



**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

(With Independent Auditors' Report Thereon)

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

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## **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 schedule of employer and nonemployer allocations of the State of Alaska Teachers' Retirement System Defined Benefit Pension Plan (the Plan) as of and for the year ended June 30, 2018, and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the accompanying schedule of pension amounts by employer and nonemployer of the Plan as of and for the year ended June 30, 2018, and the related notes.

### ***Management's Responsibility for the Schedules***

Management is responsible for the preparation and fair presentation of these schedules 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 the schedules that are free from material misstatement, whether due to fraud or error.

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

Our responsibility is to express opinions on the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of pension amounts by employer and nonemployer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer, 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 schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer 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 schedule of employer and nonemployer allocations and specified column totals included in the schedule of pension amounts by employer and nonemployer.

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



**Opinions**

In our opinion, the schedules referred to above present fairly, in all material respects, the employer and nonemployer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for the Plan as of and for the year ended June 30, 2018, in accordance with U.S. generally accepted accounting principles.

**Other Matter**

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the State of Alaska Teachers' Retirement System, which includes the Defined Benefit Pension Plan, as of and for the year ended June 30, 2018, and our report thereon, dated November 21, 2018, expressed an unmodified opinion on those financial statements.

**Other Information**

The supplemental schedule of employer allocations of special funding amounts, supplemental schedule of special funding amounts by employer, and supplemental schedule of employer and nonemployer contributions have not been subject to the auditing procedures applied in the audit of the schedule of employer and nonemployer allocations and schedule of pension amounts by employer and nonemployer and accordingly, we do not express an opinion or provide any assurance on them.

**Restriction on Use**

Our report is intended solely for the information and use of the State of Alaska Teachers' Retirement System management, the members of the Alaska Retirement Management Board, State of Alaska Teachers' Retirement System Defined Benefit Pension Plan employers and nonemployers, and their auditors, and is not intended to be and should not be used by anyone other than these specified parties.

*KPMG LLP*

Anchorage, Alaska  
April 26, 2019

**STATE of ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Schedule of Employer and Nonemployer Allocations

As and for the year ended of June 30, 2018

Employer/nonemployer	Employer number	Present value of projected future contributions	Allocation percentage
Employers:			
Anchorage School District	701	\$ 254,202,000	13.88626 %
Cordova City School District	704	2,142,000	0.11701
Craig City School District	705	2,375,000	0.12974
Fairbanks North Star Borough School District	706	71,052,000	3.88135
Haines Borough School District	707	1,618,000	0.08839
Hoonah City School District	708	593,000	0.03239
Hydaburg City School District	709	625,000	0.03414
Juneau Borough School District	710	26,973,000	1.47345
Kake City School District	712	716,000	0.03911
Ketchikan Gateway Borough School District	714	14,034,000	0.76663
Klawock City School District	717	1,235,000	0.06746
Kodiak Island Borough School District	718	14,515,000	0.79291
Nenana City School District	719	2,124,000	0.11603
Nome City School District	720	3,900,000	0.21304
Matanuska-Susitna Borough School District	722	94,658,000	5.17087
Pelican City School District	723	64,000	0.00350
Petersburg City School District	724	3,125,000	0.17071
Sitka Borough School District	727	8,504,000	0.46455
Skagway City School District	728	866,000	0.04731
Unalaska City School District	729	2,470,000	0.13493
Valdez City School District	730	5,004,000	0.27335
Wrangell Public School District	731	1,671,000	0.09128
Yakutat School District	732	486,000	0.02655
University of Alaska	733	30,663,000	1.67502
Galena City School District	735	5,570,000	0.30427
North Slope Borough School District	736	14,137,000	0.77226
State of Alaska	737	12,247,000	0.66902
Bristol Bay Borough School District	742	626,000	0.03420
Southeast Regional Resource Center	743	650,000	0.03551
Dillingham City School District	744	3,067,000	0.16754
Kenai Peninsula Borough School District	746	47,873,000	2.61515
Saint Mary's School District	748	1,272,000	0.06949
Northwest Arctic Borough School District	751	13,796,000	0.75363
Bering Strait School District	752	16,254,000	0.88791
Lower Yukon School District	753	12,913,000	0.70540
Lower Kuskokwim School District	754	26,676,000	1.45723
Kuspuk School District	755	2,584,000	0.14116
Southwest Region School District	756	5,154,000	0.28155
Lake And Peninsula Borough School District	757	3,703,000	0.20228
Aleutian Region School District	758	330,000	0.01803
Pribilof School District	759	569,000	0.03108
Iditarod Area School District	761	1,427,000	0.07795
Yukon / Koyukuk School District	762	4,332,000	0.23664
Yukon Flats School District	763	2,055,000	0.11226
Denali Borough School District	764	2,269,000	0.12395
Delta/Greely School District	765	3,960,000	0.21632
Alaska Gateway School District	766	2,581,000	0.14099
Copper River School District	767	1,614,000	0.08817

**STATE of ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Schedule of Employer and Nonemployer Allocations

As and for the year ended of June 30, 2018

<u>Employer/nonemployer</u>	<u>Employer number</u>	<u>Present value of projected future contributions</u>	<u>Allocation percentage</u>
Chatham School District	768	\$ 1,172,000	0.06402 %
Southeast Island School District	769	1,654,000	0.09035
Annette Island School District	770	2,002,000	0.10936
Chugach School District	771	1,349,000	0.07369
Tanana School District	775	277,000	0.01513
Kashunamiut School District	777	1,740,000	0.09505
Yupit School District	778	3,005,000	0.16415
Special Education Service Agency	779	846,000	0.04621
Aleutians East Borough School District	780	<u>2,175,000</u>	<u>0.11881</u>
Total present value of projected future employer contributions		743,494,000	40.61474
Total Nonemployer:			
State of Alaska	999	<u>1,087,107,000</u>	<u>59.38526</u>
Total for all entities		<u>\$ 1,830,601,000</u>	<u>100.00000 %</u>

See accompanying notes to schedule of employer and nonemployer allocations and schedule of pension amounts by employer and nonemployer.

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**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**  
Schedule of Pension Amounts by Employer and Nonemployer

As of and for the year ended June 30, 2018

Employer/nonemployer	Employer/ nonemployer number	Net pension liability	Changes of assumptions	Deferred outflows of resources		
				Net difference between projected and actual investment earnings on pension plan investments	Changes in proportion and differences between employer contributions and proportionate share of contributions	Total deferred outflows of resources
<b>Employer:</b>						
Anchorage School District	701	\$ 265,828,687	—	8,786,367	6,696,666	15,483,033
Cordova City School District	704	2,239,971	—	74,037	206,606	280,643
Craig City School District	705	2,483,628	—	82,091	164,657	246,748
Fairbanks North Star Borough School District	706	74,301,775	—	2,455,877	1,909,927	4,365,804
Haines Borough School District	707	1,692,004	—	55,925	45,823	101,748
Hoonah City School District	708	620,123	—	20,497	—	20,497
Hydaburg City School District	709	653,586	—	21,603	23,574	45,177
Juneau Borough School District	710	28,206,691	—	932,308	419,486	1,351,794
Keke City School District	712	748,748	—	24,748	—	24,748
Ketchikan Gateway Borough School District	714	14,675,887	—	485,078	482,138	967,216
Klawock City School District	717	1,291,486	—	42,687	71,176	113,863
Kodiak Island Borough School District	718	15,178,887	—	501,704	824,755	1,326,459
Nenana City School District	719	2,221,147	—	73,415	86,143	159,558
Nome City School District	720	4,078,378	—	134,802	—	134,802
Matanuska-Susitna Borough School District	722	98,987,466	—	3,271,806	2,815,068	6,086,874
Pelican City School District	723	66,927	—	2,212	1,224	3,436
Petersburg City School District	724	3,267,931	—	108,014	61,935	169,949
Sitka Borough School District	727	8,892,956	—	293,936	188,533	482,469
Skagway City School District	728	905,609	—	29,933	7,104	37,037
Unalaska City School District	729	2,582,973	—	85,374	31,536	116,910
Valdez City School District	730	5,232,873	—	172,961	305,211	478,172
Wrangell Public School District	731	1,747,428	—	57,757	—	57,757
Yakutat School District	732	508,229	—	16,798	—	16,798
University of Alaska	733	32,065,464	—	1,059,851	286,226	1,346,077
Galena City School District	735	5,824,761	—	192,524	286,436	478,960
North Slope Borough School District	736	14,783,598	—	488,638	714,412	1,203,050
State of Alaska	737	12,807,153	—	423,311	—	423,311
Bristol Bay Borough School District	742	654,632	—	21,637	16,371	38,008
Southeast Regional Resource Center	743	679,730	—	22,467	—	22,467
Dillingham City School District	744	3,207,278	—	106,009	—	106,009
Kenai Peninsula Borough School District	746	50,062,615	—	1,654,706	1,398,059	3,052,765
Saint Mary's School District	748	1,330,179	—	43,966	104,568	148,534
Northwest Arctic Borough School District	751	14,427,001	—	476,852	465,582	942,434
Bering Strait School District	752	16,997,425	—	561,811	1,013,688	1,575,499
Lower Yukon School District	753	13,503,615	—	446,331	726,279	1,172,610
Lower Kuskokwim School District	754	27,896,106	—	922,042	932,403	1,854,445
Kuspuk School District	755	2,702,187	—	89,315	—	89,315
Southwest Region School District	756	5,389,734	—	178,145	525,098	703,243
Lake And Peninsula Borough School District	757	3,872,368	—	127,992	263,824	391,816
Aleutian Region School District	758	345,094	—	11,406	12,328	23,734
Pribilof School District	759	595,025	—	19,667	61,513	81,180
Iditarod Area School District	761	1,492,268	—	49,324	67,585	116,909
Yukon / Koyukuk School District	762	4,530,137	—	149,733	187,980	337,713
Yukon Flats School District	763	2,148,992	—	71,030	113,917	184,947
Denali Borough School District	764	2,372,779	—	78,427	91,358	169,785
Delta/Greely School District	765	4,141,122	—	136,875	113,314	250,189
Alaska Gateway School District	766	2,699,050	—	89,211	133,831	223,042
Copper River School District	767	1,687,821	—	55,787	—	55,787
Chatham School District	768	1,225,605	—	40,510	—	40,510
Southeast Island School District	769	1,729,651	—	57,170	85,455	142,625
Annette Island School District	770	2,093,567	—	69,198	656	69,854
Chugach School District	771	1,410,701	—	46,628	11,164	57,792
Tanana School District	775	289,669	—	9,574	—	9,574
Kashunamiut School District	777	1,819,584	—	60,142	—	60,142
Yupit School District	778	3,142,443	—	103,866	363,862	467,728
Special Education Service Agency	779	884,694	—	29,242	22,035	51,277
Aleutians East Borough School District	780	2,274,480	—	75,178	60,912	136,090
<b>Total attributable to employer contributions</b>		<b>777,499,918</b>	<b>—</b>	<b>25,698,495</b>	<b>22,400,418</b>	<b>48,098,913</b>
<b>Nonemployer:</b>						
State of Alaska	999	1,136,829,082	—	37,575,305	—	37,575,305
<b>Total for all entities</b>		<b>\$ 1,914,329,000</b>	<b>—</b>	<b>63,273,800</b>	<b>22,400,418</b>	<b>85,674,218</b>

See accompanying notes to schedule of employer and nonemployer allocations and schedule of pension amounts by employer and nonemployer.



Difference between expected and actual experience	Deferred inflows of resources			Pension expense		
	Changes of assumptions	Changes in proportion and differences between employer contributions and proportionate share of contributions	Total deferred inflows of resources	Proportionate share of allocable plan pension expense	Net amortization of deferred amounts from changes in proportion and differences between employer contributions and proportionate share of contributions	Total pension expense (benefit)
7,495,672	—	—	7,495,672	12,341,037	(20,457,881)	(8,116,844)
63,161	—	—	63,161	103,990	129,395	233,385
70,032	—	—	70,032	115,302	16,424	131,726
2,095,115	—	—	2,095,115	3,449,443	(7,325,171)	(3,875,728)
47,710	—	—	47,710	78,551	(69,665)	8,886
17,486	—	157,804	175,290	28,789	(233,388)	(204,599)
18,429	—	—	18,429	30,343	71,188	101,531
795,355	—	—	795,355	1,309,489	(2,109,638)	(800,149)
21,113	—	107,638	128,751	34,760	(216,640)	(181,880)
413,822	—	—	413,822	681,325	(771,658)	(90,333)
36,417	—	—	36,417	59,957	(10,578)	49,379
428,005	—	—	428,005	704,676	(63,869)	640,807
62,631	—	—	62,631	103,116	(89,367)	13,749
115,000	—	13,899	128,899	189,338	(666,596)	(477,258)
2,791,187	—	—	2,791,187	4,595,471	(6,093,607)	(1,498,136)
1,887	—	—	1,887	3,107	(719)	2,388
92,147	—	—	92,147	151,713	(119,484)	32,229
250,758	—	—	250,758	412,853	(608,244)	(195,391)
25,536	—	—	25,536	42,043	(30,566)	11,477
72,833	—	—	72,833	119,914	(384,224)	(264,310)
147,553	—	—	147,553	242,935	83,053	325,988
49,273	—	14,481	63,754	81,124	(154,402)	(73,278)
14,331	—	1,995	16,326	23,594	(92,880)	(69,286)
904,162	—	—	904,162	1,488,632	(4,636,694)	(3,148,062)
164,243	—	—	164,243	270,413	(29,665)	240,748
416,859	—	—	416,859	686,325	(1,346,080)	(659,755)
361,128	—	20,978	382,106	594,569	(761,184)	(166,615)
18,459	—	—	18,459	30,391	(108,433)	(78,042)
19,167	—	10,986	30,153	31,556	2,021	33,577
90,437	—	68,341	158,778	148,897	(579,529)	(430,632)
1,411,634	—	—	1,411,634	2,324,146	(4,778,966)	(2,454,820)
37,508	—	—	37,508	61,753	100,043	161,796
406,804	—	—	406,804	669,770	(787,264)	(117,494)
479,283	—	—	479,283	789,102	253,597	1,042,699
380,767	—	—	380,767	626,902	(1,053,908)	(427,006)
786,597	—	—	786,597	1,295,070	(1,332,371)	(37,301)
76,195	—	52,627	128,822	125,448	(491,587)	(366,139)
151,976	—	—	151,976	250,217	128,896	379,113
109,191	—	—	109,191	179,774	(148,892)	30,882
9,731	—	—	9,731	16,021	(5,614)	10,407
16,778	—	—	16,778	27,624	34,912	62,536
42,078	—	—	42,078	69,278	(496,423)	(427,145)
127,738	—	—	127,738	210,311	(567,218)	(356,907)
60,596	—	—	60,596	99,766	(192,423)	(92,657)
66,906	—	—	66,906	110,156	52,153	162,309
116,769	—	—	116,769	192,251	(216,428)	(24,177)
76,106	—	—	76,106	125,303	(230,228)	(104,925)
47,592	—	53,378	100,970	78,357	(404,056)	(325,699)
34,559	—	28,198	62,757	56,898	(102,570)	(45,672)
48,772	—	—	48,772	80,299	(197,131)	(116,832)
59,033	—	—	59,033	97,193	(490,773)	(393,580)
39,778	—	—	39,778	65,491	(117,613)	(52,122)
8,168	—	58,021	66,189	13,448	(85,786)	(72,338)
51,308	—	12,041	63,349	84,474	(248,562)	(164,088)
88,609	—	—	88,609	145,887	(292,174)	(146,287)
24,941	—	—	24,941	41,072	(86,299)	(45,227)
64,134	—	—	64,134	105,593	(117,882)	(12,289)
21,923,459	—	600,387	22,523,846	36,095,257	(58,532,648)	(22,437,391)
32,055,600	—	21,800,031	53,855,631	52,777,034	58,532,648	111,309,682
53,979,059	—	22,400,418	76,379,477	88,872,291	—	88,872,291

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

**(1) Plan Description**

The State of Alaska Teachers' Retirement System (the System) Defined Benefit Pension Plan (the Plan) is a cost-sharing multiple-employer defined benefit pension plan that provides pension benefits for teachers and other eligible members.

Benefit and contribution provisions are established by Chapter 14 of Alaska Statute Title 14, and may be amended only by the state legislature. The 24th Alaska State Legislature enacted into law Senate Bill 141, which closed the Plan to new members effective July 1, 2006.

There are two tiers within the Plan:

- Tier 1 employees: Employees hired between July 1, 1955 and June 30, 1990
- Tier 2 employees: Employees hired between July 1, 1990 and June 30, 2006

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 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 Plan's administrator if the cost of living in the previous calendar year rises and the financial condition of the Plan's permits. If both an automatic and discretionary PRPA are granted, and a retiree is eligible for both adjustments, the one that provides the retiree the greater increase will be paid.

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

**(2) Basis of Presentation**

The schedule of employer and nonemployer allocations and the schedule of pension amounts by employer and nonemployer (collectively, the Schedules) present amounts that are considered elements of the financial statements of the Plan, its participating employers, or the State of Alaska (State) as a nonemployer entity. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the Plan, its participating employers, or the State. The amounts presented in the Schedules are prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the Plan to make a number of estimates and assumptions relating to the reported amounts. Due to the inherent nature of these estimates, actual results could differ from those estimates.

**(3) Allocation Methodology**

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, requires participating employers in the Plan to recognize their proportionate share of the collective net pension liability, collective deferred outflows of resources, collective deferred inflows of resources and collective employer pension expense. The employer and nonemployer allocation percentages presented in the schedule of employer and nonemployer allocations and applied to amounts presented in the schedule of pension amounts by employer and nonemployer are based on the ratio of the present value of projected future contributions for each employer to the total present value of projected future contributions for the fiscal years 2019 to 2039 to the Plan. Employer and nonemployer allocation percentages have been rounded for presentation purposes; therefore, amounts presented in the schedule of pension amounts by employer and nonemployer may result in immaterial differences.

**(4) Contributions**

Employer contributions are actuarially determined and adopted by the Alaska Retirement Management Board (Board). As set by Alaska Statute 14.25.070(a), employer contributions were 12.56% of annual payroll for the fiscal year 2018.

Alaska Statute 14.25.085 requires the State, as a nonemployer contributing entity, to contribute each July 1, or as soon after July 1 for the ensuing fiscal year, an amount that when combined with the total employer contributions is sufficient to pay the Plan's past service liability at the actuarially determined contribution rate adopted by the Board for that fiscal year.

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

**(5) Collective Net Pension Liability**

*Components of Net Pension Liability*

The components of the net pension liability of the Plan as of June 30, 2018, is as follows:

Total pension liability	\$	7,387,056,000
Plan fiduciary net position		<u>(5,472,727,000)</u>
Net pension liability	\$	<u>1,914,329,000</u>

The total pension liability for the June 30, 2018 measurement date was determined by an actuarial valuation as of June 30, 2017, which was rolled forward to June 30, 2018. This actuarial valuation used the following actuarial assumptions:

Inflation	3.12%
Salary increases	Graded by service, from 8.11% to 3.87%
Investment rate of return	8.00%, net of pension plan investment expenses. This is based on an average inflation rate of 3.12% and a real return of 4.88%.
Mortality	Posttermination 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 pretermination mortality were 68% of the male rates and 60% of female rates of the posttermination mortality rates. Deaths are assumed to result from nonoccupational causes 85% of the time.

The actuarial assumptions used in the June 30, 2017 actuarial valuation were based on the results of an actuarial experience study for the period July 1, 2009 to June 30, 2013. The assumptions used in the June 30, 2017 actuarial valuation report are the same as those used in the June 30, 2016 actuarial valuation.

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

*Long-term Expected Rate of Return*

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 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 weighing the expected future real rates of return by an asset allocation percentage, which is based on the nature and mix of current and expected plan investments, and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Plan's target asset allocation is summarized in the following table (note that the rates shown below exclude the inflation component):

<b>Asset class</b>	<b>Long-term expected real rate of return</b>
Domestic equity	8.90%
Global ex-U.S. equity	7.85
Fixed Income	1.25
Opportunistic	4.76
Real assets	6.20
Absolute return	4.76
Private equity	12.08
Cash equivalents	0.66

*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 contributions will continue to follow the current funding policy, which meets State statutes. Based on those assumptions, the 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 Collective Net Pension Liability to Changes in the Discount Rate*

The following presents the collective net pension liability of the Plan as of June 30, 2018, calculated using the discount rate of 8.00%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	<b>1% Decrease (7%)</b>	<b>Current discount rate (8%)</b>	<b>1% Increase (9%)</b>
\$	2,738,519,000	1,914,329,000	1,220,808,000

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
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June 30, 2018

**(6) Collective Deferred Outflows of Resources and Deferred Inflows of Resources**

The following presents a summary of changes in the collective deferred outflows of resources and deferred inflows of resources (excluding employer specific amounts) for the year ended June 30, 2018:

	<u>Year of deferral</u>	<u>Amortization period</u>	<u>Beginning of year balance</u>	<u>Additions</u>	<u>Deductions</u>	<u>End of year balance</u>
Deferred outflows of resources:						
Difference between projected and actual earnings on pension plan investments						
	2014	5 years	\$ (66,935,592)	—	(66,935,592)	—
	2015	5 years	86,736,000	—	43,368,000	43,368,000
	2016	5 years	264,503,400	—	88,167,800	176,335,600
	2017	5 years	(191,647,200)	—	(47,911,800)	(143,735,400)
	2018	5 years	—	(15,868,000)	(3,173,600)	(12,694,400)
			<u>\$ 92,656,608</u>	<u>(15,868,000)</u>	<u>13,514,808</u>	<u>63,273,800</u>
Total deferred outflows of resources						
Deferred inflows of resources:						
Difference between expected and actual experience						
	2016	2.1 years	\$ 2,651,524	—	2,651,524	—
	2017	1.9 years	31,148,052	—	31,148,052	—
	2018	1.7 years	—	131,092,000	77,112,941	53,979,059
			<u>\$ 33,799,576</u>	<u>131,092,000</u>	<u>110,912,517</u>	<u>53,979,059</u>
Total deferred inflows of resources						

Amounts reported as deferred outflows of resources and deferred inflows of resources (employer specific amounts) related to pensions will be recognized in pension expense, as follows:

Year ending June 30:	
2019	\$ 26,471,341
2020	37,082,400
2021	(51,085,400)
2022	(3,173,600)
2023	—
Total	<u>\$ 9,294,741</u>

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Notes to Schedule of Employer and Nonemployer Allocations and  
Schedule of Pension Amounts by Employer and Nonemployer

June 30, 2018

**(7) Collective Pension Expense**

The components of the collective pension expense (excluding employer specific amounts) for the year ending June 30, 2018 are as follows:

Service cost	\$ 64,961,000
Interest on total pension liability	572,791,000
Member contributions	(37,674,000)
Administrative expense	3,050,000
Expected investment return net of investment expenses	(416,675,000)
Other	(183,000)
Recognition (amortization) of deferred outflows/inflows of resources:	
Difference between projected and actual investment earnings on pension plan investments	13,514,808
Difference between expected and actual experience	<u>(110,912,517)</u>
Total pension expense	<u>\$ 88,872,291</u>

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Supplemental Schedule of Employer Allocations of Special Funding Amounts (Unaudited)

As of and for the year ended June 30, 2018

Employer	Employer number	Present value of projected future State contributions	Employer proportionate share
Anchorage School District	701	\$ 377,908,000	34.76272 %
Cordova City School District	704	3,185,000	0.29298
Craig City School District	705	3,527,000	0.32444
Fairbanks North Star Borough School District	706	105,633,000	9.71689
Haines Borough School District	707	2,409,000	0.22160
Hoonah City School District	708	879,000	0.08086
Hydaburg City School District	709	927,000	0.08527
Juneau Borough School District	710	40,096,000	3.68832
Kake City School District	712	1,061,000	0.09760
Ketchikan Gateway Borough School District	714	20,864,000	1.91922
Klawock City School District	717	1,840,000	0.16926
Kodiak Island Borough School District	718	21,575,000	1.98463
Nenana City School District	719	3,156,000	0.29031
Nome City School District	720	5,799,000	0.53343
Matanuska-Susitna Borough School District	722	140,721,000	12.94454
Pelican City School District	723	96,000	0.00883
Petersburg City School District	724	4,648,000	0.42756
Sitka Borough School District	727	12,644,000	1.16309
Skagway City School District	728	1,286,000	0.11830
Unalaska City School District	729	3,669,000	0.33750
Valdez City School District	730	7,443,000	0.68466
Wrangell Public School District	731	2,483,000	0.22840
Yakutat School District	732	723,000	0.06651
University of Alaska	733	45,584,000	4.19315
Galena City School District	735	8,282,000	0.76184
North Slope Borough School District	736	21,016,000	1.93320
State of Alaska	737	—	—
Bristol Bay Borough School District	742	929,000	0.08546
Southeast Regional Resource Center	743	966,000	0.08886
Dillingham City School District	744	4,560,000	0.41946
Kenai Peninsula Borough School District	746	71,168,000	6.54655
Saint Mary's School District	748	1,892,000	0.17404
Northwest Arctic Borough School District	751	20,509,000	1.88657
Bering Strait School District	752	24,163,000	2.22269
Lower Yukon School District	753	19,197,000	1.76588
Lower Kuskokwim School District	754	39,659,000	3.64812
Kuspuk School District	755	3,847,000	0.35388
Southwest Region School District	756	7,664,000	0.70499
Lake And Peninsula Borough School District	757	5,505,000	0.50639
Aleutian Region School District	758	493,000	0.04535
Pribilof School District	759	850,000	0.07819
Iditarod Area School District	761	2,120,000	0.19501
Yukon / Koyukuk School District	762	6,435,000	0.59194
Yukon Flats School District	763	3,059,000	0.28139
Denali Borough School District	764	3,372,000	0.31018
Delta/Greely School District	765	5,889,000	0.54171
Alaska Gateway School District	766	3,835,000	0.35277
Copper River School District	767	2,403,000	0.22105
Chatham School District	768	1,741,000	0.16015
Southeast Island School District	769	2,460,000	0.22629



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Supplemental Schedule of Employer Allocations of Special Funding Amounts (Unaudited)

As of and for the year ended June 30, 2018

<u>Employer</u>	<u>Employer number</u>	<u>Present value of projected future State contributions</u>	<u>Employer proportionate share</u>
Annette Island School District	770	\$ 2,976,000	0.27374 %
Chugach School District	771	2,004,000	0.18434
Tanana School District	775	414,000	0.03808
Kashunamiut School District	777	2,589,000	0.23816
Yupit School District	778	4,470,000	0.41118
Special Education Service Agency	779	1,252,000	0.11517
Aleutians East Borough School District	780	3,232,000	0.29730
		<u>\$ 1,087,107,000</u>	<u>100.00000 %</u>

See accompanying independent auditors' report

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Supplemental Schedule of Special Funding Amounts by Employer (Unaudited)

As of and for the year ended June 30, 2018

<b>Employer</b>	<b>Employer number</b>	<b>State proportionate share of net pension liability attributable to employer</b>	<b>Employer pension expense and related revenue attributable to special funding situation</b>
Anchorage School District	701	\$ 395,192,750	\$ 18,346,734
Cordova City School District	704	3,330,675	154,626
Craig City School District	705	3,688,318	171,229
Fairbanks North Star Borough School District	706	110,464,441	5,128,287
Haines Borough School District	707	2,519,183	116,952
Hoonah City School District	708	919,204	42,674
Hydaburg City School District	709	969,399	45,004
Juneau Borough School District	710	41,929,910	1,946,587
Kake City School District	712	1,109,528	51,510
Ketchikan Gateway Borough School District	714	21,818,277	1,012,909
Klawock City School District	717	1,924,158	89,329
Kodiak Island Borough School District	718	22,561,797	1,047,426
Nenana City School District	719	3,300,349	153,218
Nome City School District	720	6,064,235	281,531
Matanuska-Susitna Borough School District	722	147,157,295	6,831,744
Pelican City School District	723	100,391	4,661
Petersburg City School District	724	4,860,590	225,652
Sitka Borough School District	727	13,222,311	613,843
Skagway City School District	728	1,344,819	62,433
Unalaska City School District	729	3,836,813	178,123
Valdez City School District	730	7,783,428	361,344
Wrangell Public School District	731	2,596,567	120,545
Yakutat School District	732	756,069	35,100
University of Alaska	733	47,668,920	2,213,019
Galena City School District	735	8,660,802	402,076
North Slope Borough School District	736	21,977,229	1,020,288
State of Alaska	737	—	—
Bristol Bay Borough School District	742	971,491	45,101
Southeast Regional Resource Center	743	1,010,183	46,898
Dillingham City School District	744	4,768,565	221,380
Kenai Peninsula Borough School District	746	74,423,081	3,455,075
Saint Mary's School District	748	1,978,536	91,853
Northwest Arctic Borough School District	751	21,447,040	995,674
Bering Strait School District	752	25,268,167	1,173,069
Lower Yukon School District	753	20,075,032	931,979
Lower Kuskokwim School District	754	41,472,923	1,925,371
Kuspuk School District	755	4,022,954	186,765
Southwest Region School District	756	8,014,536	372,073
Lake And Peninsula Borough School District	757	5,756,788	267,258

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Supplemental Schedule of Special Funding Amounts by Employer (Unaudited)

As of and for the year ended June 30, 2018

Employer	Employer number	State proportionate share of net pension liability attributable to employer	Employer pension expense and related revenue attributable to special funding situation
Aleutian Region School District	758	\$ 515,549	\$ 23,934
Pribilof School District	759	888,877	41,266
Iditarod Area School District	761	2,216,965	102,922
Yukon / Koyukuk School District	762	6,729,324	312,407
Yukon Flats School District	763	3,198,912	148,509
Denali Borough School District	764	3,526,228	163,704
Delta/Greely School District	765	6,158,351	285,900
Alaska Gateway School District	766	4,010,405	186,182
Copper River School District	767	2,512,908	116,661
Chatham School District	768	1,820,630	84,522
Southeast Island School District	769	2,572,515	119,428
Annette Island School District	770	3,112,116	144,479
Chugach School District	771	2,095,659	97,290
Tanana School District	775	432,936	20,099
Kashunamiut School District	777	2,707,416	125,691
Yup'it School District	778	4,674,449	217,010
Special Education Service Agency	779	1,309,264	60,782
Aleutians East Borough School District	780	3,379,825	156,908
Total for all employers		<u>\$ 1,136,829,083</u>	<u>52,777,034</u>

See accompanying independent auditors' report

**STATE OF ALASKA TEACHERS' RETIREMENT SYSTEM  
DEFINED BENEFIT PENSION PLAN**

Supplemental Schedule of Employer and Nonemployer Contributions (Unaudited)

For the year ended June 30, 2018

<u>Employer/nonemployer</u>	<u>Employer number</u>	<u>Actual contributions</u>
Employers:		
Anchorage School District	701	\$ 13,953,834
Cordova City School District	704	136,708
Craig City School District	705	141,152
Fairbanks North Star Borough School District	706	4,017,543
Haines Borough School District	707	60,119
Hoonah City School District	708	21,575
Hydaburg City School District	709	45,017
Juneau Borough School District	710	1,535,689
Kake City School District	712	40,686
Ketchikan Gateway Borough School District	714	765,272
Klawock City School District	717	73,149
Kodiak Island Borough School District	718	665,867
Nenana City School District	719	140,642
Nome City School District	720	219,437
Matanuska-Susitna Borough School District	722	5,272,973
Pelican City School District	723	821
Petersburg City School District	724	252,002
Sitka Borough School District	727	508,568
Skagway City School District	728	42,710
Unalaska City School District	729	149,368
Valdez City School District	730	303,737
Wrangell Public School District	731	89,138
Yakutat School District	732	27,948
University of Alaska	733	1,986,247
Galena City School District	735	310,877
North Slope Borough School District	736	620,262
State of Alaska	737	1,004,123
Bristol Bay Borough School District	742	30,208
Southeast Regional Resource Center	743	24,561
Dillingham City School District	744	132,017
Kenai Peninsula Borough School District	746	2,570,793
Saint Mary's School District	748	69,719
Northwest Arctic Borough School District	751	723,018
Bering Strait School District	752	696,010
Lower Yukon School District	753	521,774
Lower Kuskokwim School District	754	1,244,222
Kuspuk School District	755	142,686
Southwest Region School District	756	175,811
Lake And Peninsula Borough School District	757	184,495
Aleutian Region School District	758	12,437
Pribilof School District	759	18,914
Iditarod Area School District	761	68,892
Yukon / Koyukuk School District	762	229,625
Yukon Flats School District	763	93,555
Denali Borough School District	764	133,593

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Supplemental Schedule of Employer and Nonemployer Contributions (Unaudited)

For the year ended June 30, 2018

Employer/nonemployer	Employer number	Actual contributions
Delta/Greely School District	765	\$ 216,894
Alaska Gateway School District	766	147,901
Copper River School District	767	98,121
Chatham School District	768	62,597
Southeast Island School District	769	71,915
Annette Island School District	770	64,185
Chugach School District	771	90,177
Tanana School District	775	10,038
Kashunamiut School District	777	78,104
Yupit School District	778	107,494
Special Education Service Agency	779	32,604
Aleutians East Borough School District	780	<u>112,452</u>
Total Employer Contributions		40,550,276
Nonemployer:		
State of Alaska	999	<u>111,042,261</u>
Total for all entities		<u>\$ 151,592,537</u>

See accompanying independent auditor's report