



# ACTUARIAL SECTION



ALASKA DIVISION OF  
**Retirement  
and Benefits**



June 5, 2018

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

## **Certification of Actuarial Valuation**

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

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System (PERS) as of June 30, 2017 performed by Conduent HR Consulting, LLC (Conduent HR Consulting).

The actuarial valuation is based on financial information provided in the statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), all as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2017. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under PERS were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Conduent HR Consulting is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS as of June 30, 2017.

PERS is funded by Employer, State, and Member Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board) and as required by Alaska state statutes. The funding objective for PERS is to pay required contributions that remain level as a percent of total PERS compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percentage of total PERS compensation over a closed 25-year period and as required by Alaska state statutes. The closed 25-year period was established effective June 30, 2014.

The compensation used to determine required contributions is the total compensation of all active members in PERS, including those hired after July 1, 2006 who are members of the Defined Contribution Retirement (DCR) Plan. This objective is currently being met and is projected to continue to be met.

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

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2009 to June 30, 2013. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2014 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claim cost rates effective June 30, 2017 to better reflect expected future healthcare experience. Based on recent experience, the healthcare cost trend assumptions were also updated. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 6.

Governmental Accounting Standards Board (GASB) Statement No. 67 (GASB 67) and Statement No. 74 (GASB 74) are effective for PERS during the fiscal year ending June 30, 2017, and separate GASB 67 and GASB 74 reports as of June 30, 2017 have been prepared. Section 3 of this report contains accounting information previously disclosed under GASB 25 for fiscal years 2007 through 2013 and accounting information previously disclosed under GASB 43 for fiscal years 2007 through 2016. We have also prepared the member data tables shown in Section 5 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions, solvency test, and analysis of financial experience for the Actuarial Section of the CAFR. Please see our separate GASB 67 and GASB 74 reports for other information needed for the CAFR.

This report was prepared under my supervision and in accordance with all applicable Actuarial Standards of Practice. David Kershner is a Fellow of the Society of Actuaries, an Enrolled Actuary and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Scott can be reached at 216-682-7583.

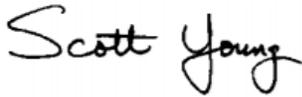
Respectfully submitted,

Conduent HR Consulting, LLC



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

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



Scott Young, FSA, EA, MAAA  
Director

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The funding method used in this valuation was adopted by the Board in October 2006. Changes in the amortization of unfunded actuarial accrued liability were made in 2014. The asset smoothing method used to determine valuation assets was changed effective June 30, 2014.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

## **A. Actuarial Method – Entry Age Normal Cost**

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method. Any funding surpluses or unfunded accrued liability are 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.

Projected pension and postemployment healthcare benefits were determined for all active members. Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for pension benefits (constant dollar amount for healthcare benefits) from the assumed entry age to the assumed retirement age were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for retired members and their beneficiaries currently receiving benefits, terminated vested members and disabled members not yet receiving benefits was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

## **B. Valuation of Assets**

The actuarial asset value was reinitialized to equal Fair Value of Assets as of June 30, 2014. Beginning in FY15, the asset value method recognizes 20% of the gain or loss each year, for a period of 5 years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP.

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## C. Valuation of Medical and Prescription Drug Benefits

This section outlines the detailed methodology used to develop the initial per capita claims cost rates for PERS postemployment healthcare plan. Note that methodology reflects the results of our annual experience rate update for the period July 1, 2016 to June 30, 2017. Healthcare cost trend and retiree contribution increase assumptions for the period after June 30, 2017 were undated since the prior valuation.

Base claims cost rates are incurred healthcare costs expressed as a rate per member per year. Ideally, claims cost rates should be derived for each significant component of cost that can be expected to require differing projection assumptions or methods (i.e., medical claims, prescription drug claims, administrative costs, etc). Separate analysis is limited by the availability and historical credibility of cost and enrollment data for each component of cost. This valuation reflects non-prescription claims separated by Medicare status, including eligibility for free Part A coverage. Prescription costs are analyzed separately as in prior valuations. Administrative costs are assumed in the final per capita claims cost rates used for valuation purposes, as described below. Analysis to date on Medicare Part A coverage is limited since Part A claim data is not available by individual, nor is this status incorporated into historical claim data.

### Benefits

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

### Administration and Data Sources

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

Claims incurred for the period from July 2015 through June 2017 (FY16 through FY17) were provided by the State of Alaska from reports extracted from their data warehouse, which separated claims by Medicare status. Monthly enrollment data for the same period was provided by Aetna.

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

Aetna provided a snapshot file as of July 1, 2017 of retirees and dependents that included a coverage level indicator. The monthly enrollment data includes dual coverage participants. These are participants whereby both the retiree

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

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

## Methodology

Conduent HR Consulting projected historical claim data to FY18 for retirees using the following summarized steps:

1. Develop historical annual incurred claim cost rates – an analysis of medical costs was completed based on claims information and enrollment data provided by the State of Alaska and Aetna for each year in the experience period of FY16 through FY17. (For this year's valuation, the Board approved reducing the number of experience periods from four years to two years.)
  - Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs for the valuation year (e.g. from the experience period up through FY18).
  - Because the reports provided this year reflected incurred claims, no additional adjustment was needed (as it was in prior years) to determine incurred claims to be used in the valuation.
  - An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. Alaska retirees who do not have 40 quarters of Medicare-covered compensation do not qualify for Medicare Part A coverage free of charge. This is a relatively small and closed group. Medicare was applied to State employment for all employees hired after March 31, 1986. For the “no-Part A” individuals who are required to enroll in Medicare Part B, the State is the primary payer for hospital bills and other Part A services. Claim experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. For Medicare Part B only participants, a lower average claims cost was applied to retirees covered by both Medicare Part A and B vs. retirees covered only by Medicare Part B based upon manual rate models that estimate the Medicare covered proportion of medical costs. To the extent that no-Part A claims can be isolated and applied strictly to the appropriate closed group, actuarial accrued liability will be more accurate.
  - Based on census data received from Aetna, less than 1% of the current retiree population was identified as having coverage only under Medicare Part B. For future retirees, we assume their Part A eligible status based on a combination of date of hire and/or re-hire, date of birth, tier, etc.

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- Based upon a reconciliation of valuation census data to the snapshot eligibility files provided by Aetna as of July 1, 2016, and July 1, 2017, Conduent HR Consulting adjusted member counts used for duplicate records where participants have dual coverage; i.e. primary coverage as a retiree and secondary coverage as the covered spouse of another retiree. This is to reflect the total cost per distinct individual/member which is then applied to distinct members in the valuation census.
  - Conduent HR Consulting understands that pharmacy claims reported do not reflect rebates. Based upon reported rebates in proportion to incurred claims for State of Alaska retiree plans, Conduent HR Consulting reduced reported pharmacy incurred claims by 9% to estimate the rebates for the retiree population for the FY16 claims and by 12% for FY17 claims. These estimates were based upon reported rebates for retirees from Aetna and Envision Rx.
2. Develop estimated Retiree Drug Subsidy reimbursement - actual subsidy payments to the State were received for claims incurred during the 2009 through 2016 calendar years. Conduent HR Consulting obtained this information based upon recorded and available information in the RDS Subsidy website and as provided by the State. The projected subsidy for FY18 was determined based on the historical ratio of subsidy received to claims incurred (adjusted for rebates), and then applied to the appropriate projection period. These amounts are applicable only to Medicare eligible participants.
  3. Adjust for claim fluctuation, anomalous experience, etc. – explicit adjustments are often made for anticipated large claims or other anomalous experience. Due to group size and demographics, we did not make any large claim adjustments. We do blend both Alaska plan-specific and national trend factors as described below. Conduent HR Consulting compared data utilized to lag reports and quarterly plan experience presentations provided by the State and Aetna to assess accuracy and reasonableness of data.
  4. Trend all data points to the projection period – project prior years’ experience forward to FY18 for retiree benefits on an incurred claim basis. Trend factors derived from historical Alaska-specific experience and national trend factors are shown in the table in item 5 below.
  5. Apply credibility to prior experience – adjust prior year’s data by assigning weight to recent periods, as shown at the right of the table below. The Board approved a change in the weighting of experience periods as outlined below. The prior valuation used a weighting of 35%/35%/20%/10% for the previous four fiscal years of experience (most recent to oldest). Note also that we averaged projected plan costs using Alaska-specific trend factors and national trend factors, assigning 75% weight to Alaska-specific trends and 25% to national trends:

Experience Period	Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year			Weighting Factors
	Medical	Prescription		
FY16 to FY17	5.3%	8.5%		50%
FY17 to FY18	7.0% Pre-Medicare / 4.5% Medicare	6.2%		50%

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

6. Develop separate administration costs – no adjustments were made for internal administrative costs. Third party retiree plan administration fees for FY18 are based upon rates in effect at the midpoint of the year, January 2018, as communicated by the State. We also ensured that these rates were consistent with the calculation of the 2018 budget and retiree contribution rates calculated by Segal. Included in the administration costs are medical and prescription fees of \$28.25 (\$27.70 for medical and \$0.55 for Rx check) PEPM, \$4.60 PPPM for retiree direct billing, \$0.71 PEPM for the Gaps in Care program (applicable to early retirees only) and a share of the HDMS fee for data analytics. The annual per participant per year administrative cost rate for medical and prescription benefits is \$236.
7. Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Conduent HR Consulting evaluated the impact of the following provisions; however, none of the impacts have been included in the valuation results except for the excise tax described below.
  - Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions of the health reform legislation apply to the State plan. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We reviewed the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.
  - Because Transitional Reinsurance fees are only in effect until 2016, we excluded these for valuation purposes.
  - The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the valuation date, Conduent HR Consulting estimated the tax based upon a blended test of pre and post-Medicare projected costs and enrollment projections.
    - A blended test compares a weighted average per capita cost (based upon proportions of pre/post Medicare eligible enrollments) to the tax cost thresholds in each projection year. Projected enrollment was based upon the enrollment data provided by Aetna, and valuation headcount projections for future years.
    - We included administrative fees and applied Retiree Drug Subsidy reimbursements to the Medicare rates.
  - We assumed claim costs would increase according to valuation trend assumptions from the June 30, 2017 valuation, and that the tax cost thresholds would increase at 2.82% (the CPI assumption of 3.12% less 0.30% to estimate the impact of using the chained CPI as required by the Tax Cut and Jobs Act passed in December 2017). The first year increased at 3.82% to reflect the additional 1.0% over inflation assumption.

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- Conduent HR Consulting determined the impact to be approximately \$21.4 million of the projected June 30, 2017 healthcare actuarial accrued liability for the defined benefit plan.

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

We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. While the House of Representatives voted to pass the American Health Care Act (AHCA), which would have repealed many provisions of the Affordable Care Act (ACA), the bill was rejected by the Senate. We will continue to monitor legislative activity.

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

- The Division of Retirement and Benefits provided pension valuation census data, which for people currently in receipt of healthcare benefits was supplemented by coverage data from the healthcare claims administrator (Aetna).
- Certain adjustments and assumptions were made to prepare the data for valuation:
  - Some records provided on the Aetna data were associated with a participant social security number not listed on the RIN-to-SSN translation file. We did not add these records to the retiree medical valuation data as they were unable to tie with our pension valuation data (and therefore were unable to be associated with a specific plan or participant).
  - Some in pay participants and beneficiaries on the pension valuation data who were previously assumed to be receiving medical benefits were not listed on the provided Aetna data. We have updated these records to only be valued under the pension valuation.
  - Some records in the Aetna data were duplicates due to the dual coverage (i.e. coverage as a retiree and as a spouse of another retiree) allowed under the Plan. Records were changed for these members so that each member was only valued once. Any additional value of the dual coverage (due to coordination of benefits) is small and reflected in the per capita costs.
  - Covered children included in the Aetna data were valued until age 23, unless handicapped. We assumed that those dependents over 23 were only eligible and included due to being handicapped.

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- Conduent HR Consulting understands that retiree medical coverage/eligibility is in place while a pension benefit is payable. If a participant dies, dependent coverage is only assumed to continue if they have ongoing pension/survivor benefits.
- For individuals included in the pension data expecting a future pension, we valued health benefits starting at the same point that the pension benefit is assumed to start.
- Future retirees' level of coverage is estimated according to valuation assumptions regarding spousal coverage.
- Limitations on the use of the valuation results due to uncertainty about various aspects of the data: Excluded records due to file mismatches are noted above but not are expected to have a material impact on the results.

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

	Medical		Prescription Drugs (Rx)		Total
	Pre-Medicare	Medicare	Pre-Medicare	Medicare	
<b>A. Fiscal 2016</b>					
1. Incurred Claims	\$ 237,116,614	\$ 65,703,369	\$ 67,176,175	\$ 146,089,568	\$ 516,085,726
2. Adjustments for Rx Rebates	-	-	(6,045,856)	(13,148,061)	(19,193,917)
3. Net incurred claims	\$ 237,116,614	\$ 65,703,369	\$ 61,130,319	\$ 132,941,507	\$ 496,891,809
4. Average Enrollment	24,439	36,151	24,439	36,151	60,591
5. Claim Cost Rate (3) / (4)	9,702	1,817	2,501	3,677	
6. Trend to Fiscal 2018	1.126	1.100	1.152	1.152	
7. Fiscal 2018 Incurred Cost Rate (5) x (6)	\$ 10,929	\$ 1,999	\$ 2,882	\$ 4,237	
<b>B. Fiscal 2017</b>					
1. Incurred Claims	\$ 231,784,641	\$ 71,323,054	\$ 64,788,957	\$ 161,532,441	\$ 529,429,093
2. Adjustments for Rx Rebates	-	-	(7,774,675)	(19,383,893)	(27,158,568)
3. Net incurred claims	\$ 231,784,641	\$ 71,323,054	\$ 57,014,282	\$ 142,148,548	\$ 502,270,525
4. Average Enrollment	23,342	38,502	23,342	38,502	61,844
5. Claim Cost Rate (3) / (4)	9,930	1,852	2,443	3,692	
6. Trend to Fiscal 2018	1.070	1.045	1.062	1.062	
7. Fiscal 2018 Incurred Cost Rate (5) x (6)	\$ 10,625	\$ 1,936	\$ 2,594	\$ 3,921	
<b>C. Incurred Cost Rate by Fiscal Year</b>					
1. Fiscal 2016 A. (7)	10,929	1,999	2,882	4,237	
2. Fiscal 2017 B. (7)	10,625	1,936	2,594	3,921	
<b>D. Weighting by Fiscal Year</b>					
1. Fiscal 2016	50%	50%	50%	50%	
2. Fiscal 2017	50%	50%	50%	50%	

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	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
<b>E. Fiscal 2018 Incurred Cost Rate</b>				
1. Rate at Average Age C x D	\$ 10,777	\$ 1,968	\$ 2,738	\$ 4,079
2. Average Aging Factor	0.788	1.305	0.784	1.101
3. Rate at Age 65 (1) / (2)	\$ 13,682	\$ 1,508	\$ 3,493	\$ 3,706
<b>F. Development of Part A&amp;B and Part B</b>				
<b>Only Cost from Pooled Rate Above</b>				
1. Part A&B Average Enrollment		38,227		
2. Part B Only Average Enrollment		275		
3. Total Medicare Average Enrollment B(4)		38,502		
4. Cost ratio for those with Part B only to those with Part A&B		3.180		
5. Factor to determine cost for those with Parts A&B (2) / (3) x (4) + (1) / (3) x 1.00		1.016		
6. Medicare per capita cost for all participants: E(3)		\$ 1,508		
7. Cost for those eligible for Parts A&B: (6) / (5)		\$ 1,485		
8. Cost for those eligible for Part B only: (7) x (4)		\$ 4,722		

Following the development of total projected costs, a distribution of per capita claims cost was developed. This was accomplished by allocating total projected costs to the population census used in the valuation. The allocation was done separately for each of prescription drugs and medical costs for the Medicare eligible and preMedicare populations. The allocation weights were developed using participant counts by age and assumed morbidity and aging factors. Results were tested for reasonableness based on historical trend and external benchmarks for costs paid by Medicare.

Below are the results of this analysis:

**Distribution of Per Capita Claims Cost by Age**  
**for the Period July 1, 2017 through June 30, 2018**

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare Retiree Drug Subsidy
45	\$ 7,577	\$ 7,577	\$ 1,843	\$ —
50	8,573	8,573	2,188	—
55	9,699	9,699	2,599	—
60	11,520	11,520	3,013	—
65	1,485	4,722	3,493	659
70	1,807	5,745	3,763	710
75	2,145	6,822	4,014	757
80	2,311	7,349	4,115	776

**Changes in Methods Since the Prior Valuation**

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

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

The demographic and economic assumptions used in the June 30, 2017 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2014 based on an experience study performed as of June 30, 2013.

1. Investment Return / Discount Rate                      8.00% per year (geometric), compounded annually, net of all expenses.
2. Salary Scale                              Inflation – 3.12% per year. Productivity – 0.50% per year. See Table 1 for salary scale rates.
3. Payroll Growth                         3.62% per year. (Inflation + Productivity).
4. Total Inflation                         Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
5. Mortality (Pre-termination)<sup>1</sup>                      Based upon the 2010-2013 actual mortality experience (see Table 2) 60% of male rates and 65% of female rates of post-termination mortality rates.  
  
Deaths are assumed to be occupational 70% of the time for Peace Officer/Firefighter, 50% of the time for Others.
6. Mortality (Post-termination)<sup>1</sup>                      96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 using Projection Scale BB.
7. Total Turnover                         Based upon the 2010-2013 actual withdrawal experience. (See Table 4 and 5).
8. Disability                                 Incidence rates based upon the 2010-2013 actual experience, in accordance with Table 6.  
  
Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB.  
  
Disabilities are assumed to be occupational 70% of the time for Peace Officer/Firefighter, 50% of the time for Others
9. Retirement                                Retirement rates based upon the 2010-2013 actual experience in accordance with Table 7 and 8.  
  
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.

<sup>1</sup>The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 109%.

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- |  |  |
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| 10. Marriage and Age Difference        | <p>Wives are assumed to be three years younger than husbands.</p> <p>For Others, 75% of male members and 70% female members are assumed to be married.</p> <p>For Peace Officer/Firefighters, 85% of male members and 60% female members are assumed to be married.</p>  |
| 11. Dependent Children                 | <p>Benefits to dependent children have been valued only for members currently covering their dependent children. These benefits are only valued through the dependent children's age 23 (unless the child is disabled).</p>  |
| 12. Contribution Refunds               | <p>For Others, 10% of terminating members with vested benefits are assumed to have their contributions refunded.</p> <p>For Peace Officers/Firefighters, 15% of terminating members with vested benefits are assumed to have their contributions refunded.</p> <p>100% of those with non-vested benefits are assumed to have their contributions refunded.</p>   |
| 13. Imputed Data                       | <p>Data changes from the prior year which are deemed to have an immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data. Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.</p> |
| 14. Active Rehire Assumption           | <p>The Normal Cost used for determining contribution rates and in the projections includes a rehire assumption to account for anticipated rehires. The Normal Cost shown in the report includes the following % assumptions (which were developed based on the 5 years of rehire loss experience through June 30, 2015): Pension 14.23% , Healthcare 17.24%.</p>   |
| 15. Active Data Adjustment             | <p>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 records but active in the October 1 client records are updated to active status as of June 30.</p>   |
| 16. COLA                               | <p>Of those benefit recipients who are eligible for the COLA, 70% of Others and 65% Peace Officers/Firefighters are assumed to remain in Alaska and receive the COLA.</p>  |
| 17. Post-Retirement Pension Adjustment | <p>50% and 75% of assumed inflation, or 1.56% and 2.34% respectively, is valued for the annual automatic Post-Retirement Pension Adjustment (PRPA) as specified in the statute.</p>  |
| 18. Expenses                           | <p>Investment return assumption is net of all expenses.</p>  |

# Actuarial Section

**State of Alaska**  
**Public Employees' Retirement System**  
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19. Part-Time Status                      Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.65 years for credited service per year for Other members.
20. Final Average Earnings              Final Average Earnings is provided on the data for active members. This amount is used as a minimum in the calculation of the average earnings in the future.
21. Per Capita Claims Cost              Sample claims cost rates adjusted to age 65 for FY18 medical and prescription are shown below:

		<u>Medical</u>		<u>Prescription drugs</u>
Pre-Medicare	\$	13,682	\$	3,493
Medicare Parts A & B		1,485		3,706
Medicare Part B Only		4,722		3,706
Medicare Part D		N/A		659

22. Third Party Administrator Fees              \$236 per person per year; assumed trend rate of 4% per year.
23. Medicare Part B Only                      For actives and retirees not yet Medicare-eligible, participation is set based on whether the employee/retiree will have 40 quarters of employment after March 31, 1986, depending upon date of hire and/or re-hire.
24. Health Cost Trend                          The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 8.0% is applied to the FY18 pre-Medicare medical claims costs to get the FY19 medical claims costs.

Fiscal year	Medical pre-65	Medical post-65	Prescription drugs	RDS/EGWP
2018	8.0%	5.5%	9.0%	6.5%
2019	7.5	5.5	8.5	6.2
2020	7.0	5.4	8.0	6.0
2021	6.5	5.4	7.5	5.7
2022	6.3	5.4	7.1	5.5
2023	6.1	5.4	6.8	5.4
2024	5.9	5.4	6.4	5.2
2025	5.8	5.4	6.1	5.0
2026	5.6	5.4	5.7	4.8
2027-2040	5.4	5.4	5.4	4.7
2041	5.2	5.2	5.2	4.6
2042	5.1	5.1	5.1	4.5
2043	4.0	4.0	4.0	4.0
2044	4.8	4.8	4.8	4.4
2045	4.7	4.7	4.7	4.3
2046	4.5	4.5	4.5	4.2
2047	4.4	4.4	4.4	4.2
2048	4.3	4.3	4.3	4.1
2049	4.1	4.1	4.1	4.0
2050+	4.0	4.0	4.0	4.0

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

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

25. Aging Factors

Age	Medical	Prescription drugs
0-44	2.0%	4.5%
45-54	2.5	3.5
55-64	3.5	3.0
65-74	4.0	1.5
75-84	1.5	0.5
85-95	0.5	—
96 +	—	—

Note that pre-65 the factor represents the amount to increase from the ages noted to the next age. However post-65, the factor represents the percentage decrease from the ages noted to the prior age. That is, 2.5% is used to adjust from 54 to 55, but 1.5% is used to adjust from age 84 back to age 83.

26. Retired Member  
Contributions for  
Medical Benefits

Currently contributions are required for PERS members who are under age 60 and have less than 30 years of service (25 for Peace Officer/Firefighter). Eligible Tier 1 members are exempt from contribution requirements. Annual FY18 contributions based on monthly rates shown below for calendar 2017 and 2018 are assumed based on the coverage category for current retirees. The composite rate shown is used for current active and inactive members in tier 2 or 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled. For dependent children, we value 1/3 of the annual retiree contribution to estimate the per child rate based upon the assumed number of children in rates where children are covered.

Coverage category	Calendar 2018		Calendar 2017
	Annual contribution	Monthly contribution	Monthly contribution
Retiree only	\$ 9,324	777	777
Retiree and spouse	18,648	1,554	1,554
Retiree and child(ren)	13,164	1,097	1,097
Retiree and family	22,500	1,875	1,875
Composite	13,848	1,154	1,154

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27. Trend Rate for Retired  
Member Medical  
Contributions

The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 8.0% is applied to the FY18 retired member medical contributions to get the FY19 retired member medical contributions.

Fiscal year:	
2018	8.0%
2019	7.6
2020	7.2
2021	6.8
2022	6.5
2023	6.3
2024	6.0
2025	5.9
2050	4.0
2100	4.0

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2014 valuation and updated to the rates shown above for the June 30, 2017 valuation. Actual FY18 retired member medical contributions are reflected in the valuation.

28. Healthcare Participation

100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 10% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

29. Changes in Assumptions  
Since the Prior Valuation

The healthcare cost trend assumption was updated as shown above to reflect anticipated increases in costs based on recent survey data. Healthcare claim costs are updated annually as described in Section 6.2.

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

Table 1  
 Alaska PERS  
 Salary Scale

<b>Peace Officer/Firefighter:</b>			
<b>Years of Service</b>	<b>Percent Increase</b>	<b>Years of Service</b>	<b>Percent Increase</b>
0	9.66%	11	4.92%
1	8.66	12	4.92
2	7.16	13	4.92
3	7.03	14	4.92
4	6.91	15	4.92
5	6.41	16	4.92
6	5.66	17	4.92
7	4.92	18	4.92
8	4.92	19	4.92
9	4.92	20+	4.92
10	4.92		
<b>Others:</b>			
<b>Years of Service</b>	<b>Percent Increase</b>		
0	8.55%		
1	7.36		
2	6.35		
3	6.11		
4	5.71		
5+	Age based		
<b>Age</b>	<b>Percent Increase</b>	<b>Age</b>	<b>Percent Increase</b>
20	7.91%	45	5.44%
21	7.83	46	5.40
22	7.75	47	5.36
23	7.51	48	5.31
24	7.27	49	5.27
25	7.03	50	5.22
26	6.79	51	5.18
27	6.55	52	5.13
28	6.52	53	5.09
29	6.49	54	5.05
30	6.47	55	5.01
31	6.44	56	4.97
32	6.41	57	4.93
33	6.33	58	4.85
34	6.24	59	4.77
35	6.16	60	4.69
36	6.07	61	4.60
37	5.99	62	4.52
38	5.90	63	4.46
39	5.82	64	4.40
40	5.73	65+	4.34
41	5.64		
42	5.55		
43	5.52		
44	5.48		

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

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

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.000188	0.000113	55	0.001978	0.001549
21	0.000195	0.000114	56	0.002292	0.001730
22	0.000200	0.000115	57	0.002515	0.001912
23	0.000204	0.000116	58	0.002775	0.002118
24	0.000205	0.000119	59	0.003073	0.002355
25	0.000205	0.000122	60	0.003425	0.002632
26	0.000206	0.000127	61	0.003826	0.002973
27	0.000208	0.000132	62	0.004287	0.003343
28	0.000214	0.000139	63	0.004813	0.003840
29	0.000225	0.000147	64	0.005324	0.004328
30	0.000242	0.000156	65	0.005904	0.004874
31	0.000272	0.000181	66	0.006558	0.005500
32	0.000307	0.000207	67	0.007184	0.006107
33	0.000344	0.000233	68	0.007842	0.006751
34	0.000383	0.000257	69	0.008689	0.007462
35	0.000422	0.000281	70	0.009744	0.008407
36	0.000459	0.000304	71	0.010782	0.009329
37	0.000493	0.000327	72	0.011971	0.010376
38	0.000526	0.000354	73	0.013334	0.011534
39	0.000557	0.000383	74	0.014876	0.012783
40	0.000589	0.000417	75	0.016602	0.014113
41	0.000623	0.000458	76	0.018504	0.015549
42	0.000663	0.000504	77	0.020583	0.017125
43	0.000709	0.000554	78	0.022872	0.018877
44	0.000762	0.000608	79	0.025419	0.020841
45	0.000823	0.000664	80	0.028245	0.023037
46	0.000882	0.000723	81	0.031612	0.025498
47	0.000946	0.000784	82	0.035318	0.028266
48	0.001015	0.000848	83	0.039369	0.031386
49	0.001089	0.000916	84	0.043784	0.034906
50	0.001167	0.000991	85	0.048601	0.038887
51	0.001336	0.001095	86	0.053884	0.043371
52	0.001455	0.001193	87	0.060797	0.048373
53	0.001591	0.001305	88	0.068537	0.053879
54	0.001744	0.001407	89	0.077135	0.059830
			90	0.086571	0.067336

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

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

Age	Male	Female	Age	Male	Female
50	0.001944	0.001524	85	0.081002	0.059827
51	0.002227	0.001684	86	0.089807	0.066725
52	0.002426	0.001835	87	0.101329	0.074420
53	0.002652	0.002007	88	0.114229	0.082891
54	0.002907	0.002165	89	0.128559	0.092046
55	0.003296	0.002383	90	0.144286	0.103593
56	0.003820	0.002662	91	0.160042	0.115847
57	0.004192	0.002942	92	0.176712	0.128589
58	0.004625	0.003259	93	0.194120	0.141591
59	0.005121	0.003623	94	0.212080	0.154643
60	0.005708	0.004050	95	0.230428	0.167558
61	0.006377	0.004574	96	0.249035	0.180154
62	0.007144	0.005143	97	0.267822	0.192248
63	0.008021	0.005908	98	0.281616	0.200025
64	0.008874	0.006658	99	0.300310	0.210437
65	0.009839	0.007498	100	0.313360	0.215967
66	0.010930	0.008462	101	0.332097	0.226721
67	0.011973	0.009396	102	0.344188	0.235671
68	0.013070	0.010386	103	0.361155	0.250844
69	0.014482	0.011479	104	0.369606	0.263111
70	0.016240	0.012933	105	0.381971	0.281391
71	0.017969	0.014352	106	0.384000	0.295499
72	0.019952	0.015964	107	0.384000	0.309816
73	0.022223	0.017744	108	0.384000	0.323943
74	0.024793	0.019666	109	0.384000	0.337482
75	0.027670	0.021712	110	0.384000	0.350032
76	0.030840	0.023921	111	0.384000	0.361196
77	0.034305	0.026346	112	0.384000	0.370574
78	0.038120	0.029042	113	0.384000	0.377767
79	0.042365	0.032063	114	0.384000	0.382376
80	0.047075	0.035441	115	0.384000	0.384000
81	0.052687	0.039227	116	0.384000	0.384000
82	0.058863	0.043487	117	0.384000	0.384000
83	0.065615	0.048286	118	0.384000	0.384000
84	0.072973	0.053702	119	1.000000	1.000000

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**Table 4**  
**Alaska PERS**  
**Total Turnover Assumptions**

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

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

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.040894	0.080000	40	0.017699	0.034930
21	0.040894	0.080000	41	0.017615	0.034779
22	0.040894	0.080000	42	0.017531	0.034627
23	0.038801	0.080000	43	0.018025	0.034352
24	0.036708	0.080000	44	0.018519	0.034077
25	0.034616	0.080000	45	0.019012	0.033802
26	0.032523	0.080000	46	0.019506	0.033527
27	0.030430	0.080000	47	0.020000	0.033251
28	0.028877	0.078000	48	0.023333	0.032862
29	0.027324	0.076000	49	0.026667	0.032474
30	0.025771	0.074000	50	0.030000	0.032085
31	0.024218	0.072000	51	0.040000	0.031581
32	0.022665	0.070000	52	0.040000	0.030941
33	0.021722	0.063077	53	0.040000	0.030201
34	0.020779	0.056154	54+	0.040000	0.060402
35	0.019836	0.049231			
36	0.018893	0.042308			
37	0.017950	0.035385			
38	0.017866	0.035234			
39	0.017782	0.035082			

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**Table 5**  
**Alaska PERS**  
**Total Turnover Assumptions**

**Others:**

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

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

Age	Male	Female	Age	Male	Female
20	0.095000	0.136735	40	0.044190	0.053792
21	0.095000	0.136735	41	0.042820	0.052523
22	0.095000	0.136735	42	0.041450	0.051254
23	0.090250	0.128522	43	0.040930	0.049398
24	0.085500	0.120309	44	0.040400	0.047541
25	0.080750	0.112096	45	0.039880	0.045685
26	0.076000	0.103883	46	0.039357	0.043828
27	0.071250	0.095670	47	0.038834	0.041972
28	0.069160	0.091756	48	0.038701	0.041891
29	0.067060	0.087842	49	0.038568	0.041809
30	0.064960	0.083927	50	0.038170	0.041566
31	0.062870	0.080013	51	0.037844	0.041365
32	0.060770	0.076099	52	0.037460	0.041121
33	0.058280	0.072399	53	0.037023	0.040844
34	0.055780	0.068699	54+	0.043859	0.057924
35	0.053290	0.064999			
36	0.050790	0.061299			
37	0.048300	0.057599			
38	0.046930	0.056330			
39	0.045560	0.055061			

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**Table 6**  
**Alaska PERS**  
**Disability Table**

Age	Peace Officer/ Firefighter Rate	Other Member Rate	
		Male	Female
20	0.000224	0.000218	0.000188
21	0.000224	0.000218	0.000188
22	0.000224	0.000218	0.000188
23	0.000305	0.000240	0.000200
24	0.000387	0.000261	0.000212
25	0.000468	0.000283	0.000224
26	0.000550	0.000304	0.000236
27	0.000631	0.000326	0.000248
28	0.000658	0.000334	0.000255
29	0.000685	0.000342	0.000262
30	0.000712	0.000349	0.000269
31	0.000739	0.000357	0.000277
32	0.000765	0.000365	0.000284
33	0.000793	0.000377	0.000293
34	0.000821	0.000389	0.000303
35	0.000849	0.000401	0.000312
36	0.000877	0.000413	0.000322
37	0.000905	0.000425	0.000331
38	0.000946	0.000446	0.000348
39	0.000986	0.000467	0.000364
40	0.001027	0.000489	0.000381
41	0.001068	0.000510	0.000397
42	0.001108	0.000531	0.000413
43	0.001221	0.000586	0.000454
44	0.001333	0.000641	0.000495
45	0.001446	0.000695	0.000536
46	0.001559	0.000750	0.000577
47	0.001671	0.000805	0.000618
48	0.001828	0.000886	0.000680
49	0.001985	0.000967	0.000742
50	0.002142	0.001048	0.000804
51	0.002299	0.001129	0.000867
52	0.002456	0.001210	0.000929
53	0.002868	0.001421	0.001084
54	0.003280	0.001633	0.001239

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

**Table 7**  
**Alaska PERS Peace Officer/Firefighter**  
**Retirement Table**

<b>Age at Retirement</b>	<b>Retirement Rate</b>		
	<b>Reduced</b>	<b>Unreduced</b>	
	<b>Unisex Rates</b>	<b>Male Rates</b>	<b>Female Rates</b>
<47	N/A	0.080000	0.060000
47	N/A	0.080000	0.150000
48	N/A	0.130000	0.150000
49	N/A	0.130000	0.150000
50	0.087041	0.150000	0.150000
51	0.085580	0.150000	0.150000
52	0.072383	0.185000	0.150000
53	0.076688	0.185000	0.150000
54	0.075561	0.185000	0.250000
55	0.077429	0.250000	0.200000
56	0.077106	0.250000	0.150000
57	0.076730	0.250000	0.150000
58	0.076820	0.250000	0.150000
59	0.200000	0.250000	0.150000
60	N/A	0.300000	0.250000
61	N/A	0.250000	0.200000
62	N/A	0.250000	0.300000
63	N/A	0.250000	0.500000
64	N/A	0.200000	0.500000
65	N/A	0.200000	0.500000
66	N/A	0.250000	0.500000
67	N/A	0.500000	0.500000
68	N/A	0.500000	0.500000
69	N/A	0.500000	0.500000
70	N/A	1.000000	1.000000
71	N/A	1.000000	1.000000
72	N/A	1.000000	1.000000
73	N/A	1.000000	1.000000
74	N/A	1.000000	1.000000
75	N/A	1.000000	1.000000

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

**Table 8**  
**Alaska PERS Other**  
**Retirement Table**

Age at Retirement	Retirement Rate			
	Reduced		Unreduced	
	Male Rate	Female Rate	Male Rates	Female Rates
<50	N/A	N/A	0.10	0.10
50	0.04	0.06	0.30	0.35
51	0.04	0.06	0.33	0.35
52	0.06	0.08	0.33	0.35
53	0.06	0.08	0.33	0.35
54	0.14	0.14	0.35	0.35
55	0.05	0.06	0.30	0.30
56	0.05	0.06	0.20	0.20
57	0.05	0.06	0.20	0.18
58	0.05	0.06	0.20	0.18
59	0.14	0.16	0.20	0.18
60	N/A	N/A	0.20	0.21
61	N/A	N/A	0.20	0.20
62	N/A	N/A	0.20	0.20
63	N/A	N/A	0.20	0.20
64	N/A	N/A	0.20	0.20
65	N/A	N/A	0.23	0.26
66	N/A	N/A	0.25	0.26
67	N/A	N/A	0.20	0.22
68	N/A	N/A	0.23	0.22
69	N/A	N/A	0.25	0.22
70	N/A	N/A	0.25	0.22
71	N/A	N/A	0.25	0.22
72	N/A	N/A	0.25	0.25
73	N/A	N/A	0.25	0.25
74	N/A	N/A	0.25	0.35
75-89	N/A	N/A	0.50	0.50
90+	N/A	N/A	1.00	1.00

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

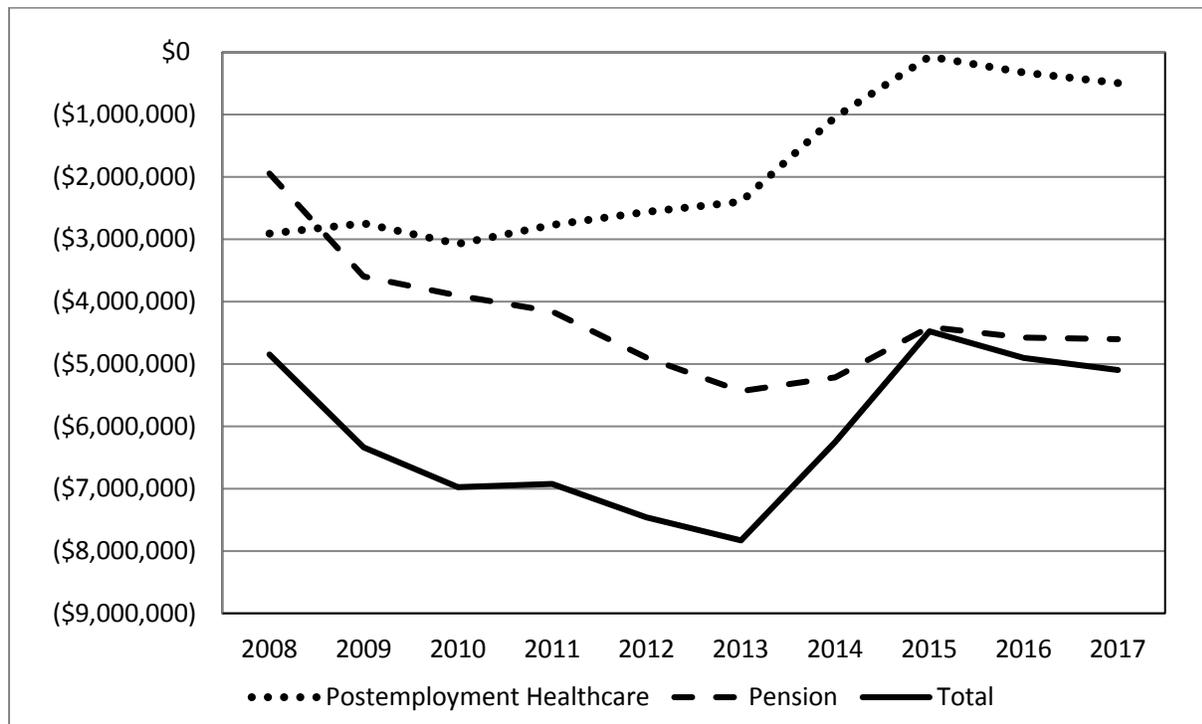
**Table 9**  
**Alaska PERS**  
**Disabled Mortality Rates**

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

# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Funding Excess/(Unfunded Liability) (In thousands)				
Actuarial Valuation Year Ended June 30	Postemployment Healthcare	Pension	Total Funding Excess/ (Unfunded Liability)	Funded Ratio
2008	\$ (2,904,525)	\$ (1,943,510)	\$ (4,848,035)	69.5%
2009	(2,742,835)	(3,593,558)	(6,336,393)	61.8
2010	(3,073,188)	(3,901,840)	(6,975,028)	61.5
2011	(2,769,878)	(4,156,898)	(6,926,776)	63.0
2012	(2,561,808)	(4,898,523)	(7,460,331)	61.3
2013	(2,395,001)	(5,435,132)	(7,830,133)	60.8
2014	(1,036,453)	(5,216,321)	(6,252,774)	70.1
2015	(68,435)	(4,406,769)	(4,475,204)	75.4
2016	(325,127)	(4,576,371)	(4,901,498)	70.0
2017	(492,197)	(4,602,427)	(5,094,624)	74.4

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



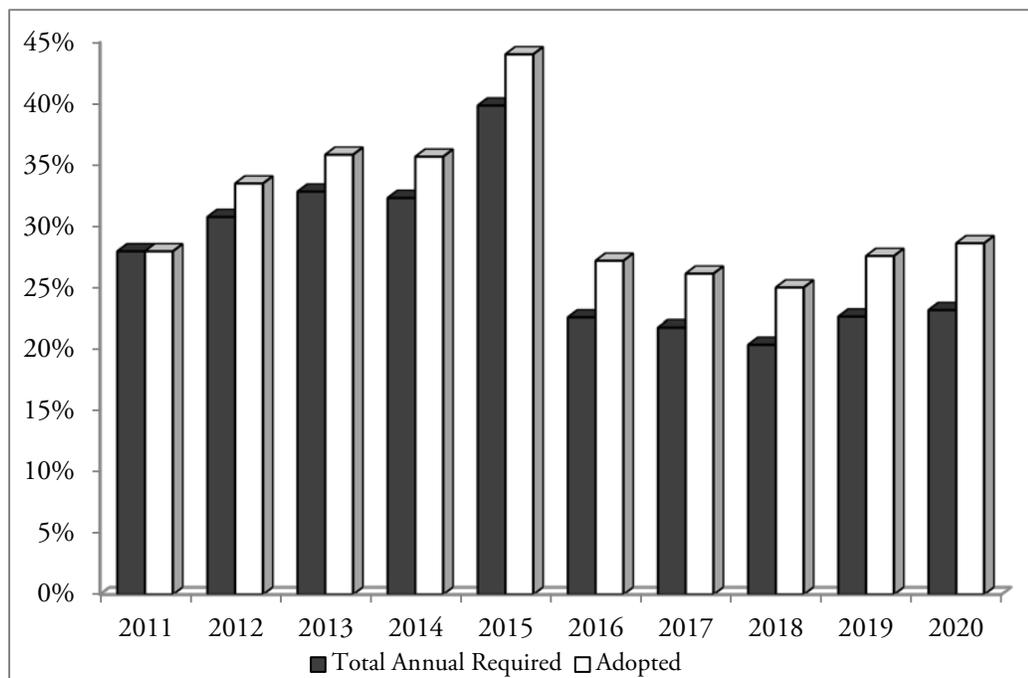
Public Employees' Retirement System Defined Benefit Retirement Plan Employer Contribution Rates					
Year Ended June 30	Actuarially Determined				Adopted
	Actuarial Valuation Year Ended June 30	Normal Cost <sup>1</sup>	Past Service	Total Annual Required	
2011	2008	9.33%	18.63%	27.96%	27.96%
2012	2009	8.28	22.48	30.76	33.49
2013	2010	8.67	24.16	32.83	35.84
2014	2011	8.12	24.19	32.31	35.68
2015	2012	6.82	33.03	39.85	44.03
2016	2013	6.05	16.53	22.58	27.19
2017	2014	5.76	16.02	21.78	26.14
2018	2015	5.10	15.28	20.38	25.01
2019	2016	6.11	16.53	22.64	27.58
2020	2017	5.74	17.43	23.17	28.62

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

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

Valuations are used to set contribution rates in future years.

## 10-YEAR COMPARISON OF AVERAGE EMPLOYER CONTRIBUTION RATES



# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Schedule of Active Member Valuation Data					
Valuation Date	Number	Annual Earnings (In thousands)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
<b>All Others</b>					
June 30, 2017	13,113	\$ 960,106	\$ 73,218	1.4%	155
June 30, 2016	14,401	1,039,960	72,214	3.2	155
June 30, 2015	15,833	1,108,218	69,994	2.1	159
June 30, 2014	17,339	1,188,918	68,569	3.4	159
June 30, 2013	18,890	1,252,786	66,320	4.5	159
June 30, 2012	20,566	1,305,337	63,471	4.6	160
June 30, 2011	22,118	1,342,122	60,680	4.7	160
June 30, 2010	24,054	1,393,803	57,945	4.5	160
June 30, 2009	25,089	1,390,971	55,441	5.1	159
June 30, 2008	26,301	1,387,117	52,740	6.9	160
<b>Peace Officer / Firefighter</b>					
June 30, 2017	1,606	\$ 171,821	\$ 106,987	1.6%	155
June 30, 2016	1,704	179,461	105,317	3.8	155
June 30, 2015	1,827	185,350	101,450	2.5	159
June 30, 2014	1,958	193,737	98,946	3.4	159
June 30, 2013	2,065	197,534	95,658	4.8	159
June 30, 2012	2,164	197,544	91,286	4.1	160
June 30, 2011	2,275	199,537	87,709	8.6	160
June 30, 2010	2,388	192,895	80,777	2.8	160
June 30, 2009	2,476	194,519	78,562	5.0	159
June 30, 2008	2,549	190,729	74,825	4.9	160
<p><b>Total and average earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.</b></p>					

Public Employees' Retirement System Defined Benefit Retirement Plan Schedule of Benefit Recipients Added to and Removed from Rolls								
Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefits
	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No.	Annual Pension Benefits		
<b>All Others</b>								
June 30, 2017	1,699	\$ 44,619,382	816	\$ 14,610,212	31,032	\$ 663,978,286	4.7%	\$ 21,398
June 30, 2016	1,780	44,409,702	660	12,099,362	30,149	633,969,116	5.4	21,028
June 30, 2015	1,583	39,939,292	627	7,232,812	29,029	601,658,756	5.7	20,726
June 30, 2014	1,778	44,823,611	603	3,011,383	28,073	568,952,296	7.9	20,267
June 30, 2013	1,808	43,247,667	554	4,861,626	26,898	527,140,068	7.9	19,598
June 30, 2012	1,679	37,855,250	636	5,344,239	25,644	488,754,027	7.1	19,059
June 30, 2011	1,595	37,100,217	554	6,897,899	24,601	456,243,016	7.1	18,546
June 30, 2010	1,667	35,089,579	517	8,712,630	23,560	426,040,698	6.6	18,083
June 30, 2009	1,340	25,402,811	476	28,773	22,410	399,663,749	6.8	17,834
June 30, 2008	1,454	28,498,471	466	5,349,935	21,546	374,289,711	6.6	17,372
<b>Peace Officer / Firefighter</b>								
June 30, 2017	166	\$ 6,971,580	54	\$ 2,132,027	3,315	\$ 118,111,073	4.3%	\$ 35,629
June 30, 2016	137	6,618,744	49	1,594,392	3,204	113,271,520	4.6	35,353
June 30, 2015	136	5,617,344	46	633,046	3,116	108,247,168	4.8	34,739
June 30, 2014	109	4,270,620	50	(145,769)	3,026	103,262,870	4.5	34,125
June 30, 2013	113	4,162,920	42	240,775	2,967	98,846,479	4.1	33,315
June 30, 2012	179	5,246,271	41	(177,568)	2,896	94,924,334	6.1	32,778
June 30, 2011	114	3,772,720	33	116,090	2,758	89,500,495	4.3	32,451
June 30, 2010	118	3,593,724	46	1,413,071	2,677	85,843,865	2.6	32,067
June 30, 2009	108	2,759,299	39	(518,134)	2,605	83,663,212	4.1	32,116
June 30, 2008	125	3,556,519	28	191,073	2,536	80,385,779	4.4	31,698

<sup>1</sup> Numbers are estimated, and include other internal transfers.

# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Pension Solvency Test (In thousands)							
Valuation Date	Pension Actuarial Accrued Liability For:			Pension Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	\$ 1,458,830	\$ 9,147,818	\$ 3,026,385	\$ 9,056,662	100.0%	83.1%	—%
June 30, 2015	1,475,852	8,762,863	3,099,214	8,931,160	100.0	85.1	—
June 30, 2014 <sup>1 2</sup>	1,486,335	8,264,683	3,196,741	7,731,438	100.0	75.6	—
June 30, 2013	1,479,538	7,514,255	2,952,088	6,510,749	100.0	67.0	—
June 30, 2012	1,459,943	7,057,967	2,911,034	6,530,421	100.0	71.8	—
June 30, 2011	1,421,967	6,657,517	2,839,563	6,762,149	100.0	80.2	—
June 30, 2010 <sup>1</sup>	1,388,029	6,268,461	2,715,182	6,469,832	100.0	81.1	—
June 30, 2009	1,315,924	5,914,959	2,471,203	6,108,528	100.0	81.0	—
June 30, 2008	1,242,288	5,606,402	2,305,592	7,210,772	100.0	100.0	15.7
June 30, 2007	1,203,007	5,282,132	2,177,185	6,739,004	100.0	100.0	11.7
June 30, 2006 <sup>1 2</sup>	1,157,755	4,933,609	2,002,679	6,331,065	100.0	100.0	12.0

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

<b>Public Employees' Retirement System                      Defined Benefit Retirement Plan                      Postemployment Healthcare Solvency Test                      (In thousands)</b>							
Valuation Date	Postemployment Healthcare Actuarial Accrued Liability For:			Post-Employment Healthcare Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2016	\$ —	\$ 5,393,537	\$ 2,342,920	\$ 7,411,330	100.0%	100.0%	86.1%
June 30, 2015	—	5,159,283	2,151,451	7,242,299	100.0	100.0	96.8
June 30, 2014 <sup>1</sup>	—	5,455,114	2,494,499	6,913,160	100.0	100.0	58.5
June 30, 2013 <sup>1</sup>	—	5,298,380	2,748,498	5,651,877	100.0	100.0	12.9
June 30, 2012 <sup>1</sup>	—	5,026,080	2,837,337	5,301,609	100.0	100.0	9.7
June 30, 2011	—	4,812,845	3,008,658	5,051,625	100.0	100.0	7.9
June 30, 2010 <sup>1</sup>	—	4,581,806	3,179,014	4,687,632	100.0	100.0	3.3
June 30, 2009	—	4,232,394	2,644,891	4,134,450	100.0	97.7	—
June 30, 2008 <sup>1</sup>	—	4,166,270	2,567,589	3,829,334	100.0	91.9	—
June 30, 2007	—	3,684,906	2,223,703	3,161,956	100.0	85.8	—
June 30, 2006 <sup>1 2</sup>	—	3,990,202	2,304,168	2,709,843	100.0	67.9	—

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

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

# Actuarial Section

Public Employees' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience					
Change in Employer/State Contribution Rate Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience					
Type of (Gain) or Loss	Change in Employer/State Contribution Rate During Fiscal Year				
	2017	2016	2015	2014	2013
Health Claims	(2.90)%	1.02%	(3.65)%	(0.85)%	(1.51)%
Salary Experience	(0.42)	(0.35)	(0.32)	(0.19)	0.23
Investment Experience	1.36	1.40	0.45	(4.63)	1.76
Demographic Experience and Miscellaneous	(0.96)	0.13	0.34	(0.04)	(0.84)
Contribution Shortfall	0.04	—	—	0.67	0.79
(Gain) or Loss During Year From Experience	(2.88)	2.20	(3.18)	(5.04)	0.43
Assumption and Method Changes	3.41	2.85	—	(13.46)	—
System Benefit Changes	—	—	—	—	—
Composite (Gain) or Loss During Year	0.53	5.05	(3.18)	(18.50)	0.43
Beginning Employer/State Contribution Rate	22.64	18.60	21.78	40.28	39.85
Ending Valuation Year Employer/State Contribution Rate	<u>23.17%</u>	<u>23.65%</u>	<u>18.60%</u>	<u>21.78%</u>	<u>40.28%</u>
Fiscal Year Employer/State Contribution Rate	23.17%*	22.64%	20.38%	21.78%	22.58%
Fiscal Year for Which Rate Applies	FY20	FY19	FY18	FY17	FY16

\*Expected. Actual Rate to be determined.

NOTE: In the second session of the 28<sup>th</sup> Alaska legislature, the legislature changed the actuarial methodology from level dollar amortization to level percent of pay. The June 30, 2013 PERS actuarial valuation report was not updated for this change, but specific revisions for the amortization change were presented to reflect the change in amortization. The change in the amortization resulted in an adjusted FY16 employer/state contribution rate of 22.58%.

Public Employees' Retirement System Defined Benefit Retirement Plan Analysis of Financial Experience						
Change in Employer/State Contribution Rate Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Three Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience						
Type of (Gain) or Loss	Change in Employer/State Contribution Rate During Fiscal Year					
	Pension			Healthcare		
	2017	2016	2015	2017	2016	2015
Health Claims	N/A	N/A	N/A	(2.90)%	1.02%	(3.65)%
Salary Experience	(0.42)%	(0.35)%	(0.32)%	N/A	N/A	N/A
Investment Experience	0.75	0.77	0.24	0.61	0.63	0.21
Demographic Experience and Miscellaneous	(0.57)	0.13	0.34	(0.39)	N/A	N/A
Contribution Shortfall	0.18	—	—	(0.14)	—	—
(Gain) or Loss During Year From Experience	(0.06)	0.55	0.26	2.82	1.65	(3.44)
Assumption and Method Changes	—	1.92	—	3.41	0.93	—
System Benefit Changes	—	—	—	—	—	—
Composite (Gain) or Loss During Year	(0.06)	2.47	0.26	0.59	2.58	(3.44)
Beginning Employer/State Contribution Rate	18.27	16.24	15.98	4.37	2.36	5.80
Ending Valuation year Employer/State Contribution Rate	<u>18.21%</u>	<u>18.71%</u>	<u>16.24%</u>	<u>4.96%</u>	<u>4.94%</u>	<u>2.36%</u>
Fiscal Year Employer/State Contribution Rate	18.21%*	18.27%	17.27%	4.96%*	4.37%	3.11%*
Fiscal Year for Which Rate Applies	FY20	FY19	FY18	FY20	FY19	FY18

\*Expected. Actual Rate to be determined.

# Actuarial Section

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

## 1. Effective Date

January 1, 1961, with amendments through June 30, 2017. Chapter 82, 1986 Session Laws of Alaska, created a two tier retirement system. Members who were first hired under PERS before July 1, 1986 (Tier 1) are eligible for different benefits than members hired after June 30, 1986 (Tier 2). Chapter 4, 1996 Session Laws of Alaska created a third tier for members who were first hired after June 30, 1996 (Tier 3). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006.

## 2. Administration of Plan

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

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

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

## 3. Employers Included

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

## 4. Membership

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

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

Senate Bill 141, signed into law on July 27, 2005, closes the Plan effective July 1, 2006, to new members first hired on or after July 1, 2006.

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

## 5. Credited Service

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

Members may claim other types of service, including:

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

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

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

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

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

# Actuarial Section

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

## 6. Employer Contributions

PERS employers contribute the amounts required, in addition to employees' contributions, to fund the benefits of the system.

The normal cost rate is a uniform rate for all participating employers (less the value of members' contributions).

The past service rate is a uniform rate for all participating employers to amortize the unfunded past service liability with payments that are a level percentage of payroll amount over a closed 25-year period starting June 30, 2014.

Employer rates cannot be less than the normal cost rate.

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

## 7. Additional State Contributions

Pursuant to AS 39.35.280 effective July 1, 2008, the State shall contribute an amount (in addition to the State contribution as an employer) that when combined with the employer contribution (22%) will be sufficient to pay the total contribution rate adopted by The Alaska Retirement Management Board.

## 8. Member Contributions

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

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

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

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

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

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

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**Reinstatement of Contributions:** Refunded accounts and the corresponding PERS service may be reinstated upon reemployment in PERS prior to July 1, 2010. Interest accrues on refunds until paid in full or members retire.

## 9. Retirement Benefits

### Eligibility:

- a) Members, including deferred vested members, are eligible for normal retirement at age 55 or early retirement at age 50 if they were hired before July 1, 1986 (Tier 1), and 60 or early retirement at age 55 if they were hired after July 1, 1986 (Tiers 2 & 3). Additionally, they must have at least:
  - i) five years of paid-up PERS service;
  - ii) 60 days of paid-up PERS service as employees of the legislature during each of the five legislative sessions and they were first hired by the legislature before May 30, 1987;
  - iii) 80 days of paid-up PERS service as employees of the legislature during each of the five legislative sessions and they were first hired by the legislature after May 29, 1987;
  - iv) two years of paid-up PERS service and they are vested in the Teachers' Retirement System; or
  - v) two years of paid-up PERS service and a minimum three years of Teachers' Retirement System service to qualify for a public service benefit.
- b) Members may retire at any age when they have:
  - i) 20 paid-up years of PERS Peace Officer/Firefighter service; or
  - ii) 30 paid-up years of PERS "all other" or "elected official" service.

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

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

**Benefit Calculations:** Retirement benefits are calculated by multiplying the average monthly compensation (AMC) times credited PERS service times the percentage multiplier. The AMC is determined by averaging the salaries earned during the five highest (three highest for Peace Officer/Firefighter members or members hired prior to July 1, 1996) consecutive payroll years. Members must earn at least 115 days of credit in the last year worked to include it in the AMC calculation. PERS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

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

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

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

## 10. Reemployment of Retired Members

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

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

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

Employers make contributions to the unfunded liability of the plan on behalf of rehired retired members at the rate the employer is making contributions to the unfunded liability of the plan for other members.

## 11. Postemployment Healthcare Benefits

Major medical benefits are provided to retirees and their surviving spouses by PERS for all employees hired before July 1, 1986 (Tier 1) and disabled retirees. Employees hired after June 30, 1986 (Tier 2) and their surviving spouses with five years of credited service (or ten years of credited service for those first hired after June 30, 1996 (Tier 3))

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must pay the full monthly premium if they are under age sixty and will receive benefits paid by PERS if they are over age sixty. Tier 3 Members with between five and ten years of credited service must pay the full monthly premium regardless of their age. Tier 2 and Tier 3 Members with less than five years of credited service are not eligible for postemployment healthcare benefits. Tier 2 Members who are receiving a conditional benefit and are age eligible are eligible for postemployment healthcare benefits. In addition, Peace Officers and their surviving spouses with twenty-five years of Peace Officer membership service, Other employees and their surviving spouses with thirty years of membership service, and any disabled member receive benefits paid by PERS, regardless of their age or date of hire.

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

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

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

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

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

The plan coordinates with Medicare on a traditional Coordination of Benefits Method.

## 12. Disability Benefits

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

**Occupational Disability:** Members are not required to satisfy age or service requirements to be eligible for occupational disability. Monthly benefits are equal to 40% of their gross monthly compensation on the date of their disability. Members on occupational disability continue to earn PERS service until they become eligible for normal retirement. Peace Officer/Firefighter members may elect to retain the disability benefit formula for the calculation of their normal retirement benefits.

**Nonoccupational Disability:** Members must be vested (five paid up years of PERS service) to be eligible for non-occupational disability benefits. Monthly benefits are calculated based on the member's average monthly

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compensation and PERS service on the date of termination from employment because of disability. Members do not earn PERS service while on non-occupational disability.

### 13. Death Benefits

Monthly death benefits may be paid to a spouse or dependent children upon the death of a member. If monthly benefits are not payable under the occupational and non-occupational death provisions, the designated beneficiary receives the lump sum benefit described below.

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

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

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

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

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

### 14. Postretirement Pension Adjustments

Postretirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage increases during the preceding calendar year. PRPAs are calculated by multiplying the recipient's base benefit, including past PRPAs, excluding the Alaska COLA, times:

- a. 75% of the CPI increase in the preceding calendar year or 9%, whichever is less, if the recipient is at least age 65 or on PERS disability; or

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

Ad-hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who first entered PERS before July 1, 1986 (Tier 1) if the CPI increases and the funded ratio is at least 105%.

In a year where an ad-hoc PRPA is granted, eligible recipients will receive the higher of the two calculations.

## **15. Alaska Cost of Living Allowance**

Eligible benefit recipients who reside in Alaska receive an Alaska cost of living allowance (COLA) equal to 10% of their base benefits or \$50, whichever is more. The following benefit recipients are eligible:

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

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

There have been no changes in the benefit provisions effective since the prior valuation.



June 5, 2018

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

## **Certification of Actuarial Valuation**

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

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan as of June 30, 2017 performed by Conduent HR Services, LLC (Conduent), formerly known as Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), all as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2016. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the PERS DCR were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Conduent HR Consulting is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the PERS DCR as of June 30, 2017.

PERS DCR is funded by Employer/State Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for PERS DCR is to pay required contributions that remain level as a percent of PERS DCR compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of PERS DCR compensation over a closed layered 25-year period. This objective is currently being met and is projected to continue to be met as required by the Alaska state statutes.

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

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2009 to June 30, 2013. Based on that experience study, the Board adopted new assumptions effective for the June 30, 2014 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the per capita claims cost rates effective June 30, 2017 to better reflect expected future healthcare experience. Based on recent experience, the health care cost trend assumptions were also updated. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Sections 5.2 and 5.3.

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

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

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

Respectfully submitted,

Conduent HR Consulting, LLC

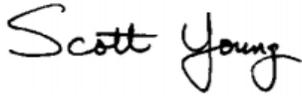


David J. Kershner, FSA, EA, MAAA, FCA  
Principal

# Actuarial Section

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



Scott Young, FSA, EA, MAAA  
Director

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The funding method used in this valuation was adopted by the Board in October 2006. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

## **Valuation of Liabilities**

### **A. Actuarial Method – Entry Age Normal Cost**

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

Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for death and disability benefits (constant dollar amount for retiree medical benefits), from the assumed entry age to the last age with a future benefit were applied to the projected benefits to determine the normal cost (the portion of the total cost of the Plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total DCR Plan payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the Plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for beneficiaries and disabled members currently receiving benefits (if any) was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

### **B. Valuation of Assets**

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method 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 financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

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

The methodology used for the valuation of the retiree medical benefits is described in Section 6.2 of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2017.

Due to the lack of experience for the DCR retiree medical plan only, base claims costs are based on those described in the actuarial valuation as of June 30, 2017 for the Defined Benefit (DB) retiree medical plan covering TRS, PERS and others. The DB rates were used with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles and out-of-pocket limits, upcoming FY18 claims costs were reduced 2.1% for medical claims, and 10.4% for prescription drugs. In addition, to account for the difference in Medicare coordination, upcoming FY18 medical claims costs for Medicare eligible retirees were further reduced 29.3%. The medical and prescription drug percentages mentioned above were reduced 0.2% in each future year for the DCR medical benefits to reflect the fact that the medical benefit to be offered to DCR members will have annual indexing of member cost sharing features such as deductibles and out-of-pocket amounts.

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

The State intends to transition to an Employer Group Waiver Program (EGWP) for this group in 2019. That impact is reflected in the valuation, but not in the base cost rates for 2017 or 2018. We estimated the impact of the EGWP plan by offsetting an amount equal to 160% of the RDS amount (a one-time adjustment, trended at the rates shown in Section 5.3 thereafter) based upon Conduent HR Consulting's review last year of client and industry comparisons of subsidies under RDS and EGWP.

Because EGWP subsidies are dependent upon risk scores which have not previously been measured for the State retiree population, and because EGWP subsidies are highly leveraged, there is considerable uncertainty in the estimate.

The estimate of the impact of the EGWP arrangement is a somewhat conservative estimate based on our experience with other similar implementations. EGWP subsidies are provided by three mechanisms, a capitation amount, a discount on brand name drugs (provided by pharmaceutical manufacturers rather than the federal government but still through the administration of a pharmacy benefit manager), and catastrophic payment.

The greatest variation in our estimate comes from the capitation amount, which is dependent upon the risk score of the population. The risk score is a measure of how sick (or well) the population is, depending on such matters as age and diagnosis. The higher the risk score, the larger the capitation. On the other hand, the healthier the population, the lower the capitation. Relatively small variations in risk score result in large swings in the capitation. Employer retiree groups tend to be healthier than the Medicare population as a whole. Our 60% estimate is meant to be conservative and is based on typical employer groups. Once a vendor is selected for the 2019 implementation

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of the EGWP arrangement, we will review an updated estimate of EGWP subsidies from that vendor and update the next valuation accordingly.

#### **D. Healthcare Reform**

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Conduent HR Consulting evaluated the impact due to these provisions; however, only the Patient Centered Outcomes Research Institute fee impact has been included in the valuation results as part of administrative fee.

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

The Plan will be subject to the high cost plan excise tax (Cadillac tax) and the value of the Health Reimbursement Account must be included along with projected plan costs. The excise tax was originally to be effective for 2018; legislation passed in December 2015 delayed it to 2020, with further delay to 2022 passed in January 2018. Based upon guidance available at the time of disclosure, Conduent HR Consulting determined the impact on plan liabilities to be immaterial (less than \$105,000 (0.10%)) based on a blend of projected pre-Medicare and Medicare retirees and related cost projections. Participants will be responsible for any tax to the extent they are reflected in retiree contributions.

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

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. While the House of Representatives voted to pass the American Health Care Act (AHCA), which would have repealed many provisions of the Affordable Care Act (ACA), the bill was rejected by the Senate. We will continue to monitor legislative activity.

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

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

# Actuarial Section

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

The demographic and economic assumptions used in the June 30, 2017 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2014. These assumptions were the result of an experience study performed for the PERS defined benefit plan as of June 30, 2013.

1. Investment Return / Discount Rate                      8.00% per year (geometric), compounded annually, net of investment expenses.
2. Salary Scale                              Inflation – 3.12% per year. Productivity – 0.50% per year. See Table 1 for salary scale rates.
3. Payroll Growth                              3.62% per year. (Inflation + Productivity).
4. Total Inflation                              Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
5. Mortality (Pre-termination)<sup>1</sup>                              Based upon the 2010-2013 actual mortality experience (see Table 2). 60% of male rates and 65% of female rates of the Post-Termination Mortality rates.  
  
Deaths are assumed to be occupational 70% of the time for Peace Officer/Firefighter, 50% of the time for Others.
6. Mortality (Post-termination)<sup>1</sup>                              Based upon 2010-2013 actual mortality experience (see Table 3).  
  
96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 with Projection Scale BB.
7. Total Turnover                              Rates based upon the 2010-2013 actual experience. (See Table 4.)
8. Disability                                      Incidence rates based upon the 2010-2013 actual experience, in accordance with Table 5.  
  
Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB.  
  
Disabilities are assumed to be occupational 70% of the time for Peace Officer/Firefighter, 50% of the time for Others.  
  
For Peace Officer/Firefighters, members are assumed to take the monthly annuity 100% of the time.
9. Retirement                                      Retirement rates based upon the 2010-2013 actual experience in accordance with Table 6.
10. Marriage and Age Difference                              Wives are assumed to be three years younger than husbands. For Others, 75% of male members and 70% female members are assumed to be married. For Peace Officer/Firefighters, 85% of male members and 60% of female members are assumed to be married at termination from active service.

<sup>1</sup>The mortality assumptions include an allowance for expected future mortality improvement. The mortality table used was set in 2014 with an Actual Deaths to Expected Deaths ratio of 109%.

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11. Part-Time Status                      Part-time employees are assumed to earn 1.00 years of credited service per year for Peace Officer/Firefighter and 0.65 years of credited service per year for Other members.
12. Peace Officer/Firefighter Occupational Disability Retirement Benefit Commencement                      The occupational disability retirement benefit is assumed to be first payable from the member’s DC account and the retirement benefit payable from the occupational death and disability trust will commence five years later.
13. Per Capita Claims Cost                      Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY18 medical and prescription drug are shown below:

	<b>Medical</b>	<b>Prescription drugs</b>
Pre-Medicare	\$ 13,682	\$ 3,493
Medicare Parts A & B	1,485	3,706
Medicare Part B Only	4,722	3,706
Medicare Part D	N/A	659

Members are assumed to attain Medicare eligibility at age 65.

14. Third Party Administrator Fees                      \$236 per person per year; assumed trend rate of 4% per year.
15. Base Claims Cost Adjustments                      Due to higher initial copays, deductibles, out-of-pocket limits and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:
- 0.979 for the medical plan.
  - 0.686 for both the Medicare medical plan and Medicare coordination method (2.1% for the medical plan and 29.3% reduction for the coordination method).
  - 0.896 for the prescription drug plan.
16. 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.

# Actuarial Section

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

17. 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, 8.0% is applied to the FY18 pre-Medicare medical claims costs to get the FY19 medical claims costs.

<u>Fiscal year</u>	<u>Medical pre-65</u>	<u>Medical post-65</u>	<u>Prescription drugs</u>	<u>RDS / EGWP</u>
2018	8.0%	5.5%	9.0%	6.5%
2019	7.5	5.5	8.5	6.2
2020	7.0	5.4	8.0	6.0
2021	6.5	5.4	7.5	5.7
2022	6.3	5.4	7.1	5.5
2023	6.1	5.4	6.8	5.4
2024	5.9	5.4	6.4	5.2
2025	5.8	5.4	6.1	5.0
2026	5.6	5.4	5.7	4.8
2027-2040	5.4	5.4	5.4	4.7
2041	5.2	5.2	5.2	4.6
2042	5.1	5.1	5.1	4.5
2050	4.0	4.0	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 estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska. The model was updated this year to use the newest version and incorporate recent trend survey information, which generated the updated trend rates shown above.

18. Aging Factors\*

<u>Age</u>	<u>Medical</u>	<u>Prescription drugs</u>
0-44	2.0%	4.5%
45-54	2.5	3.5
55-64	3.5	3.0
65-74	4.0	1.5
75-84	1.5	0.5
85-95	0.5	—
96 +	—	—

\* Note that the pre-65 factor represents the percentage increase from the ages noted to the next age. However, the post-65 factor represents the percentage decrease from the ages noted to the prior age. That is, 2.5% is used to adjust from 54 to 55, but 1.5% is used to adjust from age 84 back to age 83.

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

19. Retiree Medical Participation

<u>Decrement due to disability</u>		<u>Decrement due to retirement</u>	
<u>Age</u>	<u>Percent participation</u>	<u>Age</u>	<u>Percent participation</u>
<56	73.00%	55	40.00%
56	77.50	56	50.00
57	79.75	57	55.00
58	82.00	58	60.00
59	84.25	59	65.00
60	86.50	60	70.00
61	88.75	61	75.00
62	91.00	62	80.00
63	93.25	63	85.00
64	95.50	64	90.00
65+	94.40	65+	<u>Years of Service</u>
			< 15
			15-19
			20-24
			25-29
			30+

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

20. 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.

21. Changes in Assumptions Since the Prior Valuation

The health care cost trend assumption was updated as shown above to reflect anticipated increases in costs based on recent survey data. Healthcare claim costs are updated annually as described in Section 5.2. Minor updates were made to the factors used to adjust the DB plan costs to reflect DCR plan design differences.

# Actuarial Section

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

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

<b>Peace Officer/Firefighter:</b>		<b>Others:</b>	
<b>Years of Service</b>	<b>Percent Increase</b>	<b>Years of Service</b>	<b>Percent Increase</b>
0	9.66%	0	8.55%
1	8.66	1	7.36
2	7.16	2	6.35
3	7.03	3	6.11
4	6.91	4	5.71
5	6.41	5+	Age based
6	5.66		
7+	4.92		

<b>Age</b>	<b>Percent Increase</b>	<b>Age</b>	<b>Percent Increase</b>
20	7.91%	45	5.44%
21	7.83	46	5.40
22	7.75	47	5.36
23	7.51	48	5.31
24	7.27	49	5.27
25	7.03	50	5.22
26	6.79	51	5.18
27	6.55	52	5.13
28	6.52	53	5.09
29	6.49	54	5.05
30	6.47	55	5.01
31	6.44	56	4.97
32	6.41	57	4.93
33	6.33	58	4.85
34	6.24	59	4.77
35	6.16	60	4.69
36	6.07	61	4.60
37	5.99	62	4.52
38	5.90	63	4.46
39	5.82	64	4.40
40	5.73	65+	4.34
41	5.64		
42	5.55		
43	5.52		
44	5.48		

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

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

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
20	0.0188%	0.0113%	55	0.1978%	0.1549%
21	0.0195	0.0114	56	0.2292	0.1730
22	0.0200	0.0115	57	0.2515	0.1912
23	0.0204	0.0116	58	0.2775	0.2118
24	0.0205	0.0119	59	0.3073	0.2355
25	0.0205	0.0122	60	0.3425	0.2632
26	0.0206	0.0127	61	0.3826	0.2973
27	0.0208	0.0132	62	0.4287	0.3343
28	0.0214	0.0139	63	0.4813	0.3840
29	0.0225	0.0147	64	0.5324	0.4328
30	0.0242	0.0156	65	0.5904	0.4874
31	0.0272	0.0181	66	0.6558	0.5500
32	0.0307	0.0207	67	0.7184	0.6107
33	0.0344	0.0233	68	0.7842	0.6751
34	0.0383	0.0257	69	0.8689	0.7462
35	0.0422	0.0281	70	0.9744	0.8407
36	0.0459	0.0304	71	1.0782	0.9329
37	0.0493	0.0327	72	1.1971	1.0376
38	0.0526	0.0354	73	1.3334	1.1534
39	0.0557	0.0383	74	1.4876	1.2783
40	0.0589	0.0417	75	1.6602	1.4113
41	0.0623	0.0458	76	1.8504	1.5549
42	0.0663	0.0504	77	2.0583	1.7125
43	0.0709	0.0554	78	2.2872	1.8877
44	0.0762	0.0608	79	2.5419	2.0841
45	0.0823	0.0664	80	2.8245	2.3037
46	0.0882	0.0723	81	3.1612	2.5498
47	0.0946	0.0784	82	3.5318	2.8266
48	0.1015	0.0848	83	3.9369	3.1386
49	0.1089	0.0916	84	4.3784	3.4906
50	0.1167	0.0991	85	4.8601	3.8887
51	0.1336	0.1095	86	5.3884	4.3371
52	0.1455	0.1193	87	6.0797	4.8373
53	0.1591	0.1305	88	6.8537	5.3879
54	0.1744	0.1407	89	7.7135	5.9830
			90	8.6571	6.7336

# Actuarial Section

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

**Table 3**  
**Alaska PERS DCR Plan**  
**Mortality Table (Post-termination)**

<b>Age</b>	<b>Male</b>	<b>Female</b>	<b>Age</b>	<b>Male</b>	<b>Female</b>
50	0.1944%	0.1524%	85	8.1002%	5.9827%
51	0.2227	0.1684	86	8.9807	6.6725
52	0.2426	0.1835	87	10.1329	7.4420
53	0.2652	0.2007	88	11.4229	8.2891
54	0.2907	0.2165	89	12.8559	9.2046
55	0.3296	0.2383	90	14.4286	10.3593
56	0.3820	0.2662	91	16.0042	11.5847
57	0.4192	0.2942	92	17.6712	12.8589
58	0.4625	0.3259	93	19.4120	14.1591
59	0.5121	0.3623	94	21.2080	15.4643
60	0.5708	0.4050	95	23.0428	16.7558
61	0.6377	0.4574	96	24.9035	18.0154
62	0.7144	0.5143	97	26.7822	19.2248
63	0.8021	0.5908	98	28.1616	20.0025
64	0.8874	0.6658	99	30.0310	21.0437
65	0.9839	0.7498	100	31.3360	21.5967
66	1.0930	0.8462	101	33.2097	22.6721
67	1.1973	0.9396	102	34.4188	23.5671
68	1.3070	1.0386	103	36.1155	25.0844
69	1.4482	1.1479	104	36.9606	26.3111
70	1.6240	1.2933	105	38.1971	28.1391
71	1.7969	1.4352	106	38.4000	29.5499
72	1.9952	1.5964	107	38.4000	30.9816
73	2.2223	1.7744	108	38.4000	32.3943
74	2.4793	1.9666	109	38.4000	33.7482
75	2.7670	2.1712	110	38.4000	35.0032
76	3.0840	2.3921	111	38.4000	36.1196
77	3.4305	2.6346	112	38.4000	37.0574
78	3.8120	2.9042	113	38.4000	37.7767
79	4.2365	3.2063	114	38.4000	38.2376
80	4.7075	3.5441	115	38.4000	38.4000
81	5.2687	3.9227	116	38.4000	38.4000
82	5.8863	4.3487	117	38.4000	38.4000
83	6.5615	4.8286	118	38.4000	38.4000
84	7.2973	5.3702	119	100.0000	100.0000

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

Table 4  
 Alaska PERS DCR Plan  
 Turnover Assumptions

**Peace Officer/Firefighter:**

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

Years of Service	Male (rounded)	Female (rounded)
0	18.00%	16.50%
1	13.50	13.20
2	10.00	11.00
3	9.00	9.90
4	8.00	8.80

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

Age	Male	Female	Age	Male	Female
20	4.8000%	8.5500%	45	4.9678%	7.8800%
21	4.8000	8.5500	46	4.9061	7.8400
22	4.8000	8.5500	47	4.8444	7.8000
23	4.9120	8.5500	48	5.2256	7.7400
24	5.0240	8.5500	49	5.6067	7.6800
25	5.1360	8.5500	50	5.9878	7.6200
26	5.2480	8.5500	51	6.3689	7.5600
27	5.3600	8.5500	52	6.7500	7.5000
28	5.3528	8.5275	53	6.9300	7.6154
29	5.3456	8.5050	54	7.1100	7.7308
30	5.3384	8.4825	55	7.2900	7.8462
31	5.3312	8.4600	56	7.4700	7.9615
32	5.3239	8.4375	57	7.6500	8.0769
33	5.3119	8.4214	58	7.8480	8.1923
34	5.2998	8.4054	59	8.0460	8.3077
35	5.2878	8.3893	60	8.2440	8.4231
36	5.2757	8.3732	61	8.4420	8.5385
37	5.2636	8.3571	62	8.6400	8.6538
38	5.2415	8.2857	63	10.7600	8.7692
39	5.2194	8.2143	64	12.8800	8.8846
40	5.1972	8.1429	65+	15.0000	9.0000
41	5.1751	8.0714			
42	5.1529	8.0000			
43	5.0912	7.9600			
44	5.0295	7.9200			

# Actuarial Section

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

**Table 5**  
**Alaska PERS DCR Plan**  
**Disability Table**

Age	Peace Officer/ Firefighter Rate	Other Member Rate	
		Male	Female
20	0.0224%	0.0218%	0.0188%
21	0.0224	0.0218	0.0188
22	0.0224	0.0218	0.0188
23	0.0305	0.0240	0.0200
24	0.0387	0.0261	0.0212
25	0.0468	0.0283	0.0224
26	0.0550	0.0304	0.0236
27	0.0631	0.0326	0.0248
28	0.0658	0.0334	0.0255
29	0.0685	0.0342	0.0262
30	0.0712	0.0349	0.0269
31	0.0739	0.0357	0.0277
32	0.0765	0.0365	0.0284
33	0.0793	0.0377	0.0293
34	0.0821	0.0389	0.0303
35	0.0849	0.0401	0.0312
36	0.0877	0.0413	0.0322
37	0.0905	0.0425	0.0331
38	0.0946	0.0446	0.0348
39	0.0986	0.0467	0.0364
40	0.1027	0.0489	0.0381
41	0.1068	0.0510	0.0397
42	0.1108	0.0531	0.0413
43	0.1221	0.0586	0.0454
44	0.1333	0.0641	0.0495
45	0.1446	0.0695	0.0536
46	0.1559	0.0750	0.0577
47	0.1671	0.0805	0.0618
48	0.1828	0.0886	0.0680
49	0.1985	0.0967	0.0742
50	0.2142	0.1048	0.0804
51	0.2299	0.1129	0.0867
52	0.2456	0.1210	0.0929
53	0.2868	0.1421	0.1084
54	0.3280	0.1633	0.1239

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

**Table 6**  
**Alaska PERS DCR Plan**  
**Retirement Table**

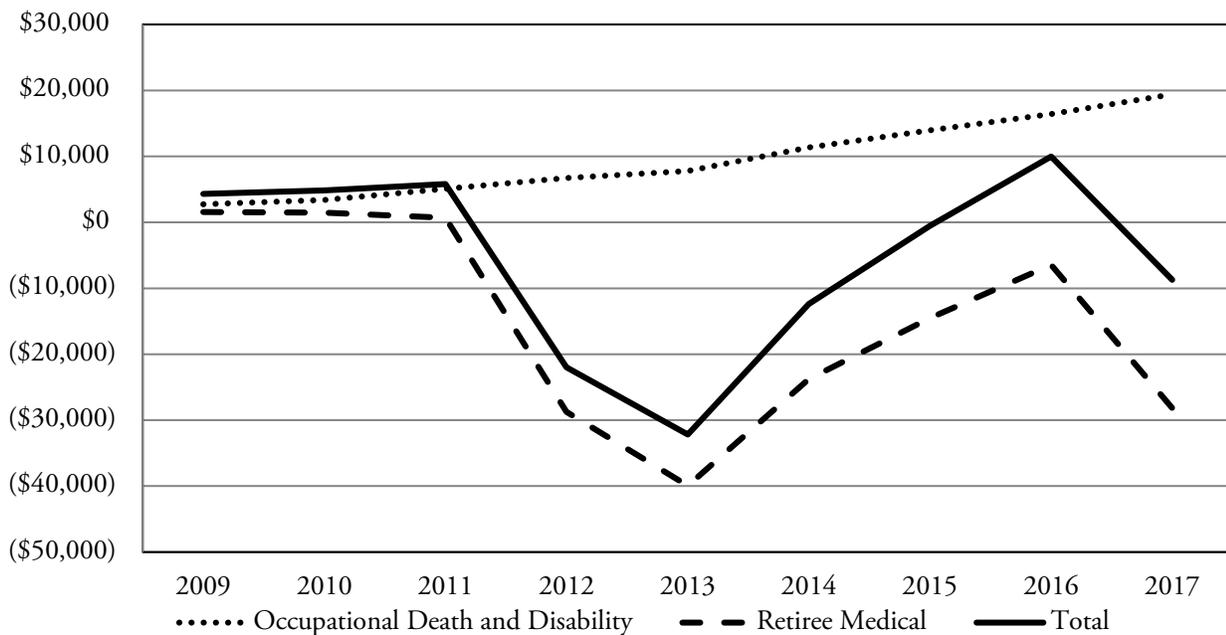
<b>Age</b>	<b>Rate</b>
≤ 50	2.00%
51	2.00
52	2.00
53	2.00
54	2.00
55	3.00
56	3.00
57	3.00
58	3.00
59	3.00
60	5.00
61	5.00
62	10.00
63	5.00
64	5.00
65	25.00
66	25.00
67	25.00
68	20.00
69	20.00
70	100.00

# Actuarial Section

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

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

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



<b>Public Employees' Retirement System                      Defined Contribution Retirement Plan                      Occupational Death and Disability and Retiree Medical Benefits                      Employer Contribution Rates</b>						
Fiscal Year	Actuarial Valuation Year Ended June 30	Actuarially Determined				Adopted
		Occupational Death and Disability		Retiree Medical	Total Required	
		Peace Officer/Firefighter	All Others			
2011	2008	1.18%	0.31%	0.55%	2.04%	2.04%
2012	2009	0.97	0.11	0.51	1.59	1.59
2013	2010	0.99	0.14	0.48	1.61	1.61
2014	2011	1.14	0.20	0.48	1.74	1.74
2015	2012	1.06	0.22	1.66	2.94	2.94
2016	2013	1.05	0.22	1.68	2.95	2.95
2017	2014	0.49	0.17	1.18	1.84	1.84
2018	2015	0.43	0.16	1.03	1.62	1.62
2019	2016	0.76	0.26	0.94	1.96	1.96
2020	2017	0.72	0.26	1.32	2.30	2.30

Valuations are used to set contribution rates in future years.

# Actuarial Section

<b>Public Employees' Retirement System                      Defined Contribution Retirement Plan                      Occupational Death and Disability and Retiree Medical Benefits                      Schedule of Active Member Valuation Data</b>					
<b>Valuation Date</b>	<b>Number</b>	<b>Annual Earnings (In thousands)</b>	<b>Annual Average Earnings</b>	<b>Percent Increase/ (Decrease) in Average Earnings</b>	<b>Number of Participating Employers</b>
June 30, 2017	19,171	\$ 1,112,398	\$ 58,025	1.5%	157
June 30, 2016	18,215	1,041,437	57,175	3.4	157
June 30, 2015	17,098	945,496	55,299	1.9	159
June 30, 2014	15,800	857,150	54,250	3.7	159
June 30, 2013	14,316	748,658	52,295	4.7	159
June 30, 2012	12,597	629,128	49,943	4.5	160
June 30, 2011	10,965	524,088	47,796	4.8	160
June 30, 2010	9,232	421,187	45,622	5.4	160
June 30, 2009	7,256	314,118	43,291	7.2	160
June 30, 2008	5,052	203,955	40,371	8.1	159
Total and average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.					

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

# Actuarial Section

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

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

## 1. Effective Date

July 1, 2006, with amendments through June 30, 2017.

## 2. Administration of Plan

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

The Alaska Retirement Management Board prescribes policies, adopts regulations, invests the funds, and performs other activities necessary to carry out the provisions of the Plan.

## 3. Employers Included

Currently there are 157 employers participating in the PERS DCR Plan, including the State of Alaska, and 156 political subdivisions and public organizations.

## 4. Membership

An employee of a participating employer who first enters service on or after July 1, 2006, or a member of the defined benefit plan who works for an employer who began participation on or after July 1, 2006, and meets the following criteria is a member in the Plan:

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

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

## 5. Member Contributions

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

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## 6. Retiree Medical Benefits

- Member must retire directly from the plan to be eligible for retiree medical coverage. Normal retirement eligibility is the earlier of a) 25 years of service as a peace officer or firefighter and 30 years of service for any other employee or b) Medicare eligible and 10 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's and any covered dependent premium is 100% until the member is Medicare eligible. Upon the member's Medicare-eligibility, the required contribution will follow the service based schedule shown below.
- Coverage cannot be denied except for failure to pay premium.
- Members who are receiving disability benefits or survivors who are receiving monthly survivor benefits are not eligible until the member meets, or would have met if he/she had lived, the normal retirement eligibility requirements.
- The following is a summary of the medical benefit design adopted in July 2016. The plan description below is used for valuation purposes and indicates participant cost-sharing. Please refer to the benefit handbook for more details.

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

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

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

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- Conduent HR Consulting used its manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the adopted DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree health plan value to the DB retiree health plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits to estimate corresponding values for the adopted DCR retiree medical plan design. These factors are noted in Section 5.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. The RDS subsidy offset in 2019 was increased by 60% to reflect estimated Medicare reimbursements under the Employer Group Waiver Plan (EGWP) arrangement. We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost assumptions so no further adjustment was needed for the DCR medical plan. The medical network differential is reflected in the relative plan value adjustments.
- The retiree medical plan’s coverage is supplemental to Medicare. Medicare coordination is described in the 2016 DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage will be through a Medicare Part D EGWP arrangement.
- The premium for Medicare-eligible retirees will be based on the member’s years of service. The percentage of premium paid by the member is as follows:

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

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

## 7. Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.

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- For Peace Officer and Firefighters there is a Disability Benefit Adjustment such that:
  - The disability benefit is increased by 75% of the cost of living increase in the preceding calendar year or 9%, whichever is less.
  - At the time the disabled member retires, the retirement benefit will be increased by a percentage equal to the total cumulative percentage that has been applied to the disability benefit. Monthly annuity payments are made from the member's contribution balance until the fund is exhausted, at which the plan pays all remaining payments.
- For Others, there is no increase in the occupational disability benefit after commencement.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service for Others members or 25 years of service for Peace Officer/Firefighter members.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service for Others members or 25 years of service for Peace Officer/Firefighter members.
- Peace Officer/Firefighter members may select that defined contribution account or monthly benefit payable as if they were retiring under Tier 3 (service continues during disability, final average salary is as of date of disability).
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

## **8. Occupational Death Benefits**

- Benefit is 40% of salary for Others members and 50% of salary for Peace Officer/Firefighter members.
- Survivor's Pension Adjustment: A survivor's pension is increased by 50% of the cost of living increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60 on July 1, or under age 60 if the recipient has been receiving PERS benefits for at least 5 years as of July 1.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No subsidized retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% of the estimated cost until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

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## 9. Changes Since the Prior Valuation

- There have been no changes in PERS DCR benefit provisions since the prior valuation other than the State's decision to defer the EGWP implementation date from January 1, 2018 to January 1, 2019.



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