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Suite 600  
701 West Eighth Avenue  
Anchorage, AK 99501

## **Independent Auditors' Report**

The Division of Retirement and Benefits and  
Members of the Alaska Retirement Management Board  
State of Alaska 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, 2016, 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 audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

# Financial Section

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## *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the State of Alaska Public Employees' Retirement System as of June 30, 2016, and the changes in fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.

## *Other Matters*

### *Prior-Year Comparative Information*

We have previously audited the System's 2015 combining financial statements, and we expressed an unmodified opinion on those financial statements in our report dated December 4, 2015. In our opinion, the summarized comparative information presented herein as of and for the year then ended June 30, 2015 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 15-24, and the schedule of changes in employer net pension liability and related ratios, schedule of employer and nonemployer contributions, schedule of investment returns, schedule of funding progress, and schedule of contributions from employers and the State of Alaska on pages 45-61 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 63 and 64 are presented for purposes of additional analysis and are not a required part of the basic financial statements. The supplemental schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplemental schedules are fairly stated in all material respects in relation to the basic financial statements as a whole.

**KPMG LLP**

December 22, 2016

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

## **Management's Discussion and Analysis**

**June 30, 2016**

This section presents management's discussion and analysis (MD&A) of the Public Employees' Retirement System's (System) financial position and performance for the year ended June 30, 2016. 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, 2016.

### **Financial Highlights**

The System's financial highlights as of June 30, 2016 were as follows:

- The System's fiduciary net position restricted for pension benefits, postemployment healthcare benefits, and individuals decreased by \$467 million during fiscal year 2016.
- The System's plan member and employer contributions increased by \$5.8 million during fiscal year 2016.
- The State of Alaska directly appropriated \$126.5 million during fiscal year 2016.
- The System's net investment income decreased \$566.4 million to a loss of \$86.8 million during fiscal year 2016.
- The System's pension benefit expenditures totaled \$732.4 million during fiscal year 2016.
- The System's postemployment healthcare benefit expenditures totaled \$401.2 million in fiscal year 2016.

### **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 held in trust 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, 2016.

*Combining Statement of Changes in Fiduciary Net Position* – This statement presents how the System's net position held in trust for pension benefits, postemployment healthcare benefits, and individuals changed during the fiscal year ended June 30, 2016. 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, 2016 and the sources and uses of those funds during fiscal year 2016.

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## Management's Discussion and Analysis

June 30, 2016

*Notes to the 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 five schedules and related notes concerning the funded status of the System and actuarial assumptions and methods used in the actuarial valuation.

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

### Condensed Financial Information (in thousands)

Description	System net position				
	2016	2015	Increase (decrease)		2014
			Amount	Percentage	
<b>Assets:</b>					
Cash and cash equivalents	\$ 148,228	344,298	(196,070)	(56.9)%	\$ 501,598
Due from State of Alaska General Fund	19,922	17,210	2,712	15.8	16,981
Contributions receivable	27,733	29,744	(2,011)	(6.8)	29,188
Due from retiree health fund	—	2	(2)	—	—
Due from PERS Occupational death & disability	2	—	2	—	—
Other receivables	218	219	(1)	—	8
Investments, at fair value	15,838,187	16,115,456	(277,269)	(1.7)	14,872,108
Other assets	2,108	2,110	(2)	(0.1)	4,365
Total assets	<u>16,036,398</u>	<u>16,509,039</u>	<u>(472,641)</u>	<u>(2.9)</u>	<u>15,424,248</u>
<b>Liabilities:</b>					
Accrued expenses	10,368	13,150	(2,782)	(21.2)	11,416
Claims payable	45,313	46,147	(834)	(1.8)	48,280
Forfeiture payable	27,351	22,545	4,806	21.3	17,613
Due to PERS DB Pension Fund	2	—	2	—	—
Due to State of Alaska General Fund	4,568	11,854	(7,286)	(61.5)	5,641
Total liabilities	<u>87,602</u>	<u>93,696</u>	<u>(6,094)</u>	<u>(6.5)</u>	<u>82,950</u>
Net position	<u>\$ 15,948,796</u>	<u>16,415,343</u>	<u>(466,547)</u>	<u>(2.8)%</u>	<u>\$ 15,341,298</u>

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## Management's Discussion and Analysis

June 30, 2016

Description	Changes in system net position		Increase (decrease)		2014
	2016	2015	Amount	Percentage	
Net position, beginning of year	\$ 16,415,343	15,341,298	1,074,045	7.0%	\$ 13,011,799
Additions:					
Contributions - Employers and members	660,834	655,049	5,785	0.9	646,412
Nonemployer Contribution – State of Alaska	126,520	1,000,000	(873,480)	(87.3)	312,473
Net investment income (loss)	(86,770)	479,616	(566,386)	(118.1)	2,402,053
Other additions	31,963	47,020	(15,057)	(32.0)	17,438
Total additions	732,547	2,181,685	(1,449,138)	(66.4)	3,378,376
Deductions:					
Pension and postemployment healthcare benefits	1,133,712	1,048,786	84,926	8.1	996,129
Refund of contributions	40,744	34,116	6,628	19.4	30,503
Administrative	24,638	24,738	(100)	(0.4)	22,245
Total deductions	1,199,094	1,107,640	91,454	8.3	1,048,877
Increase (decrease) in net position	(466,547)	1,074,045	(1,540,592)	(143.4)	2,329,499
Net position, end of year	\$ 15,948,796	16,415,343	(466,547)	(2.8)%	\$ 15,341,298

### Financial Analysis of the System

The statements of fiduciary net position as of June 30, 2016 and 2015 show net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$15,948,796,000 and \$16,415,343,000, 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 a decrease in the System's net position restricted for pension benefits, postemployment healthcare benefits, and individuals of \$466,547,000 or (2.8%) from fiscal year 2015 to 2016 and an increase of \$1,074,045,000 or 7.0% from fiscal year 2014 to 2015. Over the long term, plan member, employer and nonemployer contributions, and State of Alaska appropriations, as well as investment income earned, are anticipated to sufficiently fund the pension benefit and postemployment healthcare costs of the System.

During the Twenty-Ninth Alaska State Legislature and as part of the State of Alaska's Fiscal Year 2016 Operating Budget, House Bill 2001 appropriated \$126.5 million from the General Fund to the Department of Administration for deposit in the Defined Benefit Pension and the Alaska Retiree Healthcare Trust funds.



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## Management's Discussion and Analysis

June 30, 2016

### Contributions, Investment Income, and Other Additions

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

	Additions (in thousands)				
	2016	2015	Increase (decrease)		2014
			Amount	Percentage	
Employer contributions	\$ 486,979	483,881	3,098	0.6%	\$ 477,133
Plan member contributions	173,855	171,168	2,687	1.6	169,279
Nonemployer contributions – State of Alaska	126,520	1,000,000	(873,480)	(87.3)	312,473
Net investment income (loss)	(86,770)	479,616	(566,386)	(118.1)	2,402,053
Other additions	31,963	47,020	(15,057)	(32.0)	17,438
Total	<u>\$ 732,547</u>	<u>2,181,685</u>	<u>(1,449,138)</u>	<u>(66.4)%</u>	<u>\$ 3,378,376</u>

The System's employer contributions increased from \$483,881,000 in fiscal year 2015 to \$486,979,000 in fiscal year 2016, an increase of \$3,098,000 or 0.6%. The System's employer contributions increased from \$477,133,000 in fiscal year 2014 to \$483,881,000 in fiscal year 2015, an increase of \$6,748,000 or 1.4%. The increase in employer contributions is attributable to increased contributions from the defined benefit unfunded liability portion of DCR Plan salaries and salary floor payments.

The State of Alaska provided \$126.5 million for fiscal year 2016 and \$1 billion for fiscal year 2015 in nonemployer 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). In fiscal year 2015, in an effort to bolster the funding levels of both pension plans, the Alaska legislature appropriated an amount in excess of the actuarially determined contribution rate, in anticipation that this additional funding would decrease future nonemployer contributions.

The System's net investment income in fiscal year 2016 decreased by \$566,386,000 or a negative 118.1% from amounts recorded in fiscal year 2015. The System's net investment income in fiscal year 2015 decreased by \$1,922,437,000 or 80.0% from amounts recorded in fiscal year 2014. Over the long term, investment earnings play a significant role in funding plan benefits. Over the last two years, the investment environment has been challenging to plans across the country. The Board continues to look at investment classes and strategies best suited to meet the expected earnings returns to meet future benefit payments.

# Financial Section

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## Management's Discussion and Analysis

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

	Year ended		
	2016	2015	2014
System returns	(0.36)%	3.29%	18.46%
Domestic equities	0.58	7.84	25.45
International equities	(9.15)	(3.32)	23.41
Fixed income	5.15	(0.74)	5.14
Private equity	4.71	13.77	24.19
Absolute return	(3.09)	9.24	6.51
Real assets	4.76	3.70	12.71
Cash equivalents	0.55	0.28	0.26
Alternative equity	3.41	(0.89)	24.55
Actuarial rate of return	8.00	8.00	8.00

### Benefits and Other Deductions

The primary deduction of the DB Plan is the payment of pension and 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)				
	2016	2015	Increase (decrease)		2014
			Amount	Percentage	
Pension benefits	\$ 732,479	686,493	45,986	6.7%	\$ 640,518
Postemployment healthcare benefits	401,233	362,293	38,940	10.7	355,611
Refund of contributions	40,744	34,116	6,628	19.4	30,503
Administrative	24,638	24,738	(100)	(0.4)	22,245
Total	\$ 1,199,094	1,107,640	91,454	8.3%	\$ 1,048,877

The System's pension benefit payments in 2016 increased \$45,648,000 or 6.6% from fiscal year 2015 and increased \$45,975,000 or 7.2% from fiscal year 2014 to 2015. The increase in pension benefits in fiscal year 2016 is the result of an increase in the number of retirees.

The System's postemployment healthcare benefit payments in fiscal year 2016 increased \$38,940,000 or 10.7% from fiscal year 2015 and increased \$6,682,000 or 1.9% from fiscal year 2014 to 2015. The System has seen an increase in plan utilization for healthcare as the number of retirees in the DB Plan continue to increase. The System continues to look at ways for cost containment while providing benefits applicable to the plan.

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## Management's Discussion and Analysis

June 30, 2016

The System's refund of contributions increased \$6,628,000 or 19.4% from fiscal year 2015 to 2016 and increased \$3,613,000 or 11.8% from fiscal year 2014 to 2015. The increase in refunds is entirely in the DCR Plan, where refunds increased \$6,643,000 between fiscal year 2015 to 2016, and increased \$4,963,000 from fiscal year 2014 to 2015. 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.

The System's administrative deductions in 2016 decreased \$100,000 or 0.4% from fiscal year 2015 and increased \$2,493,000 or 11.2% from fiscal year 2014 to 2015. The decrease in administrative costs in fiscal year 2016 is related to increases in management, consulting, and other professional services, offset by a decrease in Patient Protection and Affordable Care Act transitional reinsurance program fees.

### Net Pension Liability

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

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

	<u>2016</u>	<u>2015</u>
Total pension liability	\$ 13,817,285	13,456,876
Plan fiduciary net position	<u>(8,227,687)</u>	<u>(8,606,862)</u>
Employers' net pension liability	<u>\$ 5,589,598</u>	<u>4,850,014</u>
Plan fiduciary net position as a percentage of the total pension liability	59.55%	63.96%

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## **Management's Discussion and Analysis**

**June 30, 2016**

### **Funding**

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

- The employer contribution rate is 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. Alaska Statute 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 of Alaska as a direct appropriation per AS 39.35.280.
- AS 39.35.280 provides that additional state contributions are made each July 1 or as soon after July 1 for the ensuing fiscal year that when combined with the total employer contributions are sufficient to pay the System's past service liability at the contribution rate adopted by the Board for that fiscal year.
- Plan member contributions are set by Alaska Statute 39.35.160 for the DB Plan and Alaska Statute 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 2016, the Twenty-Ninth Alaska State Legislature enacted one law that affects the System:

- House Bill 256, Section 28(a) appropriates \$99.2 million from the General Fund and the Alaska Higher Education Investment Fund to the Department of Administration for deposit in the System's defined benefit pension fund and the retiree healthcare trust as partial payment of the participating employers' contribution for fiscal year ending June 30, 2017. This appropriation is to fund the difference between the statutory 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, and is specified in Alaska Statute 39.35.280 – Additional State Contributions.

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## **Management's Discussion and Analysis**

**June 30, 2016**

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

Fiscal year 2016 was a year of negative investment returns. Net investment income decreased from \$479,616,000 in fiscal year 2015 to a loss of \$86,770,000 in fiscal year 2016, a decrease of \$566,386,000 or a negative 118.1%. The return on the System's investments was significantly below the 8.00% actuarially assumed rate of return with the System's actual rate of return of (0.36)% at June 30, 2016. In fiscal year 2015, the System's investments returned 3.29%, less than one-half the actuarially assumed rate of 8.00%. The Board continues to work with its investment counsel and the Alaska Department of Revenue, Treasury Division, to diversify the portfolio of the System to maintain an optimal risk/return ratio.

The consulting actuary recommended a decrease from the System's actuarially determined contribution rate of 44.03% in fiscal year 2015 to 27.19% in fiscal year 2016. The Board adopted the fiscal year 2016 actuarially determined contribution rate of 27.19%, which represented a decrease of 16.84%. The statutory employer effective contribution rate remained at 22.00% for fiscal years 2016 and 2015.

The June 30, 2015 and 2014 actuarial valuation reports for the DB Plan reported funding ratios based on valuation assets of 78.3% and 70.1%, respectively, as well as unfunded liabilities of \$4.5 billion and \$6.3 billion, respectively.

The System expected this decrease in the DB Plan's recommended actuarially determined contribution rate and the corresponding increase in the pension and healthcare funding ratios as of the June 30, 2015 actuarial valuation report with the infusion of the \$1 billion appropriated from the Constitutional Budget Reserve Fund during fiscal year 2015. Additionally, due to statutory changes implemented by the Alaska Legislature in conjunction with the \$1 billion infusion to the DB Plan, the statute (1) established the level percentage of pay approach as a replacement to the level dollar approach and (2) reset the 25-year amortization period beginning July 1, 2014.

For fiscal years 2016 and 2015, the DCR Plan's employer contribution rate was established by Alaska statute at 22.00%. The DCR Plan's actuarially determined occupational death and disability rate was adopted by the Board for fiscal years 2016 and 2017 to be 1.05% and 0.49%, respectively, for peace officers/firefighters; 0.22% and 0.17%, respectively, for all others. The DCR Plan retiree medical plan actuarially determined contribution rate was adopted by the Board for fiscal years 2016 and 2017 to be 1.68% and 1.18%, respectively.

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**Management's Discussion and Analysis**

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**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

**State of Alaska**  
**Public Employees' Retirement System**  
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**Combining Statement of Fiduciary Net Position**

**June 30, 2016**  
**(With comparative totals for June 30, 2015)**

**(In thousands)**

	Defined Benefit Pension	Defined Contribution Pension	Other Postemployment Benefit Plans			System total June 30, 2016	System total June 30, 2015
			Alaska retiree healthcare trust	Occupational death and disability	Retiree medical		
<b>Assets:</b>							
Cash and cash equivalents (note 3):							
Short-term fixed income pool	\$ 54,115	17,610	58,917	353	1,352	3,950	136,297
Empower money market fund - nonparticipant directed	—	11,931	—	—	—	—	11,931
Total cash and cash equivalents	54,115	29,541	58,917	353	1,352	3,950	148,228
Receivables:							
Contributions	27,201	193	243	3	25	68	27,733
Due from State of Alaska General Fund	—	8,384	7,997	222	1,130	2,189	19,922
Due from Retiree Health Fund	—	—	—	—	—	—	—
Due from PERS Occupational Death and Disability	2	—	—	—	—	—	2
Other accounts receivable	212	6	—	—	—	—	218
Total receivables	27,415	8,583	8,240	225	1,155	2,257	47,875
Investments (note 3), at fair value:							
Fixed income securities:							
U.S. Treasury fixed income pool	378,535	—	311,353	989	2,688	10,216	703,781
Taxable municipal bonds	93,079	—	76,559	243	661	2,512	173,054
Tactical fixed income pool	289,364	—	238,007	756	2,055	7,809	537,991
High yield pool	130,864	—	107,638	342	929	3,532	243,305
International fixed income pool	55,776	—	53,045	215	703	2,303	112,042
Emerging debt pool	56,071	—	46,120	146	398	1,513	104,248
Total fixed income securities	1,003,689	—	832,722	2,691	7,434	27,885	1,874,421
Broad domestic equity:							
Large cap pool	1,767,873	—	1,454,111	4,618	12,553	47,712	3,286,867
Small cap pool	376,067	—	309,322	982	2,671	10,150	699,192
Total broad domestic equity	2,143,940	—	1,763,433	5,600	15,224	57,862	3,986,059
Broad international equity:							
International equity pool	1,636,322	—	1,345,907	4,274	11,619	44,162	3,042,284
International equity small cap pool	111,130	—	91,406	291	789	2,999	206,615
Frontier market pool	—	—	—	—	—	—	—
Emerging markets equity pool	235,156	—	193,421	614	1,670	6,346	437,207
Total broad international equity	1,982,608	—	1,630,734	5,179	14,078	53,507	3,686,106
Alternative equity:							
Alternative equity	279,635	—	230,005	730	1,986	7,547	519,903
Convertible bond pool	70,302	—	57,825	184	499	1,897	130,707
Total alternative equity	349,937	—	287,830	914	2,485	9,444	650,610
Private equity pool	655,867	—	539,464	1,713	4,657	17,701	1,219,402
Absolute return pool	541,239	—	445,180	1,414	3,843	14,607	1,006,283
Real assets:							
Real estate pool	522,700	—	429,273	1,363	3,706	14,085	971,127
Real estate investment trust pool	125,519	—	103,242	328	891	3,388	233,368
Infrastructure private pool	114,141	—	93,883	298	811	3,081	212,214
Infrastructure public pool	73,897	—	60,782	193	525	1,994	137,391
Master limited partnership pool	173,833	—	142,981	454	1,234	4,691	325,193
Energy pool	25,548	—	21,014	67	181	690	47,500
Farmland pool	288,340	—	237,165	753	2,047	7,782	536,087
Timber pool	134,480	—	110,612	351	955	3,629	250,027
Treasury inflation protected securities pool	19,834	—	16,314	52	141	535	36,876
Total real assets	1,478,292	—	1,215,266	3,859	10,491	39,875	2,747,783
Other investment funds, at fair value:							
Pooled investment funds	—	366,668	—	—	—	—	366,668
Collective investment funds	—	300,855	—	—	—	—	300,855
Total other investment funds	—	667,523	—	—	—	—	667,523
Total investments	8,155,572	667,523	6,714,629	21,370	58,212	220,881	15,838,187
Other assets	15	—	2,093	—	—	—	2,108
Total assets	8,237,117	705,647	6,783,879	21,948	60,719	227,088	16,036,398
Liabilities:							
Accrued expenses	4,862	178	5,312	—	12	4	10,368
Forfeitures payable	—	27,351	—	—	—	—	27,351
Claims payable (note 6)	—	—	45,313	—	—	—	45,313
Due to PERS DB Pension Fund	—	—	—	2	—	—	2
Due to State of Alaska General Fund	4,568	—	—	—	—	—	4,568
Total liabilities	9,430	27,529	50,625	2	12	4	87,602
Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals:	\$ 8,227,687	678,118	6,733,254	21,946	60,707	227,084	15,948,796
							16,415,343

See accompanying notes to financial statements.

# Financial Section

**State of Alaska**  
**Public Employees' Retirement System**  
**(A Component Unit of the State of Alaska)**  
**Combining Statement of Changes in Fiduciary Net Position**  
**June 30, 2016**  
**(With comparative totals for June 30, 2015)**  
**(In thousands)**

	Defined Benefit Pension	Defined Contribution Pension	Other Postemployment Benefit Plans				System total June 30, 2016	System total June 30, 2015
			Alaska retiree healthcare trust	Occupational death and disability	Retiree medical	Health reimbursement arrangement		
<b>Additions:</b>								
Contributions:								
Employers	\$ 235,360	43,350	155,630	3,104	16,184	33,351	486,979	483,881
Plan members	96,024	77,196	621	14	—	—	173,855	171,168
Nonemployer State of Alaska	88,586	—	37,934	—	—	—	126,520	1,000,000
Total contributions	419,970	120,546	194,185	3,118	16,184	33,351	787,354	1,655,049
Investment income (loss):								
Net appreciation (depreciation) in fair value (note 2)	(184,340)	3,092	(148,263)	(356)	(677)	(3,499)	(334,043)	233,994
Interest	31,806	15	26,010	77	194	783	58,885	59,582
Dividends	120,406	—	98,742	292	740	2,983	223,163	222,163
Total investment income (loss)	(32,128)	3,107	(23,511)	13	257	267	(51,995)	515,739
Less investment expense	17,839	1,939	14,931	5	11	50	34,775	36,123
Net investment income (loss)	(49,967)	1,168	(38,442)	8	246	217	(86,770)	479,616
Other:								
Other	240	157	31,566	—	—	—	31,963	47,020
Total additions	370,243	121,871	187,309	3,126	16,430	33,568	732,547	2,181,685
<b>Deductions:</b>								
Pension and postemployment benefits	732,141	—	401,233	338	—	—	1,133,712	1,048,786
Refunds of contributions	10,034	30,710	—	—	—	—	40,744	34,116
Administrative	7,243	2,505	14,785	14	91	—	24,638	24,738
Total deductions	749,418	33,215	416,018	352	91	—	1,199,094	1,107,640
Net increase (decrease)	(379,175)	88,656	(228,709)	2,774	16,339	33,568	(466,547)	1,074,045
<b>Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals:</b>								
Balance, beginning of year	8,606,862	589,462	6,961,963	19,172	44,368	193,516	16,415,343	15,341,298
Balance, end of year	\$ 8,227,687	678,118	6,733,254	21,946	60,707	227,084	15,948,796	16,415,343

See accompanying notes to financial statements.

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

**Notes to Financial Statements**

**June 30, 2016**

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

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

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	
Alaska Retiree Healthcare Trust Plan	Cost-sharing, Defined Benefit OPEB
Occupational Death and Disability Plan	Cost-sharing, Defined Benefit OPEB
Retiree Medical Plan	Cost-sharing, Defined Benefit OPEB
Defined Contribution Other Postemployment Benefits	
Healthcare Reimbursement Arrangement Plan	Defined Contribution OPEB

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

	2016		
	Defined Benefit Pension	Defined Contribution Pension	OPEB Plans
State of Alaska	1	1	1
Municipalities	74	76	76
School districts	53	53	53
Other	27	27	27
Total employers	155	157	157

# Financial Section

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

## Notes to Financial Statements

June 30, 2016

(With summarized financial information for June 30, 2015)

	2015		
	Defined Benefit Pension	Defined Contribution Pension	OPEB Plans
State of Alaska	1	1	1
Municipalities	76	78	78
School districts	53	53	53
Other	27	27	27
Total employers	157	159	159

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.

### Defined Benefit Pension Plan

#### *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 (SB) 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, 2016:

Inactive plan members or beneficiaries currently receiving benefits	33,263
Inactive plan members entitled to but not yet receiving benefits	5,948
Active plan members	16,237
Total DB Plan membership	55,448

#### *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.

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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% 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 2.5% 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% of the member's average monthly compensation and 2.5% 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.

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.

### ***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 Plans members' contribution rates are 7.5% for peace officers and firefighters, 9.76% for some school district employees, and 6.75% for general DB Plan members, as required by statute. Employer effective contribution rates are 22.00% of annual payroll. Alaska Statute 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

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- (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.

### ***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**

#### ***General***

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, 2016, membership in the DCR Plan consisted of 1,611 Peace Officer and Firefighter members and 16,974 other members.

#### ***Retirement Benefits***

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

#### ***Contributions***

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

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***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.

***Participant Accounts***

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

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

Record-keeping/administrative fees consisting of a fixed amount, applied in a lump sum each calendar year, and a variable amount, applied monthly, are deducted from each participant's account, 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**

***Alaska Retiree Healthcare Trust Plan***

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

Membership in the plan was as follows as of June 30, 2016:

Inactive plan members or beneficiaries currently receiving benefits	33,263
Inactive plan members entitled to but not yet receiving benefits	5,948
Active plan members	16,237
Total DB Plan membership	55,448

**OPEB Benefits**

Major medical benefits 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 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 60 and will receive benefits at no premium cost if they are over age 60. Tier 3 members with between five and ten years of credited service must

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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 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.

### Contributions

Employer contribution rates are actuarially determined and adopted by the Board. The 2016 employer effective contribution rate is 22.00% of member's compensation.

### *Occupational Death and Disability Plan*

The Occupational Death and Disability Plan provides death benefits for beneficiaries of plan participants and long-term disability benefits to all active members within the System. Members in the Death and Disability Plan consisted of the following at June 30, 2016:

Active plan members	18,585
Participating employers	157
Open claims	11

### Death Benefits

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

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 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

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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 section for survivors of DCR Plan employees who were not peace officers or fire fighters 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.

### **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 month. If a final determination granting the benefit is not made in time to pay the benefit when due, a retroactive payment shall be made to cover the period of deferment.

### **Contributions**

An employer shall contribute to each member's account based on the member's compensation. For fiscal year 2016, the rates are 5% for Occupational Death and Disability for peace officers and firefighters, and 5% for Occupational Death and Disability non-peace officers and firefighters.

### **Retiree Medical Plan**

The retiree medical plan is established under AS 39.35.880 – Medical Benefits. The Department of Administration, Division of Retirement and Benefits, which administers the System's health plans, is in the

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process of formalizing and finalizing the retiree medical plan. Members will be eligible for the DCR Plan's health benefits plan beginning in June 2016. Currently, no members are eligible to use this plan until they have at least 10 years of service.

**Defined Contribution Other Postemployment Benefit Plan**

The Healthcare Reimbursement Arrangement Plan was established to allow medical expenses to be reimbursed from individual savings accounts established for eligible participants. For each member of the plan, an employer shall contribute an amount equal to 3.0% of the average annual compensation of all employees of all employers in the System. As of June 30, 2016, there were 28,468 members and 157 participating employers.

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

***Basis of Accounting***

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

***Use of Estimates***

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

***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.

***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

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Investment and Collective Investment Funds is credited to the fund's net asset value on a daily basis and allocated to pool participants daily on a pro rata basis.

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

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

### ***Contributions Receivable***

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

### ***Administrative Costs***

Administrative costs are paid from investment earnings.

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

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

### ***Federal Income Tax Status***

The DB Plan and 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).

### ***GASB Statement No. 67***

GASB Statement No. 67, Financial Reporting for Pension Plans, requires the disclosures of the total pension liability, fiduciary net position, and net pension liability for single-employer and cost-sharing multiple-employer defined benefit pension plans. GASB Statement No. 67 also requires certain additional note disclosures for defined benefit pension plans including the annual money-weighted rate of return on plan investments. GASB Statement No. 67 revised the reporting requirements for required supplementary information to include

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schedules that provide trend information related to (1) changes in the net pension liability, (2) the actuarially and contractually determined contributions of employer contributing entities, and (3) the annual money-weighted rate of return on plan investments.

**(3) Investments**

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

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

Treasury provides staff for the Board. Treasury has created a pooled environment by which it manages investments of the Board. Additionally, Treasury manages a mix of Pooled Investment Funds and Collective Investment Funds for the 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, Dow Jones Dividend 100 Index Fund in the Alternative Equity Strategies Pool, Real Estate Investment Trust Pool, Treasury Inflation Protected Securities (TIPS) Pool, and cash holdings of certain external managers in addition to acting as oversight manager for all externally managed investments. All other investments are managed by external management companies.

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, 2016 for the defined benefit pension plan is -0.68%.

For additional information on 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>.

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

The components of the net pension liability of the participating employers at June 30, 2016, were as follows (in thousands):

Total pension liability	\$	13,817,285
Plan fiduciary net position		<u>(8,227,687)</u>
Employers' net pension liability	\$	<u><u>5,589,598</u></u>
Plan fiduciary net position as a percentage of the total pension liability		59.55%

***Actuarial Assumptions***

The total pension liability was determined by an actuarial valuation as of June 30, 2015, using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2016:

Inflation	3.12%
Salary increases	Graded by service, from 9.66% to 4.92% for Peace Officer/Firefighter
	Graded by age and service, from 8.55% to 4.34% for All Others
Investment rate of return	8.00%, net of pension plan investment expenses. This is based on an average inflation rate of 3.12% and a real rate of return of 4.88%.

Pre-termination mortality rates were based upon the 2010–2013 actual mortality experience, 60% of male and 65% of female post-termination rates. Deaths are assumed to be occupational 70% of the time for peace officer/firefighters, 50% of the time for others. Post-termination mortality rates were based on 96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 with Projection Scale BB.

The actuarial assumptions used in the June 30, 2015 actuarial valuation were based on the results of an actuarial experience study for the period July 1, 2009 to June 30, 2013, resulting in changes in actuarial assumptions effective for the June 30, 2014 actuarial valuation adopted by the Board to better reflect expected future experience. The assumptions used in the June 30, 2015 actuarial valuation are the same as those used in the June 30, 2014 actuarial valuation.

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

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

### *Discount Rate*

The discount rate used to measure the total pension liability was 8.00%. The projection of cash flows used to determine the discount rate assumed that employer and nonemployer State contributions will continue to follow the current funding policy, which meets State statutes. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

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

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

	1% Decrease (7%)	Current discount rate (8%)	1% Increase (9%)
Net pension liability	\$ 7,199,118	5,589,597	4,232,040

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

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

	<u>Actuarial valuation date</u>	<u>Actuarial liability (AAL) entry age</u>	<u>Actuarial valuation assets</u>	<u>Funded ratio</u>	<u>Unfunded actuarial accrued liability (UAAL)</u>	<u>Covered payroll</u>	<u>UAAL as a percentage of covered payroll</u>
Healthcare trust	June 30, 2015	\$ 12,283,190	7,242,299	59.0%	5,040,891	\$ 1,420,479	354.9%
Occupational death and disability plan	June 30, 2015	5,049	19,014	376.6	(13,965)	778,980	(1.8)
Retiree medical	June 30, 2015	124,660	44,188	35.4	80,472	778,980	10.3

The funding ratio as of June 30, 2015 has increased. The funding ratio increase was primarily due to positive experiences in demographic experience and lower retiree medical costs compared to expected costs that lead to this increase.

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

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

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

June 30, 2015	
	Defined Benefit
Actuarial cost method	Entry age normal; level percentage of pay normal cost basis for pension; level dollar normal cost basis for healthcare
Amortization method	Level percentage of pay, closed for pension; level dollar, closed for healthcare
Equivalent single amortization period	25 years as of June 30, 2014
Asset valuation method	5-year smoothed market starting FY 2015
Actuarial assumptions:	
Investment rate of return	8.00% for pension, 4.55% for healthcare; includes price inflation at 3.12%
Projected salary increases	Peace officer/firefighter: merit – 2.75% per the first 4 years of employment, grading down to 0.5% at 7 years and thereafter. Productivity – 0.5% per year. Inflation - 3.12%. Others: merit – 6.00% per year grading down to 2.00% after 5 years; for more than 6 years of service, 1.50% grading down to 0.0%. Productivity – 0.5% per year. Inflation - 3.12%.
Cost-of-living adjustment	Postretirement pension adjustment
June 30, 2015	
	ODD and Retiree Medical
Actuarial cost method	Entry age normal; level percentage of pay normal cost basis for occupational death and disability; level dollar normal cost basis for retiree medical
Amortization method	Level percent of pay for occupational death and disability; level dollar for, closed with retiree medical. Closed with bases established annually.
Equivalent single amortization period	20 years to reflect retiree medical liabilities without regard to Medicare Part D
Asset valuation method	5-year smoothed market. 80% to 120% of fair value corridor
Actuarial assumptions:	
Investment rate of return	8.00% for occupational death and disability (net of expenses), 5.41% for retiree medical. Inflation - 3.12%.
Projected salary increases	Peace officer/firefighter: merit – 2.75% per year for the first 4 years of employment, grading down 0.5% at 7 years and thereafter. Productivity – 0.5% per year. Inflation - 3.12%. Others: merit – 6.00% per year, grading down to 2.00% after 5 years; for more than 6 years of service, 1.50% grading down to 0.0%. Productivity – 0.5% per year. Inflation - 3.12%.

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

The System's retiree healthcare benefits are partially funded. GASB Statement No. 43 outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on (1) the funded ratio and (2) the percentage of the annual required contribution (ARC) actually being contributed to the plan. The State has utilized the second methodology to develop a discount rate of 4.55% as of June 30, 2013, to be used for June 30, 2016 disclosure.

The System's retiree medical benefits are fully funded. Therefore, the 8.00% discount rate used for GASB Statement 25 reporting is also applied herein for GASB Statement 43 disclosure purposes.

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

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**(6) Claims Payable**

The liability for claims incurred but not reported represents the estimated amounts necessary to settle all outstanding claims, incurred but not reported, as of the balance sheet date. The 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.

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

	2016	2015
Beginning of year:		
Due to State of Alaska General Fund for outstanding warrants	\$ 9,753	—
Incurred but not reported	46,147	48,280
Total, beginning of year	55,900	48,280
Benefit deductions	401,233	361,930
Benefits paid	(409,805)	(354,310)
Total, end of year	\$ 47,328	55,900
End of year:		
Due to State of Alaska General Fund for outstanding warrants	\$ —	9,753
Warrants outstanding	2,015	—
Incurred but not reported	45,313	46,147
Total, end of year	\$ 47,328	55,900

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**June 30, 2016**

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**(7) Commitments and Contingencies**

*Contingencies*

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

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

## **REQUIRED SUPPLEMENTARY INFORMATION**

(Unaudited)

**State of Alaska**  
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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)

	2016	2015	2014	2013	2012
Total pension liability:					
Service cost	\$ 172,304	184,712	160,828	167,203	172,968
Interest	1,049,226	1,020,947	940,786	927,692	887,361
Changes of benefit terms	—	—	—	—	—
Differences between expected and actual experience	(118,947)	10,791	—	56,229	42,847
Changes of assumptions	—	541,390	—	—	—
Benefit payments, including refunds of member contributions	(742,174)	(696,542)	(651,917)	(634,187)	(593,279)
Net change in total pension liability	360,409	1,061,298	449,697	516,937	509,897
Total pension liability – beginning	13,456,876	12,395,578	11,945,881	11,428,944	10,919,047
Total pension liability – ending (a)	13,817,285	13,456,876	12,395,578	11,945,881	11,428,944
Plan fiduciary net position:					
Contributions – employer	235,360	226,136	206,204	179,976	182,695
Contributions – member	96,024	100,036	106,565	110,808	112,703
Contributions – nonemployer entity (State)	88,586	1,000,000	176,794	164,087	130,912
Total net investment income (loss)	(49,967)	253,311	1,207,484	738,656	1,650
Other miscellaneous income	240	36	49	28	35
Benefit payments, including refunds of member contributions	(742,175)	(696,542)	(651,917)	(610,247)	(570,883)
Administrative expenses	(7,243)	(7,553)	(8,223)	(7,120)	(6,743)
Net change in plan fiduciary net position	(379,175)	875,424	1,036,956	576,188	(149,631)
Plan fiduciary net position – beginning	8,606,862	7,731,438	6,694,482	6,118,294	6,267,925
Plan fiduciary net position – ending (b)	8,227,687	8,606,862	7,731,438	6,694,482	6,118,294
Plan's net pension liability (a) - (b)	\$ 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	59.55%	63.96%	62.37%	56.04%	53.53%
Covered-employee payroll	\$ 1,322,925	1,412,237	1,405,198	1,534,665	1,522,399
Net pension liability as a percentage of covered-employee payroll	422.52%	346.43%	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>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>
Actuarially determined contribution	\$ 566,615	529,264	358,718	382,889	351,674
Contributions in relation to the actuarially determined contribution	<u>323,946</u>	<u>1,226,136</u>	<u>382,998</u>	<u>344,063</u>	<u>313,607</u>
Contribution deficiency (excess)	<u>\$ 242,669</u>	<u>(696,872)</u>	<u>(24,280)</u>	<u>38,826</u>	<u>38,067</u>
Covered-employee payroll	\$ 1,322,925	1,412,237	1,405,198	1,534,665	1,522,399
Contributions as a percentage of covered-employee payroll	24.49%	86.82%	27.26%	22.42%	20.60%

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

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**Schedule of Employer and Nonemployer Contributions**  
  
**Defined Benefit Pension Plan**  
**Last 10 Fiscal Years (continued)**  
  
**(In thousands)**

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Actuarially determined contribution	\$ 220,419	217,080	166,016	140,729	268,742
Contributions in relation to the actuarially determined contribution	<u>204,262</u>	<u>186,617</u>	<u>192,740</u>	<u>151,198</u>	<u>207,539</u>
Contribution deficiency (excess)	<u>\$ 16,157</u>	<u>30,463</u>	<u>(26,724)</u>	<u>(10,469)</u>	<u>61,203</u>
Covered-employee payroll	\$ 1,559,938	1,586,697	1,585,490	1,577,846	1,605,819
Contributions as a percentage of covered-employee payroll	13.09%	11.76%	12.16%	9.58%	12.92%

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

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**Required Supplementary Information (Unaudited)**  
**Schedule of Investment Returns**

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	-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)**  
**Schedules of Funding Progress**  
**Defined Benefit OPEB Plans**

June 30, 2016  
(In thousands)

**Alaska Retiree Healthcare Trust Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 13,013,450	3,829,334	29.4%	\$ 9,184,116	1,577,846	582.1%
2009	12,770,990	4,134,450	32.4	8,636,540	1,585,490	544.7
2010	9,304,504	4,687,632	50.4	4,616,872	1,586,697	291.0
2011	9,091,034	5,051,625	55.6	4,039,409	1,559,938	258.9
2012	9,812,274	5,301,609	54.0	4,510,665	1,522,399	296.3
2013	12,281,372	5,651,877	46.0	6,629,495	1,534,665	432.0
2014	12,758,985	6,913,160	54.2	5,845,825	1,491,583	391.9
2015	12,283,190	7,242,299	59.0	5,040,891	1,420,479	354.9

**Occupational Death and Disability Benefits Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 242	1,288	532.2%	\$ (1,046)	203,955	(0.5)%
2009	403	3,138	778.7	(2,735)	314,118	(0.9)
2010	853	4,801	562.8	(3,948)	421,187	(0.9)
2011	1,949	7,049	361.7	(5,100)	459,521	(1.1)
2012	2,412	9,142	379.0	(6,730)	558,760	(1.2)
2013	3,603	11,373	315.7	(7,770)	590,380	(1.3)
2014	3,627	14,995	413.4	(11,368)	678,840	(1.7)
2015	5,049	19,014	376.6	(13,965)	778,980	(1.8)

**Retiree Medical Benefits Plan**

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	\$ 2,123	2,719	128.1%	\$ (596)	203,955	(0.3)%
2009	4,594	5,475	119.2	(881)	314,118	(0.3)
2010	8,370	8,767	104.7	(397)	421,187	(0.1)
2011	13,142	12,009	91.4	1,133	459,521	0.2
2012	51,798	15,773	30.5	36,025	558,760	6.4
2013	69,144	20,336	29.4	48,808	590,380	8.3
2014	56,819	26,466	46.6	30,353	678,840	4.5
2015	124,660	44,188	35.4	80,472	778,980	10.3

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

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**Required Supplementary Information (Unaudited)**  
**Schedules of Contributions from Employers and the State of Alaska**  
**Defined Benefit OPEB Plans**

**June 30, 2016**  
**(In thousands)**

**Alaska Retiree Healthcare Trust Plan**

Year ended June 30	Actuarial valuation year ended June 30 <sup>(1)</sup>	Annual required contribution	Percentage contributed		
			By employer	By State of Alaska (note 3)	Total percentage contributed (note 3)
2008	2005	\$ 370,456	71.2%	36.2%	107.4%
2009	2006	391,321	68.1	41.4	109.5
2010 <sup>(2)</sup>	2007	790,793	31.6	54.8	86.4
2011	2008	525,075	49.8	21.6	71.4
2012	2009	498,433	44.8	28.8	73.6
2013	2010	612,792	37.5	25.1	62.6
2014	2011	783,827	26.1	19.5	45.6
2015	2012	782,258	21.9	6.0	27.9

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

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

**Occupational Death and Disability Benefits Plan**

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	\$ 1,063	100.0%
2009	1,787	100.0
2010	1,495	100.0
2011	1,852	100.0
2012	1,085	146.0
2013	1,328	116.0
2014	2,080	114.0
2015	2,337	119.0

**Retiree Medical Benefits Plan**

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	\$ 1,845	85.0%
2009	3,152	85.0
2010	3,469	87.0
2011	3,229	78.0
2012	3,464	82.0
2013	3,365	95.0
2014	3,937	94.0
2015	15,190	96.0

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

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

**June 30, 2016**

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

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

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

**(2) Actuarial Assumptions and Methods**

The actuarial valuation was prepared by Buck Consultants. The significant actuarial assumptions used in the defined benefit pension and postemployment healthcare benefit plan valuation as of June 30, 2015 are as follows:

- (a) Actuarial cost method – Entry Age Normal Actuarial Cost method of funding. Any funding surpluses or unfunded accrued liability is amortized over a closed 25-year period (established June 30, 2014) as a level percentage of payroll amounts. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit and defined contribution member payroll combined.
- (b) Valuation of assets – The actuarial asset value was reinitialized to equal fair value of assets as of June 30, 2014. Beginning in 2015, the asset value method recognizes 20% of the gain or loss each year, for a period of five years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements.
- (c) Valuation of medical benefits – Base claims cost rates are incurred healthcare costs expressed as a rate per member per year. Ideally, claims cost rates should be derived for each significant component of cost that can be expected to require differing projection assumptions or methods, such as medical claims, prescription drug claims, administrative costs, etc. Separate analysis is limited by the availability and historic credibility of cost and enrollment data for each component of cost. This valuation reflects nonprescription claims separated by Medicare status, including eligibility for free Part A coverage. Prescription costs are analyzed separately as in prior valuations. Administrative costs are assumed in the final per capita claims cost rates used for valuation purposes. Analysis to date on Medicare Part A coverage is limited since Part A claim data is not available by individual, nor is this status incorporated into historical claim data. The valuation is prepared based on the participant census data that was readily available. Certain pension fields have been used to clarify the retiree medical data provided. This serves as a proxy until additional retiree medical data can be provided.
- (d) Investment return/discount rate – 8.00% per year (geometric), compounded annually, net of expenses.
- (e) Salary scale – Inflation 3.12% per year and productivity 0.50% per year.

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

**June 30, 2016**

- (f) Payroll growth – 3.62% per year (inflation + productivity).
- (g) Total inflation – Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
- (h) Mortality (pre-termination) – Based upon 2010–2013 actual mortality experience. 60% of male rates and 65% of female rates of post-termination mortality rates. Deaths are assumed to be occupational 70% of the peace officer/firefighters, 50% of the time for others. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 109%.
- (i) Mortality (post-termination) – 96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 with Projection Scale BB. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 109%.
- (j) Total turnover – Based upon the 2010–2013 actual withdrawal experience.
- (k) Disability – Incidence rates based upon the 2010–2013 actual experience. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB. Disabilities are assumed to be occupational 70% of the time for peace officer/firefighter, 50% of the time for others.
- (l) Retirement – Retirement rates based on the 2010–2013 actual experience. Deferred vested members are assumed to retire at their earliest unreduced retirement date for others. For peace officer/firefighter, Tier 1 deferred vested members are assumed to retire at age 55 and Tiers 2 and 3 deferred vested members are assumed to retire at age 60. The modified cash refund annuity is valued as a three-year certain and life annuity.
- (m) Marriage and age difference – Wives are assumed to be three years younger than husbands. For others, 75% of male members and 70% of 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.
- (n) Dependent children – Benefits to dependent children have been valued assuming members who are married and between the ages of 25 and 45 have two dependent children.
- (o) Contribution refunds – For others, 10% of terminating members with vested benefits are assumed to have their contributions refunded. For peace officer/firefighter, 15% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with nonvested benefits are assumed to have their contributions refunded.
- (p) 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. Nonvested

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**June 30, 2016**

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.

- (q) 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.
- (r) Postretirement pension adjustment (PRPA) – 50% and 75% of assumed inflation, or 1.56% and 2.34%, respectively, is valued for the annual automatic PRPA as specified in the statute.
- (s) Expenses – The investment return assumption is net of all expenses.
- (t) Part-time status – Part-time employees are assumed to earn 1.00 years of credited service per year for peace officer/firefighter and 0.65 years of credited service per year for other members.
- (u) Final average earnings – Final average earnings amount 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.
- (v) Per capita claims cost – Sample claims cost rates adjusted to age 65 for FY16 medical and prescription drug benefits are shown below:

	<b>Medical</b>	<b>drugs</b>
Pre-Medicare	\$ 11,724	2,753
Medicare Parts A and B	1,461	2,753
Medicare Part B Only	6,700	2,753
Medicare Part D	N/A	496

- (w) Third-party administrator fees – \$194.18 per person per year; assumed trend rate of 5% per year.
- (x) Medicare Part B Only – For actives and retirees not yet Medicare-eligible, participation is set based on whether the member/retiree will have 40 quarters of employment covered by Social Security after March 31, 1986, depending upon date of hire and/or rehire.

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2016

- (y) Health cost trend – The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 9.4% is applied to the FY16 pre-Medicare medical claims costs to get the FY17 medical claims cost.

Fiscal year	Medical pre-65	Medical post-65	Prescription drugs
2016	9.4%	5.9%	5.7%
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
2020	7.0	5.6	4.6
2021	6.5	5.6	4.4
2022	6.0	5.6	4.2
2025	5.6	5.6	4.0
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

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

- (z) Aging factors:

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

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

**June 30, 2016**

- (aa) 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 officers/firefighters). Eligible Tier 1 members are exempt from contribution requirements. Annual FY16 contributions based on monthly rates shown below for calendar 2015 and 2016 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 Tier 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled.

<b>Coverage category</b>	<b>Calendar 2016 annual contribution</b>	<b>Calendar 2016 monthly contribution</b>	<b>Calendar 2015 monthly contribution</b>
Retiree only	\$ 9,324	777	823
Retiree and spouse	18,648	1,554	1,647
Retiree and child(ren)	13,164	1,097	1,163
Retiree and family	22,500	1,875	1,987
Composite	13,848	1,154	1,223

- (bb) Trend rate for retired member contributions – The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 6.6% is applied to the FY16 retired member medical contributions to get the FY17 retired member medical contributions.

<b>Fiscal year</b>	<b>Trend Assumption</b>
2016	6.6%
2017	6.2
2018	5.8
2019	5.4
2020	5.0
2021	4.7
2025	4.1
2050	4.0
2100	4.0

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2014 valuation. Note that actual FY16 retired member medical contributions are reflected in the valuation.

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

The significant actuarial assumptions used in the defined contribution occupational death and disability and retiree medical benefit plan valuation as of June 30, 2015 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. These requirements are being amended. Under the new accounting standards that will become applicable to postemployment benefit plans other than pension plans (GASB Statement Nos. 74 and 75), the GASB requirements will not directly control amortization periods used for funding of the plan.
- (b) Valuation of assets – 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 were \$0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements. Valuation assets are constrained to a range of 80% to 120% of fair value of assets.
- (c) Valuation of retiree medical benefits – Due to the lack of experience for the DCR Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2015 for PERS DB with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles, and out-of-pocket limits, upcoming FY16 claims costs were reduced 11.9% for medical and 7.1% for prescription drugs. The healthcare trend was reduced 0.2% each year to reflect the fact that the medical benefit to be offered to members will have annual indexing of member cost sharing features such as deductibles and out-of-pocket amounts. The valuation is prepared based on the participant census data that was readily available. Certain pension fields have been used to clarify the retiree medical data provided. This serves as a proxy until additional retiree medical data can be provided.
- (d) Investment return/discount rate – 8.00% per year (geometric), compounded annually, net of expenses.
- (e) Salary scale – Inflation 3.12% per year. Productivity 0.5% per year.
- (f) Payroll growth – 3.62% per year (inflation + productivity).
- (g) Total inflation – Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.

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

**June 30, 2016**

- (h) Mortality (pre-termination) – Based upon 2010–2013 actual mortality experience. 60% of male rates and 65% of female rates of the post-termination mortality rates. Deaths are assumed to be occupational 70% of the time for peace officer/firefighters, 50% of the time for others. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 109%.
- (i) Mortality (post-termination) – Based upon 2010–2013 actual mortality experience. 96% of all rates of the RP-2000 table, 2000 Base Year, projected to 2018 with projection scale BB. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 109%.
- (j) Total turnover – Rates based upon the 2010–2013 actual experience.
- (k) Disability – Incidence rates based upon the 2010–2013 actual experience. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB. Disabilities are assumed to be occupational 70% of the time for peace officer/firefighter, 50% 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 2010–2013 actual experience.
- (m) Marriage and age difference – Wives are assumed to be three years younger than husbands. For others, 75% of male members and 70% of female members are assumed to be married. For peace officer/firefighters, 85% of male members and 75% of female members are assumed to be married at termination from active service.
- (n) Part-time status – Part-time employees are assumed to earn 1.00 years of credited service per year for peace officer/firefighter and 0.65 years of credited service per year for other members.
- (o) 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.

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**June 30, 2016**

- (p) Per capita claims cost – Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY16 medical and prescription drug benefits are shown below:

	<b>Medical</b>	<b>Prescription drugs</b>
Pre-Medicare	\$ 11,724	2,753
Medicare Parts A and B	1,461	2,753
Medicare Part B Only	6,700	2,753
Medicare Part D	N/A	496

Members are assumed to attain Medicare eligibility at age 65.

- (q) Third-party administrator fees – \$194.18 per person per year; assumed trend rate of 5% per year.
- (r) 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: 0.881 for the medical plan and 0.929 for the prescription drug plan.
- (s) 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.

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**June 30, 2016**

- (t) 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, 9.4% is applied to the FY16 pre-Medicare medical claims cost to get the FY17 medical claims costs:

<u>Fiscal year</u>	<u>Medical Pre-65</u>	<u>Medical Post-65</u>	<u>Prescription drugs</u>
2016	9.4%	5.9%	5.7%
2017	8.8	5.8	5.4
2018	8.2	5.7	5.1
2019	7.6	5.6	4.8
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2025	5.6	5.6	4.2
2050	4.4	4.0	4.0
2100	4.4	4.0	4.0

As of 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 effectively begins estimating trend amounts beginning in 2014 and projects out to 2090. This model has been adopted by the Society of Actuaries, and has been populated with assumptions that are specific to the State of Alaska.

Each of the above trend rates was reduced by 0.2% to reflect the fact that the medical benefit offered to members will have annual indexing of member cost sharing.

# Financial Section

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2016

(u) Aging factors:

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

(v) Retiree medical participation:

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

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.

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## Notes to Required Supplementary Information (Unaudited)

June 30, 2016

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

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

There have been no changes in the assumptions since the prior valuation. Healthcare claim costs are updated annually.

There have been no material changes in the asset or valuation methods since the prior valuation. To increase the efficiency of the data process, assumptions are used for individual data questions which are deemed to have an immaterial impact on liabilities and contribution rates.

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

There have been no changes in assumptions since the prior valuation. Healthcare claim costs are updated annually.

There have been no material changes in the asset or valuation methods since the prior valuation. To increase the efficiency of the data process, assumptions are used for individual data questions which are deemed to have an immaterial impact on liabilities and contribution rates.

## **SUPPLEMENTAL SCHEDULES**

**State of Alaska**  
**Public Employees' Retirement System**  
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**Schedule of Administrative and Investment Deductions**  
**Years ended June 30, 2016 and 2015**  
**(In thousands)**

	Administrative	Investment	Totals	
			2016	2015
Personal services:				
Wages	\$ 4,676	174	4,850	4,892
Benefits	2,799	66	2,865	2,869
Total personal services	7,475	240	7,715	7,761
Travel:				
Transportation	29	76	105	173
Per diem	7	12	19	28
Total travel	36	88	124	201
Contractual services:				
Management and consulting	13,109	33,590	46,699	46,934
Accounting and auditing	131	22	153	922
Data processing	1,478	570	2,048	65
Communications	115	39	154	2,036
Advertising and printing	52	5	57	190
Rentals/leases	391	66	457	451
Legal	365	46	411	540
Medical specialists	281	—	281	43
Repairs and maintenance	—	—	—	1
Transportation	85	2	87	70
Other professional services	201	54	255	289
Total contractual services	16,208	34,394	50,602	51,541
Patient Protection and Affordable Care Act Transitional Reinsurance Program	873	—	873	1,081
Total Patient Protection and Affordable Care Act	873	—	873	1,081
Other:				
Equipment	11	14	25	63
Supplies	35	39	74	214
Total other	46	53	99	277
Total administrative and investment deductions	\$ 24,638	34,775	59,413	60,861

See accompanying independent auditors' report.

# Financial Section

**State of Alaska**  
**Public Employees' Retirement System**  
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**Schedule of Payments to Consultants**  
**Other than Investment Advisors**  
**Years ended June 30, 2016 and 2015**  
**(In thousands)**

Firm	Services	2015	2014
Buck Consultants, a Xerox Company	Actuarial services	\$ 577	548
KPMGLLP	Auditing services	122	141
State Street Bank Corporation	Custodian banking services	837	697
Applied Microsystems Inc.	Data processing consultants	453	507
Computer Task Group, Inc.	Data processing consultants	52	110
Wostmann Group LLC	Data processing consultants	321	—
SHI International	Data processing consultants	385	—
Interactive Intelligence Group	Data processing consultants	25	—
Michael Silverman	Management consulting services	—	1
State of Alaska, Department of Law	Legal services	365	540
State of Alaska, Department of Health and Social Services	Medical expertise and counseling	281	41
		\$ 3,418	2,585

This schedule presents payments to consultants receiving greater than \$1,000.

See accompanying independent auditors' report.

