,945</u>	
Total Real Assets	<u>17.00%</u>	± 8%	<u>10,134,806</u>	<u>17.07%</u>
<b>Total Invested Assets</b>	<b><u>100.00%</u></b>		<b><u>\$ 59,380,498</u></b>	<b><u>100.00%</u></b>

# Investment Section

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

<u>Investments (at Fair Value)</u>	<u>Asset Allocation</u>		<u>Occupational Death and Disability</u>	
	<u>Policy</u>	<u>Range</u>	<u>Fair Market Value</u>	<u>% of Total Assets</u>
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	3.00%	-3%/+8%	\$ 73,878	
Total Cash and Cash Equivalents			<u>73,878</u>	2.33%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			173,808	
Taxable Municipal Bond Pool			29,932	
Tactical Fixed Income			16,079	
High Yield Pool			82,004	
International Fixed Income Pool			50,617	
Emerging Debt Pool			21,455	
Total Fixed Income Securities	12.00%	± 8%	<u>373,895</u>	11.82%
<b>Broad Domestic Equity</b>				
Large Cap Pool			702,850	
Small Cap Pool			152,067	
Total Broad Domestic Equity	26.00%	± 6%	<u>854,917</u>	27.01%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			655,114	
International Equity Small Cap Pool			42,839	
Frontier Markets Pool			717	
Emerging Markets Equity Pool			83,160	
Total Global Equity Ex-U.S.	25.00%	± 4%	<u>781,830</u>	24.71%
<b>Alternative Equity Strategies</b>				
Alternative Equity Strategies			90,970	
Convertible Bond Pool			26,107	
Total Alternative Equities	3.00%	-2%/+4%	<u>117,077</u>	3.70%
<b>Private Equity</b>				
Private Equity Pool			242,155	
Total Private Equity	9.00%	± 5%	<u>242,155</u>	7.65%
<b>Absolute Return</b>				
Absolute Return Pool			178,992	
Total Absolute Return	5.00%	± 4%	<u>178,992</u>	5.66%
<b>Real Assets</b>				
Real Estate Pool			173,998	
Real Estate Investment Trust Pool			43,172	
Infrastructure Private Pool			38,057	
Infrastructure Public Pool			33,213	
Master Limited Partnership Pool			69,549	
Energy Pool			13,473	
Farmland Pool			101,900	
Timber Pool			50,796	
Treasury Inflation Protected Securities Pool			17,639	
Total Real Assets	<u>17.00%</u>	± 8%	<u>541,797</u>	17.12%
<b>Total Invested Assets</b>	<b><u>100.00%</u></b>		<b><u>\$ 3,164,541</u></b>	<b><u>100.00%</u></b>

## Teachers' Retirement System Investment Summary Schedule June 30, 2015

<u>Investments (at Fair Value)</u>	<u>Retiree Medical Plan</u>			<u>% of Total Assets</u>
	<u>Asset Allocation</u>		<u>Fair Market Value</u>	
	<u>Policy</u>	<u>Range</u>		
<b>Cash and Cash Equivalents</b>				
Short-term Fixed Income Pool	3.00%	-3%/+8%	\$ 562,330	
Total Cash and Cash Equivalents			<u>562,330</u>	3.22%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			950,437	
Taxable Municipal Bond Pool			163,675	
Tactical Fixed Income			87,924	
High Yield Pool			448,423	
International Fixed Income Pool			276,790	
Emerging Debt Pool			<u>117,323</u>	
Total Fixed Income Securities	12.00%	± 8%	<u>2,044,572</u>	11.71%
<b>Broad Domestic Equity</b>				
Large Cap Pool			3,843,412	
Small Cap Pool			<u>831,549</u>	
Total Broad Domestic Equity	26.00%	± 6%	<u>4,674,961</u>	26.77%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			3,582,375	
International Equity Small Cap Pool			234,255	
Frontier Markets Pool			3,924	
Emerging Markets Equity Pool			<u>454,748</u>	
Total Global Equity Ex-U.S.	25.00%	± 4%	<u>4,275,302</u>	24.48%
<b>Alternative Equity Strategies</b>				
Alternative Equity Strategies			497,455	
Convertible Bond Pool			<u>142,762</u>	
Total Alternative Equities	3.00%	-2%/+4%	<u>640,217</u>	3.67%
<b>Private Equity</b>				
Private Equity Pool			<u>1,324,182</u>	
Total Private Equity	9.00%	± 5%	<u>1,324,182</u>	7.58%
<b>Absolute Return</b>				
Absolute Return Pool			<u>978,790</u>	
Total Absolute Return	5.00%	± 4%	<u>978,790</u>	5.60%
<b>Real Assets</b>				
Real Estate Pool			951,476	
Real Estate Investment Trust Pool			236,077	
Infrastructure Private Pool			208,112	
Infrastructure Public Pool			181,624	
Master Limited Partnership Pool			380,315	
Energy Pool			73,677	
Farmland Pool			557,219	
Timber Pool			277,765	
Treasury Inflation Protected Securities Pool			<u>96,453</u>	
Total Real Assets	17.00%	± 8%	<u>2,962,718</u>	16.97%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ 17,463,072</b>	<b>100.00%</b>

# Investment Section

## Teachers' Retirement System Recaptured Commission Fees Year Ended June 30, 2015

<b>Fund</b>	<b>Domestic Equity Pool</b>	<b>International Equity Pool</b>	<b>Total</b>
Defined Benefit Plan - Pension	\$2,173	\$1,485	\$3,658
Postemployment Benefit - Alaska Retiree Healthcare Trust	1,074	734	1,808
Postemployment Benefit - Health Reimbursement Arrangement	24	17	41
Postemployment Benefit - Occupational Death & Disability	1	1	2
Postemployment Benefit - Retiree Medical Plan	7	5	12
<b>Total Recapture Commission Fees</b>	<b>\$3,279</b>	<b>\$2,242</b>	<b>\$5,521</b>

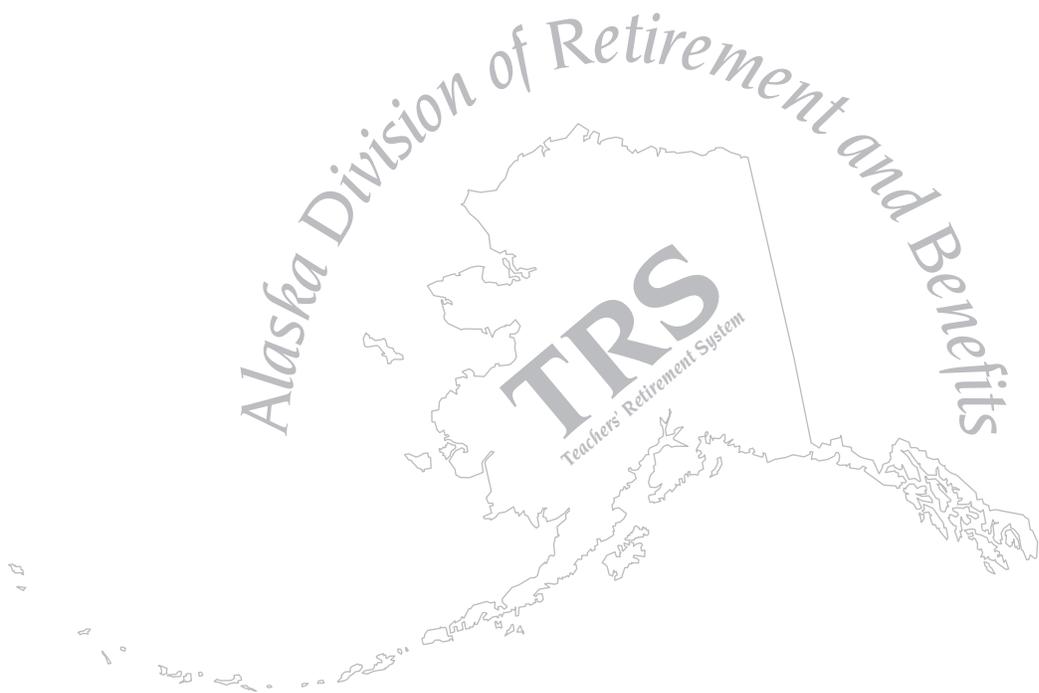
The ARMB's Commission Recapture program has been in place since 1995, first working with various brokers then switching to the State Street program in 2005. Under a commission recapture program a portion of the commissions and mark-ups on trades (placed through the State Street broker network) flow directly back to the fund.

The program allows managers to place trades for commission recapture purposes. The ARMB has established direction percentages for the managers to strive for, but is only requiring best efforts to meet them given their fiduciary obligation to achieve best execution of transactions.

The current rebate arrangement with State Street Global Markets (SSGM) is: 90% of the commissions received in excess of executing the brokers' execution-only rates; 100% of commissions in excess of its execution-only rates for all trading directed through SSGM.



# ACTUARIAL SECTION





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October 6, 2015

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

**Melissa A. Bissett**

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**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, 2014 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, 2014. 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) and as required by Alaska state statutes. 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 percentage of payroll over a closed 25-year period and as required by Alaska state statutes.

# Actuarial Section

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In accordance with Senate Bill 119, signed into law May 28, 2014, and HB 385, signed into law on June 23, 2014, the following changes are effective for this June 30, 2014 actuarial valuation:

- The amortization method used for funding changed from the level dollar amount to the level percentage of payroll method and the amortization period is re-initialized to a closed 25-year period from June 30, 2014.
- The additional state contribution for fiscal year ending June 30, 2015 is exactly \$2,000,000,000.
- The two-year rate setting time lag is intended to be eliminated. The two-year lag in the setting of contribution rates is replaced by a two-year roll forward of liabilities and projected normal costs and a one-year roll forward of June 30, 2015 assets.
- The Actuarial Value of Assets is reset to the Fair Value as of June 30, 2014. The five-year smoothing method with grow-in will be implemented over the next five years.
- The 20% corridor over/under the Fair Value of Assets is eliminated in the calculation of the Actuarial Value of Assets.

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 2014. 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 claim cost rates effective June 30, 2014 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 6.

The assumptions and methods used to determine the Actuarially Determined Contributions (ADC) 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. 67, 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 trend data schedule under GASB No. 43 that is 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.

# Actuarial Section

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Both of the undersigned are Associates 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,

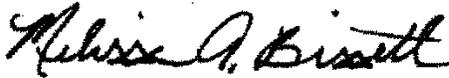


David H. Sliskinsky, ASA, MAAA, FCA  
Principal, Consulting Actuary



Todd D. Kanaster, ASA, MAAA, FCA  
Senior Consultant

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, FSA, MAAA  
Senior Consultant, Health & Productivity

# Actuarial Section

**State of Alaska**  
**Teachers' Retirement System**  
**Defined Benefit Retirement Plan**  
**Description of Actuarial Methods and Valuation Procedures**

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 percentage of payroll amount. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit and defined contribution member payroll combined.

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**

The actuarial asset value was reinitialized to equal Fair Value of Assets as of June 30, 2014. Beginning in 2015, the asset value method will recognize 20% of the gain or loss each year, for a period of up to 5 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.

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**State of Alaska**  
**Teachers' Retirement System**  
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**Description of Actuarial Methods and Valuation Procedures**

## **C. Changes in Methods Since the Prior Valuation**

In accordance with Senate Bill 119, signed into law May 28, 2014, and HB 385, signed into law on June 23, 2014, the following changes are effective for this June 30, 2014 actuarial valuation:

- The amortization method used for funding changed from the level dollar amount to the level percentage of payroll method and the amortization period is re-initialized to a closed 25-year period from June 30, 2014.
- The additional state contribution for fiscal year ending June 30, 2015 is exactly \$2,000,000,000.
- The two-year rate setting time lag is intended to be eliminated. The two-year lag in the setting of contribution rates is replaced by a two-year roll forward of liabilities and projected normal costs and a one-year roll forward of June 30, 2015 assets.
- The Actuarial Value of Assets is reset to the Fair Value as of June 30, 2014. The five-year smoothing method with grow-in will be implemented over the next five years.
- The 20% corridor over/under the Fair Value of Assets is eliminated in the calculation of the Actuarial Value of Assets.

## **D. 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, 2014 to June 30, 2015.

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 nonprescription 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 management level reporting for fiscal 2011 through 2014 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 historic management level reporting from HealthSmart does not show claims or enrollment separately for Medicare and non-Medicare plan participants, but does include overall statistics as to the

**State of Alaska**  
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percentage of claims and enrollment attributable to both groups. Historical claim level reporting and estimated impacts of Medicare coordination and plan design were used to augment cost data by Medicare status. Aetna does provide separate experience by Medicare status and will be incorporated into per capita rate development as credible experience emerges.

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 Aetna, 0.33% of the current retiree (including dependents) 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.

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 incurred 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 deemed incurred claim data from HealthSmart management reports to be complete for fiscal 2011, 2012 and 2013. Fiscal 2014 medical claim data was completed using a factor of 0.81; fiscal 2014 prescription claim data was completed using a factor of 0.92 – these factors were derived from historic completion patterns for AlaskaCare retiree claims. Incurred claim cost rates are projected forward to the valuation year using a blend of Alaska plan-specific trend and national trend rates over the same period, with Alaska experience receiving 75% weight, national trend 25%. These weighted trend factors for this purpose for the current valuation are as follows:

Experience Period	Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year		Weighting Factors
	Medical	Prescription	
FY 2010 to FY 2011	8.1%	4.5%	10.0%
FY 2011 to FY 2012	8.3%	5.1%	20.0%
FY 2012 to FY 2013	8.9%	7.1%	40.0%
FY 2013 to FY 2014	7.7%	6.5%	30.0%

**State of Alaska**  
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5. For per capital claim cost development, medical claims were trended on a composite basis for pre-Medicare vs. Medicare due to limited reporting as noted in #2 above. Trend assumptions used for rate development are assessed annually and as additional/improved reporting becomes available, we will incorporate into rate development as appropriate.
6. 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 other than noted fees 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 impact to be immaterial to the accrued liability based on a blend of pre-Medicare and Medicare retirees and the projected impact to future healthcare cost trends due to the estimated tax.

Patient-centered outcomes research fees are included in the admin fees.

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.

# Actuarial Section

**State of Alaska**  
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**Defined Benefit Retirement Plan**  
**Description of Actuarial Methods and Valuation Procedures**

**June 30, 2014 Valuation – FY 2015 Claims Cost Rates**

	Medical		
	Pre-Medicare	Medicare A&B	Medicare B Only
<b>Fiscal 2011 Incurred Claims</b>	<b>\$232,724,861</b>	<b>\$55,613,464</b>	<b>\$849,158</b>
Membership	31,362	29,997	136
Paid Claims Cost Rate	\$7,421	\$1,854	\$6,153
Trend to FY2015	1.372	1.372	1.372
FY2015 Paid Cost Rate	\$10,182	\$2,544	\$8,443
Provider Contracting Factor	0.970	0.993	0.993
<b>FY 2015 Incurred Cost Rate</b>	<b>\$9,876</b>	<b>\$2,526</b>	<b>\$8,384</b>
<b>Fiscal 2012 Incurred Claims</b>	<b>\$233,755,671</b>	<b>\$71,481,207</b>	<b>\$1,587,051</b>
Membership	29,500	33,631	208
Paid Claims Cost Rate	\$7,924	\$2,125	\$7,630
Trend to FY2015	1.269	1.269	1.269
FY2015 Paid Cost Rate	\$10,058	\$2,698	\$9,685
Provider Contracting Factor	0.970	0.970	0.970
<b>FY 2015 Incurred Cost Rate</b>	<b>\$9,757</b>	<b>\$2,617</b>	<b>\$9,395</b>
<b>Fiscal 2013 Incurred Claims</b>	<b>\$240,038,962</b>	<b>\$73,485,175</b>	<b>\$1,901,568</b>
Membership	27,037	37,913	217
Paid Claims Cost Rate	\$8,878	\$1,938	\$8,763
Trend to FY2015	1.172	1.172	1.172
FY2015 Paid Cost Rate	\$10,407	\$2,272	\$10,272
Provider Contracting Factor	0.970	0.970	0.970
<b>FY 2015 Incurred Cost Rate</b>	<b>\$10,094</b>	<b>\$2,204</b>	<b>\$9,963</b>
<b>Fiscal 2014 Incurred Claims</b>	<b>\$264,308,816</b>	<b>\$81,160,409</b>	<b>\$2,901,430</b>
Membership	24,486	42,311	223
Paid Claims Cost Rate	\$10,794	\$1,918	\$13,011
Trend to FY2015	1.076	1.076	1.076
FY2015 Paid Cost Rate	\$11,613	\$2,064	\$13,998
Provider Contracting Factor	0.985	0.985	0.985
<b>FY 2015 Incurred Cost Rate</b>	<b>\$11,439</b>	<b>\$2,033</b>	<b>\$13,788</b>
Weighted Average 7/1/2014-6/30/2015 Incurred Claims Cost Rates:			
At average age	\$10,408	\$2,267	\$10,839
At age 65	\$12,362	\$1,657	\$7,920

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June 30, 2014 Valuation – FY 2015 Claims Cost Rates (cont.)

	Prescription Drugs			Total
	Pre-Medicare	Medicare A&B	Medicare B Only	
<b>Fiscal 2011 Incurred Claims</b>	<b>\$48,405,895</b>	<b>\$85,637,669</b>	<b>\$393,968</b>	<b>\$423,625,015</b>
Membership	31,362	29,997	138	61,497
Paid Claims Cost Rate	\$1,543	\$2,855	\$2,855	\$6,889
Trend to FY2015	1.253	1.253	1.253	
FY2015 Paid Cost Rate	\$1,934	\$3,576	\$3,576	\$9,191
Provider Contracting Factor	0.967	0.967	0.967	
<b>FY2015 Incurred Cost Rate</b>	<b>\$1,870</b>	<b>\$3,458</b>	<b>\$3,458</b>	<b>\$8,936</b>
<b>Fiscal 2012 Incurred Claims</b>	<b>\$50,508,869</b>	<b>\$95,412,095</b>	<b>\$590,097</b>	<b>\$453,334,990</b>
Membership	29,500	33,631	208	63,339
Paid Claims Cost Rate	\$1,712	\$2,837	\$2,837	\$7,157
Trend to FY2015	1.199	1.199	1.199	
FY2015 Paid Cost Rate	\$2,053	\$3,401	\$3,401	\$8,922
Provider Contracting Factor	0.967	0.967	0.967	
<b>FY2015 Incurred Cost Rate</b>	<b>\$1,985</b>	<b>\$3,289</b>	<b>\$3,289</b>	<b>\$8,646</b>
<b>Fiscal 2013 Incurred Claims</b>	<b>\$52,633,265</b>	<b>\$99,470,696</b>	<b>\$569,334</b>	<b>\$468,099,000</b>
Membership	27,037	37,913	217	65,167
Paid Claims Cost Rate	\$1,947	\$2,624	\$2,624	\$7,183
Trend to FY2015	1.140	1.140	1.140	
FY2015 Paid Cost Rate	\$2,220	\$2,992	\$2,992	\$8,345
Provider Contracting Factor	0.967	0.967	0.967	
<b>FY2015 Incurred Cost Rate</b>	<b>\$2,147</b>	<b>\$2,893</b>	<b>\$2,893</b>	<b>\$8,087</b>
<b>Fiscal 2014 Incurred Claims</b>	<b>\$45,236,118</b>	<b>\$131,470,349</b>	<b>\$692,910</b>	<b>\$525,770,032</b>
Membership	24,486	42,311	223	67,020
Paid Claims Cost Rate	\$1,847	\$3,107	\$3,107	\$7,845
Trend to FY2015	1.065	1.065	1.065	
FY2015 Paid Cost Rate	\$1,967	\$3,308	\$3,308	\$8,411
Provider Contracting Factor	0.984	0.984	0.984	
<b>FY2015 Incurred Cost Rate</b>	<b>\$1,935</b>	<b>\$3,254</b>	<b>\$3,254</b>	<b>\$8,280</b>
Weighted Average 7/1/2014-6/30/2015 Incurred Claims Cost Rates:				
At average age	\$2,023	\$3,137	\$3,137	\$8,342
At age 65	\$2,624	\$2,624	\$2,624	\$8,132

# Actuarial Section

**State of Alaska**  
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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, 2014 through June 30, 2015**

<b>Age</b>	<b>Medical and Medicare Parts A &amp; B</b>	<b>Medical and Medicare Part B Only</b>	<b>Prescription Drug</b>	<b>Medicare Retiree Drug Subsidy</b>
45	\$6,846	\$6,846	\$1,384	\$ —
50	7,746	7,746	1,644	—
55	8,764	8,764	1,953	—
60	10,408	10,408	2,263	—
65	1,657	7,920	2,624	507
70	2,016	9,636	2,827	546
75	2,394	11,442	3,015	583
80	2,579	12,326	3,091	597

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The demographic and economic assumptions used in the June 30, 2014 valuation are described below. These assumptions were adopted by the Board in December 2014. These assumptions were the result of an experience study performed as of June 30, 2013.

- |     |                                 |  |
|-----|---------------------------------|--|
| 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 2010-2013 actual experience. (See Table 2). 68% of male rates and 60% of female rates of post-termination mortality. Deaths are assumed to result from non-occupational causes 85% of the time.                                 |
| 6.  | Mortality (Post-termination)*   | Based upon the 2010-2013 actual experience. (See Table 3). 94% of male and 97% of female rates of RP-2000, 2000 Base Year projection to 2018 with Projection Scale BB, with a 3-year setback for males and a 4-year setback for females.       |
| 7.  | Turnover                        | Select and ultimate rates based upon the 2010-2013 actual withdrawal experience. (See Table 4).  |
| 8.  | Disability                      | Incidence rates based upon the 2010-2013 actual experience, in accordance with Table 5. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB. |
| 9.  | Retirement                      | Retirement rates based upon the 2010-2013 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            | 5% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with non-vested 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 2014 with an Actual Deaths to Expected Deaths ratio of 110%.

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14. Sick Leave 4.5 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. Postretirement Pension Adjustment 50% and 75% of assumed inflation, or 1.56% and 2.34% respectively, is valued for the annual automatic Postretirement 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 0.75 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.
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. Per Capita Claims Cost Sample claims cost rates adjusted to age 65 for FY15 medical benefits are shown below:
- |                      | <u>Medical</u> | <u>Prescription<br/>drugs</u> |
|----------------------|----------------|-------------------------------|
| Pre-Medicare         | \$ 12,362      | 2,624                         |
| Medicare Parts A & B | 1,657          | 2,624                         |
| Medicare Part B Only | 7,920          | 2,624                         |
| Medicare Part D      | N/A            | 507                           |
22. Third Party Administrator Fees \$193.98 per person per year; assumed trend rate of 5% per year.
23. 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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24. 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, 10.0% is applied to the FY15 pre-Medicare medical claims costs to get the FY16 medical claims costs.

Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2015	10.0%	6.0%	6.0%
2016	9.4	5.9	5.7
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

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.

25. 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
84-95	0.5	—
94 +	—	—

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26. 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 FY15 contributions based on monthly rates shown below for calendar 2014 and 2015 are assumed based on the coverage category for current retirees. The composite 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:

Coverage category	Calendar 2015		Calendar 2014
	Annual contribution	Monthly contribution	Monthly contribution
Retiree only	\$ 9,876	823	823
Retiree and spouse	19,764	1,647	1,647
Retiree and child(ren)	13,956	1,163	1,163
Retiree and family	23,844	1,987	1,987
Composite	14,676	1,223	1,223

27. Trend Rate for Retired Member Medical Contribution

The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 7.0% is applied to the FY15 retired member medical contributions to get the FY16 retired member medical contributions.

Fiscal year:	
2015	7.0%
2016	6.6
2017	6.2
2018	5.8
2019	5.4
2020	5.0
2025	4.1
2050	4.0
2100	4.0

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2014 valuation. Note that actual FY15 retired member medical contributions are reflected in the valuation so trend on such contribution during FY15 is not applicable.

28. 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.

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**Table 1**  
**Alaska TRS**  
**Salary Scale**

Years of Service	Percent Increase
0	8.11%
1	7.51
2	6.91
3	6.41
4	6.11
5	6.11
6	5.90
7	5.69
8	5.55
9	5.40
10	5.26
11	5.11
12	4.96
13	4.84
14	4.72
15	4.60
16	4.49
17	4.37
18	4.27
19	4.17
20	4.07
21	3.97
21+	3.87

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**Table 2**  
**Alaska TRS**  
**Mortality Table (Pre-termination)**

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.000182	0.000098	53	0.001295	0.000855
21	0.000191	0.000101	54	0.001483	0.000908
22	0.000200	0.000104	55	0.001615	0.000985
23	0.000209	0.000105	56	0.001766	0.001054
24	0.000216	0.000105	57	0.001901	0.001132
25	0.000222	0.000106	58	0.002117	0.001221
26	0.000226	0.000107	59	0.002409	0.001344
27	0.000228	0.000109	60	0.002643	0.001501
28	0.000228	0.000111	61	0.002917	0.001659
29	0.000229	0.000114	62	0.003229	0.001837
30	0.000231	0.000118	63	0.003599	0.002080
31	0.000238	0.000123	64	0.004021	0.002367
32	0.000249	0.000130	65	0.004504	0.002723
33	0.000269	0.000137	66	0.005057	0.003118
34	0.000302	0.000146	67	0.005594	0.003582
35	0.000340	0.000169	68	0.006202	0.004036
36	0.000382	0.000193	69	0.007017	0.004546
37	0.000425	0.000217	70	0.007828	0.005130
38	0.000468	0.000240	71	0.008702	0.005696
39	0.000509	0.000262	72	0.009643	0.006297
40	0.000547	0.000283	73	0.010813	0.006959
41	0.000584	0.000305	74	0.011964	0.007841
42	0.000618	0.000330	75	0.013285	0.008701
43	0.000653	0.000357	76	0.014797	0.009678
44	0.000692	0.000389	77	0.016508	0.010757
45	0.000736	0.000427	78	0.018423	0.011923
46	0.000787	0.000470	79	0.020534	0.013163
47	0.000846	0.000517	80	0.022841	0.014502
48	0.000913	0.000567	81	0.025382	0.015972
49	0.000979	0.000620	82	0.028208	0.017607
50	0.001050	0.000674	83	0.031344	0.019438
51	0.001126	0.000731	84	0.035081	0.021486
52	0.001208	0.000791	85	0.039193	0.023782

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**Table 3**  
**Alaska TRS**  
**Mortality Table (Post-termination)**

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
50	0.001544	0.001124	85	0.057637	0.039636
51	0.001656	0.001219	86	0.064248	0.043940
52	0.001777	0.001318	87	0.072770	0.048789
53	0.001904	0.001424	88	0.082264	0.054261
54	0.002181	0.001513	89	0.092884	0.060450
55	0.002375	0.001641	90	0.104794	0.068659
56	0.002597	0.001756	91	0.118129	0.077983
57	0.002795	0.001887	92	0.132941	0.088452
58	0.003113	0.002035	93	0.149196	0.100021
59	0.003543	0.002240	94	0.165479	0.112560
60	0.003887	0.002501	95	0.182705	0.125866
61	0.004289	0.002765	96	0.200693	0.139699
62	0.004749	0.003062	97	0.219249	0.153813
63	0.005293	0.003466	98	0.233940	0.164973
64	0.005913	0.003946	99	0.252821	0.178741
65	0.006624	0.004538	100	0.267022	0.188730
66	0.007436	0.005196	101	0.285888	0.201393
67	0.008227	0.005970	102	0.299408	0.209540
68	0.009121	0.006727	103	0.318102	0.220440
69	0.010318	0.007576	104	0.331094	0.226232
70	0.011511	0.008550	105	0.349384	0.237489
71	0.012798	0.009494	106	0.360058	0.246863
72	0.014180	0.010494	107	0.368483	0.258063
73	0.015902	0.011599	108	0.374013	0.270683
74	0.017595	0.013068	109	0.376000	0.284323
75	0.019536	0.014502	110	0.376000	0.298577
76	0.021760	0.016130	111	0.376000	0.313043
77	0.024276	0.017929	112	0.376000	0.327318
78	0.027093	0.019871	113	0.376000	0.340998
79	0.030198	0.021938	114	0.376000	0.353678
80	0.033590	0.024170	115	0.376000	0.364959
81	0.037326	0.026620	116	0.376000	0.374435
82	0.041482	0.029345	117	0.376000	0.381702
83	0.046095	0.032397	118	0.376000	0.386359
84	0.051589	0.035811	119	0.376000	0.388000

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Table 4  
 Alaska TRS  
 Turnover Assumptions

**Select Rates of Turnover During the First 8 Year of Employment**

Service	Female	Male
0	0.170	0.204
1	0.170	0.204
2	0.140	0.168
3	0.120	0.144
4	0.100	0.120
5	0.090	0.108
6	0.075	0.090
7	0.060	0.072

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

Age	Female	Male	Age	Female	Male
15	0.037185	0.031209	40	0.036224	0.030159
16	0.037157	0.031170	41	0.036155	0.030085
17	0.037138	0.031138	42	0.036086	0.030010
18	0.037129	0.031107	43	0.035976	0.029866
19	0.037120	0.031091	44	0.035867	0.029721
20	0.036848	0.030847	45	0.035757	0.029577
21	0.036848	0.030831	46	0.035648	0.029432
22	0.036839	0.030799	47	0.035538	0.029288
23	0.036839	0.030776	48	0.035380	0.029046
24	0.036830	0.030736	49	0.035221	0.028805
25	0.036830	0.030705	50	0.035063	0.028563
26	0.036820	0.030673	51	0.034847	0.028248
27	0.036762	0.030642	52	0.034595	0.027878
28	0.041480	0.030610	53	0.034296	0.027468
29	0.046198	0.030579	54	0.059961	0.046305
30	0.050917	0.030555	55	0.059285	0.045414
31	0.055635	0.030540	56	0.058410	0.044334
32	0.060353	0.030516	57	0.057288	0.043012
33	0.055569	0.030500	58	0.056018	0.041567
34	0.050784	0.030455	59	0.054401	0.039826
35	0.046000	0.030431	60	0.052569	0.037868
36	0.041215	0.030407	61	0.050523	0.035694
37	0.036431	0.030383	62	0.048197	0.033170
38	0.036362	0.030308	63	0.045540	0.030294
39	0.036293	0.030234	64	0.042653	0.027176
			65+	0.066000	0.054000

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**Table 5**  
**Alaska TRS Disability Table**

Age	Unisex
20	0.000560
21	0.000563
22	0.000565
23	0.000574
24	0.000583
25	0.000593
26	0.000602
27	0.000611
28	0.000611
29	0.000612
30	0.000612
31	0.000613
32	0.000613
33	0.000622
34	0.000631
35	0.000641
36	0.000650
37	0.000659
38	0.000674
39	0.000689
40	0.000703
41	0.000718
42	0.000733
43	0.000770
44	0.000806
45	0.000843
46	0.000879
47	0.000916
48	0.000975
49	0.001034
50	0.001093
51	0.001152
52	0.001211
53	0.001356
54	0.001501

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**Table 6**  
**Alaska TRS Retirement Table**

Age at Retirement	Retirement Rate		
	Reduced	Unreduced	
	Unisex Rates	Male	Female
<45	N/A	0.03	0.03
46	N/A	0.05	0.05
47	N/A	0.05	0.08
48	N/A	0.05	0.08
49	N/A	0.05	0.08
50	0.08	0.50	0.13
51	0.08	0.80	0.12
52	0.08	0.15	0.12
53	0.08	0.15	0.13
54	0.16	0.15	0.14
55	0.08	0.20	0.16
56	0.08	0.17	0.16
57	0.08	0.15	0.16
58	0.08	0.20	0.16
59	0.16	0.20	0.22
60	N/A	0.25	0.22
61	N/A	0.18	0.22
62	N/A	0.18	0.20
63	N/A	0.18	0.20
64	N/A	0.18	0.25
65	N/A	0.30	0.20
66	N/A	0.25	0.20
67	N/A	0.25	0.20
68	N/A	0.25	0.25
69	N/A	0.35	0.25
70	N/A	0.30	0.25
71	N/A	0.30	0.35
72	N/A	0.30	0.35
73	N/A	0.30	0.35
74	N/A	0.30	0.35
75-84	N/A	0.50	
85+	N/A	1.00	

**State of Alaska**  
**Teachers' Retirement System**  
**Defined Benefit Retirement Plan**  
**Summary of Actuarial Assumptions and Changes in Assumptions**

Table 7  
 Alaska TRS  
 Disabled Mortality Rates

Age	Female	Male	Age	Female	Male
≤45	0.0071	0.0214	80	0.0582	0.0833
46	0.0078	0.0226	81	0.0621	0.0880
47	0.0085	0.0238	82	0.0662	0.0928
48	0.0093	0.0250	83	0.0707	0.0978
49	0.0101	0.0262	84	0.0755	0.1028
50	0.0109	0.0275	85	0.0806	0.1079
51	0.0118	0.0287	86	0.0862	0.1130
52	0.0127	0.0299	87	0.0921	0.1204
53	0.0137	0.0311	88	0.0985	0.1282
54	0.0144	0.0324	89	0.1054	0.1362
55	0.0151	0.0336	90	0.1148	0.1503
56	0.0158	0.0348	91	0.1249	0.1667
57	0.0164	0.0354	92	0.1359	0.1841
58	0.0171	0.0359	93	0.1475	0.2022
59	0.0176	0.0365	94	0.1611	0.2209
60	0.0182	0.0370	95	0.1745	0.2400
61	0.0188	0.0376	96	0.1877	0.2594
62	0.0194	0.0382	97	0.2003	0.2790
63	0.0204	0.0389	98	0.2084	0.2934
64	0.0214	0.0396	99	0.2192	0.3128
65	0.0226	0.0404	100	0.2250	0.3264
66	0.0238	0.0413	101	0.2362	0.3459
67	0.0252	0.0422	102	0.2455	0.3585
68	0.0267	0.0434	103	0.2613	0.3762
69	0.0284	0.0454	104	0.2741	0.3850
70	0.0303	0.0477	105	0.2931	0.3979
71	0.0323	0.0502	106	0.3078	0.4000
72	0.0345	0.0529	107	0.3227	0.4000
73	0.0368	0.0558	108	0.3374	0.4000
74	0.0393	0.0591	109	0.3515	0.4000
75	0.0420	0.0625	110	0.3646	0.4000
76	0.0449	0.0662	111	0.3762	0.4000
77	0.0479	0.0702	112	0.3860	0.4000
78	0.0511	0.0744	113	0.3935	0.4000
79	0.0546	0.0788	114	0.3983	0.4000
			115+	0.4000	0.4000

# Actuarial Section

## State of Alaska Teachers' Retirement System Defined Benefit Retirement Plan Summary of Actuarial Assumptions and Changes in Assumptions

### Changes in Actuarial Assumptions Since the Prior Valuation

	June 30, 2013	June 30, 2014
Salary Scale	Based on actual experience from 2005 to 2009.	Rates adjusted on actual experience from 2010-2013.
Pre-termination Mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, adjusted 45% of males, and 55% for females.	68% of male rates and 60% of female rates of the post-termination mortality rates. Deaths are assumed to result from non-occupational causes 85% of the time.
Post-termination Mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, setback 3-years for females and 4-years setback for males.	94% of male and 97% female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3-year setback for males and a 4-year setback for females.
Disability Mortality	RP-2000 Disabled Retiree Mortality Table.	RP-2000 Disabled Retiree Mortality, 2000 Base Year projected to 2018, with Scale BB.
Turnover	Based on actual experience from 2005 to 2009.	Select and ultimate rates based upon the 2010-2013 actual withdrawal experience.
Disability	Based on actual experience from 2005 to 2009 and stop rates at earliest retirement age.	Incidence rates based on 2010-2013 actual experience. Male/Female rates increased and changed to Unisex rates.
Retirement	Rates were adjusted based on actual experience from 2005 to 2009.	Retirement rates based upon the 2010-2013 actual experience.
Part-time Service	0.60 years of credited service per year.	Part-time employees are assumed to earn 0.75 years of credited service per year.

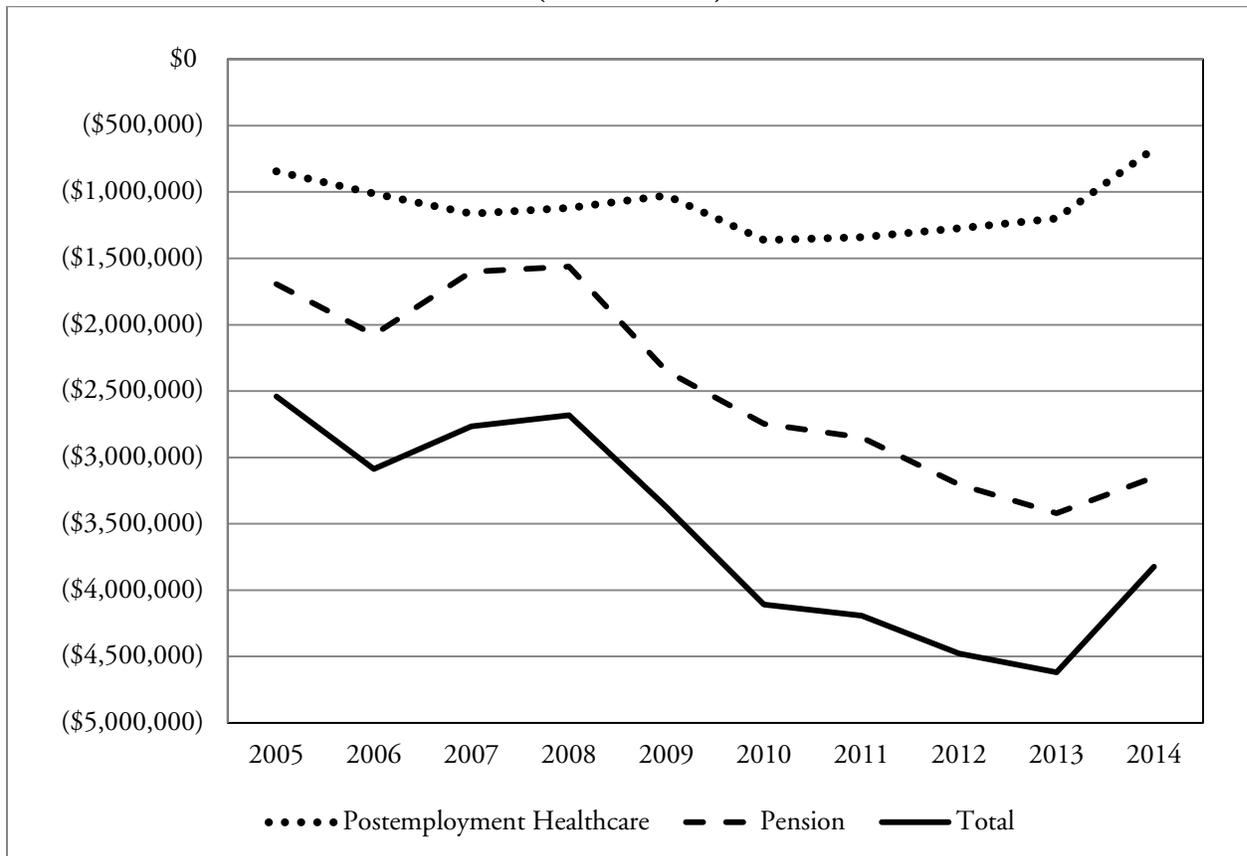
June 30, 2013				June 30, 2014			
Health Cost Trend							
Fiscal year	Medical pre-65	Medical post-65	Prescription drugs	Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2014	8.7%	6.4%	6.3%	2015	10.0%	6.0%	6.0%
2015	8.5	6.3	6.2	2016	9.4	5.9	5.7
2016	8.0	6.3	6.2	2017	8.8	5.8	5.4
2017	7.5	6.2	6.1	2018	8.2	5.7	5.1
2018	7.0	6.1	6.0	2019	7.6	5.6	4.8
2019	6.6	6.1	5.8	2020	7.0	5.6	4.6
2020	6.4	6.1	5.8	2021	6.5	5.6	4.4
2025	6.0	6.0	5.7	2025	5.6	5.6	4.2
2050	5.0	5.0	5.0	2050	4.4	4.0	4.0
2100	4.5	4.5	4.5	2100	4.4	4.0	4.0

#### Trend Rate for Retired Member Medical Contribution

FY 13 Trend Assumption		FY 14 Trend Assumption	
Fiscal year:		Fiscal year:	
2014	8.2%	2015	7.0%
2015	8.0	2016	6.6
2016	7.6	2017	6.2
2017	7.2	2018	5.8
2018	6.7	2019	5.4
2019	6.4	2020	5.0
2025	5.9	2025	4.1
2050	5.0	2050	4.0
2100	4.5	2100	4.0

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
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
2013	(1,198,791)	(3,419,240)	(4,618,031)	51.9
2014	(671,535)	(3,150,223)	(3,821,758)	61.2

**10-YEAR TREND OF UNFUNDED LIABILITY**  
(In thousands)

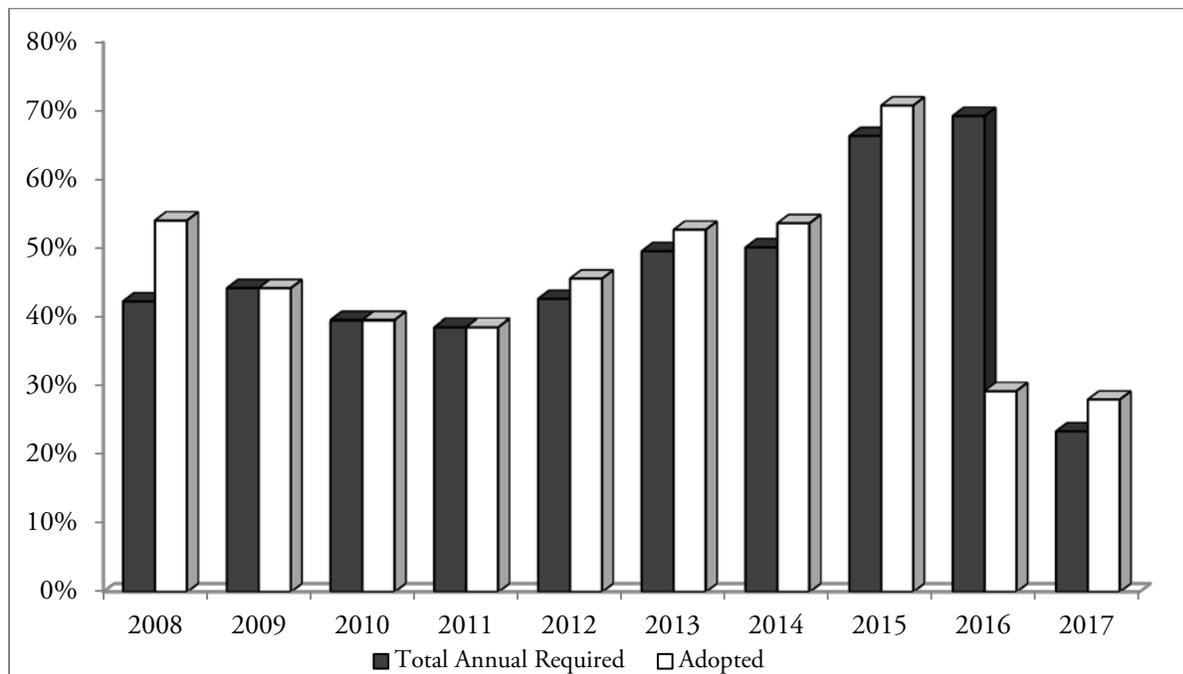


# Actuarial Section

Teachers' Retirement System Defined Benefit Retirement Plan Employer Contribution Rates					
Year Ended June 30	Actuarially Determined				Adopted
	Actuarial Valuation Year Ended June 30	Normal Cost <sup>1</sup>	Past Service	Total Annual Required	
2008	2005	12.56%	29.70%	42.26%	54.03% <sup>2</sup>
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
2016	2013	5.70	63.54	69.24	29.27
2017	2014	4.63	18.77	23.40	28.02

<sup>1</sup> Also referred to as the consolidated rate.  
<sup>2</sup> 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, 2014	5,861	\$ 474,873	\$ 81,023	2.1%	58
June 30, 2013	6,352	504,260	79,386	2.6	58
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

Teachers' Retirement System Defined Benefit Retirement Plan Schedule of Pension Benefit Recipients Added to and Removed from Rolls								
Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase/ (Decrease) In Annual Pension Allowances	Average Annual Pension Allowances
	No.*	Annual Pension Allowances*	No.*	Annual Pension Allowances*	No.	Annual Pension Allowances		
June 30, 2014	226	\$ 5,964,256	181	\$ (1,150,187)	11,750	\$ 403,274,146	1.80%	\$ 34,321
June 30, 2013	576	19,387,542	172	1,652,575	11,705	396,159,703	4.69	33,845
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	133	13,053,612	9,020	265,746,150	(0.68)	29,462

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

# Actuarial Section

<b>Teachers' Retirement System                      Defined Benefit Retirement Plan                      Pension Solvency Test                      (In thousands)</b>							
Valuation Date	Pension Aggregate Accrued Liability For:			Pension Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2014	\$ 718,694	\$ 5,042,250	\$ 1,160,418	\$ 3,771,139	100.0%	60.5%	— %
June 30, 2013	726,139	4,726,282	1,137,132	3,170,313	100.0	51.7	—
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 <sup>1</sup>	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 <sup>1,2</sup>	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 <sup>3</sup>	100.0	81.1	—

<sup>1</sup> Change in Assumptions  
<sup>2</sup> Change in Methods  
<sup>3</sup> The pension and postemployment healthcare valuation assets were allocated using a ration of fair value of assets as of June 30, 2005

<b>Teachers' Retirement System                      Defined Benefit Retirement Plan                      Postemployment Healthcare Solvency Test                      (In thousands)</b>							
Valuation Date	Postemployment Healthcare Aggregate Accrued Liability For:			Post-Employment Healthcare Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2014 <sup>1 2</sup>	\$ —	\$ 2,008,223	\$ 911,447	\$ 2,248,135	100.0%	100.0%	26.3%
June 30, 2013	—	2,012,114	990,440	1,803,763	100.0	89.6	—
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 <sup>1</sup>	—	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 <sup>1</sup>	—	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 <sup>1 2</sup>	—	1,493,219	877,296	844,766	100.0	56.6	—
June 30, 2005	—	1,493,837	670,134	773,963 <sup>3</sup>	100.0	51.8	—

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

<sup>1</sup> Change in Assumptions  
<sup>2</sup> Change in Methods  
<sup>3</sup> The pension and postemployment healthcare valuation assets were allocated using a ration of fair value of assets as of June 30, 2005

# Actuarial Section

<b>Teachers' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience</b>					
<b>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</b>					
<b>Type of (Gain) or Loss</b>	<b>Change in Employer/State Contribution Rate During Fiscal Year</b>				
	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Health Experience	(8.59)%	(1.21)%	(2.02)%	(0.72)%	0.19%
Salary Experience	(0.43)	(0.30)	—	(0.03)	0.59
Investment Experience	(6.31)	2.44	4.18	0.46	0.05
Demographic Experience	1.75	0.38	(0.36)	(0.03)	(0.75)
Contribution Shortfall	1.24	1.62	0.71	0.86	0.01
(Gain) or Loss During Year From Experience	(12.34)	2.93	2.51	0.54	0.09
<b>Non-recurring changes</b>					
Assumption and Method Changes	(33.50)	—	13.70	—	6.86
System Benefit Changes	—	—	—	—	—
Composite (Gain) or Loss During Year	(45.84)	2.93	16.21	0.54	6.95
Beginning Total Employer/State Contribution Rate	69.24	66.31	50.10	49.56	42.61
Ending Employer/State Contribution Rate	<u>23.40%</u>	<u>69.24%</u>	<u>66.31%</u>	<u>50.10%</u>	<u>49.56%</u>
Fiscal Year Employer/State Contribution Rates	23.40%*	24.48%	44.25%	50.10%	49.56%
Fiscal Year Above Rate is Applied	FY17	FY16	FY15	FY14	FY13

\* Expected. Actual Rate to be determined.

NOTE: In the second session of the 28<sup>th</sup> Alaska legislature, the legislature changed the actuarial methodology from level dollar amortization to level percent of pay. The June 30, 2013 PERS actuarial valuation report was not updated for this change, but specific revisions for the amortization change were presented to reflect the change in amortization. The change in the amortization resulted in an adjusted FY 16 employer/state contribution rate of 24.48%.

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		
	2014	2013	2012	2014	2013	2012
Health Experience	N/A	N/A	N/A	(8.59)%	(1.21)%	(2.02)%
Salary Experience	(0.43)%	(0.30)%	—%	N/A	N/A	N/A
Investment Experience	(3.97)	2.09	3.47	(2.34)	0.35	0.71
Demographic Experience	1.75	0.38	(0.36)	N/A	N/A	N/A
Contribution Shortfall	1.10	1.34	0.52	0.14	0.28	0.19
(Gain) or Loss During Year From Experience	(1.55)	3.51	3.63	(10.79)	(0.58)	(1.12)
<b>Non-recurring changes</b>						
Assumption and Method Changes	(28.73)	—	9.52	(4.77)	—	4.18
System Benefit Changes	—	—	—	—	—	—
Composite (Gain) or Loss During Year	(30.28)	3.51	13.15	(15.56)	(0.58)	3.06
Beginning Total Employer/State Contribution Rate	48.06	44.55	31.40	21.18	21.76	18.70
Ending Total Employer/State Contribution Rate	<u>17.78%</u>	<u>48.06%</u>	<u>44.55%</u>	<u>5.62%</u>	<u>21.18%</u>	<u>21.76%</u>
Fiscal Year Employer/State Contribution Rates	17.78%*	15.85%	29.90%	5.62%*	8.63%	14.35%
Fiscal Year Above Rate is Applied	FY17	FY16	FY15	FY17	FY16	FY15

\*Expected. Actual Rate to be determined.

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**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, 2014. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the TRS before July 1, 1990 (Tier 1) are eligible for different benefits than members hired after June 30, 1990 (Tier 2). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006.

## 2. Administration of Plan

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

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

On July 27, 2005, Senate Bill 141, enacted as Chapter 9, 2005 Session laws of Alaska, replaced the Teachers' Retirement Board and the Alaska State Pension Investment Board with the Alaska Retirement Management Board.

## 3. Employers Included

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

## 4. Membership

Membership in the Alaska TRS is mandatory for the following employees hired before July 1, 2006:

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

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

**State of Alaska**  
**Teachers' Retirement System**  
**Defined Benefit Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

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.

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.

# Actuarial Section

**State of Alaska**  
**Teachers' Retirement System**  
**Defined Benefit Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

## 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;
  - 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;

**State of Alaska**  
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- 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.

## 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.

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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.

## **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.

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**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.
- c. **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.

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## 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.



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October 6, 2015

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

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**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, 2014 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, 2014. 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) and as required by Alaska state statutes. 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 layered 25-year period. This objective is currently being met and is projected to continue to be met and as required by Alaska state statutes.

# Actuarial Section

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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 2013. 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, 2014, to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 5.3.

The assumptions and methods used to determine the Actuarially Determined Contribution's (ADC) 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 GASB No. 43 that is 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 Associates of the Society of Actuaries, 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,

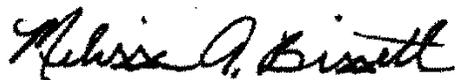


David H. Sliskinsky, ASA, MAAA, FCA  
Principal, Consulting Actuary



Todd D. Kanaster, ASA, MAAA, FCA  
Senior Consultant

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, FSA, MAAA  
Senior Consultant, Health & Productivity

**State of Alaska**  
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**Description of Actuarial Methods and Valuation Procedures**

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. These requirements under GASB 25 have been amended by GASB 67, effective June 30, 2014. Per KPMG, the new accounting standards under GASB 67 and 68 are not applicable to the Occupational Death & Disability benefits under the DCR Plan.

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

# Actuarial Section

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from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

## **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, 2014.

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, 2014 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, FY14 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.

## **D. 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, only the Patient Centered Outcomes Research Institute fee impact have been included in the valuation results as part of administrative fee.

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 determined the impact to be immaterial based on a blend of pre-Medicare and Medicare retirees and the projected impact to future healthcare cost trends due to the estimated tax.

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.

## **E. 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, 2014 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2014. These assumptions were the result of an experience study performed for the DB Plan as of June 30, 2013.

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 2010-2013 actual experience. (See Table 2.) 68% of males rate and 60% of female rates of post-termination mortality. Deaths are assumed to result from occupational causes 15% of the time.
6. Mortality (Post-termination)\* Based upon the 2010-2013 actual experience. (See Table 3.) 94% of male and 94% of male and 97% of female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3-year setback for males and 4-year setback for female.  
Disability Mortality in accordance with the RP-2000 Disability Retiree Mortality Table, 2000 Base Year, project to 2018 with Projection Scale BB.
7. Turnover Select and ultimate rates based upon the 2010-2013 actual withdrawal experience. (See Table 4.)
8. Disability Incidence rates based upon the 2010-2013 actual experience, in accordance with Table 5. Disabilities are assumed to result from occupational causes 15% of the time.
9. Retirement Retirement rates based upon the 2010-2013 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.

\*The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 110%.

# Actuarial Section

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**Summary of Actuarial Assumptions and Changes in Assumptions**

12. Contribution Refunds      5% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with non-vested benefits are assumed to have their contributions refunded.
13. Expenses                      All expenses are net of the investment return assumption.
14. Per Capita Claims Cost      Sample claims cost rates adjusted to age 65 for FY15 medical benefits are shown below:

	Medical	Prescription drugs
Pre-Medicare	\$ 12,362	2,624
Medicare Parts A & B	1,657	2,624
Medicare Part B Only	7,920	2,624
Medicare Part D	N/A	507

15. Third Party Administrator Fees      \$193.98 per person per year; assumed trend rate of 5% per year.
16. 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.

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, 10.0% is applied to the FY15 pre-Medicare medical claims costs to get the FY16 medical claims costs.

Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2015	10.0%	6.0%	6.0%
2016	9.4	5.9	5.7
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

For the June 30, 2014 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 2014 and projects out to 2090. The model has been populated with assumptions that are specific to the State of Alaska.

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**Summary of Actuarial Assumptions and Changes in Assumptions**

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
84-95	0.5	—
94 +	—	—

18. Retiree Medical Participation

Decrement due to disability		Decrement due to retirement													
Age	Percent participation	Age	Percent participation												
<56	73.00%	55	40.00%												
56	77.50	56	50.00												
57	79.75	57	55.00												
58	82.00	58	60.00												
59	84.25	59	65.00												
60	86.50	60	70.00												
61	88.75	61	75.00												
62	91.00	62	80.00												
63	93.25	63	85.00												
64	95.50	64	90.00												
65+	94.00	65+	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="border-bottom: 1px solid black; text-align: center;">Years of Service</th> <th style="border-bottom: 1px solid black; text-align: center;">Percent participation</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">&lt;15</td> <td style="text-align: center;">70.50%</td> </tr> <tr> <td style="text-align: center;">15-19</td> <td style="text-align: center;">75.20</td> </tr> <tr> <td style="text-align: center;">20-24</td> <td style="text-align: center;">79.90</td> </tr> <tr> <td style="text-align: center;">25-29</td> <td style="text-align: center;">89.30</td> </tr> <tr> <td style="text-align: center;">30+</td> <td style="text-align: center;">94.00</td> </tr> </tbody> </table>	Years of Service	Percent participation	<15	70.50%	15-19	75.20	20-24	79.90	25-29	89.30	30+	94.00
Years of Service	Percent participation														
<15	70.50%														
15-19	75.20														
20-24	79.90														
25-29	89.30														
30+	94.00														

\*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.

**State of Alaska**  
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**Defined Contribution Retirement Plan**  
**Summary of Actuarial Assumptions and Changes in Assumptions**

**Table 1**  
**Alaska TRS DCR Plan**  
**Salary Scale**

<b>Years of Service</b>	<b>Percent Increase</b>
0	8.11%
1	7.51
2	6.91
3	6.41
4	6.11
5	6.11
6	5.90
7	5.69
8	5.55
9	5.40
10	5.26
11	5.11
12	4.96
13	4.84
14	4.72
15	4.60
16	4.49
17	4.37
18	4.27
19	4.17
20	4.07
21	3.97
22+	3.87

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**Summary of Actuarial Assumptions and Changes in Assumptions**

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

Age	Male	Female	Age	Male	Female
20	0.000182	0.000098	55	0.001615	0.000985
21	0.000191	0.000101	56	0.001766	0.001054
22	0.000200	0.000104	57	0.001901	0.001132
23	0.000209	0.000105	58	0.002117	0.001221
24	0.000216	0.000105	59	0.002409	0.001344
25	0.000222	0.000106	60	0.002643	0.001501
26	0.000226	0.000107	61	0.002917	0.001659
27	0.000228	0.000109	62	0.003229	0.001837
28	0.000228	0.000111	63	0.003599	0.002080
29	0.000229	0.000114	64	0.004021	0.002367
30	0.000231	0.000118	65	0.004504	0.002723
31	0.000238	0.000123	66	0.005057	0.003118
32	0.000249	0.000130	67	0.005594	0.003582
33	0.000269	0.000137	68	0.006202	0.004036
34	0.000302	0.000146	69	0.007017	0.004546
35	0.000340	0.000169	70	0.007828	0.005130
36	0.000382	0.000193	71	0.008702	0.005696
37	0.000425	0.000217	72	0.009643	0.006297
38	0.000468	0.000240	73	0.010813	0.006959
39	0.000509	0.000262	74	0.011964	0.007841
40	0.000547	0.000283	75	0.013285	0.008701
41	0.000584	0.000305	76	0.014797	0.009678
42	0.000618	0.000330	77	0.016508	0.010757
43	0.000653	0.000357	78	0.018423	0.011923
44	0.000692	0.000389	79	0.020534	0.013163
45	0.000736	0.000427	80	0.022841	0.014502
46	0.000787	0.000470	81	0.025382	0.015972
47	0.000846	0.000517	82	0.028208	0.017607
48	0.000913	0.000567	83	0.031344	0.019438
49	0.000979	0.000620	84	0.035081	0.021486
50	0.001050	0.000674	85	0.039193	0.023782
51	0.001126	0.000731			
52	0.001208	0.000791			
53	0.001295	0.000855			
54	0.001483	0.000908			

# Actuarial Section

**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)**

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
50	0.001544	0.001124	85	0.057637	0.039636
51	0.001656	0.001219	86	0.064248	0.043940
52	0.001777	0.001318	87	0.072770	0.048789
53	0.001904	0.001424	88	0.082264	0.054261
54	0.002181	0.001513	89	0.092884	0.060450
55	0.002375	0.001641	90	0.104794	0.068659
56	0.002597	0.001756	91	0.118129	0.077983
57	0.002795	0.001887	92	0.132941	0.088452
58	0.003113	0.002035	93	0.149196	0.100021
59	0.003543	0.002240	94	0.165479	0.112560
60	0.003887	0.002501	95	0.182705	0.125866
61	0.004289	0.002765	96	0.200693	0.139699
62	0.004749	0.003062	97	0.219249	0.153813
63	0.005293	0.003466	98	0.233940	0.164973
64	0.005913	0.003946	99	0.252821	0.178741
65	0.006624	0.004538	100	0.267022	0.188730
66	0.007436	0.005196	101	0.285888	0.201393
67	0.008227	0.005970	102	0.299408	0.209540
68	0.009121	0.006727	103	0.318102	0.220440
69	0.010318	0.007576	104	0.331094	0.226232
70	0.011511	0.008550	105	0.349384	0.237489
71	0.012798	0.009494	106	0.360058	0.246863
72	0.014180	0.010494	107	0.368483	0.258063
73	0.015902	0.011599	108	0.374013	0.270683
74	0.017595	0.013068	109	0.376000	0.284323
75	0.019536	0.014502	110	0.376000	0.298577
76	0.021760	0.016130	111	0.376000	0.313043
77	0.024276	0.017929	112	0.376000	0.327318
78	0.027093	0.019871	113	0.376000	0.340998
79	0.030198	0.021938	114	0.376000	0.353678
80	0.033590	0.024170	115	0.376000	0.364959
81	0.037326	0.026620	116	0.376000	0.374435
82	0.041482	0.029345	117	0.376000	0.381702
83	0.046095	0.032397	118	0.376000	0.386359
84	0.051589	0.035811	119	1.000000	1.000000

**State of Alaska**  
**Teachers' Retirement System**  
**Defined Contribution Retirement Plan**  
**Summary of Actuarial Assumptions and Changes in Assumptions**

Table 4  
 Alaska TRS DCR Plan  
 Turnover Assumptions

**Select Rates of Turnover During the First 5 Year of Employment**

Service	Female	Male
0	0.2180	0.2070
1	0.1870	0.1955
2	0.1540	0.1610
3	0.1320	0.1380
4	0.1100	0.1150
5	0.0805	0.0732

**Ultimate Rates of Turnover  
 After the First 5 Years of Employment**

Age	Female	Male	Age	Female	Male
15	0.066811	0.062959	40	0.065647	0.061753
16	0.066811	0.062959	41	0.065516	0.061604
17	0.066811	0.062959	42	0.065386	0.061455
18	0.066811	0.062959	43	0.065175	0.061081
19	0.066811	0.062959	44	0.064965	0.060706
20	0.066811	0.062959	45	0.064754	0.060332
21	0.066811	0.062959	46	0.064544	0.059957
22	0.066811	0.062959	47	0.064333	0.059583
23	0.066773	0.062903	48	0.063975	0.059053
24	0.066735	0.062847	49	0.063617	0.058522
25	0.066697	0.062791	50	0.063259	0.057992
26	0.066659	0.062735	51	0.062901	0.057461
27	0.066621	0.062679	52	0.062543	0.056931
28	0.066583	0.062623	53	0.061818	0.055800
29	0.066544	0.062567	54	0.061093	0.054670
30	0.066506	0.062512	55	0.060367	0.053539
31	0.066467	0.062456	56	0.059642	0.052409
32	0.066429	0.062400	57	0.058917	0.051278
33	0.066351	0.062360	58	0.060021	0.051711
34	0.066273	0.062320	59	0.061125	0.052144
35	0.066194	0.062280	60	0.062230	0.052578
36	0.066116	0.062240	61	0.063334	0.053011
37	0.066038	0.062200	62	0.064438	0.053444
38	0.065908	0.062051	63	0.066292	0.057296
39	0.065777	0.061902	64	0.068146	0.061148
			65+	0.070000	0.065000

**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**

<b>Age</b>	<b>Unisex</b>
<19	0.000560
20	0.000560
21	0.000563
22	0.000565
23	0.000574
24	0.000583
25	0.000593
26	0.000602
27	0.000611
28	0.000611
29	0.000612
30	0.000612
31	0.000613
32	0.000613
33	0.000622
34	0.000631
35	0.000641
36	0.000650
37	0.000659
38	0.000674
39	0.000689
40	0.000703
41	0.000718
42	0.000733
43	0.000770
44	0.000806
45	0.000843
46	0.000879
47	0.000916
48	0.000975
49	0.001034
50	0.001093
51	0.001152
52	0.001211
53	0.001356
54	0.001501

**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**

<b>Age</b>	<b>Rate</b>
<54	2.00%
55	3.00
56	3.00
57	3.00
58	3.00
59	3.00
60	5.00
61	5.00
62	10.00
63	5.00
64	5.00
65	25.00
66	25.00
67	25.00
68	20.00
69	20.00
>70	100.00

# Actuarial Section

## State of Alaska Teachers' Retirement System Defined Contribution Retirement Plan Summary of Actuarial Assumptions and Changes in Assumptions

### Changes in Actuarial Assumptions Since the Prior Valuation

	June 30, 2013	June 30, 2014
Salary Scale	Based on actual experience from 2005 to 2009.	Rates adjusted on actual experience from 2010-2013.
Pre-termination Mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, adjusted 45% for males, and 55% for females.	68% of male rates and 60% of female rates of PR-2000, 2000 Base Year projected to 2018 with Projection Scale BB. Deaths are assumed to result from non-occupational causes 85% of the time.
Post-termination Mortality	The 1994 GAM Sex-distinct Table, 1994 Base Year projected to 2013 using Projection Scale AA, setback 3-years for females and 4-years setback for males.	94% of male and 97% female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3-year setback for males and a 4-year setback for females.
Disability Mortality	RP-2000 Disabled Retiree Mortality Table.	RP-2000 Disabled Retiree Mortality, 2000 Base Year projected to 2018, with Scale BB.
Turnover	Based on actual experience from 2005 to 2009.	Select and ultimate rates based upon the 2010-2013 actual withdrawal experience.
Disability	Based on actual experience from 2005 to 2009 and stop rates at earliest retirement age.	Incidence rates based on 2010-2013 actual experience. Male/Female rates increased and changed to Unisex rates. Disabilities are assumed to result from occupational causes 15% of the time.
Retirement	Rates were adjusted based on actual experience from 2005 to 2009.	Retirement rates based upon the 2010-2013 actual experience.
Part-time Service	0.60 years of credited service per year.	Part-time employees are assumed to earn 0.75 years of credited service per year.

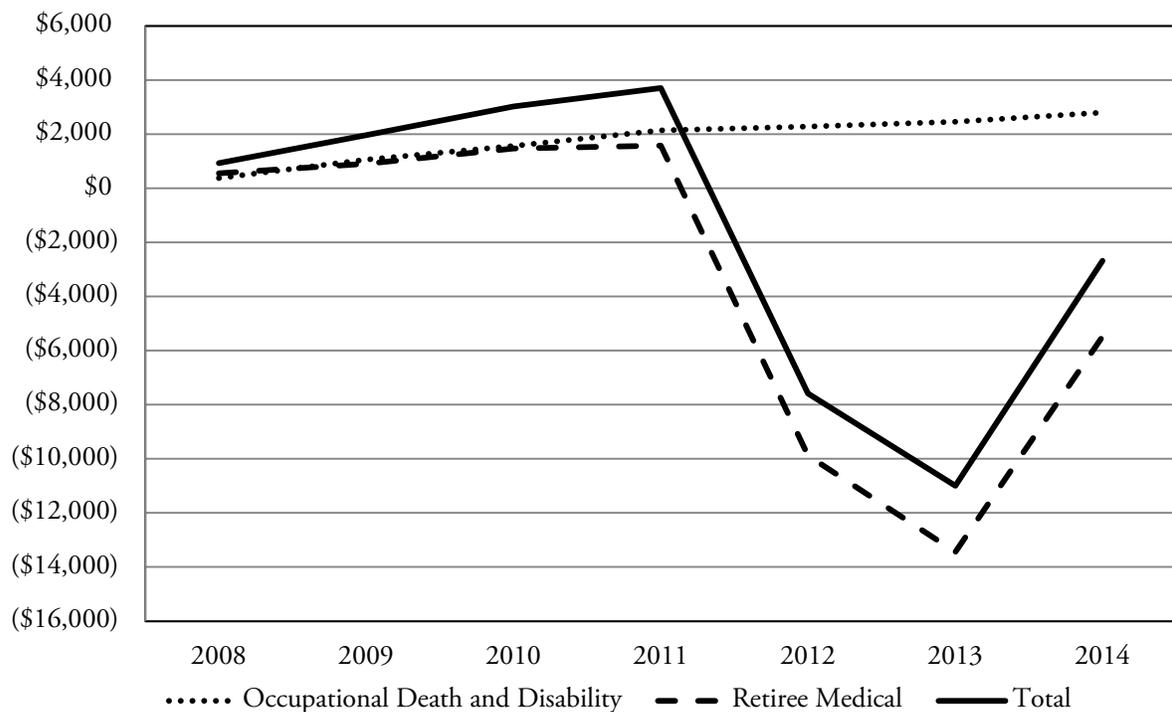
June 30, 2013				June 30, 2014			
Health Cost Trend							
Fiscal year	Medical pre-65	Medical post-65	Prescription drugs	Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2014	8.7%	6.4%	6.3%	2015	10.0%	6.0%	6.0%
2015	8.5	6.3	6.2	2016	9.4	5.9	5.7
2016	8.0	6.3	6.2	2017	8.8	5.8	5.4
2017	7.5	6.2	6.1	2018	8.2	5.7	5.1
2018	7.0	6.1	6.0	2019	7.6	5.6	4.8
2019	6.6	6.1	5.8	2020	7.0	5.6	4.6
2020	6.4	6.1	5.8	2021	6.5	5.6	4.4
2025	6.0	6.0	5.7	2025	5.6	5.6	4.2
2050	5.0	5.0	5.0	2050	4.4	4.0	4.0
2100	4.5	4.5	4.5	2100	4.4	4.0	4.0

#### Trend Rate for Retired Member Medical Contribution

FY 13 Trend Assumption		FY 14 Trend Assumption	
Fiscal year:		Fiscal year:	
2014	8.2%	2015	7.0%
2015	8.0	2016	6.6
2016	7.6	2017	6.2
2017	7.2	2018	5.8
2018	6.7	2019	5.4
2019	6.4	2020	5.0
2025	5.9	2025	4.1
2050	5.0	2050	4.0
2100	4.5	2100	4.0

<b>Teachers' Retirement System                      Defined Contribution Retirement Plan                      Occupational Death and Disability and Retiree Medical Benefits                      Funding Excess/(Unfunded Liability)                      (In thousands)</b>				
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
2013	2,452	(13,444)	(10,992)	50.3
2014	2,797	(5,482)	(2,685)	83.5

**7-YEAR TREND OF FUNDING EXCESS  
(In thousands)**



# Actuarial Section

<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Plan</b> <b>Occupational Death and Disability and Retiree Medical Benefits</b> <b>Employer Contribution Rates</b>					
Fiscal Year	Actuarial Valuation Year Ended June 30	Occupational Death and Disability	Retiree Medical	Total Annual Required	Adopted
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
2016	2013	—	2.04	2.04	2.04
2017	2014	—	1.05	1.05	1.05

Valuations are used to set contribution rates in future years.

<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Plan</b> <b>Occupational Death and Disability and Retiree Medical Benefits</b> <b>Schedule of Active Member Valuation Data</b>					
Valuation Date	Number	Annual Earnings <sup>1</sup> (In thousands)	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2014	3,547	\$ 219,701	\$ 61,940	2.4%	58
June 30, 2013	3,272	197,944	60,496	3.5	58
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

<sup>1</sup> Annual earnings are the annualized earnings for the fiscal year ending on the valuation date.

<b>Teachers' Retirement System                      Defined Contribution Retirement Plan                      Occupational Death and Disability Solvency Test                      (In thousands)</b>							
Valuation Date	Occupational Death and Disability Aggregate Accrued Liability For:			Occupational Death and Disability Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2014 <sup>1</sup>	\$ —	\$ —	\$ 23	\$ 2,820	100.0%	100.0%	100.0%
June 30, 2013	—	—	80	2,532	100.0	100.0	100.0
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 <sup>1</sup>	—	—	18	1,577	100.0	100.0	100.0
June 30, 2009 <sup>1</sup>	—	—	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

<sup>1</sup> Change in Assumptions

# Actuarial Section

<b>Teachers' Retirement System                      Defined Contribution Retirement Plan                      Retiree Medical Solvency Test                      (In thousands)</b>							
	<b>Retiree Medical                      Aggregate Accrued Liability For:</b>				<b>Portion of Accrued Liabilities                      Covered by Assets:</b>		
<b>Valuation                      Date</b>	<b>(1)                      Active Member                      Contributions</b>	<b>(2)                      Inactive                      Members</b>	<b>(3)                      Active                      Members                      (Employer-                      Financed                      Portion)</b>	<b>Retiree Medical                      Valuation                      Assets</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
June 20, 2014 <sup>1</sup>	\$ —	\$ —	\$ 16,273	\$ 10,791	100.0%	100.0%	66.3%
June 20, 2013	—	—	22,058	8,614	100.0	100.0	39.1
June 20, 2012 <sup>1</sup>	—	—	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 <sup>1</sup>	—	—	2,430	3,895	100.0	100.0	100.0
June 30, 2009 <sup>1</sup>	—	—	1,446	2,353	100.0	100.0	100.0
June 30, 2008 <sup>1</sup>	—	—	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).

<sup>1</sup> 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, 2014.

**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 member 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.

# Actuarial Section

**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:

<u>Years of Service</u>	<u>Percent of Premium Paid by Member</u>
Less than 15 years	30.00%
15 – 19	25.00
20 – 24	20.00
25 – 29	15.00
30 years or more	10.00

## 7. Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- Disability Benefit Adjustment: The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year of 9%, whichever is less.
- 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**

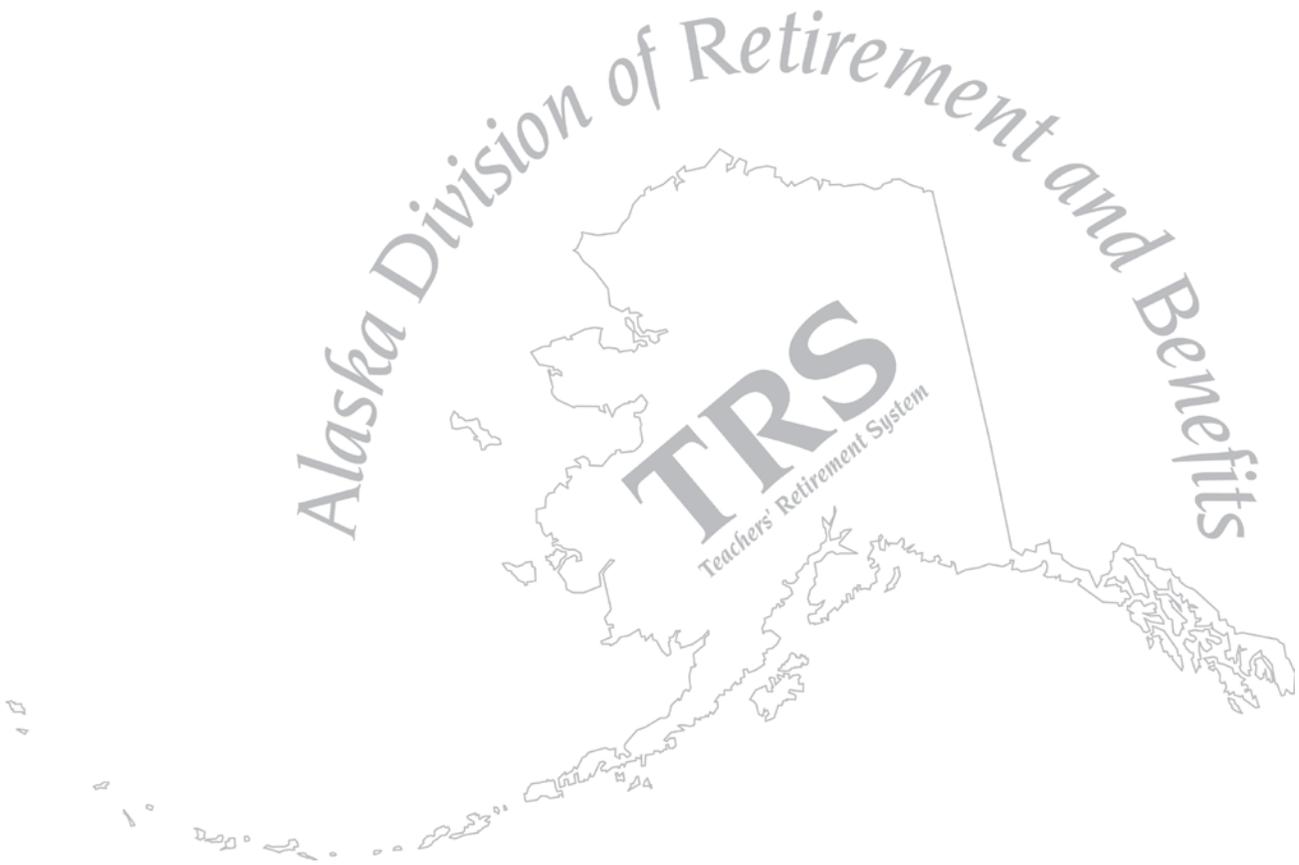
## 8. Occupational Death Benefits

- Benefit is 40% of salary.
- Survivor's Pension Adjustment: A survivor's pension is increased by 50% of the cost of living increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60 on July 1, or under age 60 if the recipient has been receiving TRS benefits for at least 8 years as of July 1.
- 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

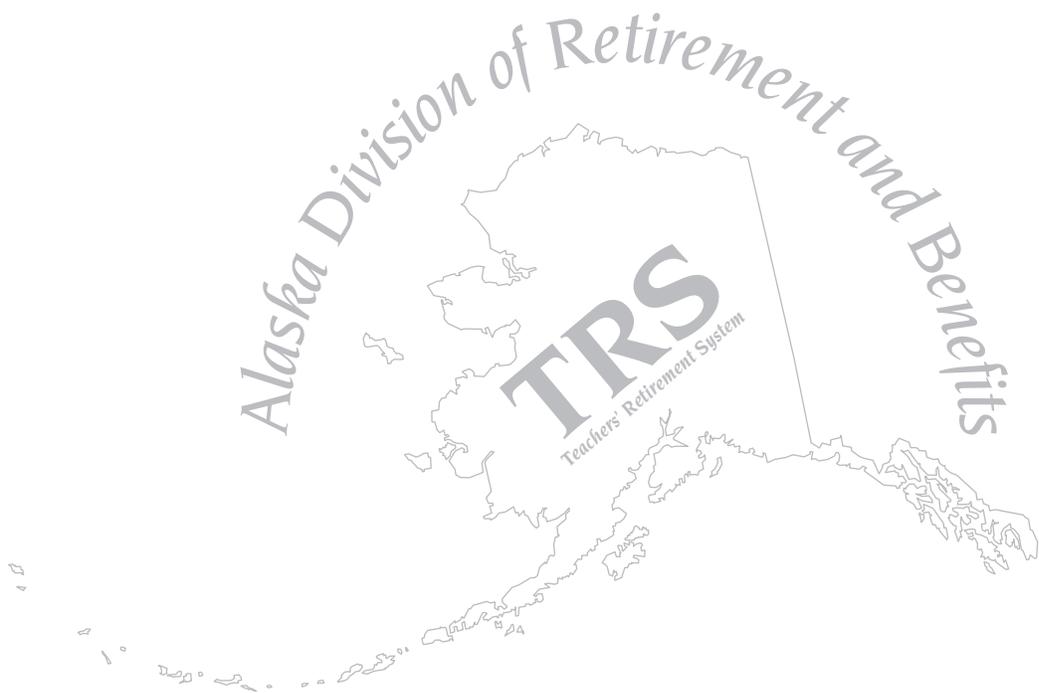
Effective for the June 30, 2014 valuation, the Board adopted the changes to the demographic and economic assumptions recommended by the actuary, based on the results of an experience analysis performed on the population experience from July 1, 2009 to June 30, 2013. The changes in assumptions were adopted by the Board during the December 2014 Board meeting. We also updated the Healthcare Cost Trend and Contribution Trend assumptions.

Due to plan clarifications, the PRPA was added to the occupational death and disability benefits.





# STATISTICAL SECTION



**STATISTICAL SECTION OVERVIEW**

The statistical section of the Teachers’ Retirement System (System) comprehensive annual financial report provides additional detail in the form of financial trends, operating statistics and demographic information. This data is provided to enhance the reader’s understanding of the System.

**Financial Trends ..... 146-163**

These schedules contain financial trend information utilizing a multi-year presentation so the reader can better understand how the System’s financial performance has changed over time. Financial information is presented on an accrual basis.

**Operating Information ..... 164-166**

These schedules contain detailed benefit payment information to provide the reader a better understanding of the pension benefits provided by the Division.

**Demographic Information ..... 167-169**

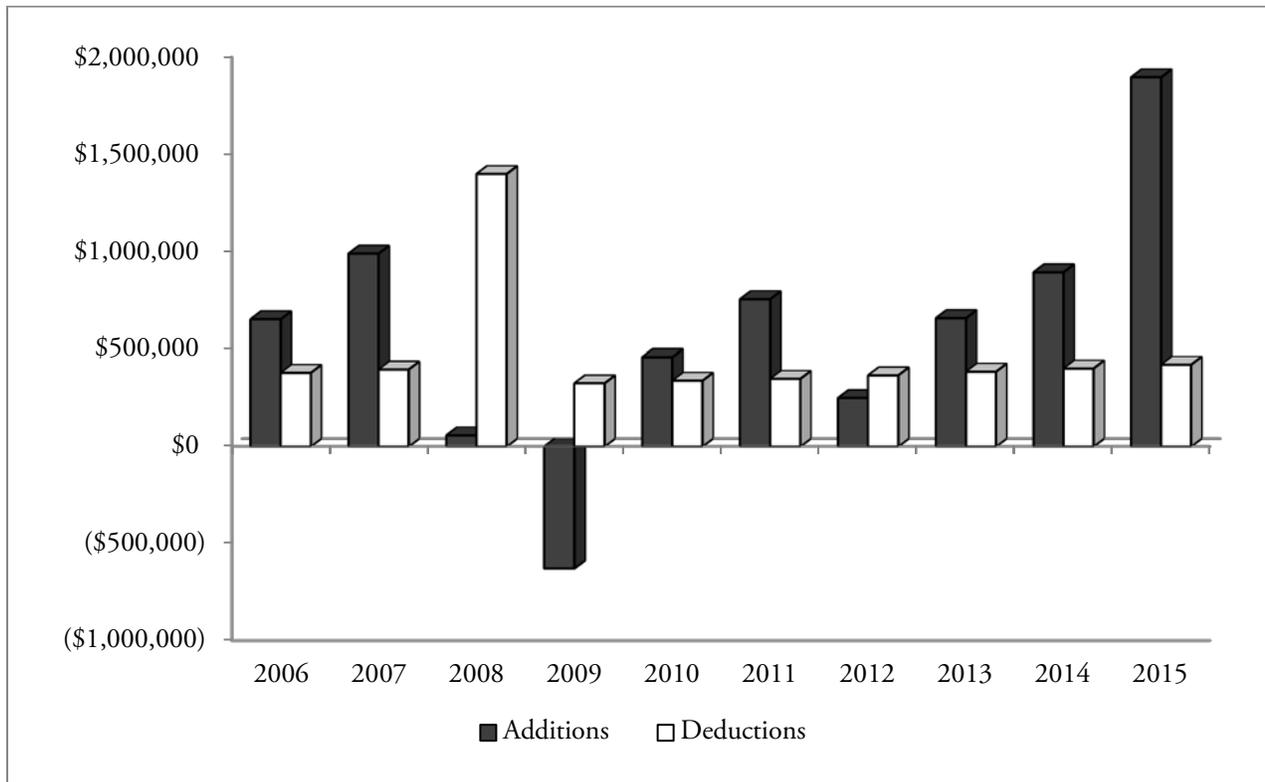
These schedules contain detailed demographic data to provide the reader a better understanding of the membership and employer participation in the System.

# Statistical Section

## Teachers' Retirement System Defined Benefit Pension Changes in Fiduciary Net Position (In thousands)

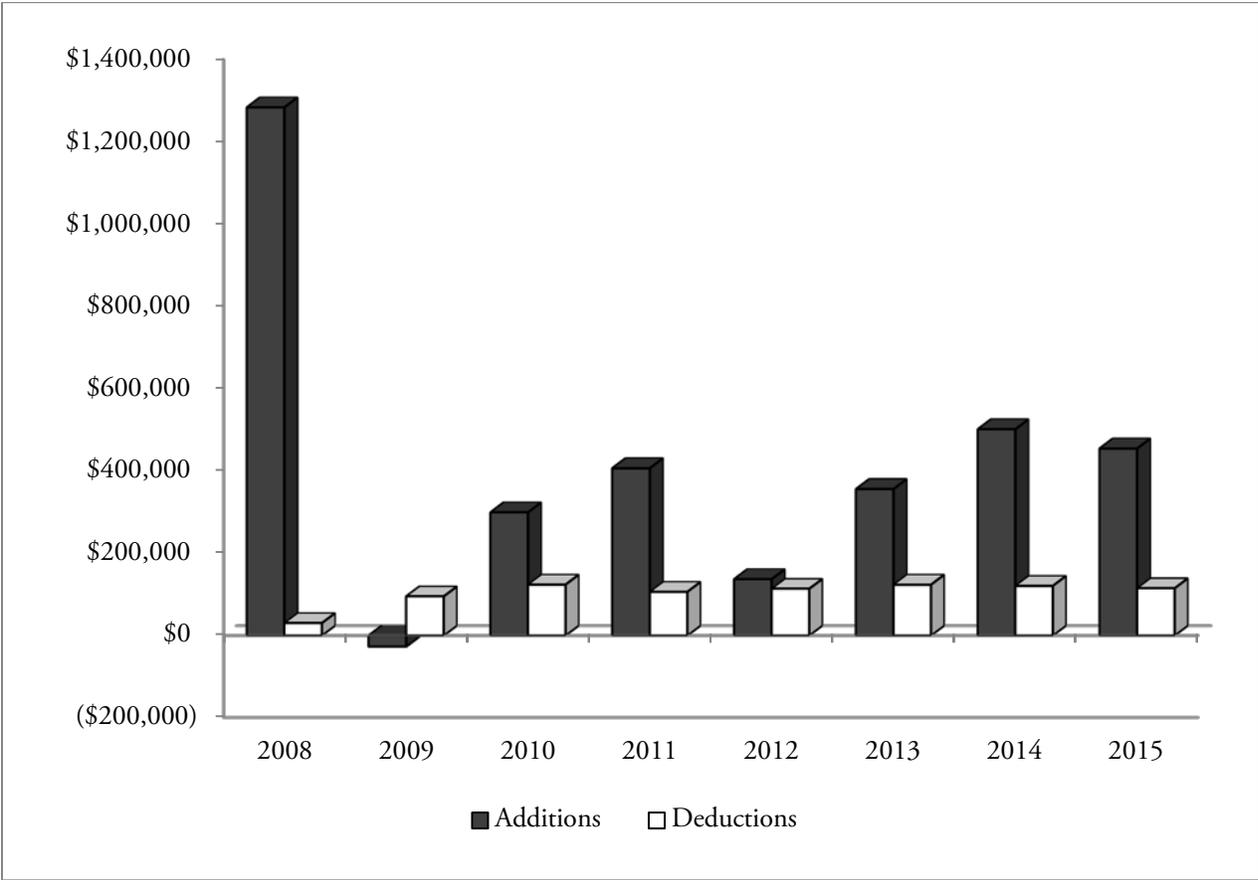
Year Ended June 30	Fiduciary Net Position, Beginning of Year	Additions	Deductions	Increase / (Decrease) in Fiduciary Net Position	Fiduciary Net Position, End of Year
2006	\$ 4,026,995	\$ 652,648	\$ 379,672	\$ 272,976	\$ 4,299,971
2007	4,299,971	989,840	396,697	593,143	4,893,114
2008	4,893,114	57,423	1,399,739	(1,342,316)	3,550,798
2009	3,550,798	(629,058)	325,307	(954,365)	2,596,433
2010	2,596,433	458,984	338,860	120,124	2,716,557
2011	2,716,557	755,768	348,795	406,973	3,123,530
2012	3,123,530	249,803	366,686	(116,883)	3,006,647
2013	3,006,647	658,405	385,922	272,483	3,279,130
2014	3,279,130	894,170	402,161	492,009	3,771,139
2015	3,771,139	1,897,150	421,334	1,475,816	5,246,955

### 10-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS (In thousands)



<b>Teachers' Retirement System                      Defined Benefit Alaska Retiree Healthcare Trust                      Changes in Fiduciary Net Position                      (In thousands)</b>					
<b>Year Ended June 30</b>	<b>Fiduciary Net Position, Beginning of Year</b>	<b>Additions</b>	<b>Deductions</b>	<b>Increase / (Decrease) in Fiduciary Net Position</b>	<b>Fiduciary Net Position, End of Year</b>
2008	\$ —	\$ 1,283,865	\$ 30,292	\$ 1,253,573	\$ 1,253,573
2009	1,253,573	(27,157)	95,383	(122,540)	1,131,033
2010	1,131,033	300,736	124,133	176,603	1,307,636
2011	1,307,636	408,179	106,485	301,694	1,609,330
2012	1,609,330	137,594	113,883	23,711	1,633,041
2013	1,633,041	357,454	124,074	233,380	1,866,421
2014	1,866,421	502,833	121,119	381,714	2,248,135
2015	2,248,135	456,055	115,224	340,831	2,588,966

**8-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS  
(In thousands)**

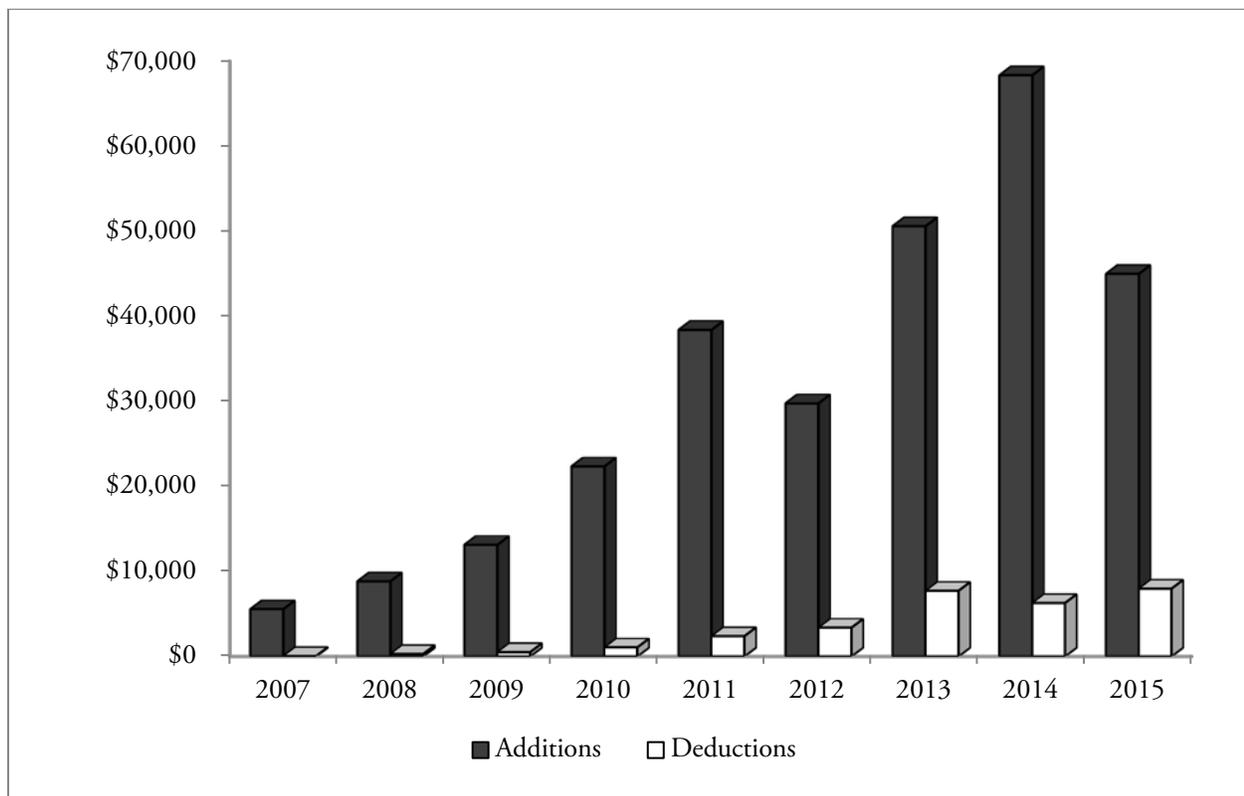


# Statistical Section

## Teachers' Retirement System Defined Contribution Retirement Participant Directed Changes in Fiduciary Net Position (In thousands)

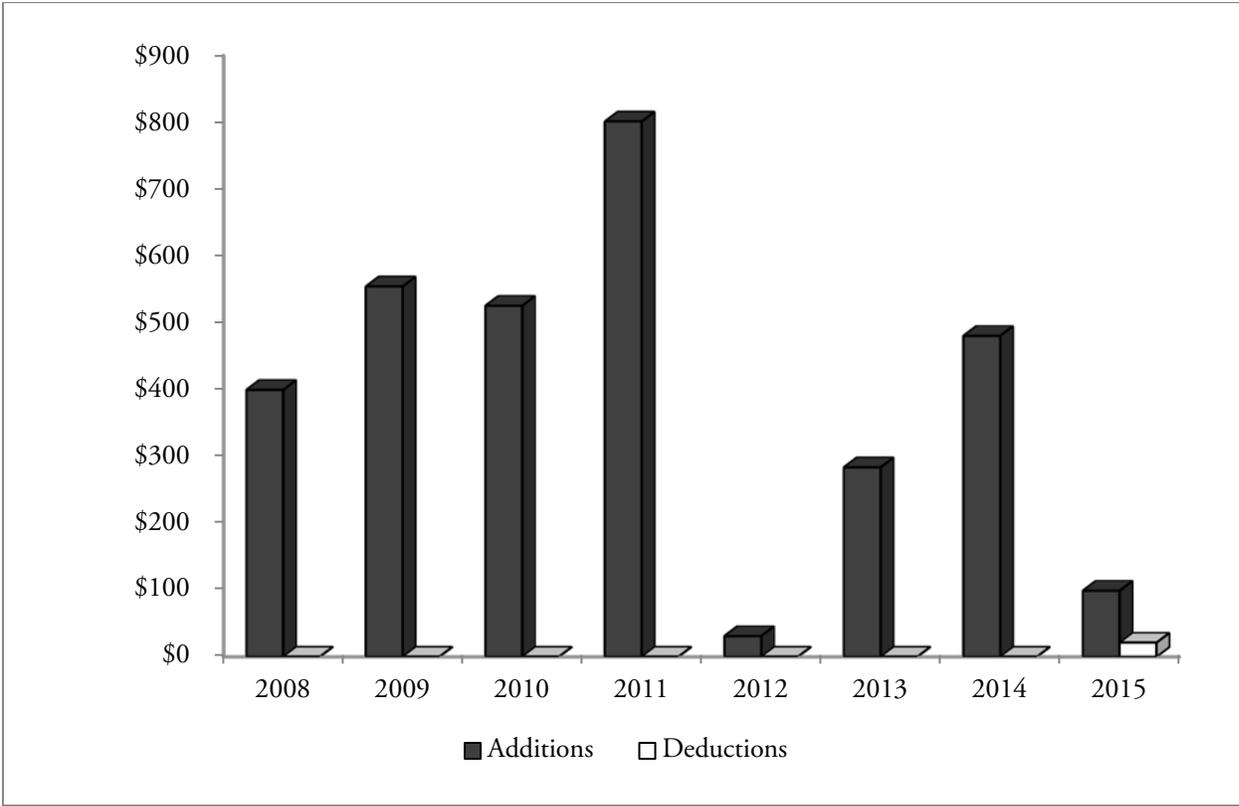
Year Ended June 30	Fiduciary Net Position, Beginning of Year	Additions	Deductions	Increase / (Decrease) in Fiduciary Net Position	Fiduciary Net Position, End of Year
2007	\$ —	\$ 5,543	\$ 36	\$ 5,507	\$ 5,507
2008	5,507	8,825	278	8,547	14,054
2009	14,054	13,132	498	12,634	26,688
2010	26,688	22,359	1,053	21,306	47,994
2011	47,994	38,355	2,377	35,978	83,972
2012	83,972	29,791	3,374	26,417	110,389
2013	110,389	50,560	7,715	42,845	153,234
2014	153,234	68,315	6,281	62,034	215,268
2015	215,268	44,952	7,972	36,980	252,248

### 9-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS (In thousands)



<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability</b> <b>Changes in Fiduciary Net Position</b> <b>(In thousands)</b>					
Year Ended June 30	Fiduciary Net Position, Beginning of Year	Additions	Deductions	Increase / (Decrease) in Fiduciary Net Position	Fiduciary Net Position, End of Year
2008	\$ —	\$ 400	\$ —	\$ 400	\$ 400
2009	400	554	—	554	954
2010	954	525	—	525	1,479
2011	1,479	801	—	801	2,280
2012	2,280	31	—	31	2,311
2013	2,311	284	—	284	2,595
2014	2,595	480	—	480	3,075
2015	3,075	99	21	78	3,153

**8-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS**  
(In thousands)

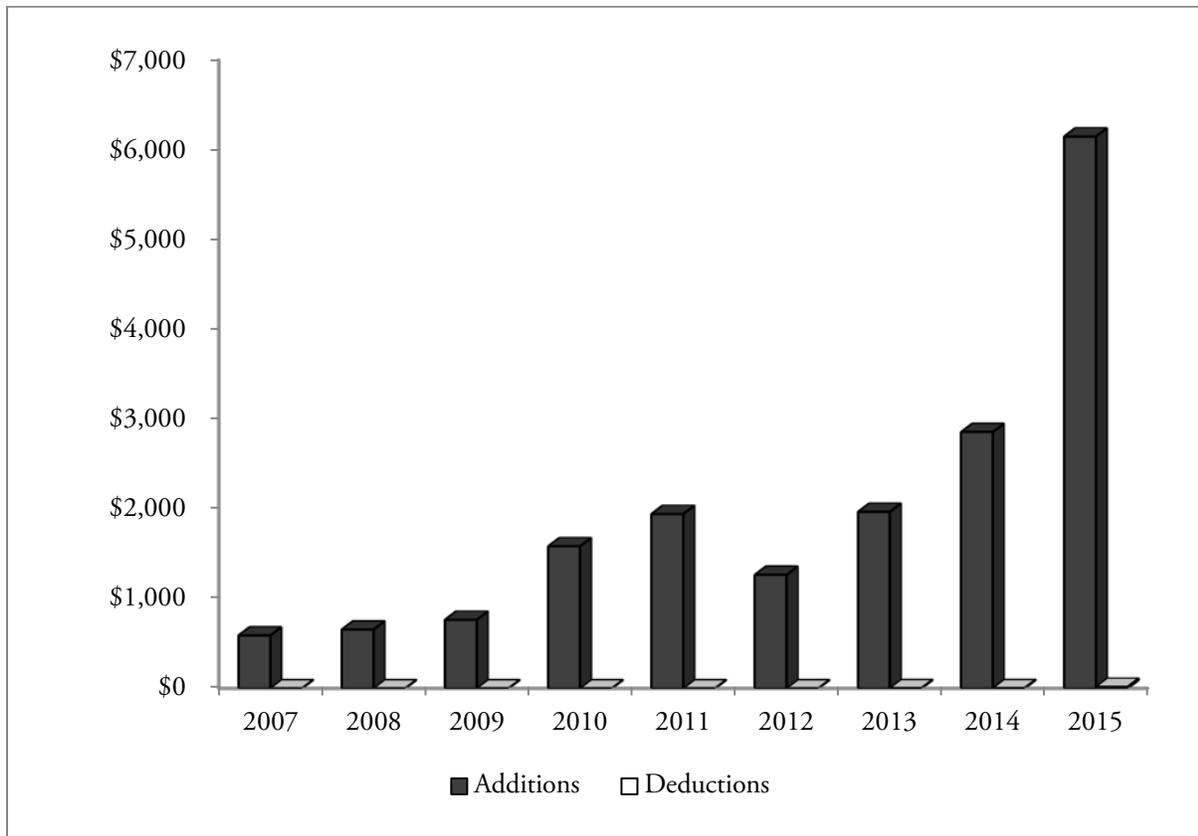


# Statistical Section

**Teachers' Retirement System  
Defined Contribution Retirement Medical Plan  
Changes in Fiduciary Net Position  
(In thousands)**

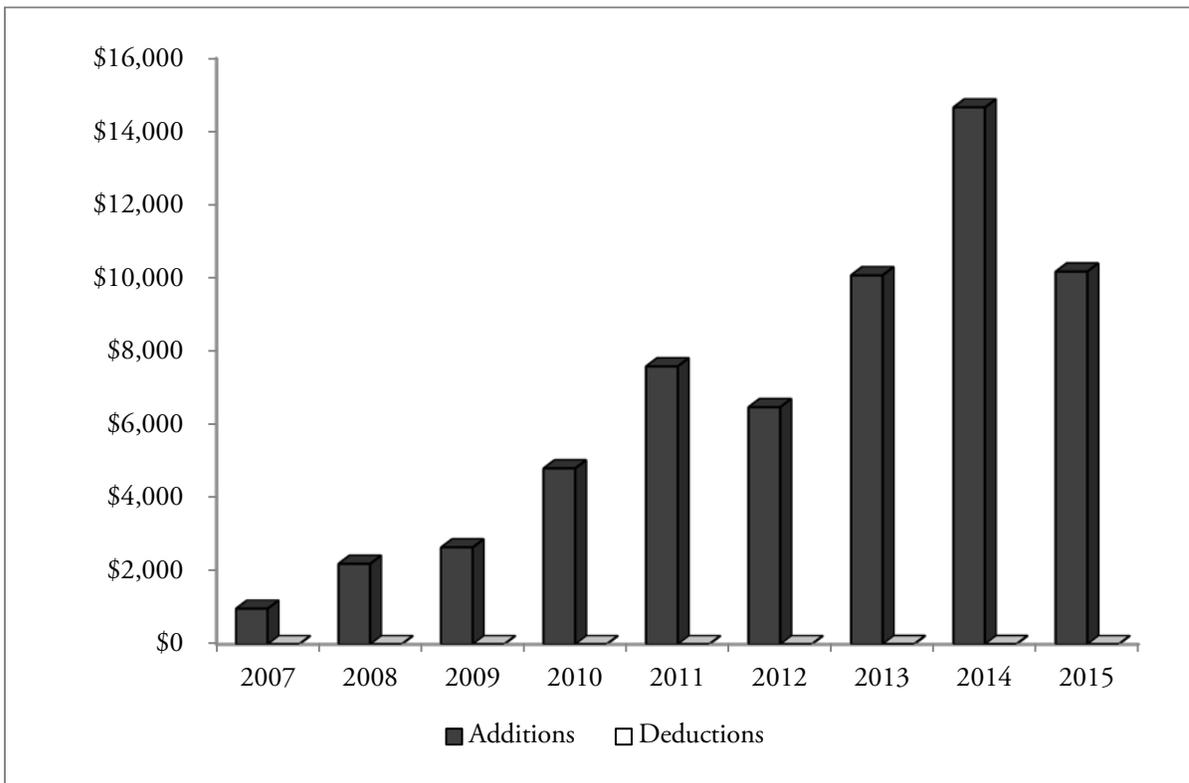
Year Ended June 30	Fiduciary Net Position, Beginning of Year	Additions	Deductions	Increase / (Decrease) in Fiduciary Net Position	Fiduciary Net Position, End of Year
2007	\$ —	\$ 590	\$ —	\$ 590	\$ 590
2008	590	656	—	656	1,246
2009	1,246	766	—	766	2,012
2010	2,012	1,586	—	1,586	3,598
2011	3,598	1,947	—	1,947	5,545
2012	5,545	1,267	—	1,267	6,812
2013	6,812	1,970	3	1,967	8,779
2014	8,779	2,861	3	2,858	11,637
2015	11,637	6,147	18	6,129	17,766

**9-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS  
(In thousands)**



<b>Teachers' Retirement System                      Defined Contribution Retirement Health Reimbursement Arrangement                      Changes in Fiduciary Net Position                      (In thousands)</b>					
Year Ended June 30	Fiduciary Net Position, Beginning of Year	Additions	Deductions	Increase / (Decrease) in Fiduciary Net Position	Fiduciary Net Position, End of Year
2007	\$ —	\$ 974	\$ —	\$ 974	\$ 974
2008	974	2,202	—	2,202	3,176
2009	3,176	2,650	—	2,650	5,826
2010	5,826	4,814	—	4,814	10,640
2011	10,640	7,606	—	7,606	18,246
2012	18,246	6,491	—	6,491	24,737
2013	24,737	10,079	3	10,076	34,813
2014	34,813	14,662	3	14,659	49,472
2015	49,472	10,178	—	10,178	59,650

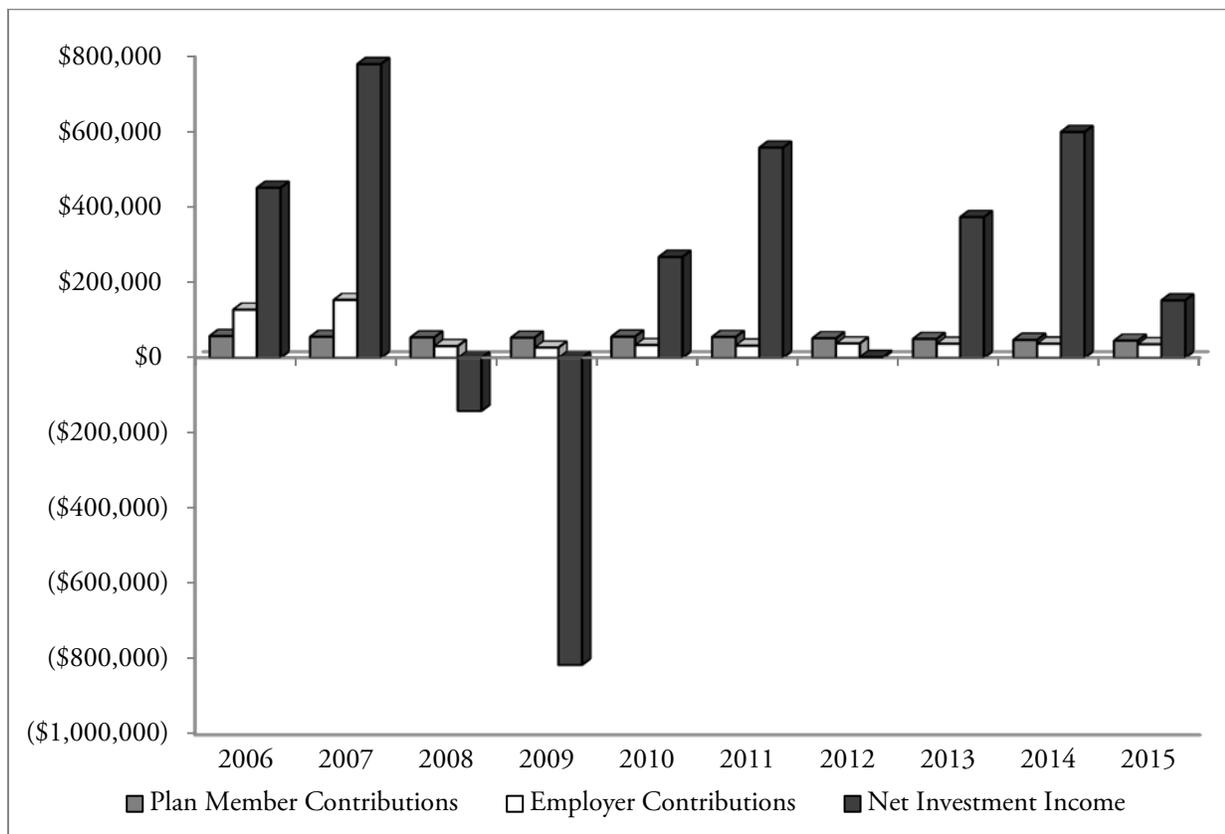
**9-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS  
(In thousands)**



# Statistical Section

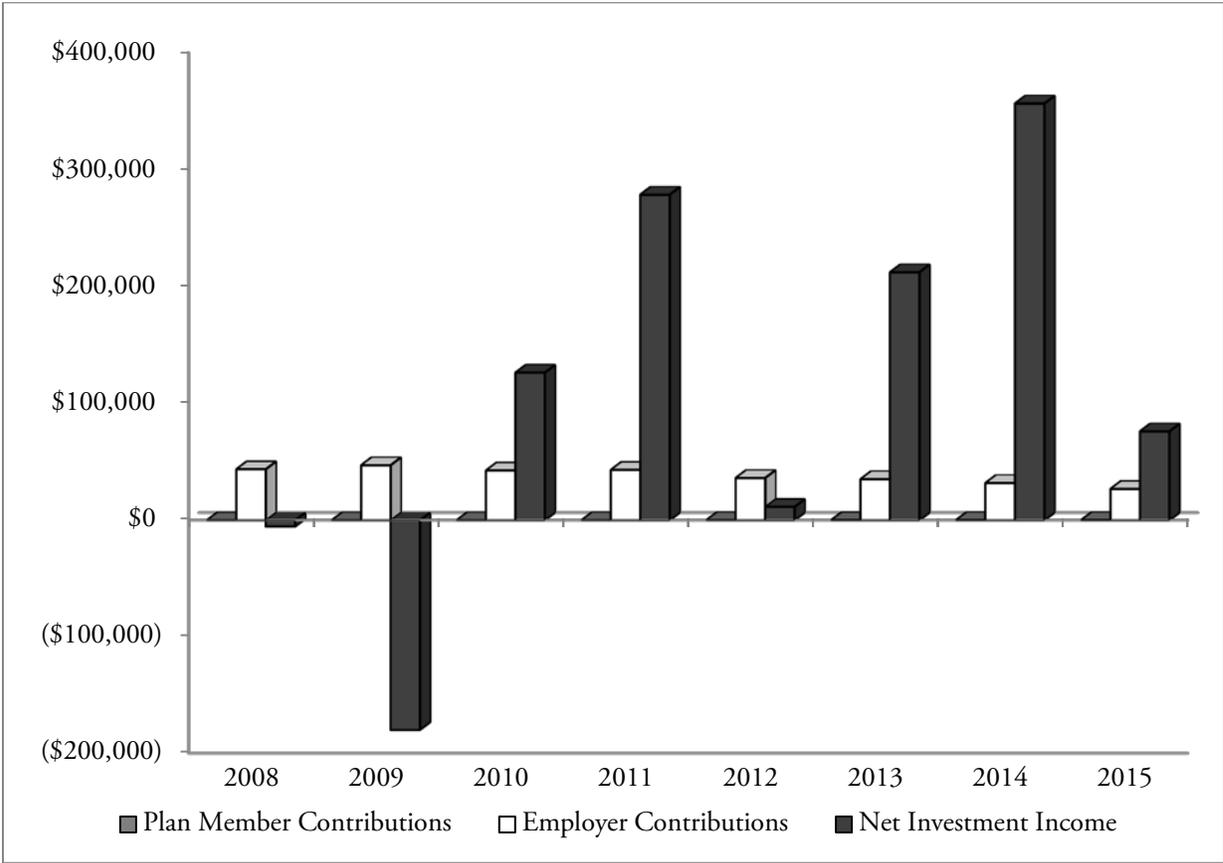
<b>Teachers' Retirement System                      Defined Benefit Pension                      Additions by Source                      (In thousands)</b>						
Year Ended June 30	Plan Member Contributions	Employer Contributions	State of Alaska	Net Investment Income (Loss)	Other	Total
2006	\$ 57,802	\$ 127,967	\$ —	\$ 451,689	\$ 15,190	\$ 652,648
2007	55,689	153,618	—	780,512	21	989,840
2008	54,121	31,313	111,237	(139,282)	34	57,423
2009	53,544	27,110	104,423	(814,138)	3	(629,058)
2010	56,554	33,800	100,475	268,146	9	458,984
2011	55,347	32,804	109,343	558,220	54	755,768
2012	52,020	38,189	157,387	2,190	17	249,803
2013	50,201	37,372	196,945	373,868	19	658,405
2014	47,724	37,571	208,890	599,958	27	894,170
2015	45,506	36,374	1,662,700	152,561	9	1,897,150

**10-YEAR COMPARISON OF ADDITIONS BY SOURCE  
(In thousands)**



<b>Teachers' Retirement System                      Defined Benefit Alaska Retiree Healthcare Trust                      Additions by Source                      (In thousands)</b>							
Year Ended June 30	Plan Member Premiums	Employer Contributions	State of Alaska	Net Investment Income (Loss)	Transfer	Other	Total
2008	\$ 111	\$ 43,697	\$ 158,755	\$ (5,318)	\$1,086,620	\$ —	\$ 1,283,865
2009	116	47,174	101,877	(179,919)	—	3,595	(27,157)
2010	117	42,694	72,987	125,903	—	59,035	300,736
2011	138	43,217	81,507	278,366	—	4,951	408,179
2012	183	36,281	77,130	11,465	—	12,535	137,594
2013	250	35,293	105,832	211,927	—	4,152	357,454
2014	263	31,980	107,956	356,411	—	6,223	502,833
2015	227	26,922	337,300	76,174	—	15,432	456,055

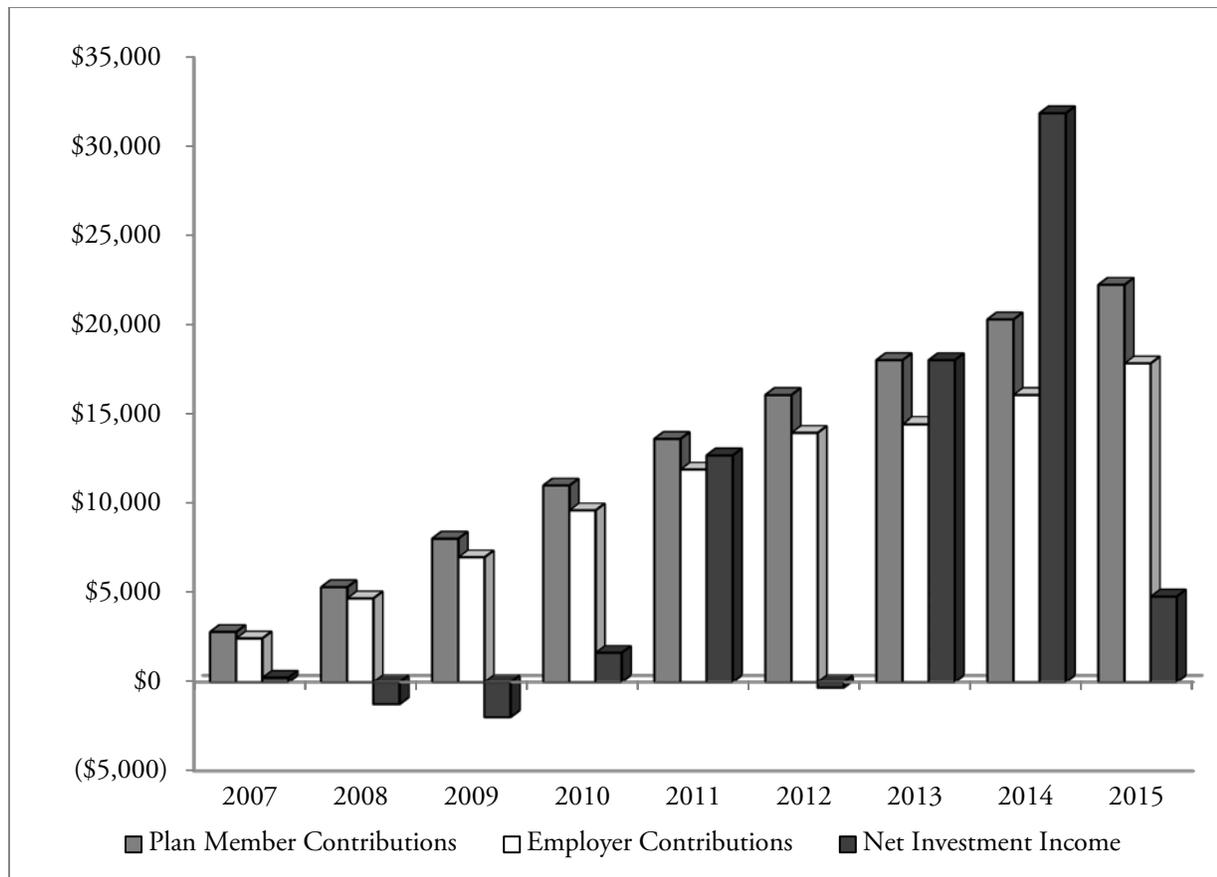
**8-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

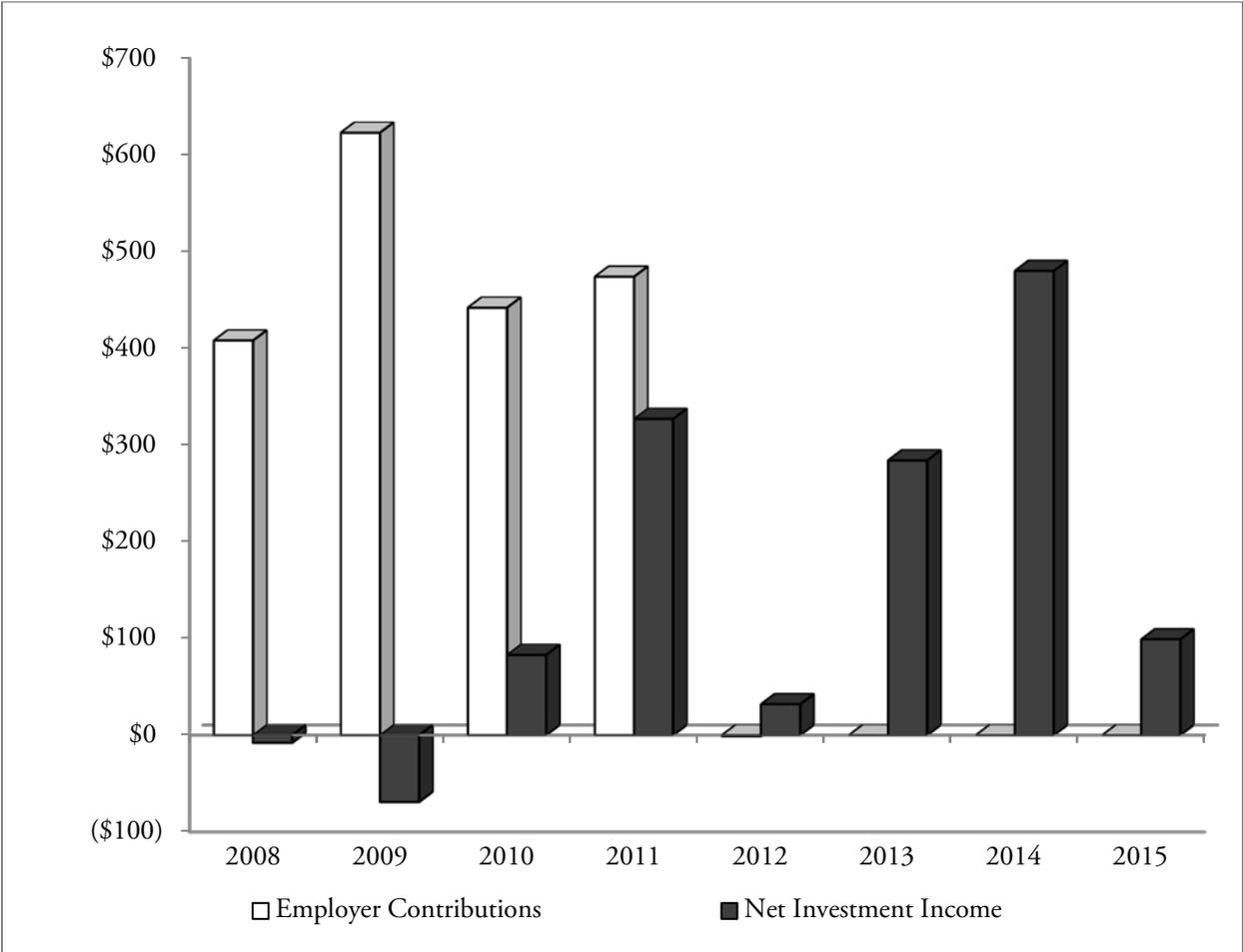
<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Participant Directed</b> <b>Additions by Source</b> <b>(In thousands)</b>					
Year Ended June 30	Plan Member Contributions	Employer Contributions	Net Investment Income (Loss)	Other	Total
2007	\$ 2,827	\$ 2,465	\$ 251	\$ —	\$ 5,543
2008	5,347	4,717	(1,239)	—	8,825
2009	8,077	7,023	(1,968)	—	13,132
2010	11,051	9,658	1,650	—	22,359
2011	13,665	11,943	12,742	5	38,355
2012	16,095	14,003	(307)	—	29,791
2013	18,044	14,474	18,040	2	50,560
2014	20,326	16,098	31,887	4	68,315
2015	22,269	17,863	4,820	—	44,952

**9-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability</b> <b>Additions by Source</b> <b>(In thousands)</b>			
Plan Ended June 30	Employer Contributions	Net Investment Income (Loss)	Total
2008	\$ 408	\$ (8)	\$ 400
2009	623	(69)	554
2010	442	83	525
2011	474	327	801
2012	(1)	32	31
2013	—	284	284
2014	—	480	480
2015	—	99	99

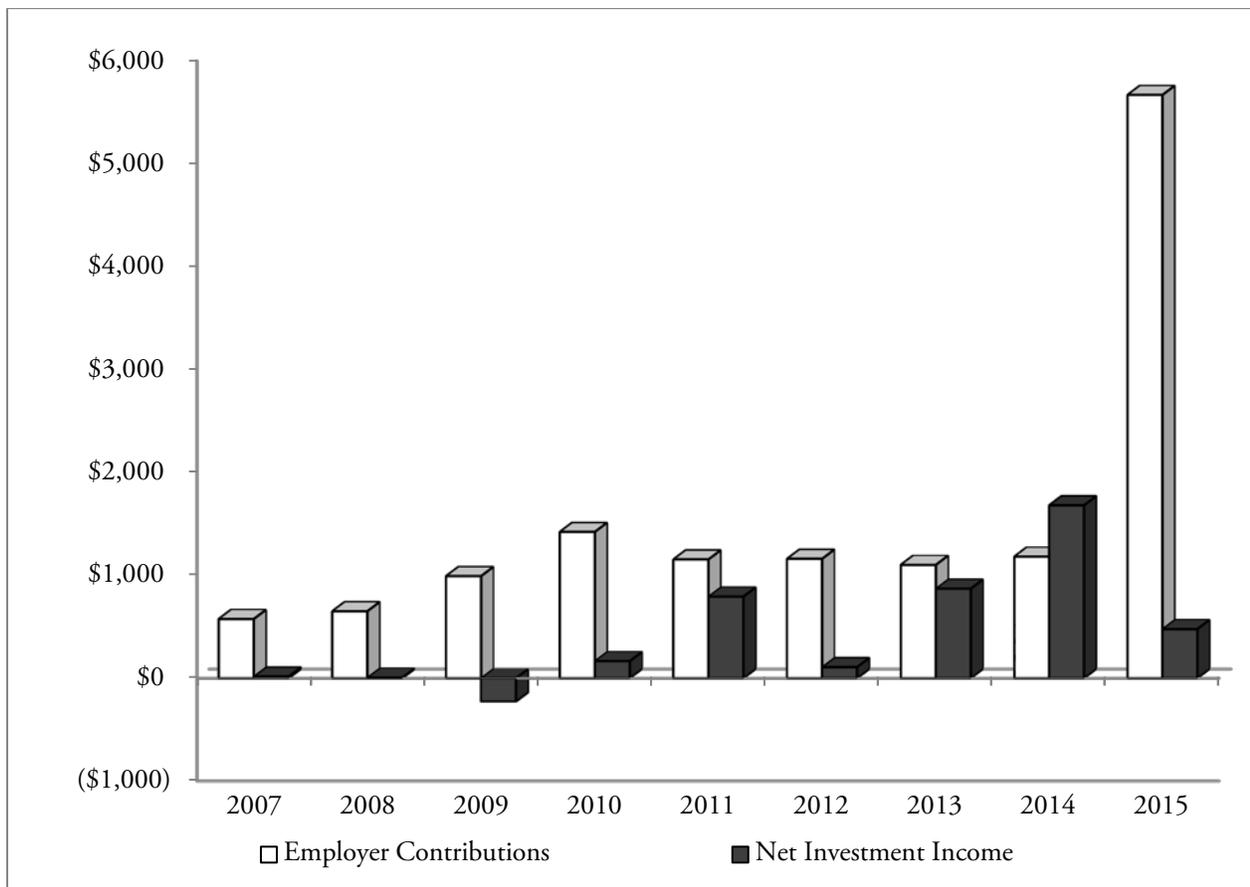
**8-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

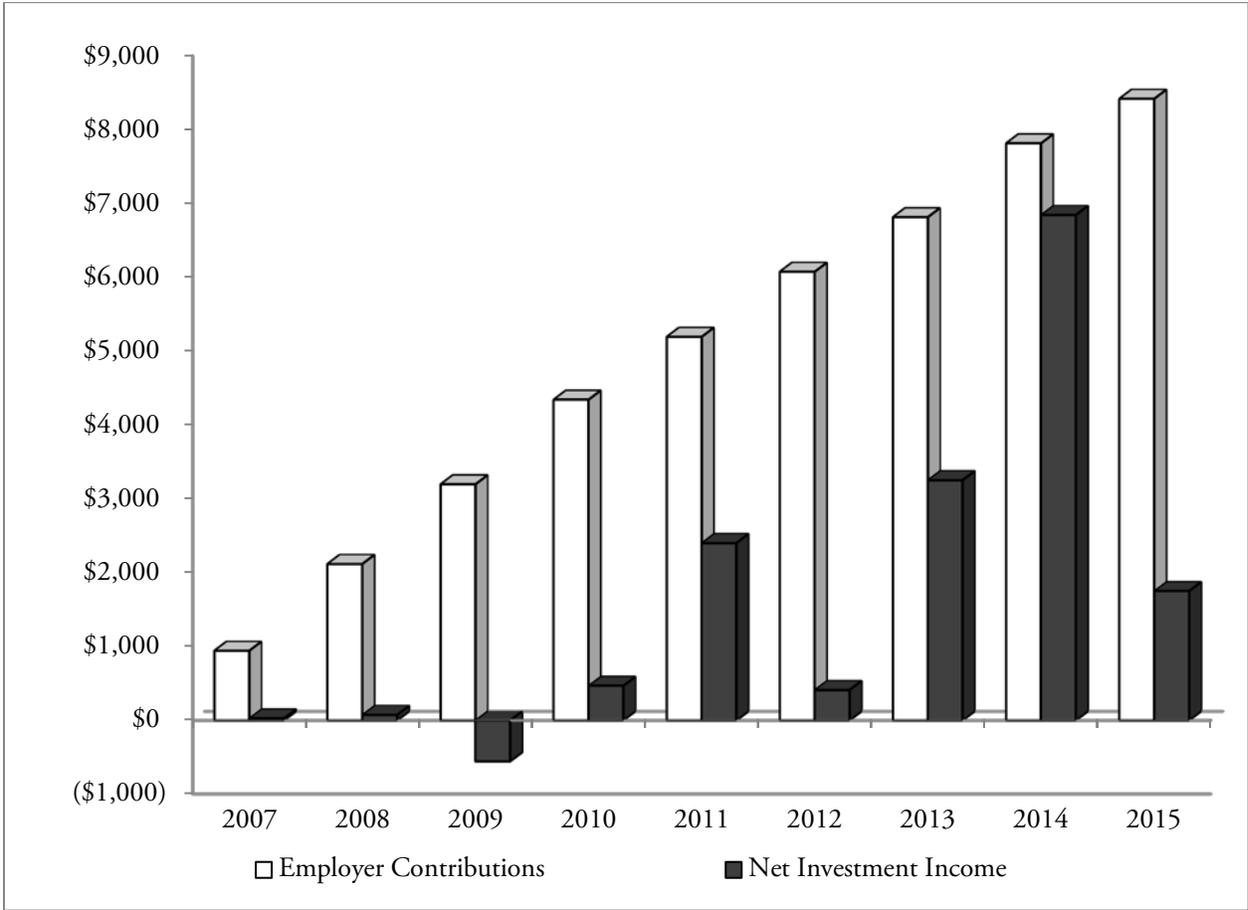
<b>Teachers' Retirement System                      Defined Contribution Retirement Retiree Medical Plan                      Additions by Source                      (In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Employer Contributions</b>	<b>Net Investment Income (Loss)</b>	<b>Total</b>
2007	\$ 575	\$ 15	\$ 590
2008	651	5	656
2009	992	(226)	766
2010	1,421	165	1,586
2011	1,154	793	1,947
2012	1,160	107	1,267
2013	1,101	869	1,970
2014	1,181	1,680	2,861
2015	5,670	477	6,147

**9-YEAR COMPARISON OF ADDITIONS BY SOURCE  
(In thousands)**



<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Health Reimbursement Arrangement</b> <b>Additions by Source</b> <b>(In thousands)</b>			
Plan Ended June 30	Employer Contributions	Net Investment Income (Loss)	Total
2007	\$ 947	\$ 27	\$ 974
2008	2,127	75	2,202
2009	3,206	(556)	2,650
2010	4,344	470	4,814
2011	5,195	2,411	7,606
2012	6,077	414	6,491
2013	6,816	3,263	10,079
2014	7,816	6,846	14,662
2015	8,420	1,758	10,178

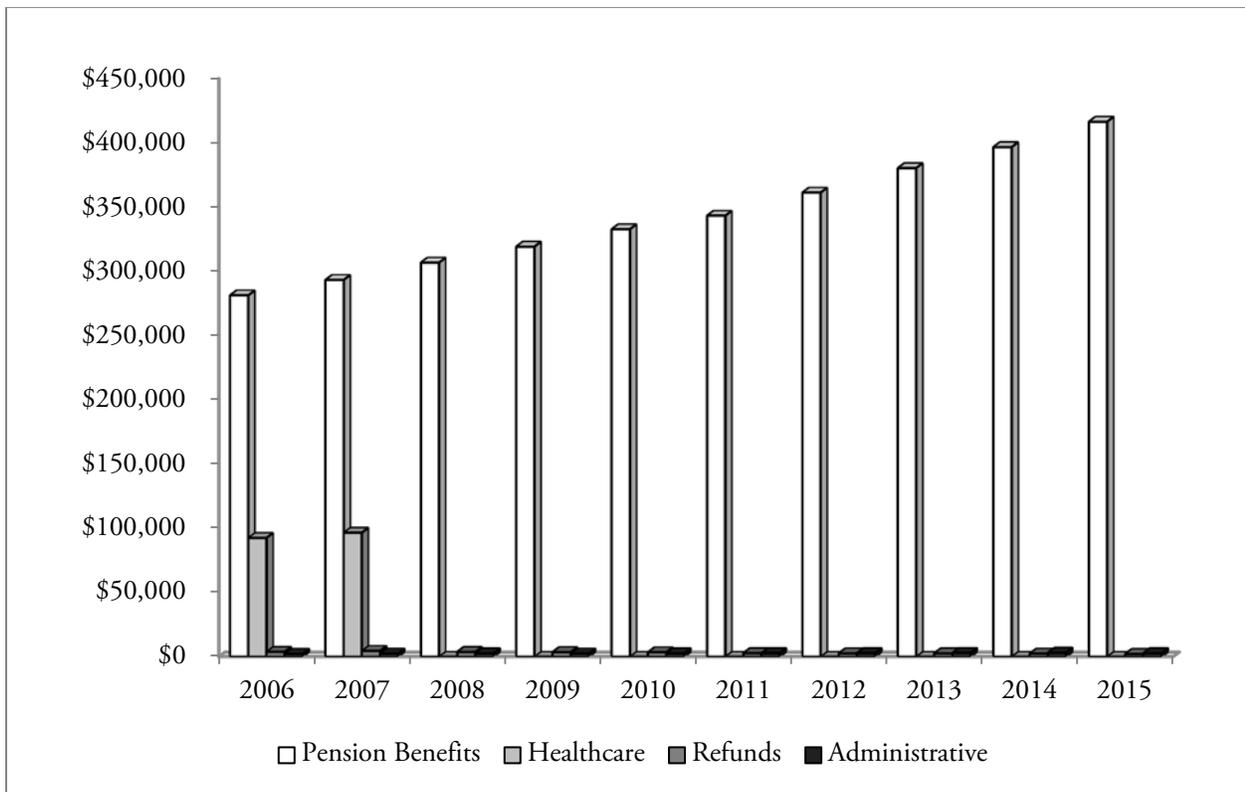
**9-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

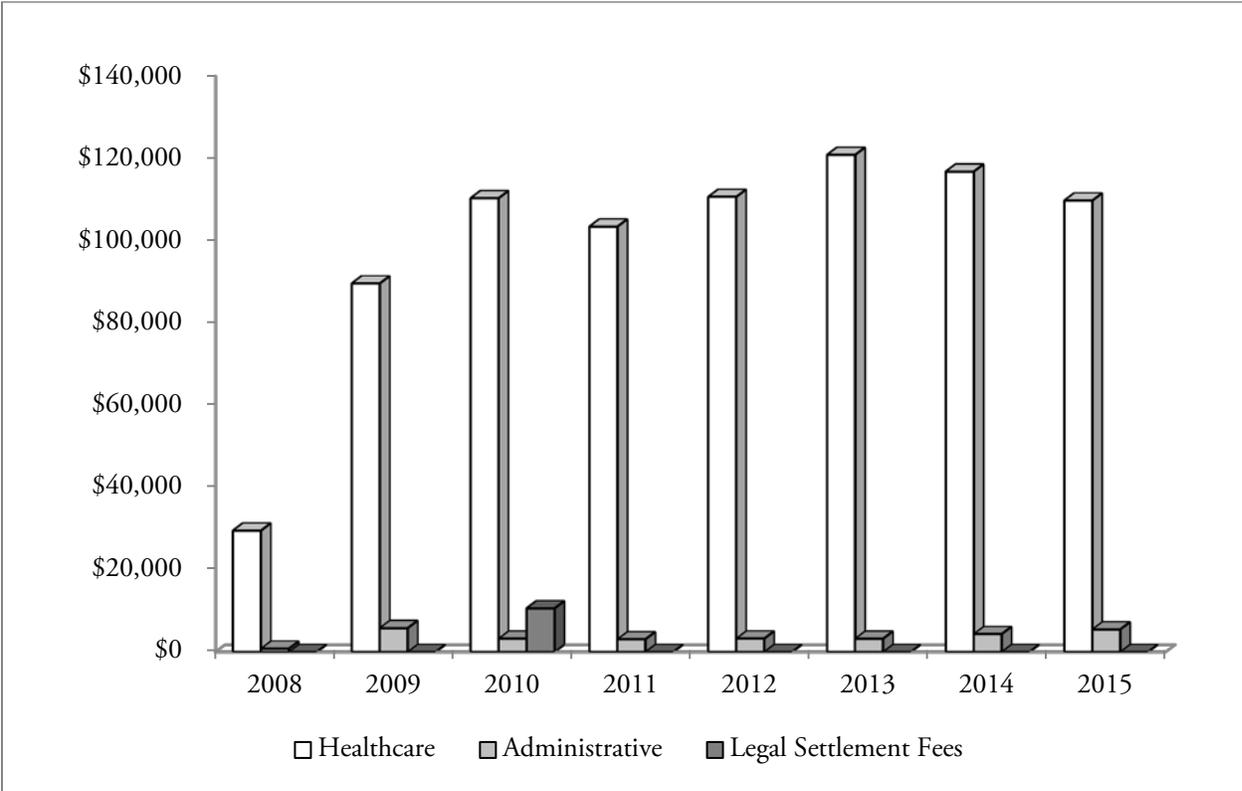
Teachers' Retirement System Defined Benefit Pension Deductions by Type (In thousands)						
Year Ended June 30	Pension Benefits	Healthcare	Refunds of Contributions	Administrative	Transfer	Total
2006	\$ 281,205	\$ 92,462	\$ 3,832	\$ 2,173	\$ —	\$ 379,672
2007	293,224	96,544	4,535	2,394	—	396,697
2008	306,689	—	3,761	2,669	1,086,620	1,399,739
2009	319,148	—	3,622	2,537	—	325,307
2010	332,690	—	3,472	2,698	—	338,860
2011	343,191	—	2,798	2,806	—	348,795
2012	361,202	—	2,637	2,847	—	366,686
2013	380,265	—	2,668	2,989	—	385,922
2014	396,614	—	2,387	3,160	—	402,161
2015	416,354	—	2,191	2,789	—	421,334

**10-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
(In thousands)



<b>Teachers' Retirement System</b> <b>Defined Benefit Alaska Retiree Healthcare Trust</b> <b>Deductions by Type</b> <b>(In thousands)</b>				
Plan Ended June 30	Healthcare	Administrative	Legal Settlement Fees	Total
2008	\$ 29,494	\$ 798	\$ —	\$ 30,292
2009	89,571	5,812	—	95,383
2010	110,313	3,228	10,592	124,133
2011	103,405	3,080	—	106,485
2012	110,632	3,251	—	113,883
2013	120,855	3,219	—	124,074
2014	116,781	4,338	—	121,119
2015	109,740	5,484	—	115,224

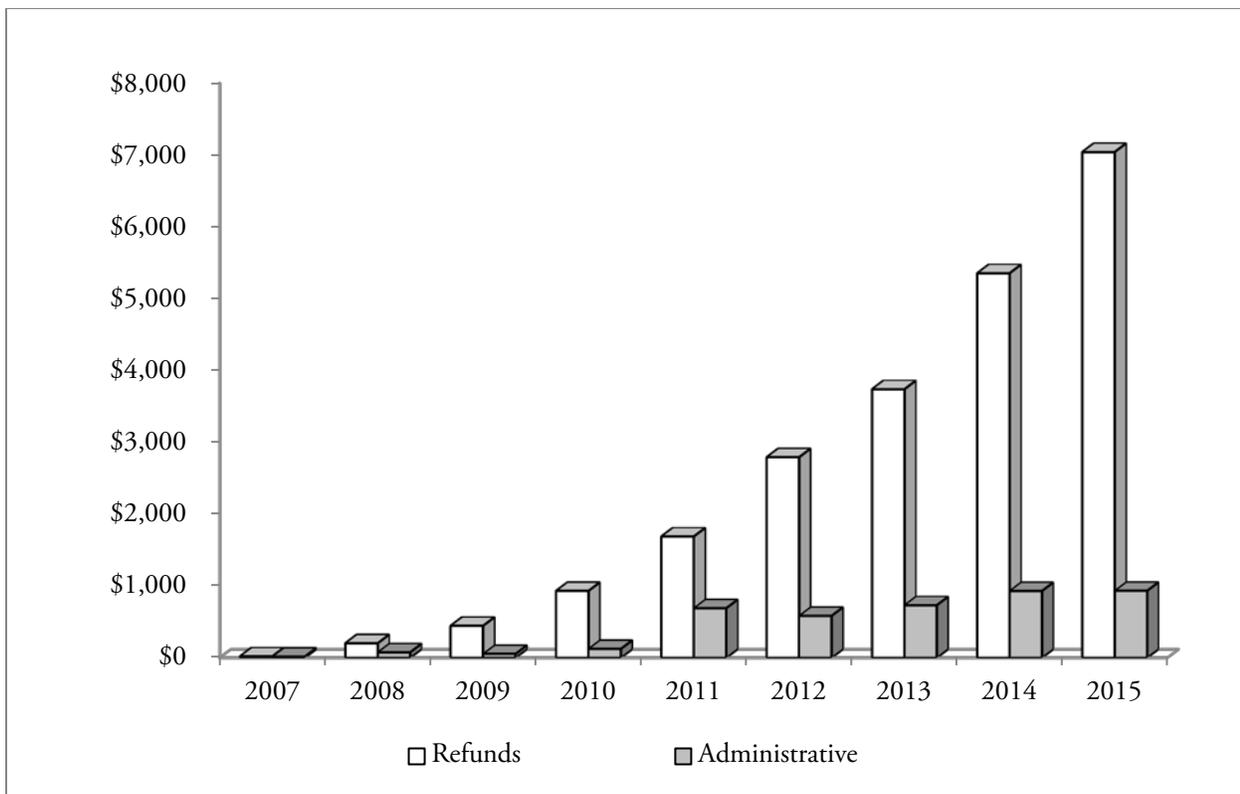
**8-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
**(In thousands)**



# Statistical Section

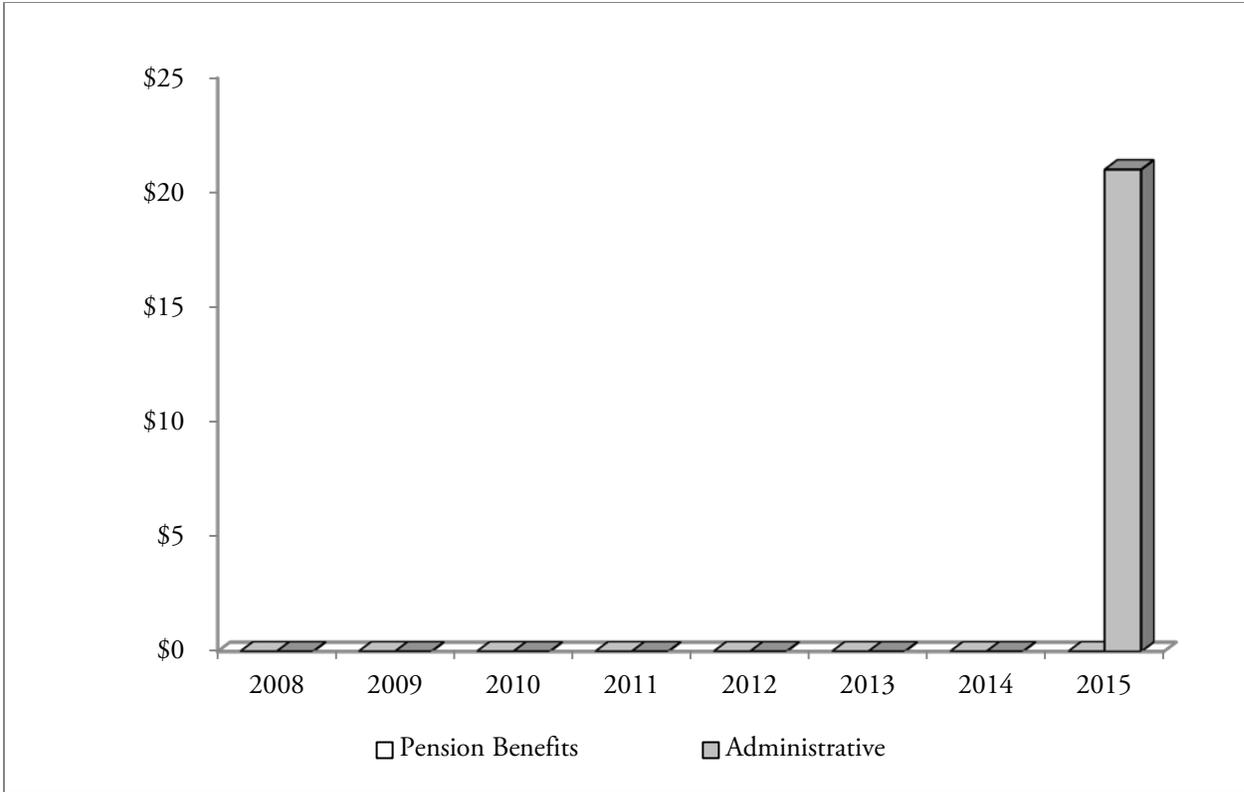
<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Participant Directed</b> <b>Deductions by Type</b> <b>(In thousands)</b>				
Plan Ended June 30	Refund of Contributions	Administrative	Prior Year Forfeiture Payable Adjustment	Total
2007	\$ 20	\$ 16	\$ —	\$ 36
2008	202	76	—	278
2009	445	53	—	498
2010	930	123	—	1,053
2011	1,688	689	—	2,377
2012	2,791	583	—	3,374
2013	3,737	731	3,247	7,715
2014	5,352	929	—	6,281
2015	7,041	931	—	7,972

**9-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
(In thousands)



<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability</b> <b>Deductions by Type</b> <b>(In thousands)</b>			
Plan Ended June 30	Healthcare	Administrative	Total
2008	\$ —	\$ —	\$ —
2009	—	—	—
2010	—	—	—
2011	—	—	—
2012	—	—	—
2013	—	—	—
2014	—	—	—
2015	—	21	21

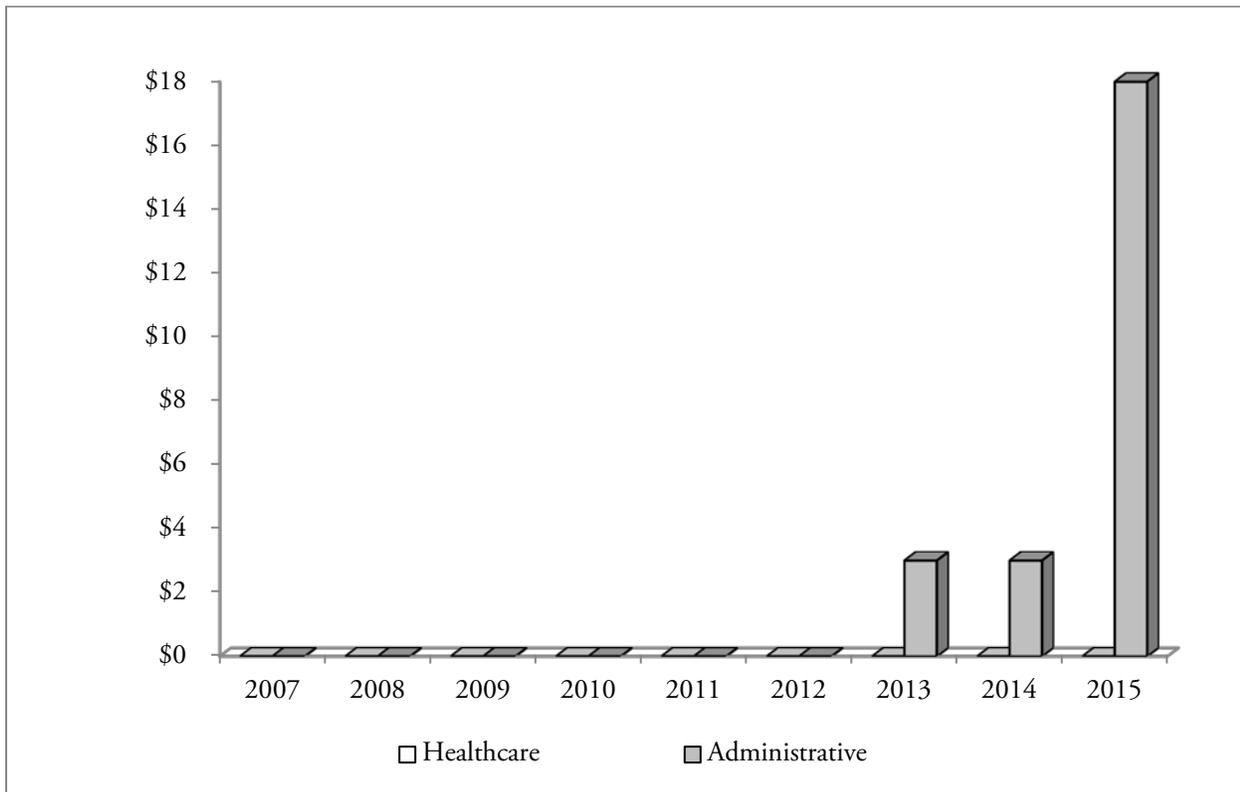
**8-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
(In thousands)



# Statistical Section

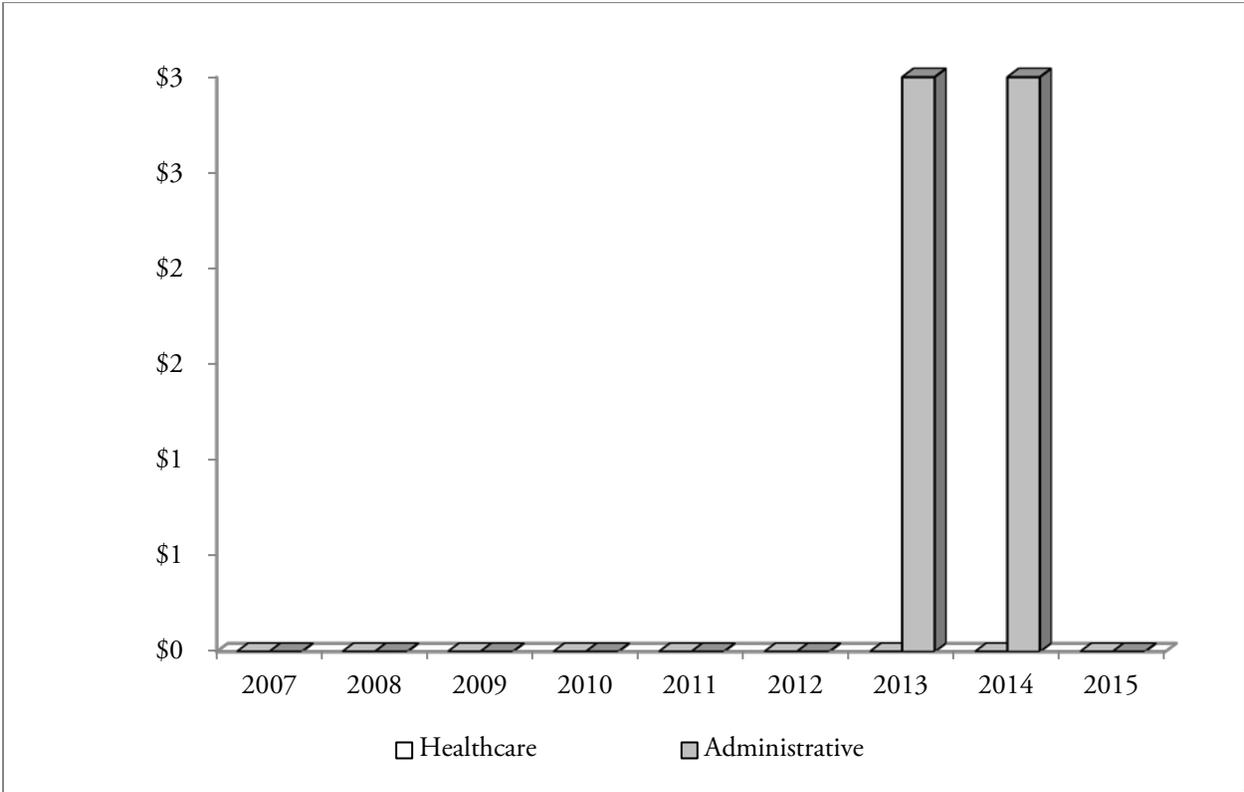
<b>Teachers' Retirement System                      Defined Contribution Retirement Medical Plan                      Deductions by Type                      (In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Healthcare</b>	<b>Administrative</b>	<b>Total</b>
2007	\$ —	\$ —	\$ —
2008	—	—	—
2009	—	—	—
2010	—	—	—
2011	—	—	—
2012	—	—	—
2013	—	3	3
2014	—	3	3
2015	—	18	18

**9-YEAR COMPARISON OF DEDUCTIONS BY TYPE  
(In thousands)**



<b>Teachers' Retirement System</b> <b>Defined Contribution Retirement Health Reimbursement Arrangement</b> <b>Deductions by Type</b> <b>(In thousands)</b>			
Plan Ended June 30	Healthcare	Administrative	Total
2007	\$ —	\$ —	\$ —
2008	—	—	—
2009	—	—	—
2010	—	—	—
2011	—	—	—
2012	—	—	—
2013	—	3	3
2014	—	3	3
2015	—	—	—

**9-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
(In thousands)

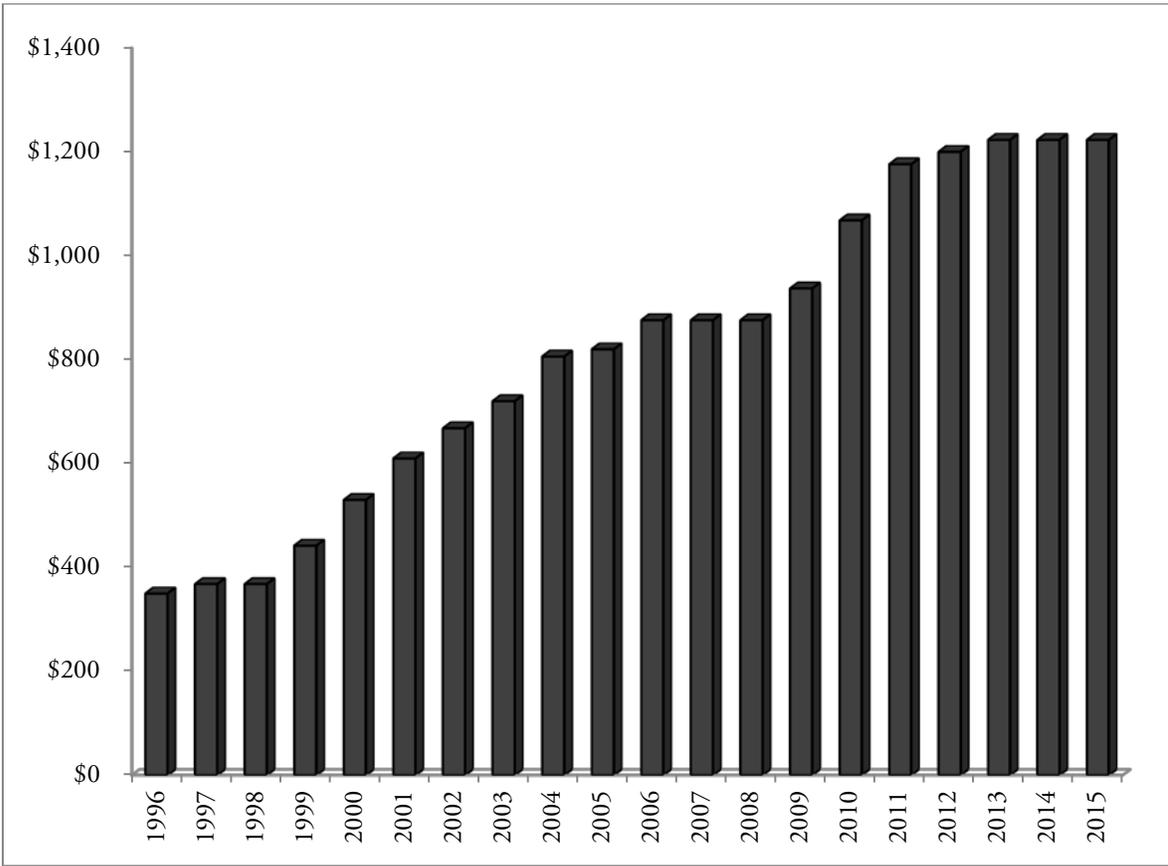


# Statistical Section

<b>Teachers' Retirement System                      Schedule of Average Pension Benefit Payments                      New Benefit Recipients</b>							
	<b>Years of Credited Service</b>						
	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30+</b>
Period 7/1/08 - 6/30/09 <sup>(1)</sup> : Average Monthly Benefit	\$230	\$950	\$1,168	\$2,239	\$2,957	\$3,897	\$4,860
Number of Recipients	13	35	64	52	67	54	18
Period 7/1/09 - 6/30/10 <sup>(1)</sup> : Average Monthly Benefit	\$482	\$1,020	\$1,343	\$2,263	\$2,992	\$4,120	\$6,263
Number of Recipients	14	50	63	85	109	79	49
Period 7/1/10 - 6/30/11 <sup>(1)</sup> : Average Monthly Benefit	\$146	\$902	\$1,432	\$2,328	\$3,131	\$4,283	\$5,496
Number of Recipients	5	68	63	77	118	104	67
Period 7/1/11 - 6/30/12 <sup>(1)</sup> : Average Monthly Benefit	\$353	\$1,064	\$1,512	\$2,241	\$3,276	\$4,320	\$5,739
Number of Recipients	11	43	62	61	118	81	58
Period 7/1/12 - 6/30/13 <sup>(1)</sup> : Average Monthly Benefit	\$253	\$1,030	\$1,496	\$2,450	\$3,281	\$4,384	\$6,052
Number of Recipients	10	57	67	90	101	79	64
Period 7/1/13 - 6/30/14 <sup>(1)</sup> : Average Monthly Benefit	\$235	\$904	\$1,435	\$2,398	\$3,016	\$4,073	\$7,485
Number of Recipients	8	31	31	28	22	18	12
"Average Monthly Benefit" includes post-retirement pension adjustments and cost-of-living increases.							
<sup>(1)</sup> Does not include beneficiaries							

<b>Teachers' Retirement System</b> <b>Schedule of Pension and Healthcare Benefits Deductions by Type</b> <b>(In thousands)</b>						
Year Ended June 30	Service	Disability	Survivor	Dependent	Healthcare	Total
2006	\$ 270,504	\$ 2,342	\$ 8,353	\$ 6	\$ 92,462	\$ 373,667
2007	281,879	2,193	9,146	6	96,544	389,768
2008	294,807	1,889	9,974	18	99,583	406,271
2009	306,748	1,692	10,688	20	103,093	422,241
2010	319,109	1,757	11,787	37	117,556	450,246
2011	329,308	1,337	12,499	47	133,152	476,343
2012	346,538	1,222	13,398	45	146,309	507,512
2013	364,387	1,377	14,467	34	160,337	540,602
2014	379,594	1,231	15,703	86	166,631	563,245
2015	398,280	1,211	16,781	82	109,740	526,094

**20-YEAR COMPARISON OF RETIREE MONTHLY COMPOSITE MEDICAL PREMIUMS**



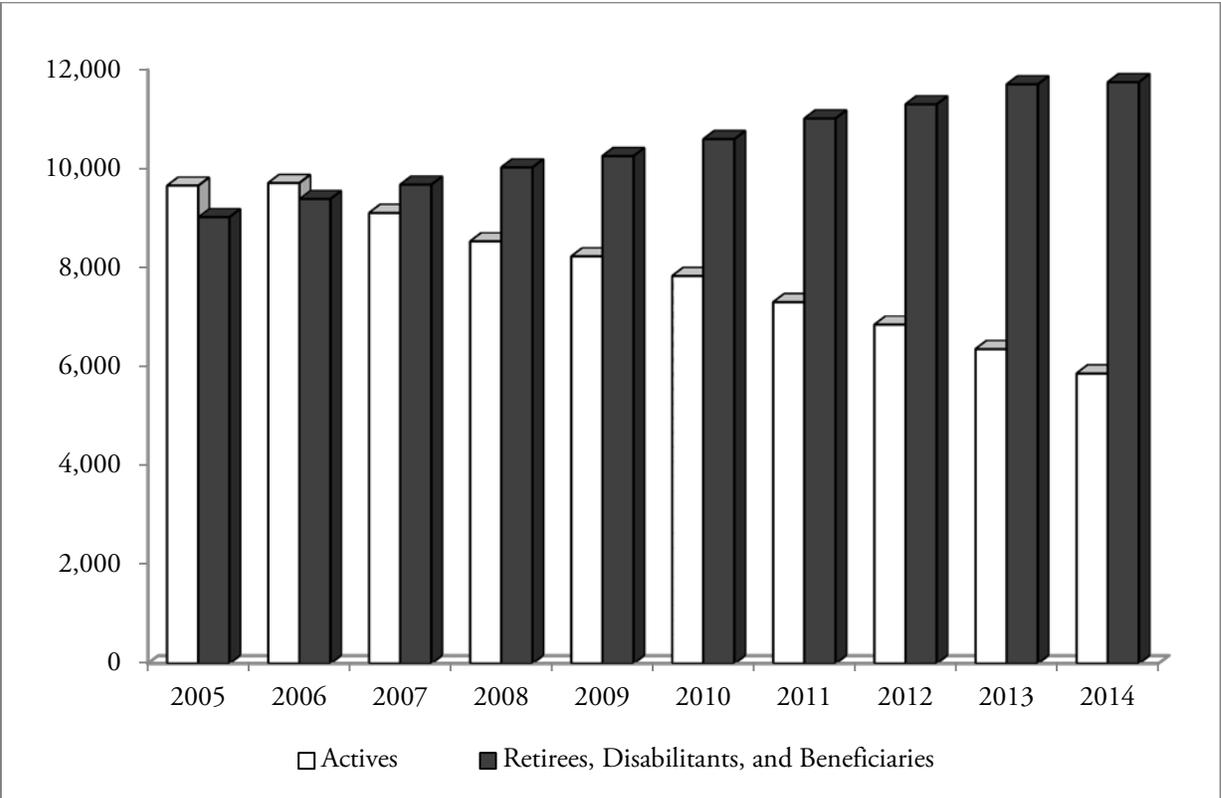
# Statistical Section

Teachers' Retirement System Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected Valuation as of June 30, 2014				
Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit		
		Regular Retirement	Survivor Payment	Disability
\$ 1 - 300	208	151	57	—
301 - 600	361	268	93	—
601 - 900	628	505	123	—
901 - 1,200	735	601	134	—
1,201 - 1,500	678	535	143	—
1,501 - 1,800	639	521	118	—
1,801 - 2,100	667	550	115	2
2,101 - 2,400	803	723	80	—
2,401 - 2,700	970	901	67	2
2,701 - 3,000	937	895	38	4
3,001 - 3,300	911	878	29	4
3,301 - 3,600	804	786	15	3
3,601 - 3,900	725	703	13	9
3,901 - 4,200	618	613	4	1
over 4,200	2,066	2,051	10	5
<b>Totals</b>	<b>11,750</b>	<b>10,681</b>	<b>1,039</b>	<b>30</b>

Teachers' Retirement System Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected Valuation as of June 30, 2014					
Amount of Monthly Pension Benefit	Number of Recipients	Option Selected			
		Whole Life Annuity	75% Joint and Contingent Annuity	50% Joint and Contingent Annuity	66 2/3% Joint and Contingent Annuity
\$ 1 - 300	208	123	45	33	7
301 - 600	361	187	76	78	20
601 - 900	628	325	140	130	33
901 - 1,200	735	423	161	125	26
1,201 - 1,500	678	363	157	133	25
1,501 - 1,800	639	344	149	123	23
1,801 - 2,100	667	338	151	153	25
2,101 - 2,400	803	377	192	207	27
2,401 - 2,700	970	467	222	258	23
2,701 - 3,000	937	439	218	252	28
3,001 - 3,300	911	439	191	258	23
3,301 - 3,600	804	394	152	244	14
3,601 - 3,900	725	377	128	196	24
3,901 - 4,200	618	311	104	191	12
over 4,200	2,066	978	308	723	57
<b>Totals</b>	<b>11,750</b>	<b>5,885</b>	<b>2,394</b>	<b>3,104</b>	<b>367</b>

Teachers' Retirement System System Membership by Status					
Year Ended June 30	Active	Retirees Disabilitants & Beneficiaries	Vested Terminations	Nonvested Terminations w/Balance	Total
2005	9,656	9,020	826	2,874	22,376
2006	9,710	9,386	795	3,085	22,976
2007	9,107	9,678	846	3,044	22,675
2008	8,531	10,026	873	2,971	22,401
2009	8,226	10,255	884	2,830	22,195
2010	7,832	10,598	840	2,789	22,059
2011	7,303	11,016	852	2,675	21,846
2012	6,845	11,301	868	2,559	21,573
2013	6,352	11,705	906	2,448	21,411
2014	5,861	11,750	1,274	2,328	21,213

**10-YEAR COMPARISON OF ACTIVE MEMBERS AND RETIREES,  
DISABILITANTS, AND BENEFICIARIES**

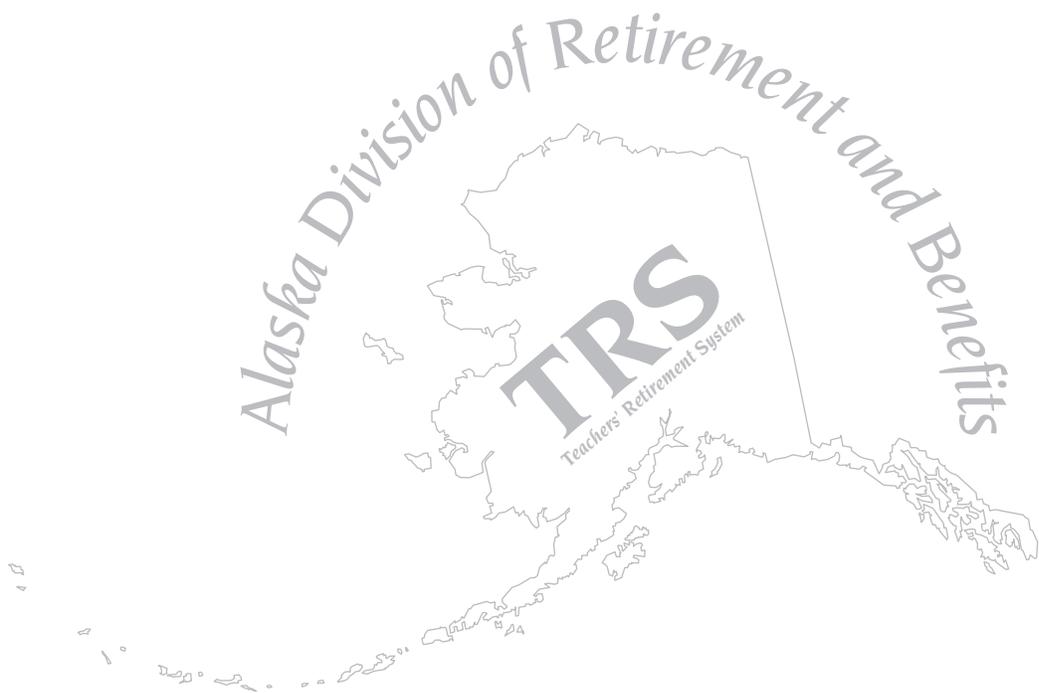


# Statistical Section

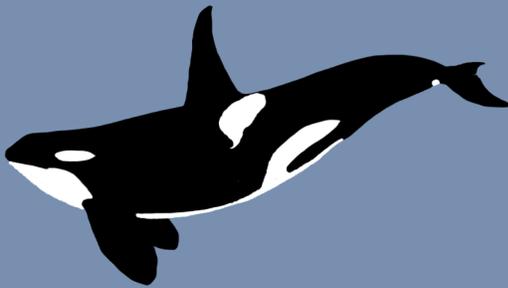
<b>Teachers' Retirement System Principal Participating Employers June 30, 2015</b>			
<b>Employer</b>	<b>Non-retired Members</b>	<b>Rank</b>	<b>Percentage of Total Non-retired Members</b>
Anchorage School District	4,859	1	32.06%
Matanuska-Susitna Borough School District	1,546	2	10.20
Fairbanks North Star Borough School District	<u>1,324</u>	3	<u>8.74</u>
<b>Total</b>	<u><b>7,729</b></u>		<u><b>51.00%</b></u>

## Teachers' Retirement System Participating Employers June 30, 2015

Alaska Department of Education	Lake and Peninsula Borough School District
Alaska Gateway School District	Lower Kuskokwim School District
Aleutian Region School District	Lower Yukon School District
Aleutians East Borough School District	
Anchorage School District	Matanuska-Susitna Borough School District
Annette Island School District	
	Nenana City School District
Bering Strait School District	Nome City School District
Bristol Bay Borough School District	North Slope Borough School District
	Northwest Arctic Borough School District
Chatham School District	
Chugach School District	Pelican City School District
Copper River School District	Petersburg City School District
Cordova City School District	Pribilof School District
Craig City School District	
	Saint Mary's School District
Delta-Greely School District	Sitka Borough School District
Denali Borough School District	Skagway City School District
Dillingham City School District	Southeast Island School District
	Southeast Regional Resource Center
Fairbanks North Star Borough School District	Southwest Region School District
	Special Education Service Agency
Galena City School District	
	Tanana School District
Haines Borough School District	
Hoonah City School District	Unalaska City School District
Hydaburg City School District	University of Alaska
Iditarod Area School District	Valdez City School District
Juneau School District, City and Borough of	Wrangell Public School District
Kake City School District	Yakutat School District
Kashunamiut School District	Yukon Flats School District
Kenai Peninsula Borough School District	Yukon-Koyukuk School District
Ketchikan Gateway Borough School District	Yupiit School District
Klawock City School District	
Kodiak Island Borough School District	
Kuspuk School District	







State of Alaska  
Department of Administration | Division of Retirement and Benefits  
P.O. Box 110203 | Juneau, Alaska 99811-0203

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