

# ALASKA

• Public Employees' Retirement System •



A component unit of the State of Alaska

## Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2019

Mike Dunleavy, Governor





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**PUBLIC EMPLOYEES' RETIREMENT SYSTEM**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT**

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

*For the Fiscal Year Ended June 30, 2019*



**Mike Dunleavy, Governor**

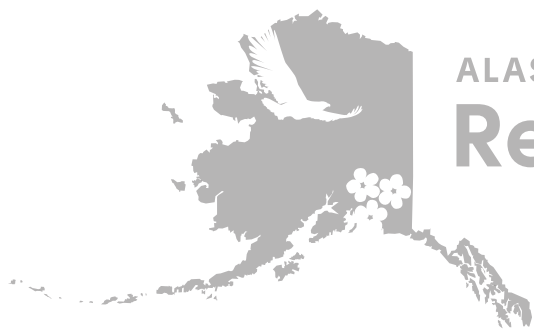
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ALASKA DIVISION OF  
**Retirement  
and Benefits**

*The Alaska Department of Administration complies with Title II of the 1990 Americans with Disabilities Act (ADA). This publication is available in alternative communication formats upon request. To make necessary arrangements, contact the ADA Coordinator for the Division of Retirement and Benefits, at (907) 465-4460 or contact the TDD for the hearing impaired at (907) 465-2805.*

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# INTRODUCTORY SECTION







THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

## Department of Administration

### DIVISION OF RETIREMENT AND BENEFITS

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## LETTER OF TRANSMITTAL

December 16, 2019

The Honorable Mike Dunleavy, 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 Public Employees' Retirement System (PERS) (System) for the fiscal year ended June 30, 2019. The CAFR is intended to fulfill the legal requirements of Alaska Statute (AS) 39.35.004(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, 2019. All disclosures necessary to enable the reader to gain an understanding of the System's activities have been included.

KPMG LLP, Certified Public Accountants, has issued an unmodified opinion on the System's basic financial statements for the year ended June 30, 2019. The independent auditor's report is located at the beginning 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.

# Introductory Section

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The CAFR is divided into five sections:

- **Introductory Section**, which contains the letter of transmittal, the organization 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;
- **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 1961 to provide pension benefits for eligible state and local government employees. Post-employment health care benefits were added 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 Retirement (DCR) 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 DCR Plan. This report includes both plans. The DB Plan includes the pension plan and the Alaska Retiree Health Care Trust (Tiers I, II, and III). The DCR Plan includes the defined contribution retirement trust, occupational death and disability plan, retiree major medical plan, and the health reimbursement arrangement plan (Tier IV).

## 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 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 Public Employees' 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 / Changes**

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 continues to develop new employee videos for employers to use and make the plan information easy to access by members. The System has developed an Employer Tool Kit to assist employers in the everyday administration of plan benefit provisions under their responsibility. Video development continues to add to the library of information available to participants on a 24/7 basis on the Division's website. 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. Additionally, the System is in the beginning phase of a 4-year system replacement for our current system software program. The System continues to tighten timeframes for issuance of audited financial statements as well as GASB reporting schedules for employers.

The System continues to identify opportunities to reduce the cost of healthcare while maintaining or improving benefits for retirees. Effective January 1, 2019, AlaskaCare transitioned to a new pharmacy benefit manager, OptumRx, resulting in advantaged drug pricing and savings on prescription drug costs for all AlaskaCare plans. At the same time, the System implemented a group Medicare Part D prescription drug plan known as an enhanced Employer Group Waiver Plan (EGWP) for all Medicare-eligible members covered under the AlaskaCare retiree health plan. The enhanced EGWP leverages increased federal subsidies to the retiree healthcare trusts for prescription drugs covered by Medicare Part D, while also providing coverage for medications not covered by Medicare Part D through a "wrap" of additional benefits. Moving to an enhanced EGWP has resulted in the retiree healthcare trusts receiving significantly higher subsidies, while simultaneously maintaining and in some cases expanding, the prescription drug coverage retirees had prior to implementation of the enhanced EGWP.

# Introductory Section

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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 Global, LLC (Buck), presented the results of the June 30, 2018, 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, 2018, 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 76.9%. The DB Plan's unfunded actuarial accrued liability (actuarial liability minus actuarial value of DB plan assets) totals approximately \$5.15 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, 2019, the DB Plan's investment portfolio was valued at \$16.9 billion and earned a 6.40% return for the fiscal year ended June 30, 2019. The DCR Plan's investment portfolio was valued at \$1.8 billion for the fiscal year ended June 30, 2019. Over the past five years ending June 30, 2019, the DB Plan's investments earned an 6.35% 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.

## **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 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, 2018. 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. The Division is 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 to the Division for the fiscal year ended June 30, 2019.

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 2020.

## **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 and Division of Finance; 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 <http://doa.alaska.gov/drb/pers/employee/resources/cafr.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,



Kelly Tshibaka  
Commissioner



Ajay Desai  
Division Director



Emily Ricci  
Chief Health Policy Administrator



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 Public Employees'  
Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2018**

*Christopher P. Morill*

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2019***

Presented to

***Alaska Public Employees' 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*

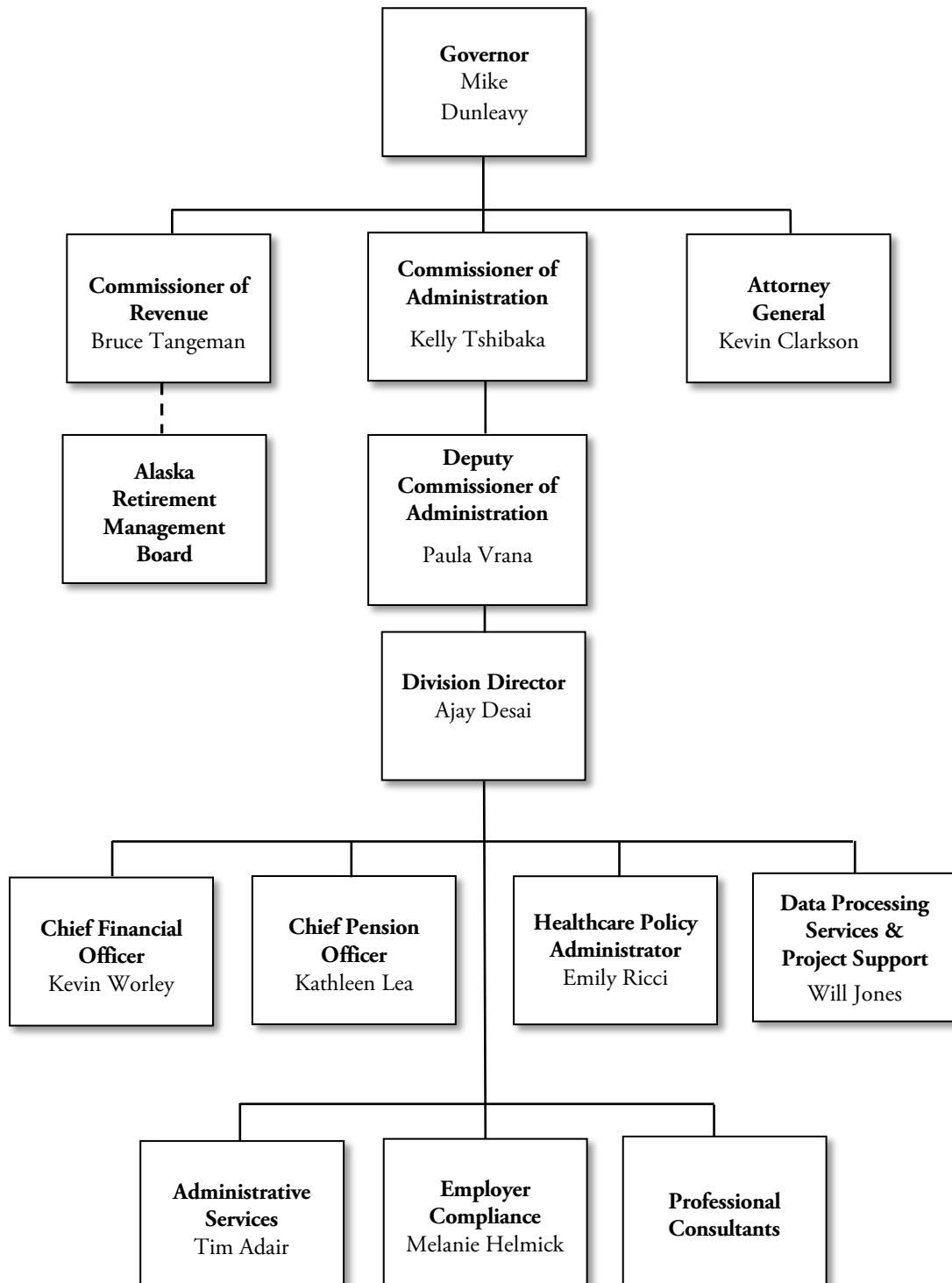
National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink, reading 'Alan H. Winkle'. The signature is written in a cursive, flowing style.

Alan H. Winkle  
Program Administrator

## ORGANIZATION CHART

As of June 30, 2019



# Introductory Section

## 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 members' physical records and performs other administrative functions such as legislative tracking and personnel management.

Professional Consultants		
<b>Consulting Actuary</b> Buck Global, LLC <i>Denver, Colorado</i>	<b>Legal Counsel</b> Kevin Dilg Kevin Higgins Jessica Leeah Bill Milks Rebecca Polizzotto Assistant Attorney Generals <i>Juneau, Alaska</i>	<b>Third-Party Healthcare Claim Administrators</b> Aetna Life Insurance Company <i>Lexington, Kentucky</i> CHCS Services, Inc. <i>Pensacola, Florida</i> Moda Health / Delta Dental of Alaska <i>Portland, Oregon</i> PayFlex Systems USA, Inc. <i>Omaha, Nebraska</i>
<b>Review Actuary</b> Gabriel Roeder Smith <i>Denver, Colorado</i>	Jessie Alloway Laura Fox Andrew Hodlofski Siobhan McIntyre Jeff Pickett Kate Vogel Margret Paton-Walsh Rachel Witty Laura Wolff <i>Anchorage, AK</i>	<b>Consulting Physicians</b> Managed Medical Review Organization <i>Novi, Michigan</i>
<b>Independent Auditors</b> KPMG LLP <i>Anchorage, Alaska</i>		
<b>Benefits Consultants</b> Buck Global, LLC <i>Denver, Colorado</i> The Segal Company <i>Greenwood Village, Colorado</i>		
<b>IT Consultants</b> Alaska IT Group <i>Juneau, Alaska</i> Applied Microsystems, Inc. Computer Task Group <i>Anchorage, Alaska</i>		
	Ice Miller LLP <i>Indianapolis, Indiana</i>	

A list of investment consultants can be found in the Investment Section of this CAFR.



## Alaska Retirement Management Board

As of June 30, 2019

**Robert M. (“Rob”) Johnson, Chair**, has been an attorney in Alaska for over 40 years. In private practice, Mr. Johnson was outside counsel for ARMB since its inception in 2005 until he recently retired from full-time practice. He also was sole outside counsel for ARMB’s predecessor entities, the Alaska State Pension Investment Board and the PERS and TRS board. Mr. Johnson’s law practice included many matters of state-wide importance including Exxon Valdez litigation, public sector labor disputes under the Public Employees Relations Act, and multi-year controversies involving valuation of the Trans-Alaska Pipeline System. His public employment included tenures as an assistant attorney general and director of petroleum revenue. Mr. Johnson received his law degree from Stanford and a B.A. in history from Claremont McKenna College.

**Tom Brice, Vice Chair**, retired as a Business Representative for the Alaska District Council of Laborers. Mr. Brice has extensive experience addressing human relations issues in the public sector from recruitment and retention problems to employee advocacy in dismissal cases. He sat on the Public Employees Local 71 negotiating team for state and municipal contracts for close to fourteen years. In Southeast Alaska, he administered the labor contracts for Laborers Local 942 and Public Employees Local 71. Prior to this position, Mr. Brice was the Apprenticeship Outreach Coordinator for the Alaska Works Partnership. Here he 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 B.A. from the University of Alaska Fairbanks. He is a member of Public Employees Local 71.

**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 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 BS in Mathematics from North Carolina State University, and a Masters in Teaching from the University of Alaska, Fairbanks, and has completed an additional 40 hours in mathematics, counseling, law and finance.

**Lorne Bretz** was appointed by Governor Dunleavy in March 2019. Lorne immigrated to Alaska in 1992, and with its vast beauty, it quickly became home. Volunteering in the community, hiking and off-road adventuring are some of Lorne's favorite hobbies. Mr. Bretz is the Plan Administrator for the Municipality of Anchorage Retiree Medical Funding Program Trust for Police Officers and Firefighters. He has a Masters in Business Administration, a Retirement Plans Associate designation and is a Certified Financial Planner professional. He has a passion for finances and a desire to support the needs of retirees and future retirees of the state he calls home.

**Allen Hippler** was appointed by Governor Dunleavy in March 2019. Allen Hippler is a Vice President of Commercial Lending at Northrim Bank, where he specializes in underwriting loans for Alaskan businesses. He has almost two decades of experience working in finance throughout the state, most notably Wasilla, Bethel, and Anchorage. Mr. Hippler has chaired the City of Bethel finance committee; was elected to and served on the Bethel City Council, and was named one of Alaska’s ‘Top Forty under Forty’ in 2009. He is active with the Alaska Chamber of Commerce, and currently is Vice Chairman of that organization. Previous service to the State of Alaska includes working as a Commissioner of the Alaska Health Care Commission. Mr. Hippler holds a B.A. in Economics from the University of Dallas.

# Introductory Section

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**Bruce Tangeman**, Commissioner of the Department of Revenue, was appointed by Governor Dunleavy in December 2018. Previously his roles included Vice President and Chief Financial Officer of the Alaska Gasline Development Corporation and Deputy Commissioner for the Department of Revenue with a focus on AKLNG negotiations and unwinding the ACES tax regime. Bruce was also Chief Financial Officer for Doyon Utilities overseeing privatization of Alaska's army utility assets as well as project manager for the Anchorage Landfill Gas Project. He most recently served as the Policy Director for the Alaska State Senate Majority. Bruce met his wife Betty 32 years ago at Indiana University where he majored in Finance and minored in Economics and Management and followed her back to her hometown of Juneau in 1991.

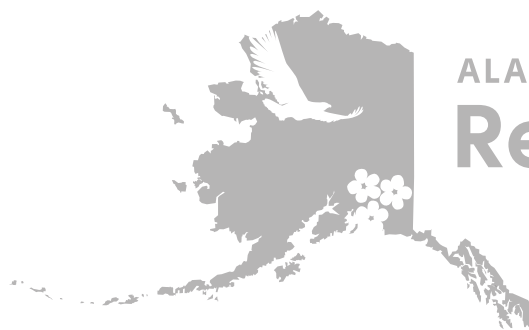
**Kelly Tshibaka**, Commissioner of the Department of Administration, was appointed by Governor Dunleavy in January 2019. Kelly Tshibaka is a born and raised Alaskan, having graduated from Stellar Secondary School in Anchorage in 1995. She has over sixteen years of leadership experience in federal government and intelligence oversight roles, including in audits, investigations, complex reviews, data analytics, and executive management. Most recently she was the Chief Data Officer for the United States Postal Service Office of the Inspector General where she was part of the executive team responsible for oversight of the US Postal Service, an agency with more than \$70 billion in annual revenue, \$13 billion in contracts, and 620,000 employees. Prior to that, she was the Acting Inspector General of the Federal Trade Commission, served as legal counsel to the Inspector General of the Office of the Director of National Intelligence, and performed sensitive reviews at the Department of Justice Office of the Inspector General. Tshibaka has dedicated her public service career to improving government agencies' efficiency and effectiveness. Tshibaka has a J.D. from Harvard Law School and a B.A. from Texas A&M University.

**Norman West, CPA**, is the Chief Financial Officer at Alaska USA Federal Credit Union with over 30 years of experience with employee benefit plans and management of large fixed income securities portfolios of \$200 million to \$1 billion. Mr. West is responsible for the investment of the Credit Union's fixed income portfolio as well as accounting and related activities. He served on the boards of the Credit Union subsidiaries, including Alaska USA Mortgage, Alaska USA Trust Company, Alaska USA Insurance Brokers, and served as a trustee on the Alaska USA Federal Credit Union's defined benefit plan. Prior to his Alaska USA employment, Mr. West was the Trust Controller and Chief Investment Officer for the Alaska Teamsters Employer Service Corp., the administrator for the union's benefit plans. He previously practiced as a CPA in Alaska, Arizona, and Texas, and received training as an ERISA specialist in 1977. He has been active for many years in professional organizations as a member, officer and presenter, and served as a volunteer in church and Boy Scouts most of his adult life. Mr. West is a graduate of Brigham Young University with a B.S. in Accounting. He resides in Palmer and is the father of eleven children.

**Bob Williams** began his teaching career as a Peace Corps teacher in Gambia, Africa. He is a nationally board certified teacher, (NBCT, Math – AYA) and currently teaches Calculus and Geometry at Colony High School in Palmer. Mr. Williams is the Alaska 2009 Teacher of the Year, served as the president of the Alaska Council of Teachers of Mathematics from 2011-2013, and is the recipient of the Presidential Award for Excellence in Mathematics Teaching. He was one of five national recipients of the 2010 Horace Mann Teaching Excellence award and is a 2012 Aspen Teacher Leader Fellow. Mr. Williams has a B.S. in Petroleum Engineering from the University of Alaska, Fairbanks, an M.A. in Mathematics Education from Columbia University, and an M.Ed. in Educational Leadership from the University of Alaska, Anchorage.



# FINANCIAL SECTION



ALASKA DIVISION OF  
**Retirement  
and Benefits**



KPMG LLP  
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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 Public Employees' Retirement System:

We have audited the accompanying combining financial statements of the State of Alaska Public Employees' Retirement System (the System), a component unit of the State of Alaska, as of and for the year ended June 30, 2019, 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 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.

### ***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 Public Employees' Retirement System as of June 30, 2019, and the changes in fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.



# Financial Section

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## *Other Matters*

### *Prior-Year Comparative Information*

We have previously audited the System's 2018 combining financial statements, and we expressed an unmodified opinion on those financial statements in our report dated November 21, 2018. In our opinion, the summarized comparative information presented herein as of and for the year then ended June 30, 2018 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 15–25 and the schedules of changes in employer net pension and other post-employment benefits (OPEB) liabilities and related ratios, schedules of employer and nonemployer contributions, and schedules of investment returns on pages 51–66 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who 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 an opinion on the financial statements that collectively comprise the System's basic financial statements. The supplemental schedules on pages 83–84 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

October 23, 2019

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

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

**June 30, 2019**

This section presents management's discussion and analysis (MD&A) of the Public Employees' Retirement System's (the System) financial position and performance for the year ended June 30, 2019. 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, 2019.

### **Financial Highlights**

The System's financial highlights as of June 30, 2019 were as follows:

- The System's fiduciary net position restricted for pension benefits, postemployment healthcare benefits, and individuals increased by \$603.8 million during fiscal year 2019.
- The System's plan member and employer contributions increased by \$42.0 million during fiscal year 2019 when compared to fiscal year 2018.
- The State of Alaska (the State) directly appropriated \$135.4 million to the System during fiscal year 2019.
- The System's net investment income decreased \$346.8 million when compared to fiscal year 2018 to \$1,096.0 million during fiscal year 2019.
- The System's pension benefit expenditures totaled \$837.4 million during fiscal year 2019.
- The System's postemployment healthcare benefit expenditures totaled \$444.8 million in fiscal year 2019.

### **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 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 value, along with cash and cash equivalents, receivables, and other assets less liabilities at June 30, 2019.

*Combining Statement of Changes in Fiduciary Net Position* – This statement presents how the System's net position restricted for pension benefits, postemployment healthcare benefits, and individuals changed during the fiscal year ended June 30, 2019. 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, 2019, and the sources and uses of those funds during fiscal year 2019.

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**State of Alaska**  
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## Management's Discussion and Analysis (Unaudited)

June 30, 2019

*Notes to Financial Statements* – The notes to 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 12 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

System net position (In thousands)					
Description	2019	2018	Increase (decrease)		2017
			Amount	Percentage	
Assets:					
Cash and cash equivalents	\$ 370,358	202,947	167,411	82.5%	\$ 470,579
Contributions receivable	13,241	24,461	(11,220)	(45.9)	24,497
Due from State of Alaska General Fund	32,285	20,257	12,028	59.4	19,338
Due from PERS occupational death and disability	—	—	—	—	2
Other accounts receivable	3,773	249	3,524	1,415.3	4,423
Investments	18,734,141	18,361,435	372,706	2.0	17,230,847
Other assets	982	982	—	—	982
Total assets	19,154,780	18,610,331	544,449	2.9	17,750,668
Liabilities:					
Claims payable	44,369	45,677	(1,308)	(2.9)	43,006
Accrued expenses	11,455	4,292	7,163	166.9	4,376
Forfeiture payable to employers	2,164	35,173	(33,009)	(93.8)	32,373
Due to PERS DB Pension Fund	—	—	—	—	2
Due to State of Alaska General Fund	—	—	—	—	1,376
Securities lending collateral payable	30,489	62,648	(32,159)	(51.3)	112,258
Total liabilities	88,477	147,790	(59,313)	(40.1)	193,391
Net position	\$ 19,066,303	18,462,541	603,762	3.3%	\$ 17,557,277

**State of Alaska**  
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## Management's Discussion and Analysis (Unaudited)

June 30, 2019

### Condensed Financial Information (Continued)

Changes in system net position (In thousands)					
Description	2019	2018	Increase (decrease)		2017
			Amount	Percentage	
Net position, beginning of year	\$ 18,462,541	17,557,277	905,264	5.2 %	\$ 15,948,796
Additions:					
Contributions – employers and plan members	744,612	702,576	42,036	5.9	708,409
Contributions – nonemployer State of Alaska	67,857	36,399	31,458	86.4	49,433
Net investment income	1,095,977	1,442,821	(346,844)	(24.0)	2,052,072
Employer Group Waiver Plan	7,076	—	7,076	100.0	—
Medicare Retiree Drug Subsidy	20,490	5,965	14,525	243.5	18,869
Pharmacy rebates	36,940	20,268	16,672	82.3	23,953
Other income	1,351	552	799	144.7	411
Total additions	1,974,303	2,208,581	(234,278)	(10.6)	2,853,147
Deductions:					
Pension and postemployment healthcare benefits	1,282,149	1,224,012	58,137	4.7	1,172,955
Refunds of contributions	60,610	54,854	5,756	10.5	45,776
Administrative	27,782	24,451	3,331	13.6	25,935
Total deductions	1,370,541	1,303,317	67,224	5.2	1,244,666
Increase in net position	603,762	905,264	(301,502)	33.3	1,608,481
Net position, end of year	\$ 19,066,303	18,462,541	603,762	3.3 %	\$ 17,557,277

### Financial Analysis of the System

The statements of fiduciary net position as of June 30, 2019 and 2018 show net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$19,066,303,000 and \$18,462,541,000, respectively. The entire amount is available to cover the System's obligation to pay pension and postemployment healthcare benefits to its members and their beneficiaries, as well as administrative costs.

These amounts represent an increase in the System's net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$603,762,000 or 3.3%, from fiscal year 2018 to 2019 and individuals of \$905,264,000, or 5.2%, from fiscal year 2017 to 2018. Over the long term, plan member, employer, and nonemployer contributions, as well as investment income earned, are anticipated to sufficiently fund the pension benefit and postemployment healthcare costs of the System.

During the 30th Alaska State Legislature and as part of the State's Fiscal Year 2019 Operating Budget, House Bill 286 appropriated \$135,360,000 from the General Fund and the Alaska Higher Education Investment Fund to the Department of Administration for deposit in the Defined Benefit Pension fund. The amount of the appropriation allocated to the State

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

**June 30, 2019**

of Alaska as an employer is included in Contributions - Employer. The remaining appropriation is reported as Contributions - Nonemployer State of Alaska.

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 2019 and 2018, the Board adopted the following asset allocation for the Defined Benefit Pension Plan (DB Plan) and Defined Contribution Retirement Pension Plan's (DCR Plan) retiree major medical insurance fund, health reimbursement arrangement fund, and occupational death and disability fund:

	<b>2019</b>		<b>2018</b>	
	<b>Pension and Healthcare Trust</b>		<b>Pension and Healthcare Trust</b>	
	<b>Allocation</b>	<b>Range</b>	<b>Allocation</b>	<b>Range</b>
Broad domestic equity	24.0%	± 6%	24.0%	± 6%
Global equity ex-U.S.	22.0	± 4	22.0	± 4
Fixed income	10.0	± 5	10.0	± 5
Opportunistic	10.0	± 5	10.0	± 5
Real assets	17.0	± 8	17.0	± 8
Absolute return	7.0	± 4	7.0	± 4
Private equity	9.0	± 5	9.0	± 5
Cash equivalents	1.0	+ 3/- 1	1.0	+ 3/- 1
Total	100.0%		100.0%	
Expected return 10-year geometric mean	6.60%		6.60%	
Projected standard deviation	14.70		14.70	

For fiscal years 2019 and 2018, the DB Plan's investments generated a 6.40% and 9.61% rate of return, respectively.



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## Management's Discussion and Analysis (Unaudited)

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### 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 appropriation, investment income, and other additions as follows:

	Additions (In thousands)				
	2019	2018	Increase (decrease)		2017
			Amount	Percentage	
Contributions – plan members	\$ 179,604	176,369	3,235	1.8%	\$ 172,838
Contributions – employers	565,008	526,207	38,801	7.3	535,571
Contributions – nonemployer					
State of Alaska	67,857	36,399	31,458	86.4	49,433
Net investment income	1,095,977	1,442,821	(346,844)	(24.0)	2,052,072
Employer group waiver plan	7,076	—	7,076	100.0	—
Medicare retiree drug subsidy	20,490	5,965	14,525	243.5	18,869
Pharmacy rebates	36,940	20,268	16,672	82.3	23,953
Other income	1,351	552	799	144.7	411
Total	\$ 1,974,303	2,208,581	(234,278)	(10.6)%	\$ 2,853,147

The System's employer contributions increased from \$526,207,000 in fiscal year 2018 to \$565,008,000 in fiscal year 2019, an increase of \$38,801,000 or 7.30%. The System's employer contributions increased from \$535,571,000 in fiscal year 2017 to \$526,207,000 in fiscal year 2018, a decrease of \$9,364,000, or 1.7%. Employer contributions increase or decrease in proportion to changes in the underlying salaries, which increased 0.9% in fiscal year 2018, and increased 1.6% in fiscal year 2019.

The State provided \$67,857,000 and \$36,399,000 for fiscal years 2019 and 2018 in non-employer contributions per Alaska Statute (AS) 39.35.280. The employer on-behalf amount (or additional State contributions as defined in AS 39.35.280) 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 22.00% is established in AS 39.35.255(a).

The System's net investment income in fiscal year 2019 decreased by \$346,844,000 or 24.0% from amounts in fiscal year 2018. The System's net investment income in fiscal year 2018 decreased by \$606,251,000 or 29.7% from amounts recorded in fiscal year 2017. Fiscal year 2019 saw rates below the assumed rate of return, while fiscal year 2018 saw rates of returns above the assumed rate of return. The investment returns received in fiscal year 2019 were lower than the returns seen in fiscal year 2018 due to market conditions, causing a decrease in returns in comparison between 2019 and 2018. Over the long term, investment earnings play a significant role in funding plan benefits. The Board continues to look at investment classes and strategies best suited to meet the expected earnings returns to meet future benefit payments.

Effective January 1, 2019, the Division implemented a group Medicare Part D prescription drug plan known as an enhanced Employer Group Waiver Plan (EGWP) for all Medicare-eligible members covered under the Plan. For the

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**June 30, 2019**

period January 1 to June 30, 2019, the Plan received \$7,076,000 in EGWP funds from the Center of Medicare and Medicaid Services (CMS) through the EGWP Plan Sponsor, OptumRx.

The Plan also participates in the Medicare Part D retiree drug subsidy (RDS) program. A provision of Medicare Part D provides sponsors of postemployment healthcare funds the opportunity to receive an RDS payment if the sponsor's fund 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 fund. The Plan received an additional \$14,525,000 in fiscal year 2019 over fiscal year 2018 due to the timing of filing for and receipt of the RDS.

Pharmacy rebates are reimbursed to the Plan by the third-party administrators. These rebates are recorded as revenue when received by the Plan. During fiscal year 2019, the Plan received \$36,940,000 compared to \$20,268,000 from fiscal year 2018 due to the timing of receipt of funds.

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

	Year ended		
	2019	2018	2017
System returns	6.40 %	9.61 %	13.35%
Domestic equities	8.41	15.21	18.55
International equities	(0.08)	7.97	20.41
Private equity	17.66	26.65	17.04
Real assets	6.08	7.56	5.98
Absolute return	4.08	4.78	8.47
Fixed income	6.34	(0.71)	2.91
Opportunistic	7.21	5.64	—
Alternative equity	—	—	11.38
Cash equivalents	2.50	1.51	0.79
Actuarially assumed rate of return	7.38	8.00	8.00

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## Management's Discussion and Analysis (Unaudited)

June 30, 2019

### Benefits and Other Deductions

The primary deduction of the DB Plan is the payment of pension and other postemployment benefits, primarily healthcare. The primary deduction of the DCR 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)				
	2019	2018	Increase (decrease)		2017
			Amount	Percentage	
Pension benefits	\$ 837,381	801,155	36,226	4.5%	\$ 766,766
Postemployment benefits	444,768	422,857	21,911	5.2	406,189
Refunds of contributions	60,610	54,854	5,756	10.5	45,776
Administrative	27,782	24,451	3,331	13.6	25,935
Total	\$ 1,370,541	1,303,317	67,224	5.2%	\$ 1,244,666

The System's pension benefit payments in 2019 increased \$36,226,000 or 4.5%, from fiscal year 2018 and increased \$34,389,000, or 4.5%, from fiscal year 2017 to 2018. The increase in pension benefits in fiscal year 2019 is the result of a continued increase in the number of retirees.

The System's postemployment healthcare benefit payments in fiscal year 2019 increased \$21,911,000 or 5.2%, from fiscal year 2018 and increased \$16,668,000, or 4.1%, from fiscal year 2017 to 2018. The System has seen an increase in plan utilization for healthcare as the number of retirees in the DB Plan continues to increase. The System continues to look at ways for cost containment while providing benefits applicable to the plan.

The System's refund of contributions increased \$5,756,000 or 10.5%, from fiscal year 2018 to 2019 and increased \$9,078,000, or 19.8%, from fiscal year 2017 to 2018. The increase in refunds is primarily in the DCR Plan, where refunds increased \$6,840,000 between fiscal year 2018 to 2019, and increased \$7,777,000 from fiscal year 2017 to 2018. Increases in refunds are attributed to the refund of DCR member accounts. The System continues to look at ways to retain member contributions by emphasizing the low investment costs to members to maintain funds within the DCR Plan, with a number of investment options available.

Administrative deductions increased from 2018 to 2019 by \$3,331,000 or 13.6%. The increase is related to additional work by management consultants related to actuarial valuations and work related to the transition to EGWP on January 1, 2019. The decrease of \$1,484,000, or 5.7%, from fiscal year 2017 to 2018 is related to decreases in wages and benefits, partially offset by increases in management, consulting, and other professional services.

### Net Pension Liability

Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, requires the DB Plan to report the total pension liability, fiduciary net position, and the net pension liability. The total pension liability represents the total obligation for the 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

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

**June 30, 2019**

experience. The Plan's fiduciary net position represents the assets available to pay the 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 Plan. The difference between the total pension liability and fiduciary net position is the net pension liability, or the unfunded portion of the total pension liability.

The components of the net pension liability of the participating employers were as follows (in thousands):

	<b>2019</b>	<b>2018</b>
Total pension liability	\$ 14,963,635	14,275,702
Plan fiduciary net position	(9,489,405)	(9,306,675)
Employers' net pension liability	<u>\$ 5,474,230</u>	<u>4,969,027</u>
Plan fiduciary net position as a percentage of the total pension liability	63.42 %	65.19 %

### **Net OPEB (Asset) Liability**

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other than Pension Plans*, requires the DB Other Postemployment Benefit (OPEB) Plans to report the total OPEB liability, fiduciary net position, and net OPEB liability for each plan. The total OPEB liability represents the total obligation for the Plan's postemployment healthcare 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 Plan's fiduciary net position represents the assets available to pay the OPEB 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 Plans. The difference between the total OPEB liability and fiduciary net position is the net OPEB liability, or the unfunded or overfunded portion of the total OPEB liability.

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## Management's Discussion and Analysis (Unaudited)

**June 30, 2019**

The components of the net OPEB liability (asset) of the participating employers for the Plans as of June 30, 2019 were as follows (in thousands):

	<b>Alaska Retiree Healthcare Trust Plan (ARHCT)</b>	<b>Occupational Death and Disability (ODD)</b>	<b>Retiree Medical Plan (RMP)</b>
Total OPEB liability	\$ 7,916,072	12,280	142,162
Plan fiduciary net position	(7,767,692)	(36,525)	(118,242)
Employers' net OPEB liability (asset)	\$ 148,380	(24,245)	23,920
Plan fiduciary net position as a percentage of the total OPEB liability	98.13 %	297.43 %	83.17 %

The components of the net OPEB liability (asset) of the participating employers for the Plans as of June 30, 2019 were as follows (in thousands):

	<b>Alaska Retiree Healthcare Trust Plan (ARHCT)</b>	<b>Occupational Death and Disability (ODD)</b>	<b>Retiree Medical Plan (RMP)</b>
Total OPEB liability	\$ 8,638,289	11,383	112,740
Plan fiduciary net position	(7,612,001)	(30,805)	(100,015)
Employers' net OPEB liability (asset)	\$ 1,026,288	(19,422)	12,725
Plan fiduciary net position as a percentage of the total OPEB liability	88.12 %	270.62 %	88.71 %

### Funding

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

- The employer contribution rate is adopted and set by the Board annually based on actuarial determinations made by the System's consulting actuary as reviewed by the Board's contracted actuary. AS 39.35.255(a) sets the employer effective contribution rate at 22.00%. The difference between the actuarially determined contribution rate adopted by the Board and the statutory employer effective rate is paid by the State as a direct appropriation per AS 39.35.280.
- AS 39.35.280 provides that additional State contributions are made each July 1 or 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.

**State of Alaska**  
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## **Management's Discussion and Analysis (Unaudited)**

**June 30, 2019**

- Plan member contributions are set by AS 39.35.160 for the DB Plan and AS 39.35.730 for the DCR Plan.
- The Board works with an external consultant to determine the proper asset allocation strategy.

### **Legislation**

During fiscal year 2019, the 31st Alaska State Legislature enacted one law that affects the System. Conference Committee Substitute First Special Session House Bill 39, Section 35(a), appropriates \$159.1 million from the General Fund to the Department of Administration for deposit in the System's defined benefit plan account as partial payment of the participating employers' contribution for fiscal year ending June 30, 2020.

This appropriation is to fund the difference between the statutory employer required contribution of 22% 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. This additional state contribution is specified in AS 39.35.280 – Additional State Contributions.

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

Fiscal year 2019 was a year of positive investment returns. Net investment income decreased from \$1,442,821,000 in fiscal year 2018 to \$1,095,976,000 in fiscal year 2019, a decrease of \$346,844,000 or 24.0%. The return on the System's investments was below the 7.38% actuarially assumed rate of return with the System's actual rate of return of 6.40% at June 30, 2019. 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 25.01% in fiscal year 2018 to 27.58% in fiscal year 2019. The Board adopted the fiscal year 2019 actuarially determined contribution rate of 27.58%, which represented an increase of 2.57%. The statutory employer effective contribution rate remained at 22% for fiscal years 2019 and 2018.

The June 30, 2018 and 2017 actuarial valuation reports for the DB Plan reported funding ratios based on valuation assets of 76.9% and 76.7%, respectively, as well as unfunded liabilities of \$5.15 billion and \$5.09 billion, respectively.

For fiscal years 2019 and 2018, the DCR Plan's employer contribution rate was established by AS 39.35.255(a) at 22.00%. The DCR Plan's actuarially determined occupational death and disability rate was adopted by the Board for fiscal years 2019 and 2018 to be 0.76% and 0.43%, respectively, for peace officers/firefighters; and 0.26% and 0.16%, respectively, for all others. The DCR Plan retiree medical plan actuarially determined contribution rate was adopted by the Board for fiscal years 2019 and 2018 to be 0.94% and 1.03%, respectively.

**State of Alaska  
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**Management's Discussion and Analysis (Unaudited)**

**June 30, 2019**

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

### Combining Statement of Fiduciary Net Position

June 30, 2019

(With summarized financial information for June 30, 2018)

(In thousands)

	Defined benefit pension	Defined contribution pension	Other Postemployment Benefit Plans				System total June 30, 2019	System total June 30, 2018
			Alaska Retiree Healthcare Trust	Occupational death and disability	Retiree medical	Health reimbursement arrangement		
<b>Assets:</b>								
Cash and cash equivalents (note 3):								
Short-term fixed-income pool	\$ 177,173	5,145	146,236	679	2,200	7,850	339,283	138,731
Empower money market fund – non-participant directed	—	586	—	—	—	—	586	1,568
Securities lending collateral	16,199	—	13,318	61	199	712	30,489	62,648
Total cash and cash equivalents	193,372	5,731	159,554	740	2,399	8,562	370,358	202,947
<b>Receivables:</b>								
Contributions	13,241	—	—	—	—	—	13,241	24,461
Due from State of Alaska General Fund	11,371	11,443	5,933	299	844	2,395	32,285	20,257
Other accounts receivable	159	—	3,614	—	—	—	3,773	249
Total receivables	24,771	11,443	9,547	299	844	2,395	49,299	44,967
<b>Investments (note 3), at fair value:</b>								
U.S. Treasury Fixed Income Pool	993,678	—	819,561	3,803	12,324	43,986	1,873,352	1,580,356
<b>Broad domestic equity:</b>								
Large Cap Pool	1,921,105	—	1,584,480	7,352	23,826	85,040	3,621,803	3,428,589
Small Cap Pool	267,552	—	220,670	1,024	3,318	11,844	504,408	650,162
Total broad domestic equity	2,188,657	—	1,805,150	8,376	27,144	96,884	4,126,211	4,078,751
<b>Global equity ex-U.S.:</b>								
International Equity Pool	1,602,023	—	1,321,309	6,131	19,868	70,916	3,020,247	2,964,545
International Equity Small Cap Pool	134,239	—	110,717	514	1,665	5,942	253,077	270,117
Emerging Markets Equity Pool	341,699	—	281,826	1,308	4,238	15,126	644,197	504,685
Total global equity ex-U.S.	2,077,961	—	1,713,852	7,953	25,771	91,984	3,917,521	3,739,347
<b>Opportunistic:</b>								
Alternative Equity Pool	469,549	—	387,273	1,797	5,823	20,785	885,227	881,672
Opportunistic Fixed Income Pool	256,955	—	211,930	983	3,187	11,374	484,429	585,938
Other Opportunities Pool	42,438	—	35,002	162	526	1,879	80,007	224,926
Tactical Allocation Strategies Pool	152,075	—	125,427	582	1,886	6,732	286,702	205
Total opportunistic	921,017	—	759,632	3,524	11,422	40,770	1,736,365	1,692,741
<b>Private Equity Pool</b>	997,227	—	822,488	3,816	12,368	44,144	1,880,043	1,609,190
<b>Absolute Return Pool</b>	545,747	—	450,119	2,089	6,768	24,158	1,028,881	1,292,074
<b>Real assets:</b>								
Real Estate Pools	535,311	—	441,599	2,049	6,640	23,701	1,009,300	1,100,166
Real Estate Investment Trust Pool	106,361	—	87,724	407	1,319	4,708	200,519	134,580
Infrastructure Private Pool	202,313	—	166,863	774	2,509	8,956	381,415	340,542
Infrastructure Public Pool	60,383	—	49,802	231	749	2,673	113,838	170,855
Master Limited Partnership Pool	194,621	—	160,519	745	2,414	8,615	366,914	672,195
Energy Pool	31,934	—	26,338	122	396	1,414	60,204	66,316
Farmland Pool	303,858	—	250,614	1,163	3,769	13,450	572,854	558,540
Timber Pool	129,479	—	106,791	496	1,606	5,731	244,103	246,736
Treasury Inflation-Protected Securities Pool	—	—	—	—	—	—	—	37,684
Total real assets	1,564,260	—	1,290,250	5,987	19,402	69,248	2,949,147	3,327,614
<b>Other investment funds:</b>								
Participant directed at fair value:								
Pooled investment funds	—	745,642	—	—	—	—	745,642	638,110
Collective investment funds	—	428,015	—	—	—	—	428,015	403,252
Participant directed at contract value:								
Synthetic investment funds	—	48,964	—	—	—	—	48,964	—
Total other investment funds	—	1,222,621	—	—	—	—	1,222,621	1,041,362
Total investments	9,288,547	1,222,621	7,661,052	35,548	115,199	411,174	18,734,141	18,361,435
<b>Other assets</b>	15	—	967	—	—	—	982	982
Total assets	9,506,705	1,239,795	7,831,120	36,587	118,442	422,131	19,154,780	18,610,331
<b>Liabilities:</b>								
Claims payable (note 6)	—	—	44,369	—	—	—	44,369	45,677
Accrued expenses	1,101	4,597	5,741	1	5	10	11,455	4,292
Forfeitures payable to employers	—	2,164	—	—	—	—	2,164	35,173
Securities lending collateral payable	16,199	—	13,318	61	199	712	30,489	62,648
Total liabilities	17,300	6,761	63,428	62	204	722	88,477	147,790
Net position restricted for pension benefits, postemployment healthcare benefits, and individuals	\$ 9,489,405	1,233,034	7,767,692	36,525	118,238	421,409	19,066,303	18,462,541

See accompanying notes to financial statements.

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## Combining Statement of Changes in Fiduciary Net Position

**Year ended June 30, 2019**  
**(With summarized financial information for June 30, 2018)**

**(In thousands)**

	Defined benefit pension	Defined contribution pension	Other Postemployment Benefit Plans				System total June 30, 2019	System total June 30, 2018
			Alaska Retiree Healthcare Trust	Occupational death and disability	Retiree medical	Health reimbursement arrangement		
<b>Additions:</b>								
Contributions:								
Employers	\$ 350,601	57,221	102,266	4,083	11,736	39,101	565,008	526,207
Plan members	79,609	99,995	—	—	—	—	179,604	176,369
Nonemployer State of Alaska	67,857	—	—	—	—	—	67,857	36,399
Total contributions	498,067	157,216	102,266	4,083	11,736	39,101	812,469	738,975
Investment income:								
Net appreciation in fair value (note 2)	372,865	74,717	311,499	1,448	4,686	16,818	782,033	1,158,949
Interest	26,678	239	21,762	94	304	1,090	50,167	60,394
Dividends	143,880	—	118,419	504	1,635	5,867	270,305	230,645
Total investment income	543,423	74,956	451,680	2,046	6,625	23,775	1,102,505	1,449,988
Less investment expense	3,993	449	3,120	12	41	145	7,760	9,199
Net investment income before securities lending activities	539,430	74,507	448,560	2,034	6,584	23,630	1,094,745	1,440,789
Securities lending income	801	—	655	3	9	33	1,501	2,488
Less securities lending expense	143	—	117	1	2	6	269	456
Net income from securities lending activities	658	—	538	2	7	27	1,232	2,032
Net investment income	540,088	74,507	449,098	2,036	6,591	23,657	1,095,977	1,442,821
Other income								
Employer Group Waiver Plan	—	—	7,066	—	10	—	7,076	—
Medicare Retiree Drug Subsidy	—	—	20,481	—	9	—	20,490	5,965
Pharmacy rebates	—	—	36,921	—	19	—	36,940	20,268
Miscellaneous income	23	454	874	—	—	—	1,351	552
Total other income	23	454	65,342	—	38	—	65,857	26,785
Total additions	1,038,178	232,177	616,706	6,119	18,365	62,758	1,974,303	2,208,581
<b>Deductions:</b>								
Pension and postemployment benefits	837,381	—	444,143	398	128	99	1,282,149	1,224,012
Refunds of contributions	10,638	49,972	—	—	—	—	60,610	54,854
Administrative	7,429	3,465	16,872	1	14	1	27,782	24,451
Total deductions	855,448	53,437	461,015	399	142	100	1,370,541	1,303,317
Net increase	182,730	178,740	155,691	5,720	18,223	62,658	603,762	905,264
Net position restricted for pension benefits, postemployment healthcare benefits, and individuals:								
Balance, beginning of year	9,306,675	1,054,294	7,612,001	30,805	100,015	358,751	18,462,541	17,557,277
Balance, end of year	\$ 9,489,405	1,233,034	7,767,692	36,525	118,238	421,409	19,066,303	18,462,541

See accompanying notes to financial statements.

# Financial Section

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

June 30, 2019

### (1) Description

The State of Alaska Public Employees' Retirement System (PERS or the System) is a component unit of the State of Alaska (the State). The System is administered by the Division of Retirement and Benefits within the Department of Administration. Benefit and contribution provisions are established by State law and may be amended only the State legislature. The Alaska Retirement Management Board (the Board) is responsible for overseeing the management and investment of the system. The Board consists of nine trustees as follows, two trustees 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 PERS or Teachers' Retirement System (TRS), two trustees who are PERS members, and two trustees who are TRS members.

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

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

At June 30, 2019, the number of participating local government employers and public organizations, including the State, was as follows:

	Defined Benefit Pension	Defined Contribution Pension	OPEB plans
State of Alaska	1	1	1
Municipalities	73	74	74
School districts	52	52	52
Other	27	27	27
Total employers	153	154	154

Inclusion in the plans is a condition of employment for eligible State employees, except as otherwise provided for judges, elected officers, and certain employees of the Alaska Marine Highway System. Any local government in the State may elect to have its permanent general and peace officer and firefighter employees covered by the System.

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## *Defined Benefit Pension Plan*

### **(a) General**

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

The DB Plan's membership consisted of the following at June 30, 2019:

Inactive plan members or beneficiaries currently receiving benefits	36,059
Inactive plan members entitled to but not yet receiving benefits	7,361
Inactive plan members not entitled to benefits	10,808
Active plan members	12,316
Total DB Plan membership	66,544

### **(b) Pension Benefits**

Members hired prior to July 1, 1986, with five or more paid-up years of credited service, are entitled to monthly pension benefits beginning at normal retirement age, 55, or early retirement age, 50. For members first hired after June 30, 1986, the normal and early retirement ages are 60 and 55, respectively. Members with 30 or more years of credited service (20 years for peace officers and firefighters) may retire at any age and receive a normal benefit.

The normal monthly pension benefit is based on years of service and average monthly compensation. For members hired prior to July 1, 1996, and all peace officers and firefighters, the average monthly compensation is based upon the members' three highest, consecutive years' salaries. For all other members hired after June 30, 1996, average monthly compensation is based upon the members' five highest, consecutive years' salaries.

The benefit related to all years of service prior to July 1, 1986, and for years of service through a total of 10 years for general members, is equal to 2.00% of the member's average monthly compensation for each year of service. The benefit for each year over 10 years of service subsequent to June 30, 1986 is equal to 2.25% of the member's average monthly compensation for the second 10 years and 2.50% for all remaining years of service. For peace officers and firefighters, the benefit for years of service through a total of 10 years is equal to 2.00% of the member's average monthly compensation and 2.50% for all remaining years of service.

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 another person is eligible for benefits under a qualified domestic relations order.

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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 funding ratio of the DB Plan meets or exceeds 105%. 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.

**(c) Contributions**

Contribution 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's members' contribution rates are 7.50% for peace officers and firefighters, 9.60% for some school district employees, and 6.75% for general DB Plan members, as required by statute. The statutory employer effective rate is 22.00% of annual payroll, which for fiscal year 2019 is allocated 16.17% to the DB Pension Plan and 5.83% to the DB ARHCT Plan as determined by the actuary of the Plan. Alaska Statute (AS) 39.35.280 provides that the State, as a nonemployer contributing entity, contributes each July 1, or as soon after July 1 for the ensuing fiscal year, an amount 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 Defined Contribution Retirement Pension (DCR) Plan payroll. The DBUL amount is computed as the difference between:

- (A) The amount calculated for the statutory employer contribution rate of 22.00% 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
  - (4) Health reimbursement arrangement.

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

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### **(d) Refunds**

DB Plan member contributions may be voluntarily or, under certain circumstances, involuntarily refunded to the member 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 previously refunded to members accrue interest at the rate of 7.0% per annum, compounded semiannually.

### ***Defined Contribution Retirement Pension Plan***

#### **(a) General**

The DCR Plan provides retirement benefits for eligible employees hired after July 1, 2006. Additionally, certain active members of the DB Plan were eligible to transfer to the DCR Plan if that member had not vested in the DB Plan. Benefit and contribution provisions are established by State law and may be amended only by the State Legislature.

At June 30, 2019, membership in the DCR Plan consisted of 2,055 peace officer and firefighter members and 20,340 other members.

#### **(b) 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.

#### **(c) Contributions**

State statutes require an 8.0% contribution rate for DCR Plan members. Employers are required to contribute 5.0% of the member's compensation.

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**(d) Participant Distributions and Refunds of Contributions**

A member is eligible to request a refund of contributions from their account 60 days after termination of employment.

**(e) Participant Accounts**

Participant accounts under the DCR Plan are self-directed with respect to investment options.

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 and 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.

***Defined Benefit Other Postemployment Benefit Plans***

**(a) Alaska Retiree Healthcare Trust Plan**

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

Membership in the plan consisted of the following at June 30, 2019:

Inactive plan members or beneficiaries currently receiving benefits	36,059
Inactive plan members entitled to but not yet receiving benefits	7,361
Inactive plan members not entitled to benefits	10,808
Active plan members	12,316
Total ARHCT Plan membership	<u>66,544</u>

**(i) OPEB Benefits**

Major medical benefits to cover medical expenses are provided to retirees and their surviving spouses at no premium cost for all members hired before July 1, 1986 (Tier 1), and disabled retirees. Members hired after June 30, 1986 (Tier 2), and their surviving spouses with 5 years of credited service (or 10 years of credited service for those first hired after June 30, 1996 [Tier 3]) must pay the full monthly premium if they are under



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age 60 and will receive benefits at no premium cost if they are over age 60. Tier 3 members with between 5 and 10 years of credited service must pay the full monthly premium regardless of their age. Tier 2 and Tier 3 members with less than 5 years of credited service are not eligible for postemployment healthcare benefits. Tier 2 members who are receiving a conditional benefit and are age eligible are eligible for postemployment healthcare benefits. In addition, peace officers and their surviving spouses with 25 years of peace officer membership service and all other members and their surviving spouses with 30 years of membership service receive benefits at no premium cost, regardless of their age or date of hire. Peace officers/firefighters who are disabled between 20 and 25 years must pay the full monthly premium.

**(ii) Contributions**

Employer contribution rates are actuarially determined and adopted by the Board. The 2019 statutory employer effective contribution rate is 22.00% of member's compensation, with 4.88% specifically allocated to ARHCT Plan.

**(b) Occupational Death and Disability Plan**

The Occupational Death and Disability Plan (ODD) provides death benefits for beneficiaries of plan participants and long-term disability benefits to all active members within the System. Members in the Death and Disability Plan consisted of the following at June 30, 2019:

Active plan members	22,311
Participating employees	154
Open claims	42

**(i) 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, then 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.

If an active general DB Plan member dies from occupational causes, the spouse may receive a monthly pension equal to 40% of the DB Plan's member's salary. If an active peace officer or firefighter DB Plan member dies from occupational causes, the spouse may receive a monthly pension equal to 50% of the DB Plan's member's salary or 75% of the member's retirement benefit calculated as if the member had survived until normal retirement age, whichever is greater. When death is due to

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occupational causes and there is no surviving spouse, the DB Plan's member's dependent child(ren) may receive the monthly pension until they 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 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 monthly compensation at the time of death and the credited service, including service that would have accrued if the DB Plan member had lived and continued to work until normal retirement. 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 monthly compensation 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 benefit for survivors of DCR Plan employees who were not peace officers or firefighters is 40% of the employee's monthly compensation in the month in which the employee dies. The monthly survivor's pension for survivors of employees who were peace officers or firefighters is 50% of the 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.

**(ii) Disability Benefits**

Active DB Plan members who become permanently disabled due to occupational or nonoccupational causes receive disability benefits until normal retirement age, or when the service requirement for normal retirement is met. Although there are no minimum service requirements for DB Plan members to be eligible for occupational disability, DB Plan members must be vested to receive nonoccupational disability benefits. The monthly occupational disability benefit is equal to 40% of the DB Plan's salary at the time of the disability. The nonoccupational disability benefit is based on the DB Plan member's service and salary at the time of disability. At normal retirement age, a disabled general DB Plan member receives normal retirement benefits. A peace officer or firefighter DB Plan member may elect to receive normal retirement benefits calculated under the occupational disability benefit rules.

A DCR Plan member is eligible for an occupational disability benefit if employment is terminated because of a total and apparently permanent occupational disability before the member'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

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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.

**(iii) Contributions**

An employer shall contribute to each member's account based on the member's compensation. For fiscal year 2019, the rates are 0.76% for occupational death and disability for peace officers and firefighters and 0.26% for occupational death and disability for all other members.

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**(c) Retiree Medical Plan**

The RMP provides major medical coverage to retirees of the DCR Plan. The RMP is self-insured. Members are not eligible to use this plan until they have at least 10 years of service and are Medicare age eligible.

Membership in the RMP was as follows at June 30, 2019:

Inactive plan members or beneficiaries currently receiving benefits	34
Inactive plan members entitled to but not yet receiving benefits	1,412
Inactive plan members not entitled to benefits	13,248
Active plan members	22,311
Total RMP membership	<u>37,005</u>

**(i) OPEB Benefits**

The medical benefits available to eligible persons means that an eligible person may not be denied medical coverage except for failure to pay the required premium. Major medical coverage, to cover medical expenses, takes effect on the first day of the month following the date of the RMP administrator's approval of the election and stops when the person who elects coverage dies or fails to make the required premium payment. The coverage for persons 65 years of age or older is the same as that available for persons under 65 years of age. The benefits payable to those persons 65 years of age or older supplement any benefits provided under the federal old age, survivors, and disability insurance program. The medical and optional insurance premiums owed by the person who elects coverage may be deducted from the health reimbursement arrangement account until the account balance becomes insufficient to pay the premiums; at this time, the person who elects coverage shall pay the premiums directly.

The cost of premiums for retiree major medical coverage for an eligible member or surviving spouse who is:

- (1) Not eligible for Medicare is an amount equal to the full monthly group premium for retiree major medical insurance coverage,
- (2) Eligible for Medicare is the following percentage of the premium:
  - (a) 30% if the member had 10 or more, but less than 15, years of service
  - (b) 25% if the member had 15 or more, but less than 20, years of service
  - (c) 20% if the member had 20 or more, but less than 25, years of service
  - (d) 15% if the member had 25 or more, but less than 30, years of service
  - (e) 10% if the member had 30 or more years of service.

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**(ii) Contributions**

Employer contribution rates are actuarially determined and adopted by the Board. The 2019 employer effective contribution rate is 0.94% of member's compensation.

**Defined Contribution Other Postemployment Benefit Plan**

**(a) General**

The Health Reimbursement Arrangement (HRA) Plan is established under AS 39.30.300. The Department of Administration, Division of Retirement and Benefits administers the System's health plans. The HRA Plan allows for medical care expenses to be reimbursed from individual savings accounts established for eligible persons. The HRA Plan became effective July 1, 2006, at which time contributions by employers began.

Membership in the plan was as follows as of June 30, 2019:

Inactive plan members or beneficiaries currently receiving benefits	40
Inactive plan members entitled to but not yet receiving benefits	1,412
Inactive plan members not entitled to benefits	13,248
Active plan members	22,311
	<hr/>
Total HRA Plan membership	37,011
	<hr/>

**(b) OPEB Benefits**

Persons who meet the eligibility requirements of AS 39.35.870 are eligible for reimbursements from the individual account established for a member under the HRA Plan but do not have to retire directly from the System.

The Plan Administrator may deduct the cost of monthly premiums from the HRA individual account for the RMP insurance on behalf of an eligible person who elected the retiree major medical insurance under AS 39.35.880. Upon application of an eligible person, the HRA Plan administrator shall reimburse the costs for medical care expenses defined in 26 USC 213(d). Reimbursement is limited to the medical expenses of (1) an eligible member, the spouse of an eligible member, and the dependent children of an eligible member; or (2) a surviving spouse and the dependent children of an eligible member dependent on the surviving spouse. When the member's individual account balance is exhausted, any deductions from the HRA individual account end. If all eligible persons die before exhausting the member's individual account, the account balance reverts to the HRA Plan.

**(c) Contributions**

An employer shall contribute to the HRA Plan trust fund an amount equal to 3.00% of the average annual compensation of all employees of all employers in the TRS and PERS. The administrator maintains a record of

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each member to account for employer contributions on behalf of that member. The 2019 contribution amount was an annual contribution not to exceed \$2,102.88, and required for every pay period in which the employee is enrolled in the DCR Plan, regardless of the compensation paid during the year. An amount less than \$2,102.88 would be deposited to a member's account if that member worked less than a full year.

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

#### ***(a) 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 revenue 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.

#### ***(b) Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP 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.

#### ***(c) 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, is 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.

#### ***(d) Defined Contribution Participant – Directed Investments***

The Board contracts with an external investment manager, through the Treasury, 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.

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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 DCR 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 DCR 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 comprised commingled investment funds, alongside other investors, through ownership of equity shares.

Synthetic Investment Contracts (SICs) are included in the Plan's statements at contract value. The Board's investment manager entered into the investment contracts, on behalf of the Board, with four financial institutions who provide wrap contracts that cover separately managed SIC portfolios. The accounts are credited with earnings and investment deposits, less administrative expenses charged by the financial institutions and investment withdrawals. They are fully benefit-responsive. There are no reserves against contract value for the credit risk of the contract issuer or otherwise. The crediting interest rate is based on the approximate rate of interest that will amortize differences between contract and market value over the portfolio's average duration.

**(e) *Contributions Receivable***

Contributions from the System's members and employers applicable to payrolls received during July for wages paid 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.

**(f) *Administrative Costs***

Administrative costs are paid from contributions. The Board has established a funding policy objective that the required contributions be sufficient to pay the plan administrative expenses, normal costs, and past service costs.

**(g) *Other Income***

Other income consists of Medicare Part D Retiree Drug Subsidy (RDS) rebates, Employer Group Waiver Plan (EGWP) rebates, pharmacy rebates, and other miscellaneous items. The RDS are rebates provided to the plan sponsor. The State has elected to voluntarily put the RDS back into the trust and are treated as a contribution for



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purposes of calculating the net OPEB liability. The EGWP and pharmacy rebates are provided to the plan through the third party administrators and are treated as a reduction to the benefit payments for purposes of calculating the net OPEB liability. RDS, EGWP, and pharmacy rebates are recognized on a cash basis.

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

Amounts due from the State of Alaska General Fund represent the amounts remitted by employers to the General Fund but not yet transmitted to the System.

***(i) Federal Income Tax Status***

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

**(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 assets under the Prudent Investor Rule. Fiduciary responsibility for the Board's invested assets is pursuant to AS 37.10.210-390.

AS 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, collective investment funds and SICs for the DCR 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, Real Estate Investment Trust Pool, Treasury Inflation-Protected Securities Pool, in addition to acting as oversight manager for all externally managed investments. All other investments are managed by external management companies.

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, 2019 for the DB Pension Plan is 5.88%, for the ARHCT Plan is 6.03%, for the ODD Plan is 6.22%, and for the RMP is 6.21%.

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For additional information on securities lending, interest rate risk, credit risk, foreign exchange, derivatives, fair value, and counterparty credit risk, see the separately issued report on the Invested Assets of the State of Alaska Retirement and Benefits Plans at: <http://treasury.dor.alaska.gov/armb/Reports-and-Policies/Annual-Audited-Financial-Schedules.aspx>.

### **(4) Net Pension Liability – Defined Benefit Pension Plan**

The components of the net pension liability of the participating employers at June 30, 2019 were as follows (in thousands):

Total pension liability	\$ 14,963,635
Plan fiduciary net position	(9,489,405)
	<hr/>
Employers' net pension liability	\$ 5,474,230
	<hr/>
Plan fiduciary net position as a percentage of the total pension liability	63.42%

#### **(a) Actuarial Assumptions**

The total pension liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2019:

Inflation	2.50% per year
Salary increases	For peace officer/firefighter, increases range from 7.75% to 2.75% based on service. For all others, increases range from 6.75% to 2.75% based on service.
Investment rate of return	7.38%, net of pension plan investment expenses. This is based on an average inflation rate of 2.50% and a real return of 4.88%.
Mortality	Pre-termination and post-termination mortality rates were based upon the 2013–2017 actual mortality experience. Pre-termination mortality rates were based on 100% of the RP-2014 table with MP-2017 generational improvement. Post-termination mortality rates were based on 91% of male and 96% of female rates of the RP-2014 table with MP-2017 generational improvement. Deaths are assumed to be occupational 75% of the time for peace officer/firefighters, 40% of the time for all others.

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The actuarial assumptions used in the June 30, 2018 actuarial valuation were based on the results of an actuarial experience study for the period from July 1, 2013 to June 30, 2017. As a result of this experience study, the Board adopted updated actuarial assumptions for the June 30, 2018 actuarial valuation to better reflect expected future experience.

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, excluding the inflation component of 2.90%, for each major asset class included in the pension plan's target asset allocation as of June 30, 2019 are summarized in the following table:

<b>Asset class</b>	<b>Long-term expected real rate of return</b>
Broad domestic equity	8.16%
Global equity (non-U.S.)	7.51
Intermediate treasuries	1.58
Opportunistic	3.96
Real assets	4.76
Private equity	11.39
Cash equivalents	0.83

***(b) Discount Rate***

The discount rate used to measure the total pension liability was 7.38%. The projection of cash flows used to determine the discount rate assumed that employer and 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 in accordance with the method prescribed by GASB Statement No. 67. In the event benefit payments are not covered by the plan's fiduciary net position, a municipal bond rate would be used to discount the benefit payments not covered by the plan's fiduciary net position. The S&P Municipal Bond 20-Year High Grade Index rate was 2.79% as of June 30, 2019.

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

The following presents the net pension liability of the System, as of June 30, 2019, calculated using the discount rate of 7.38%, 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 or one percentage point higher than the current rate (in thousands):

	<b>1.00% decrease (6.38%)</b>	<b>Current discount rate (7.38%)</b>	<b>1.00% increase (8.38%)</b>
Net pension liability	\$ 7,225,023	5,474,230	4,007,998

**(5) Net OPEB Liability (Asset)**

The components of the net OPEB liability (asset) of the participating employers for each plan at June 30, 2019 were as follows (in thousands):

	<b>ARHCT Plan</b>	<b>ODD Plan</b>	<b>RMP</b>
Total OPEB liability	\$ 7,916,072	12,280	142,162
Plan fiduciary net position	(7,767,692)	(36,525)	(118,242)
Employers' net OPEB (asset) liability	\$ 148,380	(24,245)	23,920
Plan fiduciary net position as a percentage of the total OPEB liability	98.13%	297.43%	83.17%

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**(a) Actuarial Assumptions**

The total OPEB liability for each plan was determined by actuarial valuations as of June 30, 2018, using the following actuarial assumptions, applied to all periods in the measurement and rolled forward to the measurement date of June 30, 2019:

Inflation	2.50% per year
Salary increases	Graded by service, from 7.75% to 2.75% for peace officer/firefighter Graded by service, from 6.75% to 2.75% for all others
Investment rate of return	7.38%, net of postretirement healthcare plan investment expenses. This is based on an average inflation rate of 2.50% and a real return of 4.88%.
Healthcare cost trend rates (ARHCT Plan and RMP)	Pre-65 medical: 7.5% grading down to 4.5% Post-65 medical: 5.5% grading down to 4.5% Prescription drug: 8.5% grading down to 4.5% EGWP: 8.5% grading down to 4.5%
Mortality	Pre-termination and post-termination mortality rates were based upon the 2013–2017 actual mortality experience. Post-termination mortality rates were based on 91% of the male rates and 96% of the female rates of the RP-2014 healthy annuitant table projected with MP-2017 generational improvement. The rates for pre-termination mortality were 100% of the RP-2014 employee table with MP-2017 generational improvement.
Participation (ARHCT)	100% system paid of members and their spouses are assumed to elect the healthcare benefits as soon as they are eligible 10% of non-system paid members and their spouses are assumed to elect the healthcare benefits as soon as they are eligible

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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. This assumption is based on observed trends in participation from a range of other plans. The following participation rates were used to measure the net OPEB liability of the Retiree Medical Plan:

Decrement due to disability		Decrement due to retirement	
Age	Percent participation	Age	Percent participation
<56	75.0 %	55	50.0 %
56	77.5	56	55.0
57	80.0	57	60.0
58	82.5	58	65.0
59	85.0	59	70.0
60	87.5	60	75.0
61	90.0	61	80.0
62	92.5	62	85.0
63	95.0	63	90.0
64	97.5	64	95.0
65+	100.0	65+	
			Years of service
		<15	75.0 %
		15–19	80.0
		20–24	85.0
		25–29	90.0
		30+	95.0

The actuarial assumptions used in the June 30, 2018 actuarial valuation were based on the results of an actuarial experience study for the period from July 1, 2013 to June 30, 2017. As a result of this experience study, the Board adopted updated actuarial assumptions for the June 30, 2018 actuarial valuation to better reflect expected future experience.

In addition to the changes in assumptions resulting from the experience study, the following assumption changes have been made since the prior valuation:

1. An Employer Group Waiver Plan (EGWP) was implemented effective January 1, 2019. This arrangement replaced the Retiree Drug Subsidy (RDS) under Medicare Part D and resulted in larger projected subsidies to offset the cost of prescription drug coverage.
2. Based on recent experience, the healthcare cost trend assumptions were updated.
3. Per capita claims costs were updated reflecting recent experience.
4. Healthcare cost trends were updated to reflect a Cadillac Tax load.

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The long-term expected rate of return on postretirement healthcare 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 postretirement healthcare 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, excluding the inflation component of 2.90%, for each major asset class included in the postretirement healthcare plan's target asset allocation as of June 30, 2019 are summarized in the following table:

Asset class	Long-term expected real rate of return	Allocation	Range
Broad domestic equity	8.16%	24.0% %	± 6%
Global equity (non-U.S.)	7.51	22.0	± 4
Intermediate treasuries	1.58	10.0	± 5
Opportunistic	3.96	10.0	± 5
Real assets	4.76	17.0	± 8
Private equity	11.39	9.0	± 5
Cash equivalents	0.83	1.0	+3/-1

**(b) Discount Rate**

The discount rate used to measure the total OPEB liability as of June 30, 2019 was 7.38%. The projection of cash flows used to determine the discount rate assumed that employer and state contributions will continue to follow the current funding policy, which meets state statutes. Based on those assumptions, the postretirement healthcare 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 postretirement healthcare plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability in accordance with the method prescribed by GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans. In the event benefit payments are not covered by the plan's fiduciary net position, a municipal bond rate would be used to discount the benefit payments not covered by the plan's fiduciary net position. The S&P Municipal Bond 20-Year High Grade Index rate was 2.79% as of June 30, 2019.



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*(c) Sensitivity of the Net OPEB Liability (Asset) to Changes in the Discount Rate*

The following presents the net OPEB (asset) liability for each plan as of June 30, 2019, calculated using the discount rate of 7.38%, as well as what the respective plan's net OPEB liability (asset) would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate (in thousands):

	<b>1.00% decrease (6.38%)</b>	<b>Current discount rate (7.38%)</b>	<b>1.00% increase (8.38%)</b>
ARHCT Plan	\$ 1,193,531	148,380	(711,371)
ODD Plan	(22,998)	(24,245)	(25,253)
RMP	60,089	23,920	(3,303)

*(d) Sensitivity of the Net OPEB Liability (Asset) to Changes in the Healthcare Cost Trend Rates*

The following presents the net OPEB liability (asset) for each plan as of June 30, 2019 calculated using the healthcare cost trend rates as summarized in the 2018 actuarial valuation reports as well as what the respective plan's net OPEB liability would be if it were calculated using trend rates that are one percentage point lower or one percentage point higher than the current healthcare cost trend rates (in thousands):

	<b>1.00% decrease</b>	<b>Current healthcare cost trend rate</b>	<b>1.00% increase</b>
ARHCT Plan	\$ (811,925)	148,380	1,320,314
ODD Plan	N/A	N/A	N/A
RMP	(7,358)	23,920	66,746

**(6) Claims Payable**

The liability for claims payable and claims incurred but not reported represent the estimated amounts necessary to settle all outstanding claims incurred as of the balance sheet date. The ARHCT 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.

# Financial Section

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

	<b>2019</b>	<b>2018</b>
Total, beginning of year	\$ 45,677	43,006
Healthcare benefits	444,270	422,419
Benefits paid	(445,578)	(419,748)
Total, end of year	\$ 44,369	45,677
End of year:		
Incurred but not reported	44,369	45,677
Total, end of year	\$ 44,369	45,677

### (7) Commitments and Contingencies

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

### (8) Medicare Part D Retiree Drug Subsidy

One of the provisions of Medicare Part D provides sponsors of pension healthcare plans the opportunity to receive an 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 ARHCT Plan was approved for participation in the Medicare Part D program beginning calendar year 2006.

### (9) Employer Group Waiver Program

Effective January 1, 2019, the Division of Retirement and Benefits (the Division) implemented a group Medicare Part D prescription drug plan known as an enhanced EGWP for all Medicare-eligible members covered under the ARHCT Plan and the RMP. The enhanced EGWP leverages increased federal subsidies to the ARHCT Plan and the RMP for prescription drugs covered by Medicare Part D while also providing coverage for medications not covered by Medicare Part D through a "wrap" of additional benefits. Moving to an enhanced EGWP has resulted in the ARHCT Plan and RMP receiving significantly higher subsidies, while simultaneously maintaining the prescription drug coverage retirees had prior to implementation of the enhanced EGWP. Currently, EGWP is the primary program used by the Division; however, there are still retirees that are covered by the RDS if they do not meet the requirements of EGWP.

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## **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)**

	2019	2018	2017	2016	2015	2014	2013	2012
Total pension liability:								
Service cost	\$ 157,708	170,816	184,411	172,304	184,712	160,828	167,203	172,968
Interest	1,118,574	1,108,068	1,072,312	1,049,226	1,020,947	940,786	927,692	887,361
Differences between expected and actual experience	(243,120)	(302,874)	(184,252)	(118,947)	10,791	—	56,229	42,847
Changes of assumptions	502,790	—	—	—	541,390	—	—	—
Benefit payments, including refunds of member contributions	(848,019)	(812,877)	(777,187)	(742,174)	(696,542)	(651,917)	(634,187)	(593,279)
Net change in total pension liability	687,933	163,133	295,284	360,409	1,061,298	449,697	516,937	509,897
Total pension liability – beginning	14,275,702	14,112,569	13,817,285	13,456,876	12,395,578	11,945,881	11,428,944	10,919,047
Total pension liability – ending (a)	14,963,635	14,275,702	14,112,569	13,817,285	13,456,876	12,395,578	11,945,881	11,428,944
Plan fiduciary net position:								
Contributions – employer	350,601	299,665	263,597	235,360	226,136	206,204	179,976	182,695
Contributions – member	79,609	84,956	89,345	96,024	100,036	106,565	110,808	112,703
Contributions – nonemployer entity (State)	67,857	72,719	99,167	88,586	1,000,000	176,794	164,087	130,912
Total net investment income (loss)	540,088	725,310	1,048,006	(49,967)	253,311	1,207,484	738,656	1,650
Benefit payments, including refunds of member contributions	(848,019)	(812,877)	(777,187)	(742,175)	(696,542)	(651,917)	(610,247)	(570,883)
Administrative expenses	(7,429)	(6,250)	(7,526)	(7,243)	(7,553)	(8,223)	(7,120)	(6,743)
Other income	23	25	38	240	36	49	28	35
Net change in plan fiduciary net position	182,730	363,548	715,440	(379,175)	875,424	1,036,956	576,188	(149,631)
Plan fiduciary net position – beginning	9,306,675	8,943,127	8,227,687	8,606,862	7,731,438	6,694,482	6,118,294	6,267,925
Plan fiduciary net position – ending (b)	9,489,405	9,306,675	8,943,127	8,227,687	8,606,862	7,731,438	6,694,482	6,118,294
Plan's net pension liability (a)–(b)	\$ 5,474,230	4,969,027	5,169,442	5,589,598	4,850,014	4,664,140	5,251,399	5,310,650
Plan fiduciary net position as a percentage of the total pension liability	63.42 %	65.19 %	63.37 %	59.55 %	63.96 %	62.37 %	56.04 %	53.53 %
Covered payroll	\$ 1,049,152	1,159,599	1,247,884	1,322,925	1,412,237	1,405,198	1,534,665	1,522,399
Net pension liability as a percentage of covered payroll	521.78 %	428.51 %	414.26 %	422.52 %	343.43 %	331.92 %	342.19 %	348.83 %

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>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Actuarially determined contribution	\$ 414,243	395,663	368,766	566,615	529,264
Contributions in relation to the actuarially determined contribution	<u>418,458</u>	<u>372,383</u>	<u>362,764</u>	<u>323,946</u>	<u>1,226,136</u>
Contribution deficiency (excess)	\$ <u>(4,215)</u>	<u>23,280</u>	<u>6,002</u>	<u>242,669</u>	<u>(696,872)</u>
Covered payroll	\$ 1,049,152	1,159,599	1,247,884	1,322,925	1,412,237
Contributions as a percentage of covered payroll	39.89 %	32.11 %	29.07 %	24.49 %	86.82 %

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 (continued)**  
**Last 10 Fiscal Years**  
**(In thousands)**

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$ 358,718	382,889	351,674	220,419	217,080
Contributions in relation to the actuarially determined contribution	<u>382,998</u>	<u>344,063</u>	<u>313,607</u>	<u>204,262</u>	<u>186,617</u>
Contribution deficiency (excess)	\$ <u>(24,280)</u>	<u>38,826</u>	<u>38,067</u>	<u>16,157</u>	<u>30,463</u>
Covered payroll	\$ 1,405,198	1,534,665	1,522,399	1,559,938	1,586,697
Contributions as a percentage of covered payroll	27.26 %	22.42 %	20.60 %	13.09 %	11.76 %

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

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**Required Supplementary Information (Unaudited)**  
**Schedule of Investment Returns -**  
**Defined Benefit Pension Plan**

	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	5.88 %	8.26 %	12.99 %	(0.68)%	3.12 %	18.43 %

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 Changes in Employer Net OPEB Liability and Related**  
**Ratios - Alaska Retiree Healthcare Trust Plan**  
**(In thousands)**

	2019	2018	2017
Total OPEB liability:			
Service cost	\$ 119,782	110,333	114,109
Interest	684,429	647,310	623,599
Differences between expected and actual experience	(147,463)	(149,287)	(28,042)
Changes of assumptions	(965,602)	259,497	—
Benefit payments, including refunds of member contributions	(420,429)	(413,273)	(405,872)
EGWP rebates	7,066	—	—
Net change in total OPEB liability	(722,217)	454,580	303,794
Total OPEB liability – beginning	8,638,289	8,183,709	7,879,915
Total OPEB liability – ending (a)	7,916,072	8,638,289	8,183,709
Plan fiduciary net position:			
Contributions – employer	102,266	85,731	124,541
Contributions – RDS	20,481	5,965	—
Total net investment income	449,098	598,342	859,980
Benefit payments	(444,143)	(422,378)	(405,872)
EGWP rebates	7,066	—	—
Pharmacy rebates	36,921	20,268	—
ASO fees	(13,207)	(11,163)	—
Net benefit payments	(413,363)	(413,273)	(405,872)
Administrative expenses, net of ASO fees	(3,665)	(3,822)	(15,960)
Other	874	106	43,009
Net change in plan fiduciary net position	155,691	273,049	605,698
Plan fiduciary net position – beginning	7,612,001	7,338,952	6,733,254
Plan fiduciary net position – ending (b)	7,767,692	7,612,001	7,338,952
Plan's net OPEB liability (a)–(b)	\$ 148,380	1,026,288	844,757
Plan fiduciary net position as a percentage of the total OPEB liability	98.13%	88.12%	89.68%
Covered payroll	\$ 1,049,152	1,159,599	1,247,884
Net OPEB liability as a percentage of covered payroll	14.14%	88.50%	67.70%

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.

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

**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Alaska Retiree Healthcare Trust Plan**  
**Last 10 Fiscal Years**

(In thousands)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Actuarially determined contribution	\$ 99,083	71,251	133,845	790,824	782,258
Contributions in relation to the actuarially determined contribution	<u>102,266</u>	<u>85,731</u>	<u>124,541</u>	<u>193,564</u>	<u>171,028</u>
Contribution deficiency (excess)	\$ <u>(3,183)</u>	<u>(14,480)</u>	<u>9,304</u>	<u>597,260</u>	<u>611,230</u>
Covered payroll	\$ 1,049,152	1,159,599	1,247,884	1,322,925	1,412,237
Contributions as a percentage of covered payroll	9.75 %	7.39 %	9.98 %	14.63 %	12.11 %

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

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

**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Alaska Retiree Healthcare Trust Plan (continued)**

**Last 10 Fiscal Years**

(In thousands)

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$ 783,827	612,792	498,433	525,075	790,793
Contributions in relation to the actuarially determined contribution	<u>340,458</u>	<u>373,205</u>	<u>334,941</u>	<u>362,188</u>	<u>313,683</u>
Contribution deficiency (excess)	\$ <u>443,369</u>	<u>239,587</u>	<u>163,492</u>	<u>162,887</u>	<u>477,110</u>
Covered payroll	\$ 1,405,198	1,534,665	1,522,399	1,559,938	1,586,697
Contributions as a percentage of covered payroll	24.23 %	24.32 %	22.00 %	23.22 %	19.77 %

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

**State of Alaska**  
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**Required Supplementary Information (Unaudited)**

**Schedule of Investment Returns -  
Alaska Retiree Healthcare Trust Plan**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expense	6.03 %	8.35 %	12.69 %

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.

**State of Alaska**  
**Public Employees' Retirement System**  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Changes in Employer Net OPEB Liability and Related**  
**Ratios - Occupational Death and Disability Plan**

(In thousands)

	2019	2018	2017
Total OPEB liability:			
Service cost	\$ 3,870	3,565	3,419
Interest	1,205	1,275	977
Differences between expected and actual experience	(3,252)	(5,625)	(470)
Changes in assumptions	(528)	—	—
Benefit payments, including refunds of member contributions	(398)	(392)	(313)
Net change in total OPEB liability	897	(1,177)	3,613
Total OPEB liability – beginning	11,383	12,560	8,947
Total OPEB liability – ending (a)	12,280	11,383	12,560
Plan fiduciary net position:			
Contributions – employer	4,083	2,215	2,196
Total net investment income	2,036	2,233	2,938
Benefit payments, including refunds of member contributions	(398)	(392)	(313)
Administrative expenses	(1)	—	(18)
Net change in plan fiduciary net position	5,720	4,056	4,803
Plan fiduciary net position – beginning	30,805	26,749	21,946
Plan fiduciary net position – ending (b)	36,525	30,805	26,749
Plan's net OPEB asset (a)–(b)	\$ (24,245)	(19,422)	(14,189)
Plan fiduciary net position as a percentage of the total OPEB asset	297.43 %	270.62 %	212.97 %
Covered payroll	\$ 1,218,186	1,131,411	1,059,791
Net OPEB asset as a percentage of covered payroll	(1.99)%	(1.72)%	(1.34)%

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.

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

**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Occupational Death and Disability Plan**  
**Last 10 Fiscal Years**

(In thousands)

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Actuarially determined contribution	\$ 3,944	2,190	2,226	2,601	2,337
Contributions in relation to the actuarially determined contribution	<u>4,083</u>	<u>2,215</u>	<u>2,196</u>	<u>3,104</u>	<u>2,790</u>
Contribution deficiency (excess)	\$ <u>(139)</u>	<u>(25)</u>	<u>30</u>	<u>(503)</u>	<u>(453)</u>
Covered payroll	\$ 1,218,186	1,131,441	1,059,791	867,000	778,980
Contributions as a percentage of covered payroll	0.34 %	0.20 %	0.21 %	0.36 %	0.36 %

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

**State of Alaska**  
**Public Employees' Retirement System**  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Occupational Death and Disability Plan (continued)**

**Last 10 Fiscal Years**

**(In thousands)**

	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$ 2,080	1,328	1,085	1,852	1,495
Contributions in relation to the actuarially determined contribution	<u>2,372</u>	<u>1,541</u>	<u>1,582</u>	<u>1,852</u>	<u>1,495</u>
Contribution deficiency (excess)	\$ <u>(292)</u>	<u>(213)</u>	<u>(497)</u>	<u>—</u>	<u>—</u>
Covered payroll	\$ 678,840	590,380	558,760	459,521	421,187
Contributions as a percentage of covered payroll	0.35 %	0.26 %	0.28 %	0.40 %	0.35 %

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

State of Alaska  
Public Employees' Retirement System  
(A Component Unit of the State of Alaska)  
**Required Supplementary Information (Unaudited)**  
**Schedule of Investment Returns -**  
**Occupational Death and Disability Plan**

	2019	2018	2017
Annual money-weighted rate of return, net of investment expense	6.22 %	8.06 %	11.97 %

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.



**State of Alaska**  
**Public Employees' Retirement System**  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Changes in Employer Net OPEB Liability and Related Ratios - Retiree Medical Plan**  
**(In thousands)**

	2019	2018	2017
Total OPEB liability:			
Service cost	\$ 13,465	12,269	10,394
Interest	10,093	7,916	6,425
Differences between expected and actual experience	(1,340)	(724)	(46)
Change of assumptions	7,303	6,623	—
Benefit payments	(109)	(41)	—
EGWP rebates	10	—	—
Net change in total OPEB liability	29,422	26,043	16,773
Total OPEB liability – beginning	112,740	86,697	69,924
Total OPEB liability – ending (a)	142,162	112,740	86,697
Plan fiduciary net position:			
Contributions – employer	11,736	11,657	12,280
Contributions – RDS	9	—	—
Total net investment income	6,591	6,919	8,506
Benefit payments	(128)	(41)	—
EGWP rebates	10	—	—
Pharmacy rebates	19	—	—
Net benefit payments	(99)	(41)	—
Administrative expenses	(14)	(4)	(12)
Other	—	2	1
Net change in plan fiduciary net position	18,223	18,533	20,775
Plan fiduciary net position – beginning	100,015	81,482	60,707
Plan fiduciary net position – ending (b)	118,238	100,015	81,482
Plan's net OPEB liability (a)–(b)	\$ 23,924	12,725	5,215
Plan fiduciary net position as a percentage of the total OPEB liability	83.17 %	88.71 %	93.98 %
Covered payroll	\$ 1,218,186	1,131,441	1,059,791
Net OPEB liability as a percentage of covered payroll	1.96 %	1.12 %	0.49 %

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.

State of Alaska  
Public Employees' Retirement System  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Retiree Medical Plan**  
**Last 10 Fiscal Years**

(In thousands)

	2019	2018	2017	2016	2015
Actuarially determined contribution	\$ 11,451	11,654	12,506	16,907	15,190
Contributions in relation to the actuarially determined contribution	11,736	11,657	12,280	16,184	14,552
Contribution deficiency (excess)	\$ (285)	(3)	226	723	638
Covered payroll	\$ 1,218,186	1,131,441	1,059,791	867,000	778,980
Contributions as a percentage of covered payroll	0.96 %	1.03 %	1.16 %	1.87 %	1.87 %

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

**State of Alaska**  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Employer and Nonemployer Contributions -**  
**Retiree Medical Plan (continued)**  
**Last 10 Fiscal Years**

(In thousands)

	2014	2013	2012	2011	2010
Actuarially determined contribution	\$ 3,937	3,365	3,464	3,229	3,469
Contributions in relation to the actuarially determined contribution	3,708	3,195	2,850	2,527	3,031
Contribution deficiency (excess)	\$ 229	170	614	702	438
Covered payroll	\$ 678,840	590,380	558,760	459,521	421,187
Contributions as a percentage of covered payroll	0.55 %	0.54 %	0.51 %	0.55 %	0.72 %

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

**State of Alaska**  
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**Required Supplementary Information (Unaudited)**  
**Schedule of Investment Returns -**  
**Retiree Medical Plan**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expense	6.21 %	7.89 %	11.93 %

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

**June 30, 2019**

### **(1) Actuarial Assumptions and Methods**

The actuarial valuation was prepared by Buck. The significant actuarial methods and assumptions used in the defined benefit pension and postemployment healthcare benefit plan valuation as of June 30, 2018 are as follows:

- (a) Actuarial cost method – Liabilities and contributions are computed using the Entry Age Normal Cost Method.

Effective June 30, 2018, the Board adopted a layered unfunded accrued actuarial liability (UAAL) amortization method: Layer #1 equals the sum of (i) the UAAL at June 30, 2018 based on the 2017 valuation, plus (ii) the FY18 experience gain/loss. Layer #1 is amortized over the remainder of the 25-year closed period that was originally established in 2014. Layer #2 equals the change in UAAL at June 30, 2018 due to the experience study and Employer Group Waiver Program (EGWP) implementation. Layer #2 is amortized over a separate closed 25-year period starting in 2018. Future layers will be created each year based on the change in UAAL occurring that year, and will be amortized over separate closed 25-year periods. The UAAL amortization continues to be on a level percent of pay basis. State of Alaska (the 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 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 UAAL 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 UAAL.

- (b) Valuation of assets – The actuarial asset value was reinitialized to equal fair value of assets as of June 30, 2014. Beginning in FY15, the asset value method recognizes 20% of the gain or loss each year, for a period of five years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements.

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

**June 30, 2019**

- (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 historical 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.
- (d) Investment return – 7.38% per year, net of expenses
- (e) Salary scale – Rates based upon the 2013–2017 actual experience. Inflation 2.50% per year and productivity 0.25% per year.
- (f) Payroll growth – 2.75% 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 2.50% annually.
- (h) Mortality (pre-termination) – Mortality rates based upon 2013–2017 actual experience, 100% (male and female) of RP-2014 healthy annuitant table with MP-2017 generational improvement.
- (i) Mortality (post-termination) – Mortality rates based upon the 2013–2017 actual experience. 91% of male and 96% of female rates of RP-2014 health annuitant table with MP-2017 generational improvement.
- (j) Total turnover – Based upon the 2013–2017 actual experience
- (k) Disability – Incidence rates based on 2013–2017 actual experience. Post-disability mortality in accordance with the RP-2014 disability table with MP-2017 generational improvement. Disabilities are assumed to be occupational 75% of the time for Peace Officer/Firefighters, 40% of the time for others.
- (l) Retirement – Retirement rates based on the 2013–2017 actual experience. Deferred vested members are assumed to retire at their earliest unreduced retirement date. The modified cash refund annuity is valued as a three-year certain and life annuity.
- (m) Spouse age difference – Males are assumed to be three years older than their wives. Females are assumed to be two years younger than husbands.
- (n) Percent married for pension – For others, 75% of male members and 70% female members are assumed to be married. For peace officer/firefighters, 85% of male members and 60% of female members are assumed to be married.

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

**June 30, 2019**

- (o) Dependent spouse medical coverage election – Applies to members who do not have a dual medical coverage. For others, 65% of male members and 60% female members are assumed to be married and covered a dependent spouse. For peace officer/firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse.
- (p) Dependent children – Benefits to dependent children have been valued only for members currently covering their dependent children. These benefits are only valued through the dependent children's age 23 (unless the child is disabled).
- (q) Contribution refunds – For others, 5% of terminating members with vested benefits are assumed to have their contributions refunded. For peace officers/firefighters, 10% of terminating members with vested benefits are assumed to have their contributions refunded; 100% of those with nonvested benefits are assumed to have their contributions refunded.
- (r) Imputed data – Data changes from the prior year that are deemed to have an immaterial impact on liabilities and contribution rates, are assumed to be correct in the current year's client data. Nonvested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.
- (s) Active rehire assumption – The normal cost used for determining contribution rates and in the projections includes a rehire assumption to account for anticipated rehires. The normal cost includes the following percentage assumptions (which were developed based on the five years of rehire loss experience through June 30, 2017): For projections, these assumptions were assumed to grade to zero uniformly over a 20-year period. Pension – 18.7% and Healthcare – 17.09%.
- (t) Active data adjustment – To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 census data file but active in the October 1 census data files are updated to active status as of June 30.
- (u) Cost of Living Allowance (COLA) – Of those benefit recipients who are eligible for the COLA, 70% of others and 65% of peace officer/firefighters are assumed to remain in Alaska and receive the COLA.
- (v) Postretirement pension adjustment (PRPA) – 50% and 75% assumed inflation, or 1.25% and 1.875%, respectively, is valued for the annual automatic PRPA as specified in the statute.
- (w) Expenses – The investment return assumption is net of investment expenses. The Normal Cost as of June 30, 2018 was increased by the following amounts for administrative expenses (for projections, the % increase was assumed to remain constant in future years): Pension – \$6,888,000 and Healthcare – \$4,365,000.
- (x) Part-time status – Part-time employees are assumed to earn 1.00 years of credited service per year for peace officer/firefighter and 0.75 years of credited service per year for other members.
- (y) 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.

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

**June 30, 2019**

- (z) Per capita claims cost – Sample claims cost rates adjusted to age 65 for FY19 medical and prescription drug benefits are shown below:

	<u>Medical</u>	<u>Prescription drugs</u>
Pre-Medicare	\$ 13,535	3,360
Medicare Parts A and B	1,468	3,764
Medicare Part B Only	4,667	3,764
Medicare Part D – RDS	N/A	527
Medicare Part D – EGWP	N/A	1,039

Members are assumed to attain Medicare eligibility at age 65. The EGWP cost shown above is for calendar year 2019. All other costs are for the 2019 fiscal year (July 1, 2018–June 30, 2019).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following page. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the Plan's actuarial accrued liability), those changes will be evaluated and quantified when they occur.

- (aa) Third-party administrator fees – \$300 per person per year; assumed to increase at 4.5% per year
- (bb) Medicare Part B Only – It's assumed that 5% of actives hired before April 1, 1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.



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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

- (cc) Healthcare 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, 7.5% is applied to the FY19 pre-Medicare medical claims costs to get the FY20 medical claims costs:

<b>Fiscal year</b>	<b>Medical Pre-65</b>	<b>Medical Post-65</b>	<b>Prescription drugs/EGWP</b>	<b>RDS</b>
2019	7.5%	5.5%	8.5%	4.7%
2020	7.0	5.4	8.0	4.7
2021	6.5	5.4	7.5	4.6
2022	6.3	5.4	7.1	4.6
2023	6.1	5.4	6.8	4.6
2024	5.9	5.4	6.4	4.6
2025	5.8	5.4	6.1	4.6
2026	5.6	5.4	5.7	4.6
2027–2040	5.4	5.4	5.4	4.5
2041	5.3	5.3	5.3	4.5
2042	5.2	5.2	5.2	4.5
2043	5.1	5.1	5.1	4.5
2044	5.1	5.1	5.1	4.5
2045	5.0	5.0	5.0	4.5
2046	4.9	4.9	4.9	4.5
2047	4.8	4.8	4.8	4.5
2048	4.7	4.7	4.7	4.5
2049	4.6	4.6	4.6	4.5
2050+	4.5	4.5	4.5	4.5

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 costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska. The model was updated to incorporate recent trend survey information.

# Financial Section

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

The table below shows the amount each trend rate shown on the previous page was increased to account for the Cadillac Tax:

<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>	<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>
2018–2030	— %	— %	2070	0.21 %	0.46 %
2031	—	0.15	2071	0.21	0.45
2032	—	0.34	2072	0.20	0.44
2033	—	0.30	2073	0.20	0.43
2034	—	0.28	2074	0.20	0.42
2035	—	0.26	2075	0.19	0.41
2036	—	0.26	2076	0.19	0.40
2037	—	0.21	2077	0.18	0.39
2038	0.10	0.22	2078	0.18	0.38
2039	0.09	0.20	2079	0.17	0.37
2040	0.08	0.16	2080	0.17	0.36
2041	0.08	0.14	2081	0.17	0.35
2042	0.06	0.12	2082	0.16	0.34
2043	0.04	0.06	2083	0.16	0.33
2044	0.04	0.07	2084	0.15	0.32
2045	0.04	0.06	2085	0.15	0.31
2046	0.03	0.05	2086	0.15	0.31
2047	0.04	0.10	2087	0.14	0.30
2048	0.04	0.43	2088	0.14	0.29
2049	0.05	0.57	2089	0.14	0.29
2050	0.05	0.52	2090	0.13	0.28
2051	0.06	0.60	2091	0.13	0.27
2052	0.06	0.63	2092	0.13	0.27
2053	0.07	0.69	2093	0.13	0.26
2054	0.10	0.69	2094	0.12	0.25
2055	0.30	0.68	2095	0.12	0.25
2056	0.30	0.67	2096	0.12	0.24
2057	0.29	0.66	2097	0.11	0.24
2058	0.29	0.64	2098	0.11	0.23
2059	0.28	0.62	2099	0.11	0.22
2060	0.27	0.60	2100	0.11	0.22
2061	0.27	0.58	2101	0.10	0.21
2062	0.26	0.57	2102	0.10	0.21
2063	0.25	0.56	2103	0.10	0.20
2064	0.25	0.54	2104	0.10	0.20
2065	0.24	0.53	2105	0.10	0.19
2066	0.24	0.51	2106	0.09	0.19
2067	0.23	0.50	2107	0.09	0.19
2068	0.30	0.49	2108	0.09	0.18
2069	0.22	0.47	2109	0.09	0.18

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

(dd) Aging factors:

Age	Medical	Prescription drugs
0–44	2.0%	4.5%
45–54	2.5	3.5
55–64	2.5	1.5
65–74	3.0	2.0
75–84	2.0	(0.5)
85–94	0.3	(2.5)
95+	—	—

(ee) Retired member contributions for medical benefits – Currently, contributions are required for System members who are under age 60 and have less than 30 years of service (25 for peace officers/ firefighters). Eligible Tier 1 members are exempt from contribution requirements. Annual FY19 contributions based on monthly rates shown below for calendar 2018 and 2019 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 or 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled. For dependent children, the System values one-third of the annual retiree contribution is used to estimate the per-child rate based upon the assumed number of children in rates where children are covered.

Coverage category	Calendar 2019		Calendar 2018
	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

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

**June 30, 2019**

- (ff) Trend rate for retired member medical 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, 7.6% is applied to the FY19 retired member medical contributions to get the FY20 retired member medical contributions.

<u>Fiscal year</u>	<u>Trend assumption</u>
2019	7.6%
2020	7.2
2021	6.8
2022	6.5
2023	6.3
2024	6.0
2025	5.9
2050	4.5
2100	4.5

Graded trend rates for retired member medical contributions were updated to the rates shown above for the June 30, 2018 valuation to reflect the updated ultimate trend assumption of 4.5% used for gross cost components. Actual FY19 retired member medical contributions are reflected in the valuation.

- (gg) Healthcare participation – 100% of System-Paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible; 20% of non-System Paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

The significant actuarial methods and assumptions used in the defined contribution occupational death and disability and retiree medical benefit plan valuation as of June 30, 2018 are as follows:

- (a) Actuarial cost method – Liabilities and contributions are computed using the Entry Age Normal Actuarial Cost Method. Any funding surpluses or unfunded accrued liability is amortized over 25 years as a level percentage of expected payroll. However, in keeping with Governmental Accounting Standards Board (GASB) requirements in effect when the plan was adopted, the net amortization period will not exceed 30 years. Under the new accounting standards (GASB Statement Nos. 74 and 75), the GASB requirements will not directly control amortization periods used for funding the plan.
- (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 was 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 and prescription drug benefits – Due to the lack of experience for the Defined Contribution Retirement (DCR) retiree medical plan only, base claims costs are based on those described in

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

**June 30, 2019**

the actuarial valuation as of June 30, 2018 for PERS Defined Benefit (DB) retiree medical plan were used with some adjustments. The claim 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, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles, and out-of-pocket limits, upcoming FY19 claims costs were reduced 2.1% for medical and 10.4% for prescription drugs. In addition, to account for the difference in Medicare coordination, projected FY19 medical claims costs for Medicare eligible retirees were further reduced 29.3%. The medical and prescription drug percentages were reduced 0.2% in each future year for the DCR medical benefits to reflect the fact that the medical benefit to be offered to DCR members will have an annual indexing of member cost-sharing features, such as deductibles and out-of-pocket amounts.

The State transitioned to EGWP for DCR participants effective January 1, 2019. In the prior valuation, the impact of transitioning to the EGWP was valued by increasing the RDS subsidy offset in 2019 by 60% to reflect estimated Medicare reimbursements under the EGWP arrangement. For this year's valuation, the estimated 2019 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates).

- (d) Investment return – 7.38% per year, net of investment expenses
- (e) Salary scale – Salary scale rates based upon the 2013–2017 actual experience. Inflation 2.50% per year. Productivity 0.25% per year.
- (f) Payroll growth – 2.75% 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 2.50% annually.
- (h) Mortality (pre-termination) – Based upon 2013–2017 actual mortality experience, 100% of male and female of RP-2014 employee table with MP-2017 generational improvement.
- (i) Mortality (post-termination) – Based upon 2013–2017 actual mortality experience, 91% of male and 96% of female rates of the RP-2014 healthy annuitant table with MP-2017 generational improvement.
- (j) Total turnover – Select and ultimate rates based upon the 2013–2017 actual experience
- (k) Disability – Incidence rates based upon the 2013–2017 actual experience. Post-disability mortality in accordance with the RP-2014 disabled table with MP-2017 generational improvement. Disabilities are assumed to be occupational 75% of the time for peace officer/firefighters, 40% of the time for others. For peace officer/firefighters, members are assumed to take the monthly annuity 100% of the time.
- (l) Retirement – Retirement rates based upon the 2013–2017 actual experience
- (m) Spouse age difference – Males are assumed to be three years older than their wives. Females are assumed to be two years younger than husbands.

# Financial Section

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

- (n) Percent married for occupational death and disability – For others, 75% of male members and 70% female members are assumed to be married. For peace officer/firefighters, 85% of male members and 60% of female members are assumed to be married.
- (o) Dependent spouse medical coverage election – Applies to members who do not have dual medical coverage. For others 65% of male members and 60% female members are assumed to be married and cover a dependent spouse. For peace officer/firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse.
- (p) Part-time status – Part-time employees are assumed to earn 1.00 years of credited service per year for peace officer/firefighters and 0.75 years of credited service per year for other members.
- (q) Peace officer/firefighter occupational disability retirement benefit commencement – The occupational disability retirement benefit is assumed to be first payable from the member's DC account and the retirement benefit payable from the occupational death and disability trust will commence five years later.
- (r) Per capita claims cost – Sample claims cost rates (before base claims cost adjustments described below adjusted to age 65 for FY19 medical and prescription drug benefits are shown below:

	<u>Medical</u>	<u>Prescription drugs</u>
Pre-Medicare	\$ 13,535	3,360
Medicare Parts A and B	1,468	3,764
Medicare Part B Only	4,722	527
Medicare Part D	N/A	1,039

Members are assumed to attain Medicare eligibility at age 65. The EGWP cost shown above is for calendar year 2019. All other costs are for the 2019 fiscal year (July 1, 2018–June 30, 2019).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the Plan's actuarial accrued liability), those changes will be evaluated and quantified when they occur.

- (s) Third-party administrator fees – \$300 per person per year; assumed trend rate of 4.5% per year
- (t) 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: 0.979 for the pre-Medicare plan and 0.686 for the Medicare medical plan and Medicare coordination method (2.1% reduction for the medical plan and 29.3% reduction for the coordination method), and 0.896 for the prescription drug plan.

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

- (u) Active data adjustment – To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated on the June 30 client data but active in the October 1 client records are updated to active status.
- (v) Administrative expenses – Beginning with the June 30, 2018 valuation, the normal cost is increased for administrative expenses expected to be paid for plan assets during the year. The amounts included in the June 30, 2018 normal cost, which are based on the average of actual administrative expenses during the last two fiscal years, are \$9,300 for occupational death and disability and \$7,600 for retiree medical.
- (w) Healthcare cost trend – The table below shows the rates used to project the cost from the shown fiscal year to the next fiscal year. For example, 7.5% is applied to the FY19 pre-Medicare medical claims cost to get the FY20 medical claims costs:

Fiscal year	Medical Pre-65	Medical Post-65	Prescription drugs/EGWP	RDS
2019	7.5%	5.5%	8.5%	4.7%
2020	7.0	5.4	8.0	4.7
2021	6.5	5.4	7.5	4.6
2022	6.3	5.4	7.1	4.6
2023	6.1	5.4	6.8	4.6
2024	5.9	5.4	6.4	4.6
2025	5.8	5.4	6.1	4.6
2026	5.6	5.4	5.7	4.6
2027–2040	5.4	5.4	5.4	4.5
2041	5.3	5.3	5.3	4.5
2042	5.2	5.2	5.2	4.5
2043	5.1	5.1	5.1	4.5
2044	5.1	5.1	5.1	4.5
2045	5.0	5.0	5.0	4.5
2046	4.9	4.9	4.9	4.5
2047	4.8	4.8	4.8	4.5
2048	4.7	4.7	4.7	4.5
2049	4.6	4.6	4.6	4.5
2050+	4.5	4.5	4.5	4.5

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 costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State. The model was updated to incorporate recent trend survey information.

# Financial Section

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

**June 30, 2019**

The table below shows the amount each trend rate shown on the previous page was increased to account for the Cadillac Tax.

<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>	<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>
2019–2044	— %	— %	2077	0.20 %	0.50 %
2045	—	0.12	2078	0.20	0.49
2046	—	0.29	2079	0.19	0.48
2047	—	0.27	2080	0.19	0.46
2048	—	0.25	2081	0.18	0.45
2049	—	0.25	2082	0.18	0.44
2050	—	0.20	2083	0.18	0.43
2051	—	0.20	2084	0.17	0.42
2052	0.06	0.16	2085	0.17	0.41
2053	0.06	0.16	2086	0.16	0.40
2054	0.06	0.15	2087	0.16	0.39
2055	0.06	0.15	2088	0.16	0.38
2056	0.05	0.14	2089	0.15	0.37
2057	0.06	0.14	2090	0.15	0.37
2058	0.05	0.13	2091	0.15	0.36
2059	0.05	0.12	2092	0.15	0.35
2060	0.05	0.15	2093	0.14	0.34
2061	0.05	0.61	2094	0.14	0.33
2062	0.05	0.59	2095	0.14	0.33
2063	0.05	0.61	2096	0.13	0.32
2064	0.05	0.64	2097	0.13	0.31
2065	0.05	0.65	2098	0.13	0.30
2066	0.05	0.64	2099	0.13	0.30
2067	0.14	0.64	2100	0.12	0.29
2068	0.24	0.63	2101	0.12	0.28
2069	0.24	0.61	2102	0.12	0.28
2070	0.23	0.60	2103	0.12	0.27
2071	0.23	0.58	2104	0.11	0.27
2072	0.22	0.57	2105	0.11	0.26
2073	0.22	0.55	2106	0.11	0.25
2074	0.21	0.54	2107	0.11	0.25
2075	0.21	0.53	2108	0.10	0.24
2076	0.20	0.51	2109	0.10	0.24



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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

(x) Aging factors:

Age	Medical	Prescription drugs
0-44	2.0%	4.5%
45-54	2.5	3.5
55-64	2.5	1.5
65-74	3.0	2.0
75-84	2.0	(0.5)
85-94	0.3	(2.5)
95+	—	—

(y) Retiree medical participation:

Decrement due to disability		Decrement due to retirement	
Age	Percent participation	Age	Percent participation
<56	75.0%	55	50.0%
56	77.5	56	55.0
57	80.0	57	60.0
58	82.5	58	65.0
59	85.0	59	70.0
60	87.5	60	75.0
61	90.0	61	80.0
62	92.5	62	85.0
63	95.0	63	90.0
64	97.5	64	95.0
65+	100.0	65+	Years of service
			<15
			15-19
			20-24
			25-29
			30+
			75.0%
			80.0
			85.0
			90.0
			95.0

Participation assumption is a combination of (i) the service-based rates for retirement from employment at age 65+ and (ii) the age-based rates for retirement from employment before age 65. These 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. This assumption is based on observed trends in participation from a range of other plans.

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2019

- (z) Imputed data – Data changes from the prior year that are deemed to have immaterial impact on liabilities and contribution rates, are assumed to be correct in the current year's client data. Nonvested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

### (2) Changes in Actuarial Assumptions, Methods, and Benefits Since the Prior Valuation

#### *Defined Benefit Pension and Postemployment Healthcare Benefit Plan*

##### **(a) Changes in Methods Since the Prior Valuation – June 30, 2016 to June 30, 2018**

Effective June 30, 2018, the amortization of the UAAL was changed. As part of the experience study, the actuarial cost method for retiree healthcare benefits was changed from the Entry Age Level Dollar method to the Entry Age Level Percent of Pay method. There were no other changes in actuarial methods since the prior valuation.

##### **(b) Changes in Assumptions Since the Prior Valuation – June 30, 2016 to June 30, 2018**

Effective for the June 30, 2018 valuation, the Board adopted 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, 2013 to June 30, 2017. The changes in assumptions/methods were adopted by the Board during the January 2019 Board meeting. The new assumptions/methods increased the Actuarial Accrued Liability as of June 30, 2018 by approximately \$555 million (pension) and \$761 million (healthcare). Healthcare claim costs are updated annually.

##### **(c) Changes in Benefit Provisions Since the Prior Valuation – June 30, 2016 to June 30, 2018**

There have been no changes in the PERS benefit provisions since the prior valuation. However, EGWP became effective as of January 1, 2019. This arrangement replaced the Retiree Drug Subsidy under Medicare Part D and resulted in larger projected subsidies to offset the cost of prescription drug coverage. This change decreased the healthcare actuarial accrued liability as of June 30, 2018 by approximately \$711 million.

#### *Defined Contribution Occupational Death and Disability and Retiree Medical Benefits Plan*

##### **(a) Changes in Methods Since the Prior Valuation – June 30, 2016 to June 30, 2018**

As part of the experience study, the actuarial cost method for the retiree healthcare plan was changed from the Entry Age Level Dollar method to the Entry Age Level Percent of Pay method. There were no other changes in actuarial methods since the prior valuation.

##### **(b) Changes in Assumptions Since the Prior Valuation – June 30, 2016 to June 30, 2018**

Effective for the June 30, 2018 valuation, the Board adopted 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, 2013 to June 30, 2017. The changes in assumptions/methods were adopted by the Board during the January 2019 Board meeting. The effect of the new assumptions/methods was to

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**Public Employees' Retirement System**  
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**Notes to Required Supplementary Information (Unaudited)**

**June 30, 2019**

decrease the Actuarial Accrued Liability as of June 30, 2018 by approximately \$10.5 million. Healthcare claim costs are updated annually.

**(c) *Changes in Benefit Provisions Since the Prior Valuation – June 30, 2016 to June 30, 2018***

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

## **SUPPLEMENTAL SCHEDULES**

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

## Schedule of Administrative and Investment Deductions

Years ended June 30, 2019 and 2018

(In thousands)

Schedule 1

	Administrative	Investment	Totals	
			2019	2018
Personal services:				
Wages	\$ 4,899	302	5,201	4,899
Benefits	2,980	126	3,106	2,570
Total personal services	7,879	428	8,307	7,469
Travel:				
Transportation	16	65	81	120
Per diem	3	12	15	19
Total travel	19	77	96	139
Contractual services:				
Management and consulting	16,672	6,129	22,801	22,316
Accounting and auditing	189	19	208	132
Data processing	1,331	746	2,077	2,033
Communications	85	25	110	154
Advertising and printing	59	2	61	63
Rentals/leases	375	89	464	440
Legal	423	90	513	330
Medical specialists	56	—	56	66
Repairs and maintenance	91	4	95	21
Transportation	154	3	157	171
Securities lending expense	—	269	269	456
Other professional services	344	37	381	121
Total contractual services	19,779	7,413	27,192	26,303
Other:				
Equipment	79	20	99	90
Supplies	26	91	117	105
Total other	105	111	216	195
Total administrative and investment deductions	\$ 27,782	8,029	35,811	34,106

See accompanying independent auditors' report.

**State of Alaska**  
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**Schedule of Payments to Consultants**  
**Other than Investment Advisors**  
**Years ended June 30, 2019 and 2018**  
**(In thousands)**

**Schedule 2**

<b>Firm</b>	<b>Services</b>	<b>2019</b>	<b>2018</b>
Buck Global LLC (formerly Conduent Human Resource Services)	Actuarial services	\$ 709	701
Health Management Systems	Auditing services	—	251
KPMG LLP	Auditing services	173	99
State Street Bank and Trust	Custodial banking services	1,025	851
Alaska IT Group	Data processing services	351	333
Applied Microsystems Incorporated	Data processing services	385	330
Genesys Telecommunications Lab	Data processing services	—	18
International Business Machines	Data processing services	35	18
Resource Data Inc.	Data processing services	41	—
SHI International Corporation	Data processing services	287	429
Sungard Availability Services	Data processing services	33	33
State of Alaska, Department of Law	Legal services	499	310
Agnew Beck Consulting	Management consulting services	28	—
Arizona State University	Management consulting services	—	19
Maximus Incorporated	Management consulting services	—	1
The Segal Company Incorporated	Management consulting services	294	245
Managed Medical Review Origination	Medical specialist and consulting	44	59
		<u>\$ 3,904</u>	<u>3,697</u>

This schedule presents payments to consultants receiving greater than \$10,000.

See accompanying independent auditors' report.



# INVESTMENT SECTION







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October 16, 2019

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, 2019.

Callan LLC (Callan) 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. Prior to April 1, 2019 ARMB's former real estate consultant, Townsend Group, calculated returns for the real estate segment of the portfolio. The Townsend data for those periods has been incorporated into ARMB's Total Fund returns. Callan took over as the real estate consultant on April 1, 2019 and we now calculate performance independently.

Callan serves as the ARMB Board's (Board) 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 are made using a methodology broadly similar to the Global Investment Performance Standards.

ARMB purposely seeks to invest assets prudently, expertly, and according to governing law and industry practices. The objective of this approach is that assets under supervision be sufficient to pay promised benefits to members and beneficiaries. In pursuit of these objectives, the ARMB periodically evaluates liabilities, expected contributions and potential earnings. This analysis considers a wide range of potentially viable investment strategies. With thoughtful consideration of multiple factors, 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 decision regarding asset allocation policy. The custom policy benchmark comprises equity, fixed income, real estate and other market indices weighted in proportions corresponding to the ARMB's investment policy.

# Investment Section

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## **2019 Fiscal Year Market Overview**

U.S. equity markets posted a gain for the tenth consecutive fiscal year. The Russell 3000 Index, a measure of broad U.S. equity, returned 8.98% in the period. Non-U.S. stocks trailed their U.S. counterparts as major economies outside of the U.S. struggle to find growth and some regions grapple with geopolitical issues, most notably Brexit negotiations in Europe. The MSCI ACWI ex-U.S. IMI (Net), a broad benchmark reflecting developed and emerging market non-U.S. equity, gained only 0.26%. A broad measure of the total global equity market, MSCI All Country World Index (Net), rose 5.74%.

An unexpected retreat in interest rates, which declined significantly across all but the shortest parts of the yield curve, boosted fixed income performance. The Bloomberg U.S. Aggregate Bond Index, a widely-used gauge of the investment grade domestic bond market, rose 7.87% after posting negative returns in each of the two preceding fiscal years. Absolute return strategies significantly trailed the equity markets; the Callan Absolute Return Hedge Fund-of-Funds Style median return was 1.05% (net-of-fees). Private real estate, as measured by the NCREIF Property Index, was positive for the ninth year in a row. In fiscal year 2019, the NCREIF Property Index returned 6.51%. Publicly traded real estate, as measured by the FTSE NAREIT All Equity Index, outpaced the private markets meaningfully, gaining 13.01%.

ARMB's actual asset groupings delivered the following one-year returns through June 30, 2019<sup>1</sup>:

Domestic Stocks:	8.41%
Int'l Stocks:	(0.08%)
Opportunistic:	7.21%
Fixed Income:	6.34%
Real Assets:	6.08%
Private Equity:	17.66%
Absolute Return:	4.08%

For the fiscal year ended 30 June 2019, the Public Employees Retirement System (PERS) had a time-weighted total return of 6.40%. The Teachers Retirement System (TRS) had a time-weighted total return of 6.39%. Both systems' gross return exceeded their strategic policy target return of 5.65% and the median return for Callan's Public Fund Sponsor database of 6.19%.

Over longer trailing periods, PERS and TRS have outperformed their target index returns. PERS 5-year annualized return was 6.35%. TRS also returned 6.35% over this same period. Both outperformed the 5-year annualized benchmark return of 5.88%. The seven-year annualized return was 8.88% for PERS and 8.90% for TRS. Both were above the 7-year target return of 8.33%. Over 27.75 years – the longest period for which we have data – PERS and TRS achieved annualized total returns of 7.74% and 7.79%, respectively, while the policy benchmark return was 7.63%.

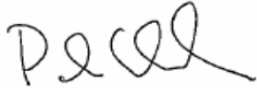
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<sup>1</sup>Note PERS asset class returns are used to represent the asset class performance of all plans.

Both systems are well diversified and currently have asset allocation policies that, in Callan's opinion, are consistent with achieving a long-term "real" (above inflation) return of 4.5%.

In summary, fiscal 2019 was a year in which the ARMB's broad asset class returns – those shown in the table on the preceding page – were mostly positive, with only Int'l Stocks posting a loss. PERS and TRS produced higher returns than the average public fund, both ranking in the 41st percentile within the Public Fund Sponsor peer group for the one-year period ended June 30, 2019.

Sincerely,

A handwritten signature in dark ink, appearing to read 'P. Erlendson', with a stylized, cursive script.

Paul Erlendson  
Senior Vice President

c: Bob Mitchell  
Steven Center

# Investment Section

## Department of Revenue Treasury Division Staff As of June 30, 2019

<b>Commissioner</b> Bruce Tangeman	<b>Chief Investment Officer</b> Bob G. Mitchell	<b>Investment Officers</b> Casey Colton Emily Howard Josh McLin Kekama Tuiofu Kevin Elliott Kevin Liu Kevin Buckland Mark Moon	Michelle Prebula Nicholas Orr Sean Howard Shane Carson Stephanie Pham Stephen Sikes Steve Verschoor Victor Djajalie
<b>Deputy Commissioner</b> Greg Samorajski	<b>Comptroller</b> Scott Jones, CPA		
<b>Treasury Division Director</b> Pamela Leary, CPA	<b>Cash Management</b> Bronze Ickes, CTP, AAP  <b>ARMB Liaison Officer</b> Stephanie Alexander		

## External Money Managers and Consultants

### Domestic Equity Small Capitalization

ArrowMark Partners  
*Denver, CO*  
BMO Global Asset Management  
*Chicago, IL*  
Frontier Capital Management  
*Boston, MA*  
Jennison Associates LLC  
*New York, NY*  
Sycamore Capital Management  
*Cincinnati, OH*  
T. Rowe Price Investment Services  
*Baltimore, MD*

### Domestic Equity Micro Capitalization

DePrince, Race & Zollo, Inc.  
*Winter Park, FL*  
Lord Abbett & Co.  
*Jersey City, NJ*  
Zebra Capital Management  
*Stanford, CT*

### International Small Capitalization

Mondrian Investment Partners  
*London, England*  
Schroders Investment Management NA  
*London, England*

### Emerging Market Income

Lazard Asset Management  
*New York, NY*

### International Fixed Income

Mondrian Investment Partners  
*London, England*  
Schroder Investment Management NA  
*New York, NY*

### High Yield/Convertible Bond/Tactical Bond

Fidelity Investment Asset Management  
*Smithfield, RI*  
MacKay Shields LLC  
*New York, NY*

### Tactical Asset Allocation

PineBridge Investments  
*New York, NY*  
McKinley Capital Management, Inc.  
*Anchorage, AK*  
Fidelity Investment Asset Management  
*Smithfield, RI*

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

Arrowstreet Capital, LP  
*Boston, MA*  
BlackRock  
*San Francisco, CA*  
Bailie Gifford Overseas Ltd.  
*Edinburgh, Scotland*  
Brandes Investment Partners, L.P.  
*San Diego, CA*  
Capital Group Trust Co.  
*Los Angeles, CA*  
DePrince, Race & Zollo, Inc.  
*Winter Park, FL*  
Lazard Asset Management  
*New York, NY*  
Legal and General Investment Management America  
*Chicago, IL*  
McKinley Capital Management, Inc.  
*Anchorage, AK*  
Parametric Clifton  
*Seattle, WA*  
State Street Global Advisors  
*San Francisco, CA*

### Absolute Return

Allianz Global Investors  
*New York, NY*  
Crestline Investors, Inc.  
*Fort Worth, TX*  
Global Assets Management Inc.  
*New York, NY*  
J.P. Morgan Asset Management  
*New York, NY*  
Man Group  
*London, UK*  
Prisma Capital  
*New York, NY*  
Zebra Capital Management  
*Stanford, CT*

### Alternative Equity

Analytic Investors  
*Los Angeles, CA*  
State Street Global Advisors  
*San Francisco, CA*

### Tactical Fixed Income

Fidelity Investment Asset Management  
*Merrimack, NH*

## External Money Managers and Consultants (cont.)

### Private Equity

Abbott Capital Management, L.P.  
*New York, NY*

Angelo, Gordon & Co.  
*New York, NY*

Advent International,  
*Boston, MA*

Dyal Capital Partners  
*New York, NY*

Glendon Capital  
*Santa Monica, CA*

KKR Lending Partners  
*New York, NY*

Lexington Partners  
*New York, NY*

Merit Capital Partners  
*Chicago, IL*

Neuberger Berman  
*New York, NY*

New Mountain Partners  
*New York, NY*

NGP  
*Irvine, TX*

Onex  
*New York, NY*

Pathway Capital Management, LLC  
*Irvine, CA*

Summit Partners  
*Boston, MA*

The Jordan Company  
*New York, NY*

Warburg Pincus  
*New York, NY*

### Taxable Municipal Bonds

Western Asset Management Company  
*Pasadena, CA*

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

Allianz Global Investors  
*San Francisco, CA*

BlackRock  
*San Francisco, CA*

Brandes Investment Partners  
*San Diego, CA*

Russell Investment Implementation Services  
*Seattle, WA*

State Street Global Advisors  
*Boston, MA*

T. Rowe Price Investment Services  
*Baltimore, MD*

### Investment Consultants

Callan Associates, Inc.  
*Denver, CO*

The Townsend Group  
*San Francisco, CA*

### Investment Advisory Council

Jerrold Mitchell  
*Wayland, MA*

Robert Shaw  
*San Francisco, CA*

William Jennings  
*Colorado Springs, CO*

### Independent Auditors

KPMG, LLP  
*Anchorage, AK*

### Actuaries

Buck Global, LLC  
*Denver, CO*

Gabriel Roeder Smith  
*Denver, CO*

### Master Limited Partnerships

Advisory Research  
*St. Louis, MO*

Tortoise Capital Advisors LLC  
*Leawood, KS*

### Global Master Custodian

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

### Real Assets – Real Estate Core Separate Accounts

LaSalle Investment Management  
*Chicago, IL*

Sentinel Real Estate Corporation  
*New York, NY*

UBS Realty Investors, LLC  
*Hartford, CT*

### Real Assets – Energy

EIG Global Energy Partners  
*Washington, DC*

### Real Assets – Infrastructure

Brookfield Investment Management  
*New York, NY*

IFM  
*New York, NY*

JP Morgan Asset Management  
*New York, NY*

Lazard Asset Management  
*New York, NY*

# Investment Section

## External Money Managers and Consultants (cont.)

### Real Estate – Commingled Real Estate Funds

Almanac Realty Investors

*New York, NY*

BlackRock Realty

*New York, NY*

Clarion Partners

*New York, NY*

Colony NorthStar Capital

*Los Angeles, CA*

Coventry Real Estate Fund II, LLC

*New York, NY*

J.P. Morgan Investment Management Inc.

*New York, NY*

KKR & Co.

*New York, NY*

LaSalle Investment Management

*Chicago, IL*

Silverpeak Real Estate Partners

*New York, NY*

Tishman Speyer Properties

*New York, NY*

UBS Realty Investors, LLC

*Hartford, CT*

### Real Assets – Farmland and Timber

Hancock Agricultural Investment Group

*Boston, MA*

Hancock Timber Resource Group

*Boston, MA*

Timberland Investment Resources LLC

*Atlanta, GA*

UBS Farmland Investors, LLC

*Hartford, CT*

## Public Employees' Retirement System Investment Report

### INVESTMENTS

The investment goals of the State of Alaska Public Employees' Retirement System 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., opportunistic, 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
Opportunistic	60% Russell 1000 Index 40% Bloomberg Barclays Aggregate Index
Private Equity	1/3 S&P 500 Index 1/3 Russell 2000 Index 1/3 MSCI EAFE Index
Real Assets	31% NCREIF Total Property Index 25% NCREIF Farmland Index 10% NCREIF Timberland Index 17.5% S&P Global Infrastructure Index 12.5% Alerian MLP Index 4% FTSE NAREIT All Equity REIT Index
Fixed Income	Bloomberg Barclays Intermediate Treasury Index
Absolute Return	HFRI Fund of Funds Composite Index
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 LLC. During the 2019 fiscal year, the ARMB's target asset allocation was 24% domestic equities, 22% global equities ex-U.S., 10% opportunistic, 9% private equity, 17% real assets, 10% fixed income, 7% absolute return, and 1% cash equivalents. Over the next 10 years, the target asset allocation is expected to generate a return of 6.6% with a standard deviation of 14.7%.

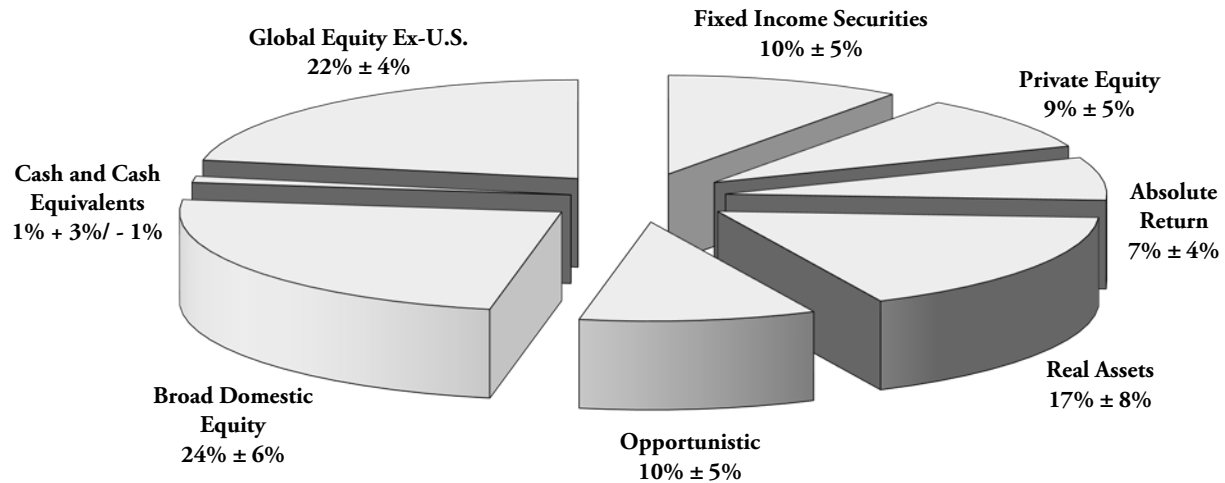
# Investment Section

Public Employees' Retirement System Schedule of Investment Results Fiscal Years Ended June 30							
	2015	2016	2017	2018	2019	Annualized	
						3 Year	5 Year
<b>Total Fund</b>							
PERS	3.29%	(0.36%)	13.35%	9.61%	6.40%	9.75%	6.35%
Custom Composite Index	-	-	-	-	5.65	9.01	5.88
Actuarial Earnings Rate	8.00	8.00	8.00	8.00	7.38	7.38	7.38
<b>Broad Domestic Equity</b>							
PERS	7.84	0.58	18.55	15.21	8.41	13.98	9.94
Custom Composite Index	7.29	2.14	18.51	14.78	8.98	14.02	10.19
<b>Fixed Income</b>							
PERS	(0.74)	5.15	2.91	(0.71)	6.34	2.80	2.55
Custom Composite Index	0.41	4.79	0.02	(0.76)	6.19	1.77	1.93
<b>Opportunistic</b>							
PERS	-	-	-	5.64	7.21	-	-
Custom Composite Index	-	-	-	8.39	9.72	-	-
<b>Real Assets</b>							
PERS	3.70	4.76	5.98	7.53	6.08	6.53	5.60
Custom Composite Index	7.99	8.87	5.66	4.29	7.23	5.72	6.79
<b>Global Equity Ex-US</b>							
PERS	(3.32)	(9.15)	20.41	7.97	(0.08)	9.11	2.67
MSCI ACWI ex-US	(4.85)	(9.80)	21.00	7.75	0.26	9.34	2.33
<b>Private Equity</b>							
PERS	13.77	4.71	17.04	26.65	17.66	20.37	15.75
Custom Composite Index	3.33	(4.41)	21.04	12.92	2.71	11.97	6.75
<b>Absolute Return</b>							
PERS	9.24	(3.09)	8.47	4.78	4.08	5.76	4.60
3-month Treasury Bill +5%	5.02	5.19	5.49	5.18	1.15	3.92	4.39
<b>Alternative Equity</b>							
PERS	(0.89)	3.41	11.38	-	-	-	-
Custom Composite Index	4.26	2.09	15.07	-	-	-	-
<b>Cash Equivalent</b>							
PERS	0.28	0.55	0.79	1.51	2.50	1.60	1.12
3-month Treasury Bill	0.02	0.19	0.49	1.36	2.31	1.38	0.87
<p>MSCI ACWI =Morgan Stanley Capital International All Country World Index</p> <p>Returns for periods longer than one year are reported on an annualized basis.</p> <p>Basis of calculation: Time-Weighed rate of return based on the market rate of return.</p>							

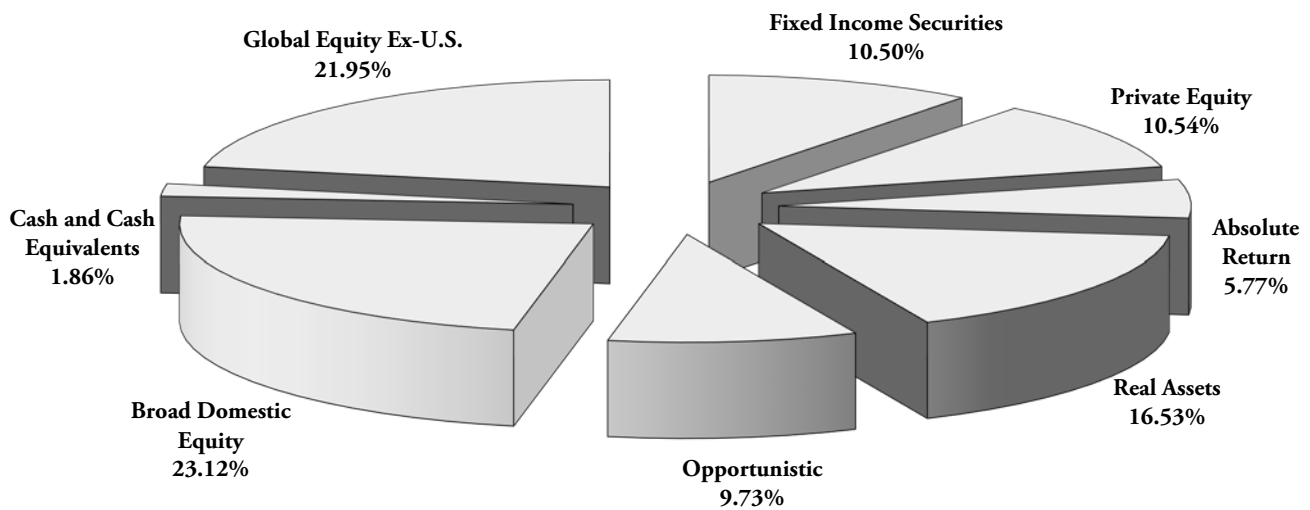


## Public Employees' Retirement System Asset Allocation June 30, 2019

### Policy



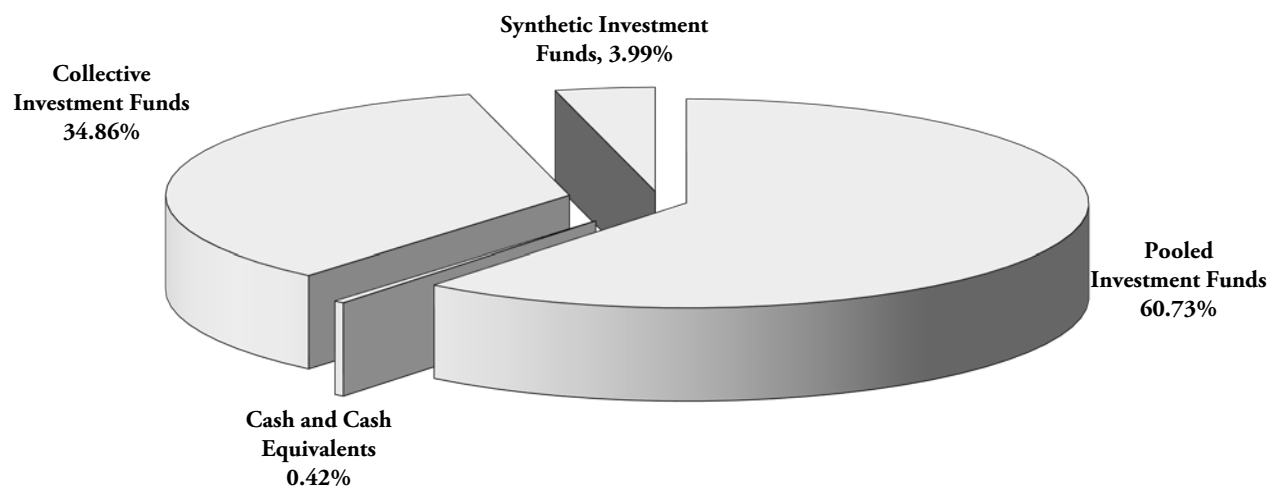
### Actual – Defined Benefit Pension



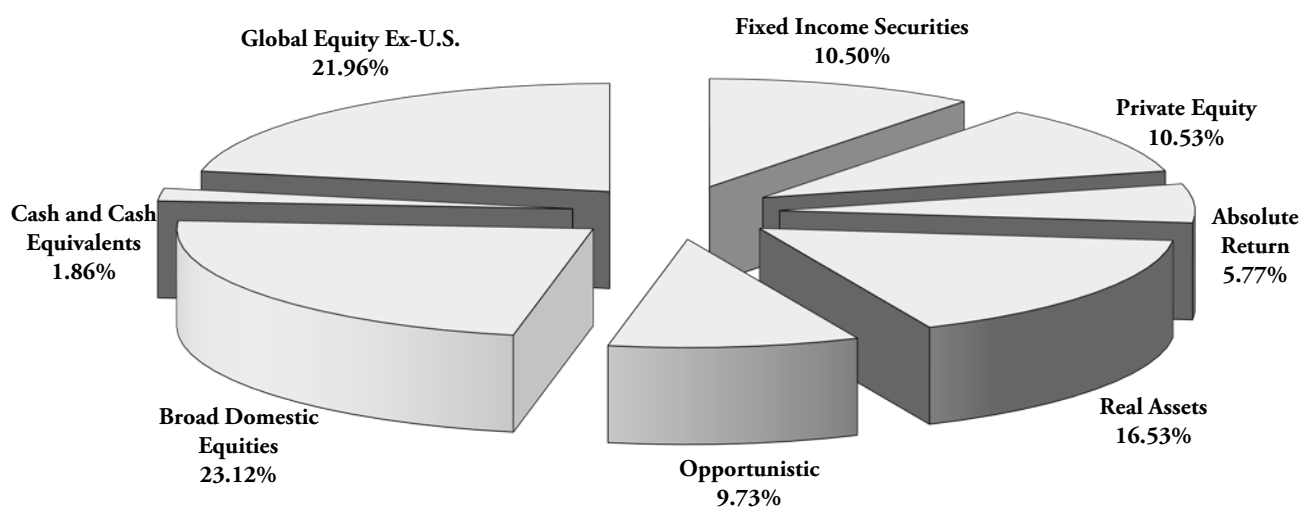
# Investment Section

## Public Employees' Retirement System Asset Allocation June 30, 2019

### Actual – Defined Contribution Participant Directed

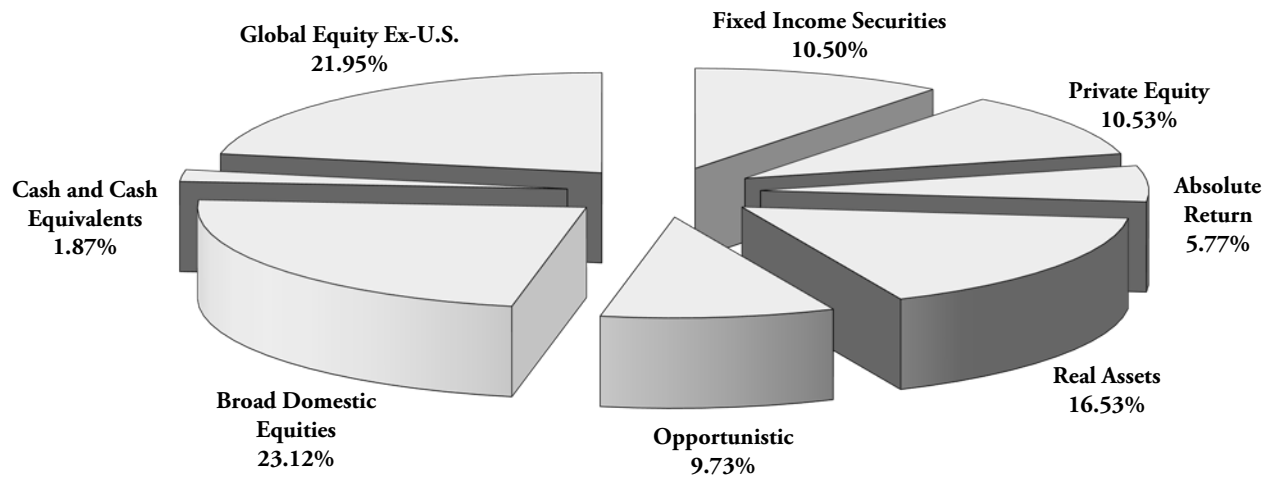


### Actual – Defined Benefit Alaska Retiree Healthcare Trust

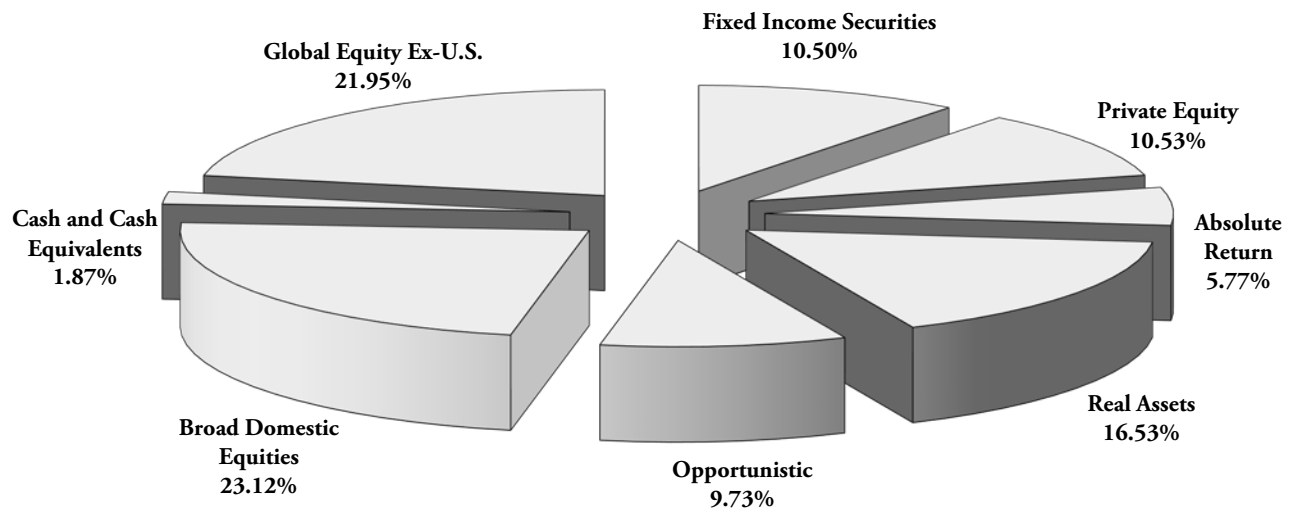


## Public Employees' Retirement System Asset Allocation June 30, 2019

### Actual — Health Reimbursement Arrangement



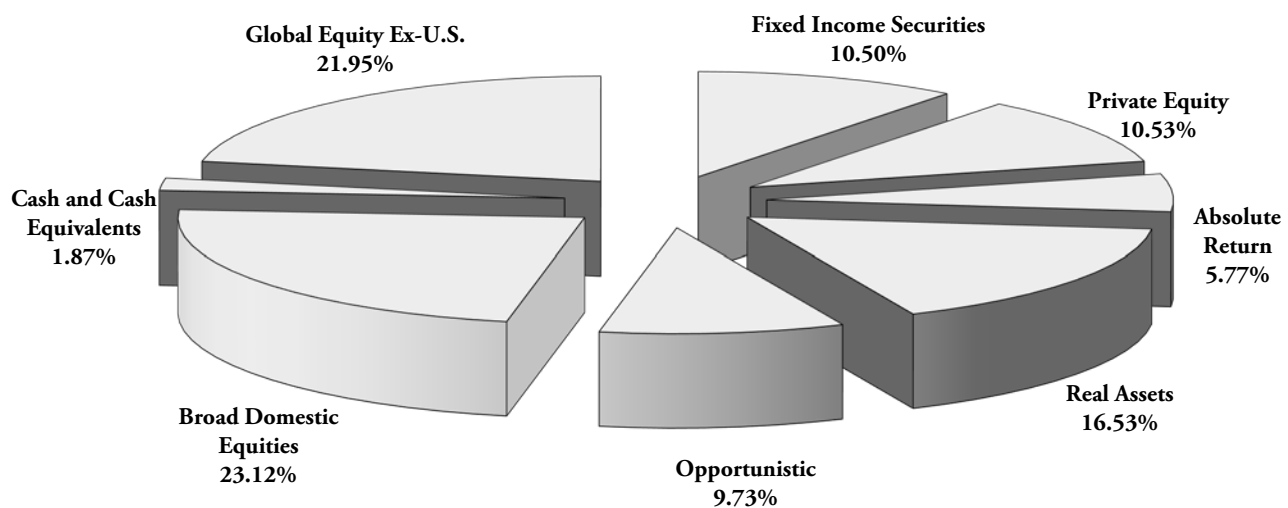
### Actual — Occupational Death & Disability



# Investment Section

## Public Employees' Retirement System Asset Allocation June 30, 2019

### Actual — Retiree Medical Plan



## Alaska Retirement Management Board Top Ten Holdings by Asset Type June 30, 2019

Invested assets under the fiduciary responsibility of the Alaska Retirement Management Board (ARMB) have been commingled in various investment pools to manage the overall cost of the program. 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

Rank	Largest Fixed Income Holdings	Market Value	Par Value
1	US Treasury 2.250% 12/31/2023	\$148,716,519	\$145,577,504
2	US Treasury 1.500% 3/31/2023	146,625,482	14,855,687
3	US Treasury 2.750% 2/15/2024	109,015,335	104,398,944
4	US Treasury 2.000% 5/31/2024	70,299,931	69,482,963
5	US Treasury 2.000% 8/15/2025	69,347,346	68,689,962
6	US Treasury 2.125% 5/15/2025	59,561,965	58,573,537
7	US Treasury 2.375% 8/15/2024	48,694,645	47,308,649
8	US Treasury 2.375% 5/15/2027	41,293,595	39,940,909
9	US Treasury 2.875% 8/15/2028	39,403,169	36,667,435
10	US Treasury 2.875% 5/15/2028	38,679,802	36,021,788

### Equities

Rank	Largest Equity Holdings	Market Value	Par Value
1	Microsoft Corp	\$108,720,583	\$811,590
2	Apple Inc	94,095,845	475,424
3	Amazon.com Inc	74,731,781	39,465
4	Exxon Mobil Corp.	48,855,849	637,555
5	Procter & Gamble Co/The	48,526,509	442,558
6	Pfizer Inc.	44,625,187	1,030,129
7	Facebook Inc	44,206,366	229,049
8	Johnson & Johnson	41,904,450	300,865
9	Alphabet Inc	40,435,588	37,344
10	Berkshire Hathaway Inc	40,104,392	188,133

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

# Investment Section

## Public Employees' Retirement System Schedule of Investment Management Fees Year Ended June 30, 2019

	<u>Fair Value</u>	<u>Fees</u>
<b>Investment Management</b>		
Total Opportunistic	\$ 1,736,365,611	5,084,983
Total Broad Domestic Equity	4,126,206,600	5,594,039
Total Global Equity Ex-U.S.	3,917,520,592	12,380,414
Total Private Equity	1,880,042,452	9,577,192
Total Absolute Return	1,028,880,502	9,272,536
Total Real Assets	2,949,147,408	20,033,974
 <b>Custodian</b>		
State Street Bank		830,169
 <b>Investment Advisory</b>		
Callan Associates		209,324
Investment Advisory Council		61,748
Townsend Group		66,690
Total Investment Advisory		<u>337,762</u>
 <b>Performance</b>		
Callan Associates		203,303
	<u>\$ 15,638,163,165</u>	<u>63,314,372</u>

## Public Employees' Retirement System Investment Summary Schedule June 30, 2019

Investments (at Fair Value)	Defined Benefit - Pension			% of Total Assets
	Asset Allocation		Fair Value	
	Policy	Range		
<b>Cash and Cash Equivalents</b>				
Short-Term Fixed Income Pool			\$ 177,108,312	
Securities Lending Income			64,574	
Total Cash and Cash Equivalents	1.00%	+ 3% / - 1%	177,172,886	1.86%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			993,678,226	
Total Fixed Income Securities	10.00%	± 5%	993,678,226	10.50%
<b>Opportunistic</b>				
Alternative Equity Strategies			469,549,108	
Tactical Allocation Strategies			152,073,886	
Opportunistic Fixed Income			256,955,012	
Other Opportunities			42,438,483	
Total Opportunistic	10.00%	± 5%	921,016,489	9.73%
<b>Broad Domestic Equity</b>				
Large Cap Pool			1,921,105,106	
Small Cap Pool			267,551,664	
Total Broad Domestic Equity	24.00%	± 6%	2,188,656,770	23.12%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			1,602,023,161	
International Equity Small Cap Pool			134,238,956	
Emerging Markets Equity Pool			341,699,483	
Total Global Equity Ex-U.S.	22.00%	± 4%	2,077,961,600	21.95%
<b>Private Equity</b>				
Private Equity Pool			997,226,673	
Total Private Equity	9.00%	± 5%	997,226,673	10.54%
<b>Absolute Return</b>				
Absolute Return Pool			545,746,761	
Total Absolute Return	7.00%	± 4%	545,746,761	5.77%
<b>Real Assets</b>				
Real Estate Pool			535,311,262	
Real Estate Investment Trust Pool			106,361,258	
Infrastructure Private Pool			202,313,141	
Infrastructure Public Pool			60,383,085	
Master Limited Partnership Pool			194,621,199	
Energy Pool			31,933,913	
Farmland Pool			303,857,698	
Timber Pool			129,478,496	
Total Real Assets	17.00%	± 8%	1,564,260,052	16.53%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ 9,465,719,457</b>	<b>100.00%</b>

# Investment Section

## Public Employees' Retirement System Investment Summary Schedule June 30, 2019

	Defined Contribution - Participant Directed			
Investments (at Fair Value)	Asset Allocation Policy	Range	Fair Value	% of Total Assets
Cash and Cash Equivalents				
Short-Term Fixed Income Pool	100.00%	0%	\$ 5,128,341	
Total Cash and Cash Equivalents			5,128,341	0.42%
Pooled Investment Funds (1)				
T. Rowe Price				
Alaska Balanced Fund Trust			25,583,482	
Long-Term Balanced Fund			16,080,306	
Target 2010 Trust			2,533,390	
Target 2015 Trust			12,408,599	
Target 2020 Trust			36,166,681	
Target 2025 Trust			58,674,346	
Target 2030 Trust			61,156,888	
Target 2035 Trust			74,274,030	
Target 2040 Trust			87,892,278	
Target 2045 Trust			113,245,184	
Target 2050 Trust			134,446,874	
Target 2055 Trust			121,818,939	
Target 2060 Trust			1,360,975	
Total Pooled Investment Funds			745,641,972	60.73%
Collective Investment Funds (1)				
State Street Global Advisors				
SSgA Treasury Money Market Fund			11,559,536	
S&P Stock Index Fund			110,571,930	
Russell 3000 Index			12,820,967	
U.S. Real Estate Investment Trust Index			17,394,501	
World Equity Ex-U.S. Index			60,336,269	
U.S. Treasury Inflation Protected Securities Index			20,376,883	
Passive U.S. Bond Index Fund			51,886,248	
Brandes Institutional				
Alaska International Equity Fund			40,591,437	
RCM				
Sustainable Core Opportunities Fund			18,894,062	
T. Rowe Price				
Small-Cap Stock Fund			83,582,937	
Total Collective Investment Funds			428,014,770	34.86%
Synthetic Investment Funds (1)				
T. Rowe Price				
Stable Value Fund			48,964,250	
			48,964,250	3.99%
Total Invested Assets			\$1,227,749,333	100.00%

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



## Public Employees' Retirement System Investment Summary Schedule June 30, 2019

	Defined Benefit - Alaska Retiree Health Care Trust			
	Asset Allocation			% of Total Assets
Investments (at Fair Value)	Policy	Range	Fair Value	
<b>Cash and Cash Equivalents</b>				
Short-Term Fixed Income Pool			\$ 146,182,787	
Securities Lending Income			53,087	
Total Cash and Cash Equivalents	1.00%	+ 3%/ - 1%	146,235,874	1.86%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			819,561,349	
Total Fixed Income Securities	10.00%	± 5%	819,561,349	10.50%
<b>Opportunistic</b>				
Alternative Equity Strategies			387,272,550	
Tactical Allocation Strategies			125,426,799	
Opportunistic Fixed Income			211,930,171	
Other Opportunities			35,002,217	
Total Opportunistic	10.00%	± 5%	759,631,737	9.73%
<b>Broad Domestic Equity</b>				
Large Cap Pool			1,584,480,218	
Small Cap Pool			220,670,029	
Total Broad Domestic Equity	24.00%	± 6%	1,805,150,247	23.12%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			1,321,309,281	
International Equity Small Cap Pool			110,716,988	
Emerging Markets Equity Pool			281,825,325	
Total Global Equity Ex-U.S.	22.00%	± 4%	1,713,851,594	21.96%
<b>Private Equity</b>				
Private Equity Pool			822,488,021	
Total Private Equity	9.00%	± 5%	822,488,021	10.53%
<b>Absolute Return</b>				
Absolute Return Pool			450,118,499	
Total Absolute Return	7.00%	± 4%	450,118,499	5.77%
<b>Real Assets</b>				
Real Estate Pool			441,598,582	
Real Estate Investment Trust Pool			87,724,148	
Infrastructure Private Pool			166,862,900	
Infrastructure Public Pool			49,802,482	
Master Limited Partnership Pool			160,518,776	
Energy Pool			26,338,306	
Farmland Pool			250,614,352	
Timber Pool			106,790,678	
Total Real Assets	17.00%	± 8%	1,290,250,224	16.53%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ 7,807,287,545</b>	<b>100.00%</b>

# Investment Section

## Public Employees' Retirement System Investment Summary Schedule June 30, 2019

	Health Reimbursement Arrangement			
	Asset Allocation			% of Total
Investments (at Fair Value)	Policy	Range	Fair Value	Assets
Cash and Cash Equivalents				
Short-Term Fixed Income Pool			\$ 7,846,732	
Securities Lending Income			2,839	
Total Cash and Cash Equivalents	1.00%	+ 3%/ - 1%	7,849,571	1.87%
Fixed Income Securities				
U.S. Treasury Fixed Income Pool			43,986,453	
Total Fixed Income Securities	10.00%	± 5%	43,986,453	10.50%
Opportunistic				
Alternative Equity Strategies			20,785,199	
Tactical Allocation Strategies			6,731,747	
Opportunistic Fixed Income			11,374,446	
Other Opportunities			1,878,594	
Total Opportunistic	10.00%	± 5%	40,769,986	9.73%
Broad Domestic Equity				
Large Cap Pool			85,040,204	
Small Cap Pool			11,843,521	
Total Broad Domestic Equity	24.00%	± 6%	96,883,725	23.12%
Global Equity Ex-U.S.				
International Equity Pool			70,915,629	
International Equity Small Cap Pool			5,942,261	
Emerging Markets Equity Pool			15,125,770	
Total Global Equity Ex-U.S.	22.00%	± 4%	91,983,660	21.95%
Private Equity				
Private Equity Pool			44,143,530	
Total Private Equity	9.00%	± 5%	44,143,530	10.53%
Absolute Return				
Absolute Return Pool			24,158,187	
Total Absolute Return	7.00%	± 4%	24,158,187	5.77%
Real Assets				
Real Estate Pool			23,700,917	
Real Estate Investment Trust Pool			4,708,219	
Infrastructure Private Pool			8,955,653	
Infrastructure Public Pool			2,672,935	
Master Limited Partnership Pool			8,615,159	
Energy Pool			1,413,596	
Farmland Pool			13,450,654	
Timber Pool			5,731,533	
Total Real Assets	17.00%	± 8%	69,248,666	16.53%
Total Invested Assets	100.00%		\$ 419,023,778	100.00%

**Public Employees' Retirement System**  
**Investment Summary Schedule**  
**June 30, 2019**

	Occupational Death and Disability			
	Asset Allocation			% of Total Assets
Investments (at Fair Value)	Policy	Range	Fair Value	
<b>Cash and Cash Equivalents</b>				
Short-Term Fixed Income Pool			\$ 678,526	
Securities Lending Income			245	
Total Cash and Cash Equivalents	1.00%	+ 3% / - 1%	678,771	1.87%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			3,802,843	
Total Fixed Income Securities	10.00%	± 5%	3,802,843	10.50%
<b>Opportunistic</b>				
Alternative Equity Strategies			1,796,981	
Tactical Allocation Strategies			581,992	
Opportunistic Fixed Income			983,376	
Other Opportunities			162,414	
Total Opportunistic	10.00%	± 5%	3,524,763	9.73%
<b>Broad Domestic Equity</b>				
Large Cap Pool			7,352,139	
Small Cap Pool			1,023,930	
Total Broad Domestic Equity	24.00%	± 6%	8,376,069	23.12%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			6,131,001	
International Equity Small Cap Pool			513,737	
Emerging Markets Equity Pool			1,307,696	
Total Global Equity Ex-U.S.	22.00%	± 4%	7,952,434	21.95%
<b>Private Equity</b>				
Private Equity Pool			3,816,423	
Total Private Equity	9.00%	± 5%	3,816,423	10.53%
<b>Absolute Return</b>				
Absolute Return Pool			2,088,593	
Total Absolute Return	7.00%	± 4%	2,088,593	5.77%
<b>Real Assets</b>				
Real Estate Pool			2,049,059	
Real Estate Investment Trust Pool			407,048	
Infrastructure Private Pool			774,260	
Infrastructure Public Pool			231,088	
Master Limited Partnership Pool			744,822	
Energy Pool			122,212	
Farmland Pool			1,162,874	
Timber Pool			495,519	
Total Real Assets	17.00%	± 8%	5,986,882	16.53%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ 36,226,778</b>	<b>100.00%</b>

# Investment Section

## Public Employees' Retirement System Investment Summary Schedule June 30, 2019

	Retiree Medical Plan			
	Asset Allocation			% of Total
Investments (at Fair Value)	Policy	Range	Fair Value	Assets
<b>Cash and Cash Equivalents</b>				
Short-Term Fixed Income Pool			\$ 2,198,856	
Securities Lending Income			793	
Total Cash and Cash Equivalents	1.00%	+ 3%/- 1%	2,199,649	1.87%
<b>Fixed Income Securities</b>				
U.S. Treasury Fixed Income Pool			12,323,800	
Total Fixed Income Securities	10.00%	± 5%	12,323,800	10.50%
<b>Opportunistic</b>				
Alternative Equity Strategies			5,823,444	
Tactical Allocation Strategies			1,886,051	
Opportunistic Fixed Income			3,186,808	
Other Opportunities			526,331	
Total Opportunistic	10.00%	± 5%	11,422,634	9.73%
<b>Broad Domestic Equity</b>				
Large Cap Pool			23,825,937	
Small Cap Pool			3,318,230	
Total Broad Domestic Equity	24.00%	± 6%	27,144,167	23.12%
<b>Global Equity Ex-U.S.</b>				
International Equity Pool			19,868,618	
International Equity Small Cap Pool			1,664,859	
Emerging Markets Equity Pool			4,237,827	
Total Global Equity Ex-U.S.	22.00%	± 4%	25,771,304	21.95%
<b>Private Equity</b>				
Private Equity Pool			12,367,809	
Total Private Equity	9.00%	± 5%	12,367,809	10.53%
<b>Absolute Return</b>				
Absolute Return Pool			6,768,463	
Total Absolute Return	7.00%	± 4%	6,768,463	5.77%
<b>Real Assets</b>				
Real Estate Pool			6,640,348	
Real Estate Investment Trust Pool			1,319,114	
Infrastructure Private Pool			2,509,129	
Infrastructure Public Pool			748,883	
Master Limited Partnership Pool			2,413,732	
Energy Pool			396,051	
Farmland Pool			3,768,505	
Timber Pool			1,605,819	
Total Real Assets	17.00%	± 8%	19,401,581	16.53%
<b>Total Invested Assets</b>	<b>100.00%</b>		<b>\$ 117,399,407</b>	<b>100.00%</b>

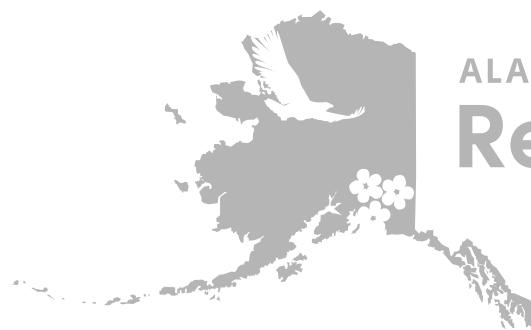
## Public Employees' Retirement System Recaptured Commission Fees Year Ended June 30, 2019

<b>Fund</b>	<b>Broad Domestic Equity Pool</b>	<b>Global Equity Ex-U.S.</b>	<b>Total</b>
Defined Benefit Plan – Pension	\$ 8,113	5,116	13,229
Postemployment Benefit – Alaska Retiree Healthcare Trust	6,614	4,181	10,795
Postemployment Benefit – Health Reimbursement Arrangement	327	208	535
Postemployment Benefit – Retiree Medical Plan	91	58	149
Postemployment Benefit – Occupational Death & Disability	28	18	46
<b>Total Recapture Commission Fees</b>	<b>\$ 15,173</b>	<b>9,581</b>	<b>24,754</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.



ALASKA DIVISION OF  
**Retirement  
and Benefits**



# ACTUARIAL SECTION







August 9, 2019

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

## **Certification of Actuarial Valuation**

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

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System (PERS) as of June 30, 2018 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2018. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under PERS 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 is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS as of June 30, 2018.

PERS 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 PERS is to pay required contributions that remain level as a percent of total PERS 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 (UAAL) as a level percentage of total PERS compensation over a closed 25-year period as required by Alaska state statutes. The closed 25-year period was originally established effective June 30, 2014. Effective June 30, 2018, the Board adopted a layered UAAL amortization method: Layer #1 equals the sum of (i) the UAAL at June 30, 2018 based on the 2017 valuation, plus (ii) the FY18 experience gain/loss. Layer #1 is amortized over the remainder of the 25-year closed period that was established in 2014<sup>1</sup>. Layer #2 equals the change in UAAL at June 30, 2018 due to the experience study and EGWP implementation. Layer #2 is amortized over a separate closed 25-year period starting in 2018. Future layers will be created each year based on the change in UAAL occurring that year, and will be amortized over separate closed 25-year periods. The UAAL amortization continues to be on a level percent of pay basis. The compensation used to determine required contributions is the total compensation of all active members in PERS, 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. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the overall funded status is expected to increase to 100% after 25 years.

# Actuarial Section

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The Board and staff of the State of Alaska may use this report for the review of the operations of PERS. Use of this report, for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Buck to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without the review by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. In particular, retiree group benefits models necessarily rely on the use of approximations and estimates and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation.

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 for the period July 1, 2013 to June 30, 2017. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2018 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claim cost rates effective June 30, 2018 to better reflect expected future healthcare experience. Based on recent experience, the healthcare cost trend assumptions were also updated. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 6.2 and 6.3.

Governmental Accounting Standards Board (GASB) Statement No. 67 (GASB 67) was effective for PERS beginning with fiscal year ending June 30, 2014, and Statement No. 74 (GASB 74) was effective for PERS beginning with fiscal year ending June 30, 2017. Separate GASB 67 and GASB 74 reports as of June 30, 2018 have been prepared. Section 3 of this report contains accounting information previously disclosed under GASB 25 for fiscal years 2007 through 2013 and accounting information previously disclosed under GASB 43 for fiscal years 2007 through 2016. 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. Please see our separate GASB 67 and GASB 74 reports for other information needed for the CAFR.

This report was prepared under my supervision and in accordance with all applicable Actuarial Standards of Practice. I am a Fellow of the Society of Actuaries, an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

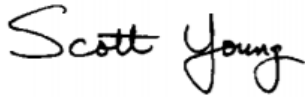
I am available to discuss this report with you at your convenience. I can be reached at 602-803-6174.

Respectfully submitted,



David J. Kershner, FSA, EA, MAAA, FCA  
Principal  
Buck

The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms his qualification to render opinions in such matters in accordance with the Qualification Standards of the American Academy of Actuaries.

A handwritten signature in black ink that reads "Scott Young". The signature is written in a cursive style with a large, stylized "S" and "Y".

Scott Young, FSA, EA, MAAA  
Director  
Buck

## State of Alaska Public Employees' 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. Changes in methods were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017. The asset smoothing method used to determine valuation assets was changed effective June 30, 2014.

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 Normal Cost**

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method.

Effective June 30, 2018, the Board adopted a layered UAAL amortization method: Layer #1 equals the sum of (i) the UAAL at June 30, 2018 based on the 2017 valuation, plus (ii) the FY18 experience gain/loss. Layer #1 is amortized over the remainder of the 25-year closed period that was originally established in 2014<sup>1</sup>. Layer #2 equals the change in UAAL at June 30, 2018 due to the experience study and EGWP implementation. Layer #2 is amortized over a separate closed 25-year period starting in 2018. Future layers will be created each year based on the change in UAAL occurring that year, and will be amortized over separate closed 25-year periods. The UAAL amortization continues to be on a level percent of pay basis. 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 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.

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(i) Layer #1 is referred to as "initial amount" in Section 1.2 of Valuation

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

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## **B. Valuation of Assets**

The actuarial asset value was reinitialized to equal Fair Value of Assets as of June 30, 2014. Beginning in FY15, the asset value method recognizes 20% of the gain or loss each year, for a period of 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.

## **C. Valuation of Retiree Medical and Prescription Drug Benefits**

This section outlines the detailed methodology used to develop the initial per capita claims cost rates for the PERS postemployment healthcare plan. Note that the methodology reflects the results of our annual experience rate update for the period from July 1, 2017 to June 30, 2018. Healthcare cost trend and retiree contribution increase assumptions for the period after June 30, 2018 were updated since the prior valuation.

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 historical credibility of cost and enrollment data for each component of cost. This valuation reflects non-prescription claims separated by Medicare status, including eligibility for free Part A coverage. Prescription costs are analyzed separately as in prior valuations. Administrative costs are assumed in the final per capita claims cost rates used for valuation purposes, as described below. Analysis to date on Medicare Part A coverage is limited since Part A claim data is not available by individual, nor is this status incorporated into historical claim data.

### Benefits

Medical, prescription drug, dental, vision and audio coverage is provided through the AlaskaCare Retiree Health Plan and is available to employees of the State and subdivisions who meet retirement criteria based on the retirement plan tier in effect at their date of hire. Health plan provisions do not vary by retirement tier or age, except for Medicare coordination for those Medicare-eligible. Dental, vision and audio claims (DVA) are excluded from data analyzed for this valuation because those are retiree-pay all benefits where rates are assumed to be self-supporting. Buck relies upon rates set by a third-party for the DVA benefits. Buck reviewed historical rate-setting information and views contribution rate adjustments made are not unreasonable.

### Administration and Data Sources

The plan was administered by Wells Fargo Insurance Services (acquired by HealthSmart, in January 2012) from July 1, 2009 through December 31, 2013 and by Aetna effective January 1, 2014.

Claims incurred for the period from July 2016 through June 2018 (FY17 through FY18) were provided by the State of Alaska from reports extracted from their data warehouse, which separated claims by Medicare status. In reviewing the claims reports generated for this year's valuation, it was discovered that audio and vision claims were incorrectly included in the reports that were provided for the prior year valuation. These audio and vision claims accounted for approximately \$9.9M in claims during fiscal 2017 (which was less than 2% of the total gross claims for that fiscal year). The claims for fiscal 2017 used in this year's claims cost development exclude the audio and vision claims that were incorrectly included in last year's development. Monthly enrollment data for the same period was provided by Aetna.

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

Aetna also provided census information identifying Medicare Part B only participants. These participants are identified when hospital claims are denied by Medicare; Aetna then flags that participant as a Part B only participant. Buck added newly identified participants to our list of Medicare Part B only participants. Buck assumes that once identified as Part B only, that participant remains in that status until we are notified otherwise.

Aetna provided a snapshot file as of July 1, 2018 of retirees and dependents that included a coverage level indicator. The monthly enrollment data includes dual coverage participants. These are participants whereby both the retiree and spouse are retirees from the State and both are reflected with Couple coverage in the enrollment. In this case, such a couple would show up as four members in the monthly enrollment (each would be both a retiree and a spouse). As a result, the snapshot census file was used to adjust the total member counts in the monthly enrollment reports to estimate that number of unique participants enrolled in coverage. Based on the snapshot files from the last two valuations, the total member count in the monthly enrollment reports needs to be reduced by approximately 13% to account for the number of participants with dual coverage.

Aetna does not provide separate experience by Medicare status in standard reporting so the special reports mentioned above from the data warehouse were used this year to obtain that information and incorporate it into the per capita rate development for each year of experience (with corresponding weights applied in the final per capita cost).

### Methodology

Buck projected historical claim data to FY19 for retirees using the following summarized steps:

1. Develop historical annual incurred claim cost rates – an analysis of medical costs was completed based on claims information and enrollment data provided by the State of Alaska and Aetna for each year in the experience period of FY17 through FY18.
  - Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs for the valuation year (e.g. from the experience period up through FY19).
  - Because the reports provided this year reflected incurred claims, no additional adjustment was needed to determine incurred claims to be used in the valuation
  - An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. 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 the “no-Part A” individuals who are required to enroll in Medicare Part B, the State is the primary payer for hospital bills and other Part A services. Claim experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. For Medicare Part B only participants, a lower average claims cost was applied to retirees covered by both Medicare Part A and B vs. retirees covered only by Medicare Part B based upon manual rate models that estimate the Medicare covered proportion of medical costs. 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.

**State of Alaska**  
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- Based on census data received from Aetna, less than 1% of the current retiree population was identified as having coverage only under Medicare Part B. We assume that 5% of actives hired before 4/1/1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.
  - Based upon a reconciliation of valuation census data to the snapshot eligibility files provided by Aetna as of July 1, 2017, and July 1, 2018, Buck adjusted member counts used for duplicate records where participants have dual coverage; i.e. primary coverage as a retiree and secondary coverage as the covered spouse of another retiree. This is to reflect the total cost per distinct individual/member which is then applied to distinct members in the valuation census.
  - Buck understands that pharmacy claims reported do not reflect rebates. Based upon reported rebates in proportion to incurred claims for State of Alaska retiree plans, Buck reduced reported pharmacy incurred claims by 12% to estimate the rebates for the retiree population. These estimates were based upon reported rebates for retirees from Aetna.
2. Develop estimated Retiree Drug Subsidy reimbursement - actual subsidy payments to the State were received for claims incurred during the 2009 through 2017 calendar years. Buck obtained this information based upon recorded and available information in the RDS Subsidy website and as provided by the State. The projected subsidy for FY19 was determined based on the historical ratio of subsidy received to claims incurred (adjusted for rebates), and then applied to the appropriate projection period. These amounts are applicable only to Medicare eligible participants.
  3. Adjust for claim fluctuation, anomalous experience, etc. – explicit adjustments are often made for anticipated large claims or other anomalous experience. Due to group size and demographics, we did not make any large claim adjustments. We do blend both Alaska plan-specific and national trend factors as described below. Buck compared data utilized to lag reports and quarterly plan experience presentations provided by the State and Aetna to assess accuracy and reasonableness of data.
  4. Trend all data points to the projection period – project prior years' experience forward to FY19 for retiree benefits on an incurred claim basis. Trend factors derived from historical Alaska-specific experience and national trend factors are shown in the table in item 5 below.
  5. Apply credibility to prior experience – adjust prior year's data by assigning weight to recent periods, as shown at the right of the table below. The Board approved a change in the weighting of experience periods beginning with the prior valuation as outlined below. Note also that we averaged projected plan costs using Alaska-specific trend factors and national trend factors, assigning 75% weight to Alaska-specific trends and 25% to national trends:

Experience Period	Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year		
	Medical	Prescription	Weighting Factors
FY17 to FY18	7.0% Pre-Medicare / 4.5% Medicare	6.2%	50%
FY18 to FY19	6.2% Pre-Medicare / 4.0% Medicare	8.0%	50%



## **State of Alaska**

### **Public Employees' Retirement System**

#### **Defined Benefit Retirement Plan**

#### **Description of Actuarial Methods and Valuation Procedures**

Trend assumptions used for rate development are assessed annually and as additional/improved reporting becomes available, we will incorporate into rate development as appropriate. Based upon recent experience trending up, particularly for prescription drugs, the Board has approved our recommendation to update to the valuation healthcare cost trend assumption.

6. Develop separate administration costs – no adjustments were made for internal administrative costs. Third party retiree plan administration fees for FY19 are based upon total fees projected to 2019 by Segal based on actual FY 2018 fees. The annual per participant per year administrative cost rate for medical and prescription benefits is \$300.

#### **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 of the following provisions.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions of the health reform legislation apply to the State plan. 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.

Because Transitional Reinsurance fees are only in effect until 2016, we excluded these for valuation purposes.

The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the valuation date, Buck estimated the tax based upon a blended test of pre and post-Medicare projected costs and enrollment projections.

- A blended test compares a weighted average per capita cost (based upon proportions of pre/post Medicare eligible enrollments) to the tax cost thresholds in each projection year. Projected enrollment was based upon the current enrollment data provided by Aetna, and valuation headcount projections for future years.
- We included administrative fees and applied Retiree Drug Subsidy / EGWP reimbursements to the Medicare rates.

We assumed claim costs would increase according to valuation trend assumptions from the June 30, 2018 valuation, and that the tax cost thresholds would increase at 2.25% (the CPI assumption of 2.50% less 0.25% to estimate the impact of using the chained CPI as required by the Tax Cut and Jobs Act passed in December 2017). The first year increased at 3.25% to reflect the additional 1.0% over inflation assumption.

We determined the impact to be approximately \$83.9 million of the projected June 30, 2018 healthcare actuarial accrued liability for the defined benefit plan.

The Tax Cuts and Jobs Act passed in December 2017 included the elimination of the individual mandate penalty and changed the inflation measure for purposes of determining the limits for the High Cost Excise Tax to use chained CPI. It is our understanding the law does not directly impact other provisions of the ACA. While the nullification of the



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**State of Alaska**

**Public Employees' Retirement System**

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**Description of Actuarial Methods and Valuation Procedures**

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ACA's individual mandate penalty does not directly impact employer group health plans, it could contribute to the destabilization of the individual market and increase the number of uninsured. Such destabilization could translate to increased costs for employers. We have considered this when setting our healthcare cost trend assumptions and will continue to monitor this issue.

We have not identified any other specific provision of health care reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

## **E. Healthcare Reform**

In accordance with actuarial standards, we note the following specific data sources and steps taken to value retiree medical benefits:

The Division of Retirement and Benefits provided pension valuation census data, which for people currently in receipt of healthcare benefits was supplemented by coverage data from the healthcare claims administrator (Aetna)

Certain adjustments and assumptions were made to prepare the data for valuation:

- Some records provided on the Aetna data were associated with a participant social security number not listed on the RIN-to-SSN translation file. We reconciled those participants with the pension valuation data as either a surviving spouse or a retiree in the appropriate plan based on account structure information in the Aetna data.
- All records provided with retiree medical coverage on the Aetna data were included in this valuation and we relied on the Aetna data as the source of medical coverage for current retirees and their dependents.
- Some records in the Aetna data were duplicates due to the dual coverage (i.e. coverage as a retiree and as a spouse of another retiree) allowed under the plan. Records were adjusted for these members so that each member was only valued once. Any additional value of the dual coverage (due to coordination of benefits) is small and reflected in the per capita costs.
- Covered children included in the Aetna data were valued until age 23, unless disabled. We assumed that those dependents over 23 were only eligible and valued due to being disabled.
- For individuals included in the pension data expecting a future pension, we valued health benefits starting at the same point that the pension benefit is assumed to start.

We are not aware of any other data issues that would be expected to have a material impact on the results and there are no unresolved matters related to the data.

## State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan Description of Actuarial Methods and Valuation Procedures

The chart below shows the basis of setting the per capita claims cost assumption, which includes both PERS and TRS.

	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
<b>A. Fiscal 2017</b>				
1. Incurred Claims	\$ 230,671,216	\$ 66,265,130	\$ 64,442,324	\$ 160,756,912
2. Adjustments for Rx Rebates	-	-	(7,733,079)	(19,290,829)
3. Net incurred claims	\$ 230,671,216	\$ 66,265,130	\$ 56,709,245	\$ 141,466,082
4. Average Enrollment	23,342	38,502	23,342	38,502
5. Claim Cost Rate (3) / (4)	9,882	1,721	2,430	3,674
6. Trend to Fiscal 2019	1.136	1.087	1.147	1.147
7. Fiscal 2019 Incurred Cost Rate (5) x (6)	\$ 11,230	\$ 1,870	\$ 2,787	\$ 4,214
<b>B. Fiscal 2018</b>				
1. Incurred Claims	\$ 228,572,782	\$ 72,875,570	\$ 65,406,973	\$ 178,763,430
2. Adjustments for Rx Rebates	-	-	(7,848,837)	(21,451,612)
3. Net incurred claims	\$ 228,572,782	\$ 72,875,570	\$ 57,558,136	\$ 157,311,819
4. Average Enrollment	21,920	40,560	21,920	40,560
5. Claim Cost Rate (3) / (4)	10,428	1,797	2,626	3,878
6. Trend to Fiscal 2019	1.062	1.040	1.080	1.080
7. Fiscal 2019 Incurred Cost Rate (5) x (6)	\$ 11,074	\$ 1,869	\$ 2,836	\$ 4,189
	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
<b>C. Incurred Cost Rate by Fiscal Year</b>				
1. Fiscal 2017 A. (7)	11,230	1,870	2,787	4,214
2. Fiscal 2018 B. (7)	11,074	1,869	2,836	4,189
<b>D. Weighting by Fiscal Year</b>				
1. Fiscal 2017	50%	50%	50%	50%
2. Fiscal 2018	50%	50%	50%	50%
<b>E. Fiscal 2019 Incurred Cost Rate</b>				
1. Rate at Average Age C x D	\$ 11,152	\$ 1,870	\$ 2,811	\$ 4,201
2. Average Aging Factor	0.824	1.251	0.837	1.116
3. Rate at Age 65 (1) / (2)	\$ 13,535	\$ 1,494	\$ 3,360	\$ 3,764
<b>F. Development of Part A&amp;B and Part B Only Cost from Pooled Rate Above</b>				
1. Part A&B Average Enrollment		40,223		
2. Part B Only Average Enrollment		338		
3. Total Medicare Average Enrollment B(4)		40,560		
4. Cost ratio for those with Part B only to those with Part A&B		3.180		
5. Factor to determine cost for those with Parts A&B (2) / (3) x (4) + (1) / (3) x 1.00		1.018		
6. Medicare per capita cost for all participants: E(3)		\$ 1,494		
7. Cost for those eligible for Parts A&B: (6) / (5)		\$ 1,468		
8. Cost for those eligible for Part B only: (7) x (4)		\$ 4,667		

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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, 2018 through June 30, 2019**

<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>	<b>Medicare EGWP Subsidy</b>
45	\$ 8,260	\$ 8,260	\$ 2,053	\$ —	\$ —
50	9,346	9,346	2,438	—	—
55	10,574	10,574	2,896	—	—
60	11,963	11,963	3,119	—	—
65	1,468	4,667	3,764	527	1,039
70	1,701	5,410	4,155	582	1,147
75	1,972	6,272	4,588	642	1,266
80	2,178	6,925	4,474	626	1,235

## Changes in Methods Since the Prior Valuation

Prior to the June 30, 2018 valuation: (i) the total UAAL was amortized over the remainder of the 25-year closed period that was established in 2014; and (ii) the actuarial cost method for the retiree healthcare plan was on a level dollar basis (it is now on a level percent of pay method). There were no other changes in the asset or valuation methods since the prior valuation.

# Actuarial Section

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

The demographic and economic assumptions used in the June 30, 2018 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017.

- |                                    |   |
|------------------------------------|---|
| 1. Investment Return               | 7.38% per year, net of investment expenses.   |
| 2. Salary Scale                    | Salary scale rates based on upon the 2013-2017 actual experience. (See Table 1)<br>Inflation – 2.50% per year. Productivity – 0.25% per year.   |
| 3. Payroll Growth                  | 2.75% 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 2.50% annually.   |
| 5. Mortality<br>(Pre-termination)  | Mortality rates based upon the 2013-2017 actual experience.<br><br>100% (male and female) of RP-2014 healthy annuitant table with MP-2017 generational improvement.   |
| 6. Mortality<br>(Post-termination) | Mortality rates based upon the 2013-2017 actual experience.<br><br>91% of male and 96% of female rates of RP-2014 healthy annuitant table with MP-2017 generational improvement.  |
| 7. Turnover                        | Based upon the 2013-2017 actual experience. (See Tables 2 and 3).   |
| 8. Disability                      | Incidence rates based on 2013-2017 actual experience (See Table 4).<br><br>Post-disability mortality in accordance with the RP-2014 disabled table with MP-2017 generational improvement. Disabilities are assumed to be occupational 75% of the time for Peace Officer/Firefighters, 40% of the time for Others. |
| 9. Retirement                      | Retirement rates based upon the 2013-2017 actual experience (See Tables 5 and 6).<br><br>Deferred vested members are assumed to retire at their earliest unreduced retirement date.<br><br>The modified cash refund annuity is valued as a three-year certain and life annuity.                                   |
| 10. Spouse Age Difference          | Males are assumed to be three years older than their wives. Females are assumed to be two years younger than husbands.  |
| 11. Percent Married for Pension    | For Others, 75% of male members and 70% female members are assumed to be married. For Peace Officer/Firefighters, 85% of male members and 60% of female members are assumed to be married   |

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- |  |   |
|--|---|
| 12. Dependent Spouse Medical Coverage Election | Applies to members who do not have dual medical coverage. For Others, 65% of male members and 60% female members are assumed to be married and cover a dependent spouse. For Peace Officer/Firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse.  |
| 13. Dependent Children                         | Benefits for dependent children have been valued only for members currently covering their dependent children. These benefits are only valued through the dependent children's age 23 (unless the child is disabled).   |
| 14. Contribution Refunds                       | <p>For Others, 5% of terminating members with vested benefits are assumed to have their contributions refunded.</p> <p>For Peace Officers/Firefighters, 10% of terminating members with vested benefits are assumed to have their contributions refunded.</p> <p>100% of those with non-vested benefits are assumed to have their contributions refunded.</p>   |
| 15. Imputed Data                               | Data changes from the prior year which are deemed to have an immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data. Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.                               |
| 16. Active Rehire Assumption                   | The Normal Cost used for determining contribution rates and in the projections includes a rehire assumption to account for anticipated rehires. The Normal Cost shown in the report includes the following % assumptions (which were developed based on the 5 years of rehire loss experience through June 30, 2017). For projections, these assumptions were assumed to grade to zero uniformly over a 20-year period. – Pension 18.77% – Healthcare 17.09%. |
| 17. Active Data Adjustment                     | To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 census data file but active in the October 1 census data file are updated to active status as of June 30.  |
| 18. COLA                                       | Alaska Cost-of-Living Adjustment. Of those benefit recipients who are eligible for the COLA, 70% of Others and 65% Peace Officers/Firefighters are assumed to remain in Alaska and receive the COLA.  |
| 19. Post-Retirement Pension Adjustment         | 50% and 75% of assumed inflation, or 1.25% and 1.875% respectively, is valued for the annual automatic Post-Retirement Pension Adjustment (PRPA) as specified in the statute.   |

# Actuarial Section

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

20. Expenses The investment return assumption is net of investment expenses. The Normal Cost as of June 30, 2018 was increased by the following amounts for administrative expenses (for projections, the % increase was assumed to remain constant in future years): – Pension: \$6,888,000 – Healthcare: \$4,365,000
21. Part-Time Status Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.75 years for credited service per year for Other members.
22. 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.
23. Per Capita Claims Cost Sample claims cost rates adjusted to age 65 for FY19 medical and prescription are shown below:

	<b>Medical</b>	<b>Prescription Drugs</b>
Pre-Medicare	\$ 13,535	\$ 3,360
Medicare Parts A & B	1,468	3,764
Medicare Part B Only	4,667	3,764
Medicare Part D - RDS	N/A	527
Medicare Part D - EGWP	N/A	1,039

Members are assumed to attain Medicare eligibility at age 65. The EGWP cost shown above is for calendar year 2019. All other costs are for the 2019 fiscal year (July 1, 2018 – June 30, 2019).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

24. Third Party Administrator Fees \$300 per person per year; assumed trend rate of 4.5% per year.
25. Medicare Part B Only We assume that 5% of actives hired before 4/1/1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.

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## 26. 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, 7.5% is applied to the FY19 pre-Medicare medical claims costs to get the FY20 medical claims costs.

<b>Fiscal year</b>	<b>Medical pre-65</b>	<b>Medical post-65</b>	<b>Prescription Drugs / EGWP</b>	<b>RDS</b>
2019	7.5%	5.5%	8.5%	4.7%
2020	7.0	5.4	8.0	4.7
2021	6.5	5.4	7.5	4.6
2022	6.3	5.4	7.1	4.6
2023	6.1	5.4	6.8	4.6
2024	5.9	5.4	6.4	4.6
2025	5.8	5.4	6.1	4.6
2026	5.6	5.4	5.7	4.6
2027-2040	5.4	5.4	5.4	4.5
2041	5.3	5.3	5.3	4.5
2042	5.2	5.2	5.2	4.5
2043	5.1	5.1	5.1	4.5
2044	5.1	5.1	5.1	4.5
2045	5.0	5.0	5.0	4.5
2046	4.9	4.9	4.9	4.5
2047	4.8	4.8	4.8	4.5
2048	4.7	4.7	4.7	4.5
2049	4.6	4.6	4.6	4.5
2050+	4.5	4.5	4.5	4.5

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 costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska. The model was updated this year to use the newest version and incorporate recent trend survey information, which generated the updated trend rates shown above.

# Actuarial Section

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

The table below shows the amount each trend rate shown on the previous page was increased by the amount for the Cadillac Tax:

Fiscal year	Pre-65	Post-65	Fiscal year	Pre-65	Post-65
2018-2030	—%	—%	2070	0.21%	0.46%
2031	—	0.15	2071	0.21	0.45
2032	—	0.34	2072	0.20	0.44
2033	—	0.30	2073	0.20	0.43
2034	—	0.28	2074	0.20	0.42
2035	—	0.26	2075	0.19	0.41
2036	—	0.26	2076	0.19	0.40
2037	—	0.21	2077	0.18	0.39
2038	0.10	0.22	2078	0.18	0.38
2039	0.09	0.20	2079	0.17	0.37
2040	0.08	0.16	2080	0.17	0.36
2041	0.07	0.14	2081	0.17	0.35
2042	0.06	0.12	2082	0.16	0.34
2043	0.04	0.06	2083	0.16	0.33
2044	0.04	0.07	2084	0.15	0.32
2045	0.04	0.06	2085	0.15	0.31
2046	0.03	0.05	2086	0.15	0.31
2047	0.04	0.10	2087	0.14	0.30
2048	0.04	0.43	2088	0.14	0.29
2049	0.05	0.57	2089	0.14	0.29
2050	0.05	0.52	2090	0.13	0.28
2051	0.06	0.60	2091	0.13	0.27
2052	0.06	0.63	2092	0.13	0.27
2053	0.07	0.69	2093	0.13	0.26
2054	0.10	0.69	2094	0.12	0.25
2055	0.30	0.68	2095	0.12	0.25
2056	0.30	0.67	2096	0.12	0.24
2057	0.29	0.66	2097	0.11	0.24
2058	0.29	0.64	2098	0.11	0.23
2059	0.28	0.62	2099	0.11	0.22
2060	0.27	0.60	2100	0.11	0.22
2061	0.27	0.58	2101	0.10	0.21
2062	0.26	0.57	2102	0.10	0.21
2063	0.25	0.56	2103	0.10	0.20
2064	0.25	0.54	2104	0.10	0.20
2065	0.24	0.53	2105	0.10	0.19
2066	0.24	0.51	2106	0.09	0.19
2067	0.23	0.50	2107	0.09	0.19
2068	0.23	0.49	2108	0.09	0.18

### 27. Aging Factors

Age	Medical	Prescription drugs
0–44	2.0%	4.5%
45–54	2.5	3.5
55–64	2.5	1.5
65–74	3.0	2.0
75–84	2.0	(0.5)
85–95	0.3	(2.5)
95 +	—	—



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28. Retired Member  
Contributions for  
Medical Benefits

Currently contributions are required for PERS members who are under age 60 and have less than 30 years of service (25 for Peace Officer/Firefighter). Eligible Tier 1 members are exempt from contribution requirements. Annual FY19 contributions based on monthly rates shown below for calendar 2018 and 2019 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 or 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled. For dependent children, we value 1/3 of the annual retiree contribution to estimate the per child rate based upon the assumed number of children in rates where children are covered.

Coverage category	Calendar 2019		Calendar 2018
	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

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29. Trend Rate for Retired  
Member Medical  
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, 7.6% is applied to the FY19 retired member medical contributions to get the FY20 retired member medical contributions.

<b>Trend Assumptions</b>	
Fiscal year:	
2019	7.6%
2020	7.2
2021	6.8
2022	6.5
2023	6.3
2024	6.0
2025	5.9
2050	4.5
2100	4.5

Graded trend rates for retired member medical contributions were updated to the rates shown above for the June 30, 2018 valuation to reflect the updated ultimate trend assumption of 4.5% used for gross cost components. Actual FY19 retired member medical contributions are reflected in the valuation.

30. Healthcare Participation

100% system paid of members and their spouses are assumed to elect the healthcare benefits as soon as they are eligible. 20% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

31. Changes in Assumptions  
Since the Prior Valuation

Effective for the June 30, 2018 valuation, the Board adopted 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, 2013 to June 30, 2017. The changes in assumptions were adopted by the Board during the January 2019 Board meeting.

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

Table 1  
Alaska PERS  
Salary Scale

**Peace Officer/Firefighter:**

Years of Service	Percent Increase	Years of Service	Percent Increase
0	7.75%	11	3.45%
1	7.25	12	3.35
2	6.75	13	3.25
3	6.25	14	3.15
4	5.75	15	3.05
5	5.25	16	2.95
6	4.75	17	2.85
7	4.25	18	2.75
8	3.75	19	2.75
9	3.65	20+	2.75
10	3.55		

**Others:**

Years of Service	Percent Increase	Years of Service	Percent Increase
0	6.75%	11	3.25%
1	6.25	12	3.15
2	5.75	13	3.05
3	5.25	14	2.95
4	4.75	15	2.85
5	4.25	16	2.75
6	3.75	17	2.75
7	3.65	18	2.75
8	3.55	19	2.75
9	3.45	20+	2.75
10	3.35		

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

**Table 2**  
**Alaska PERS**  
**Turnover Assumptions**

<b>Peace Officer/Firefighter:</b>		
<b>Years of Service</b>	<b>Male (rounded)</b>	<b>Female (rounded)</b>
0	0.15	0.15
1	0.12	0.08
2	0.07	0.06
3	0.06	0.06
4	0.06	0.07

**Members with 5 or more years of service**

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.047000	0.068000	40	0.016800	0.033900
21	0.047000	0.068000	41	0.016700	0.033700
22	0.047000	0.068000	42	0.016700	0.033600
23	0.044600	0.068000	43	0.017100	0.033300
24	0.042200	0.068000	44	0.017600	0.033100
25	0.039800	0.068000	45	0.018100	0.032800
26	0.037400	0.068000	46	0.018500	0.032500
27	0.035000	0.068000	47	0.019000	0.032300
28	0.033200	0.066300	48	0.022200	0.031900
29	0.031400	0.064600	49	0.025300	0.031500
30	0.029600	0.062900	50	0.031800	0.064200
31	0.027900	0.061200	51	0.042400	0.063200
32	0.026100	0.059500	52	0.042400	0.061900
33	0.025000	0.053600	53	0.042400	0.060400
34	0.023900	0.047700	54	0.042400	0.030000
35	0.022800	0.041800	55+	0.030000	0.020000
36	0.021700	0.036000			
37	0.020600	0.030100			
38	0.020500	0.029900			
39	0.020400	0.029800			

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**Table 3**  
**Alaska PERS**  
**Turnover Assumptions**

**Others:**

Years of Service	Hire Age < 35		Hire Age > 35	
	Male (rounded)	Female (rounded)	Male	Female
0	0.29	0.29	0.20	0.20
1	0.16	0.20	0.12	0.15
2	0.13	0.16	0.10	0.13
3	0.10	0.13	0.09	0.10
4	0.08	0.10	0.09	0.09

**Members with 5 or more years of service**

Age	Male	Female	Age	Male	Female
20	0.114000	0.129900	40	0.048600	0.056500
21	0.114000	0.129900	41	0.047100	0.055100
22	0.114000	0.129900	42	0.045600	0.053800
23	0.108300	0.122100	43	0.045000	0.051900
24	0.102600	0.114300	44	0.044400	0.049900
25	0.096900	0.106500	45	0.043900	0.048000
26	0.091200	0.098700	46	0.043300	0.046000
27	0.085500	0.090900	47	0.042700	0.044100
28	0.083000	0.087200	48	0.042600	0.044000
29	0.080500	0.083400	49	0.042400	0.043900
30	0.078000	0.079700	50	0.036300	0.044500
31	0.075400	0.076000	51	0.036000	0.044300
32	0.072900	0.072300	52	0.035600	0.044000
33	0.069900	0.068800	53	0.035200	0.043700
34	0.066900	0.065300	54	0.041700	0.062000
35	0.063900	0.061700	55+	0.030000	0.050000
36	0.061000	0.058200			
37	0.058000	0.054700			
38	0.056300	0.053500			
39	0.054700	0.052300			

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Table 4  
Alaska PERS  
Disability Table

Age	Peace Officer / Firefighter Rate		Other Member Rate	
	Male	Female	Male	Female
20	0.000179	0.000112	0.000327	0.000376
21	0.000179	0.000112	0.000327	0.000376
22	0.000179	0.000112	0.000327	0.000376
23	0.000244	0.000153	0.000360	0.000400
24	0.000310	0.000194	0.000392	0.000424
25	0.000374	0.000234	0.000425	0.000448
26	0.000440	0.000275	0.000456	0.000472
27	0.000505	0.000316	0.000489	0.000496
28	0.000526	0.000329	0.000501	0.000510
29	0.000548	0.000343	0.000513	0.000524
30	0.000570	0.000356	0.000524	0.000538
31	0.000591	0.000370	0.000536	0.000554
32	0.000612	0.000383	0.000548	0.000568
33	0.000634	0.000397	0.000566	0.000586
34	0.000657	0.000411	0.000584	0.000606
35	0.000679	0.000425	0.000602	0.000624
36	0.000702	0.000439	0.000620	0.000644
37	0.000724	0.000453	0.000638	0.000662
38	0.000757	0.000473	0.000669	0.000696
39	0.000789	0.000493	0.000701	0.000728
40	0.000822	0.000514	0.000734	0.000762
41	0.000854	0.000534	0.000765	0.000794
42	0.000887	0.000554	0.000797	0.000826
43	0.000977	0.000611	0.000879	0.000908
44	0.001066	0.000667	0.000962	0.000990
45	0.001157	0.000723	0.001043	0.001072
46	0.001247	0.000780	0.001125	0.001154
47	0.001337	0.000836	0.001208	0.001236
48	0.001462	0.000914	0.001329	0.001360
49	0.001588	0.000993	0.001451	0.001484
50	0.001714	0.001071	0.001572	0.001608
51	0.001839	0.001150	0.001694	0.001734
52	0.001965	0.001228	0.001815	0.001858
53	0.002294	0.001434	0.002132	0.002168
54	0.002624	0.001640	0.002450	0.002478

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

**Table 5**  
**Alaska PERS Peace Officer / Firefighter**  
**Retirement Table**

Age at Retirement	Retirement Rate			
	Reduced Rates		Unreduced Rates	
	Male	Female	Male	Female
<47	N/A	N/A	0.088000	0.060000
47	N/A	N/A	0.088000	0.150000
48	N/A	N/A	0.143000	0.150000
49	N/A	N/A	0.143000	0.150000
50	0.050000	0.050000	0.165000	0.150000
51	0.050000	0.070000	0.165000	0.150000
52	0.070000	0.070000	0.203500	0.150000
53	0.070000	0.070000	0.203500	0.150000
54	0.070000	0.350000	0.203500	0.250000
55	0.070000	0.080000	0.275000	0.200000
56	0.070000	0.080000	0.275000	0.150000
57	0.070000	0.080000	0.275000	0.150000
58	0.070000	0.080000	0.275000	0.150000
59	0.200000	0.200000	0.275000	0.150000
60	N/A	N/A	0.330000	0.250000
61	N/A	N/A	0.275000	0.200000
62	N/A	N/A	0.275000	0.300000
63	N/A	N/A	0.275000	0.500000
64	N/A	N/A	0.220000	0.500000
65	N/A	N/A	0.220000	0.500000
66	N/A	N/A	0.275000	0.500000
67	N/A	N/A	0.550000	0.500000
68	N/A	N/A	0.550000	0.500000
69	N/A	N/A	0.550000	0.500000
70	N/A	N/A	1.000000	1.000000
71	N/A	N/A	1.000000	1.000000
72	N/A	N/A	1.000000	1.000000
73	N/A	N/A	1.000000	1.000000
74	N/A	N/A	1.000000	1.000000
75	N/A	N/A	1.000000	1.000000

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

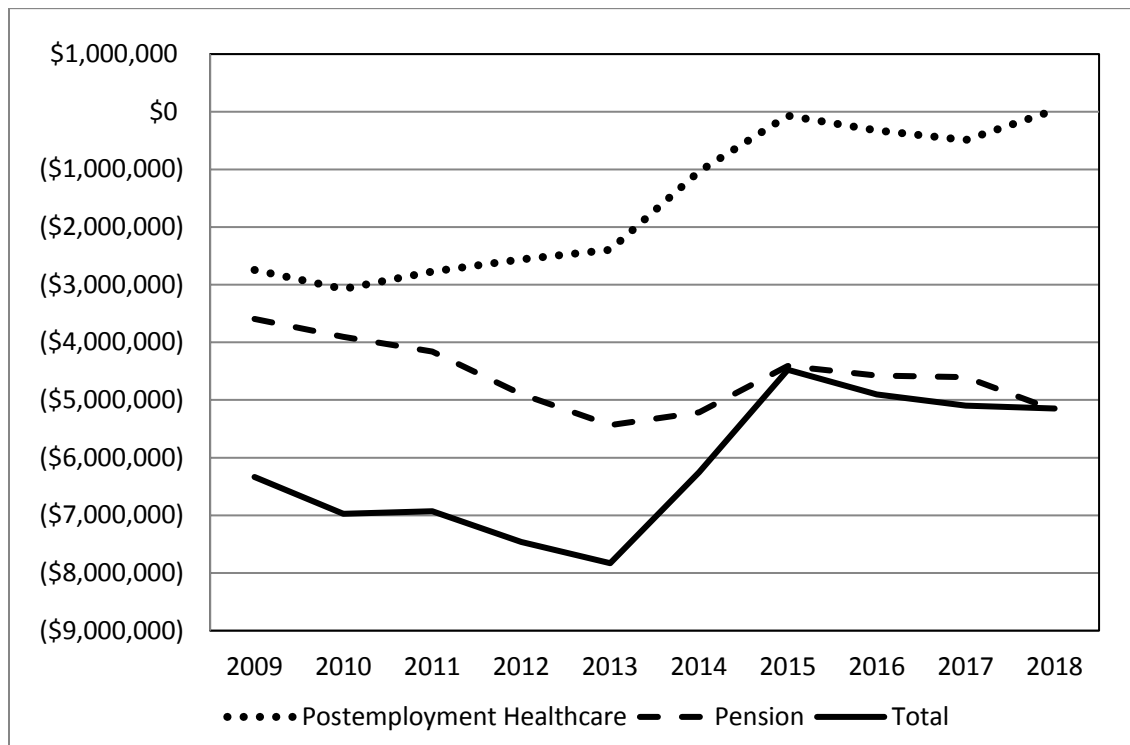
**Table 6**  
**Alaska PERS Other**  
**Retirement Table**

Age at Retirement	Retirement Rates			
	Reduced		Unreduced	
	Male	Female	Male	Female
<50	N/A	N/A	0.1100	0.1100
50	0.0600	0.0800	0.3300	0.3850
51	0.0600	0.0800	0.3575	0.3850
52	0.0900	0.0800	0.3575	0.3850
53	0.0900	0.0800	0.3575	0.3850
54	0.2000	0.1500	0.3850	0.3850
55	0.0600	0.0600	0.3300	0.3300
56	0.0600	0.0600	0.2200	0.2200
57	0.0600	0.0600	0.2200	0.1980
58	0.0600	0.0600	0.2200	0.1980
59	0.1500	0.2000	0.2200	0.1980
60	N/A	N/A	0.2200	0.2310
61	N/A	N/A	0.2200	0.2200
62	N/A	N/A	0.2200	0.2200
63	N/A	N/A	0.2200	0.2200
64	N/A	N/A	0.2200	0.2200
65	N/A	N/A	0.2475	0.2860
66	N/A	N/A	0.2750	0.2860
67	N/A	N/A	0.2200	0.2420
68	N/A	N/A	0.2475	0.2420
69	N/A	N/A	0.2750	0.2420
70	N/A	N/A	0.2750	0.2420
71	N/A	N/A	0.2750	0.2420
72	N/A	N/A	0.2750	0.2750
73	N/A	N/A	0.2750	0.2750
74	N/A	N/A	0.2750	0.3850
75-79	N/A	N/A	0.5500	0.5500
80+	N/A	N/A	1.0000	1.0000



<b>Public Employees' Retirement System Defined Benefit Retirement Plan Funding Excess/(Unfunded Liability) (In thousands)</b>				
<b>Actuarial Valuation Year Ended June 30</b>	<b>Postemployment Healthcare</b>	<b>Pension</b>	<b>Total Funding Excess/ (Unfunded Liability)</b>	<b>Funded Ratio</b>
2009	\$ (2,742,835)	\$ (3,593,558)	\$ (6,336,393)	61.8%
2010	(3,073,188)	(3,901,840)	(6,975,028)	61.5
2011	(2,769,878)	(4,156,898)	(6,926,776)	63.0
2012	(2,561,808)	(4,898,523)	(7,460,331)	61.3
2013	(2,395,001)	(5,435,132)	(7,830,133)	60.8
2014	(1,036,453)	(5,216,321)	(6,252,774)	70.1
2015	(68,435)	(4,406,769)	(4,475,204)	75.4
2016	(325,127)	(4,576,371)	(4,901,498)	70.0
2017	(492,197)	(4,602,427)	(5,094,624)	74.4
2018	28,405	(5,175,841)	(5,147,436)	76.0

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



# Actuarial Section

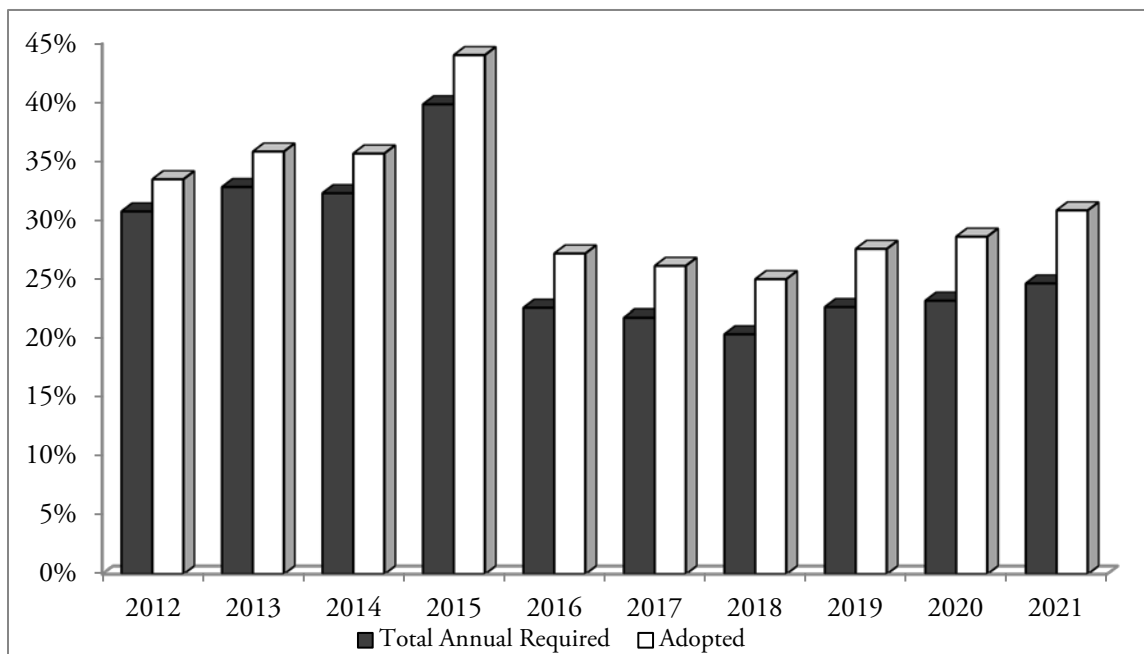
Public Employees' Retirement System Defined Benefit Retirement Plan Employer Contribution Rates					
Year Ended June 30	Actuarially Determined				Adopted
	Actuarial Valuation Year Ended June 30	Normal Cost <sup>1</sup>	Past Service	Total Annual Required	
2012	2009	8.28%	22.48%	30.76%	33.49%
2013	2010	8.67	24.16	32.83	35.84
2014	2011	8.12	24.19	32.31	35.68
2015	2012	6.82	33.03	39.85	44.03
2016	2013	6.05	16.53	22.58	27.19
2017	2014	5.76	16.02	21.78	26.14
2018	2015	5.10	15.28	20.38	25.01
2019	2016	6.11	16.53	22.64	27.58
2020	2017	5.74	17.44	23.18	28.62
2021	2018	6.70	17.94	24.64	30.85

<sup>1</sup> Also referred to as the consolidated rate.

Beginning with the June 30, 2014 valuation, contribution rates for FY17 and beyond are determined using new methodology in accordance with 2014 legislation under HB 385 and SB 119, 2014 Alaska Laws, which changed the amortization methodology to a closed 25-year period as a level percentage of pay, and eliminated the time lag on the contribution rate calculation by using a 2-year year "roll-forward" approach and assuming 0% population growth. Investment gains and losses are recognized over a 5-year period beginning in FY15. Beginning with the June 30, 2018 valuation, the UAAL amortization was changed as described in Section 6.2.

Valuations are used to set contribution rates in future years.

## 10-YEAR COMPARISON OF AVERAGE EMPLOYER CONTRIBUTION RATES



<b>Public Employees' Retirement System Defined Benefit Retirement Plan Schedule of Active Member Valuation Data</b>					
<b>Valuation Date</b>	<b>Number</b>	<b>Annual Earnings (In thousands)</b>	<b>Annual Average Earnings</b>	<b>Percent Increase in Average Earnings</b>	<b>Number of Participating Employers</b>
<b>All Others</b>					
June 30, 2018	11,927	\$ 881,716	\$ 73,926	1.0%	155
June 30, 2017	13,113	960,106	73,218	1.4	155
June 30, 2016	14,401	1,039,960	72,214	3.2	155
June 30, 2015	15,833	1,108,218	69,994	2.1	159
June 30, 2014	17,339	1,188,918	68,569	3.4	159
June 30, 2013	18,890	1,252,786	66,320	4.5	159
June 30, 2012	20,566	1,305,337	63,471	4.6	160
June 30, 2011	22,118	1,342,122	60,680	4.7	160
June 30, 2010	24,054	1,393,803	57,945	4.5	160
June 30, 2009	25,089	1,390,971	55,441	5.1	159
<b>Peace Officer / Firefighter</b>					
June 30, 2018	1,507	\$ 163,630	\$ 108,580	1.5%	155
June 30, 2017	1,606	171,821	106,987	1.6	155
June 30, 2016	1,704	179,461	105,317	3.8	155
June 30, 2015	1,827	185,350	101,450	2.5	159
June 30, 2014	1,958	193,737	98,946	3.4	159
June 30, 2013	2,065	197,534	95,658	4.8	159
June 30, 2012	2,164	197,544	91,286	4.1	160
June 30, 2011	2,275	199,537	87,709	8.6	160
June 30, 2010	2,388	192,895	80,777	2.8	160
June 30, 2009	2,476	194,519	78,562	5.0	159
<b>Total and average earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.</b>					

# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Schedule of Benefit Recipients Added to and Removed from Rolls								
Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefits
	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No.	Annual Pension Benefits		
All Others								
June 30, 2018	1,708	\$ 46,316,673	673	\$ 10,533,376	32,067	\$ 699,761,583	5.4%	\$ 21,822
June 30, 2017	1,699	44,619,382	816	14,610,212	31,032	663,978,286	4.7	21,398
June 30, 2016	1,780	44,409,702	660	12,099,362	30,149	633,969,116	5.4	21,028
June 30, 2015	1,583	39,939,292	627	7,232,812	29,029	601,658,756	5.7	20,726
June 30, 2014	1,778	44,823,611	603	3,011,383	28,073	568,952,296	7.9	20,267
June 30, 2013	1,808	43,247,667	554	4,861,626	26,898	527,140,068	7.9	19,598
June 30, 2012	1,679	37,855,250	636	5,344,239	25,644	488,754,027	7.1	19,059
June 30, 2011	1,595	37,100,217	554	6,897,899	24,601	456,243,016	7.1	18,546
June 30, 2010	1,667	35,089,579	517	8,712,630	23,560	426,040,698	6.6	18,083
June 30, 2009	1,340	25,402,811	476	28,773	22,410	399,663,749	6.8	17,834
Peace Officer / Firefighter								
June 30, 2018	153	\$ 7,002,504	81	\$ 2,573,694	3,387	\$ 122,539,883	3.7%	\$ 36,179
June 30, 2017	166	6,971,580	54	2,132,027	3,315	118,111,073	4.3	35,629
June 30, 2016	137	6,618,744	49	1,594,392	3,204	113,271,520	4.6	35,353
June 30, 2015	136	5,617,344	46	633,046	3,116	108,247,168	4.8	34,739
June 30, 2014	109	4,270,620	50	(145,769)	3,026	103,262,870	4.5	34,125
June 30, 2013	113	4,162,920	42	240,775	2,967	98,846,479	4.1	33,315
June 30, 2012	179	5,246,271	41	(177,568)	2,896	94,924,334	6.1	32,778
June 30, 2011	114	3,772,720	33	116,090	2,758	89,500,495	4.3	32,451
June 30, 2010	118	3,593,724	46	1,413,071	2,677	85,843,865	2.6	32,067
June 30, 2009	108	2,759,299	39	(518,134)	2,605	83,663,212	4.1	32,116
¹ Numbers are estimated, and include other internal transfers.								

<b>Public Employees' Retirement System</b> <b>Defined Benefit Retirement Plan</b> <b>Pension Solvency Test</b> <b>(In thousands)</b>							
Valuation Date	Pension Actuarial Accrued Liability For:			Pension Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets:		
	(1)  Active Member Contributions	(2)  Inactive Members	(3)  Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	1,458,830	9,147,818	3,026,385	9,056,662	100.0	83.1	—
June 30, 2015	1,475,852	8,762,863	3,099,214	8,931,160	100.0	85.1	—
June 30, 2014 <sup>1 2</sup>	1,486,335	8,264,683	3,196,741	7,731,438	100.0	75.6	—
June 30, 2013	1,479,538	7,514,255	2,952,088	6,510,749	100.0	67.0	—
June 30, 2012	1,459,943	7,057,967	2,911,034	6,530,421	100.0	71.8	—
June 30, 2011	1,421,967	6,657,517	2,839,563	6,762,149	100.0	80.2	—
June 30, 2010 <sup>1</sup>	1,388,029	6,268,461	2,715,182	6,469,832	100.0	81.1	—
June 30, 2009	1,315,924	5,914,959	2,471,203	6,108,528	100.0	81.0	—
June 30, 2008	1,242,288	5,606,402	2,305,592	7,210,772	100.0	100.0	15.7
June 30, 2007	1,203,007	5,282,132	2,177,185	6,739,004	100.0	100.0	11.7
<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 ratio of fair value of assets as of June 30, 2005							

# Actuarial Section

<b>Public Employees' Retirement System Defined Benefit Retirement Plan Postemployment Healthcare Solvency Test (In thousands)</b>							
Valuation Date	Postemployment Healthcare Actuarial Accrued Liability For:			Post-Employment Healthcare Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	—	5,393,537	2,342,920	7,411,330	100.0	100.0	86.1
June 30, 2015	—	5,159,283	2,151,451	7,242,299	100.0	100.0	96.8
June 30, 2014 <sup>1</sup>	—	5,455,114	2,494,499	6,913,160	100.0	100.0	58.5
June 30, 2013 <sup>1</sup>	—	5,298,380	2,748,498	5,651,877	100.0	100.0	12.9
June 30, 2012 <sup>1</sup>	—	5,026,080	2,837,337	5,301,609	100.0	100.0	9.7
June 30, 2011	—	4,812,845	3,008,658	5,051,625	100.0	100.0	7.9
June 30, 2010 <sup>1</sup>	—	4,581,806	3,179,014	4,687,632	100.0	100.0	3.3
June 30, 2009	—	4,232,394	2,644,891	4,134,450	100.0	97.7	—
June 30, 2008 <sup>1</sup>	—	4,166,270	2,567,589	3,829,334	100.0	91.9	—
June 30, 2007	—	3,684,906	2,223,703	3,161,956	100.0	85.8	—
<p>Healthcare liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).</p> <p><sup>1</sup> Change in Assumptions</p> <p><sup>2</sup> Change in Methods</p> <p><sup>3</sup> The pension and postemployment healthcare valuation assets were allocated using a ratio of fair value of assets as of June 30, 2005</p>							

<b>Public Employees' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience</b>					
<b>Change in Employer/State Contribution Rate Due to (Gains) and Losses in Actuarial 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 Total</b>				
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Health Claims	(1.75)%	(2.90)%	1.02%	(3.65)%	(0.85)%
Salary Experience	(0.37)	(0.42)	(0.35)	(0.32)	(0.19)
Investment Experience	1.12	1.36	1.40	0.45	(4.63)
Demographic Experience and Miscellaneous	(1.88)	(1.97)	0.13	0.34	(0.04)
Contribution Shortfall	0.25	0.04	—	—	0.67
(Gain) or Loss During Year From Experience	(2.63)	(3.89)	2.20	(3.18)	(5.04)
Assumption / Method Changes and EGWP	4.10	3.41	2.85	—	(13.46)
System Benefit Changes	—	—	—	—	—
Composite (Gain) or Loss During Year	1.47	(0.48)	5.05	(3.18)	(18.50)
Beginning Employer/State Contribution Rate	23.17	23.65	18.60	21.78	40.28
Ending Valuation Year Employer/State Contribution Rate	<u>24.64%</u>	<u>23.17%</u>	<u>23.65%</u>	<u>18.60%</u>	<u>21.78%</u>
Fiscal Year Employer/State Contribution Rate	24.93%	23.18%	22.64%	20.38%	21.78%
Fiscal Year for Which Rate Applies	FY21	FY20	FY19	FY18	FY17

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 FY16 employer/state contribution rate of 22.58%.

# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience						
Change in Employer/State Contribution Rate Due to (Gains) and Losses in Actuarial 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		
	2018	2017	2016	2018	2017	2016
Health Claims	N/A	N/A	N/A	(1.75)%	(2.90)%	1.02%
Salary Experience	(0.37)%	(0.42)%	(0.35)%	N/A	N/A	N/A
Investment Experience	0.63	0.75	0.77	0.49	0.61	0.63
Demographic Experience and Miscellaneous	(0.24)	(1.01)	0.13	(1.64)	(0.96)	N/A
Contribution Shortfall	0.17	0.18	—	(0.08)	(0.14)	—
(Gain) or Loss During Year From Experience	0.19	(0.50)	0.55	(2.82)	(3.39)	1.65
Assumption and Method Changes	1.98	—	1.92	2.12	3.41	0.93
System Benefit Changes	—	—	—	—	—	—
Composite (Gain) or Loss During Year	2.17	(0.50)	2.47	0.70	0.02	2.58
Beginning Employer/State Contribution Rate	18.21	18.71	16.24	4.96	4.94	2.36
Ending Valuation year Employer/State Contribution Rate	<u>20.38%</u>	<u>18.21%</u>	<u>18.71%</u>	<u>4.26%</u>	<u>4.96%</u>	<u>4.94%</u>
Fiscal Year Employer/State Contribution Rate	20.66%	18.29%	18.27%	4.27%	4.89%	4.37%
Fiscal Year for Which Rate Applies	FY21	FY20	FY19	FY21	FY20	FY19



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**State of Alaska**

**Public Employees' Retirement System**

**Defined Benefit Retirement Plan**

**Summary of Plan Provisions and Changes in Plan Provisions**

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## **1. Effective Date**

January 1, 1961, with amendments through June 30, 2017. Chapter 82, 1986 Session Laws of Alaska, created a two tier retirement system. Members who were first hired under PERS before July 1, 1986 (Tier 1) are eligible for different benefits than members hired after June 30, 1986 (Tier 2). Chapter 4, 1996 Session Laws of Alaska created a third tier for members who were first hired after June 30, 1996 (Tier 3). 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 Public Employees' 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 PERS funds.

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

## **3. Employers Included**

Currently there are 155 employers participating in PERS, including the State of Alaska and 154 political subdivisions and public organizations. Two additional political subdivisions participate in PERS for healthcare benefits only.

## **4. Membership**

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

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

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## 5. Credited Service

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

Members may claim other types of service, including:

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

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

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

At the election of certain PERS members, certain service may be credited in the same fashion as members in TRS.

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

## State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan Summary of Plan Provisions and Changes in Plan Provisions

### 6. Employer Contributions

PERS 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 percentage of payroll amount over a closed 25-year period starting June 30, 2014. Effective June 30, 2018, each future year's unfunded service liability is separately amortized on a level percent of pay basis over 25 years.

Employer rates cannot be less than the normal cost rate.

Pursuant to AS 39.35.255 effective July 1, 2008, each PERS employer will pay a simple uniform contribution rate of 22% of member payroll.

### 7. Additional State Contributions

Pursuant to AS 39.35.280 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 (22%) will be sufficient to pay the total contribution rate adopted by The Alaska Retirement Management Board.

### 8. Member Contributions

**Mandatory Contributions:** Peace Officer/Firefighter members are required to contribute 7.5% of their compensation; all Others contribute 6.75%. Those all Others who have elected to have their service calculated under TRS rules contribute 9.76% of their compensation. Members' contributions are deducted from gross wages before federal income taxes are withheld.

**Contributions for Claimed Service:** Member contributions are also required for most of the claimed service described above.

**Voluntary Contributions:** Members may voluntarily contribute up to 5% of their salary on an after-tax basis. Voluntary contributions are recorded in a separate account and are payable to the:

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

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

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

**Reinstatement of Contributions:** Refunded accounts and the corresponding PERS service may be reinstated upon reemployment in PERS 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, 1986 (Tier 1), and 60 or early retirement at age 55 if they were hired after July 1, 1986 (Tiers 2 & 3). Additionally, they must have at least:
  - i. five years of paid-up PERS service;
  - ii. 60 days of paid-up PERS service as employees of the legislature during each of the five legislative sessions and they were first hired by the legislature before May 30, 1987;
  - iii. 80 days of paid-up PERS service as employees of the legislature during each of the five legislative sessions and they were first hired by the legislature after May 29, 1987;
  - iv. two years of paid-up PERS service and they are vested in the Teachers' Retirement System (TRS); or
  - v. two years of paid-up PERS service and a minimum three years of TRS service to qualify for a public service benefit.
- b. Members may retire at any age when they have:
  - i. 20 paid-up years of PERS Peace Officer/Firefighter service; or
  - ii. 30 paid-up years of PERS "all other" or "elected official" service.

**Benefit Type:** Lifetime benefits are paid to members. Eligible members may receive normal, unreduced benefits when they (1) reach normal retirement age and complete the service required; or (2) satisfy the minimum service requirements under the "20 and out" or "30 and out" provisions. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Members may elect an early retirement or a joint and survivor option. Members who entered PERS prior to July 1, 1996 may also select a 66-2/3 last survivor option and a level income option. Under these options and early retirement, benefits are actuarially adjusted so that members receive the actuarial equivalents of their normal benefit amounts.

**Benefit Calculations:** Retirement benefits are calculated by multiplying the average monthly compensation (AMC) times credited PERS service times the percentage multiplier. The AMC is determined by averaging the salaries earned during the five highest (three highest for Peace Officer/Firefighter members or members hired prior to July 1, 1996) consecutive payroll years. Members must earn at least 115 days of credit in the last year worked to include it in the

## State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan Summary of Plan Provisions and Changes in Plan Provisions

AMC calculation. PERS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

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

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

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

### 10. Reemployment of Retired Members

Retirement and retiree healthcare benefits are suspended while retired members are reemployed under e PERS. During reemployment, members earn additional PERS service and contributions are withheld from their wages. A member who retired with a normal retirement benefit can elect to waive payment of PERS contributions. The waiver allows the member to continue receiving the retirement benefit during the period of reemployment. Members who elect the waiver option do not earn additional PERS service. The Waiver Option first became effective July 1, 2005 and applies to reemployment periods after that date. The Waiver Option is not available to members who retired early or under the Retirement Incentive Programs (RIPs). The Waiver Option is no longer available after June 30, 2009.

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

- a) forfeit the three years of incentive credits that they received;
- b) owe PERS 150% of the benefits that they received for state and political subdivision members, and 110% for school district employees, under the 1996-2000 RIP, which may include costs for health insurance, excluding amounts that they paid to participate for the 1986 and 1989 RIPs. Under prior RIPs, the penalty is 110% of the benefits received; and
- c) be charged 7% interest from the date that they are reemployed until their indebtedness is paid in full or they retire again. If the indebtedness is not completely paid, future benefits will be actuarially reduced for life.

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.

## State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan Summary of Plan Provisions and Changes in Plan Provisions

### 11. Postemployment Healthcare Benefits

Major medical benefits are provided to retirees and their surviving spouses by PERS for all employees hired before July 1, 1986 (Tier 1) and disabled retirees. Employees hired after June 30, 1986 (Tier 2) and their surviving spouses with five years of credited service (or ten years of credited service for those first hired after June 30, 1996 (Tier 3)) must pay the full monthly premium if they are under age sixty and will receive benefits paid by PERS if they are over age sixty. Tier 3 Members with between five and ten years of credited service must pay the full monthly premium regardless of their age. Tier 2 and Tier 3 Members with less than five years of credited service are not eligible for postemployment healthcare benefits. Tier 2 Members who are receiving a conditional benefit and are age eligible are eligible for postemployment healthcare benefits. In addition, Peace Officers and their surviving spouses with twenty-five years of Peace Officer membership service, Other employees and their surviving spouses with thirty years of membership service, and any disabled member receive benefits paid by PERS, regardless of their age or date of hire.

Medical, prescription drug, dental, vision and audio coverage is provided through the AlaskaCare Retiree Health Plan. Health plan provisions do not vary by retirement tier or age, except for Medicare coordination.

Surviving spouses continue coverage only if a pension payment form that provided survivor benefits was elected. Alternate payees (i.e. individuals who are the subject of a domestic relations order or DRO) are allowed to participate in the plan, but must pay the full cost.

Where premiums are required prior to age 60, the valuation bases this payment upon the age of the retiree.

Participants in the defined benefit plan are covered under the following benefit design:

Plan Feature	Amount
Deductible (single/family)	\$150 / \$450
Coinsurance - most services	20%
Outpatient surgery/testing	0%
Maximum Out-of-Pocket (single/family, excl. deductible)	\$800 / \$2,400
Rx Copays (generic/brand/mail-order), does not apply to OOP max	\$4 / \$8 / \$0
Lifetime Maximum	\$2,000,000

The plan coordinates with Medicare on a traditional Coordination of Benefits Method. Starting in 2019, the prescription drug coverage will be through a Medicare Part D EGWP arrangement.

### 12. Disability Benefits

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

**Occupational Disability:** Members are not required to satisfy age or service requirements to be eligible for occupational disability. Monthly benefits are equal to 40% of their gross monthly compensation on the date of their disability. Members on occupational disability continue to earn PERS service until they become eligible for normal

## State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan Summary of Plan Provisions and Changes in Plan Provisions

retirement. Peace Officer/Firefighter members may elect to retain the disability benefit formula for the calculation of their normal retirement benefits.

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

### 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 occupational and non-occupational death provisions, the designated beneficiary receives the lump sum benefit described below.

**Occupational Death:** When an active member (vested or non-vested) dies from occupational causes, a monthly survivor's pension may be paid to the spouse. The pension equals 40% of the member's gross monthly compensation on the date of death or disability, if earlier. If there is no spouse, the pension may be paid to the member's dependent children. On the member's normal retirement date, the benefit converts to a normal retirement benefit. The normal benefit is based on the member's salary on the date of death and service, including service accumulated from the date of the member's death to the normal retirement date. Survivors of Peace Officer/Firefighter members receive the greater of 50% of the member's gross monthly compensation on the date of death or disability, or 75% of the member's monthly normal retirement benefit (including service projected to Normal Retirement). If the member is unmarried with no children, a refund of contributions is payable to the estate.

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

**Nonoccupational Death:** When a vested member dies from non-occupational causes, the surviving spouse may elect to receive a monthly 50% joint and survivor benefit or a lump sum benefit. The monthly benefit is calculated on the member's average monthly compensation and PERS service at the time of termination or death.

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

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

### 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

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

Ad-hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who first entered PERS before July 1, 1986 (Tier 1) if the CPI increases and the funded 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 or \$50, whichever is more. The following benefit recipients are eligible:

- a. members who first entered PERS before July 1, 1986 (Tier 1) and their survivors;
- b. members who first entered PERS after June 30, 1986 (Tiers 2 & 3) and their survivors if they are at least age 65; and
- c. all disabled members.

## **16. Changes in Benefit Provisions Valued Since the Prior Valuation**

The PERS medical benefit provisions were changed since the prior valuation to reflect the implementation of EGWP as of January 1, 2019.





August 9, 2019

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

## **Certification of Actuarial Valuation**

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

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan as of June 30, 2018 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2018. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under PERS DCR 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 is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS DCR as of June 30, 2018.

PERS DCR is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for PERS DCR is to pay required contributions that remain level as a percent of PERS 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 PERS DCR compensation over a closed layered 25-year period. This objective is currently being met and is projected to continue to be met as required by the Alaska state statutes. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the overall funded status is expected to remain at or above 100%.

The Board and staff of the State of Alaska may use this report for the review of the operations of PERS DCR. Use of this report, for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Buck to review any statement you wish to make on the results contained in this report. Buck will not accept any liability for any such statement made without the review by Buck.

# Actuarial Section

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Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. In particular, retiree group benefits models necessarily rely on the use of approximations and estimates and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation.

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 for the period July 1, 2013 to June 30, 2017. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2018 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claims cost rates effective June 30, 2018 to better reflect expected future healthcare experience. Based on recent experience, the health care cost trend assumptions were also updated. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 5.2 and 5.3.

Governmental Accounting Standards Board (GASB) Statement No. 74 (GASB 74) was effective for PERS DCR beginning with fiscal year ending June 30, 2017, and GASB 75 was effective beginning with fiscal year ending June 30, 2018. Separate GASB 74 and GASB 75 reports have been prepared. Section 3 of this report contains accounting information previously disclosed under GASB 25 for fiscal years 2007 through 2013 and accounting information previously disclosed under GASB 43 for fiscal years 2007 through 2016.

This report was prepared under my supervision and in accordance with all applicable Actuarial Standards of Practice. I am a Fellow of the Society of Actuaries, an Enrolled Actuary, a Fellow of the Conference of Consulting Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

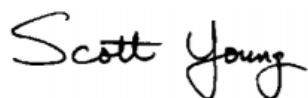
I am available to discuss this report with you at your convenience. I can be reached at 602-803-6174.

Respectfully submitted,



David J. Kershner, FSA, EA, MAAA, FCA  
Principal  
Buck

The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms his qualification to render opinions in such matters in accordance with the Qualification Standards of the American Academy of Actuaries.



Scott Young, FSA, EA, MAAA  
Director  
Buck

## State of Alaska Public Employees' Retirement System Defined Contribution Retirement Plan Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006, and was modified as part of the experience study for the period July 1, 2013 to June 30, 2017. 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 Normal Cost

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method. Any funding surplus or unfunded actuarial accrued liability is amortized over 25 years as a level percentage of expected payroll. However, in keeping with GASB requirements in effect when the plan was adopted, the net amortization period will not exceed 30 years. Under the new accounting standards (GASB 74 and 75), the GASB requirements will not directly control amortization periods used for funding of the 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 and 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 was 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

## State of Alaska Public Employees' Retirement System Defined Contribution Retirement Plan Description of Actuarial Methods and Valuation Procedures

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 and Prescription Drug Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 6.2 of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2018.

Due to the lack of experience for the DCR retiree medical plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2018 for the Defined Benefit (DB) retiree medical plan covering TRS and PERS. The DB rates were used 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, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, projected FY19 claims costs were reduced 2.1% for medical claims, and 10.4% for prescription drugs. In addition, to account for the difference in Medicare coordination, projected FY19 medical claims costs for Medicare eligible retirees were further reduced 29.3%. The medical and prescription drug percentages mentioned above were reduced 0.2% in each future year for the DCR medical benefits to reflect the fact that the medical benefit to be offered to DCR members will have annual indexing of member cost sharing features such as deductibles and out-of-pocket amounts.

No implicit subsidies are assumed. Employees projected to retire with 30 years of service (25 years of service for Peace/Fire) prior to Medicare are valued with commencement deferred to Medicare eligibility because those members will be required to pay the full plan premium prior to Medicare. Explicit subsidies for disabled and normal retirement are determined using the plan-defined percentages of age-related total projected plan costs, again with no implicit subsidy assumed.

The State transitioned to an Employer Group Waiver Program (EGWP) for DCR participants effective January 1, 2019. In the prior valuation, the impact of transitioning to the EGWP was valued by increasing the RDS subsidy offset in 2019 by 60% to reflect estimated Medicare reimbursements under the EGWP arrangement. For this year's valuation, the estimated 2019 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates).

### 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 these provisions.

Because the State plan is retiree-only, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. The adopted DCR plan does not place lifetime limits on benefits, but does restrict dependent child coverage.

The Plan will be subject to the high cost plan excise tax (Cadillac tax) and the value of the Health Reimbursement Account must be included along with projected plan costs. Based upon guidance available at the valuation date, Buck estimated the tax based upon a blend of pre and post-Medicare projected costs and enrollment projections.

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**State of Alaska**

**Public Employees' Retirement System**

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**Description of Actuarial Methods and Valuation Procedures**

- A blended test compares a weighted average per capita cost (based upon proportions of pre/post Medicare eligible enrollments) to the tax cost thresholds in each projection year. Projected enrollment was based upon the current enrollment data provided by Aetna, and valuation headcount projections for future years.
- We included administrative fees and applied Retiree Drug Subsidy / EGWP reimbursements to the Medicare rates.

We assumed claim costs would increase according to valuation trend assumptions from the June 30, 2018 valuation, and that the tax cost thresholds would increase at 2.25% (the CPI assumption of 2.50% less 0.25% to estimate the impact of using the chained CPI as required by the Tax Cut and Jobs Act passed in December 2017). The first year increased at 3.25% to reflect the additional 1.0% over inflation assumption.

We determined the impact to be approximately \$1.6M of the projected June 30, 2018 healthcare actuarial accrued liability for the DCR plan.

The Tax Cuts and Jobs Act passed in December 2017 included the elimination of the individual mandate penalty and changed the inflation measure for purposes of determining the limits for the High Cost Excise Tax to use chained CPI. It is our understanding the law does not directly impact other provisions of the ACA. While the nullification of the ACA's individual mandate penalty does not directly impact employer group health plans, it could contribute to the destabilization of the individual market and increase the number of uninsured. Such destabilization could translate to increased costs for employers. We have considered this when setting our healthcare cost trend assumptions and will continue to monitor this issue.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

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

The actuarial cost method for the retiree healthcare plan was changed from the Entry Age Level Dollar method to the Entry Age Level Percent of Pay method. There were no other changes in the asset or valuation methods since the prior valuation.

# Actuarial Section

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

The demographic and economic assumptions used in the June 30, 2018 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017.

- |   |  |
|---|--|
| 1. Investment Return  | 7.38% per year, net of investment expenses.  |
| 2. Salary Scale   | Salary scale rates based upon the 2013-2017 actual experience. (See Table 1).<br>Inflation – 2.50% per year. Productivity – 0.25% per year.  |
| 3. Payroll Growth   | 2.75% 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 2.50% annually.  |
| 5. Mortality<br>(Pre-termination)                             | Mortality rates based upon the 2013-2017 actual experience.<br><br>100% (male and female) of RP-2014 employee table with MP-2017 generational improvement.   |
| 6. Mortality<br>(Post-termination)                            | Mortality rates based upon the 2013-2017 actual experience.<br><br>91% of male and 96% of female rates of RP-2014 healthy annuitant table with MP-2017 generational improvement.   |
| 7. Turnover   | Select and ultimate rates based upon the 2013-2017 actual experience. (See Table 2).   |
| 8. Disability   | Incidence rates based upon the 2013-2017 actual experience. (See Table 3).<br><br>Post-disability mortality in accordance with the RP-2014 disabled table with MP-2017 generational improvement.<br><br>Disabilities are assumed to be occupational 75% of the time for Peace Officer/Firefighters, 40% of the time for Others.<br><br>For Peace Officer/Firefighters, members are assumed to take the monthly annuity 100% of the time. |
| 9. Retirement   | Retirement rates based upon the 2013-2017 actual experience. (See Table 4).  |
| 10. Spouse Age Difference                                     | Males are assumed to be three years older than their wives. Females are assumed to be two years younger than husbands.   |
| 11. Percent Married for<br>Occupational Death &<br>Disability | For Others, 75% of male members and 70% female members are assumed to be married. For Peace Officer/Firefighters, 85% of male members and 60% of female members are assumed to be married.   |

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

12. Dependent Spouse Medical Coverage Election Applies to members who do not have dual medical coverage. For Others, 65% of male members and 60% female members are assumed to be married and cover a dependent spouse. For Peace Officer/Firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse.
13. Part-Time Status Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.75 years of credited service per year for Other members.
14. Peace Officer/Firefighter Occupational Disability Retirement Benefit Commencement The occupational disability retirement benefit is assumed to be first payable from the member's DC account and the retirement benefit payable from the occupational death and disability trust will commence five years later.
15. Per Capita Claims Cost Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY19 medical and prescription drugs are shown below:

	<u>Medical</u>	<u>Prescription Drugs</u>
Pre-Medicare	\$ 13,535	\$ 3,360
Medicare Parts A & B	1,468	3,764
Medicare Part D - RDS	N/A	527
Medicare Part D - EGWP	N/A	1,039

Members are assumed to attain Medicare eligibility at age 65. The EGWP cost shown above is for calendar year 2019. All other costs are for the 2019 fiscal year (July 1, 2018 – June 30, 2019).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

16. Third Party Administrator Fees \$300 per person per year; assumed trend rate of 4.5% per year.
17. 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:
- 0.979 for the pre-Medicare plan.
  - 0.686 for both the Medicare medical plan and Medicare coordination method (2.1% reduction for the medical plan and 29.3% reduction for the coordination method).
  - 0.896 for the prescription drug plan.



# Actuarial Section

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

18. Active Data Adjustment To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.
19. Administrative Expenses Beginning with the June 30, 2018 valuation, the Normal Cost is increased for administrative expenses expected to be paid from plan assets during the year. The amounts included in the June 30, 2018 Normal Cost, which are based on the average of actual administrative expenses during the last two fiscal years, are \$9,300 for occupational death & disability and \$7,600 for retiree medical.
20. Health Cost Trend The table below shows the rates used to project the cost from the shown fiscal year to the next fiscal year. For example, 7.5% is applied to the FY19 pre-Medicare medical claims cost to get the FY20 medical claims cost.

<u>Fiscal year</u>	<u>Medical pre-65</u>	<u>Medical post-65</u>	<u>Prescription Drugs/EGWP</u>	<u>RDS</u>
2019	7.5%	5.5%	8.5%	4.7%
2020	7.0	5.4	8.0	4.7
2021	6.5	5.4	7.5	4.6
2022	6.3	5.4	7.1	4.6
2023	6.1	5.4	6.8	4.6
2024	5.9	5.4	6.4	4.6
2025	5.8	5.4	6.1	4.6
2026	5.6	5.4	5.7	4.6
2027-2040	5.4	5.4	5.4	4.5
2041	5.3	5.3	5.3	4.5
2042	5.2	5.2	5.2	4.5
2043	5.1	5.1	5.1	4.5
2044	5.1	5.1	5.1	4.5
2045	5.0	5.0	5.0	4.5
2046	4.9	4.9	4.9	4.5
2047	4.8	4.8	4.8	4.5
2048	4.7	4.7	4.7	4.5
2049	4.6	4.6	4.6	4.5
2050+	4.5	4.5	4.5	4.5

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 estimates trend amounts projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska. The model was updated this year to use the newest version and incorporate recent trend survey information, which generated the updated trend rates shown above.



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The table below shows the amount each trend rate shown on the previous page was increased by the amount for the Cadillac Tax:

<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>	<u>Fiscal year</u>	<u>Pre-65</u>	<u>Post-65</u>
2019-2044	—%	—%	2077	0.20%	0.50%
2045	—	0.12	2078	0.20	0.49
2046	—	0.29	2079	0.19	0.48
2047	—	0.27	2080	0.19	0.46
2048	—	0.25	2081	0.18	0.45
2049	—	0.25	2082	0.18	0.44
2050	—	0.20	2083	0.18	0.43
2051	—	0.20	2084	0.17	0.42
2052	0.06	0.16	2085	0.17	0.41
2053	0.06	0.16	2086	0.16	0.40
2054	0.06	0.15	2087	0.16	0.39
2055	0.06	0.15	2088	0.16	0.38
2056	0.05	0.14	2089	0.15	0.37
2057	0.06	0.14	2090	0.15	0.37
2058	0.05	0.13	2091	0.15	0.36
2059	0.05	0.12	2092	0.15	0.35
2060	0.05	0.15	2093	0.14	0.34
2061	0.05	0.61	2094	0.14	0.33
2062	0.05	0.59	2095	0.14	0.33
2063	0.05	0.61	2096	0.13	0.32
2064	0.05	0.64	2097	0.13	0.31
2065	0.05	0.65	2098	0.13	0.30
2066	0.05	0.64	2099	0.13	0.30
2067	0.14	0.64	2100	0.12	0.29
2068	0.24	0.63	2101	0.12	0.28
2069	0.24	0.61	2102	0.12	0.28
2070	0.23	0.60	2103	0.12	0.27
2071	0.23	0.58	2104	0.11	0.27
2072	0.22	0.57	2105	0.11	0.26
2073	0.22	0.55	2106	0.11	0.25
2074	0.21	0.54	2107	0.11	0.25
2075	0.21	0.53	2108	0.10	0.24
2076	0.20	0.51	2109	0.10	0.24

## 21. 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	2.5	1.5
65–74	3.0	2.0
75–84	2.0	(0.5)
85–94	0.3	(2.5)
95 +	—	—

**State of Alaska**  
**Public Employees' Retirement System**  
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**Summary of Actuarial Assumptions and Changes in Assumptions**

22. Retiree Medical  
Participation

Decrement due to disability		Decrement due to retirement		
Age	Percent participation	Age	Percent participation *	
<56	75.0%	55	50.0%	
56	77.5	56	55.0	
57	80.0	57	60.0	
58	82.5	58	65.0	
59	85.0	59	70.0	
60	87.5	60	75.0	
61	90.0	61	80.0	
62	92.5	62	85.0	
63	95.0	63	90.0	
64	97.5	64	95.0	
65+	100.0	65+	Years of Service	
			< 15	75.0%
			15-19	80.0
			20-24	85.0
			25-29	90.0
			30+	95.0

\* Participation assumption is a combination of (i) the service-based rates for retirement from employment at age 65+ and (ii) the age-based rates for retirement from employment before age 65. These 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. This assumption is based on observed trends in participation from a range of other plans.

23. Imputed Data

Data changes from the prior year which are deemed to have immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data. Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

24. Changes in Assumptions  
Since the Prior Valuation

Effective for the June 30, 2018 valuation, the Board adopted the changes to the demographic and economic assumptions recommended by the actuary, based on the results of an experience study performed on the population experience from July 1, 2013 to June 30, 2017. The changes in assumptions were adopted at the January 2019 Board meeting.

**State of Alaska**  
**Public Employees' Retirement System**  
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**Summary of Actuarial Assumptions and Changes in Assumptions**

Table 1  
Alaska PERS DCR Plan  
Salary Scale

Peace Officer/Firefighter:		Others:	
Years of Service	Percent Increase	Years of Service	Percent Increase
0	7.75%	0	6.75%
1	7.25	1	6.25
2	6.75	2	5.75
3	6.25	3	5.25
4	5.75	4	4.75
5	5.25	5	4.25
6	4.75	6	3.75
7	4.25	7	3.65
8	3.75	8	3.55
9	3.65	9	3.45
10	3.55	10	3.35
11	3.45	11	3.25
12	3.35	12	3.15
13	3.25	13	3.05
14	3.15	14	2.95
15	3.05	15	2.85
16	2.95	16	2.75
17	2.85	17	2.75
18	2.75	18	2.75
19	2.75	19	2.75
20 +	2.75	20 +	2.75

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

**Table 2**  
**Alaska PERS DCR Plan**  
**Turnover Assumptions**

**Peace Officer/Firefighter:**

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

<b>Years of Service</b>	<b>Male</b>	<b>Female</b>
0	18.9%	20.6%
1	14.2	16.5
2	10.5	13.8
3	9.5	12.4
4	8.4	11.3

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

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	5.5200%	11.9700%	45	5.7100%	11.0300%
21	5.5200	11.9700	46	5.6400	10.9800
22	5.5200	11.9700	47	5.5700	10.9200
23	5.6500	11.9700	48	6.0100	10.8400
24	5.7800	11.9700	49	6.4500	10.7500
25	5.9100	11.9700	50	6.8900	10.6700
26	6.0400	11.9700	51	7.3200	10.5800
27	6.1600	11.9700	52	7.7600	10.5000
28	6.1600	11.9400	53	7.9700	10.6600
29	6.1500	11.9100	54	8.1800	10.8200
30	6.1400	11.8800	55	8.3800	10.9800
31	6.1300	11.8400	56	8.5900	11.1500
32	6.1200	11.8100	57	8.8000	11.3100
33	6.1100	11.7900	58	9.0300	11.4700
34	6.0900	11.7700	59	9.2500	11.6300
35	6.0800	11.7500	60	9.4800	11.7900
36	6.0700	11.7200	61	9.7100	11.9500
37	6.0500	11.7000	62	9.9400	12.1200
38	6.0300	11.6000	63	12.3700	12.2800
39	6.0000	11.5000	64	14.1000	12.4400
40	5.9800	11.4000	65+	17.2500	12.6000
41	5.9500	11.3000			
42	5.9030	11.2000			
43	5.8500	11.1400			
44	5.7800	11.0900			

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

**Table 2**  
**Alaska PERS DCR Plan**  
**Turnover Assumptions**

**Other:**

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

<b>Years of Service</b>	<b>Male</b>	<b>Female</b>
0	24.4%	28.0%
1	21.0	22.3
2	16.8	17.9
3	13.4	14.3
4	9.5	12.3

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

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	13.7100%	16.5000%	45	7.7200%	7.9000%
21	13.7100	16.5000	46	7.6000	7.5800
22	13.7100	16.5000	47	7.4800	7.2600
23	13.7100	16.5100	48	7.6800	7.2300
24	13.7100	16.5100	49	7.8700	7.2000
25	13.7100	16.5200	50	8.0700	7.1700
26	13.7100	16.5300	51	8.2600	7.1400
27	13.7100	16.5400	52	8.4600	7.1100
28	13.4100	15.9400	53	8.4600	7.2600
29	13.1200	15.3400	54	8.4700	7.4200
30	12.8200	14.7500	55	8.4800	7.5700
31	12.5200	14.1500	56	8.4800	7.7200
32	12.2200	13.5500	57	8.4900	7.8800
33	11.6500	12.9000	58	8.7700	8.1500
34	11.0900	12.2400	59	9.0500	8.4200
35	10.5200	11.5800	60	9.3200	8.6900
36	9.9500	10.9200	61	9.6000	8.9600
37	9.3900	10.2600	62	9.8800	9.2400
38	9.1200	9.9800	63	10.2800	10.5100
39	8.8600	9.7000	64	10.6800	11.7800
40	8.6000	9.4200	65+	11.0800	13.0500
41	8.3200	9.1400			
42	8.0700	8.8600			
43	7.9500	8.5400			
44	7.8300	8.2200			

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

**Table 3**  
**Alaska PERS DCR Plan**  
**Disability Table**

<b>Age</b>	<b>Peace Officer/ Firefighter Rate</b>		<b>Other Member Rate</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
20	0.1790%	0.0112%	0.0327%	0.0376%
21	0.0179	0.0122	0.0327	0.0376
22	0.0179	0.0112	0.0327	0.0376
23	0.0244	0.0153	0.0360	0.0400
24	0.0310	0.0194	0.0392	0.0424
25	0.0374	0.0234	0.0425	0.0448
26	0.0440	0.0275	0.0456	0.0472
27	0.0505	0.0316	0.0489	0.0496
28	0.0526	0.0329	0.0501	0.0510
29	0.0548	0.0343	0.0513	0.0524
30	0.0570	0.0356	0.0524	0.0538
31	0.0591	0.0370	0.0536	0.0554
32	0.0612	0.0383	0.0548	0.0568
33	0.0634	0.0397	0.0566	0.0586
34	0.0657	0.0411	0.0584	0.0606
35	0.0679	0.0425	0.0602	0.0624
36	0.0702	0.0439	0.0620	0.0644
37	0.0724	0.0453	0.0638	0.0662
38	0.0757	0.0473	0.0669	0.0696
39	0.0789	0.0493	0.0701	0.0728
40	0.0822	0.0514	0.0734	0.0762
41	0.0854	0.0534	0.0765	0.0794
42	0.0886	0.0554	0.0797	0.0826
43	0.0977	0.0611	0.0879	0.0908
44	0.1066	0.0667	0.0962	0.0990
45	0.1157	0.0723	0.1043	0.1072
46	0.1247	0.0780	0.1125	0.1154
47	0.1337	0.0836	0.1208	0.1236
48	0.1462	0.0914	0.1329	0.1360
49	0.1588	0.0993	0.1451	0.1484
50	0.1714	0.1071	0.1572	0.1608
51	0.1839	0.1150	0.1694	0.1734
52	0.1965	0.1228	0.1815	0.1858
53	0.2294	0.1434	0.2132	0.2168
54	0.2624	0.1640	0.2450	0.2478

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

**Table 4**  
**Alaska PERS DCR Plan**  
**Retirement Table**

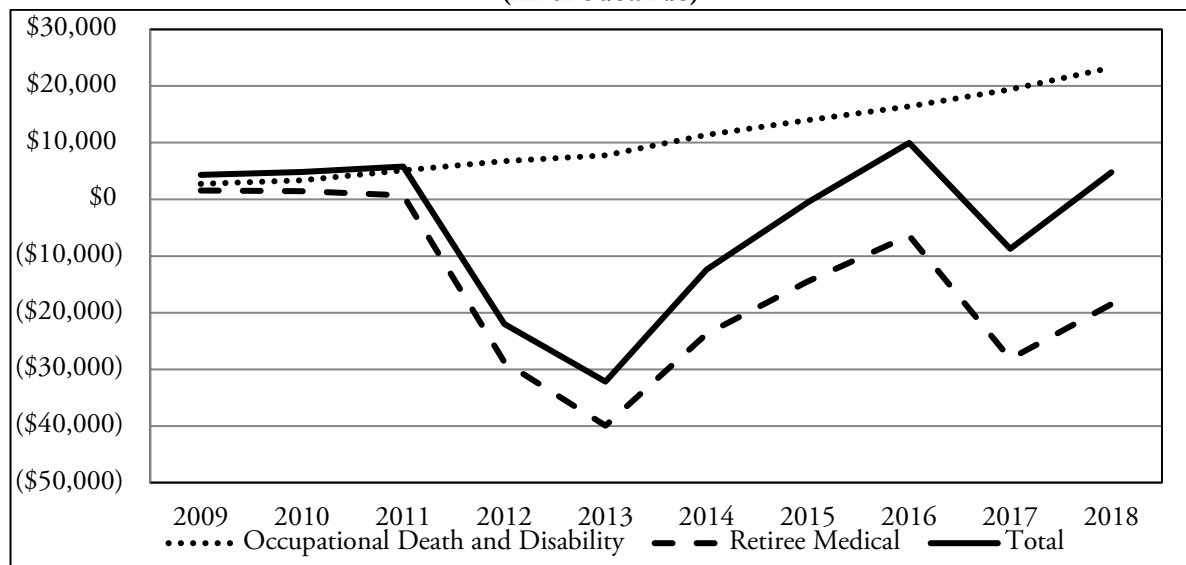
Age	Unisex Rate
≤ 50	2.00%
51	2.00
52	2.00
53	2.00
54	2.00
55	3.00
56	3.00
57	3.00
58	3.00
59	3.00
60	5.00
61	5.00
62	10.00
63	5.00
64	5.00
65	25.00
66	25.00
67	25.00
68	20.00
69	20.00
70	100.00

# Actuarial Section

**Public Employees' Retirement System  
Defined Contribution Retirement Plan  
Occupational Death and Disability and Retiree Medical Benefits  
Funding Excess/(Unfunded Liability)  
(In thousands)**

Actuarial Valuation Year Ended June 30	Occupational Death and Disability	Retiree Medical	Total Funding Excess/ (Unfunded Liability)	Funded Ratio
2009	\$ 2,735	\$ 1,562	\$ 4,297	199.6%
2010	3,386	1,460	4,846	171.1
2011	5,100	707	5,807	143.8
2012	6,730	(28,736)	(22,006)	53.1
2013	7,770	(39,946)	(32,176)	49.6
2014	11,368	(23,751)	(12,383)	77.0
2015	13,965	(14,495)	(530)	99.2
2016	16,413	(6,438)	9,975	112.9
2017	19,404	(28,144)	(8,740)	92.5
2018	23,248	(18,501)	4,747	103.8

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





Public Employees’ Retirement System Defined Contribution Retirement Plan Occupational Death and Disability and Retiree Medical Benefits Employer Contribution Rates						
Fiscal Year	Actuarial Valuation Year Ended June 30	Actuarially Determined				Adopted
		Occupational Death and Disability				
		Peace Officer/ Firefighter	All Others			
2012	2009	0.97%	0.11%	0.51%	1.59%	1.59%
2013	2010	0.99	0.14	0.48	1.61	1.61
2014	2011	1.14	0.20	0.48	1.74	1.74
2015	2012	1.06	0.22	1.66	2.94	2.94
2016	2013	1.05	0.22	1.68	2.95	2.95
2017	2014	0.49	0.17	1.18	1.84	1.84
2018	2015	0.43	0.16	1.03	1.62	1.62
2019	2016	0.76	0.26	0.94	1.96	1.96
2020	2017	0.72	0.26	1.32	2.30	2.30
2021	2108	0.70	0.31	1.27	2.28	2.28
Valuations are used to set contribution rates in future years.						

<b>Public Employees' Retirement System                      Defined Contribution Retirement Plan                      Occupational Death and Disability and Retiree Medical Benefits                      Schedule of Active Member Valuation Data</b>					
<b>Valuation Date</b>	<b>Number</b>	<b>Annual Earnings (In thousands)</b>	<b>Annual Average Earnings</b>	<b>Percent Increase/ (Decrease) in Average Earnings</b>	<b>Number of Participating Employers</b>
June 30, 2018	20,378	\$ 1,209,152	\$ 59,336	2.3%	155
June 30, 2017	19,171	1,112,398	58,025	1.5	157
June 30, 2016	18,215	1,041,437	57,175	3.4	157
June 30, 2015	17,098	945,496	55,299	1.9	159
June 30, 2014	15,800	857,150	54,250	3.7	159
June 30, 2013	14,316	748,658	52,295	4.7	159
June 30, 2012	12,597	629,128	49,943	4.5	160
June 30, 2011	10,965	524,088	47,796	4.8	160
June 30, 2010	9,232	421,187	45,622	5.4	160
June 30, 2009	7,256	314,118	43,291	7.2	160
Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.					

<b>Public Employees' Retirement System Defined Contribution Retirement Plan Occupational Death and Disability Solvency Test (In thousands)</b>							
Valuation Date	Occupational Death and Disability Actuarial Accrued Liability For:			Occupational Death and Disability Valuation Assets	Portion of Actuarial Accrued Liability Covered by Assets:		
	(1)  Active Member Contributions	(2)  Inactive Members	(3)  Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	\$ —	\$ —	\$ 6,763	\$ 23,176	100.0%	100.0%	100.0%
June 30, 2015	—	—	5,049	19,014	100.0	100.0	100.0
June 30, 2014 <sup>1</sup>	—	—	3,627	14,995	100.0	100.0	100.0
June 30, 2013	—	—	3,603	11,373	100.0	100.0	100.0
June 30, 2012	—	—	2,412	9,142	100.0	100.0	100.0
June 30, 2011	—	—	1,949	7,049	100.0	100.0	100.0
June 30, 2010 <sup>1</sup>	—	—	853	4,801	100.0	100.0	100.0
June 30, 2009 <sup>1</sup>	—	—	403	3,138	100.0	100.0	100.0
June 30, 2008	—	—	242	1,288	100.0	100.0	100.0
June 30, 2007	—	—	48	188	100.0	100.0	100.0
<sup>1</sup> Change in Assumptions							

# Actuarial Section

<b>Public Employees' Retirement System Defined Contribution Retirement Plan Retiree Medical Solvency Test (In thousands)</b>							
Valuation Date	Retiree Medical Actuarial Accrued Liability For:			Retiree Medical Valuation Assets	Portion of Actuarial Accrued Liability Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	\$ —	\$ —	\$ 70,289	\$ 63,851	100.0%	100.0%	90.8%
June 30, 2015	—	—	58,683	44,188	100.0	100.0	75.3
June 30, 2014 <sup>1</sup>	—	—	50,217	26,466	100.0	100.0	52.7
June 30, 2013	—	—	60,282	20,336	100.0	100.0	33.7
June 30, 2012 <sup>1</sup>	—	—	44,509	15,773	100.0	100.0	35.4
June 30, 2011	—	—	11,302	12,009	100.0	100.0	100.0
June 30, 2010 <sup>1</sup>	—	—	7,185	8,767	100.0	100.0	100.0
June 30, 2009 <sup>1</sup>	—	—	3,913	5,475	100.0	100.0	100.0
June 30, 2008 <sup>1</sup>	—	—	1,776	2,719	100.0	100.0	100.0
June 30, 2007	—	—	711	1,067	100.0	100.0	100.0
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							

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**State of Alaska**  
**Public Employees' 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, 2018.

## **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 155 employers participating in PERS DCR, including the State of Alaska, and 154 political subdivisions and public 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 employees of the State of Alaska, participating political subdivisions or public organizations. An employee must be regularly scheduled to work 30 or more hours per week to be considered full-time by the PERS. An employee must be regularly scheduled to work 15 or more hours per week but less than 30 hours to be considered a part-time employee for PERS purposes.
- Elected state officials.
- Elected municipal officials who are compensated and receive at least \$2,001.00 per month.

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

## **5. Member Contributions**

Other than the member-paid premiums discussed later in this section, there are no member contributions for the occupational death & disability and retiree medical benefits.

**State of Alaska**  
**Public Employees' Retirement System**  
**Defined Contribution Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

## 6. Retiree Medical Benefits

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal retirement eligibility is the earlier of a) 25 years of service as a peace officer or firefighter and 30 years of service for any other employee or b) Medicare eligible and 10 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's and any covered dependent premium is 100% until the member is Medicare eligible. Upon the member's Medicare-eligibility, the required contribution will follow the service-based schedule shown below.
- 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 following is a summary of the medical benefit design adopted in July 2016. The plan description below is used for valuation purposes and indicates participant cost-sharing. Please refer to the benefit handbook for more details.

<b>Plan Design Feature</b>	<b>In-Network<sup>(1)</sup></b>	<b>Out-of-Network<sup>(1)(2)</sup></b>
Deductible (single/family)	\$300 / \$600	\$300 / \$600
Medical services (participant share)	20%	40%
Emergency Room Copay (non-emergent use)	\$100	\$100
Medical Out-of-Pocket Maximum (single/family, after deductible)	\$1,200 / \$2,400	\$2,400 / \$4,800
Medicare Coordination	Exclusion	Exclusion
Pharmacy	No Deductible	No Deductible
Retail Generic (per 30-day fill)	20% \$10 min / \$50 max	40%
Retail Non-Formulary Brand (per 30-day fill)	25% \$25 min / \$75 max	
Retail Formulary Brand (per 30-day fill)	35% \$80 min / \$150 max	
Mail-Order Generic	\$20 copay	40%
Mail-Order Non-Formulary Brand	\$50 copay	
Mail-Order Formulary Brand	\$100 copay	
Pharmacy Out-of-Pocket Max (single/family)	\$1,000 / \$2,000	\$1,000 / \$2,000
Medicare Pharmacy Arrangement	Retiree Drug Subsidy / Employer Group Waiver Plan Effective 1/1/2019	
Wellness/Preventative	100%, Not subject to deductible	

<sup>(1)</sup> Assumed to increase annually to mitigate impact of healthcare cost trend

<sup>(2)</sup> OON applies only to non-Medicare eligible participants.

**State of Alaska**  
**Public Employees' Retirement System**  
**Defined Contribution Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

- Buck used its manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the adopted DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree medical plan value to the DB retiree medical plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits to estimate corresponding values for the adopted DCR retiree medical plan design. These factors are noted in Section 5.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. In the prior valuation, the RDS subsidy offset in 2019 was increased by 60% to reflect estimated Medicare reimbursements under the Employer Group Waiver Plan (EGWP) arrangement. For this year's valuation, the estimated 2019 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates). We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost so no further adjustment was needed for the DCR retiree medical plan. The medical network differential is reflected in the relative plan value adjustments.
- The retiree medical plan's coverage is supplemental to Medicare. Medicare coordination is described in the 2018 DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage will be through a Medicare Part D EGWP arrangement.
- The premium for Medicare-eligible retirees will be based on the member's years of service. The percentage of premium paid by the member is as follows:

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

- The premium for dependents who are not eligible for Medicare aligns with the member's subsidy. While a member is not Medicare-eligible, premiums are 100% of the estimated cost.
- Members have a separate defined contribution Health Reimbursement Arrangement account, which is not reflected in this valuation, that can be used to pay for premiums or other medical expenses.
- For valuation purposes, retiree premiums were assumed to equal the percentages outlined in the table above times the age-related plan costs. Future premiums calculated and charged to DCR participants will need to be determined reflecting any appropriate adjustments to the defined benefit (DB) plan data because current DB premiums were determined using information based upon enrollment with dual coverage members.
- Coverage will continue for surviving spouses of covered retired members.

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**State of Alaska**  
**Public Employees' Retirement System**  
**Defined Contribution Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

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## 7. Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- For Peace Officer and Firefighters there is a Disability Benefit Adjustment such that:
  - The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year or 9%, whichever is less.
  - At the time the disabled member retires, the retirement benefit will be increased by a percentage equal to the total cumulative percentage that has been applied to the disability benefit. Monthly annuity payments are made from the member's contribution balance until the fund is exhausted, at which the plan pays all remaining payments.
- For Others, there is no increase in the occupational disability benefit after commencement.
- 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 for Others members or 25 years of service for Peace Officer/Firefighter members.
- Peace Officer/Firefighter members may select the defined contribution account or the monthly benefit payable as if they were retiring under Tier 3 (service continues during disability, final average salary is as of date of disability).
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

## 8. Occupational Death Benefits

- Benefit is 40% of salary for Others members and 50% of salary for Peace Officer/Firefighter members.
- 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 PERS benefits for at least 5 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 subsidized retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% of the estimated cost until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.



**State of Alaska**  
**Public Employees' Retirement System**  
**Defined Contribution Retirement Plan**  
**Summary of Plan Provisions and Changes in Plan Provisions**

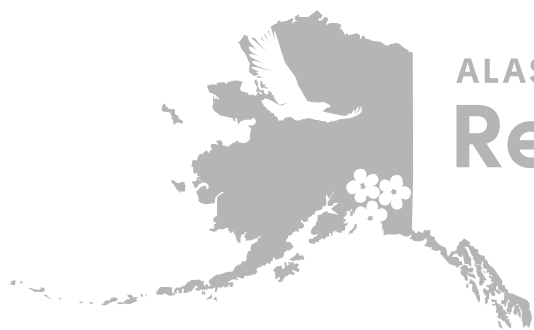
**9. Changes Since the Prior Valuation**

- There have been no changes in PERS DCR benefit provisions valued since the prior valuation.





# STATISTICAL SECTION



ALASKA DIVISION OF  
**Retirement  
and Benefits**

**STATISTICAL SECTION OVERVIEW**

The statistical section of the Public Employees’ 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 ..... 174-194**

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 ..... 195-197**

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

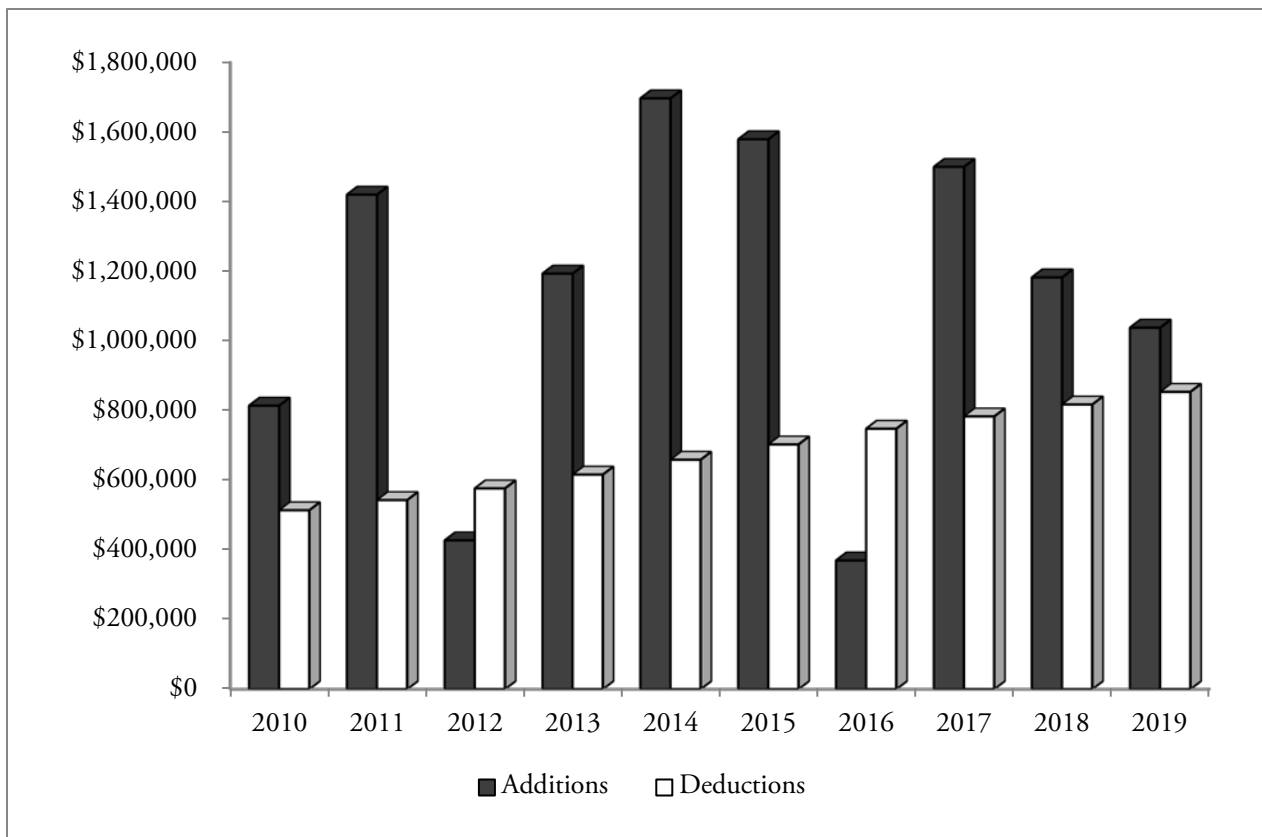
**Demographic Information ..... 198-202**

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

# Statistical Section

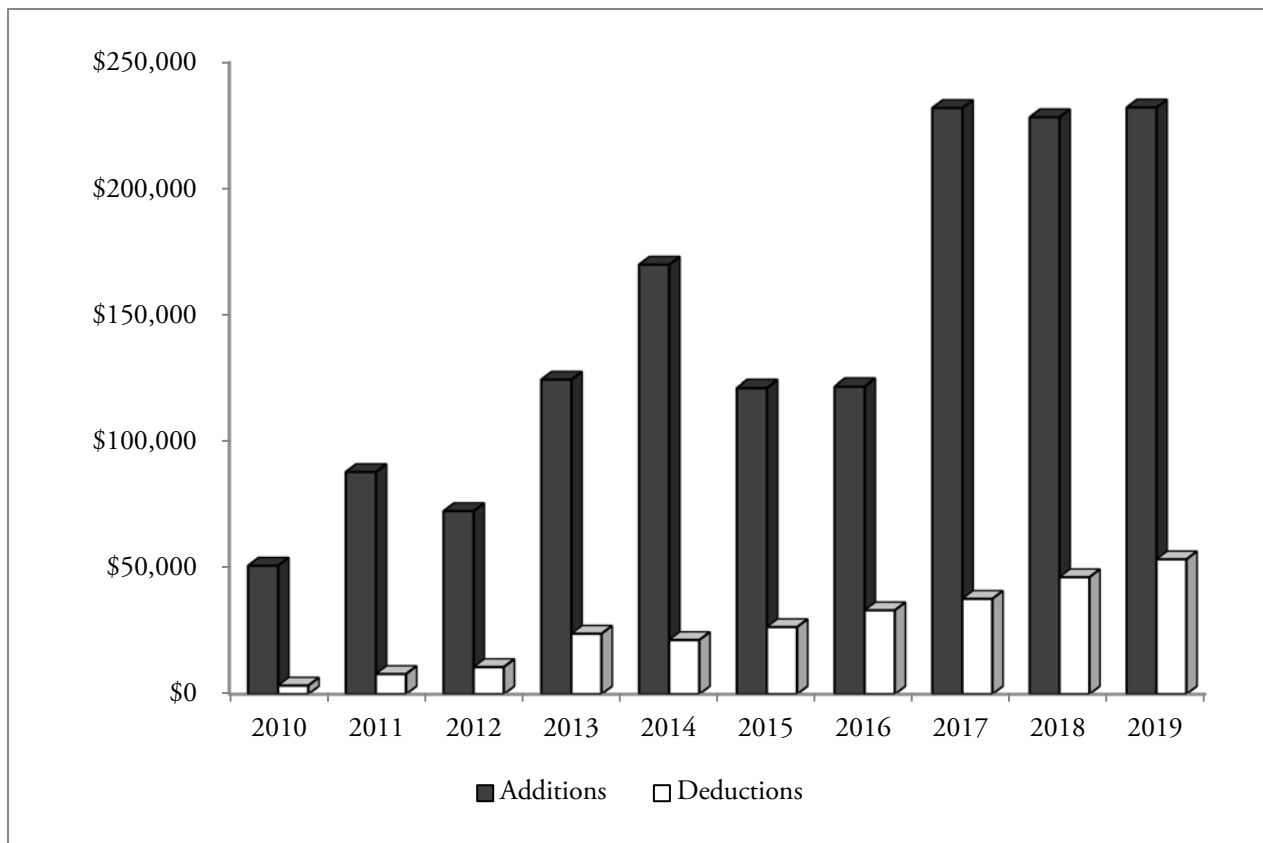
<b>Public Employees' Retirement System Defined Benefit Pension Changes in Fiduciary Net Position (In thousands)</b>					
<b>Year Ended June 30</b>	<b>Fiduciary Net Position, Beginning of Year</b>	<b>Additions</b>	<b>Deductions</b>	<b>Increase / (Decrease) in Fiduciary Net Position</b>	<b>Fiduciary Net Position, End of Year</b>
2010	\$ 5,090,440	\$ 815,831	\$ 514,744	\$ 301,087	\$ 5,391,527
2011	5,391,527	1,420,342	543,944	876,398	6,267,925
2012	6,267,925	427,995	577,626	(149,631)	6,118,294
2013	6,118,294	1,193,555	617,367	576,188	6,694,482
2014	6,694,482	1,697,096	660,140	1,036,956	7,731,438
2015	7,731,438	1,579,519	704,095	875,424	8,606,862
2016	8,606,862	370,243	749,418	(379,175)	8,227,687
2017	8,227,687	1,500,153	784,713	715,440	8,943,127
2018	8,943,127	1,182,675	819,127	363,548	9,306,675
2019	9,306,675	1,038,178	855,448	182,730	9,489,405

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



<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Participant Directed</b> <b>Changes in Fiduciary Net Position</b> <b>(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>
2010	\$ 56,011	\$ 50,908	\$ 3,364	\$ 47,544	\$ 103,555
2011	103,555	88,084	7,937	80,147	183,702
2012	183,702	72,561	10,692	61,869	245,571
2013	245,571	124,464	23,917	100,547	346,118
2014	346,118	169,983	21,428	148,555	494,673
2015	494,673	121,343	26,554	94,789	589,462
2016	589,462	121,871	33,215	88,656	678,118
2017	678,118	231,977	37,774	194,203	872,321
2018	872,321	228,316	46,343	181,973	1,054,294
2019	1,054,294	232,177	53,437	178,740	1,233,034

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

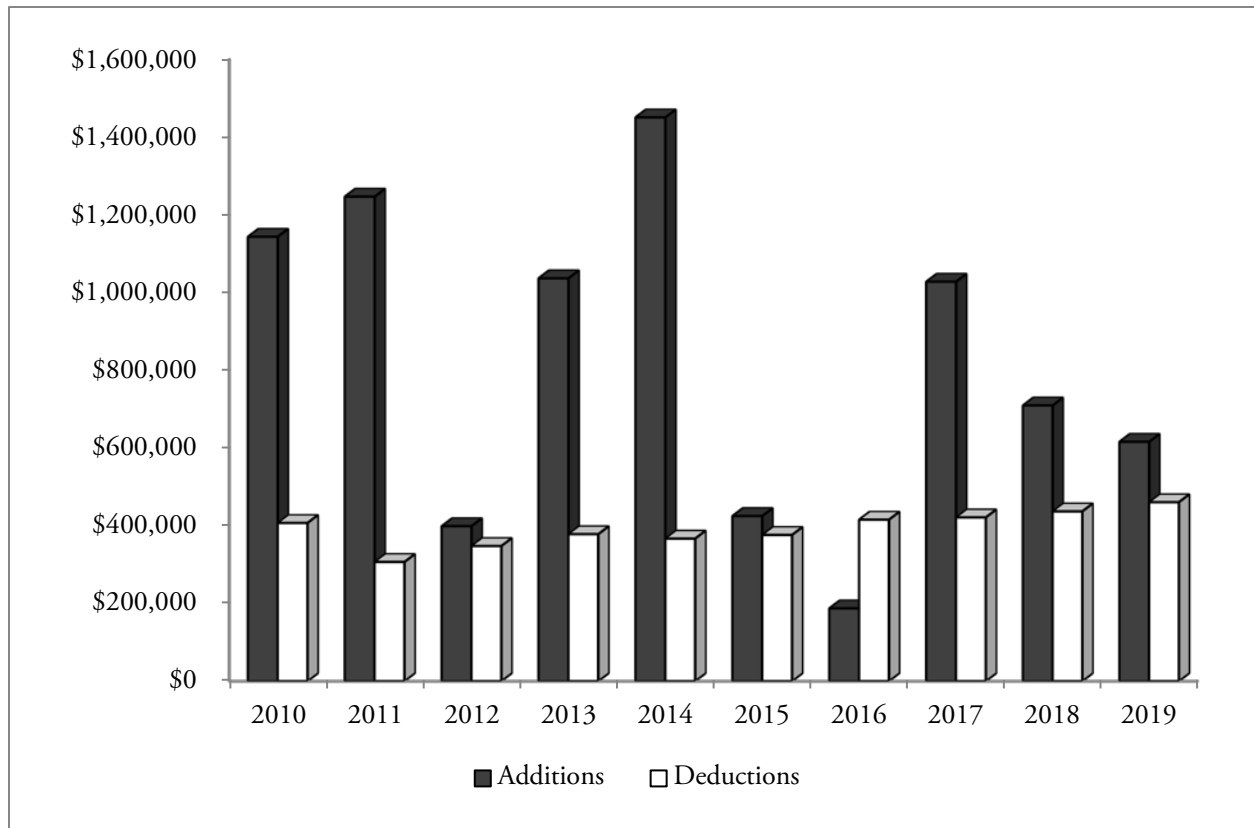


# Statistical Section

## Public Employees' Retirement System Defined Benefit Alaska Retiree Healthcare Trust 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
2010	\$ 3,445,375	\$ 1,143,261	\$ 407,555	\$ 735,706	\$ 4,181,081
2011	4,181,081	1,246,616	307,002	939,614	5,120,695
2012	5,120,695	399,273	348,152	51,120	5,171,816
2013	5,171,816	1,036,394	378,639	657,755	5,829,571
2014	5,829,571	1,450,755	367,166	1,083,589	6,913,160
2015	6,913,160	425,380	376,577	48,803	6,961,963
2016	6,961,963	187,309	416,018	(228,709)	6,733,254
2017	6,733,254	1,027,530	421,832	605,698	7,338,952
2018	7,338,952	710,412	437,363	273,049	7,612,001
2019	7,612,001	616,706	461,015	155,691	7,767,692

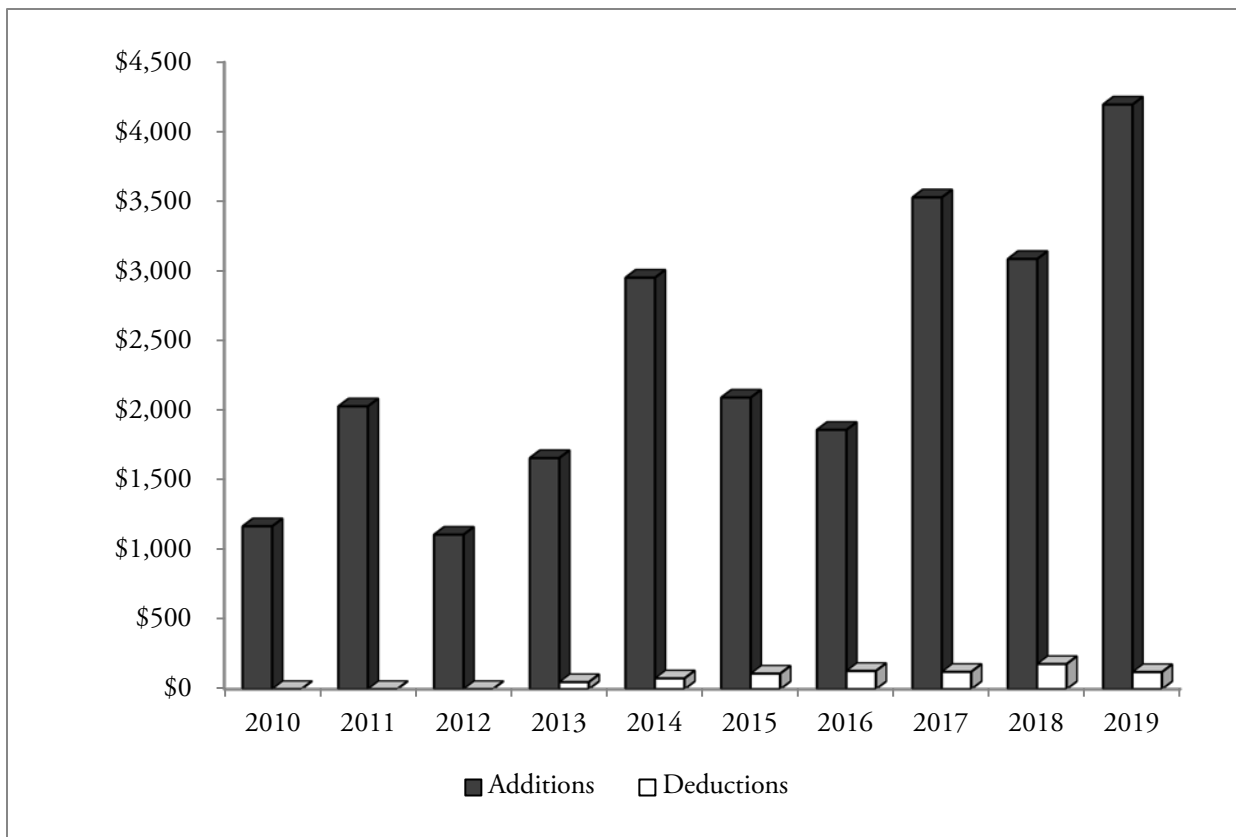
## 10-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS (In thousands)





<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability - All Other</b> <b>Changes in Fiduciary Net Position</b> <b>(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>
2010	\$ 2,146	\$ 1,171	\$ —	\$ 1,171	\$ 3,317
2011	3,317	2,034	—	2,034	5,351
2012	5,351	1,111	—	1,111	6,462
2013	6,462	1,662	50	1,612	8,074
2014	8,074	2,954	77	2,877	10,951
2015	10,951	2,097	111	1,986	12,937
2016	12,937	1,865	130	1,735	14,672
2017	14,672	3,530	124	3,406	18,078
2018	18,078	3,088	180	2,908	20,986
2019	20,986	4,197	122	4,075	25,061

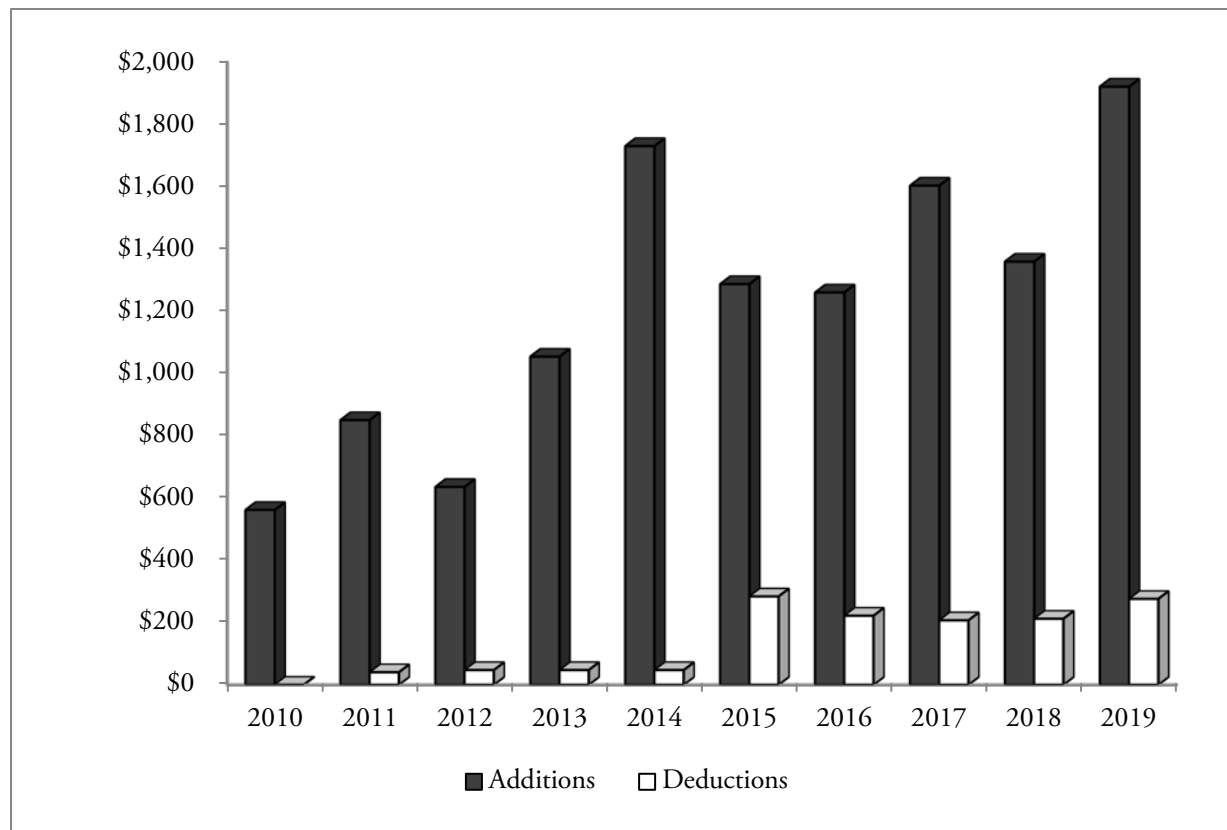
**10-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS**  
(In thousands)



# Statistical Section

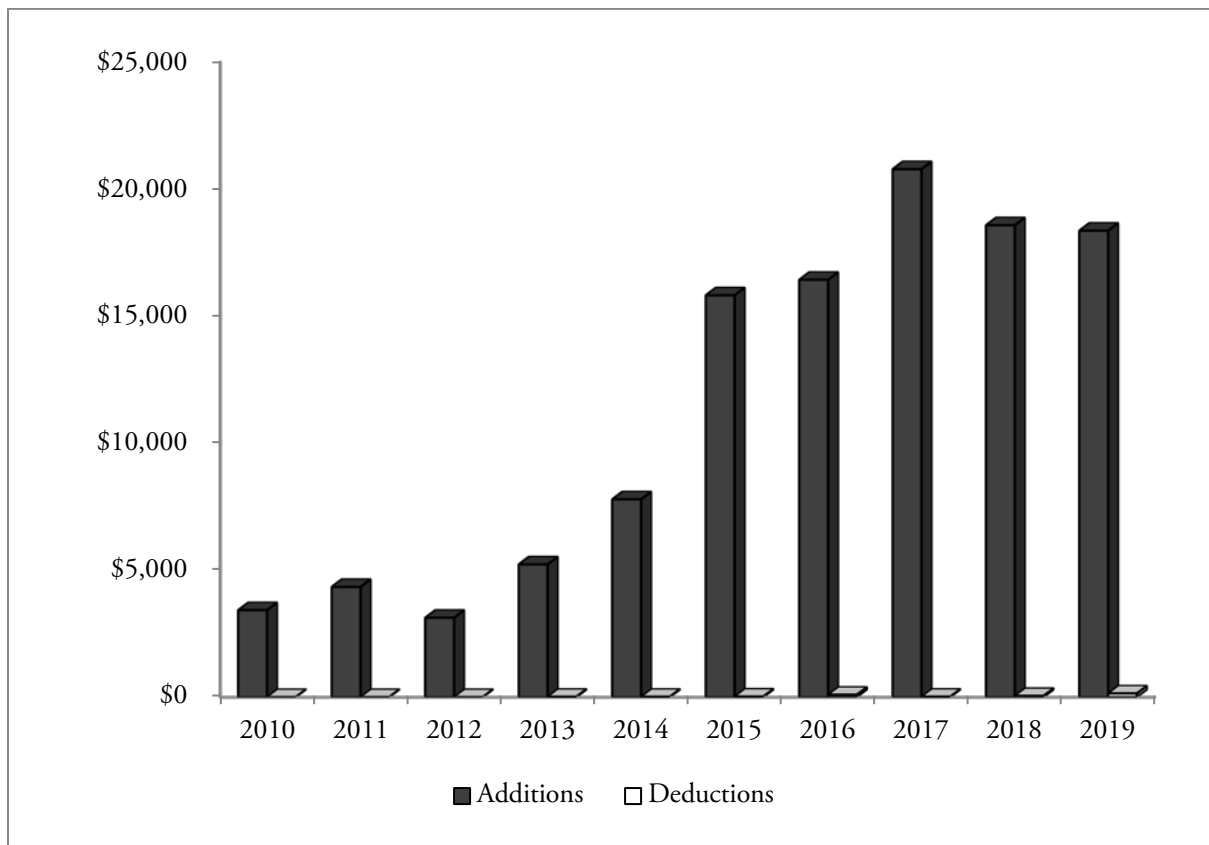
<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability - Peace Officers &amp; Firefighters</b> <b>Changes in Fiduciary Net Position</b> <b>(In thousands)</b>					
<b>Year Ended June 30</b>	<b>Fiduciary Net Position, Beginning of Year</b>	<b>Additions</b>	<b>Deductions</b>	<b>Increase / (Decrease) in Fiduciary Net Position</b>	<b>Fiduciary Net Position, End of Year</b>
2010	\$ 577	\$ 562	\$ —	\$ 562	\$ 1,139
2011	1,139	851	40	811	1,950
2012	1,950	636	47	590	2,539
2013	2,539	1,055	47	1,008	3,547
2014	3,547	1,731	47	1,684	5,231
2015	5,231	1,288	284	1,004	6,235
2016	6,235	1,261	222	1,039	7,274
2017	7,274	1,604	207	1,397	8,671
2018	8,671	1,360	212	1,148	9,819
2019	9,819	1,922	277	1,645	11,464

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



<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Retiree Medical Plan</b> <b>Changes in Fiduciary Net Position</b> <b>(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>
2010	\$ 4,649	\$ 3,429	\$ —	\$ 3,429	\$ 8,078
2011	8,078	4,345	—	4,345	12,423
2012	12,423	3,128	—	3,128	15,551
2013	15,551	5,235	10	5,225	20,776
2014	20,776	7,802	10	7,792	28,568
2015	28,568	15,819	19	15,800	44,368
2016	44,368	16,430	91	16,339	60,707
2017	60,707	20,787	12	20,775	81,482
2018	81,482	18,578	45	18,533	100,015
2019	100,015	18,365	142	18,223	118,238

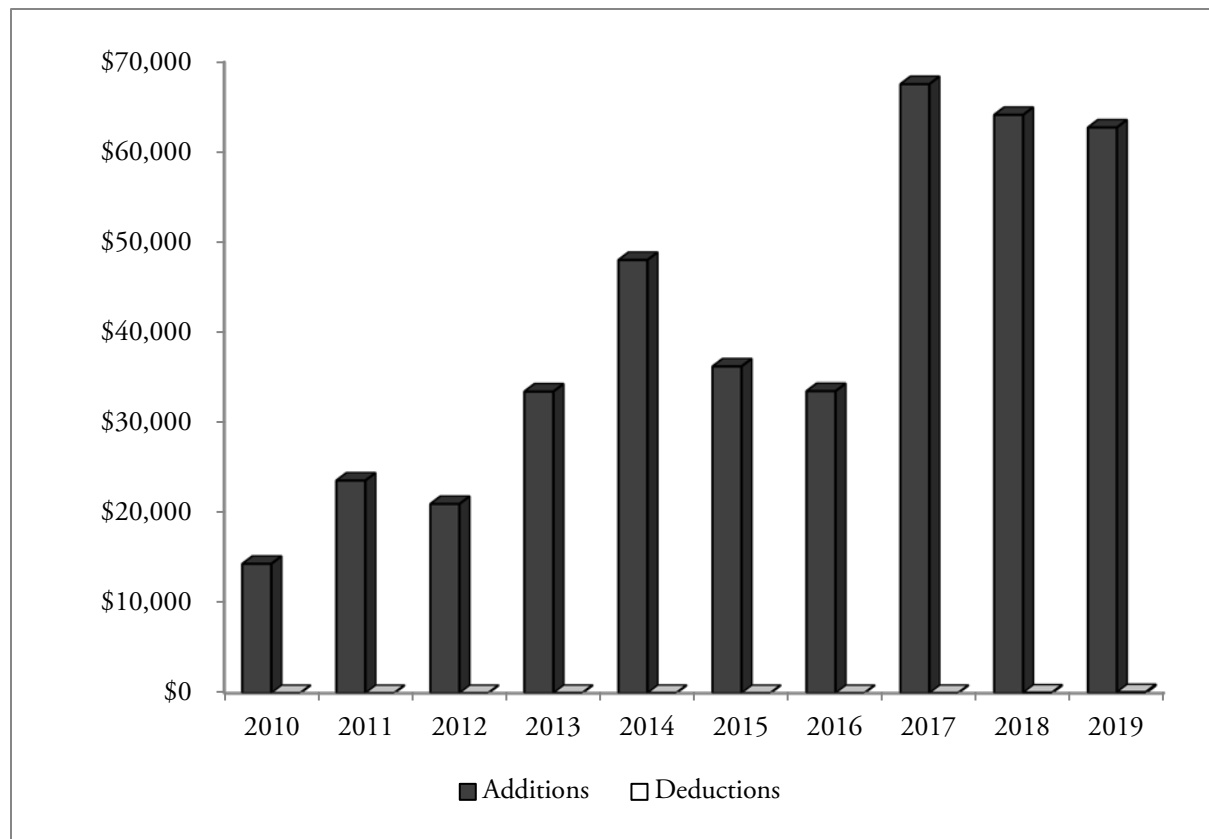
**10-YEAR COMPARISON OF ADDITIONS AND DEDUCTIONS**  
(In thousands)



# Statistical Section

<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Health Reimbursement Arrangement</b> <b>Changes in Fiduciary Net Position</b> <b>(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>
2010	\$ 16,434	\$ 14,635	\$ —	\$ 14,635	\$ 31,069
2011	31,069	23,625	—	23,625	54,694
2012	54,694	21,022	—	21,022	75,716
2013	75,716	33,524	9	33,515	109,231
2014	109,231	48,055	9	48,046	157,277
2015	157,277	36,239	—	36,239	193,516
2016	193,516	33,568	—	33,568	227,084
2017	227,084	67,566	4	67,562	294,646
2018	294,646	64,152	47	64,105	358,751
2019	358,751	62,758	100	62,658	421,409

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

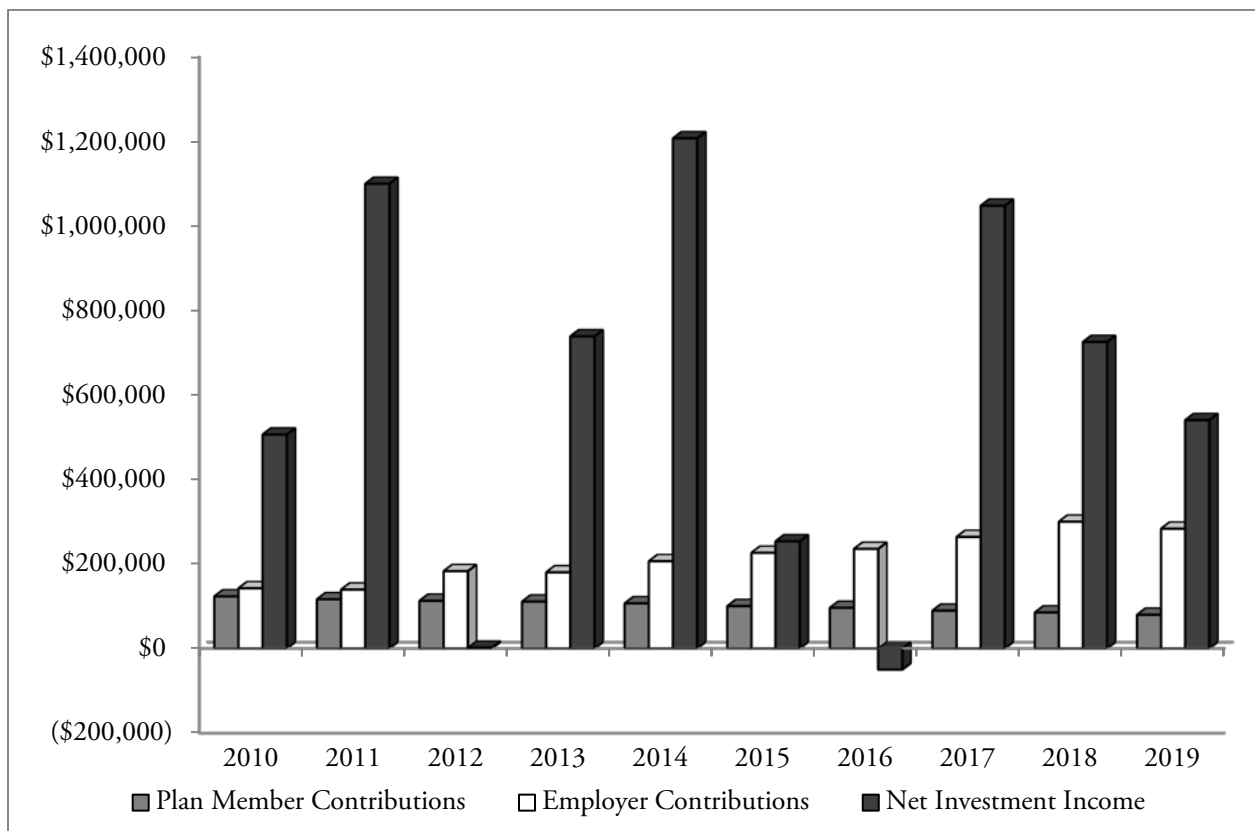


<b>Public Employees' Retirement System Defined Benefit Pension Additions by Source (In thousands)</b>						
<b>Year Ended June 30</b>	<b>Plan Member Contributions</b>	<b>Employer Contributions</b>	<b>State of Alaska</b>	<b>Net Investment Income (Loss)</b>	<b>Other</b>	<b>Total</b>
2010	\$ 123,066	\$ 142,157	\$ 44,460	\$ 506,043	\$ 105	\$ 815,831
2011	116,270	139,075	65,187	1,099,713	97	1,420,342
2012	112,703	182,695	130,912	1,650	35	427,995
2013	110,808	179,976	164,087	738,656	28	1,193,555
2014	106,565	206,204	176,794	1,207,484	49	1,697,096
2015	100,036	226,136	1,000,000	253,311	36	1,579,519
2016	96,024	235,360	88,586	(49,967)	240	370,243
2017	89,345	263,597	99,167	1,048,006	38	1,500,153
2018	84,956	299,665	72,719	725,310	25	1,182,675
2019	79,609	283,098	135,360	540,088	23	1,038,178

**Note:** This schedule shows the full appropriated amount of the additional state contribution as required by AS 39.35.280, a portion of which is included in "Employer Contributions" on the audited financial statements.

## 10-YEAR COMPARISON OF ADDITIONS BY SOURCE

(In thousands)

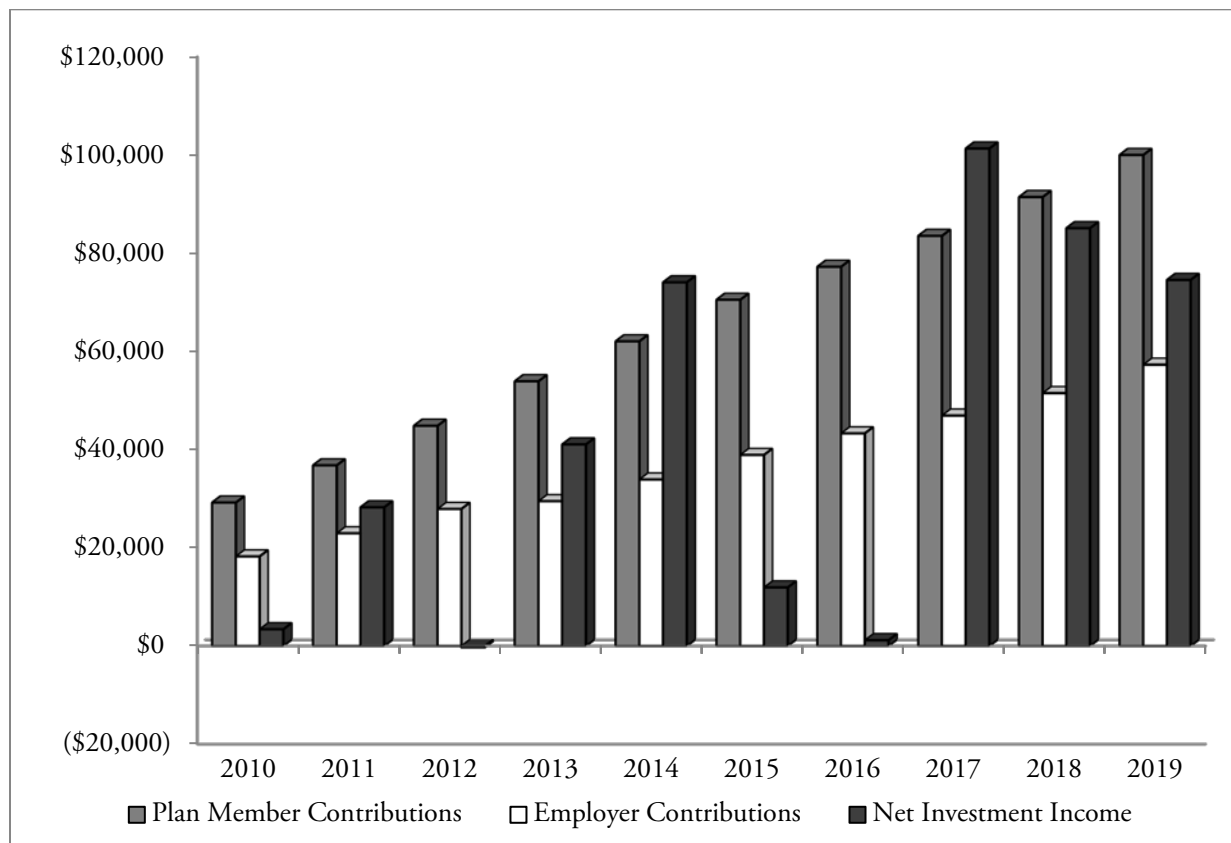


# Statistical Section

## Public Employees' Retirement System Defined Contribution Retirement Participant Directed Additions by Source (In thousands)

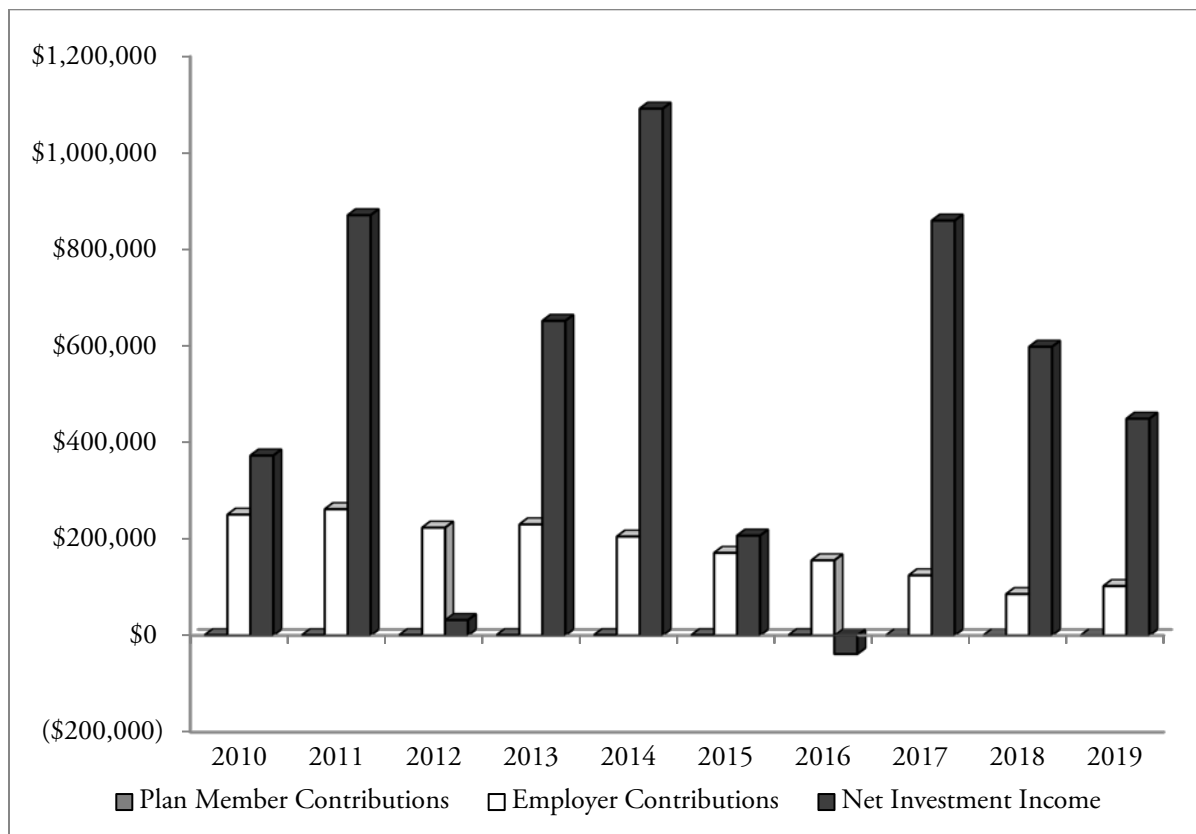
Year Ended June 30	Plan Member Contributions	Employer Contributions	Net Investment Income (Loss)	Other	Total
2010	\$ 29,246	\$ 18,258	\$ 3,404	\$ —	\$ 50,908
2011	36,831	22,976	28,264	13	88,084
2012	44,903	27,938	(280)	—	72,561
2013	53,843	29,519	41,098	4	124,464
2014	61,989	33,942	74,031	21	169,983
2015	70,462	38,949	11,931	1	121,343
2016	77,196	43,350	1,168	157	121,871
2017	83,493	46,982	101,317	185	231,977
2018	91,413	51,424	85,059	420	228,316
2019	99,995	57,221	74,507	454	232,177

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



<b>Public Employees' Retirement System Defined Benefit Alaska Retiree Healthcare Trust Additions by Source (In thousands)</b>						
<b>Year Ended June 30</b>	<b>Plan Member Premiums</b>	<b>Employer Contributions</b>	<b>State of Alaska – Additional State Contribution</b>	<b>Net Investment Income (Loss)</b>	<b>Other</b>	<b>Total</b>
2010	\$ 475	\$ 250,190	\$ 63,493	\$ 372,712	\$ 456,391	\$ 1,143,261
2011	557	261,534	100,654	871,221	12,650	1,246,616
2012	627	223,243	111,698	31,815	31,889	399,272
2013	635	229,990	143,215	652,118	10,436	1,036,394
2014	717	204,779	135,679	1,092,212	17,368	1,450,755
2015	656	171,028	—	206,713	46,983	425,380
2016	621	155,630	37,934	(38,442)	31,566	187,309
2017	—	124,541	—	859,980	43,009	1,027,530
2018	—	85,731	—	598,343	26,338	710,412
2019	—	102,266	—	449,098	65,342	616,706

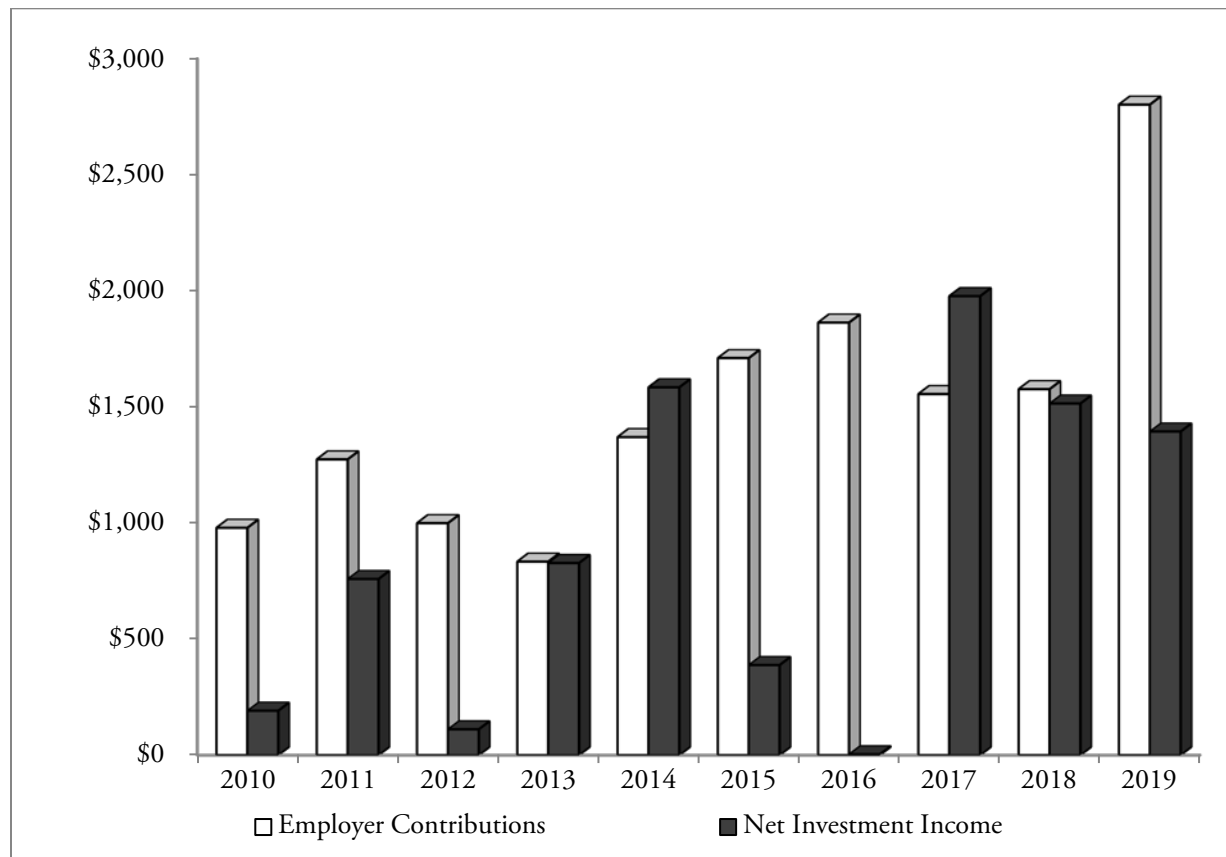
**10-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability - All Other</b> <b>Additions by Source</b> <b>(In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Employer Contributions</b>	<b>Net Investment Income (Loss)</b>	<b>Total</b>
2010	\$ 980	\$ 191	\$ 1,171
2011	1,275	759	2,034
2012	1,000	111	1,111
2013	834	828	1,662
2014	1,371	1,583	2,954
2015	1,709	388	2,097
2016	1,862	3	1,865
2017	1,554	1,976	3,530
2018	1,575	1,513	3,088
2019	2,802	1,395	4,197

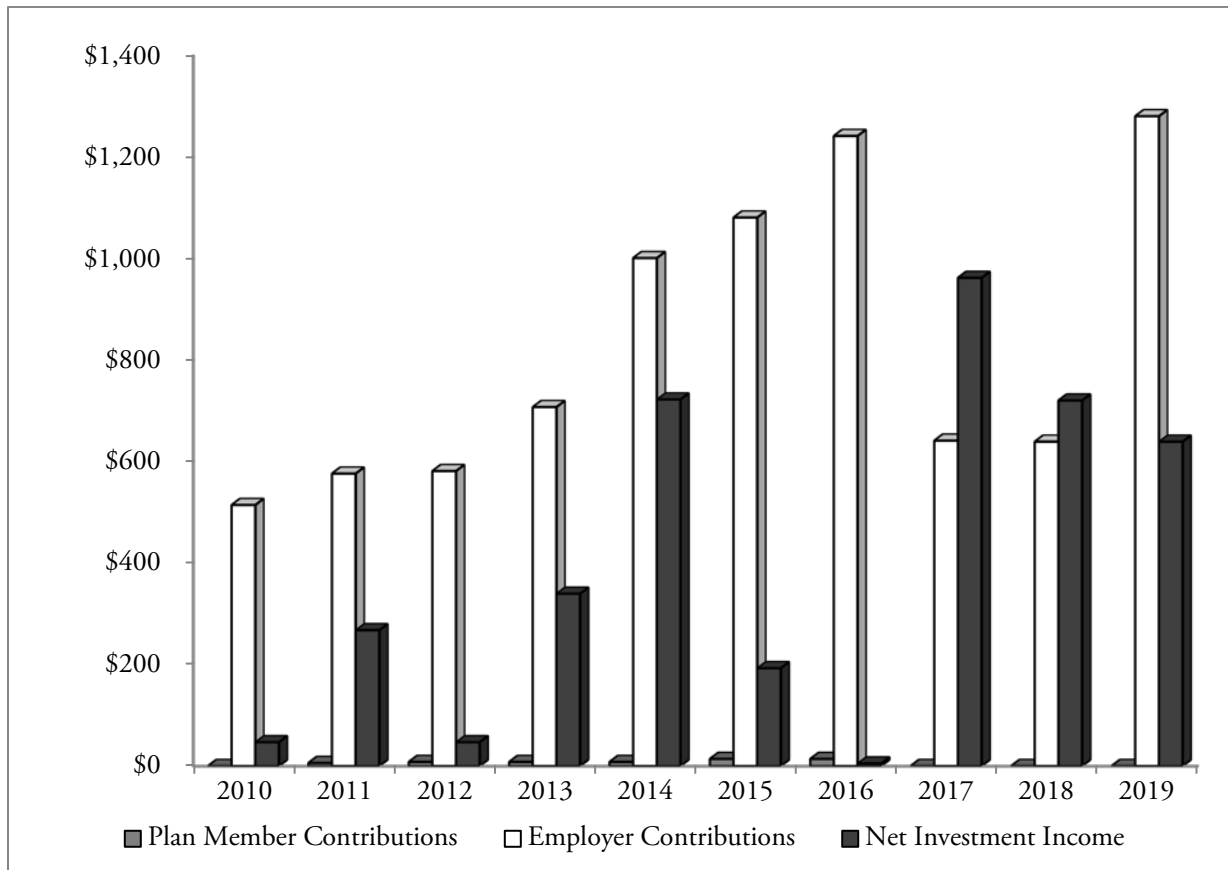
**10-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)





<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability - Peace Officers &amp; Firefighters</b> <b>Additions by Source</b> <b>(In thousands)</b>				
<b>Plan Ended June 30</b>	<b>Plan Member Contributions</b>	<b>Employer Contributions</b>	<b>Net Investment Income (Loss)</b>	<b>Total</b>
2010	\$ —	\$ 515	\$ 47	\$ 562
2011	6	577	268	851
2012	8	582	47	637
2013	8	707	340	1,055
2014	8	1,001	722	1,731
2015	14	1,081	193	1,288
2016	14	1,242	5	1,261
2017	—	642	962	1,604
2018	—	640	720	1,360
2019	—	1,281	641	1,922

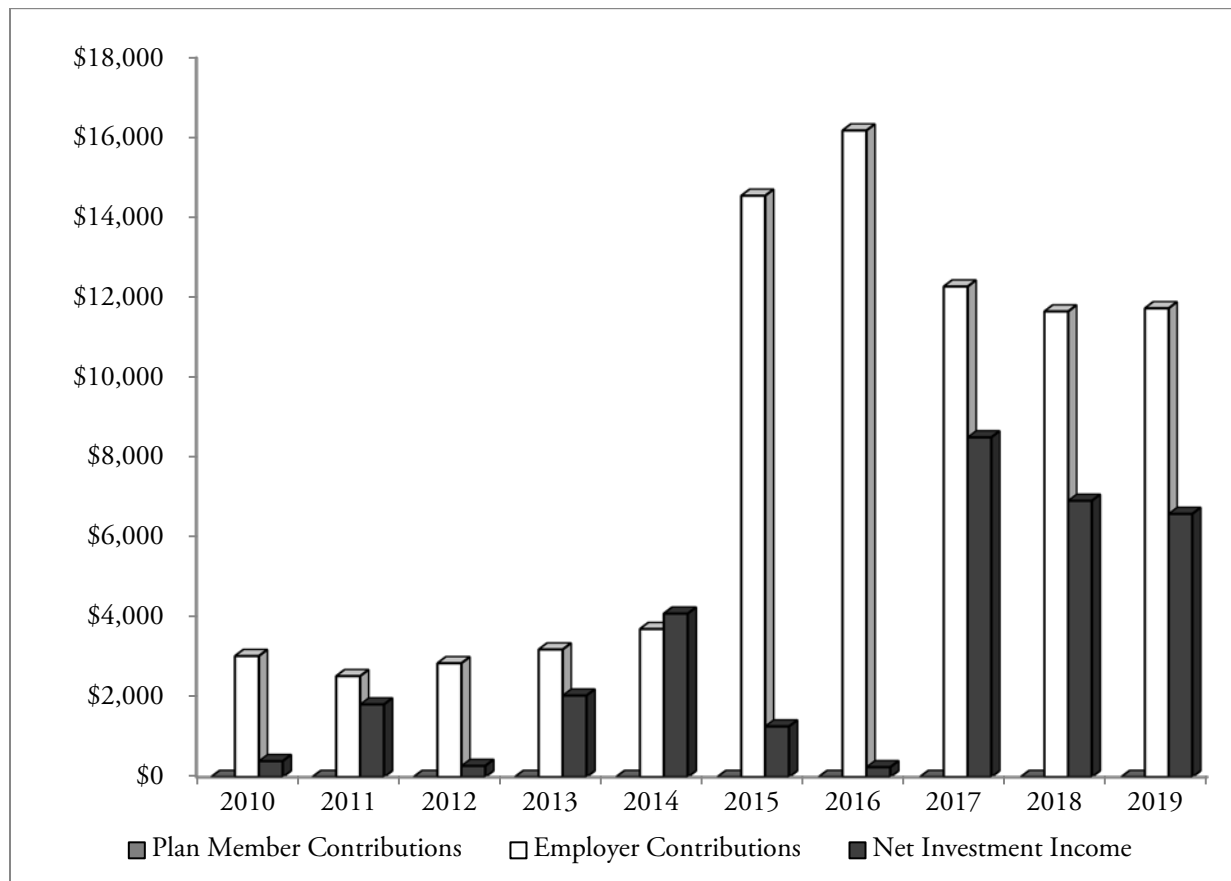
**10-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

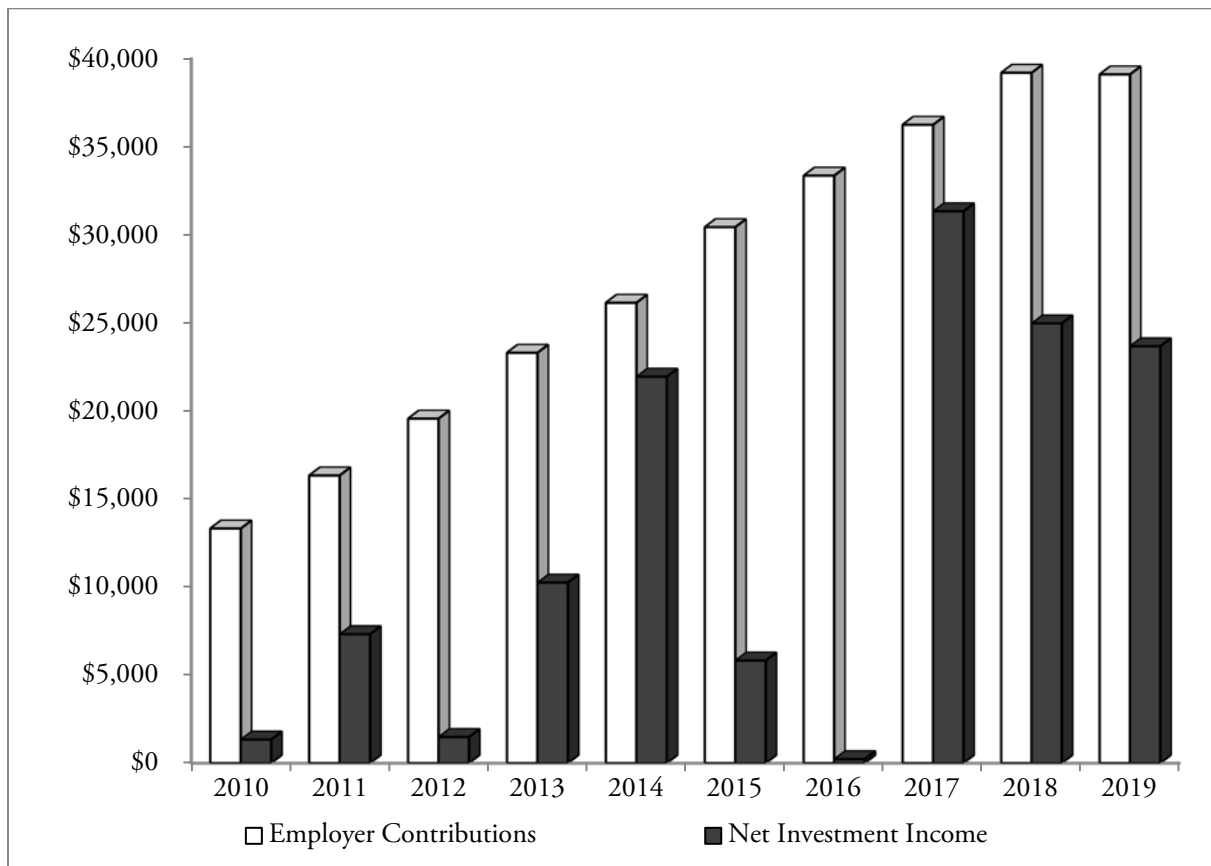
<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Retiree Medical Plan</b> <b>Additions by Source</b> <b>(In thousands)</b>					
<b>Plan Ended June 30</b>	<b>Plan Member Contributions</b>	<b>Employer Contributions</b>	<b>Net Investment Income (Loss)</b>	<b>Other</b>	<b>Total</b>
2010	\$ —	\$ 3,031	\$ 398	\$ —	\$ 3,429
2011	—	2,527	1,818	—	4,345
2012	—	2,850	278	—	3,128
2013	—	3,195	2,040	—	5,235
2014	—	3,708	4,094	—	7,802
2015	—	14,552	1,267	—	15,819
2016	—	16,184	246	—	16,430
2017	—	12,280	8,506	1	20,787
2018	—	11,657	6,919	2	18,578
2019	—	11,736	6,591	38	18,365

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



<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Health Reimbursement Arrangement</b> <b>Additions by Source</b> <b>(In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Employer Contributions</b>	<b>Net Investment Income (Loss)</b>	<b>Total</b>
2010	\$ 13,304	\$ 1,331	\$ 14,635
2011	16,317	7,308	23,625
2012	19,547	1,475	21,022
2013	23,289	10,235	33,524
2014	26,128	21,927	48,055
2015	30,426	5,813	36,239
2016	33,351	217	33,568
2017	36,241	31,325	67,566
2018	39,195	24,957	64,152
2019	39,101	23,657	62,758

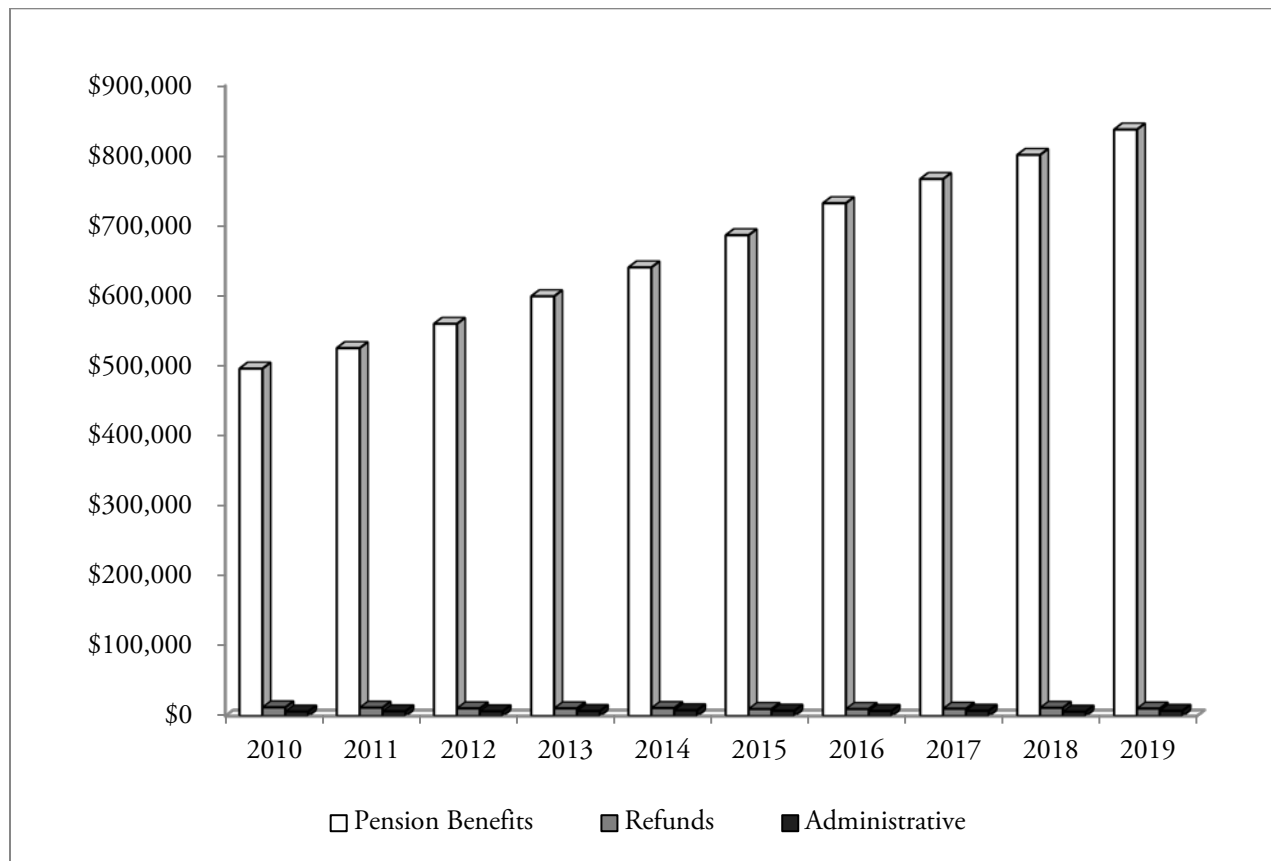
**10-YEAR COMPARISON OF ADDITIONS BY SOURCE**  
(In thousands)



# Statistical Section

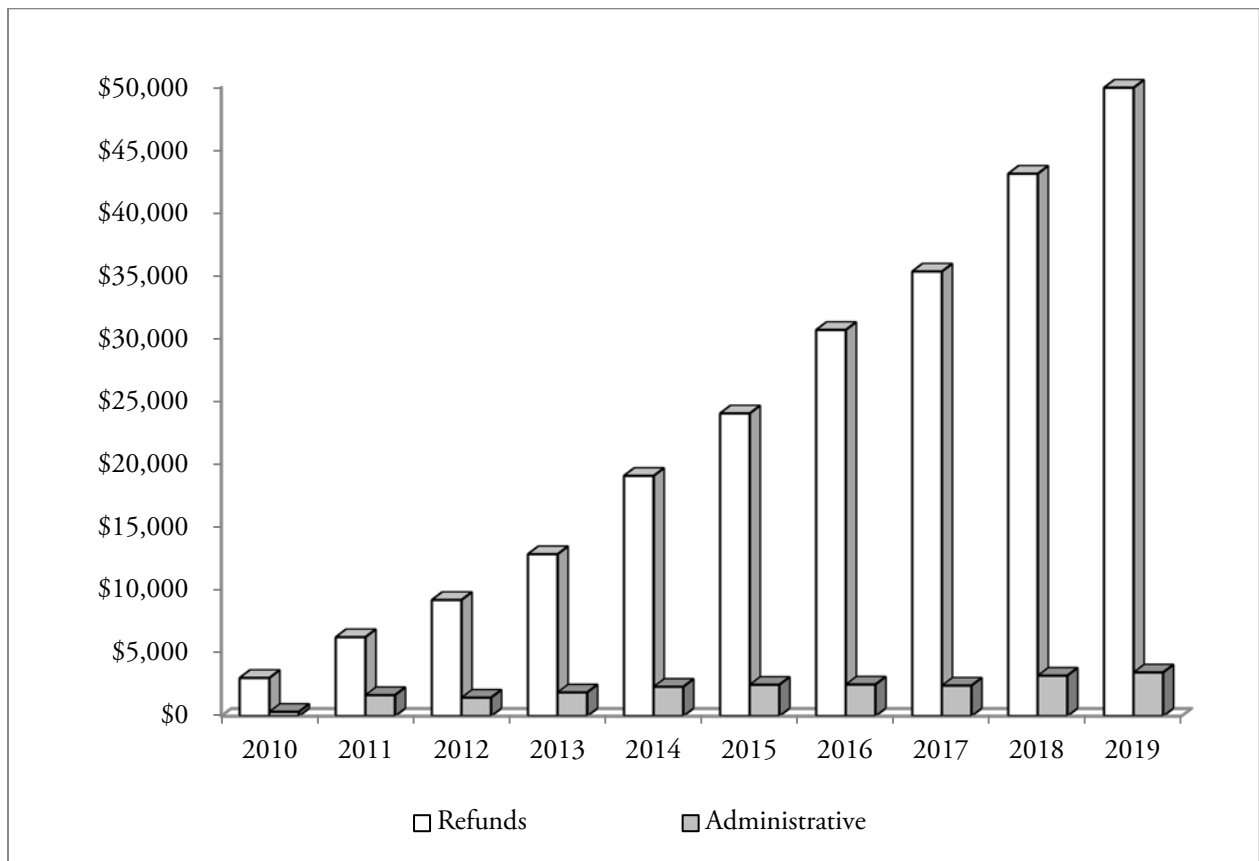
<b>Public Employees' Retirement System Defined Benefit Pension Deductions by Type (In thousands)</b>				
<b>Year Ended June 30</b>	<b>Pension Benefits</b>	<b>Refunds of Contributions</b>	<b>Administrative</b>	<b>Total</b>
2010	\$ 496,015	\$ 12,364	\$ 6,365	\$ 514,744
2011	525,277	11,923	6,744	543,944
2012	559,977	10,906	6,743	577,626
2013	599,318	10,929	7,120	617,367
2014	640,518	11,399	8,223	660,140
2015	686,493	10,049	7,553	704,095
2016	732,141	10,034	7,243	749,418
2017	766,766	10,421	7,526	784,713
2018	801,155	11,722	6,250	819,127
2019	837,381	10,638	7,429	855,448

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



<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Participant Directed</b> <b>Deductions by Type</b> <b>(In thousands)</b>				
<b>Plan Ended June 30</b>	<b>Refund of Contributions</b>	<b>Administrative</b>	<b>Prior Year Forfeiture Payable Adjustment</b>	<b>Total</b>
2010	\$ 3,029	\$ 335	\$ —	\$ 3,364
2011	6,273	1,664	—	7,937
2012	9,230	1,462	—	10,692
2013	12,872	1,879	9,166	23,917
2014	19,104	2,324	—	21,428
2015	24,067	2,487	—	26,554
2016	30,709	2,506	—	33,215
2017	35,355	2,419	—	37,774
2018	43,132	3,211	—	46,343
2019	49,972	3,465	—	53,437

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

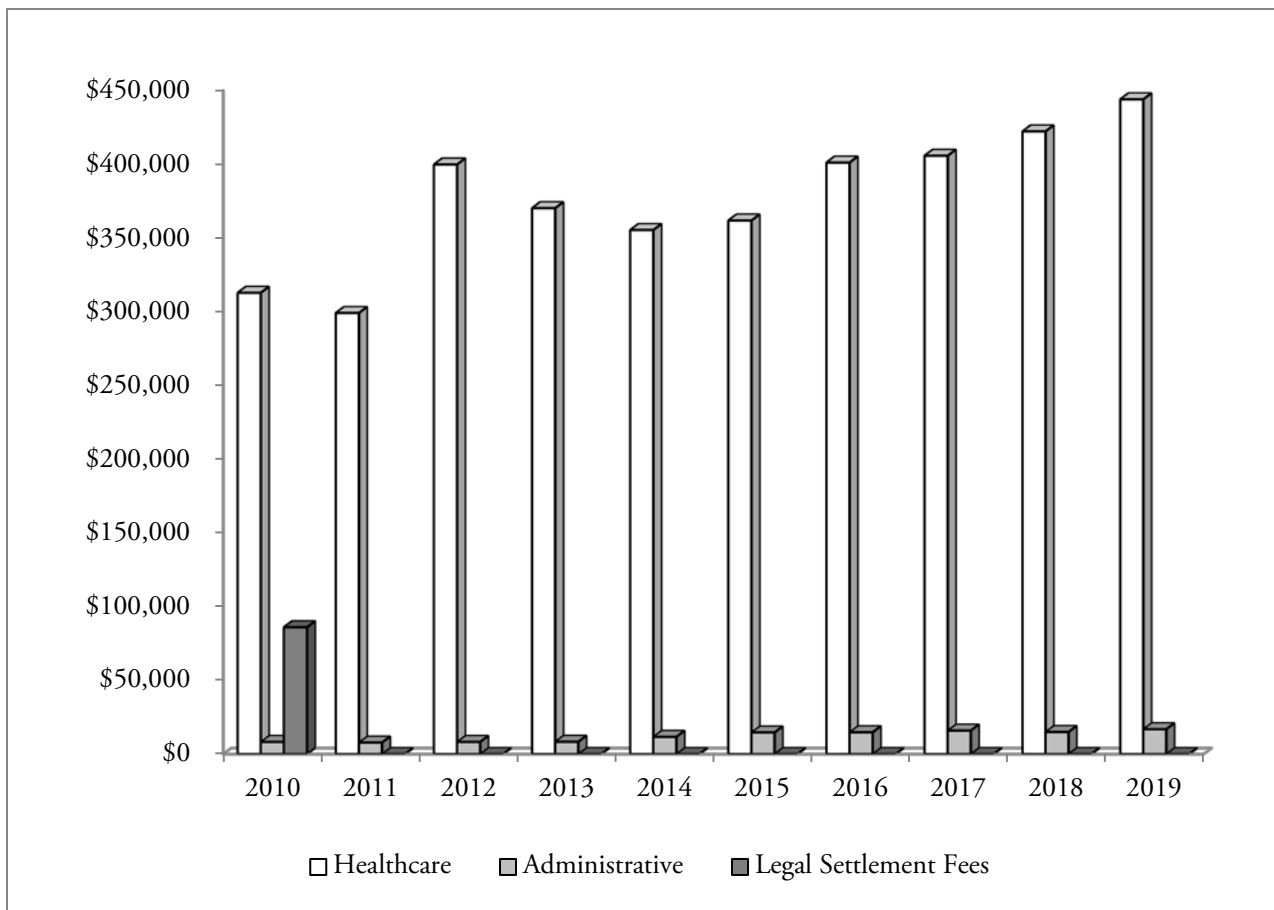


# Statistical Section

<b>Public Employees' Retirement System Defined Benefit Alaska Retiree Healthcare Trust Deductions by Type (In thousands)</b>				
<b>Plan Ended June 30</b>	<b>Healthcare</b>	<b>Administrative</b>	<b>Legal Settlement Fees</b>	<b>Total</b>
2010	\$ 312,901	\$ 8,226	\$ 86,428	\$ 407,555
2011	299,196	7,806	—	307,002
2012	399,923	8,229	—	348,152
2013	370,314	8,325	—	378,639
2014	355,487	11,679	—	367,166
2015	361,930	14,647	—	376,577
2016	401,233	14,785	—	416,018
2017	405,872	15,960	—	421,832
2018	422,378	14,985	—	437,363
2019	444,143	16,872	—	461,015

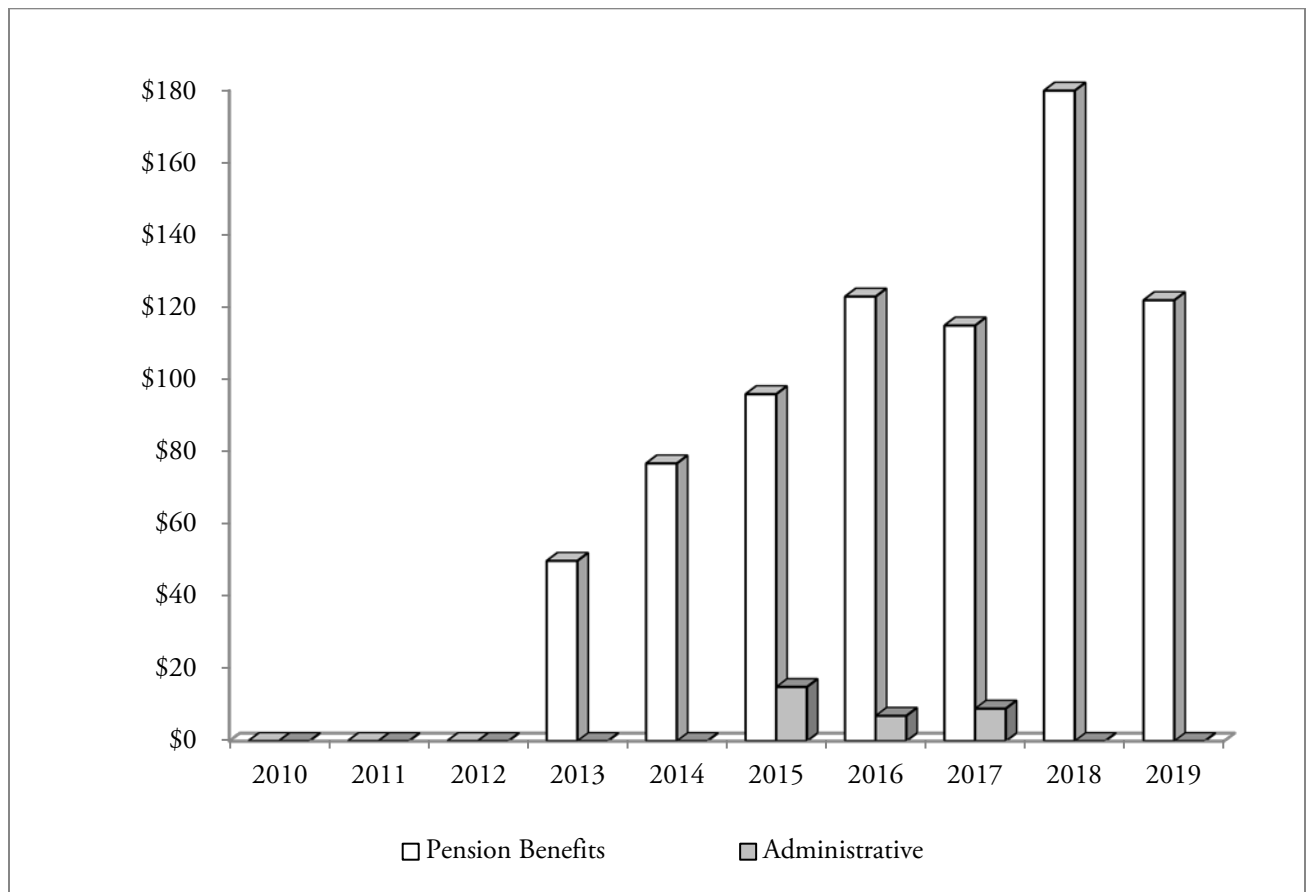
## 10-YEAR COMPARISON OF DEDUCTIONS BY TYPE

(In thousands)



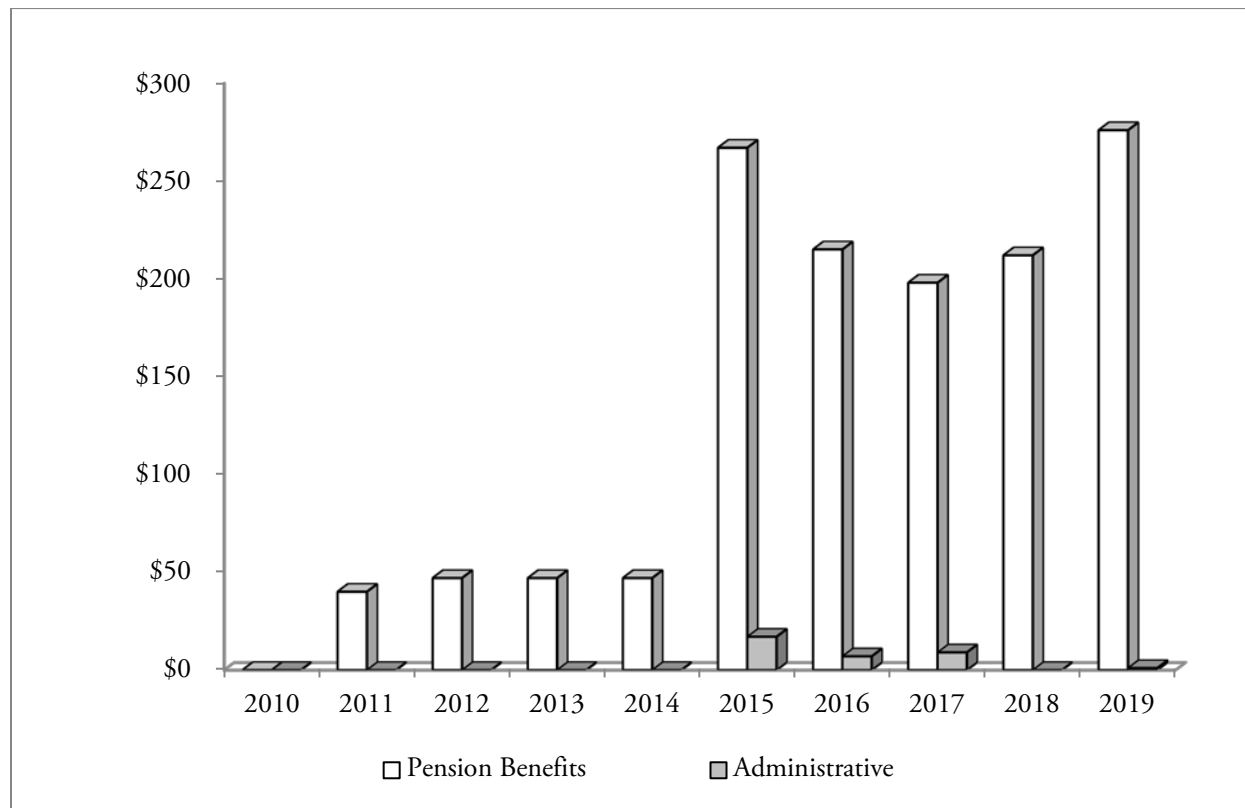
<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability – All Other</b> <b>Deductions by Type</b> <b>(In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Pension Benefits</b>	<b>Administrative</b>	<b>Total</b>
2010	\$ —	\$ —	\$ —
2011	—	—	—
2012	—	—	—
2013	50	—	50
2014	77	—	77
2015	96	15	111
2016	123	7	130
2017	115	9	124
2018	180	—	180
2019	122	—	122

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



<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Occupational Death &amp; Disability – Peace Officers &amp; Firefighters</b> <b>Deductions by Type</b> <b>(In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Pension Benefits</b>	<b>Administrative</b>	<b>Total</b>
2010	\$ —	\$ —	\$ —
2011	40	—	40
2012	47	—	47
2013	47	—	47
2014	47	—	47
2015	267	17	284
2016	215	7	222
2017	198	9	207
2018	212	—	212
2019	276	1	277

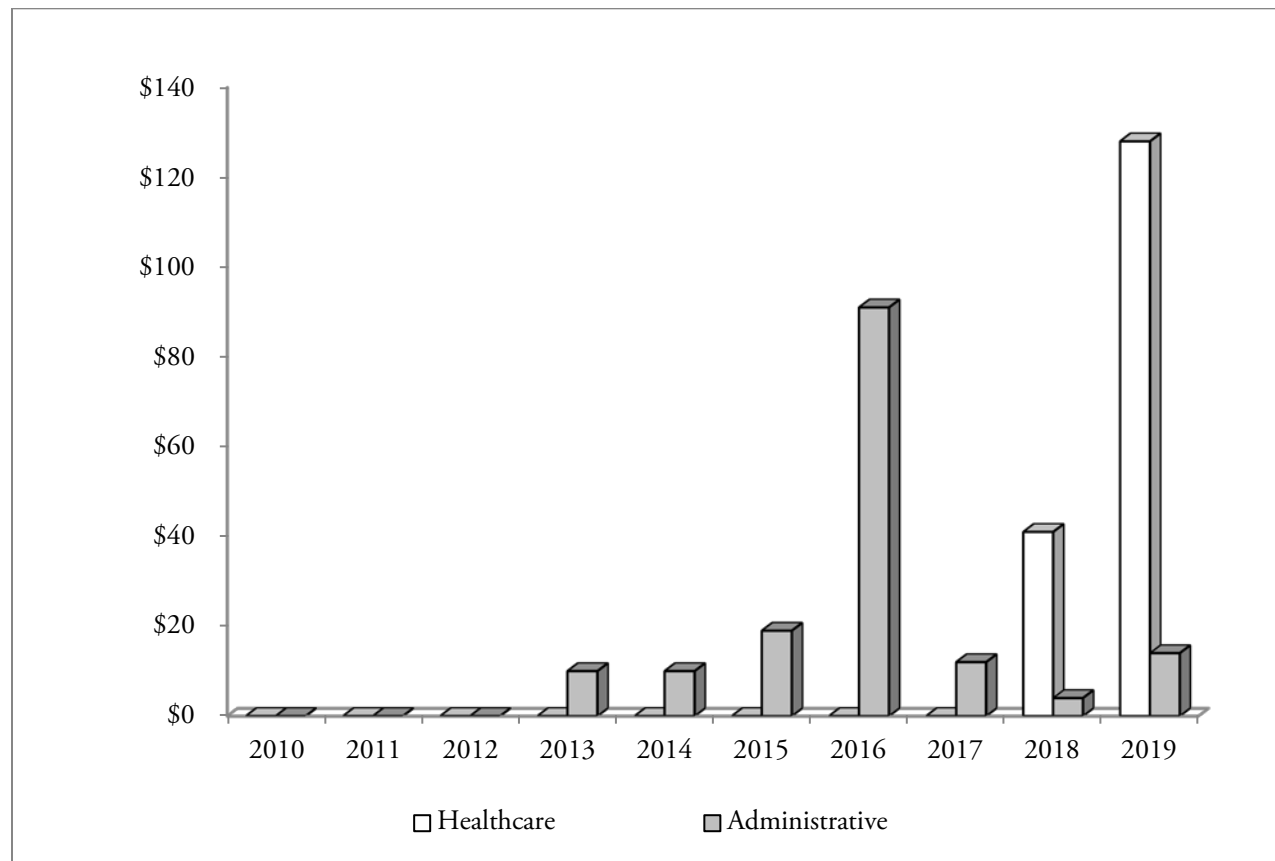
**10-YEAR COMPARISON OF DEDUCTIONS BY TYPE**  
(In thousands)





<b>Public Employees' Retirement System Defined Contribution Retirement Retiree Medical Plan Deductions by Type (In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Healthcare</b>	<b>Administrative</b>	<b>Total</b>
2010	\$ —	\$ —	\$ —
2011	—	—	—
2012	—	—	—
2013	—	10	10
2014	—	10	10
2015	—	19	19
2016	—	91	91
2017	—	12	12
2018	41	4	45
2019	128	14	142

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

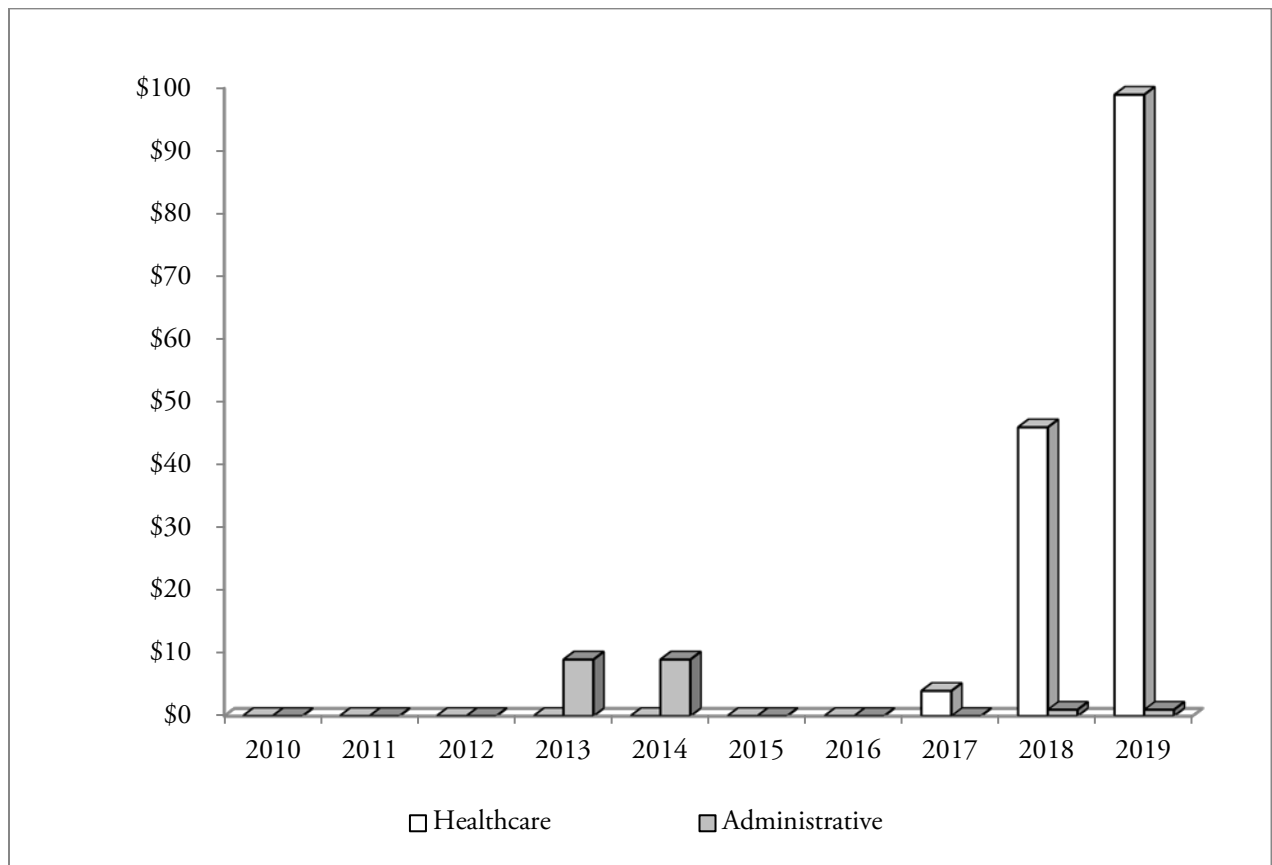


# Statistical Section

<b>Public Employees' Retirement System</b> <b>Defined Contribution Retirement Healthcare Reimbursement Arrangement</b> <b>Deductions by Type</b> <b>(In thousands)</b>			
<b>Plan Ended June 30</b>	<b>Healthcare</b>	<b>Administrative</b>	<b>Total</b>
2010	\$ —	\$ —	\$ —
2011	—	—	—
2012	—	—	—
2013	—	9	9
2014	—	9	9
2015	—	—	—
2016	—	—	—
2017	4	—	4
2018	46	1	47
2019	99	1	100

## 10-YEAR COMPARISON OF DEDUCTIONS BY TYPE

(In thousands)



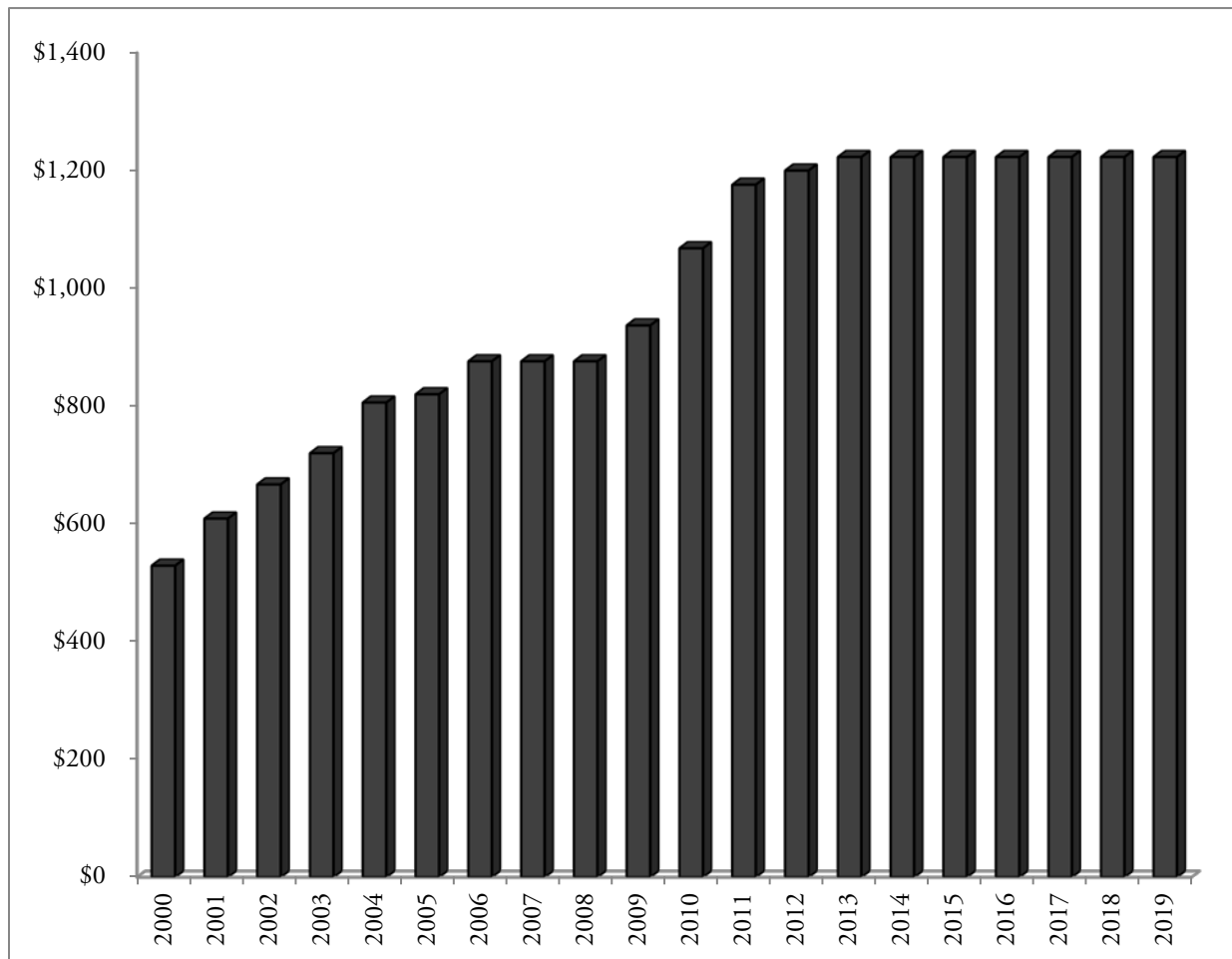
Public Employees' Retirement System Schedule of Average Benefit Payments New Benefit Recipients							
Years of Credited Service							
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
All Others							
Period 7/1/12 - 6/30/13:							
Average Monthly Benefit	\$ 414	\$ 650	\$1,179	\$1,925	\$2,879	\$4,356	\$5,208
Number of Recipients	59	349	365	257	206	209	132
Period 7/1/13 - 6/30/14:							
Average Monthly Benefit	\$ 503	\$ 700	\$1,189	\$2,065	\$3,021	\$4,439	\$5,490
Number of Recipients	48	347	319	241	214	224	121
Period 7/1/14 - 6/30/15:							
Average Monthly Benefit	\$ 430	\$ 685	\$1,260	\$2,008	\$3,086	\$4,544	\$6,195
Number of Recipients	42	284	304	213	198	169	98
Period 7/1/15 - 6/30/16:							
Average Monthly Benefit	\$ 434	\$ 660	\$1,240	\$2,017	\$3,059	\$4,158	\$6,583
Number of Recipients	30	323	387	266	192	161	135
Period 7/1/16 - 6/30/17:							
Average Monthly Benefit	\$ 381	\$ 640	\$1,271	\$2,067	\$3,119	\$4,579	\$6,224
Number of Recipients	27	254	375	233	212	191	115
Period 7/1/17 - 6/30/18:							
Average Monthly Benefit	\$ 414	\$ 607	\$1,299	\$1,982	\$3,034	\$4,475	\$6,085
Number of Recipients	26	221	351	280	223	214	127
Peace Officer/Firefighter							
Period 7/1/12 - 6/30/13:							
Average Monthly Benefit	\$ —	\$ 865	\$1,779	\$2,762	\$3,793	\$4,983	\$4,911
Number of Recipients	—	9	8	19	31	18	4
Period 7/1/13 - 6/30/14:							
Average Monthly Benefit	\$ 209	\$1,423	\$2,002	\$2,902	\$4,014	\$5,464	\$6,299
Number of Recipients	1	9	10	14	22	16	7
Period 7/1/14 - 6/30/15:							
Average Monthly Benefit	\$ —	\$1,173	\$1,621	\$3,632	\$4,436	\$5,457	\$6,863
Number of Recipients	—	8	9	26	24	25	7
Period 7/1/15 - 6/30/16:							
Average Monthly Benefit	\$ —	\$ 958	\$1,742	\$3,347	\$4,622	\$5,778	\$7,221
Number of Recipients	—	6	11	19	30	28	16
Period 7/1/16 - 6/30/17:							
Average Monthly Benefit	\$ —	\$ 686	\$2,075	\$3,234	\$4,462	\$5,151	\$6,376
Number of Recipients	—	8	9	28	41	23	14
Period 7/1/17 - 6/30/18:							
Average Monthly Benefit	\$ —	\$1,063	\$2,133	\$3,747	\$4,847	\$6,024	\$7,717
Number of Recipients	—	4	18	19	35	30	3

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

# Statistical Section

Public Employees' Retirement System Schedule of Pension and Healthcare Benefits Deductions by Type (In thousands)					
Year Ended June 30	Service	Disability	Survivor	Healthcare	Total
2010	\$ 464,735	\$ 6,539	\$ 24,741	\$ 283,095	\$ 779,110
2011	492,808	5,821	26,648	323,843	849,120
2012	543,789	5,528	28,651	339,923	917,891
2013	563,172	5,276	30,870	395,939	995,257
2014	601,705	5,630	33,183	415,926	1,056,444
2015	645,895	5,220	35,742	361,930	1,048,786
2016	689,487	4,878	38,115	401,233	1,133,713
2017	721,300	4,812	40,967	405,876	1,172,955
2018	753,409	4,861	43,277	422,465	1,224,012
2019	786,301	5,052	46,426	444,370	1,282,149

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



Public Employees' Retirement System Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected Valuation as of June 30, 2018									
Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected				
		1	2	3	1	2	3	4	5
All Others									
\$ 1 - 300	2,158	1,627	528	3	1,002	407	291	73	385
301 - 600	5,149	4,350	789	10	2,647	1,238	852	251	161
601 - 900	4,216	3,561	639	16	2,187	1,018	681	198	132
901 - 1,200	3,347	2,908	427	12	1,603	858	623	163	100
1,201 - 1,500	2,930	2,557	347	26	1,399	799	525	119	88
1,501 - 1,800	2,273	2,026	217	30	1,031	651	426	96	69
1,801 - 2,100	1,917	1,734	167	16	830	557	367	99	64
2,101 - 2,400	1,609	1,486	107	16	673	455	340	89	52
2,401 - 2,700	1,370	1,278	77	15	560	439	261	57	53
2,701 - 3,000	1,132	1,061	65	6	458	373	226	41	34
3,001 - 3,300	941	895	40	6	355	319	198	40	29
3,301 - 3,600	821	792	27	2	296	283	170	56	16
3,601 - 3,900	677	656	20	1	258	238	129	34	18
3,901 - 4,200	618	596	19	3	209	205	153	34	17
over \$4,200	2,909	2,873	34	2	947	1,099	649	164	50
Totals	32,067	28,400	3,503	164	14,455	8,939	5,891	1,514	1,268
Peace Officer/Firefighter									
\$ 1 - 300	58	23	35	—	39	8	—	2	9
301 - 600	171	103	68	—	92	36	23	8	12
601 - 900	169	100	68	1	98	42	8	11	10
901 - 1,200	182	107	75	—	110	36	18	9	9
1,201 - 1,500	179	124	54	1	100	37	25	7	10
1,501 - 1,800	151	114	36	1	78	41	21	8	3
1,801 - 2,100	173	127	45	1	73	51	35	7	7
2,101 - 2,400	207	153	51	3	91	67	26	13	10
2,401 - 2,700	214	184	26	4	79	75	35	16	9
2,701 - 3,000	246	219	25	2	72	109	41	14	10
3,001 - 3,300	285	257	24	4	91	116	49	15	14
3,301 - 3,600	213	188	21	4	72	93	29	14	5
3,601 - 3,900	200	188	9	3	62	92	29	11	6
3,901 - 4,200	176	172	4	—	43	87	29	14	3
over \$4,200	763	744	18	1	188	393	113	57	12
Totals	3,387	2,803	559	25	1,288	1,283	481	206	129

**Type of Pension Benefit**

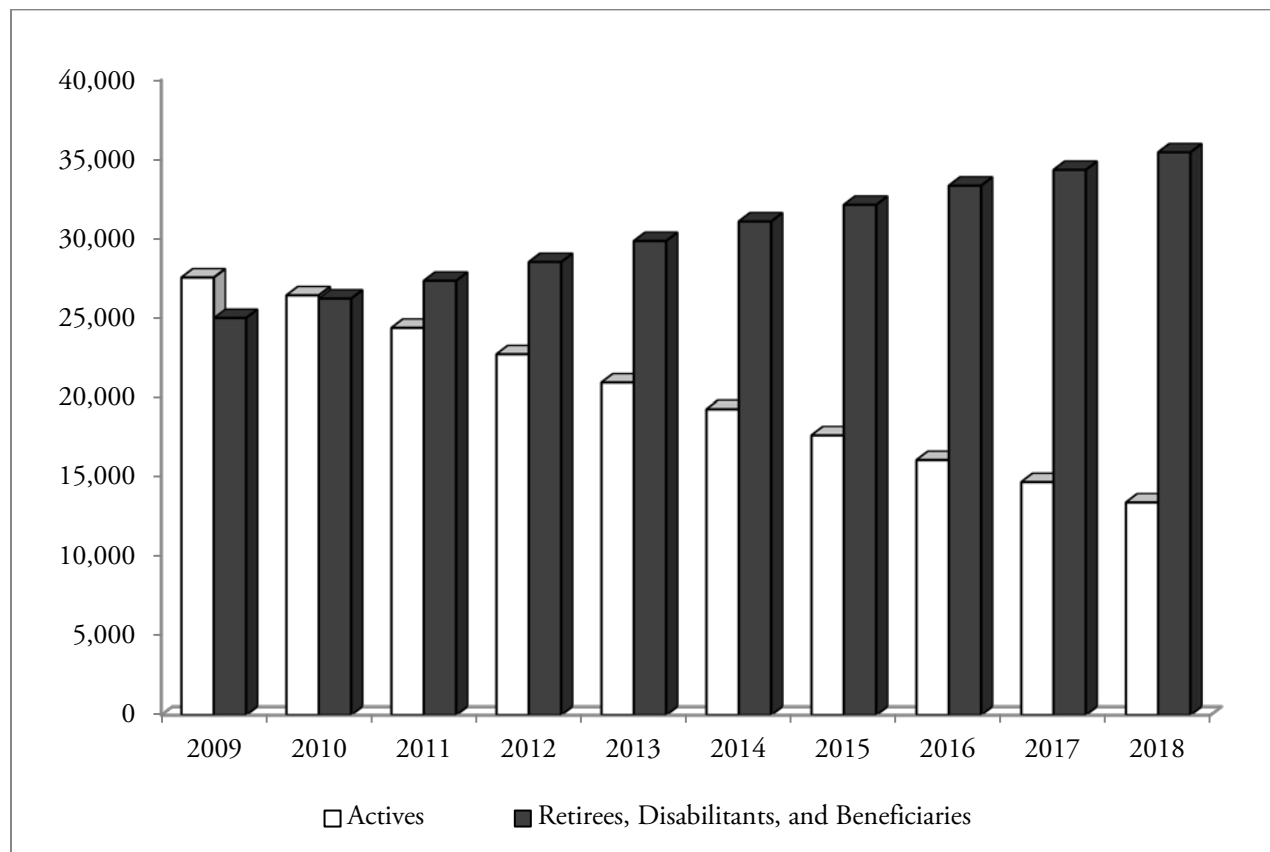
- 1 - Regular retirement
- 2 - Survivor payment
- 3 - Disability

**Option Selected**

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

Public Employees' Retirement System System Membership by Status					
Year Ended June 30	Active	Retirees, Disabilitants & Beneficiaries	Vested Terminations	Nonvested Terminations w/Balance	Total
2009	27,565	25,015	6,566	14,626	73,772
2010	26,442	26,237	6,253	14,543	73,475
2011	24,393	27,359	6,414	14,028	72,194
2012	22,730	28,540	6,294	13,552	71,116
2013	20,955	29,865	6,230	13,162	70,212
2014	19,297	31,099	6,167	12,713	69,276
2015	17,660	32,145	6,304	12,339	68,448
2016	16,105	33,353	6,160	11,880	67,498
2017	14,719	34,347	5,962	11,506	66,534
2018	13,434	35,454	5,660	11,192	65,740

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



Public Employees' Retirement System Principal Participating Employers June 30, 2019			
Employer	Non-retired Members	Rank	Percentage of of Total Non-retired Members
State of Alaska	26,716	1	40.30%
Anchorage School District	5,870	2	8.86
University of Alaska	<u>4,315</u>	3	<u>6.51</u>
<b>Total</b>	<b><u>36,901</u></b>		<b><u>55.67%</u></b>

# Statistical Section

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## **Public Employees' Retirement System Participating Employers at June 30, 2019**

Akutan, City of	Chatham School District
Alaska, State of	Chugach School District
Alaska Gasline Development Corporation	Cook Inlet Housing Authority
Alaska Gateway School District	Copper River Basin Regional Housing Authority
Alaska Housing Finance Corporation	Copper River School District
Alaska Municipal League	Cordova, City of
Aleutian Housing Authority	Cordova City School District
Aleutians East Borough	Cordova Community Medical Center
Aleutians East Borough School District	Craig, City of
Allakaket, City of	Craig City School District
Anchorage, Municipality of	
Anchorage Community Development Authority	Delta-Greely School District
Anchorage School District	Delta Junction, City of
Anderson, City of	Denali Borough
Aniak, City of	Denali Borough School District
Annette Island School District	Dillingham, City of
Atka, City of	Dillingham City School District
Baranof Island Housing Authority	Eek, City of
Barrow, City of	Egegik, City of
Bartlett Regional Hospital	Elim, City of
Bering Strait School District	
Bering Straits Regional Housing Authority	Fairbanks, City of
Bethel, City of	Fairbanks North Star Borough
Bristol Bay Borough	Fairbanks North Star Borough School District
Bristol Bay Borough School District	Fort Yukon, City of
Bristol Bay Housing Authority	
	Galena, City of
	Galena City School District



## Public Employees' Retirement System Participating Employers at June 30, 2019 (continued)

Haines Borough	Lake and Peninsula Borough
Haines Borough School District	Lake and Peninsula Borough School District
Homer, City of	Lower Kuskokwim School District
Hoonah, City of	Lower Yukon School District
Hoonah City School District	
Hooper Bay, City of	Matanuska-Susitna Borough
Huslia, City of	Matanuska-Susitna Borough School District
Hydaburg City School District	Mekoryuk, City of
Iditarod Area School District	Nenana, City of
Ilisagvik College	Nenana City School District
Interior Regional Housing Authority	Nome, City of
Inter-Island Ferry Authority	Nome City School District
	Nome Joint Utility System
Juneau School District, City and Borough of	Noorvik, City of
Juneau, City and Borough of	North Pacific Fishery Management Council
	North Pacific Rim Housing Authority
Kachemak, City of	North Pole, City of
Kake City School District	North Slope Borough
Kaltag, City of	North Slope Borough School District
Kashunamiut School District	Northwest Arctic Borough
Kenai, City of	Northwest Arctic Borough School District
Kenai Peninsula Borough	Northwest Inupiat Housing Authority
Kenai Peninsula Borough School District	Nulato, City of
Ketchikan, City of	
Ketchikan Gateway Borough	Palmer, City of
Ketchikan Gateway Borough School District	Pelican, City of
King Cove, City of	Pelican City School District
Kivalina, City of	Petersburg Borough
Klawock, City of	Petersburg City School District
Klawock City School District	Petersburg Medical Center
Kodiak, City of	Pribilof School District
Kodiak Island Borough	
Kodiak Island Borough School District	
Kotzebue, City of	
Koyuk, City of	
Kuspuk School District	

# Statistical Section

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<p><b>Public Employees' Retirement System</b> <b>Participating Employers</b> at June 30, 2019 (continued)</p>
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Saint George, City of	Thorne Bay, City of
Saint Mary's School District	Tlingit-Haida Regional Housing Authority
Saint Paul, City of	Toksook Bay, City of
Sand Point, City of	
Saxman, City of	Unalakleet, City of
Saxman Seaport	Unalaska, City of
Selawik, City of	Unalaska City School District
Seldovia, City of	University of Alaska
Seward, City of	Upper Kalskag, City of
Shaktolik, City of	
Sitka Borough School District	Valdez, City of
Sitka, City and Borough of	Valdez City School District
Sitka Community Hospital	
Skagway City School District	Wasilla, City of
Skagway, Municipality of	Whittier, City of
Soldotna, City of	Wrangell, City and Borough of
Southeast Island School District	Wrangell Public School District
Southeast Regional Resource Center	
Southwest Region School District	Yakutat, City and Borough of
Special Education Service Agency	Yakutat School District
	Yukon Flats School District
Tagiugmiullu Nunamiullu Housing Authority	Yukon-Koyukuk School District
Tanana, City of	Yupiit School District
Tanana School District	





STATE OF ALASKA • DEPARTMENT OF ADMINISTRATION

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