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

Independent Auditors' Report

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

We have audited the accompanying combining financial statements of the State of Alaska Teachers' 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.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the State of Alaska Teachers' Retirement System as of June 30, 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 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 45-60 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 62 and 63 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
Teachers' Retirement System
(A Component Unit of the State of Alaska)

Management's Discussion and Analysis (Unaudited)

June 30, 2016

This section presents management's discussion and analysis (MD&A) of the Teachers' Retirement System's (System) financial position and performance for the year ended June 30, 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 and postemployment healthcare benefits decreased by $317.2 million during fiscal year 2016.
- The System's plan member and employer contributions increased by $570,000 during fiscal year 2016.
- The State of Alaska directly appropriated $130.1 million during fiscal year 2016.
- The System's net investment income decreased $279.4 million to a $43.5 million loss during fiscal year 2016.
- The System's pension benefit expenditures totaled $435.7 million during fiscal year 2016.
- The System's postemployment healthcare benefit expenditures totaled $123.0 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 the financial statements. This report also contains required supplementary information and other supplemental schedules.

Combining Statement of Fiduciary Net Position – This statement presents information regarding the System's assets, liabilities, and resulting net position 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 and postemployment healthcare benefits changed during the fiscal years 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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Notes to Financial Statements – The notes to the financial statements are an integral part of the financial statements and provide additional detailed information and schedules that are essential to a full understanding of the System's financial statements.

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

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

Condensed Financial Information (In thousands)

System net position

Description	2016	2015	Increase (decrease) Amount	Increase (decrease) Percentage	2014
Assets:					
Cash and cash equivalents	$ 74,899	159,119	(84,220)	(52.9)%	$ 204,330
Due from State of Alaska General Fund	5,976	8,798	(2,822)	(32.1)	3,933
Contributions receivable	4,757	4,039	718	17.8	4,317
Other receivables	87	87	—	—	3
Due from Retiree Health Fund	—	—	—	—	—
Investments, at fair value	7,792,741	8,027,200	(234,459)	(2.9)	6,113,985
Other assets	711	711	—	—	1,497
Total assets	7,879,171	8,199,954	(320,783)	(3.9)	6,328,065
Liabilities:					
Accrued expenses	4,693	4,748	(55)	(1.2)	3,989
Claims payable	13,924	14,451	(527)	(3.6)	18,979
Forfeitures payable to employers	8,977	7,592	1,385	18.2	5,997
Due to State of Alaska General Fund	—	4,425	(4,425)	(100.0)	374
Total liabilities	27,594	31,216	(3,622)	(11.6)	29,339
Net position	$ 7,851,577	8,168,738	(317,161)	(3.9)%	$ 6,298,726

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June 30, 2016

Changes in system net position

Description	2016	2015	Increase (decrease) Amount	Increase (decrease) Percentage	2014
Net position, beginning of year	$ 8,168,738	6,298,726	1,870,012	29.7%	$ 5,344,972
Additions:					
Contributions	163,821	163,251	570	0.3	162,959
Nonemployer contribution - State of Alaska	130,108	2,000,000	(1,869,892)	(93.5)	316,846
Net investment income	(43,534)	235,889	(279,423)	(118.5)	997,262
Other additions	9,848	15,441	(5,593)	(14.3)	6,254
Total additions	260,243	2,414,581	(2,154,338)	(89.2)	1,483,321
Deductions:					
Pension and postemployment healthcare benefits	558,653	526,094	32,559	6.2	513,395
Refund of contributions	9,560	9,232	328	3.6	7,739
Administrative	9,191	9,243	(52)	(0.6)	8,433
Total deductions	577,404	544,569	32,835	6.0	529,567
Less adjustment to beginning of position	—	—	—	—	—
Increase in net position	(317,161)	1,870,012	(2,187,173)	(117.0)	953,754
Net position, end of year	$ 7,851,577	8,168,738	(317,161)	(3.9)%	$ 6,298,726

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 $7,851,577,000 and $8,168,738,000, respectively. The entire amount is available to cover the System's obligations to pay pension and postemployment healthcare benefits to its members and their beneficiaries, as well as administrative costs.

This represents a decrease in the System's net position restricted for pension benefits, postemployment healthcare benefits, and individuals of $317,161,000 or 3.9% from fiscal year 2015 to 2016 and an increase of $1,870,012,000 or 29.7% from fiscal year 2014 to 2015. Over the long term, plan member, employer, and nonemployer contributions, as well as investment income earned, are anticipated to sufficiently fund the pension benefit and postemployment healthcare costs of the System.

During the Twenty-Ninth Alaska State Legislature and as part of the State of Alaska Fiscal Year 2016 Operating Budget, House Bill 2001 appropriated $130.1 million from the General Fund to the Department of Administration for deposit in the Defined Benefit Pension and the Alaska Retiree Healthcare Trust funds.

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

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June 30, 2016

System Asset Allocation

During fiscal years 2016 and 2015, the Board adopted the following asset allocation for the Defined Benefit Pension Plan (DB Plan) and Defined Contribution Pension Plan's (DCR Plan) retiree major medical insurance fund, health reimbursement, and occupational death and disability fund:

	2016	
	Pension and Healthcare Trust	
	Allocation	Range
Broad domestic equity	26.0%	± 6%
Global equity ex-U.S.	25.0	± 4
Private equity	9.0	± 5
Real assets	17.0	± 8
Absolute return	5.0	± 4
Fixed composite	12.0	± 5
Alternative equity strategies	3.0	± 2
Cash equivalents	3.0	± 3
Total	100.0%	
Expected return five-year geometric mean	7.20%	
Projected standard deviation	15.30	

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

For fiscal years 2016 and 2015, the DB Plan's investments generated a (0.36)% and 3.30% rate of return, respectively.

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Contributions, Investment Income, and Other Additions

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

Additions (In thousands)

			Increase (decrease)		
	2016	**2015**	**Amount**	**Percentage**	**2014**
Plan member contributions	$ 67,864	68,002	(138)	(0.2)%	68,313
Employer contributions	95,957	95,249	708	0.7	94,646
Nonemployer contributions – State of Alaska	130,108	2,000,000	(1,869,892)	(93.5)	316,846
Net investment income (loss)	(43,534)	235,889	(279,423)	(118.5)	997,262
Other additions	9,848	15,441	(5,593)	(36.2)	6,254
Total	$ 260,243	2,414,581	(2,154,338)	(89.2)%	1,483,321

The System's employer contributions increased from $95,249,000 in fiscal year 2015 to $95,957,000 in fiscal year 2016, an increase of $708,000 or 0.7%. The System's employer contributions increased from $94,646,000 in fiscal year 2014 to $95,249,000 in fiscal year 2015, an increase of $603,000 or 0.6%. The increase in employer contributions is attributable to increased contributions from the defined benefit unfunded liability portion of DCR Plan salaries.

The State of Alaska provided $130,108,000 for fiscal year 2016 and $2 billion for fiscal year 2015 in nonemployer contributions per Alaska Statute (AS) 14.25.085. The employer on-behalf amount (or additional state contribution as defined in AS 14.25.085) is calculated by the System's actuary. It is based on projected payroll and the difference between the actuarially determined contribution rate and the statutory effective rate. The employer effective contribution rate of 12.56% is established in AS 14.25.070(a). In fiscal year 2015, in an effort to bolster the funding levels of both pension and healthcare defined benefit plans, the Alaska legislature appropriated an amount in excess of the actuarially determined contribution rate, in anticipation that this additional funding would decrease future nonemployer contributions.

The System's net investment income in fiscal year 2016 decreased by $279,423,000 or 118.5% from amounts recorded in fiscal year 2015. The System's net investment income in fiscal year 2015 decreased by $761,373,000 or 76.3% from amounts recorded in fiscal year 2014. 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.

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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)%	3.30%	18.46%
Domestic equities	0.58	7.85	25.45
International equities	(9.15)	(3.28)	23.41
Private equity	4.71	13.77	24.19
Real assets	4.76	3.69	12.71
Absolute return	(3.09)	9.24	6.51
Fixed income	5.15	(0.73)	5.14
Alternative equity	3.41	(0.88)	24.55
Cash equivalents	0.55	0.27	0.26
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) Amount	Increase (decrease) Percentage	2014
Pension benefits	$ 435,699	416,354	19,345	4.6%	$ 396,614
Postemployment healthcare benefits	122,954	109,740	13,214	12.0	116,781
Refund of contributions	9,560	9,232	328	3.6	7,739
Administrative	9,191	9,243	(52)	(0.6)	8,433
Total	$ 577,404	544,569	32,835	6.0%	$ 529,567

The System's pension benefit payments in 2016 increased $19,345,000 or 4.6% from fiscal year 2015 and increased $19,740,000 or 5.0% from fiscal year 2014. 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 $13,214,000 or 12.0% from fiscal year 2015 and decreased $7,041,000 or 6.0% from fiscal year 2014 to 2015. The System has seen an increase in

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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.

The System's refund of contributions increased $328,000 or 3.6% from fiscal year 2015 and increased $1,493,000 or 19.3% from fiscal year 2014. The increase in refunds is entirely in the DCR Plan, where refunds increased $636,000 between fiscal year 2015 to 2016, and increased $1,689,000 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 $52,000 or 0.6% from fiscal year 2015 and increased $810,000 or 9.6% from fiscal year 2014. The decrease in administrative costs in fiscal year 2015 is related to increases in management, consulting, and other professional services, offset by a decrease in Patient Protection Affordable Care Act transitional reinsurance program fees.

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Net Pension Liability

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

The components of the NPL of the participating employers were as follows (in thousands):

		2016	2015
Total pension liability	$	7,225,545	7,107,406
Plan fiduciary net position		(4,942,201)	(5,246,955)
Employers' net pension liability	$	2,283,344	1,860,451
Plan fiduciary net position as a percentage of the total pension liability		68.40%	73.82%

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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. AS 14.25.070(a) sets the employer effective contribution rate at 12.56%. The difference between the actuarially determined contribution rate adopted by the Board and the statutory employer effective rate is paid by the State of Alaska as a direct nonemployer contribution per AS 14.25.085.
- AS 14.25.085 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 established by AS14.25.050 for the DB Plan and AS 14.25.340 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(b) appropriates $116.7 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 12.56% paid by participating employers for both defined benefit and defined contribution members, and the actuarially determined contribution rate adopted by the Board for that fiscal year, and is specified in Alaska Statute 14.25.085 – Additional State Contributions.

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

Fiscal year 2016 was a year of negative investment returns. Net investment income decreased from $235,889,000 in fiscal year 2015 to a loss of $43,534,000 in fiscal year 2016, a decrease of $279,423,000 or negative 118.5%. The return on the System's investments was significantly below the 8.00% actuarially assumed rate of return with the System's rate of return of (0.36)% at June 30, 2016. In fiscal year 2015, the System's investments returned 3.30%, less than the actuarially assumed return of 8.00%. The Board continues to work with its investment counsel and the Alaska Department of Revenue, Treasury Division, to diversify the portfolio of the System to maintain an optimal risk/return ratio.

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The consulting actuary recommended a decrease from the System's actuarially determined contribution rate of 70.75% in fiscal year 2015 to 29.27% in fiscal year 2016. The Board adopted the fiscal year 2016 actuarially determined contribution rate of 29.27%, which represented a decrease of 42.73%. The statutory employer effective contribution rate remained at 12.56% 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 83.3% and 61.2%, respectively, as well as unfunded liabilities of $1.6 billion and $3.8 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 $2 billion appropriated from the Constitutional Budget Reserve Fund during fiscal year 2015. Additionally, due to statutory changes implemented by the Alaska Legislature in conjunction with the $2 billion infusion to the 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. Actuarial projections reflect that the additional State contribution would be significantly reduced for a period of time.

For fiscal years 2016 and 2015, the DCR Plan's employer contribution rate was established by Alaska statute at 12.56%. The DCR Plan's actuarially determined occupational death and disability rate was adopted by the Board to be 0.00%. The DCR Plan retiree medical plan actuarially determined contribution rate was adopted by the Board to be 1.05% and 2.04%, respectively.

Requests for Information

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

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

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

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

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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: Alaska Retiree Healthcare Trust	Occupational Death and Disability	Retiree Medical	Healthcare Reimbursement Arrangement	System Total June 30, 2016	System Total June 30, 2015
Assets:								
Cash and cash equivalents (note 3):								
Short-term fixed income pool	$ 37,839	5,947	24,703	34	1,217	2,004	71,744	157,658
Empower money market fund - nonparticipant directed	—	3,155	—	—	—	—	3,155	1,461
Total cash and cash equivalents	37,839	9,102	24,703	34	1,217	2,004	74,899	159,119
Receivables:								
Contributions	4,729	13	10	—	2	3	4,757	4,039
Due from State of Alaska General Fund	322	3,413	1,157	—	465	619	5,976	8,798
Other account receivable	87	—	—	—	—	—	87	87
Total receivables	5,138	3,426	1,167	—	467	622	10,820	12,924
Investments (note 3), at fair value:								
Fixed income securities:								
U.S. Treasury fixed income pool	227,541	—	116,519	144	1,032	3,069	348,305	437,297
Taxable municipal bonds	55,950	—	28,651	35	254	755	85,645	75,307
Tactical fixed income pool	33,088	—	19,816	26	330	687	53,947	40,454
High yield fixed income pool	173,939	—	89,071	110	788	2,346	266,254	206,320
International fixed income pool	78,664	—	40,282	50	356	1,061	120,413	127,353
Emerging markets debt pool	33,705	—	17,260	21	153	455	51,594	53,978
Total fixed income securities	602,887	—	311,599	386	2,913	8,373	926,158	940,709
Broad domestic equity:								
Large cap pool	1,062,684	—	544,181	672	4,819	14,335	1,626,691	1,768,356
Small cap pool	226,057	—	115,759	143	1,025	3,049	346,033	382,597
Total broad domestic equity	1,288,741	—	659,940	815	5,844	17,384	1,972,724	2,150,953
Broad international equity:								
International equity pool	983,607	—	503,687	622	4,460	13,268	1,505,644	1,648,254
International equity small cap pool	66,801	—	34,207	42	303	901	102,254	107,781
Frontier market pool	—	—	—	—	—	—	—	1,805
Emerging markets equity pool	141,355	—	72,385	89	641	1,907	216,377	209,231
Total broad international equity	1,191,763	—	610,279	753	5,404	16,076	1,824,275	1,967,071
Alternative equity:								
Alternative equity	168,091	—	86,076	106	762	2,267	257,302	228,880
Convertible bond pool	42,259	—	21,640	27	192	570	64,688	65,684
Total alternative equity	210,350	—	107,716	133	954	2,837	321,990	294,564
Private equity pool	394,247	—	201,887	249	1,788	5,318	603,489	609,257
Absolute return pool	325,343	—	166,602	206	1,475	4,389	498,015	450,342
Real assets:								
Real estate pool	314,200	—	160,649	198	1,422	4,232	480,701	438,844
Real estate investment trust pool	75,450	—	38,637	48	342	1,018	115,495	108,619
Infrastructure private pool	68,611	—	35,134	43	311	925	105,024	95,753
Infrastructure public pool	44,420	—	22,747	28	201	599	67,995	83,565
Master limited partnership pool	104,493	—	53,509	66	474	1,410	159,952	174,984
Energy pool	15,357	—	7,864	10	70	207	23,508	33,898
Farmland pool	173,323	—	88,756	110	786	2,338	265,313	256,376
Timber pool	80,837	—	41,395	51	367	1,090	123,740	127,800
Treasury inflation protected securities pool	11,923	—	6,105	7	54	161	18,250	44,379
Total real assets	888,614	—	454,796	561	4,027	11,980	1,359,978	1,364,218
Other investment funds, at fair value:								
Pooled investment funds	—	159,045	—	—	—	—	159,045	132,377
Collective investment funds	—	127,067	—	—	—	—	127,067	117,709
Total other investment funds	—	286,112	—	—	—	—	286,112	250,086
Total investments	4,901,945	286,112	2,512,819	3,103	22,405	66,357	7,792,741	8,027,200
Other assets	—	—	711	—	—	—	711	711
Total assets	4,944,922	298,640	2,539,400	3,137	24,089	68,983	7,879,171	8,199,954
Liabilities:								
Accrued expenses	2,721	65	1,896	—	10	1	4,693	4,748
Claims payable (note 6)	—	—	13,924	—	—	—	13,924	14,451
Forfeiture payable	—	8,977	—	—	—	—	8,977	7,592
Due to State of Alaska General Fund	—	—	—	—	—	—	—	4,425
Total liabilities	2,721	9,042	15,820	—	10	1	27,594	31,216
Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals	$ 4,942,201	289,598	2,523,580	3,137	24,079	68,982	7,851,577	8,168,738

See accompanying notes to financial statements.

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Combining Statement of Changes in Fiduciary Net Position

Year Ended June 30, 2016
(With comparative totals for June 30, 2015)

(In thousands)

	Defined Benefit Pension	Defined Contribution Pension	Other Postemployment Benefit Plans: Alaska Retiree Healthcare Trust	Other Postemployment Benefit Plans: Occupational Death and Disability	Other Postemployment Benefit Plans: Retiree Medical	Other Postemployment Benefit Plans: Healthcare Reimbursement Arrangement	System Total June 30, 2016	System Total June 30, 2015
Additions:								
Contributions:								
Employers	$ 33,478	20,280	26,580	1	6,317	9,301	95,957	95,249
Plan members	42,654	24,904	306	—	—	—	67,864	68,002
Nonemployer State of Alaska	90,589	—	39,519	—	—	—	130,108	2,000,000
Total contributions	166,721	45,184	66,405	1	6,317	9,301	293,929	2,163,251
Investment income (loss):								
Net appreciation (depreciation) in fair value	(112,740)	1,567	(54,159)	(66)	(275)	(1,095)	(166,768)	117,838
Interest	19,281	49	9,723	12	75	238	29,378	27,979
Dividends	72,980	—	36,921	45	286	903	111,135	105,189
Total investment income (loss)	(20,479)	1,616	(7,515)	(9)	86	46	(26,255)	251,006
Less investment expense	10,861	843	5,555	1	4	15	17,279	15,117
Net investment income (loss)	(31,340)	773	(13,070)	(10)	82	31	(43,534)	235,889
Other:								
Other	95	8	9,744	1	—	—	9,848	15,441
Total additions	135,476	45,965	63,079	(8)	6,399	9,332	260,243	2,414,581
Deductions:								
Pension and postemployment benefits	435,699	—	122,954	—	—	—	558,653	526,094
Refunds of contributions	1,883	7,677	—	—	—	—	9,560	9,232
Administrative	2,648	938	5,511	8	86	—	9,191	9,243
Total deductions	440,230	8,615	128,465	8	86	—	577,404	544,569
Net increase (decrease)	(304,754)	37,350	(65,386)	(16)	6,313	9,332	(317,161)	1,870,012
Net position held in trust for pension benefits, postemployment healthcare benefits, and individuals:								
Balance, beginning of year	5,246,955	252,248	2,588,966	3,153	17,766	59,650	8,168,738	6,298,726
Balance, end of year	$ 4,942,201	289,598	2,523,580	3,137	24,079	68,982	7,851,577	8,168,738

See accompanying notes to financial statements.

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(1) Description

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

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

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

At June 30, 2016 and 2015, the number of participating local government employers and public organizations including the State was as follows:

State of Alaska	1
School districts	53
Other	3
Total employers	57

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

Defined Benefit Pension Plan

General

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

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The DB Plan's membership consisted of the following at June 30, 2016:

Inactive plan members or beneficiaries currently receiving benefits	12,444
Inactive plan members entitled to but not yet receiving benefits	2,913
Active plan members	5,181
Total DB Plan membership	20,538

Pension Benefits

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

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

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

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

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

The DB Plan has two types of postretirement pension adjustments (PRPA). The automatic PRPA is issued annually to all eligible benefit recipients, when the cost of living increases in the previous calendar year. The automatic PRPA increase is paid beginning July 1 of each year. The discretionary PRPA may be granted to eligible recipients by the DB Plan's administrator if the 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.

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Contributions

Contributions requirements of the active plan members and the participating employers are actuarially determined and approved by the Board as an amount that, when combined, is expected to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability. The DB Plan members contribute 8.65% of their base salary as required by statute. Employer effective contribution rates are 12.56% of annual payroll. Alaska Statute 14.25.085 provides that additional State contributions be 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 actuarially determined contribution rate adopted by the Board for that fiscal year. Additionally, there is a Defined Benefit Unfunded Liability (DBUL) amount levied against the DCR Plan payroll. The DBUL amount is computed as the difference between:

(A) The amount calculated for the statutory employer contribution rate of 12.56% on eligible salary less

(B) The total of the employer contributions for:

(1) The defined contribution employer matching amount

(2) Major medical

(3) Occupational death and disability

(4) Health reimbursement arrangement.

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

Refunds

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

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Defined Contribution Retirement Plan

General

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

At June 30, 2016, membership in the DC Plan consisted of 4,378 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

State statutes require an 8.0% contribution rate for DCR Plan members. Employers are required to contribute 7.0% of the member's compensation.

Participant Distributions and Refunds of Contributions

A member is eligible to elect 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.

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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	12,444
Inactive plan members entitled to but not yet receiving benefits	2,913
Active plan members	5,181
Total DB Plan membership	20,538

OPEB Benefits

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

Contributions

Employer contribution rates are actuarially determined and adopted by the Board. The 2016 employer effective contribution rate is 12.56% of member's compensation.

Occupational Death and Disability Plan

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

Active plan members	4,378
Participating employers	57
Open claims	—

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Death Benefits

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

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

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

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

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Disability Benefits

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

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 employee's normal retirement date. The occupational disability benefits accrue beginning the first day of the month following termination of employment as a result of the disability and are payable the last day of the month. If a final determination granting the benefit is not made in time to pay the benefit when due, a retroactive payment shall be made to cover the period of deferment.

Contributions

An employer shall contribute to each member's account based on the member's compensation. For fiscal year 2016, the rate is 7.00%.

Retiree Medical Plan

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

Defined Contribution Other Postemployment Benefit Plan

The Healthcare Reimbursement Arrangement Plan was established to allow medical expenses to be reimbursed from individual savings accounts established for eligible participants. For each member of the plan, an employer shall contribute an amount equal to 3.0% of the average annual compensation of all employees of all employers in the System. As of June 30, 2016, there were 6,842 members and 57 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.

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

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

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

Contributions Receivable

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

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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 Section 401(a) and 414(d) of the Internal Revenue Code and are exempt from federal income taxes under Section 501(a).

GASB Statement No. 67

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 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 the assets under the Prudent Investor Rule. Fiduciary responsibility for the Board's Invested Assets is pursuant to Alaska Statute 37.10.210-390.

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

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

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

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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 -0.67%.

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	$ 7,225,545
Plan fiduciary net position	(4,942,201)
Employers' net pension liability	$ 2,283,344
Plan fiduciary net position as a percentage of the total pension liability	68.40%

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

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

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 System's net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (7%) or one-percentage-point higher (9%) than the current rate:

	1% Decrease (7%)	Current discount rate (8%)	1% Increase (9%)
Net pension liability	$ 3,111,338	2,283,343	1,589,141

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(5) Defined Benefit OPEB Funding Status

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

	Actuarial valuation date	Actuarial accrued liability (AAL) entry age	Actuarial valuation assets	Funded ratio	Unfunded actuarial accrued liability (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
Healthcare trust	June 30, 2015	$ 4,840,935	2,686,272	55.5%	$ 2,154,663	$ 503,166	428.2%
Occupational death and disability plan	June 30, 2015	29	3,114	10,737.9	(3,085)	255,186	(1.2)
Retiree medical	June 30, 2015	42,743	17,733	41.5	25,010	255,186	9.8

The funding ratio as of June 30, 2015 has increased. The increase in funding ratio was primarily due to positive experiences in demographic experience and retiree medical costs compared to expected costs that led 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 and 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 value starting FY 2015
Actuarial assumptions:	
Investment rate of return	8.00% for pension (ne of expenses), 4.31% for healthcare; includes price inflation at 3.12%
Projected salary increases	8.11% grading down to 3.87% after 22 years
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, and level dollar normal cost basis for retiree medical
Amortization method	Level percentage of pay for occupational death and disability, level dollar for retiree medical, closed with bases established annually
Equivalent single amortization period	20years to reflect retiree medical liabilities without regard to Medicare Part D
Asset valuation method	5-year smoothed market 80%/120% of fair value corridor
Actuarial assumptions:	
Investment rate of return	8.00% for pension, 5.08% for healthcare; includes price inflation at 3.12% occupational death and disability, and retiree medical
Projected salary increases	8.11% for first 5 years of service grading down to 3.87% after 22 years

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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 ARC actually being contributed to the plan. The State has utilized the second methodology to develop a discount rate of 4.31% 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 No. 25 reporting is also applied herein for GASB Statement No. 43 reporting.

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

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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	$	4,192	—
Incurred but not reported		14,451	18,979
Total, beginning of year		18,643	18,979
Benefit deductions		122,954	109,740
Benefits paid		(127,099)	(110,076)
Total, end of year	$	14,498	18,643
End of year:			
Due to State of Alaska General Fund for outstanding warrants	$	—	4,192
Warrants outstanding		574	—
Incurred but not reported		13,924	14,451
Total, end of year	$	14,498	18,643

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(7) Commitments and Contingencies

Contingencies

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

(8) Medicare Part D Retiree Drug Subsidy

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

REQUIRED SUPPLEMENTARY INFORMATION

(Unaudited)

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Required Supplementary Information (Unaudited)

Schedule of Changes in Employer Net Pension Liability and Related Ratios - Defined Benefit Pension Plan

(In thousands)

		2016	2015	2014	2013	2012
Total pension liability:						
Service cost	$	61,011	63,608	64,324	69,113	69,548
Interest		550,392	540,981	515,325	517,511	501,252
Changes of benefit terms		—	—	—	—	—
Differences between expected and actual experience		(55,682)	(5,693)	—	1,108	10,986
Changes of assumptions		—	156,854	—	—	—
Benefit payments, including refunds of member contributions		(437,582)	(418,545)	(399,001)	(397,956)	(378,113)
Net change in total pension liability		118,139	337,205	180,648	189,776	203,673
Total pension liability – beginning		7,107,406	6,770,201	6,589,553	6,399,777	6,196,104
Total pension liability – ending (a)		7,225,545	7,107,406	6,770,201	6,589,553	6,399,777
Plan fiduciary net position:						
Contributions – employer		33,478	36,374	37,571	37,372	38,189
Contributions – member		42,654	45,506	47,724	50,201	52,020
Contributions – nonemployer entity (State)		90,589	1,662,700	208,890	196,945	157,387
Total net investment income (loss)		(31,340)	152,561	599,958	373,868	2,190
Other miscellaneous income		95	9	27	19	17
Benefit payments, including refunds of member contributions		(437,582)	(418,545)	(399,001)	(382,933)	(363,839)
Administrative expenses		(2,648)	(2,789)	(3,160)	(2,989)	(2,847)
Net change in plan fiduciary net position		(304,754)	1,475,816	492,009	272,483	(116,883)
Plan fiduciary net position – beginning		5,246,955	3,771,139	3,279,130	3,006,647	3,123,530
Plan fiduciary net position – ending (b)		4,942,201	5,246,955	3,771,139	3,279,130	3,006,647
Plan's net pension liability (a) - (b)	$	2,283,344	1,860,451	2,999,062	3,310,423	3,393,130
Plan fiduciary net position as a percentage of the total pension liability		73.82%	73.82%	55.70%	49.76%	46.98%
Covered-employee payroll	$	473,734	490,667	514,035	550,044	561,971
Net pension liability as a percentage of covered-employee payroll		481.99%	379.17%	583.44%	601.85%	603.79%

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

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

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Required Supplementary Information (Unaudited)

Schedule of Employer and Nonemployer Contributions

Defined Benefit Pension Plan
Last 10 Fiscal Years

(In thousands)

		2016	2015	2014	2013	2012
Actuarially determined contribution	$	359,790	321,971	240,366	259,786	229,509
Contributions in relation to the actuarially determined contribution		124,067	1,699,074	246,461	234,317	195,576
Contribution deficiency (excess)	$	235,723	(1,377,103)	(6,095)	25,469	33,933
Covered-employee payroll	$	473,734	490,667	514,035	550,044	561,971
Contributions as a percentage of covered-employee payroll		26.19%	346.28%	47.95%	42.60%	34.80%

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

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Required Supplementary Information (Unaudited)

Schedule of Employer and Nonemployer Contributions

Defined Benefit Pension Plan

Last 10 Fiscal Years (continued)

(In thousands)

		2011	2010	2009	2008	2007
Actuarially determined contribution	$	167,978	170,788	94,388	134,544	169,974
Contributions in relation to the actuarially determined contribution		142,147	134,275	131,533	142,550	105,775
Contribution deficiency (excess)	$	25,831	36,513	(37,145)	(8,006)	64,199
Covered-employee payroll	$	584,068	564,887	557,026	549,148	554,245
Contributions as a percentage of covered-employee payroll		24.34%	23.77%	23.61%	25.96%	19.08%

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

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Required Supplementary Information (Unaudited)

Schedule of Investment Returns

	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	(0.36)%	3.30%	18.41%

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

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

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Required Supplementary Information (Unaudited)

Schedules of Funding Progress

Defined Benefit OPEB Plans

June 30, 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	$ 4,648,055	1,266,890	27.3%	$ 3,381,165	549,148	615.7%
2009	4,604,820	1,357,239	29.5	3,247,581	557,026	583.0
2010	3,076,388	1,479,260	48.1	1,597,128	564,887	282.7
2011	3,635,492	1,591,988	43.8	2,043,504	584,068	349.9
2012	5,046,942	1,674,160	33.2	3,372,782	561,971	600.2
2013	5,002,345	1,803,763	36.1	3,198,582	550,044	581.5
2014	3,114,113	2,248,135	72.2	865,978	523,580	165.4
2015	4,840,935	2,686,272	55.5	2,154,663	503,166	428.2

Occupational Death and Disability Benefits Plan

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	$ 44	420	954.5%	$ (376)	56,369	(0.7)%
2009	14	1,071	7,650.0	(1,057)	89,708	(1.2)
2010	18	1,577	8,761.1	(1,559)	118,813	(1.3)
2011	57	2,193	3,847.4	(2,136)	170,606	(1.3)
2012	63	2,348	3,727.0	(2,285)	200,043	(1.1)
2013	80	2,532	3,165.0	(2,452)	206,771	(1.2)
2014	23	2,820	12,260.9	(2,797)	229,971	(1.2)
2015	29	3,114	10,737.9	(3,085)	255,186	(1.2)

Retiree Medical Benefits Plan

Actuarial valuation year ended June 30	Actuarial accrued liabilities (AAL)	Actuarial value of plan assets	Funded ratio	Unfunded actuarial accrued liabilities (UAAL)	Covered payroll	UAAL as a percentage of covered payroll
2008	$ 899	1,308	145.5%	$ (409)	56,369	(0.7)%
2009	1,690	2,353	139.2	(663)	89,708	(0.7)
2010	2,809	3,895	138.7	(1,086)	118,813	(0.9)
2011	4,386	5,373	122.5	(987)	170,606	(0.6)
2012	19,427	6,937	35.7	12,490	200,043	6.2
2013	25,152	8,614	34.2	16,538	206,771	8.0
2014	18,290	10,791	59.0	7,499	229,971	3.3
2015	42,743	17,733	41.5	25,010	255,186	9.8

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 (1)	Annual required contribuiton	Percentage contributed: By employer	Percentage contributed: By State of Alaska (note 3)	Percentage contributed: Total percentage contributed (note 3)
2008	2005	$ 185,271	23.6%	85.7%	109.3%
2009	2006	164,171	28.7	62.1	90.8
2010 (2)	2007	312,922	13.6	38.8	52.4
2011	2008	167,686	25.8	51.5	77.3
2012	2009	192,700	18.8	46.6	65.4
2013	2010	330,411	10.7	33.3	44.0
2014	2011	320,797	10.0	35.6	45.6
2015	2012	352,417	7.6	100.1	107.7

(1) Actuarial valuation related to annual required contribution for fiscal year.
(2) In the year ended June 30, 2010, the postemployment healthcare annual required contribution and percentage contributed included the Mercer legal settlement, net of legal fees, as well as the Medicare Part D subsidy contributed by the State to the healthcare fund.

Occupational Death and Disability Benefits Plan

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	$ 408	100.0%
2009	623	100.0
2010	442	100.0
2011	474	100.0
2012	—	100.0
2013	—	100.0
2014	—	100.0
2015	—	100.0

Retiree Medical Benefits Plan

Year ended June 30	Annual required contribution	Percentage of ARC contributed
2008	$ 763	85.0%
2009	1,162	85.0
2010	1,628	87.0
2011	1,422	81.0
2012	1,420	82.0
2013	1,241	89.0
2014	1,334	89.0
2015	6,099	93.0

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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 surplus or unfunded accrued liability is amortized over a closed 25–year period (established June 30, 2014) as a level percentage of payroll amount. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit and defined contribution member payroll combined.

(b) Valuation of assets – The actuarial asset value was reinitialized to equal fair value of assets as of June 30, 2014. Beginning in 2015, the asset value method recognizes 20% of the gain or loss each year, for a period of 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.

(f) Payroll growth – 3.62% per year (inflation + productivity).

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(g) Total inflation – Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.

(h) Mortality (pre-termination) – Based upon the 2010–2013 actual experience. 68% of male rates and 60% of female rates of post-termination mortality. Deaths are assumed to result from nonoccupational causes 85% of the time. The mortality assumptions include an allowance for future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 110%.

(i) Mortality (post-termination) – Based upon the 2010–2013 actual experience study. 94% of male and 97% of female rates of RP-2000, 2000 base year, projected to 2018 with Projection Scale BB, with a three-year setback for males and a four-year setback for females. The mortality assumptions include an allowance for future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 110%.

(j) Turnover – Select and ultimate rates based upon the 2010–2013 actual withdrawal experience.

(k) Disability – Incidence rates based upon the 2010–2013 actual experience. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB.

(l) Retirement – Retirement rates based on the 2010–2013 actual experience. Deferred vested members are assumed to retire at their earliest unreduced retirement date. 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. 85% of male members and 75% of female members are assumed to be married.

(n) Dependent children – Benefits to dependent children have been valued assuming members who are married and between the ages of 25 and 45 have two dependent children.

(o) Contribution refunds – 5% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with nonvested benefits are assumed to have their contributions refunded.

(p) 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 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) Teacher active data adjustment – To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.

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(r) Cost of living allowance (COLA) – Of those benefit recipients who are eligible for the COLA, 60% are assumed to remain in Alaska and receive the COLA.

(s) Sick leave – 4.5 days of unused sick leave for each year of service are assumed to be available to be credited once the member retires, terminates, or dies.

(t) 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.

(u) Expenses – The investment return assumption is net of all expenses.

(v) Part-time status – Part-time members are assumed to earn 0.75 years of credited service per year.

(w) Re-employment option – All re-employed retirees are assumed to return to work under the Standard Option.

(x) Service – Total credited service is provided by the State. The actuary assumes that this service is the only service that should be used to calculate benefits. Additionally, the State provides claimed service (including Bureau of Indian Affairs Service). Claimed service is used for vesting and eligibility purposes.

(y) Final average earnings – Final average earnings is provided on the data for active members. This amount is used as a minimum in the calculation of the average earnings in the future.

(z) Per capita claims cost – Sample claims cost rates adjusted to age 65 for FY16 medical benefits are shown below:

	Medical	Prescription drugs
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

(aa) Third-party administrator fees – $194.18 per person per year; assumed trend rate of 5% per year.

(bb) 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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June 30, 2016

(cc) 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 populated with assumptions that are specific to the State of Alaska.

(dd) 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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June 30, 2016

(ee) Retired member contributions for medical benefits – Currently, contributions are required for TRS members who are under age 60 and have less than 25 years of service. Eligible Tier 1 members are exempt from contribution requirements. Annual 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 who are assumed to retire prior to age 60 with less than 25 years of service and who are not disabled:

	Calendar 2016		Calendar 2015
Coverage category	**Annual contribution**	**Monthly contribution**	**Monthly contribution**
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

(ff) 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.

Fiscal year	**Trend Assumption**
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, so trend on such contribution during FY16 is not applicable.

(gg) 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.

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Notes to Required Supplementary Information (Unaudited)

June 30, 2016

The significant actuarial assumptions used in the defined contribution occupational death and disability and retiree medical benefits plan valuation as of June 30, 2015 are as follows:

(a) Actuarial cost method – Liabilities and contributions are computed using entry age normal actuarial cost method. Any funding surplus 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, 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 was $0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements. Valuation assets are constrained to a range of 80% to 120% of fair value of assets.

(c) Valuation of retiree medical benefits – Due to the lack of experience for the DCR Plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2015 for TRS DB with some adjustments. The claim costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, 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.

(h) Mortality (pre-termination) – Based upon the 2010–2013 actual experience. 68% of male rates and 60% of female rates of post-termination mortality rates. Deaths are assumed to result from occupational causes 15% of the time. The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an actual deaths to expected deaths ratio of 110%.

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(i) Mortality (post-termination) – Based upon the 2010–2013 actual experience 94% of male and 97% of female rates of RP-2000 Mortality Table, 2000 Base Year, projected to 2018 with Projection Scale BB, with a three-year setback for males and a four-year setback for females. Disability mortality in accordance with the RP-2000 Disabled Retiree Mortality 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 110%.

(j) Turnover – Select and ultimate rates based upon the 2010–2013 actual withdrawal experience.

(k) Disability – Incidence rates based upon the 2010–2013 actual experience. Disabilities are assumed to result from occupational causes 15% of the time.

(l) Retirement – Retirement rates based upon the 2010–2013 actual experience. Deferred vested members are assumed to retire at their earliest unreduced retirement date.

(m) Marriage and age difference – Wives are assumed to be three years younger than husbands. 85% of male members and 75% of female members are assumed to be married at termination from active service.

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

		Medical	Prescription drugs
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.

(o) Third-party administrator fees – $194.18 per person per year; assumed trend rate of 5% per year.

(p) 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.

(q) 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 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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(q) Teacher active data adjustment – To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.

(s) 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:

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 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.

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(t) 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 +	—	—

(u) Retiree medical participation:

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

Participation rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market. This assumption is based on observed trends in participation from a range of other plans.

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Changes in Actuarial Assumptions and Methods Since the Prior Valuation

Defined benefit pension and postemployment healthcare benefit plan

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

To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.

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 or methods since the prior valuation. Healthcare claim costs are updated annually.

To reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date, participants who are listed as terminated in the June 30 client data but active in the October 1 client records are updated to active status.

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 contributions rates.

SUPPLEMENTAL SCHEDULES

State of Alaska

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Schedule of Administrative and Investment Deductions

Years ended June 30, 2016 and 2015

(In thousands)

	Administrative	Investment	Totals 2016	Totals 2015
Personal services:				
Wages	$ 1,612	85	1,697	1,717
Benefits	984	33	1,017	1,023
Total personal services	2,596	118	2,714	2,740
Travel:				
Transportation	9	38	47	57
Per diem	2	6	8	22
Total travel	11	44	55	79
Contractual services:				
Management and consulting	5,266	16,687	21,953	19,359
Accounting and auditing	99	11	110	416
Data processing	513	284	797	750
Communications	38	19	57	69
Advertising and printing	19	3	22	25
Rentals/leases	135	33	168	159
Legal	104	30	134	162
Medical specialists	22	—	22	20
Repairs and maintenance	—	—	—	5
Transportation	28	2	30	23
Other professional services	46	19	65	74
Total contractual services	6,270	17,088	23,358	21,062
Patient Protection and Affordable Care Act:				
Transitional Reinsurance Program	297	—	297	378
Total Patient Protection and Affordable Care Act	297	—	297	378
Other:				
Equipment	5	10	15	23
Supplies	12	19	31	78
Total other	17	29	46	101
Total administrative and investment deductions	$ 9,191	17,279	26,470	24,360

See accompanying independent auditors' report.

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Schedule of Payments to Consultants Other than Investment Advisors

Years ended June 30, 2016 and 2015
(In thousands)

Firm	Services		2016	2015
Buck Consultants, a Xerox Company	Actuarial services	$	316	395
KPMG LLP	Auditing services		95	107
State Street Bank Corporation	Custodian banking services		416	374
Applied Microsystems Inc.	Data processing consultants		157	203
Computer Task Group, Inc.	Data processing consultants		15	47
Wostmann Group LLC	Data processing consultants		117	101
SHI International	Data processing consultants		133	—
Interactive Intelligence Group	Data processing consultants		8	—
State of Alaska, Department of Law	Legal services		104	127
State of Alaska, Department of Health and Social Services	Medical specialists and consulting		97	15
		$	1,458	1,369

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

See accompanying independent auditors' report.

Alaska Division of Retirement and Benefits

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