

# State of Alaska Public Employees' Retirement System

Actuarial Valuation Report  
as of June 30, 2015

June 2016



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June 27, 2016

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, 2015 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2015. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness. Valuation census data used for the retiree medical valuation utilized available retiree medical information. Certain pension data fields have been used to clarify the retiree medical data provided to us. Details regarding this information can be found in Section 6.2.d.

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC 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 System as of June 30, 2015.

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, System expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percentage of payroll 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.

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

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. In particular, retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. An analysis of the potential range of such future differences is beyond the scope of this valuation (other than the sensitivity analyses shown in Sections 3.2 and 4.7).

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the System. The actuary performs an analysis of System 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 claim cost rates effective June 30, 2015 to better reflect expected future healthcare experience. Based on recent experience, the healthcare cost trend assumptions are still reasonable and were not changed. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 6.

The assumptions and methods used to determine the healthcare Actuarial Required Contribution (ARC) of the Employers to the PERS as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statements No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the trend data schedule under GASB No. 43 that is included in the Financial Section of the CAFR. 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 report for pension-related information needed for the CAFR.

David Kershner is a Fellow of the Society of Actuaries and Todd Kanaster and Larry Langer are Associates of the Society of Actuaries. All are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. J. Kershner".

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

A handwritten signature in black ink, appearing to read "Todd Kanaster".

Todd D. Kanaster, ASA, MAAA, FCA  
Senior Consultant

A handwritten signature in blue ink, appearing to read "L. Langer".

Larry Langer, ASA, 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 her qualification to render opinions in such matters, in accordance with the Qualification Standards of the American Academy of Actuaries.

A handwritten signature in black ink, appearing to read "Melissa A. Bissett".

Melissa A. Bissett, FSA, MAAA  
Senior Consultant, Health & Productivity

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# Executive Summary

## Overview

The State of Alaska Public Employees' Retirement System (PERS) provides pension and postemployment healthcare benefits to eligible participants. The Commissioner of the Department of Administration is responsible for administering the System. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the System. This report presents the results of the actuarial valuation of the System as of the valuation date of June 30, 2015.

## Purpose

An actuarial valuation is performed on the retirement plan annually as of the end of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

- To determine the Employer/State contribution necessary to meet the Board's funding policy for the System;
- To disclose the funding assets and liability measures as of the valuation date;
- To disclose the healthcare accounting measures for the System required by GASB No. 43 for the last fiscal year;
- To review the current funded status of the System and assess the funded status as an appropriate measure for determining future actuarially determined contributions;
- To compare actual and expected experience under the System during the last fiscal year; and
- To report trends in contributions, assets, liabilities, and funded status over the last several years.

The actuarial valuation provides a "snapshot" of the funded position of PERS based on the plan provisions, membership data, assets, and actuarial methods and assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns (see Section 4). The sensitivity analysis shown in Section 4.7 is an example of differences which can occur in projected contribution amounts when actual investment returns are different than assumed, but does not include the impact of all possible future differences that can impact future measurements. 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.

## Funded Status

The funded status is a snapshot measure of the funding of the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. As shown in the chart below, the funded ratio can differ depending on whether the market value of assets is used or the actuarial value of assets. Also, the funded ratios presented below do not imply any assessment of the funded position in the event a settlement were being considered. A comparative summary of the funded status from the prior and current actuarial valuations follows:

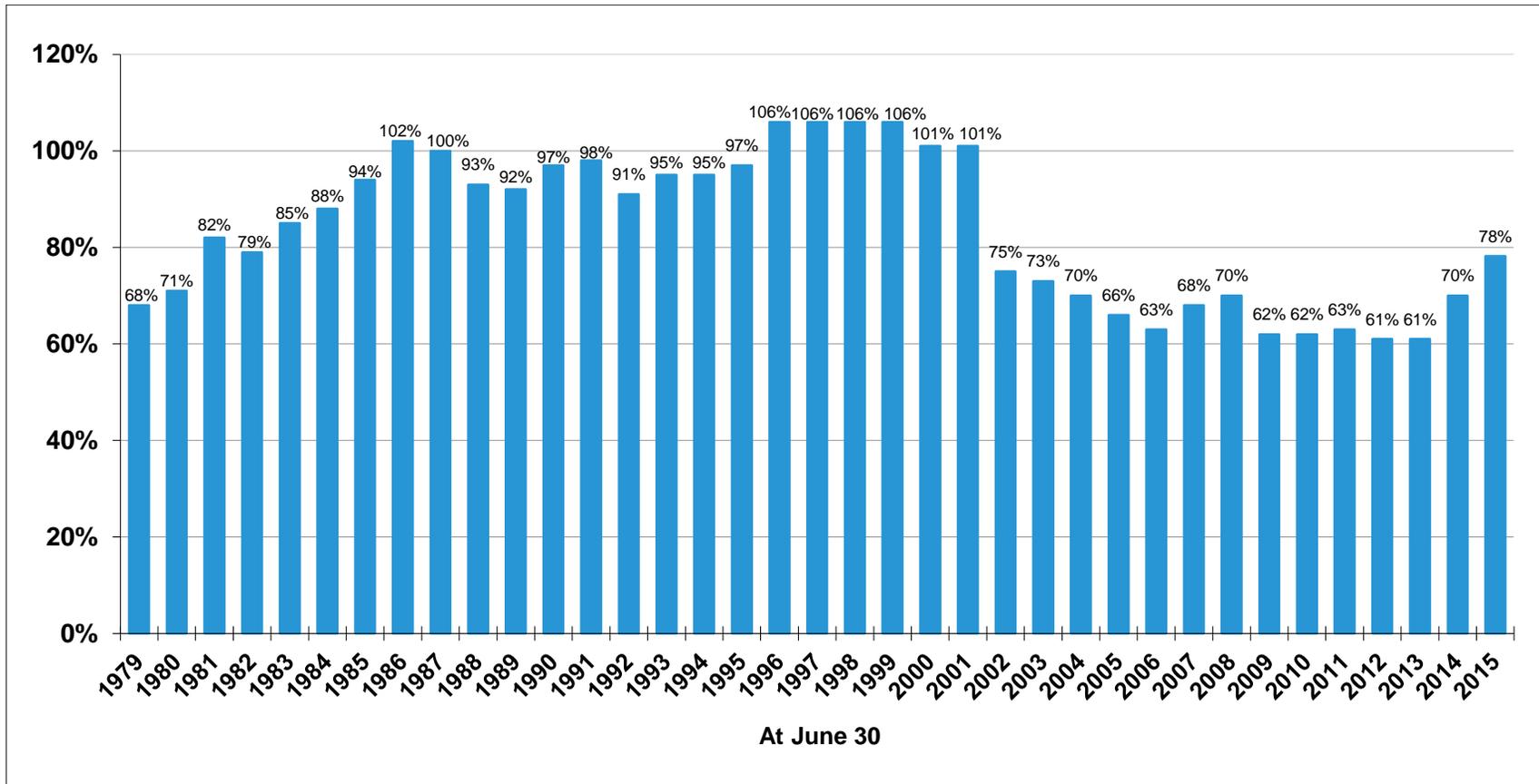
Funded Status as of June 30 (\$'s in 000's)	2014	2015
<b>Pension</b>		
a. Actuarial Accrued Liability	\$ 12,947,759	\$ 13,337,929
b. Valuation Assets	<u>7,731,438</u>	<u>8,931,160</u>
c. Unfunded Actuarial Accrued Liability, (a) – (b)	\$ 5,216,321	\$ 4,406,769
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	59.7%	67.0%
e. Fair Value of Assets	\$ 7,731,438	\$ 8,606,862
f. Funded Ratio based on Fair Assets, (e) ÷ (a)	59.7%	64.5%
<b>Healthcare</b>		
a. Actuarial Accrued Liability	\$ 7,949,613	\$ 7,310,734
b. Valuation Assets	<u>6,913,160</u>	<u>7,242,299</u>
c. Unfunded Actuarial Accrued Liability, (a) – (b)	\$ 1,036,453	\$ 68,435
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	87.0%	99.1%
e. Fair Value of Assets	\$ 6,913,160	\$ 6,961,963
f. Funded Ratio based on Fair Assets, (e) ÷ (a)	87.0%	95.2%
<b>Total</b>		
a. Actuarial Accrued Liability	\$ 20,897,372	\$ 20,648,663
b. Valuation Assets	<u>14,644,598</u>	<u>16,173,459</u>
c. Unfunded Actuarial Accrued Liability, (a) – (b)	\$ 6,252,774	\$ 4,475,204
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	70.1%	78.3%
e. Fair Value of Assets	\$ 14,644,598	\$ 15,568,825
f. Funded Ratio based on Fair Assets, (e) ÷ (a)	70.1%	75.4%

The funded status of the plan increased from June 30, 2014 to June 30, 2015 primarily due to the large state contribution made in FY15 as well as the FY15 experience summarized on the pages that follow.

The funded status for healthcare benefits is not necessarily an appropriate measure to confirm that assets are sufficient to settle health plan obligations as there are no available financial instruments for purchase. While the System is currently strongly funded for healthcare liabilities valuation purposes, it is not based upon fair value. Future experience is likely to vary from assumptions, thus there is a potential for actuarial losses.

# PERS Funded Ratio History

(Based on Valuation Assets)



## **1. Investment Experience**

The actuarial asset value was reinitialized to equal Fair Value of Assets as of June 30, 2014. Beginning in FY15, the asset valuation method recognizes 20% of the gain or loss each year, for a period of five years. The approximate FY15 investment return based on fair value was 2.9% compared to the expected investment return of 8.00% (net of investment and administrative expenses of approximately 0.40%). This resulted in a loss of approximately \$755.8 million to the System. Due to the recognition of deferred investment gains and losses over a 5-year period, the approximate FY15 investment return based on actuarial value was 7.0%, compared to the expected investment return of 8.00% (net of investment and administrative expenses). This loss increased the Employer/State contribution rate for FY18 by approximately 0.45%.

## **2. Salary Increases**

During the period June 30, 2014 to June 30, 2015, salary increases for continuing active members were less than anticipated in the valuation assumptions, which led to salary gains of approximately \$91.1 million. The net effect of the FY15 salary gain was a decrease of approximately 0.32% in the Employer/State contribution rate for FY18.

## **3. Demographic Experience (Pension)**

Section 5 provides statistics on active participants. The number of active participants decreased 8.5%, from 19,297 at June 30, 2014 to 17,660 at June 30, 2015 due to members retiring and terminating during the year and the closure of the plan to new entrants as of July 1, 2006. The average age of active participants increased from 50.90 to 51.34 and average credited service increased from 14.64 to 15.29 years.

The number of benefit recipients increased 3.4%, from 31,099 to 32,145, and their average age increased from 68.15 to 68.60. There was a 2.2% increase in the number of vested terminated participants from 6,167 to 6,304. Their average age increased from 51.15 to 51.80.

The overall effect of the demographic experience during FY15, combined with data and other miscellaneous changes, was an actuarial loss of approximately \$10.6 million to the System. As shown on page 7, there was a gain of approximately \$67.1 million due to COLA/PRPA increases during FY15. These, in combination with the pension valuation programming refinements noted in #6, resulted in an increase in the Employer/State contribution rate for FY18 of approximately 0.34%.

## **4. Retiree Medical Experience**

As described in Section 6.2, recent claims experience created an actuarial gain of approximately \$884.8 million. There was also a demographic experience gain (including data and other miscellaneous changes) of approximately \$5.4 million. These, in combination with the healthcare valuation programming refinements noted in #6, resulted in a decrease in the Employer/State contribution rate for FY18 of approximately 3.65%.

## **5. Effect of FY15 State Contribution**

The large State contribution made in FY15 increased the funded ratio of the plan by approximately 5%.

## **6. Valuation Programming Refinements**

We made changes to our valuation programming for pension and healthcare benefits. These included refinements to the programming for optional forms, Domestic Relation Orders (DROs), the Social Security Level Income Option, and the postretirement survivor benefit adjustment. The combined effect of these programming changes was an actuarial loss of \$28.7M for pension and an actuarial gain of \$94.7M for healthcare.

## **7. Actuarial Projections**

Several years ago, the PERS Board approved the use of an enhanced actuarial projection system in the valuation report. The same actuarial cost method is used, but the enhanced system projects the associated liabilities 30 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 30 years. Section 4, Actuarial Funding Projections, contains the results of this analysis.

This type of information can be especially useful to multi-tiered systems, such as PERS. No new DB plan entrants are anticipated. The total active population is expected to grow at 0% per year and all future demographic assumptions are expected to be exactly realized. In Section 4.7, we illustrate the sensitivity of projected contributions due to potential changes in expected investment rates of return.

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

There have been no material changes in the asset or valuation methods since the prior valuation. To increase the efficiency of the data process, assumptions are used for individual data questions which are deemed to have an immaterial impact on liabilities and contribution rates. These data assumptions are described in Section 6.3.

## **9. Changes in Assumptions Since the Prior Valuation**

There have been no changes in the assumptions since the prior valuation. Healthcare claim costs are updated annually as described in Section 6.2.

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

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

# Comparative Summary of Key Actuarial Valuation Results

Employer/State Contribution Rates for Pension for Fiscal Year:	2017	2018
a. Normal Cost Rate Net of Member Contributions	3.06%	2.94%
b. Past Service Rate	<u>12.92%</u>	<u>13.30%</u>
c. Total Employer/State Contribution Rate (a) + (b)*	15.98%	16.24%
Employer/State Contribution Rates for Postemployment Healthcare for Fiscal Year:	2017	2018
a. Normal Cost Rate	2.70%	2.16%
b. Past Service Rate	<u>3.10%</u>	<u>0.20%</u>
c. Total Employer/State Contribution Rate (a) + (b)*	5.80%	2.36%
Total Employer/State Contribution Rates for Fiscal Year:	2017	2018
a. Normal Cost Rate Net of Member Contributions	5.76%	5.10%
b. Past Service Rate	<u>16.02%</u>	<u>13.50%</u>
c. Total Employer/State Contribution Rate (a) + (b)*	21.78%	18.60%
d. Board Adopted Total Employer/State Contribution Rate	21.78%	TBD
e. Defined Contribution Retirement (DCR) Rate Paid by Employers	<u>4.36%</u>	<u>4.63%</u>
f. Board Adopted Total Rate, Including DCR Rate Paid by Employers (d) + (e)	26.14%	TBD

\* 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.

Contribution rates are based on salary for both DB plan members and DCR members, combined. The rates shown above are for funding purposes which may differ from the healthcare Annual Required Contribution for GASB No. 43 reporting purposes. Under GASB No. 43, postemployment healthcare liabilities are gross of the retiree drug subsidy and are calculated with a discount rate for a partially funded plan. Under GASB No. 43, PERS calculates the amortization of the unfunded liabilities as a level dollar amount.

Contribution rates include Employer contribution rates as limited by state statute, and include the additional State contribution required under SB 125.

## Summary of Actuarial Gain/(Loss) and Other Changes During the Year

The following table summarizes the sources of change in the total Employer/State contribution rate as of June 30, 2014 and June 30, 2015 based on DB and DCR payroll combined:

	Pension	Healthcare	Total
1. Total Employer/State contribution rate as of June 30, 2014	18.23%	6.41%	24.64%
2. Change due to:			
a. FY15 Contribution	(2.36%)	(0.19%)	(2.55%)
b. Salary increases	(0.39%)	N/A	(0.39%)
c. Investment experience	0.23%	0.20%	0.43%
d. Demographic and medical experience <sup>1</sup>	0.27%	(3.37%)	(3.10%)
e. Total change (a + b + c + d)	(2.25%)	(3.36%)	(5.61%)
3. Total Employer/State contribution rate as of June 30, 2015 (1) + (2e)	15.98%	3.05%	19.03%

The following table shows the gain/(loss) on total actuarial accrued liability as of June 30, 2015 (\$'s in 000's):

	Pension	Healthcare	Total
Retirement Experience	\$ (3,813)	\$ 2,568	\$ (1,245)
Termination Experience	(2,435)	(12,263)	(14,698)
Active Mortality Experience	9,355	(1,388)	7,967
Inactive Mortality Experience	25,209	36,291	61,500
Disability Experience	(2,073)	(2,927)	(5,000)
Rehires	(21,255)	(9,547)	(30,802)
Other Demographic Experience <sup>2</sup>	(44,211)	87,365	43,154
Salary Increases	91,053	N/A	91,053
Alaska COLA	7,700	N/A	7,700
PRPA Other Than Expected	59,417	N/A	59,417
Medical Claims Costs	N/A	884,823	884,823
Total	\$ 118,947	\$ 984,922	\$ 1,103,869

<sup>1</sup> Includes changes in assumed future healthcare claims costs.

<sup>2</sup> Includes effects of data and programming changes.

- The pension loss includes:
  - o (\$28,663): Disabled retirees with J&S optional form programming refinement
  - o (\$15,548): Data and other miscellaneous changes
- The healthcare gain includes:
  - o \$55,247: Reflection of the language in the updated retiree medical handbook regarding loss of spousal coverage for DROs.
  - o \$39,524: SSLIO optional form programming refinement
  - o (\$76): Postretirement survivor benefit adjustment programming refinement
  - o (\$7,330): Data and other miscellaneous changes

# Section 1 Actuarial Funding Results

## Section 1.1

Actuarial Liabilities and Normal Cost – Peace Officer/Firefighter  
(\$'s in 000's)

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Retirement Benefits	\$ 934,394	\$ 744,886
Termination Benefits	19,978	8,194
Disability Benefits	4,321	(675)
Death Benefits	9,500	5,530
Return of Contributions	3,429	(7,678)
Medical and Prescription Drug Benefits	339,689	292,033
Medicare Part D Subsidy	(11,944)	(10,360)
Indebtedness	<u>(5,954)</u>	<u>(5,954)</u>
Subtotal	\$ 1,293,413	\$ 1,025,976
<b>Inactive Members</b>		
Not Vested	\$ 2,228	\$ 2,228
Vested Terminations		
- Retirement Benefits	34,783	34,783
- Medical and Prescription Drug Benefits	31,900	31,900
- Medicare Part D Subsidy	(1,248)	(1,248)
- Indebtedness	(770)	(770)
Retirees & Beneficiaries		
- Retirement Benefits	1,283,505	1,283,505
- Medical and Prescription Drug Benefits	509,799	509,799
- Medicare Part D Subsidy	<u>(31,405)</u>	<u>(31,405)</u>
Subtotal	\$ 1,828,792	\$ 1,828,792
<b>Total</b>	<b>\$ 3,122,205</b>	<b>\$ 2,854,768</b>
<b>Total Pension</b>	<b>\$ 2,285,414</b>	<b>\$ 2,064,049</b>
<b>Total Medical, Net of Part D Subsidy</b>	<b>\$ 836,791</b>	<b>\$ 790,719</b>
<b>Total Medical, Gross of Part D Subsidy</b>	<b>\$ 881,388</b>	<b>\$ 833,732</b>

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>By Tier</b>		
Tier 1		
- Pension	\$1,096,435	\$1,091,470
- Medical, Net of Part D Subsidy	398,770	397,006
Tier 2		
- Pension	563,469	521,552
- Medical, Net of Part D Subsidy	200,158	193,306
Tier 3		
- Pension	625,510	451,027
- Medical, Net of Part D Subsidy	<u>237,863</u>	<u>200,407</u>
<b>Total</b>	<b>\$3,122,205</b>	<b>\$2,854,768</b>
As of June 30, 2015		Normal Cost
<b>Active Members</b>		
Retirement Benefits		\$ 25,079
Termination Benefits		1,624
Disability Benefits		688
Death Benefits		558
Return of Contributions		1,539
Medical and Prescription Drug Benefits		7,676
Medicare Part D Subsidy		<u>(265)</u>
Subtotal		\$ 36,899
<b>Total</b>		<b>\$ 36,899</b>
<b>Total Pension</b>		<b>\$ 29,488</b>
<b>Total Medical, Net of Part D Subsidy</b>		<b>\$ 7,411</b>
<b>Total Medical, Gross of Part D Subsidy</b>		<b>\$ 7,676</b>
<b>By Tier</b>		
Tier 1		
- Pension		\$ 1,355
- Medical, Net of Part D Subsidy		523
Tier 2		
- Pension		7,837
- Medical, Net of Part D Subsidy		1,444
Tier 3		
- Pension		20,296
- Medical, Net of Part D Subsidy		<u>5,444</u>
<b>Total</b>		<b>\$ 36,899</b>

## Actuarial Liabilities and Normal Cost – Others (\$'s in 000's)

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Retirement Benefits	\$ 4,494,322	\$ 3,765,366
Termination Benefits	280,582	134,139
Disability Benefits	14,777	1,384
Death Benefits	63,708	44,645
Return of Contributions	29,655	(58,356)
Medical and Prescription Drug Benefits	2,300,906	1,972,752
Medicare Part D Subsidy	(118,347)	(102,974)
Indebtedness	<u>(56,415)</u>	<u>(56,415)</u>
Subtotal	\$ 7,009,188	\$ 5,700,541
<b>Inactive Members</b>		
Not Vested	\$ 71,567	\$ 71,567
Vested Terminations		
- Retirement Benefits	582,187	582,187
- Medical and Prescription Drug Benefits	805,327	805,327
- Medicare Part D Subsidy	(35,129)	(35,129)
- Indebtedness	(14,223)	(14,223)
Retirees & Beneficiaries		
- Retirement Benefits	6,803,586	6,803,586
- Medical and Prescription Drug Benefits	4,169,557	4,169,557
- Medicare Part D Subsidy	<u>(289,518)</u>	<u>(289,518)</u>
Subtotal	\$ 12,093,354	\$ 12,093,354
<b>Total</b>	<b>\$ 19,102,542</b>	<b>\$ 17,793,895</b>
<b>Total Pension</b>	<b>\$ 12,269,746</b>	<b>\$ 11,273,880</b>
<b>Total Medical, Net of Part D Subsidy</b>	<b>\$ 6,832,796</b>	<b>\$ 6,520,015</b>
<b>Total Medical, Gross of Part D Subsidy</b>	<b>\$ 7,275,790</b>	<b>\$ 6,947,636</b>

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>By Tier</b>		
Tier 1		
- Pension	\$ 6,498,688	\$ 6,401,449
- Medical, Net of Part D Subsidy	3,625,959	3,567,148
Tier 2		
- Pension	3,141,753	2,878,609
- Medical, Net of Part D Subsidy	1,695,380	1,627,108
Tier 3		
- Pension	2,629,305	1,993,822
- Medical, Net of Part D Subsidy	<u>1,511,457</u>	<u>1,325,759</u>
<b>Total</b>	<b>\$ 19,102,542</b>	<b>\$ 17,793,895</b>
As of June 30, 2015		Normal Cost
<b>Active Members</b>		
Retirement Benefits		\$ 108,034
Termination Benefits		18,233
Disability Benefits		1,808
Death Benefits		2,751
Return of Contributions		11,990
Medical and Prescription Drug Benefits		60,709
Medicare Part D Subsidy		<u>(2,854)</u>
Subtotal		\$ 200,671
<b>Total</b>		<b>\$ 200,671</b>
<b>Total Pension</b>		<b>\$ 142,816</b>
<b>Total Medical, Net of Part D Subsidy</b>		<b>\$ 57,855</b>
<b>Total Medical, Gross of Part D Subsidy</b>		<b>\$ 60,709</b>
<b>By Tier</b>		
Tier 1		
- Pension		\$ 23,278
- Medical, Net of Part D Subsidy		\$ 15,625
Tier 2		
- Pension		\$ 40,927
- Medical, Net of Part D Subsidy		\$ 12,656
Tier 3		
- Pension		\$ 78,611
- Medical, Net of Part D Subsidy		\$ 29,574
<b>Total</b>		<b>\$ 200,671</b>

## Actuarial Liabilities and Normal Cost – All Members (\$'s in 000's)

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>Active Members</b>		
Retirement Benefits	\$ 5,428,716	\$ 4,510,252
Termination Benefits	300,560	142,333
Disability Benefits	19,098	709
Death Benefits	73,208	50,175
Return of Contributions	33,084	(66,034)
Medical and Prescription Drug Benefits	2,640,595	2,264,785
Medicare Part D Subsidy	(130,291)	(113,334)
Indebtedness	<u>(62,369)</u>	<u>(62,369)</u>
Subtotal	\$ 8,302,601	\$ 6,726,517
<b>Inactive Members</b>		
Not Vested	\$ 73,795	\$ 73,795
Vested Terminations		
- Retirement Benefits	616,970	616,970
- Medical and Prescription Drug Benefits	837,227	837,227
- Medicare Part D Subsidy	(36,377)	(36,377)
- Indebtedness	(14,993)	(14,993)
Retirees & Beneficiaries		
- Retirement Benefits	8,087,091	8,087,091
- Medical and Prescription Drug Benefits	4,679,356	4,679,356
- Medicare Part D Subsidy	<u>(320,923)</u>	<u>(320,923)</u>
Subtotal	\$ 13,922,146	\$ 13,922,146
<b>Total</b>	<b>\$ 22,224,747</b>	<b>\$ 20,648,663</b>
<b>Total Pension</b>	<b>\$ 14,555,160</b>	<b>\$ 13,337,929</b>
<b>Total Medical, Net of Part D Subsidy</b>	<b>\$ 7,669,587</b>	<b>\$ 7,310,734</b>
<b>Total Medical, Gross of Part D Subsidy</b>	<b>\$ 8,157,178</b>	<b>\$ 7,781,368</b>

As of June 30, 2015	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
<b>By Tier</b>		
Tier 1		
- Pension	\$ 7,595,123	\$ 7,492,919
- Medical, Net of Part D Subsidy	4,024,729	3,964,154
Tier 2		
- Pension	3,705,222	3,400,161
- Medical, Net of Part D Subsidy	1,895,538	1,820,414
Tier 3		
- Pension	3,254,815	2,444,849
- Medical, Net of Part D Subsidy	<u>1,749,320</u>	<u>1,526,166</u>
<b>Total</b>	<b>\$ 22,224,747</b>	<b>\$ 20,648,663</b>
As of June 30, 2015		Normal Cost
<b>Active Members</b>		
Retirement Benefits		\$ 133,113
Termination Benefits		19,857
Disability Benefits		2,496
Death Benefits		3,309
Return of Contributions		13,529
Medical and Prescription Drug Benefits		68,385
Medicare Part D Subsidy		<u>(3,119)</u>
Subtotal		\$ 237,570
<b>Total</b>		<b>\$ 237,570</b>
<b>Total Pension</b>		<b>\$ 172,304</b>
<b>Total Medical, Net of Part D Subsidy</b>		<b>\$ 65,266</b>
<b>Total Medical, Gross of Part D Subsidy</b>		<b>\$ 68,385</b>
<b>By Tier</b>		
Tier 1		
- Pension		\$ 24,633
- Medical, Net of Part D Subsidy		16,148
Tier 2		
- Pension		48,764
- Medical, Net of Part D Subsidy		14,100
Tier 3		
- Pension		98,907
- Medical, Net of Part D Subsidy		<u>35,018</u>
<b>Total</b>		<b>\$ 237,570</b>

## Section 1.2 Actuarial Contributions as of June 30, 2015 – Peace Officer/Firefighter (\$'s in 000's)

Normal Cost Rate	Pension	Healthcare	Total
1. Total Normal Cost	\$ 29,488	\$ 7,411	\$ 36,899
2. DB Rate Payroll Projected for FY16	193,976	193,976	193,976
3. DCR Rate Payroll Projected for FY16	110,139	110,139	110,139
4. Total Rate Payroll Projected for FY16	304,115	304,115	304,115
5. Normal Cost Rate for Peace Officer/Firefighter			
a. Based on DB Rate Payroll, (1) ÷ (2)	15.20%	3.82%	19.02%
b. Based on Total Rate Payroll, (1) ÷ (4)	9.70%	2.44%	12.14%
6. Average Member Contribution Rate (Peace Officer/Firefighter) <sup>1</sup>	4.78%	0.00%	4.78%
7. Employer Normal Cost Rate For Peace Officer/Firefighter, (5b) – (6)	4.92%	2.44%	7.36%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 2,064,049	\$ 790,719	\$ 2,854,768
2. Valuation Assets <sup>2</sup>	<u>1,382,100</u>	<u>783,317</u>	<u>2,165,417</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ 681,949	\$ 7,402	\$ 689,351
4. Funded Ratio, (2) ÷ (1)	67.0%	99.1%	75.9%
5. Past Service Cost Amortization Payment <sup>3</sup>	43,916	477	44,393
6. Total Rate Payroll Projected for FY16	304,115	304,115	304,115
7. Past Service Rate, (5) ÷ (6)	14.44%	0.16%	14.60%
<b>Total Employer/State Contribution Rate</b>	<b>19.36%</b>	<b>2.60%</b>	<b>21.96%</b>
<b>Normal Cost Rate by Tier (Total Employer and Member)<sup>4</sup></b>			
Tier 1	16.57%	6.40%	22.97%
Tier 2	15.08%	2.78%	17.86%
Tier 3	15.17%	4.07%	19.24%
Maturity Ratio	63.9%	64.4%	64.1%

<sup>1</sup> Assumes no member contributions from members in the DCR plan and 7.50% from Tiers 1, 2 and 3 in Peace Officer/Firefighter.

<sup>2</sup> Allocated between Peace Officer/Firefighter and Others in proportion to accrued liability.

<sup>3</sup> Calculated on a level percent of pay over a 24-year period as of June 30, 2015.

<sup>4</sup> Rate determined considering the pay for members of the plan in each tier. DCR payroll is excluded from these calculations.

## Actuarial Contributions as of June 30, 2015 – Others

(\$'s in 000's)

Normal Cost Rate	Pension	Healthcare	Total
1. Total Normal Cost	\$ 142,816	\$ 57,855	\$ 200,671
2. DB Rate Payroll Projected for FY16	1,128,949	1,128,949	1,128,949
3. DCR Rate Payroll Projected for FY16	847,996	847,996	847,996
4. Total Rate Payroll Projected for FY16	1,976,945	1,976,945	1,976,945
5. Normal Cost Rate for Others			
a. Based on DB Rate Payroll, (1) ÷ (2)	12.65%	5.12%	17.77%
b. Based on Total Rate Payroll, (1) ÷ (4)	7.22%	2.93%	10.15%
6. Average Member Contribution Rate (Others) <sup>1</sup>	3.90%	0.00%	3.90%
7. Employer/State Normal Cost Rate For Others, (5b) – (6)	3.32%	2.93%	6.25%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 11,273,880	\$ 6,520,015	\$ 17,793,895
2. Valuation Assets <sup>2</sup>	<u>7,549,060</u>	<u>6,458,982</u>	<u>14,008,042</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ 3,724,820	\$ 61,033	\$ 3,785,853
4. Funded Ratio, (2) ÷ (1)	67.0%	99.1%	78.7%
5. Past Service Cost Amortization Payment <sup>3</sup>	239,870	3,930	243,800
6. Total Rate Payroll Projected for FY16	1,976,945	1,976,945	1,976,945
7. Past Service Rate, (5) ÷ (6)	12.13%	0.20%	12.33%
<b>Total Employer/State Contribution Rate</b>	<b>15.45%</b>	<b>3.13%</b>	<b>18.58%</b>
<b>Normal Cost Rate by Tier (Total Employer and Member)<sup>4</sup></b>			
Tier 1	14.57%	9.78%	24.35%
Tier 2	12.23%	3.78%	16.01%
Tier 3	12.39%	4.66%	17.05%
Maturity Ratio	66.0%	71.3%	68.0%

<sup>1</sup> Assumes no member contributions from members in the DCR plan and 6.75% from Tiers 1, 2 and 3 in Others members.

<sup>2</sup> Allocated between Peace Officer/Firefighter and Others in proportion to accrued liability.

<sup>3</sup> Calculated on a level percent of pay over a 24-year period as of June 30, 2015.

<sup>4</sup> Rate determined considering the pay for members of the plan in each tier. DCR payroll is excluded from these calculations.

## Actuarial Contributions as of June 30, 2015 – All Members

(\$'s in 000's)

Normal Cost Rate	Pension	Healthcare	Total
1. Total Normal Cost	\$ 172,304	\$ 65,266	\$ 237,570
2. DB Rate Payroll Projected for FY16	1,322,925	1,322,925	1,322,925
3. DCR Rate Payroll Projected for FY16	958,135	958,135	958,135
4. Total Rate Payroll Projected for FY16	2,281,060	2,281,060	2,281,060
5. Normal Cost Rate for All Members			
a. Based on DB Rate Payroll, (1) ÷ (2)	13.02%	4.93%	17.95%
b. Based on Total Rate Payroll, (1) ÷ (4)	7.55%	2.86%	10.41%
6. Average Member Contribution Rate <sup>1</sup>	4.01%	0.00%	4.01%
7. Employer Normal Cost Rate For All Members, (5b) – (6)	3.54%	2.86%	6.40%
Past Service Rate			
1. Actuarial Accrued Liability	\$ 13,337,929	\$ 7,310,734	\$ 20,648,663
2. Valuation Assets <sup>2</sup>	<u>8,931,160</u>	<u>7,242,299</u>	<u>16,173,459</u>
3. Total Unfunded Actuarial Accrued Liability, (1) – (2)	\$ 4,406,769	\$ 68,435	\$ 4,475,204
4. Funded Ratio, (2) ÷ (1)	67.0%	99.1%	78.3%
5. Past Service Cost Amortization Payment <sup>3</sup>	283,786	4,407	288,193
6. Total Rate Payroll Projected for FY16	2,281,060	2,281,060	2,281,060
7. Past Service Rate, (5) ÷ (6)	12.44%	0.19%	12.63%
<b>Total Employer/State Contribution Rate</b>	<b>15.98%</b>	<b>3.05%</b>	<b>19.03%</b>
<b>Normal Cost Rate by Tier (Total Employer and Member)<sup>4</sup></b>			
Tier 1	14.67%	9.62%	24.29%
Tier 2	12.61%	3.65%	16.26%
Tier 3	12.87%	4.56%	17.43%
Maturity Ratio	65.7%	70.6%	67.4%

<sup>1</sup> Assumes no member contribution from members in the DCR plan, 7.5% for Peace Officer/Firefighter members and 6.75% for Others members.

<sup>2</sup> Allocated between Peace Officer/Firefighter and Others in proportion to accrued liability.

<sup>3</sup> Calculated on a level percent of pay over a 24-year period as of June 30, 2015.

<sup>4</sup> Rate determined considering the pay for members of the plan in each tier. DCR payroll is excluded from these calculations.

## Section 1.3

### Roll Forward Contribution Rate Calculation for FY18

(\$'s in 000's)

	Pension	Healthcare	Total
<b>1. Liability Roll Forward</b>			
<b>a. Actuarial Accrued Liability as of June 30, 2015</b>	<b>\$ 13,337,929</b>	<b>\$ 7,310,735</b>	<b>\$ 20,648,664</b>
b. Normal Cost	172,304	65,266	237,570
c. Interest on (a) and (b) at 8.00%	1,080,819	590,080	1,670,899
d. Estimated Benefit Payments	(750,802)	(401,269)	(1,152,071)
e. Interest on (d) at 8.00%, adjusted for timing	<u>(31,960)</u>	<u>(17,081)</u>	<u>(49,041)</u>
<b>f. Expected Actuarial Accrued Liability as of June 30, 2016</b>	<b>\$ 13,808,290</b>	<b>\$ 7,547,731</b>	<b>\$ 21,356,021</b>
g. Projected Normal Cost	162,989	58,291	221,280
h. Interest on (f) and (g) at 8.00%	1,117,702	608,482	1,726,184
i. Estimated Benefit Payments	(800,072)	(430,343)	(1,230,415)
j. Interest on (i) at 8.00%, adjusted for timing	<u>(34,058)</u>	<u>(18,319)</u>	<u>(52,377)</u>
<b>k. Expected Actuarial Accrued Liability as of June 30, 2017</b>	<b>\$ 14,254,851</b>	<b>\$ 7,765,842</b>	<b>\$ 22,020,693</b>
<b>2. Asset Roll Forward</b>			
<b>a. Actuarial Value of Assets as of June 30, 2015</b>	<b>\$ 8,931,160</b>	<b>\$ 7,242,299</b>	<b>\$ 16,173,459</b>
b. Interest on (a) at 8.00%	714,493	579,384	1,293,877
c. Employee Contributions	99,708	0	99,708
d. Employer Contributions	246,354	150,322	396,676
e. State Assistance	88,586	37,934	126,520
f. Interest on (c) – (e) at 8.00%, adjusted for timing*	18,840	8,151	26,991
g. Estimated Benefit payments	(750,802)	(401,269)	(1,152,071)
h. AVA Adjustments	(107,018)	(92,511)	(199,529)
i. Interest on (g) at 8.00%, adjusted for timing	<u>(31,960)</u>	<u>(17,081)</u>	<u>(49,041)</u>
<b>j. Expected Actuarial Value of Assets as of June 30, 2016</b>	<b>\$ 9,209,361</b>	<b>\$ 7,507,229</b>	<b>\$ 16,716,590</b>
k. Interest on (j) at 8.00%	736,749	600,578	1,337,327
l. Employee Contributions	95,756	0	95,756
m. Employer Contributions	296,458	117,176	413,634
n. State Assistance	99,166	0	99,166
o. Interest on (l) – (n) at 8.00%, adjusted for timing*	23,320	4,597	27,917
p. Estimated Benefit payments	(800,072)	(430,343)	(1,230,415)
q. AVA Adjustments	(100,533)	(86,904)	(187,437)
r. Interest on (p) at 8.00%, adjusted for timing	<u>(34,058)</u>	<u>(18,319)</u>	<u>(52,377)</u>
<b>s. Expected Actuarial Value of Assets as of June 30, 2017</b>	<b>\$ 9,526,147</b>	<b>\$ 7,694,014</b>	<b>\$ 17,220,161</b>

	Pension	Healthcare	Total
<b>3. Unfunded Liability Roll Forward</b>			
<b>a. Unfunded Actuarial Accrued Liability as of June 30, 2015</b>	<b>\$ 4,406,769</b>	<b>\$ 68,436</b>	<b>\$ 4,475,205</b>
b. Normal Cost	172,304	65,266	237,570
c. Interest on (a) and (b) at 8.00%	366,326	10,696	377,022
d. Employee Contributions	(99,708)	0	(99,708)
e. Employer Contributions	(246,354)	(150,322)	(396,676)
f. State Assistance	(88,586)	(37,934)	(126,520)
g. AVA Adjustment	107,018	92,511	199,529
h. Interest on (d) – (f) at 8.00%, adjusted for timing*	<u>(18,840)</u>	<u>(8,151)</u>	<u>(26,991)</u>
<b>i. Expected Unfunded Actuarial Accrued Liability as of June 30, 2016</b>	<b>\$ 4,598,929</b>	<b>\$ 40,502</b>	<b>\$ 4,639,431</b>
j. Projected Normal Cost	162,989	58,291	221,280
k. Interest on (i) and (j) at 8.00%	380,953	7,904	388,857
l. Employee Contributions	(95,756)	0	(95,756)
m. Employer Contributions	(296,458)	(117,176)	(413,634)
n. State Assistance	(99,166)	0	(99,166)
o. AVA Adjustment	100,533	86,904	187,437
p. Interest on (l) – (n) at 8.00%, adjusted for timing*	<u>(23,320)</u>	<u>(4,597)</u>	<u>(27,917)</u>
<b>q. Expected Unfunded Actuarial Accrued Liability as of June 30, 2017</b>	<b>\$ 4,728,704</b>	<b>\$ 71,828</b>	<b>\$ 4,800,532</b>
<b>4. Expected Annual Rate Payroll for FY18</b>			
a. Defined Benefit Members			\$ 1,198,763
b. Defined Contribution Retirement Members			<u>1,212,231</u>
<b>c. Total Rate Payroll</b>			<b>\$ 2,410,994</b>
<b>5. Expected FY18 Contribution Rate Calculation</b>			
a. Projected Normal Cost for FY18	\$ 153,876	\$ 51,957	\$ 205,833
b. Projected Normal Cost Rate for FY18	6.38%	2.16%	8.54%
c. Expected Member Contribution Rate for FY18	(3.44%)	0.00%	(3.44%)
<b>d. Expected Employer Normal Cost Rate for FY18</b>	<b>2.94%</b>	<b>2.16%</b>	<b>5.10%</b>
e. Expected Unfunded Liability as of June 30, 2017	\$ 4,728,704	\$ 71,828	\$ 4,800,532
f. 22 Year Amortization of Expected Unfunded Liability	320,799	4,873	325,672
<b>g. Expected Past Service Cost Contribution Rate for FY18</b>	<b>13.30%</b>	<b>0.20%</b>	<b>13.50%</b>
<b>h. Expected Total Contribution Rate for FY18</b>	<b>16.24%</b>	<b>2.36%</b>	<b>18.60%</b>

\* Employee and Employer Contributions are paid throughout the year. State Assistance was paid on October 1, 2015 for FY16 and is assumed to be paid the beginning of year each year thereafter.

FY17 State assistance contribution was allocated 100% to pension.  
Past service contribution rates set to be greater than or equal to 0%.

## Section 1.4 Actuarial Gain/(Loss) for FY15 (\$'s in 000's)

	Pension	Healthcare	Total
1. Expected Actuarial Accrued Liability			
a. Actuarial Accrued Liability, June 30, 2014	\$ 12,947,759	\$ 7,949,613	\$ 20,897,372
b. Normal Cost for FY15	184,712	80,936	265,648
c. Interest on (a) and (b) at 8.00%	1,050,598	642,444	1,693,042
d. Actual Benefit Payments for FY15	686,493	361,930	1,048,423
e. Refund of Contributions for FY15	10,049	0	10,049
f. Interest on (d) and (e) at 8.00%, adjusted for timing	29,651	15,407	45,058
g. Change in Healthcare Cost Trend Rates	<u>N/A</u>	<u>0</u>	<u>0</u>
h. Expected Actuarial Accrued Liability as of June 30, 2015 (a) + (b) + (c) – (d) – (e) – (f) + (g)	\$ 13,456,876	\$ 8,295,656	\$ 21,752,532
2. Actual Actuarial Accrued Liability, June 30, 2015	<u>13,337,929</u>	<u>7,310,734</u>	<u>20,648,663</u>
<b>3. Liability Gain/(Loss), (1)(h) – (2)</b>	<b>\$ 118,947</b>	<b>\$ 984,922</b>	<b>\$ 1,103,869</b>
4. Expected Actuarial Asset Value			
a. Actuarial Asset Value, June 30, 2014	\$ 7,731,438	\$ 6,913,160	\$ 14,644,598
b. Interest on (a) at 8.00%	618,515	553,053	1,171,568
c. Employee Contributions for FY15	100,036	656	100,692
d. Employer Contributions for FY15	226,136	171,028	397,164
e. Employer Legislative Relief for FY15	1,000,000	0	1,000,000
f. Medicare Part D Subsidy	0	46,929	46,929
g. Interest on (c), (d), (e) and (f) at 8.00%, adjusted for timing	62,302	4,894	67,196
h. Benefit Payments for FY15	686,493	361,930	1,048,423
i. Refund of Contributions for FY15	10,049	0	10,049
j. Interest on (h) and (i) at 8.00%, adjusted for timing	<u>29,651</u>	<u>15,407</u>	<u>45,058</u>
k. Expected Actuarial Asset Value, June 30, 2015 (a)+(b)+(c)+(d)+(e)+(f)+(g)-(h)-(i)-(j)	\$ 9,012,234	\$ 7,312,383	\$ 16,324,617
5. Actuarial Asset Value, June 30, 2015	<u>8,931,160</u>	<u>7,242,299</u>	<u>16,173,459</u>
<b>6. Actuarial Asset Gain/(Loss), (5) – (4)(k)</b>	<b>\$ (81,074)</b>	<b>\$ (70,084)</b>	<b>\$ (151,158)</b>
<b>7. Actuarial Gain/(Loss), (3) + (6)</b>	<b>\$ 37,873</b>	<b>\$ 914,838</b>	<b>\$ 952,711</b>
<b>8. Contribution Gain/(Loss)</b>	<b>\$ 834,640</b>	<b>\$ 65,690</b>	<b>\$ 900,330</b>
<b>9. FY15 Gain/(Loss), (7) + (8)</b>	<b>\$ 872,513</b>	<b>\$ 980,528</b>	<b>\$ 1,853,041</b>

## Section 1.5 Development of Change in Unfunded Liability During FY15 (\$'s in 000's)

	Pension	Healthcare	Total
1. 2014 Unfunded Liability	\$ 5,216,321	\$ 1,036,453	\$ 6,252,774
a. Interest on unfunded liability, at 8.00%	\$ 417,306	\$ 82,916	\$ 500,222
b. Normal cost	184,712	80,936	265,648
c. Employee contributions	(100,036)	(656)	(100,692)
d. Employer contributions	(226,136)	(171,028)	(397,164)
e. State Assistance Contributions	(1,000,000)	-	(1,000,000)
f. Medicare Part D subsidy	-	(46,929)	(46,929)
g. Interest on b., c., d., e., and f., at 8.00%, adjusted for timing	(47,525)	1,581	(45,944)
h. Change in Healthcare Cost Trend Rates	<u>N/A</u>	<u>0</u>	<u>0</u>
i. Expected change in unfunded liability during FY15	\$ (771,679)	\$ (53,180)	\$ (824,859)
2. Expected 2015 Unfunded Liability, (1) + (1i)	\$ 4,444,642	\$ 983,273	\$ 5,427,915
a. Liability (gains)/losses during FY15	\$ (118,947)	\$ (984,922)	\$ (1,103,869)
b. Assets (gains)/losses during FY15	<u>81,074</u>	<u>70,084</u>	<u>151,158</u>
c. Total (gains)/losses FY15	\$ (37,873)	\$ (914,838)	\$ (952,711)
3. Actual 2015 Unfunded Liability, (2) + (2c)	\$ 4,406,769	\$ 68,435	\$ 4,475,204

## Section 1.6 Analysis of Financial Experience

**Pension**  
**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				
	Pension				
	2011	2012	2013	2014	2015
1. Health Claims and Demographic Experience	N/A	N/A	N/A	N/A	N/A
2. Salary Experience	0.31%	0.23%	0.23%	(0.19)%	(0.32)%
3. Investment Experience	0.00%	2.40%	1.43%	(2.40)%	0.24%
4. Demographic Experience	0.29%	(1.00)%	(0.84)%	(0.04)%	0.34%
5. Contribution Shortfall	<u>0.42%</u>	<u>0.25%</u>	<u>0.78%</u>	<u>0.63%</u>	<u>0.00%</u>
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	1.02%	1.88%	1.60%	(2.00)%	0.26%
7. Assumption and Method Changes	0.00%	4.89%	0.00%	(6.86)%	0.00%
8. System Benefit Changes	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	1.02%	6.77%	1.60%	(8.86)%	0.26%
10. Beginning Total Employer/State Contribution Rate	<u>15.45%</u>	<u>16.47%</u>	<u>23.24%</u>	<u>24.84%</u>	<u>15.98%</u>
11. Ending Valuation Year Employer/State Contribution Rate, (9) + (10)	16.47%	23.24%	24.84%	15.98%	16.24%
12. Fiscal Year Rates					
a. Fiscal Year Employer/State Contribution Rate	16.47%	16.29%	14.43%	15.98%	16.24%*
b. Fiscal Year for Which Rate Applies	FY14	FY15	FY16	FY17	FY18

\*Expected. Actual Rate to be determined.

**Healthcare**  
**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				
	Healthcare				
	2011	2012	2013	2014	2015
1. Health Claims and Demographic Experience	(1.82)%	(2.97)%	(1.51)%	(0.85)%	(3.65)%
2. Salary Experience	N/A	N/A	N/A	N/A	N/A
3. Investment Experience	0.26%	0.71%	0.33%	(2.23)%	0.21%
4. Demographic Experience	N/A	N/A	N/A	N/A	N/A
5. Contribution Shortfall	<u>0.02%</u>	<u>(0.04)%</u>	<u>0.01%</u>	<u>0.04%</u>	<u>0.00%</u>
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(1.54)%	(2.30)%	(1.17)%	(3.04)%	(3.44)%
7. Assumption and Method Changes	0.00%	3.07%	0.00%	(6.60)%	0.00%
8. System Benefit Changes	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	(1.54)%	0.77%	(1.17)%	(9.64)%	(3.44)%
10. Beginning Total Employer/State Contribution Rate	<u>17.38%</u>	<u>15.84%</u>	<u>16.61%</u>	<u>15.44%</u>	<u>5.80%</u>
11. Ending Valuation Year Employer/State Contribution Rate, (9) + (10)	15.84%	16.61%	15.44%	5.80%	2.36%
12. Fiscal Year Rates					
a. Fiscal Year Employer/State Contribution Rate	15.84%	11.43%	8.15%	5.80%	2.36%*
b. Fiscal Year for Which Rate Applies	FY14	FY15	FY16	FY17	FY18

\*Expected. Actual Rate to be determined.

**Total**  
**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				
	Total				
	2011	2012	2013	2014	2015
1. Health Claims and Demographic Experience	(1.82)%	(2.97)%	(1.51)%	(0.85)%	(3.65)%
2. Salary Experience	0.31%	0.23%	0.23%	(0.19)%	(0.32)%
3. Investment Experience	0.26%	3.11%	1.76%	(4.63)%	0.45%
4. Demographic Experience	0.29%	(1.00)%	(0.84)%	(0.04)%	0.34%
5. Contribution Shortfall	<u>0.44%</u>	<u>0.21%</u>	<u>0.79%</u>	<u>0.67%</u>	<u>0.00%</u>
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(0.52)%	(0.42)%	0.43%	(5.04)%	(3.18)%
7. Assumption and Method Changes	0.00%	7.96%	0.00%	(13.46)%	0.00%
8. System Benefit Changes	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	(0.52)%	7.54%	0.43%	(18.50)%	(3.18)%
10. Beginning Total Employer/State Contribution Rate	<u>32.83%</u>	<u>32.31%</u>	<u>39.85%</u>	<u>40.28%</u>	<u>21.78%</u>
11. Ending Valuation Year Employer/State Contribution Rate, (9) + (10)	32.31%	39.85%	40.28%	21.78%	18.60%
12. Fiscal Year Rates					
a. Fiscal Year Employer/State Contribution Rate	32.31%	27.72%	22.58%	21.78%	18.60%*
b. Fiscal Year for Which Rate Applies	FY14	FY15	FY16	FY17	FY18

\*Expected. Actual Rate to be determined.

## Section 1.7 History of Unfunded Liability and Funded Ratio (\$'s in 000's)

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2003	10,561,653	7,687,281	72.8%	2,874,372
June 30, 2004	11,443,916	8,030,414	70.2%	3,413,502
June 30, 2005	12,844,841	8,442,919	65.7%	4,401,922
June 30, 2006	14,388,413	9,040,908	62.8%	5,347,505
June 30, 2007	14,570,933	9,900,960	68.0%	4,669,973
June 30, 2008	15,888,141	11,040,106	69.5%	4,848,035
June 30, 2009	16,579,371	10,242,978	61.8%	6,336,393
June 30, 2010	18,132,492	11,157,464	61.5%	6,975,028
June 30, 2011	18,740,550	11,813,774	63.0%	6,926,776
June 30, 2012	19,292,361	11,832,030	61.3%	7,460,331
June 30, 2013	19,992,759	12,162,626	60.8%	7,830,133
June 30, 2014	20,897,372	14,644,598	70.1%	6,252,774
June 30, 2015	20,648,663	16,173,459	78.3%	4,475,204

# Section 2 Plan Assets

## Section 2.1 Summary of Fair Value of Assets (\$'s in 000's)

As of June 30, 2015	Pension	Healthcare	Total Fair Value	Allocation Percent
<b>Cash and Short-Term Investments</b>				
- Cash and Cash Equivalents	\$ 152,381	\$ 160,559	\$ 312,940	2.0%
- Subtotal	\$ 152,381	\$ 160,559	\$ 312,940	2.0%
<b>Fixed Income Investments</b>				
- Domestic Fixed Income Pool	\$ 555,868	\$ 451,666	\$ 1,007,534	6.5%
- International Fixed Income Pool	138,100	112,212	250,312	1.6%
- High Yield Pool	223,734	181,793	405,527	2.6%
- Treasury Inflation Protection Pool	48,124	39,103	87,227	0.6%
- Emerging Debt Pool	<u>58,536</u>	<u>47,563</u>	<u>106,099</u>	<u>0.7%</u>
- Subtotal	\$ 1,024,362	\$ 832,337	\$ 1,856,699	12.0%
<b>Equity Investments</b>				
- Domestic Equity Pool	\$ 2,332,498	\$ 1,895,251	\$ 4,227,749	27.1%
- International Equity Pool	1,904,248	1,547,279	3,451,527	22.1%
- Frontier Market Pool	1,958	1,591	3,549	nil
- Private Equity Pool	660,680	536,829	1,197,509	7.7%
- Emerging Markets Equity Pool	226,889	184,357	411,246	2.6%
- Taxable Fixed Income Pool	43,868	35,645	79,513	0.5%
- Alternative Equity Strategies	<u>319,427</u>	<u>259,547</u>	<u>578,974</u>	<u>3.7%</u>
- Subtotal	\$ 5,489,568	\$ 4,460,499	\$ 9,950,067	63.7%
<b>Other Investments</b>				
- Real Estate Pool	\$ 594,261	\$ 481,440	\$ 1,075,701	6.9%
- Other Investments Pool	837,566	680,557	1,518,123	9.7%
- Absolute Return Pool	488,352	396,806	885,158	5.7%
- Other Assets	<u>17</u>	<u>2,093</u>	<u>2,110</u>	<u>nil</u>
- Subtotal	\$ 1,920,196	\$ 1,560,896	\$ 3,481,092	22.3%
<b>Total Cash and Investments</b>	\$ 8,586,507	\$ 7,014,291	\$ 15,600,798	100.0%
<b>Net Accrued Receivables</b>	<u>20,355</u>	<u>(52,328)</u>	<u>(31,973)</u>	
<b>Net Assets</b>	\$ 8,606,862	\$ 6,961,963	\$ 15,568,825	

## Section 2.2 Changes in Fair Value of Assets During FY15 (\$'s in 000's)

Fiscal Year 2015	Pension	Healthcare	Total Fair Value
1. Net Assets, June 30, 2014 (fair value)	\$ 7,731,438	\$ 6,913,160	\$ 14,644,598
2. Additions:			
a. Employee Contributions	\$ 100,036	\$ 656	\$ 100,692
b. Employer Contributions	226,136	171,028	397,164
c. State Assistance Contributions	1,000,000	0	1,000,000
d. Interest and Dividend Income	150,734	126,851	277,585
e. Net Appreciation/(Depreciation) in Fair Value of Investments	121,302	96,106	217,408
f. Medicare Part D Subsidy	0	46,929	46,929
g. Other	<u>36</u>	<u>54</u>	<u>90</u>
h. Total Additions	\$ 1,598,244	\$ 441,624	\$ 2,039,868
3. Deductions:			
a. Medical Benefits	\$ 0	\$ 361,930	\$ 361,930
b. Retirement Benefits	686,493	0	686,493
c. Refunds of Contributions	10,049	0	10,049
d. Investment Expenses	18,725	16,244	34,969
e. Administrative Expenses	<u>7,553</u>	<u>14,647</u>	<u>22,200</u>
f. Total Deductions	\$ 722,820	\$ 392,821	\$ 1,115,641
4. Net Assets, June 30, 2015 (fair value)	\$ 8,606,862	\$ 6,961,963	\$ 15,568,825
Approximate Fair Value Investment Return Rate During FY15 Net of All Expense	3.1%	2.8%	2.9%
Liquidity Factor	11.7	19.2	14.3

## Section 2.3 Development of Actuarial Value of Assets (\$'s in 000's)

The actuarial value of assets was set equal to the fair value at June 30, 2014 and the 20% corridor was eliminated. Investment gains and losses after June 30, 2014 are recognized 20% per year over 5 years.

	Pension	Healthcare	Total
1. Deferral of Investment Gain/(Loss) for FY15			
a. Fair Value, June 30, 2014	\$ 7,731,438	\$ 6,913,160	\$ 14,644,598
b. Employee Contributions	100,036	656	100,692
c. Employer Contributions	226,136	171,028	397,164
d. State Assistance Contributions	1,000,000	0	1,000,000
e. Medicare Part D Subsidy	0	46,929	46,929
f. Benefit Payments for FY15	696,542	361,930	1,058,472
g. Actual Investment Return (net of expenses)	245,794	192,120	437,914
h. Expected Return Rate	8.00%	8.00%	8.00%
i. Expected Return - Weighted for Timing	651,167	542,540	1,193,707
j. Investment Gain/(Loss) for the Year (g. – i.)	(405,373)	(350,420)	(755,793)
k. Deferred Investment Gain/(Loss)	(324,298)	(280,336)	(604,634)
2. Actuarial Value, June 30, 2015			
a. Fair Value, June 30, 2015	\$ 8,606,862	\$ 6,961,963	\$ 15,568,825
b. 2015 Deferred Investment Gain/(Loss)	(324,298)	(280,336)	(604,634)
c. Actuarial Value, June 30, 2015 (a. – b.)	\$ 8,931,160	\$ 7,242,299	\$ 16,173,459
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	103.8%	104.0%	103.9%
4. Approximate Actuarial Value Investment Return Rate During FY15 Net of All Expenses	7.1%	6.9%	7.0%

## Section 2.4 Historical Asset Rates of Return

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative*	Annual	Cumulative*
June 30, 2005	8.7%	8.7%	8.5%	8.5%
June 30, 2006	9.3%	9.0%	11.4%	9.9%
June 30, 2007	11.6%	9.9%	18.5%	12.7%
June 30, 2008	10.0%	9.9%	(3.1)%	8.5%
June 30, 2009	(7.3)%	6.2%	(20.5)%	2.0%
June 30, 2010	7.2%	6.4%	10.2%	3.3%
June 30, 2011	7.2%	6.5%	20.4%	5.6%
June 30, 2012	1.2%	5.8%	0.2%	4.9%
June 30, 2013	4.0%	5.6%	12.1%	5.7%
June 30, 2014	21.9%	7.1%	18.2%	6.9%
June 30, 2015	7.0%	7.1%	2.9%	6.5%

\*Cumulative since FYE June 30, 2005.

# Section 3 Accounting Information\*

## Section 3.1 Historical Exhibits (\$'s in 000's)

### Schedule of Employer Contributions

This exhibit below shows pension disclosure under GASB No. 25 for fiscal years ending 2007 through 2013.

Fiscal Year Ended June 30	Total Annual Required Contribution	Percentage Contributed		
		By Employer	By State	Total
2013	\$ 382,889	47.0%	42.9%	89.9%
2012	351,674	52.0%	37.2%	89.2%
2011	220,419	63.1%	29.6%	92.7%
2010*	217,080	65.5%	20.5%	86.0%
2009	166,016	68.1%	48.0%	116.1%
2008	140,729	71.2%	36.2%	107.4%
2007	268,742	73.2%	4.1%	77.3%

\*Pension accounting figures for fiscal years after 2013 are contained in separate GASB 67 reports.

**Schedule of Funding Progress**  
 (\$' in 000's)

The exhibit below shows pension disclosure under GASB No. 25, prior to 2006.

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Annual Active Member Payroll	UAAL as a Percent of Annual Active Member Payroll
June 30, 2005	\$ 12,844,841	\$ 8,442,919	65.7%	\$ 4,401,922	\$ 1,513,117	290.9%
June 30, 2004 <sup>2 3</sup>	11,443,916	8,030,414	70.2%	3,413,502	1,472,987	231.7%
June 30, 2003	10,561,653	7,687,281	72.8%	2,874,372	1,460,783	196.8%
June 30, 2002 <sup>1 2 3</sup>	9,859,591	7,412,833	75.2%	2,446,758	1,402,687	174.4%
June 30, 2001	7,868,574	7,941,756	100.9%	N/A	1,360,401	N/A
June 30, 2000 <sup>2 3</sup>	7,376,912	7,454,758	101.1%	N/A	1,324,278	N/A
June 30, 1999	6,648,673	7,016,340	105.5%	N/A	1,279,359	N/A
June 30, 1998 <sup>1 2 3</sup>	6,203,991	6,571,562	105.9%	N/A	1,232,488	N/A
June 30, 1997	5,534,116	5,885,488	106.3%	N/A	1,227,795	N/A

<sup>1</sup> Change in Asset Valuation Method

<sup>2</sup> Change of Assumptions

<sup>3</sup> Change in Methods

## Section 3.2 Postemployment Healthcare (\$ in 000's)

The exhibit below shows postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Annual Active Member Payroll <sup>1</sup>	UAAL as a Percent of Annual Active Member Payroll
June 30, 2015 – 4.55%	\$ 12,283,190	\$ 7,242,299	59.0%	\$ 5,040,891	\$ 1,420,479	354.9%
June 30, 2014 <sup>2</sup> – 4.90%	12,758,985	6,913,160	54.2%	5,845,825	1,491,583	391.9%
June 30, 2013 – 5.41%	12,281,372	5,651,877	46.0%	6,629,495	1,534,665	432.0%
June 30, 2012 <sup>2</sup> – 6.88%	9,812,274	5,301,609	54.0%	4,510,665	1,522,399	296.3%
June 30, 2011 – 7.43%	9,091,034	5,051,625	55.6%	4,039,409	1,559,938	258.9%
June 30, 2010 <sup>2</sup> – 7.48%	9,304,504	4,687,632	50.4%	4,616,872	1,586,697	291.0%
June 30, 2009 – 4.70%	12,770,990	4,134,450	32.4%	8,636,540	1,585,490	544.7%
June 30, 2008 <sup>2</sup> – 4.50%	13,013,450	3,829,334	29.4%	9,184,116	1,577,846	582.1%
June 30, 2007 – 4.50%	11,108,553	3,161,956	28.5%	7,946,597	1,605,819	494.9%
June 30, 2006 <sup>2</sup> – 4.50%	11,455,015	2,709,843	23.7%	8,745,172	1,590,693	549.8%

For illustration, the exhibit below shows the postemployment healthcare disclosure without regard to the Medicare Part D subsidy discounted at 8.00% and at 4.25% per annum under GASB No. 43 for the current year. These values show the minimum and maximum accrued liability amounts depending on the portion of ARC actually contributed.

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Annual Active Member Payroll <sup>1</sup>	UAAL as a Percent of Annual Active Member Payroll
June 30, 2015 – 8.00%	\$ 7,781,368	\$ 7,242,299	93.1%	\$ 539,069	\$ 1,420,479	37.9%
June 30, 2015 – 4.25%	12,855,105	7,242,299	56.3%	5,612,806	1,420,479	395.1%

<sup>1</sup> Actual active member payroll has been based on information provided by KPMG, LLP.

<sup>2</sup> Change in assumptions

## Schedule of Employer Contributions (\$'s in 000's)

This exhibit below shows postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43 for fiscal year ending 2007 and later.

Fiscal Year Ended June 30	Total Annual Required Contribution	Percentage Contributed		
		By Employer	By State	Total
2015	\$ 782,258	21.9%	6.0%	27.9%
2014	783,827	26.1%	19.5%	45.6%
2013	612,792	37.5%	25.1%	62.6%
2012	498,433	44.8%	28.8%	73.6%
2011	525,075	49.8%	21.6%	71.4%
2010*	790,793	31.6%	54.8%	86.4%
2009	391,321	68.1%	41.4%	109.5%
2008	370,456	71.2%	36.2%	107.4%
2007	189,495	73.2%	4.1%	77.3%

\* The ARC and percentage contributed are based on Buck's calculation and do not match the CAFR. The percentage contributed in includes the legal settlement in FY10, net of fees, as well as the Medicare Part D subsidy contributed by the State to the Healthcare Fund.

The exhibit below shows the healthcare annual required contribution (ARC) as a percentage of pay.

Valuation Date	Fiscal Year	ARC (% of Pay)	
		Healthcare	Healthcare Discount Rate
June 30, 2005	FY08	53.96%	4.50%
June 30, 2006	FY09	55.87%	4.50%
June 30, 2007	FY10	49.98%	4.70%
June 30, 2008	FY11	33.66%	7.48%
June 30, 2009	FY12	32.74%	7.43%
June 30, 2010*	FY13	39.93%	6.88%
June 30, 2011	FY14	52.55%	5.41%
June 30, 2012	FY15	55.07%	4.90%
June 30, 2013	FY16	58.73%	4.55%
June 30, 2014	FY17	N/A**	N/A**
June 30, 2015	FY18	N/A**	N/A**

\* Change in discount rate assumptions effective June 30, 2010

\*\*GASB 74 accounting will be in effect beginning in FY17 and will be provided in a separate report.

GASB 43 ARC is based on DB salary only and a level dollar basis to determine normal cost and amortization of the unfunded liability. These amounts are converted to percentage of pay. DB salary is the same salary used for determination of employer contribution rates.

## Section 3.3 Notes to Trend Data

### Actuarial Assumptions, Methods and Additional Information under GASB

Valuation Date	June 30, 2015
Actuarial Cost Method	Entry Age Normal Level Percentage of Pay Normal Cost Basis for Pension Level Dollar Normal Cost Basis for Healthcare
Amortization Method	Level Percentage of Pay, Closed for Pension Level Dollar, Closed for Healthcare
Amortization Period	25 years as of June 30, 2014
Asset Valuation Method	5-year smoothed market starting in FY15
Actuarial Assumptions:	
Investment rate of return*	8.00% for pension (net of expenses), 4.55% for healthcare.
Projected salary increases*	Peace Officer/Firefighter: Merit – 2.75% per year for the first 4 years of employment, grading down to 0.5% at 7 years and thereafter. Productivity – 0.5% per year. Others: Merit – 6.00% per year grading down to 2.00% after 5 years; for more than 6 years of service, 1.50% grading down to 0%. Productivity – 0.5% per year.
Cost-of-living adjustment	Postretirement Pension Adjustment as described in Section 6.1, item (14)

\*Includes inflation at 3.12%

GASB 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

PERS retiree healthcare benefits are partially funded. GASB 43 outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on 1) the funded ratio and 2) the percentage of the annual required contribution (ARC) actually being contributed to the plan. The State of Alaska has utilized the second methodology to develop a discount rate of 4.55% as of June 30, 2013, to be used for June 30, 2015 disclosure and FY16 ARC under GASB 43.

The development of the discount rate used for the June 30, 2015 healthcare liabilities valuation disclosure purposes is summarized below:

**Investment Returns**

Plan Assets (Long-Term Return)	=	8.00%
Employer Assets (Estimated Short-Term Return)	=	4.25%

**Based on Percentage of ARC Contributed During FY13\***

1. Contribution Allocated to Healthcare	=	23.09%
2. Annual Required Contribution, Funding Assumptions	=	39.93%
3. Pay-as-you-go Contribution	=	21.64%
4. Portion of ARC Contributed: $[(1-3) / (2-3)]$ , not less than 0%, not greater than 100%]	=	7.95%
5. Multiplied by long-term investment return	=	0.64%
6. Portion of ARC not Contributed: $[100\% - (4)]$	=	92.05%
7. Multiplied by short-term investment return	=	3.91%
8. Total: (5) + (7)	=	4.55%

\*It is assumed that FY11 contributions allocated to healthcare ARC for funding purposes and pay-as-you-go contributions are used to derive the GASB 43 discount rate applied to the June 30, 2013 valuation (FY14) which in turn drives the FY16 GASB 43 ARC.

Using the GASB 43 discount rate determined above and disregarding future Medicare Part D payments, the FY16 employer ARC rate for accounting purposes is 58.73% of pay for healthcare benefits.

## Section 3.4 Solvency Test (\$'s in 000's)

The exhibit below shows the pension Solvency Test for valuation dates June 30, 2005 and later.

Valuation Date	Pension Actuarial Accrued Liability For:			Pension 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, 2015	\$ 1,475,852	\$ 8,762,863	\$ 3,099,214	\$ 8,931,160	100.0%	85.1%	0.0%
June 30, 2014 <sup>1 2</sup>	1,486,335	8,264,683	3,196,741	7,731,438	100.0%	75.6%	0.0%
June 30, 2013	1,479,538	7,514,255	2,952,088	6,510,749	100.0%	67.0%	0.0%
June 30, 2012	1,459,943	7,057,967	2,911,034	6,530,421	100.0%	71.8%	0.0%
June 30, 2011	1,421,967	6,657,517	2,839,563	6,762,149	100.0%	80.2%	0.0%
June 30, 2010 <sup>1</sup>	1,388,029	6,268,461	2,715,182	6,469,832	100.0%	81.1%	0.0%
June 30, 2009	1,315,924	5,914,959	2,471,203	6,108,528	100.0%	81.0%	0.0%
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%
June 30, 2005	1,104,821	4,627,467	1,354,903	6,016,713 <sup>3</sup>	100.0%	100.0%	21.0%

<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.

The exhibit below shows the postemployment healthcare Solvency Test for valuation dates June 30, 2005 and later.

Valuation Date	Postemployment Healthcare Actuarial Accrued Liability For:			Postemployment Healthcare 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, 2015	\$ 0	\$ 5,159,283	\$ 2,151,451	\$ 7,242,299	100.0%	100.0%	96.8%
June 30, 2014 <sup>1</sup>	0	5,455,114	2,494,499	6,913,160	100.0%	100.0%	58.5%
June 30, 2013 <sup>1</sup>	0	5,298,380	2,748,498	5,651,877	100.0%	100.0%	12.9%
June 30, 2012 <sup>1</sup>	0	5,026,080	2,837,337	5,301,609	100.0%	100.0%	9.7%
June 30, 2011	0	4,812,845	3,008,658	5,051,625	100.0%	100.0%	7.9%
June 30, 2010 <sup>1</sup>	0	4,581,806	3,179,014	4,687,632	100.0%	100.0%	3.3%
June 30, 2009	0	4,232,394	2,644,891	4,134,450	100.0%	97.7%	0.0%
June 30, 2008 <sup>1</sup>	0	4,166,270	2,567,589	3,829,334	100.0%	91.9%	0.0%
June 30, 2007	0	3,684,906	2,223,703	3,161,956	100.0%	85.8%	0.0%
June 30, 2006 <sup>1,2</sup>	0	3,990,202	2,304,168	2,709,843	100.0%	67.9%	0.0%
June 30, 2005	0	4,039,591	1,718,059	2,426,206 <sup>3</sup>	100.0%	60.1%	0.0%

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.

The exhibit below shows the combined pension and postemployment healthcare Solvency Test for valuation dates June 30, 2010 and before.

Valuation Date	Actuarial Accrued Liability For:			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, 2010 <sup>1</sup>	\$ 1,388,029	\$ 10,850,267	\$ 5,894,196	\$ 11,157,464	100.0%	90.0%	0.0%
June 30, 2009	1,315,924	10,147,353	5,116,094	10,242,978	100.0%	88.0%	0.0%
June 30, 2008 <sup>1</sup>	1,242,288	9,772,672	4,873,181	11,040,106	100.0%	100.0%	0.5%
June 30, 2007	1,203,007	8,967,038	4,400,888	9,900,960	100.0%	97.0%	0.0%
June 30, 2006 <sup>1,2</sup>	1,157,755	8,923,811	4,306,847	9,040,908	100.0%	88.3%	0.0%
June 30, 2005	1,104,821	8,667,058	3,072,962	8,442,919	100.0%	84.7%	0.0%
June 30, 2004 <sup>1</sup>	1,070,268	7,650,156	2,723,492	8,030,414	100.0%	91.0%	0.0%
June 30, 2003	1,026,730	6,860,834	2,674,089	7,687,281	100.0%	97.1%	0.0%
June 30, 2002 <sup>1,2,3</sup>	967,045	6,301,095	2,591,451	7,412,833	100.0%	100.0%	5.6%
June 30, 2001	920,702	5,059,386	1,888,486	7,941,756	100.0%	100.0%	100.0%

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> Change in Asset Valuation Method

# Section 4 Projections

## Section 4.1 Projection Assumptions and Methods

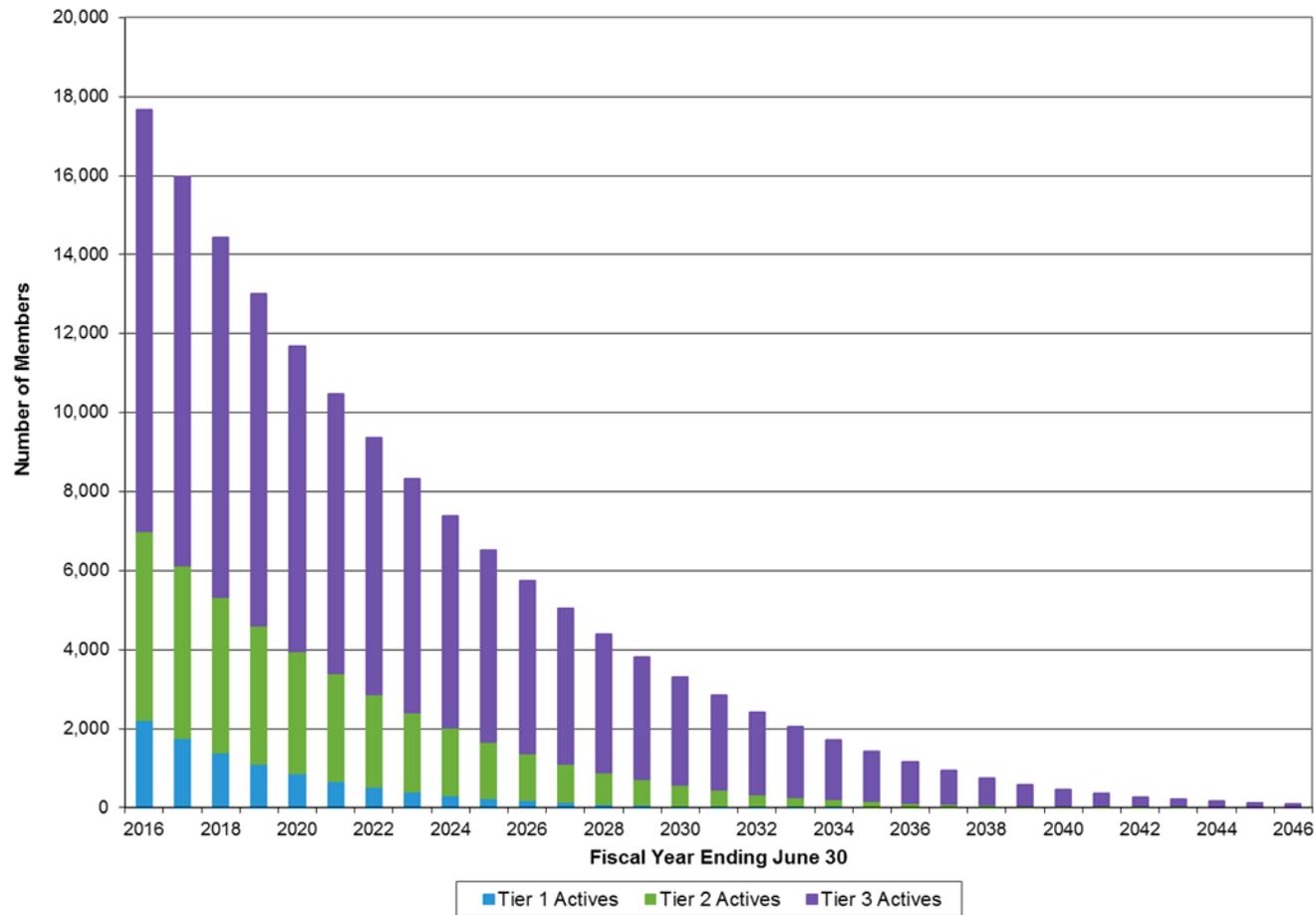
### Key Assumptions

- 8.00% investment return on the Fair Value of Assets in all future years.
- The Actuarial Value of Assets is re-initialized to Fair Value as of June 30, 2014. The Actuarial Value of Assets after June 30, 2014 reflects the deferred gains and losses generated by the smoothing method. The current deferred amount is recognized in the first four years of the projections.
- Actuarial assumptions and methods as described in Section 6. All future demographic experience is assumed to be exactly realized.
- The actuarially calculated contribution rate using a two-year roll-forward approach is adopted each year.
- No new DB Plan members enter into Tiers 1,2 or 3.
- Projections assume a 0% increase in the total active member population. All new members are expected to enter the DCR plan and contribution rates are determined as a percent of total DB and DCR payroll, combined.
- For the Sensitivity Analysis, all assumptions and methods are the same except investment returns on the Fair Value of Assets are assumed as follows:
  - Base Case: 8.00% for all future years
  - Optimistic: 8.75% for all future years
  - Pessimistic: 7.25% for all future years

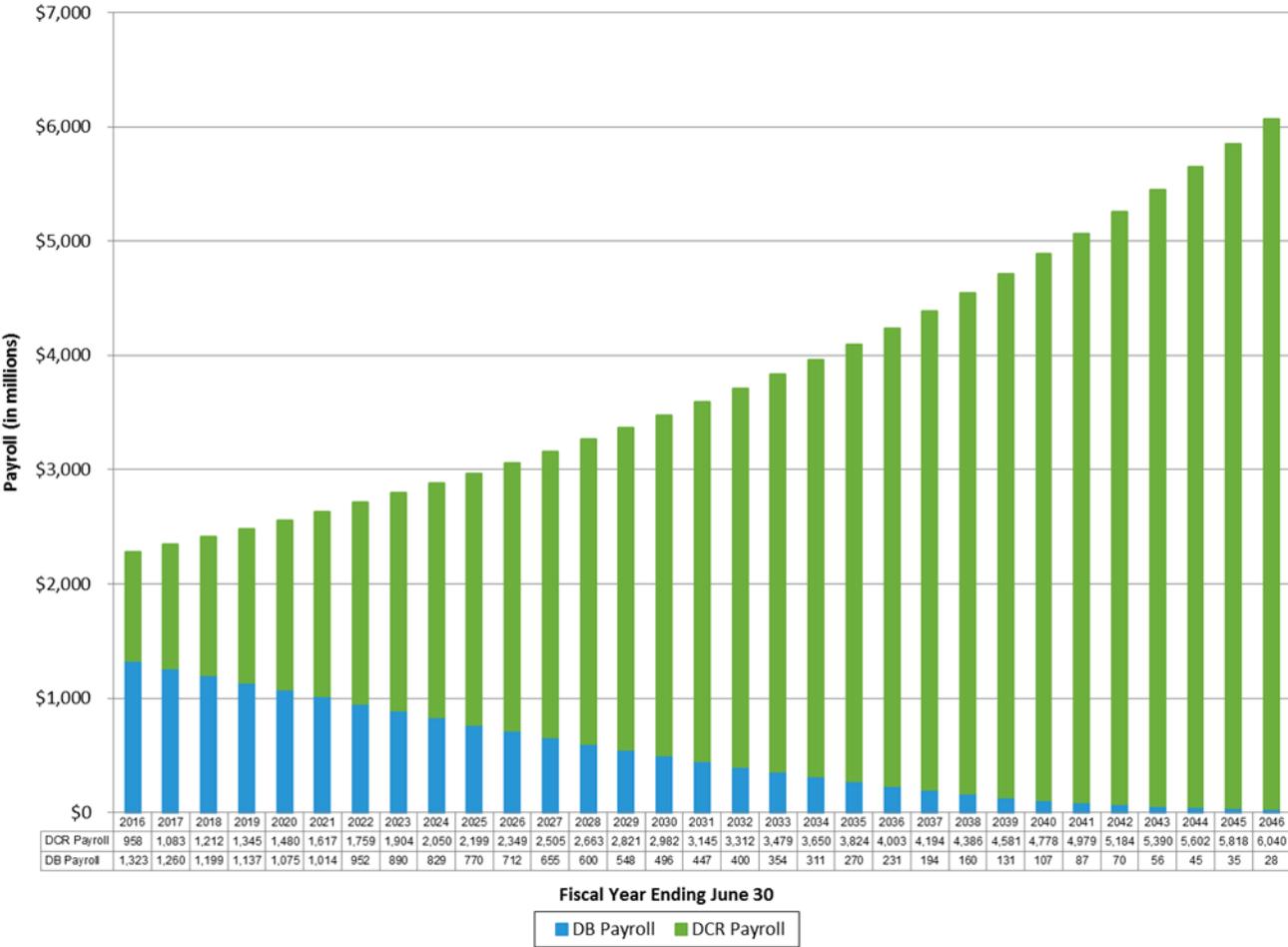
In each case, liabilities have been projected using 8.00% as the discount rate for future benefit payments. These scenarios are intended to illustrate the impact if investment rates of return are different than the 8.00% assumed investment return. They do not illustrate the effect of changing the assumed discount rate for determining liabilities.

## Section 4.2 Membership Projection

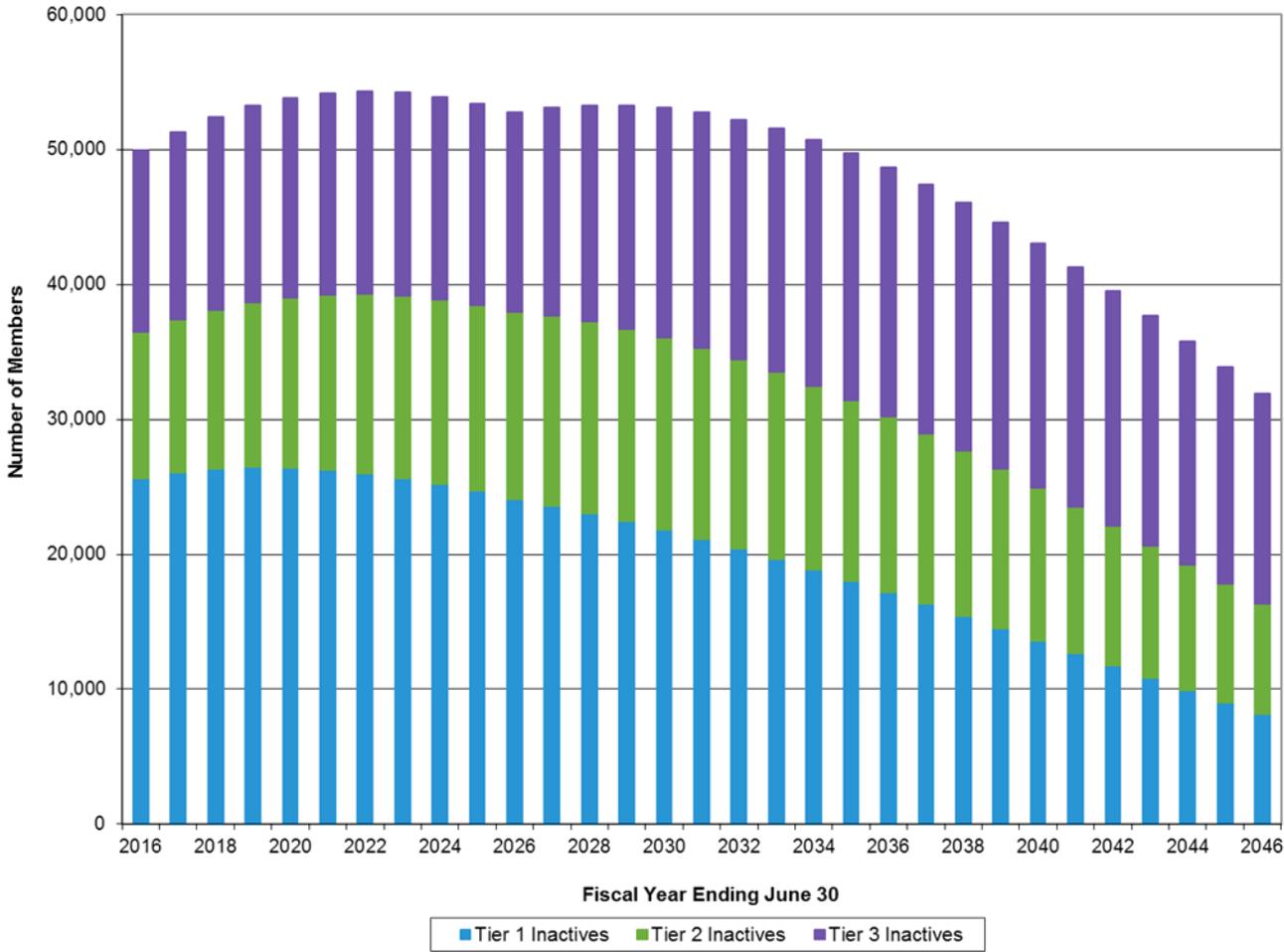
### Projected Active Member Count



# Projected DB and DCR Payroll

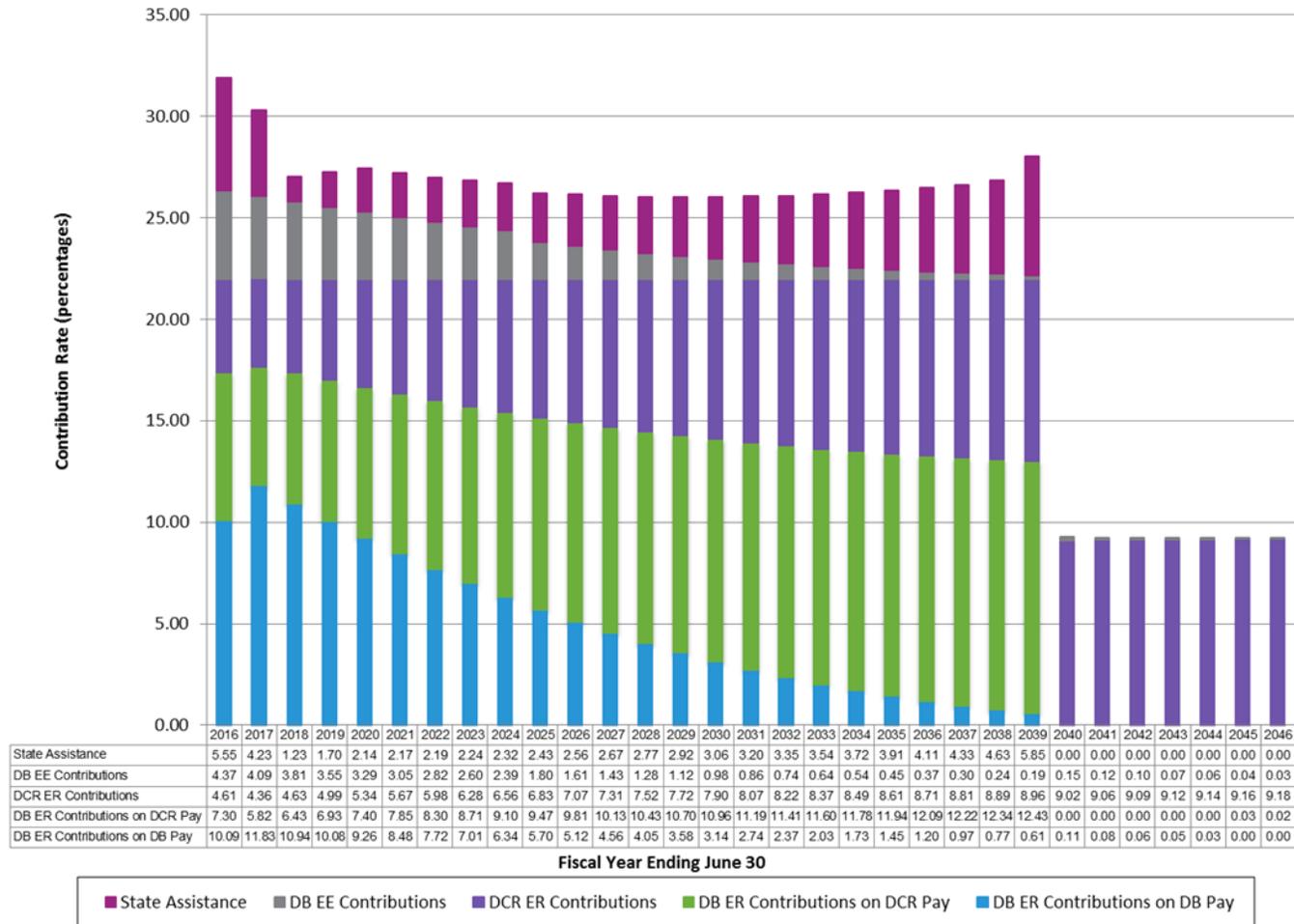


# Projected Inactive Member Count

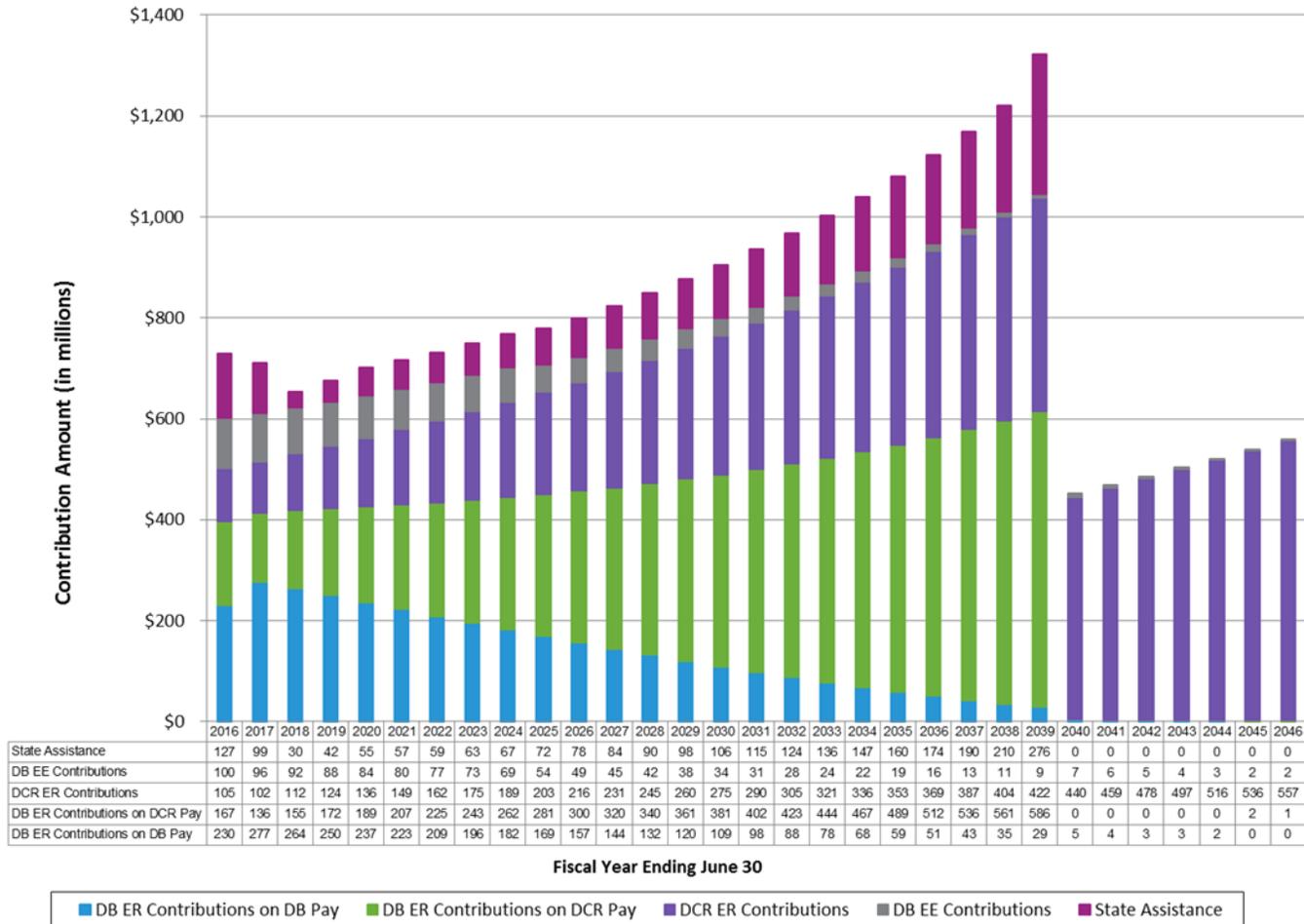


## Section 4.3 Projected Employer/State Contribution Rates

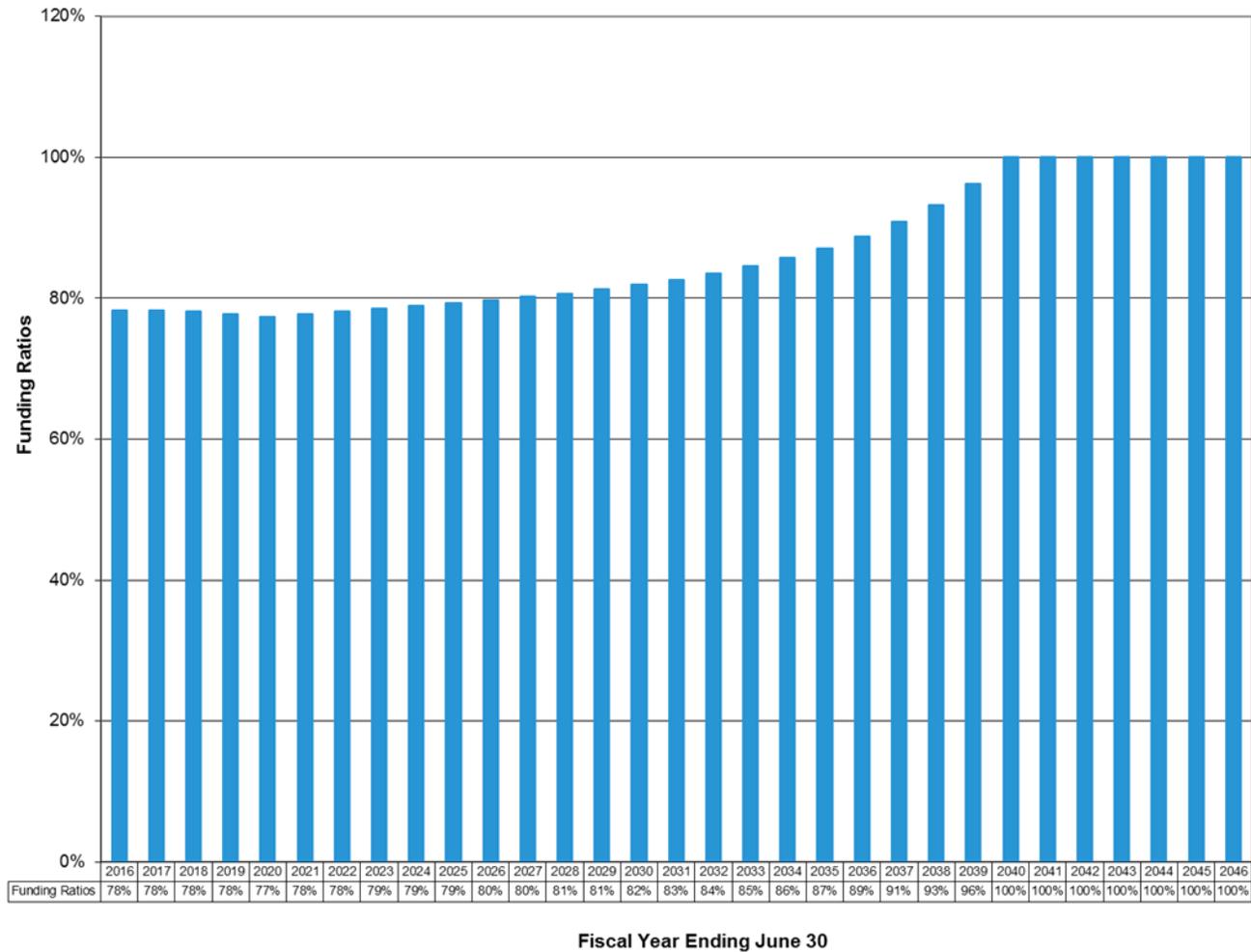
(Based on Total DB and DCR Payroll)



## Section 4.4 Projected Employer/State Contribution Amounts



## Section 4.5 Projection of Funded Ratios



# Section 4.6 Table of Projected Actuarial Results

## State of Alaska PERS Financial Projections (\$ in Thousands) Based on 2015 Actuarial Valuation Results, 0% Population Growth for Payroll Baseline

Fiscal Year End	FY 16 Investment Return 8.00% Valuation Amounts on July 1 (Beginning of Fiscal Year)				Investment Return of 8.00% for FY 17 and beyond.				Flow Amounts During Following 12 Months							Deferred Asset Gain/(Loss)	Ending Actuarial Assets	
	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus (Deficit)	Total Salaries	Er/State Ctb Rate	DCR Ctb Rate	Total Ctb Rate	DB Contributions			Benefit Payments	Net Contribs	Investment Earnings				
									Employer	State Assistance	Employee				Total			
2016	\$16,173,459	\$20,648,664	78.3%	(\$4,475,205)	\$2,281,060	22.94%	4.61%	27.55%	\$396,676	\$126,520	\$99,708	\$622,904	\$1,152,071	(\$529,167)	\$1,223,455	(\$453,476)	\$16,716,590	
2017	16,716,590	21,356,021	78.3%	(4,639,431)	2,343,538	21.88%	4.36%	26.24%	413,634	99,166	95,756	608,556	1,230,415	(621,859)	1,276,589	(302,317)	17,220,161	
2018	17,220,161	22,020,693	78.2%	(4,800,532)	2,410,994	18.60%	4.63%	23.23%	418,790	29,654	91,802	540,246	1,306,860	(766,614)	1,320,200	(151,159)	17,622,589	
2019	17,622,589	22,666,652	77.7%	(5,044,063)	2,481,805	18.71%	4.99%	23.70%	422,155	42,190	87,983	552,328	1,382,318	(829,990)	1,362,260	0	18,003,700	
2020	18,003,700	23,253,582	77.4%	(5,249,882)	2,555,313	18.80%	5.34%	24.14%	425,715	54,684	84,100	564,499	1,457,387	(892,888)	1,402,632	0	18,513,444	
2021	18,513,444	23,794,646	77.8%	(5,281,202)	2,631,109	18.50%	5.67%	24.17%	429,660	57,095	80,340	567,095	1,532,431	(965,336)	1,440,418	0	18,988,526	
2022	18,988,526	24,287,151	78.2%	(5,298,625)	2,711,488	18.21%	5.98%	24.19%	434,380	59,382	76,539	570,301	1,609,555	(1,039,254)	1,475,360	0	19,424,632	
2023	19,424,632	24,725,788	78.6%	(5,301,156)	2,794,017	17.96%	6.28%	24.24%	439,219	62,587	72,635	574,441	1,686,729	(1,112,288)	1,507,257	0	19,819,601	
2024	19,819,601	25,106,220	78.9%	(5,286,619)	2,879,779	17.76%	6.56%	24.32%	444,638	66,811	68,910	580,359	1,761,588	(1,181,229)	1,536,072	0	20,174,443	
2025	20,174,443	25,427,181	79.3%	(5,252,738)	2,968,351	17.60%	6.83%	24.43%	450,299	72,130	53,511	575,940	1,835,148	(1,259,208)	1,561,371	0	20,476,607	
2026	20,476,607	25,685,575	79.7%	(5,208,968)	3,060,673	17.49%	7.07%	24.56%	456,958	78,354	49,232	584,544	1,894,585	(1,310,041)	1,583,606	0	20,750,171	
2027	20,750,171	25,879,263	80.2%	(5,129,092)	3,160,652	17.36%	7.31%	24.67%	464,300	84,389	45,303	593,992	1,962,913	(1,368,921)	1,603,199	0	20,984,449	
2028	20,984,449	26,005,735	80.7%	(5,021,286)	3,262,922	17.25%	7.52%	24.77%	472,471	90,383	41,679	604,533	2,029,980	(1,425,447)	1,619,744	0	21,178,746	
2029	21,178,746	26,062,128	81.3%	(4,883,382)	3,368,800	17.20%	7.72%	24.92%	481,065	98,368	37,867	617,300	2,094,549	(1,477,249)	1,633,366	0	21,334,863	
2030	21,334,863	26,045,788	81.9%	(4,710,925)	3,478,335	17.16%	7.90%	25.06%	490,445	106,437	34,163	631,045	2,156,176	(1,525,131)	1,644,100	0	21,453,832	
2031	21,453,832	25,954,497	82.7%	(4,500,665)	3,592,642	17.13%	8.07%	25.20%	500,455	114,964	30,954	646,373	2,216,698	(1,570,325)	1,651,990	0	21,535,496	
2032	21,535,496	25,783,782	83.5%	(4,248,286)	3,711,298	17.13%	8.22%	25.35%	511,417	124,329	27,635	663,381	2,273,083	(1,609,702)	1,657,172	0	21,582,966	
2033	21,582,966	25,533,643	84.5%	(3,950,677)	3,832,702	17.17%	8.37%	25.54%	522,397	135,678	24,485	682,560	2,325,094	(1,642,534)	1,659,971	0	21,600,403	
2034	21,600,403	25,201,719	85.7%	(3,601,316)	3,960,305	17.23%	8.49%	25.72%	535,037	147,324	21,554	703,915	2,368,889	(1,664,974)	1,660,814	0	21,596,243	
2035	21,596,243	24,790,742	87.1%	(3,194,499)	4,094,196	17.30%	8.61%	25.91%	548,213	160,083	18,550	726,846	2,406,020	(1,679,174)	1,660,320	0	21,577,389	
2036	21,577,389	24,301,719	88.8%	(2,724,330)	4,234,254	17.40%	8.71%	26.11%	562,732	174,028	15,749	752,509	2,436,907	(1,684,398)	1,659,072	0	21,552,063	
2037	21,552,063	23,735,217	90.8%	(2,183,154)	4,387,749	17.52%	8.81%	26.33%	578,744	189,989	13,247	781,980	2,459,887	(1,677,907)	1,657,875	0	21,532,031	
2038	21,532,031	23,095,219	93.2%	(1,563,188)	4,546,100	17.74%	8.89%	26.63%	595,994	210,485	10,996	817,475	2,470,907	(1,653,432)	1,658,031	0	21,536,631	
2039	21,536,631	22,387,933	96.2%	(851,302)	4,711,692	18.89%	8.96%	27.85%	614,405	275,633	9,095	899,133	2,472,225	(1,573,092)	1,664,203	0	21,627,741	
2040	21,627,741	21,618,633	100.0%	9,108	4,884,747	0.11%	9.02%	9.13%	5,373	0	7,474	12,847	2,459,636	(2,446,789)	1,626,021	0	20,806,973	
2041	20,806,973	20,797,575	100.0%	9,398	5,065,731	0.08%	9.06%	9.14%	4,052	0	5,842	9,894	2,437,501	(2,427,607)	1,561,186	0	19,940,552	
2042	19,940,552	19,930,974	100.0%	9,578	5,254,277	0.06%	9.09%	9.15%	3,153	0	5,008	8,161	2,402,966	(2,394,805)	1,493,274	0	19,039,021	
2043	19,039,021	19,028,678	100.0%	10,343	5,446,533	0.05%	9.12%	9.17%	2,724	0	3,621	6,345	2,357,523	(2,351,178)	1,423,015	0	18,110,857	
2044	18,110,857	18,099,582	100.0%	11,275	5,646,847	0.03%	9.14%	9.17%	1,694	0	3,189	4,883	2,298,034	(2,293,151)	1,351,237	0	17,168,943	
2045	17,168,943	17,156,499	100.0%	12,444	5,853,492	0.03%	9.16%	9.19%	1,756	0	2,204	3,960	2,230,144	(2,226,184)	1,278,737	0	16,221,496	
<b>Totals:</b>									\$11,628,552	\$2,660,662	\$1,219,131	\$15,508,345						

The FY16 and FY17 Employer/State contribution rates don't match the September 26, 2014 and October 7, 2015 Allocation of Additional Contribution letters due to updated projected Total Salaries

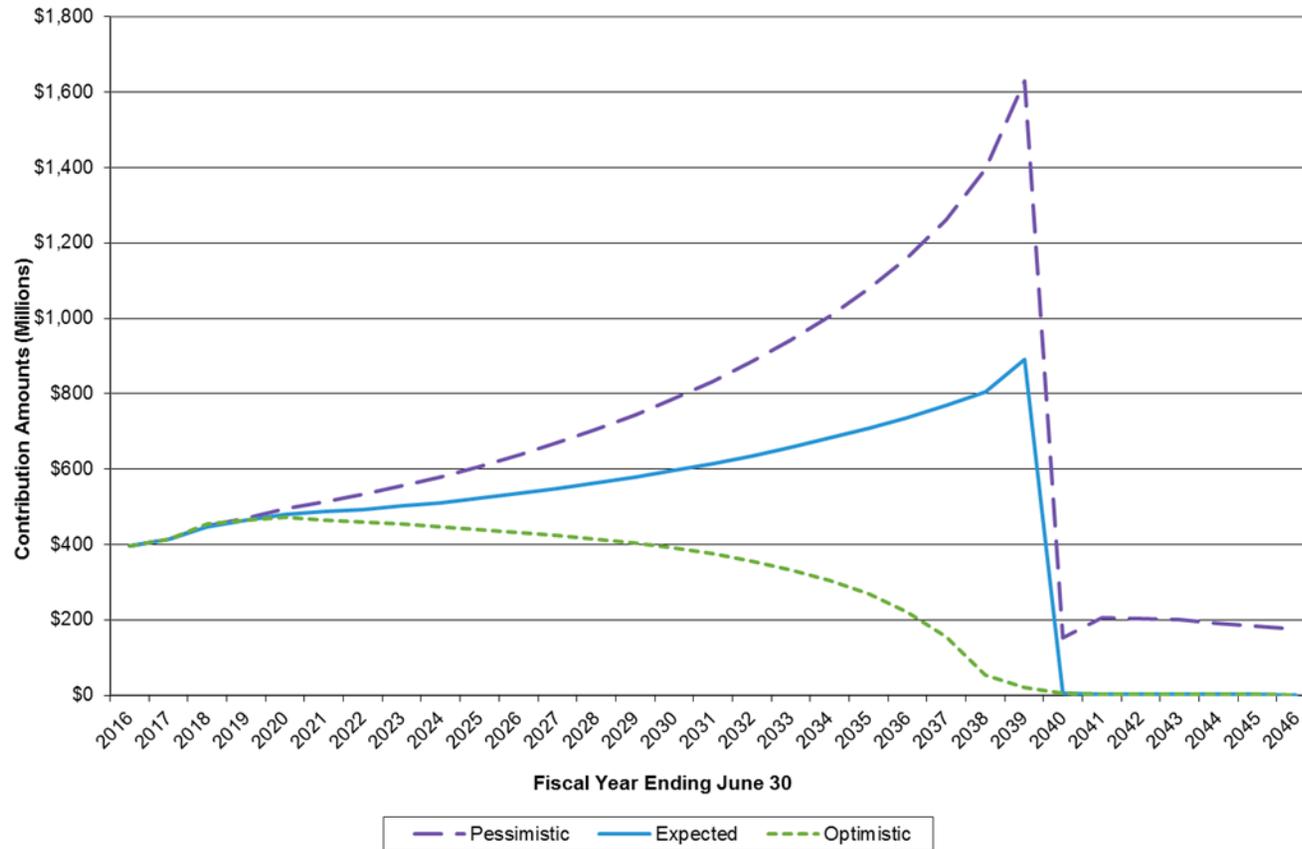
The FY17 State assistance contribution was allocated 100% to pension

Past service contribution rates set to be greater than or equal to 0% for both pension and medical

The employer contribution rate for Occupational Death & Disability and Retiree Medical is 1.20% for Police/Fire and 1.22% for Others, determined as of June 30, 2015

## Section 4.7 Sensitivity Analysis

### Impact Various Investment Rates of Return Have on the Employer/State Contribution Amount



# Section 5 Member Data

## Section 5.1 Summary of Members Included

As of June 30	2011	2012	2013	2014	2015
<b>Active Members</b>					
1. Number	24,393	22,730	20,955	19,297	17,660
2. Average Age	49.22	49.85	50.39	50.90	51.34
3. Average Credited Service	12.60	13.32	14.00	14.64	15.29
4. Average Entry Age	36.62	36.53	36.39	36.26	36.05
5. Average Annual Earnings	\$ 63,201	\$ 66,119	\$ 69,211	\$ 71,651	\$ 73,248
6. Number Vested	21,640	20,842	19,670	18,381	16,996
7. Percent Who Are Vested	88.7%	91.7%	93.9%	95.3%	96.2%
<b>Retirees, Disabiltants and Beneficiaries</b>					
1. Number	27,359	28,540	29,865	31,099	32,145
2. Average Age	67.05	67.41	67.76	68.15	68.60
3. Average Years Since Retirement	N/A	N/A	N/A	N/A	11.27
4. Average Monthly Pension Benefit					
Base	\$ 1,345	\$ 1,375	\$ 1,415	\$ 1,454	\$ 1,490
COLA <sup>1</sup>	88	89	90	91	92
P.R.P.A. <sup>1</sup>	229	241	242	255	258
Adjustment	0	0	0	0	1
Total	\$ 1,662	\$ 1,705	\$ 1,747	\$ 1,800	\$ 1,841
<b>Vested Terminations (vested at time of termination, not refunded contributions or commenced benefits)</b>					
1. Number	6,414	6,294	6,230	6,167	6,304
2. Average Age	50.29	50.55	50.84	51.15	51.80
3. Average Monthly Pension Benefit	\$ 821	\$ 844	\$ 863	\$ 897	\$ 991
<b>Non-Vested Terminations With Account Balances (not vested at termination, not refunded contributions)</b>					
1. Number	14,028	13,552	13,162	12,713	12,339
2. Average Account Balance	\$ 5,074	\$ 5,373	\$ 5,578	\$ 5,765	\$ 5,981
<b>Total Number of Members</b>	<b>72,194</b>	<b>71,116</b>	<b>70,212</b>	<b>69,276</b>	<b>68,448</b>

<sup>1</sup> Calculated by taking the average of the data field, as provided by the State of Alaska, for all participants in the group.

## Summary of Members Included

As of June 30, 2015	DB				DCR Tier 4	Grand Total
	Tier 1	Tier 2	Tier 3	Total		
<b>Active Members</b>						
1. Number	2,208	4,801	10,651	17,660	17,098	34,758
2. Average Age	58.82	53.90	48.64	51.34	40.07	45.80
3. Average Credited Service	21.19	19.80	12.04	15.29	3.28	9.38
4. Average Entry Age	37.63	34.10	36.60	36.05	36.79	36.41
5. Annual Earnings						
(a) Amount (000's)	\$ 165,082,703	\$ 377,696,221	\$ 750,788,705	\$1,293,567,629	\$ 945,495,913	\$2,239,063,542
(b) Average	\$ 74,766	\$ 78,670	\$ 70,490	\$ 73,248	\$ 55,299	\$ 64,419

Retiree Medical Participants as of June 30, 2015*		
	Retirees	All Members
Pre-Medicare	10,358	19,349
Medicare Part A & B	18,419	29,739
Medicare Part B Only	101	172

\*Based upon Aetna enrollment reporting as of June 2015, allocated to Medicare Part B only based upon assumptions noted in Section 6.

As of June 30, 2015	Tier 1	Tier 2	Tier 3	Total
<b>Retirees, Disabilitants and Beneficiaries</b>				
1. Number	23,620	6,190	2,335	32,145
2. Average Age	69.26	67.28	65.44	68.60
3. Average Years Since Retirement	13.09	7.10	3.87	11.27
4. Average Monthly Pension Benefit				
Base	\$ 1,594	\$ 1,304	\$ 936	\$ 1,490
COLA	110	42	33	92
P.R.P.A.	321	98	42	258
Adjustment	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total	\$ 2,026	\$ 1,445	\$ 1,012	\$ 1,841

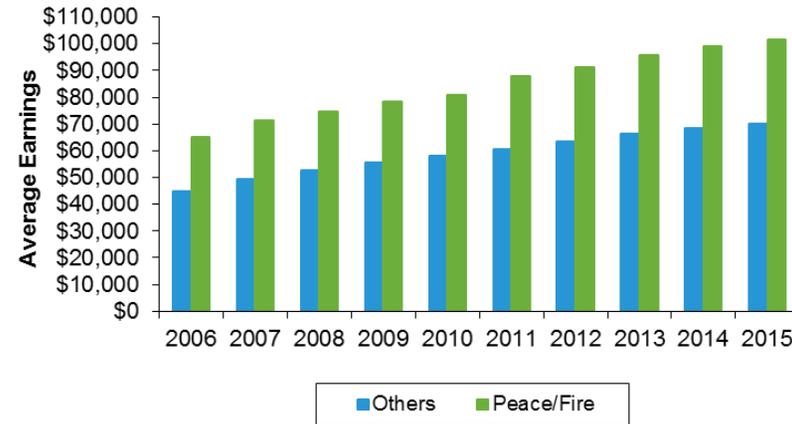
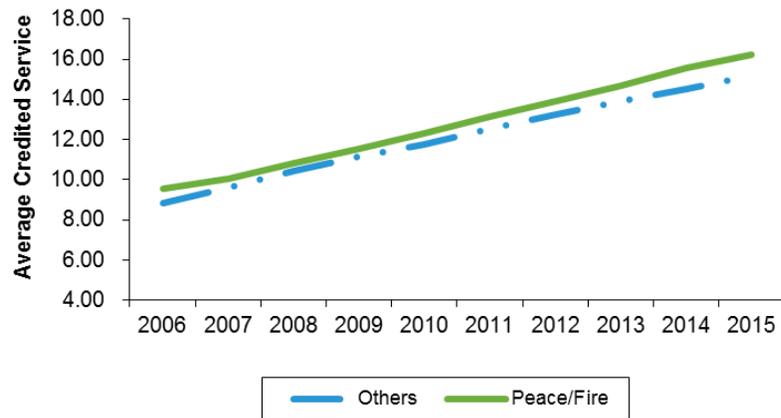
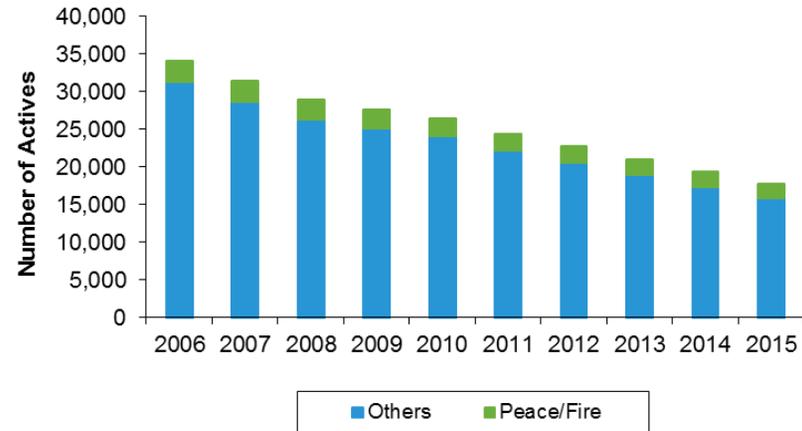
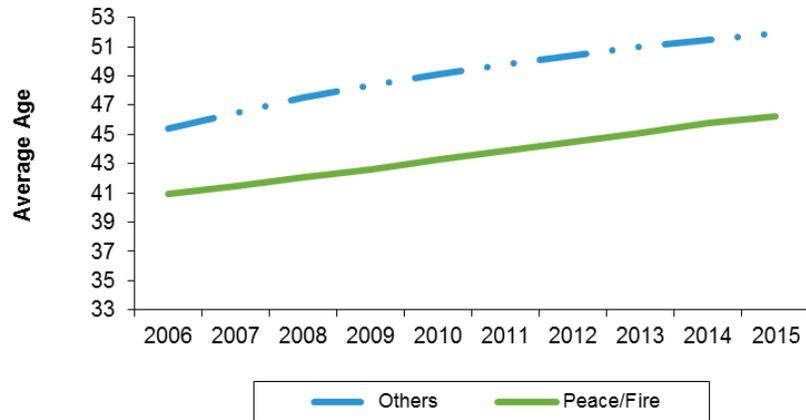
## Summary of Members Included

### Active Members – DB Only

As of June 30	2011	2012	2013	2014	2015
<b>Peace Officer/Firefighter</b>					
1. Number	2,275	2,164	2,065	1,958	1,827
2. Average Age	43.86	44.48	45.09	45.74	46.26
3. Average Credited Service	13.13	13.90	14.71	15.55	16.23
4. Average Entry Age	30.73	30.58	30.38	30.19	30.03
5. Average Annual Earnings	\$ 87,709	\$ 91,286	\$ 95,658	\$ 98,946	\$ 101,450
6. Number Vested	2,183	2,098	2,018	1,934	1,817
7. Percent Who Are Vested	96.0%	97.0%	97.7%	98.8%	99.5%
<b>Others</b>					
1. Number	22,118	20,566	18,890	17,339	15,833
2. Average Age	49.77	50.41	50.97	51.48	51.93
3. Average Credited Service	12.55	13.26	13.92	14.54	15.18
4. Average Entry Age	37.22	37.15	37.05	36.94	36.75
5. Average Annual Earnings	\$ 60,680	\$ 63,471	\$ 66,320	\$ 68,569	\$ 69,994
6. Number Vested	19,457	18,744	17,652	16,447	15,179
7. Percent Who Are Vested	88.0%	91.1%	93.4%	94.9%	95.9%
<b>Total</b>					
1. Number	24,393	22,730	20,955	19,297	17,660
2. Average Age	49.22	49.85	50.39	50.90	51.34
3. Average Credited Service	12.60	13.32	14.00	14.64	15.29
4. Average Entry Age	36.62	36.53	36.39	36.26	36.05
5. Average Annual Earnings	\$ 63,201	\$ 66,119	\$ 69,211	\$ 71,651	\$ 73,248
6. Number Vested	21,640	20,842	19,670	18,381	16,996
7. Percent Who Are Vested	88.7%	91.7%	93.9%	95.3%	96.2%

Total and average annual earnings (“valuation pay”) are the annualized earnings for the fiscal year ending on the valuation date.

## Summary of Members Included – Active Members as of June 30



Total and average annual earnings (“valuation pay”) are the annualized earnings for the fiscal year ending on the valuation date.

## Section 5.2 Age and Service Distribution of Active Members

### Peace Officer/Firefighter

**Annual Earnings by Age**

Age	Number	Total Annual Earnings	Average Annual Earnings
0 – 19	0	\$ 0	\$ 0
20 – 24	0	0	0
25 – 29	7	493,927	70,561
30 – 34	119	11,823,260	99,355
35 – 39	282	28,713,588	101,821
40 – 44	434	44,617,211	102,805
45 – 49	428	44,686,282	104,407
50 – 54	307	31,266,687	101,846
55 – 59	170	16,427,952	96,635
60 – 64	64	5,974,804	93,356
65 – 69	16	1,345,874	84,117
70 – 74	0	0	0
75+	0	0	0

Total 1,827 \$ 185,349,585 \$ 101,450

**Annual Earnings by Credited Service**

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	1	\$ 179,473	\$ 179,473
1	2	102,195	51,098
2	0	0	0
3	3	190,862	63,621
4	5	347,245	69,449
0 – 4	11	819,775	74,525
5 – 9	223	20,300,008	91,031
10 – 14	621	60,387,829	97,243
15 – 19	525	54,354,120	103,532
20 – 24	308	34,424,760	111,769
25 – 29	108	11,621,993	107,611
30 – 34	25	2,652,542	106,102
35 – 39	5	637,771	127,554
40+	1	150,787	150,787

Total 1,827 \$ 185,349,585 \$ 101,450

**Years of Credited Service by Age**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	2	3	2	0	0	0	0	0	0	7
30 – 34	0	60	59	0	0	0	0	0	0	119
35 – 39	2	53	159	68	0	0	0	0	0	282
40 – 44	2	38	150	174	70	0	0	0	0	434
45 – 49	2	32	100	133	130	31	0	0	0	428
50 – 54	1	21	91	79	70	42	3	0	0	307
55 – 59	1	7	46	48	27	26	14	1	0	170
60 – 64	1	8	11	19	8	6	7	3	1	64
65 – 69	0	1	3	4	3	3	1	1	0	16
70 – 74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	11	223	621	525	308	108	25	5	1	1,827

Total and average annual earnings (“valuation pay”) are the annualized earnings for the fiscal year ending on the valuation date.

## Age and Service Distribution of Active Members – Others

**Annual Earnings by Age**

Age	Number	Total Annual Earnings	Average Annual Earnings
0 – 19	0	\$ 0	\$ 0
20 – 24	0	0	0
25 – 29	56	3,318,797	59,264
30 – 34	588	37,910,069	64,473
35 – 39	1,228	83,901,696	68,324
40 – 44	1,740	125,938,296	72,378
45 – 49	2,315	163,114,424	70,460
50 – 54	3,508	246,516,807	70,273
55 – 59	3,605	253,072,882	70,201
60 – 64	1,978	137,192,256	69,359
65 – 69	637	45,367,731	71,221
70 – 74	137	9,144,270	66,746
75+	41	2,740,816	66,849

Total 15,833 \$1,108,218,044 \$ 69,994

**Annual Earnings by Credited Service**

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	28	\$ 1,161,634	\$ 41,487
1	68	3,617,022	53,192
2	113	5,615,248	49,692
3	132	6,545,285	49,585
4	208	10,611,695	51,018
0 – 4	549	27,550,884	50,184
5 – 9	3,075	182,307,277	59,287
10 – 14	5,387	361,906,514	67,181
15 – 19	3,259	238,569,185	73,203
20 – 24	1,960	156,777,438	79,988
25 – 29	1,163	100,012,853	85,996
30 – 34	359	33,329,672	92,840
35 – 39	60	5,668,791	94,480
40+	21	2,095,430	99,782

Total 15,833 \$1,108,218,044 \$ 69,994

**Years of Credited Service by Age**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	26	28	2	0	0	0	0	0	0	56
30 – 34	68	320	193	7	0	0	0	0	0	588
35 – 39	79	396	643	110	0	0	0	0	0	1,228
40 – 44	70	419	765	420	65	1	0	0	0	1,740
45 – 49	78	476	821	553	279	103	5	0	0	2,315
50 – 54	87	544	1,102	739	568	401	67	0	0	3,508
55 – 59	71	457	1,060	820	634	400	145	18	0	3,605
60 – 64	49	302	581	443	308	178	91	22	4	1,978
65 – 69	15	108	172	130	83	65	41	13	10	637
70 – 74	3	18	39	29	19	12	8	5	4	137
75+	3	7	9	8	4	3	2	2	3	41
Total	549	3,075	5,387	3,259	1,960	1,163	359	60	21	15,833

Total and average annual earnings (“valuation pay”) are the annualized earnings for the fiscal year ending on the valuation date.

## Section 5.3 Member Data Reconciliation

### Total PERS

	Active Members	Inactive Members					Total
		Due a Refund	With Deferred Benefits	Retired Members	Disabled Members	Beneficiaries	
<b>As of June 30, 2014</b>	<b>19,297</b>	<b>12,713</b>	<b>6,167</b>	<b>27,621*</b>	<b>230</b>	<b>3,261</b>	<b>69,289</b>
Vested Terminations	(829)	(7)	840	(1)	(3)	0	0
Non-vested Terminations	(114)	130	(16)	0	0	0	0
Cash-outs	(73)	(286)	(60)	0	0	0	(419)
Converted to DCR Plan	(2)	(6)	(1)	0	0	0	(9)
Disability Retirements	(16)	0	(14)	(2)	32	0	0
Age Retirements	(963)	(24)	(390)	1,406	(29)	N/A	0
Deaths With Beneficiary	(17)	0	(13)	(212)	(4)	246	0
Deaths Without Beneficiary	(27)	(25)	(5)	(331)	(2)	(86)	(476)
Expired Benefits	0	0	0	0	0	(1)	(1)
Data Corrections	1	0	(1)	0	0	(11)	(11)
Transfers Out	(20)	(2)	(8)	(1)	0	0	(31)
Rehires	392	(162)	(198)	(32)	0	0	0
Pick Ups***	31	8	3	1	0	76	119
<b>Net Change</b>	<b>(1,637)</b>	<b>(374)</b>	<b>137</b>	<b>828</b>	<b>(6)</b>	<b>224</b>	<b>(828)</b>
<b>As of June 30, 2015</b>	<b>17,660</b>	<b>12,339</b>	<b>6,304</b>	<b>28,449**</b>	<b>224</b>	<b>3,485</b>	<b>68,461</b>

\* Includes 13 medical only retirees

\*\* Includes 13 medical only retirees

\*\*\* Pickup beneficiaries are primarily new DROs

## Section 5.4 Schedule of Active Member Data

### Peace Officer/Firefighter

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2015	1,827	\$ 185,350	\$ 101,450	2.5%	155
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
June 30, 2007	2,687	191,674	71,334	9.3%	160
June 30, 2006	2,785	181,830	65,289	2.5%	160

Total and average earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

## Schedule of Active Member Data

### Others

Valuation Date	Number	Annual Earnings (000's) <sup>1</sup>	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2015	15,833	\$ 1,108,218	\$ 69,994	2.1%	155
June 30, 2014	17,339	1,188,918	68,569	3.4%	158
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
June 30, 2007	28,675	1,414,145	49,316	9.5%	160
June 30, 2006	31,286	1,408,863	45,032	4.2%	160

Total and average earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

## Section 5.5 Summary of New Pension Benefit Recipients

### Peace Officer/Firefighter

During the Year Ending June 30	2011	2012	2013	2014	2015
<b>Service</b>					
1. Number	83	78	85	74	97
2. Average Age at Commencement	56.41	56.73	56.66	57.16	55.29
3. Average Monthly Pension Benefit	\$ 3,229	\$ 3,042	\$ 3,400	\$ 3,765	\$ 4,146
<b>Survivor (including surviving spouse and DROs)</b>					
1. Number	29	25	23	30	36
2. Average Age at Commencement	57.19	62.97	61.25	59.60	63.51
3. Average Monthly Pension Benefit	\$ 1,438	\$ 1,541	\$ 1,868	\$ 2,076	\$ 1,546
<b>Disability Retirements</b>					
1. Number	2	4	5	5	3
2. Average Age at Commencement	50.53	48.14	45.41	43.62	40.50
3. Average Monthly Pension Benefit	\$ 2,354	\$ 3,923	\$ 3,000	\$ 2,992	\$ 3,433
<b>Total</b>					
1. Number	114	107	113	109	136
2. Average Age at Commencement	56.51	57.87	57.10	57.21	57.14
3. Average Monthly Pension Benefit	\$ 2,758	\$ 2,724	\$ 3,070	\$ 3,265	\$ 3,442

## Summary of New Pension Benefit Recipients

### Average Pension Benefit Payments – Peace Officer/Firefighter

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/14 - 6/30/15:							
Average Monthly Pension Benefit	\$ 0	\$ 1,173	\$ 1,621	\$ 3,632	\$ 4,436	\$ 5,457	\$ 6,863
Number of Recipients	0	8	9	26	24	25	7
Period 7/1/13 - 6/30/14:							
Average Monthly Pension Benefit	\$ 290	\$ 1,423	\$ 2,002	\$ 2,902	\$ 4,014	\$ 5,464	\$ 6,299
Number of Recipients	1	9	10	14	22	16	7
Period 7/1/12 - 6/30/13:							
Average Monthly Pension Benefit	\$ 0	\$ 865	\$ 1,779	\$ 2,762	\$ 3,793	\$ 4,983	\$ 4,911
Number of Recipients	0	9	8	19	31	18	4
Period 7/1/11 - 6/30/12:							
Average Monthly Pension Benefit	\$ 0	\$ 1,159	\$ 1,161	\$ 3,142	\$ 3,504	\$ 4,673	\$ 5,079
Number of Recipients	0	13	13	12	20	17	7
Period 7/1/10 - 6/30/11:							
Average Monthly Pension Benefit	\$ 525	\$ 880	\$ 1,469	\$ 2,666	\$ 3,743	\$ 4,806	\$ 5,661
Number of Recipients	1	8	18	10	24	16	8
Period 7/1/09 - 6/30/10:							
Average Monthly Pension Benefit	\$ 1,902	\$ 1,242	\$ 1,459	\$ 2,284	\$ 3,179	\$ 4,527	\$ 4,695
Number of Recipients	4	7	16	14	28	14	7
Period 7/1/08 - 6/30/09:							
Average Monthly Pension Benefit	\$ 489	\$ 820	\$ 979	\$ 2,466	\$ 3,152	\$ 4,213	\$ 4,894
Number of Recipients	2	17	11	18	23	7	5
Period 7/1/07 - 6/30/08:							
Average Monthly Pension Benefit	\$ 1,522	\$ 950	\$ 1,171	\$ 2,378	\$ 3,179	\$ 3,837	\$ 6,014
Number of Recipients	6	13	13	20	32	18	3
Period 7/16 - 6/30/07:							
Average Monthly Pension Benefit	\$ 925	\$ 858	\$ 1,304	\$ 2,385	\$ 3,180	\$ 4,198	\$ 4,942
Number of Recipients	4	13	9	26	40	12	4

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

## Summary of New Pension Benefit Recipients – Others

During the Year Ending June 30	2011	2012	2013	2014	2015
<b>Service</b>					
1. Number	1,379	1,413	1,547	1,495	1,281
2. Average Age at Commencement	59.19	59.68	59.94	60.41	60.70
3. Average Monthly Pension Benefit	\$ 2,061	\$ 2,031	\$ 2,141	\$ 2,290	\$ 2,310
<b>Survivor (including surviving spouse and DROs)</b>					
1. Number	191	238	231	263	275
2. Average Age at Commencement	66.04	65.26	66.07	67.55	69.00
3. Average Monthly Pension Benefit	\$ 1,103	\$ 1,005	\$ 1,025	\$ 1,064	\$ 1,159
<b>Disability Retirements</b>					
1. Number	25	25	30	20	27
2. Average Age at Commencement	51.10	53.32	52.43	49.66	51.39
3. Average Monthly Pension Benefit	\$ 1,550	\$ 1,553	\$ 1,809	\$ 1,391	\$ 1,858
<b>Total</b>					
1. Number	1,595	1,676	1,808	1,778	1,583
2. Average Age at Commencement	59.88	60.38	60.60	61.35	61.98
3. Average Monthly Pension Benefit	\$ 1,938	\$ 1,878	\$ 1,993	\$ 2,101	\$ 2,103

## Summary of New Pension Benefit Recipients

### Average Pension Benefit Payments – Others

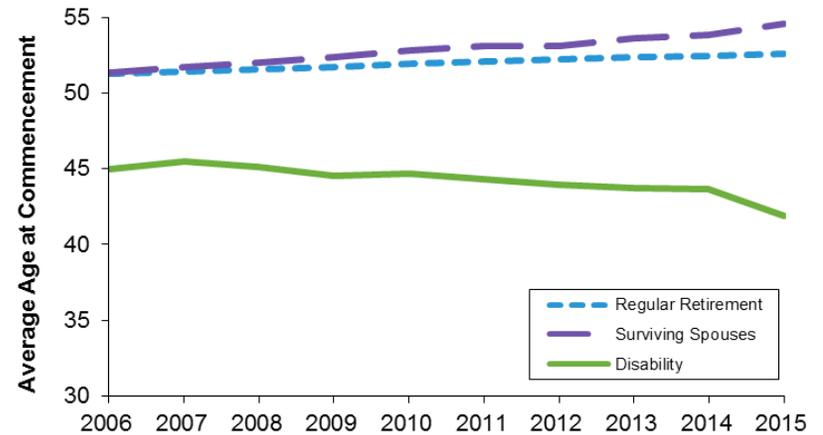
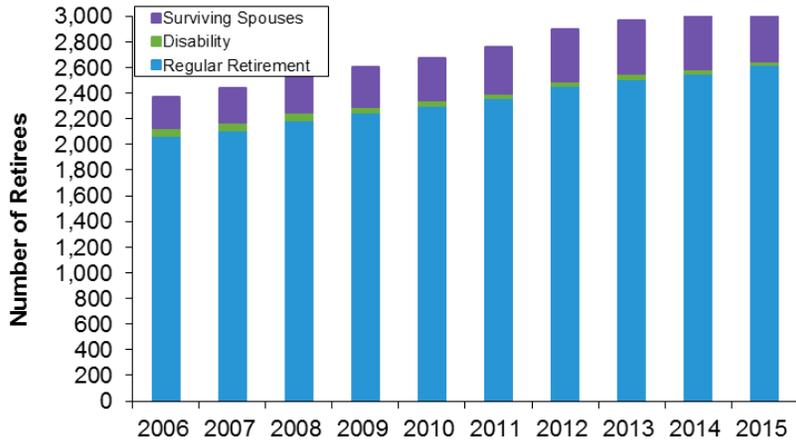
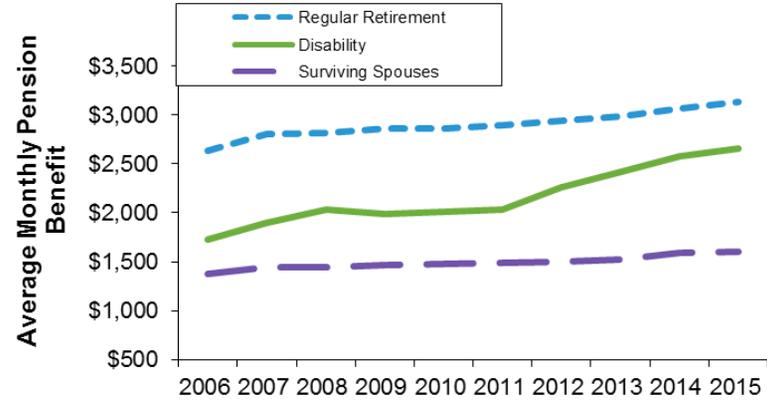
	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/14 - 6/30/15:							
Number of Recipients	\$ 430	\$ 685	\$ 1,260	\$ 2,008	\$ 3,086	\$ 4,544	\$ 6,195
Average Monthly Pension Benefit	42	284	304	213	198	169	98
Period 7/1/13 - 6/30/14:							
Average Monthly Pension Benefit	\$ 503	\$ 700	\$ 1,189	\$ 2,065	\$ 3,021	\$ 4,439	\$ 5,490
Number of Recipients	48	347	319	241	214	224	121
Period 7/1/12 - 6/30/13:							
Average Monthly Pension Benefit	\$ 414	\$ 650	\$ 1,179	\$ 1,925	\$ 2,879	\$ 4,356	\$ 5,208
Number of Recipients	59	349	365	257	206	209	132
Period 7/1/11 - 6/30/12:							
Average Monthly Pension Benefit	\$ 407	\$ 610	\$ 1,147	\$ 1,931	\$ 2,805	\$ 4,214	\$ 5,076
Number of Recipients	67	351	314	204	208	188	106
Period 7/1/10 - 6/30/11:							
Average Monthly Pension Benefit	\$ 409	\$ 633	\$ 1,150	\$ 1,876	\$ 2,690	\$ 4,294	\$ 5,226
Number of Recipients	73	352	270	227	172	205	105
Period 7/1/09 - 6/30/10:							
Average Monthly Pension Benefit	\$ 485	\$ 579	\$ 1,116	\$ 1,763	\$ 2,674	\$ 4,008	\$ 5,039
Number of Recipients	93	367	273	217	218	200	74
Period 7/1/08 - 6/30/09:							
Average Monthly Pension Benefit	\$ 534	\$ 554	\$ 988	\$ 1,708	\$ 2,693	\$ 3,718	\$ 4,723
Number of Recipients	71	341	216	171	154	159	47
Period 7/1/07 - 6/30/08:							
Average Monthly Pension Benefit	\$ 586	\$ 548	\$ 1,044	\$ 1,655	\$ 2,668	\$ 3,642	\$ 4,561
Number of Recipients	69	315	249	222	172	170	56
Period 7/16 - 6/30/07:							
Average Monthly Pension Benefit	\$ 1,026	\$ 564	\$ 1,084	\$ 1,773	\$ 2,509	\$ 3,699	\$ 4,132
Number of Recipients	97	320	263	207	190	183	44

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

## Section 5.6 Summary of All Pension Benefit Recipients

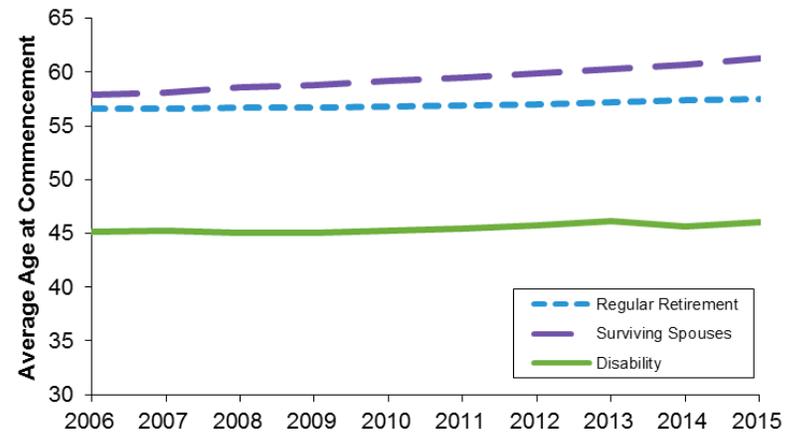
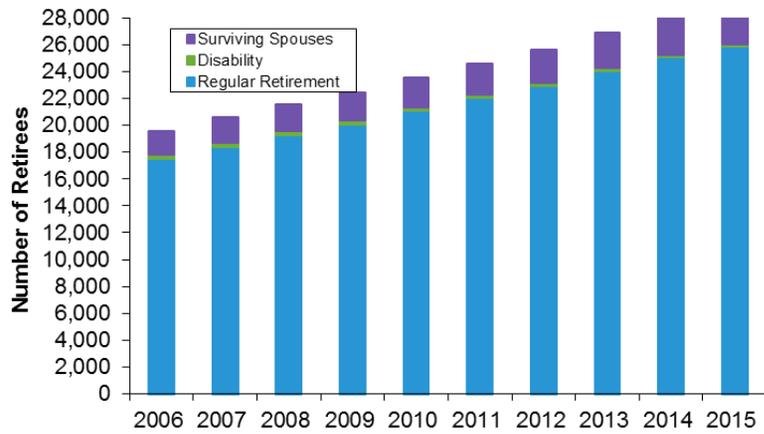
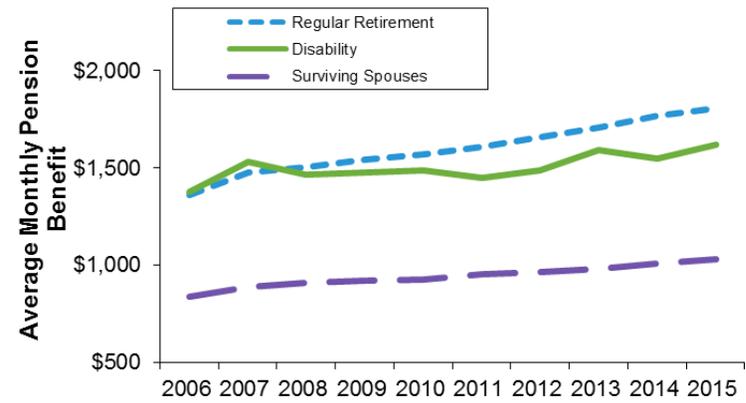
	Peace Officer/ Firefighter	Others
<b>Service Retirements</b>		
1. Number, June 30, 2014	2,550	25,058
2. Net Change During FY15	67	761
3. Number, June 30, 2015	2,617	25,819
4. Average Age At Commencement	52.60	57.51
5. Average Current Age	66.33	68.78
6. Average Monthly Pension Benefit	\$ 3,130	\$ 1,809
<b>Survivors (including surviving spouses and DROs)</b>		
1. Number, June 30, 2014	440	2,821
2. Net Change During FY15	28	196
3. Number, June 30, 2015	468	3,017
4. Average Age At Commencement	54.58	61.27
5. Average Current Age	65.33	70.71
6. Average Monthly Pension Benefit	\$ 1,598	\$ 1,032
<b>Disability Retirements</b>		
1. Number, June 30, 2014	36	194
2. Net Change During FY15	(5)	(1)
3. Number, June 30, 2015	31	193
4. Average Age At Commencement	41.91	46.07
5. Average Current Age	48.35	53.72
6. Average Monthly Pension Benefit	\$ 2,658	\$ 1,618
<b>Total</b>		
1. Number, June 30, 2014	3,026	28,073
2. Net Change During FY15	90	956
3. Number, June 30, 2015	3,116	29,029
4. Average Age At Commencement	52.79	57.82
5. Average Current Age	66.00	68.88
6. Average Monthly Pension Benefit	\$ 2,895	\$ 1,727

# Summary of All Pension Benefit Recipients Peace Officer/Firefighter



# Summary of All Pension Benefit Recipients

## Others



## Summary of All Pension Benefit Recipients – Peace Officer/Firefighter

### Annual Pension Benefit by Age

Age	Number	Total Annual Benefit	Average Annual Benefit
0 – 19	0	\$ 0	\$ 0
20 – 24	0	0	0
25 – 29	0	0	0
30 – 34	1	43,215	43,215
35 – 39	2	41,775	20,888
40 – 44	20	747,945	37,397
45 – 49	60	2,141,048	35,684
50 – 54	169	6,622,039	39,184
55 – 59	447	16,199,803	36,241
60 – 64	725	24,910,520	34,359
65 – 69	777	27,100,943	34,879
70 – 74	505	16,297,897	32,273
75+	410	14,141,983	34,493

Total 3,116 \$ 108,247,168 \$ 34,739

### Annual Pension Benefit by Years Since Commencement

Years Since Commencement	Number	Total Annual Benefit	Average Annual Benefit
0	141	\$ 5,798,567	\$ 41,125
1	103	4,074,444	39,558
2	114	4,200,879	36,850
3	109	3,451,593	31,666
4	111	3,621,819	32,629
0 – 4	578	21,147,302	36,587
5 – 9	595	17,765,373	29,858
10 – 14	718	23,505,796	32,738
15 – 19	617	21,922,368	35,531
20 – 24	280	10,154,021	36,264
25 – 29	229	10,096,525	44,090
30 – 34	65	2,643,964	40,676
35 – 39	29	882,470	30,430
40+	5	129,349	25,870

Total 3,116 \$ 108,247,168 \$ 34,739

### Years Since Benefit Commencement by Age

Age	Years Since Commencement									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	0	0	0	0	0	0	0	0	0	0
30 – 34	1	0	0	0	0	0	0	0	0	1
35 – 39	1	1	0	0	0	0	0	0	0	2
40 – 44	14	4	1	1	0	0	0	0	0	20
45 – 49	48	10	2	0	0	0	0	0	0	60
50 – 54	87	55	22	3	2	0	0	0	0	169
55 – 59	153	114	142	34	2	1	1	0	0	447
60 – 64	159	179	239	127	18	2	0	1	0	725
65 – 69	68	169	204	206	80	39	6	4	1	777
70 – 74	27	42	82	184	97	64	7	1	1	505
75+	20	21	26	62	81	123	51	23	3	410
Total	578	595	718	617	280	229	65	29	5	3,116

## Summary of All Benefit Recipients – Others

### Annual Pension Benefit by Age

Age	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0 – 19	0	\$ 0	\$ 0
20 – 24	0	0	0
25 – 29	1	6,245	6,245
30 – 34	3	56,221	18,740
35 – 39	8	108,107	13,513
40 – 44	23	333,287	14,491
45 – 49	57	857,122	15,037
50 – 54	436	11,107,058	25,475
55 – 59	2,848	72,984,154	25,626
60 – 64	7,056	160,269,309	22,714
65 – 69	7,311	150,142,378	20,537
70 – 74	5,011	95,524,332	19,063
75+	6,275	110,270,563	17,573

Total 29,029 \$ 601,658,776 \$ 20,726

### Annual Pension Benefit by Years Since Commencement

Years Since Commencement	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0	1,543	\$ 38,687,767	\$ 25,073
1	1,738	42,576,231	24,497
2	1,744	41,636,732	23,874
3	1,605	37,045,303	23,081
4	1,521	36,049,644	23,701
0 – 4	8,151	195,995,677	24,046
5 – 9	6,875	143,432,608	20,863
10 – 14	5,488	106,061,419	19,326
15 – 19	4,287	83,422,126	19,459
20 – 24	2,021	34,268,071	16,956
25 – 29	1,526	27,532,785	18,042
30 – 34	493	8,208,752	16,651
35 – 39	172	2,448,080	14,233
40+	16	289,258	18,079

Total 29,029 \$ 601,658,776 \$ 20,726

### Years Since Benefit Commencement by Age

Age	Years Since Commencement									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	1	0	0	0	0	0	0	0	0	1
30 – 34	3	0	0	0	0	0	0	0	0	3
35 – 39	5	3	0	0	0	0	0	0	0	8
40 – 44	13	6	4	0	0	0	0	0	0	23
45 – 49	27	17	8	3	1	1	0	0	0	57
50 – 54	336	57	22	14	6	1	0	0	0	436
55 – 59	2,048	682	78	24	10	5	1	0	0	2,848
60 – 64	3,264	2,781	914	76	14	6	1	0	0	7,056
65 – 69	1,550	2,120	2,561	1,036	23	12	5	4	0	7,311
70 – 74	485	810	1,243	1,817	558	84	9	5	0	5,011
75+	419	399	658	1,317	1,409	1,417	477	163	16	6,275
Total	8,151	6,875	5,488	4,287	2,021	1,526	493	172	16	29,029

## Section 5.7 Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected

### Peace Officer/Firefighter

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected				
		1	2	3	1	2	3	4	5
\$ 1 – \$ 300	57	25	32	0	36	10	0	2	9
301 – 600	162	103	59	0	78	37	25	9	13
601 – 900	162	96	65	1	89	42	9	14	8
901 – 1,200	164	104	59	1	85	40	20	11	8
1,201 – 1,500	178	130	47	1	89	43	24	9	13
1,501 – 1,800	148	114	32	2	67	42	19	15	5
1,801 – 2,100	167	126	38	3	61	50	40	8	8
2,101 – 2,400	195	145	44	6	78	70	23	17	7
2,401 – 2,700	204	180	19	5	63	81	37	17	6
2,701 – 3,000	230	210	19	1	61	105	36	17	11
3,001 – 3,300	254	234	17	3	65	114	41	16	18
3,301 – 3,600	212	193	16	3	66	95	32	14	5
3,601 – 3,900	200	190	7	3	58	98	24	14	6
3,901 – 4,200	156	154	2	0	37	81	22	13	3
Over \$4,200	627	613	12	2	128	342	82	58	17
Totals	3,116	2,617	468	31	1,061	1,250	434	234	137

#### Type of Pension Benefit

1. Regular retirement
2. Survivor payment
3. Disability

#### Option Selected

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

## Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected

### Others

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected				
		1	2	3	1	2	3	4	5
\$ 1 – \$ 300	2,002	1,548	452	2	835	403	287	80	397
301 – 600	4,865	4,160	687	18	2,289	1,258	853	280	185
601 – 900	3,967	3,384	564	19	1,867	1,025	676	238	161
901 – 1,200	3,126	2,733	368	25	1,364	858	608	176	120
1,201 – 1,500	2,687	2,365	293	29	1,172	794	468	147	106
1,501 – 1,800	2,042	1,821	189	32	818	635	402	112	75
1,801 – 2,100	1,709	1,545	142	22	679	511	333	112	74
2,101 – 2,400	1,480	1,370	92	18	550	477	299	98	56
2,401 – 2,700	1,219	1,140	65	14	453	419	235	58	54
2,701 – 3,000	1,021	963	56	2	363	342	217	59	40
3,001 – 3,300	843	807	31	5	286	330	168	31	28
3,301 – 3,600	709	681	26	2	227	271	144	44	23
3,601 – 3,900	591	575	16	0	204	222	106	42	17
3,901 – 4,200	511	497	13	1	144	190	136	29	12
Over \$4,200	2,257	2,230	23	4	661	920	487	133	56
Totals	29,029	25,819	3,017	193	11,912	8,655	5,419	1,639	1,404

#### Type of Pension Benefit

4. Regular retirement
5. Survivor payment
6. Disability

#### Option Selected

6. Whole Life Annuity
7. 75% Joint and Contingent Annuity
8. 50% Joint and Contingent Annuity
9. 66 2/3% Joint and Survivor Annuity
10. Level Income Option

## Section 5.8 Pension Benefit Recipients Added to and Removed from Rolls

### Peace Officer/Firefighter

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No.	Annual Pension Benefits		
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
June 30, 2007	138	3,930,564	67	(2,546,491)	2,439	77,020,333	9.2%	31,579
June 30, 2006	118	3,289,370	30	209,287	2,368	70,543,278	8.9%	29,790

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

## Pension Benefit Recipients Added to and Removed from Rolls

### Others

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No. <sup>1</sup>	Annual Pension Benefits <sup>1</sup>	No.	Annual Pension Benefits		
June 30, 2015	1,583	\$ 39,939,292	627	\$ 7,232,812	29,029	\$ 601,658,776	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
June 30, 2007	1,479	28,985,748	454	(14,280,390)	20,558	351,141,175	14.1%	17,081
June 30, 2006	1,494	26,193,750	384	2,265,651	19,533	307,875,037	8.4%	15,762

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

# Section 6 Basis of the Actuarial Valuation

## Section 6.1 Summary of Plan Provisions

### 1. Effective Date

January 1, 1961, with amendments through June 30, 2008. Chapter 82, 1986 Session Laws of Alaska, created a two tier retirement system. Members who were first hired under the 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 156 employers participating in the PERS, including the State of Alaska and 155 political subdivisions and public organizations.

### 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 the 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 the 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.

## 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 Teachers' Retirement System (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 Teachers' Retirement System (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.

## 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 the Teachers' Retirement System 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 in (5) 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.

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

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

Members may elect an early retirement or a joint and survivor option. Members who entered the 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. The PERS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

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

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

**Indebtedness:** Members who terminate and refund their PERS contributions are not eligible to retire, unless they return to PERS employment and pay back their refunds plus interest or accrue additional service which qualifies them for retirement. PERS refunds must be paid in full if the corresponding service is to count toward the minimum service requirements for retirement. Refunded PERS service

is included in total service for the purpose of calculating retirement benefits. However, if a member is otherwise eligible to retire, when refunds are not completely paid before retirement, benefits are actuarially reduced for life. Indebtedness balances may also be created when a member purchases qualified claimed service.

## **10. Reemployment of Retired Members**

Retirement and retiree healthcare benefits are suspended while retired members are reemployed under the 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 the PERS, Teachers' Retirement System (TRS), or the University of Alaska's Optional Retirement Plan will:

- a. forfeit the three years of incentive credits that they received;
- b. owe the 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 the PERS for all employees hired before July 1, 1986 (Tier 1) and disabled retirees. Employees hired after June 30, 1986 (Tier 2) and their surviving spouses with five years of credited service (or ten years of credited service for those first hired after June 30, 1996 (Tier 3)) must pay the full monthly premium if they are under age sixty and will receive benefits paid by the 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 and Other employees and their surviving spouses with thirty years of membership service receive benefits paid by the PERS, regardless of their age or date of hire. Peace Officers / Firefighters who are disabled between 20 and 25 years must pay the full monthly premium.

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	Amounts
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 nonoccupational disability benefits. Monthly benefits are calculated based on the member's average monthly compensation and PERS service on the date of termination from employment because of disability. Members do not earn PERS service while on nonoccupational 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 nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

**Occupational Death:** When an active member (vested or nonvested) 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 nonoccupational 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
- 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 the 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 the PERS before July 1, 1986 (Tier 1) and their survivors;
- b. members who first entered the 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. This valuation reflects a better understanding of the coverage for alternate payees under a domestic relations order.

## Section 6.2

# Description of Actuarial Methods and Valuation Procedures

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

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 2015, the asset value method recognizes 20% of the gain or loss each year, for a period of 5 years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP.

**c. Changes in Methods Since the Prior Valuation**

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

**d. Valuation of Medical 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, 2015 to June 30, 2016. Healthcare cost trend and retiree contribution increase assumptions remain unchanged from the prior year (June 30, 2014) 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 historic 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.

We analyzed HealthSmart and Aetna reporting for fiscal 2012 through 2015 and derived recommended base claims cost rates as described in the following steps:

1. 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. Dental, vision and audio claims (DVA) are excluded from data analyzed for this valuation as those are retiree-pay all benefits where rates are assumed to be self-supporting.
2. 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.
  - a. Claims and enrollment data for July 2011 (FY12) through June 2015 (FY15), with claims paid through July 2015 were provided by HealthSmart and Aetna and are included in our analysis.

Available historic management level reporting from HealthSmart does not show claims or enrollment separately for Medicare and non-Medicare plan participants, but does include overall statistics as to the percentage of claims and enrollment attributable to both groups. Historical claim level reporting and estimated impacts of Medicare coordination and plan design were used to augment cost data by Medicare status. Aetna does provide separate experience by Medicare status and will be incorporated into per capita rate development as credible experience emerges.

For the June 30, 2015 valuation, we were informed that pharmacy claims reported did not reflect rebates. Based upon aggregate rebates in proportion to 2014 incurred claims for all State of Alaska plans (active and retiree), Buck reduced reported pharmacy incurred claims by 7% to estimate the rebates for the retiree population beginning January 1, 2014. As more detailed rebate information becomes available, we will update as appropriate.

3. 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 these “no-Part A” individuals, the State is the primary payer for hospital bills and other Part A services. Thus, claims costs are higher for the no-Part A group. To date, claim experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. Therefore, higher no-Part A claims are spread across the entire retired population and have been applied to future claims of current active employees projected to retire in the future. 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 and will be lower. The smaller the no-Part A population, the more accrued liabilities will decrease.

Based on census data received from Aetna, about 0.35% of the current retiree (including dependents) 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.

4. Develop estimated Retiree Drug Subsidy reimbursement - Actual subsidy payments to the State were received for CY2007-CY2014, and the first six months of CY2015. Buck obtained this information based upon recorded and available information in the RDS Subsidy website. The projected subsidy for FY 2016 was determined based on the historic 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.
5. Adjust for network change – based upon projections for network savings of 3% (improved discounts, pharmacy rebates etc.), adjustments were applied to claims in the experience base prior to January 1, 2014.
6. Adjust for claim fluctuation, anomalous experience, etc. – explicit adjustments are often made for anticipated large claims or other anomalous experience. Because we accounted for both Alaska-specific and national trend factors as described below, we did not make any additional smoothing adjustments. Buck compared data utilized to alternate sources provided by the State and Aetna to assess accuracy and reasonableness of data.
7. The steps above result in separate incurred claims cost rates for medical and prescription benefits for non-Medicare, Medicare Part B only and Medicare Part A&B members for the past four fiscal years. Medical claims cost rates reflect differing average ages and levels of Medicare coordination for each group. Prescription claims cost rates reflect differing average ages. We deemed incurred claim data from HealthSmart and Aetna provided data to be complete for fiscal 2012, 2013 and 2014. Fiscal 2015 medical claim data was completed using a factor of 0.91; fiscal 2015 prescription claim data was deemed complete. These factors were derived from completion patterns through July 2015 for AlaskaCare retiree claims. Incurred claim cost rates are projected forward to the valuation year using a blend of Alaska plan-specific trend and national trend rates over the same period, with Alaska experience receiving 75% weight, national trend 25%. These weighted trend factors for this purpose for the current valuation are as follows:

Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year			
Experience Period	Medical	Prescription	Weighting Factors
FY2011 to FY2012	8.3%	5.1%	10%
FY2011 to FY2013	8.9%	7.1%	20%
FY2012 to FY2014	7.7%	6.5%	35%
FY2013 to FY2015	6.4%	7.1%	35%

We have some run-out claims data, thus less estimation for complete claims in fiscal 2015, so we increased the credibility weight slightly for the most recent period. Incurred but not reported claim liability is separately determined and accounted for outside of this valuation.

For per capita claim cost development, medical claims were trended on a composite basis for pre-Medicare vs. Medicare due to limited reporting as noted in #2 above. Trend assumptions used for rate development are assessed annually and as additional/improved reporting becomes available, we will incorporate into rate development as appropriate.

All claims cost rates developed provided in management level reporting have been compared to similar rates developed from provided experience data to assess reasonableness data.

8. Develop separate administration costs – no adjustments were made for internal administrative costs. Third party retiree plan administration fees for fiscal 2016 are based upon rates in effect at the midpoint of the year, January 2016 as agreed upon in the Aetna contracts. We also include PCORI fees under the Affordable Care Act. We estimated the 2016 rates based upon the 2014 rate of \$2.08 per member per year. The annual per participant per year rate for medical and prescription benefits (including PCORI) is \$194.18.
9. Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact of the following provisions; however, none of the impacts other than noted fees have been included in the valuation results. Legislation passed in December 2015 deferred the effective date of this tax until 2020; though thresholds still start indexing in 2018. This did not change our estimated impact of the tax.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions are required. 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.

The Plan will be subject to the high cost plan excise tax (Cadillac tax); however, the impact is not expected to significantly impact the OPEB liability and not until far into the future. Based upon guidance available at the time of disclosure, Buck estimated the tax based upon a blended test of pre and post-Medicare projected costs and enrollment projections.

- A blended test compares a weighted average per capita cost (based upon proportions of pre/post Medicare eligible enrollments) to the thresholds in each projection year. Projected enrollment was based upon the 2015 enrollment data provided by Aetna, and 2015 valuation headcount projections. 2015 valuation census projections reflected an increase in the proportion of retirees that are Medicare eligible.

- We included administrative fees and applied Retiree Drug Subsidy reimbursements to the Medicare rates. We tested the results excluding the impact of the Retiree Drug Subsidy and results are still well below 0.01% of accrued liability.
- We assumed claim costs would increase according to valuation trend assumptions from the June 30, 2014 valuation, and that the cost thresholds would increase at 3.0%.
- Buck determined the impact to be less than \$750,000 (0.01%) of the June 30, 2015 healthcare actuarial accrued liability. In addition, any additional per capita costs due to the tax were not expected to significantly impact trend over the long term.

Patient-centered outcomes research fees are included in the admin fees. As Transitional Reinsurance fees are only in effect until 2016, we excluded these for valuation purposes.

We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

The following table summarizes data sources and assumptions and the relative impact changes in each have on healthcare cost projections for 2015 as compared to 2014:

Healthcare Cost Rate Data Source or Assumption Change, 2014 vs. 2013	Gain / Loss Impact on 2014 Valuation Results
Claim lag specific to medical and prescription experience	Negligible
Individual claims level data	<ul style="list-style-type: none"> <li>– No impact on cost data used for 2015, though potentially a source of future modifications</li> <li>– No impact on morbidity assumptions used for 2015, though potentially a source of future modifications</li> </ul>
Explicit TPA fees	Negligible
Actual RDS payments received	Negligible
Aggregate claims data	Gain due to experience; mainly Medicare eligible, but dampened by weighting methodology
Census Data*	Gain due to updated census

\* We have prepared our valuation based on the participant census data that was readily available. Certain pension fields have been used to clarify the retiree medical data provided. This serves as a proxy until additional retiree medical data can be provided.

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. This pension census data included retiree medical enrollment information that indicated the retirement system and an indication regarding eligibility for system-paid benefits.
- Certain adjustments and assumptions were made to determine the number of people enrolled in retiree medical:
  - Where there is an indication of non-system paid health benefits, we reflected the coverage level (e.g. single vs. couple) indicated on the pension data in valuing the retiree medical plan.

- Where system-paid health benefits coverage is indicated, the premium dollar amount indicated on the data is a composite rate that does not specify the number of people enrolled.
- Buck understands that retiree medical coverage/eligibility is in place while a pension benefit is payable.
- For individuals who are receiving a pension benefit, Buck references the pension benefit payment form (single life annuity, joint & survivor, etc.) along with marital status to determine the number of people to value for medical purposes:
  - Where there is a single life-annuity indicated and the marital status is single, we valued one member for health coverage.
  - Where there is a single life-annuity indicated and the marital status is married, we valued two members until the retiree dies. Upon the retiree's death, medical coverage for the spouse is assumed to cease and that spouse is no longer valued.
  - Where there is a joint & survivor annuity, we assumed a member and spouse are covered and upon the retiree's death, health coverage is assumed to continue to the surviving spouse.
- 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: Since pension data is used to estimate health care coverage, the retiree medical liabilities and resultant figures regarding funded status and proposed employer contribution rates may be different if we had data that could directly determine the level of health coverage for each retiree.
- Unresolved matters: We have received retiree medical enrollment data, but we have not completed the reconciliation of retiree medical enrollment data to the retiree medical valuation census data. Based on information provided to us, it appears that our valuation may assume that a greater number of individuals are enrolled in the retiree medical coverage than are indicated in the enrollment statistics provided by the carrier. This is because our data assumptions for use of pension data as a proxy for individual retiree medical coverage conservatively include in the valuation any potential dependent. The carrier enrollment information with lower enrollment figures are conservatively used to develop per capita costs, resulting in higher per capita costs than if the counts from the proxy data were used.
- Potential uncertainty or bias: Until we complete the comparison between retiree medical enrollment and the proxy data, we cannot specify the magnitude of the difference. There is potential for bias, and we believe there is conservatism in our methodology. That is, it is possible there are more people included in the valuation than are enrolled in the retiree medical plan.

The following table summarizes the monthly premium per benefit recipient since 1977.

Time Period	Monthly Premium Per Retiree For Health Coverage	Annual Percentage Change	Average Compound Annual Increase Since FY78
2/1/77-1/31/78	\$ 57.64	66%	- -
2/1/78-1/31/79	69.10	20%	20%
2/1/79-1/31/80	64.70	-6%	6%
2/1/80-1/31/81	96.34	49%	19%
2/1/81-1/31/82	96.34	0%	14%
2/1/82-1/31/83	115.61	20%	15%
2/1/83-1/31/84	156.07	35%	18%
2/1/84-1/31/85	191.85	23%	19%
2/1/85-1/31/86	168.25	-12%	14%
2/1/86-1/31/87	165.00	-2%	12%
2/1/87-1/31/88	140.25	-15%	9%
2/1/88-1/31/89	211.22	51%	13%
2/1/89-1/31/90	252.83	20%	13%
2/1/90-1/31/91	243.98	-4%	12%
2/1/91-1/31/92	243.98	0%	11%
2/1/92-1/31/93	226.90	-7%	10%
2/1/93-1/31/94	309.72	37%	11%
2/1/94-1/31/95	336.05	9%	11%
2/1/95-1/31/96	350.50	4%	11%
2/1/96-1/31/97	350.50	0%	10%
2/1/97-1/31/98	368.00	5%	10%
2/1/98-12/31/98	368.00	0%	9%
1/1/99-12/31/99	442.00	20%	10%
1/1/00-12/31/00	530.00	20%	10%
1/1/01-12/31/01	610.00	15%	10%
1/1/02-12/31/02	668.00	10%	10%
1/1/03-12/31/03	720.00	8%	10%
1/1/04-12/31/04	806.00	12%	10%
1/1/05-12/31/05	850.00	5%	10%
1/1/06-12/31/06	876.00	3%	10%
1/1/07-12/31/07	876.00	0%	10%
1/1/08-12/31/08	876.00	0%	9%
1/1/09-12/31/09	937.00	7%	9%
1/1/10-12/31/10	1,068.00	14%	9%
1/1/11-12/31/11	1,176.00	10%	9%
1/1/12-12/31/12	1,200.00	2%	9%
1/1/13-12/31/13	1,223.00	2%	9%
1/1/14-12/31/14	1,223.00	0%	9%
1/1/15-12/31/15	1,223.00	0%	8%
1/1/16-12/31/16	1,154.04	-6%	8%

As shown in the table above, the monthly retiree medical premium for the January 1, 2016 to December 31, 2016 time period will remain at \$1,154. This represents a decrease of 6% from the previous year's medical premium. The health cost trend rates used for this valuation are described in Section 6.3. Also over the last ten years, the increase in the premium rate has been about 2.8% compounded annually. Segal developed and provided 2016 retiree contribution rates.

## Description of Actuarial Methods and Valuation Procedures

### June 30, 2015 Valuation – FY 2016 Claims Cost Rates

	Medical			Prescription Drugs			Total
	Pre-Medicare	Medicare A&B	Medicare B Only	Pre-Medicare	Medicare A&B	Medicare B Only	
<b>Fiscal 2012 Incurred Claims</b>	<b>\$ 233,811,415</b>	<b>\$ 71,498,254</b>	<b>\$ 1,587,430</b>	<b>\$ 50,508,869</b>	<b>\$ 95,412,095</b>	<b>\$ 590,097</b>	<b>\$ 453,408,160</b>
Membership	29,500	33,631	208	29,500	33,631	208	63,339
Paid Claims Cost Rate	\$ 7,926	\$ 2,126	\$ 7,632	\$ 1,712	\$ 2,837	\$ 2,837	\$ 7,158
Trend to FY2016	1.353	1.353	1.353	1.285	1.285	1.285	
FY 2016 Paid Cost Rate	\$ 10,721	\$ 2,876	\$ 10,323	\$ 2,200	\$ 3,645	\$ 3,645	\$ 9,526
Manual Adjustment*	0.970	0.970	0.970	0.967	0.967	0.967	
<b>FY 2016 Incurred Cost Rate</b>	<b>\$ 10,399</b>	<b>\$ 2,789</b>	<b>\$ 10,014</b>	<b>\$ 2,127</b>	<b>\$ 3,525</b>	<b>\$ 3,525</b>	<b>\$ 9,231</b>
<b>Fiscal 2013 Incurred Claims</b>	<b>\$ 239,986,289</b>	<b>\$ 73,469,050</b>	<b>\$ 1,901,151</b>	<b>\$ 52,633,265</b>	<b>\$ 99,470,696</b>	<b>\$ 569,334</b>	<b>\$ 468,029,785</b>
Membership	27,037	37,913	217	27,037	37,913	217	65,167
Paid Claims Cost Rate	\$ 8,876	\$ 1,938	\$ 8,761	\$ 1,947	\$ 2,624	\$ 2,624	\$ 7,182
Trend to FY2016	1.249	1.249	1.249	1.222	1.222	1.222	
FY 2016 Paid Cost Rate	\$ 11,086	\$ 2,420	\$ 10,942	\$ 2,379	\$ 3,206	\$ 3,206	\$ 8,907
Manual Adjustment*	0.970	0.970	0.970	0.967	0.967	0.967	
<b>FY 2016 Incurred Cost Rate</b>	<b>\$ 10,754</b>	<b>\$ 2,348</b>	<b>\$ 10,614</b>	<b>\$ 2,301</b>	<b>\$ 3,101</b>	<b>\$ 3,101</b>	<b>\$ 8,631</b>
<b>Fiscal 2014 Incurred Claims</b>	<b>\$ 222,724,835</b>	<b>\$ 68,391,357</b>	<b>\$ 2,049,847</b>	<b>\$ 41,879,298</b>	<b>\$ 121,714,936</b>	<b>\$ 640,931</b>	<b>\$ 457,401,204</b>
Membership	24,507	42,348	223	24,507	42,348	223	67,078
Paid Claims Cost Rate	\$ 9,088	\$ 1,615	\$ 9,192	\$ 1,709	\$ 2,874	\$ 2,874	\$ 6,819
Trend to FY2016	1.146	1.146	1.146	1.141	1.141	1.141	
FY 2016 Paid Cost Rate	\$ 10,418	\$ 1,851	\$ 10,538	\$ 1,950	\$ 3,280	\$ 3,280	\$ 7,804
Manual Adjustment*	0.985	0.985	0.985	0.984	0.984	0.984	
<b>FY 2016 Incurred Cost Rate</b>	<b>\$ 10,262</b>	<b>\$ 1,824</b>	<b>\$ 10,380</b>	<b>\$ 1,918</b>	<b>\$ 3,225</b>	<b>\$ 3,225</b>	<b>\$ 7,683</b>
<b>Fiscal 2015 Incurred Claims</b>	<b>\$ 221,696,106</b>	<b>\$ 72,331,402</b>	<b>\$ 1,567,300</b>	<b>\$ 61,185,727</b>	<b>\$ 129,308,154</b>	<b>\$ 711,515</b>	<b>\$ 486,800,204</b>
Membership	24,046	43,980	242	24,046	43,980	242	68,268
Paid Claims Cost Rate	\$ 9,220	\$ 1,645	\$ 6,476	\$ 2,545	\$ 2,940	\$ 2,940	\$ 7,131
Trend to FY2016	1.064	1.064	1.064	1.071	1.071	1.071	
FY 2016 Paid Cost Rate	\$ 9,814	\$ 1,751	\$ 6,894	\$ 2,725	\$ 3,149	\$ 3,149	\$ 7,707
Manual Adjustment*	1.000	1.000	1.000	1.000	1.000	1.000	
<b>FY 2016 Incurred Cost Rate</b>	<b>\$ 9,814</b>	<b>\$ 1,751</b>	<b>\$ 6,894</b>	<b>\$ 2,725</b>	<b>\$ 3,149</b>	<b>\$ 3,149</b>	<b>\$ 7,707</b>
Weighted Average 7/1/2015-6/30/2016 Incurred Claims Cost Rates:							
At average age	\$ 10,217	\$ 1,999	\$ 9,170	\$ 2,298	\$ 3,204	\$ 3,204	\$ 8,036
At age 65	\$ 11,724	\$ 1,461	\$ 6,700	\$ 2,753	\$ 2,753	\$ 2,753	\$ 7,516

\* "Manual Adjustment" is the estimated savings due to the change in claims administrator effective January 1, 2014.

## Description of Actuarial Methods and Valuation Procedures

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

Below are the results of this analysis:

### Distribution of Per Capita Claims Cost by Age for the Period July 1, 2015 through June 30, 2016

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare Retiree Drug Subsidy
45	\$ 6,493	\$ 6,493	\$ 1,452	\$ -
50	7,346	7,346	1,725	-
55	8,311	8,311	2,048	-
60	9,871	9,871	2,375	-
65	1,461	6,700	2,753	496
70	1,778	8,152	2,966	534
75	2,111	9,679	3,163	570
80	2,274	10,427	3,243	584

## Section 6.3 Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2015 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 as of June 30, 2013.

Investment Return / Discount Rate	8.00% per year (geometric), compounded annually, net of expenses.
Salary Scale	Inflation – 3.12% per year. Productivity – 0.50% per year. See Table 1 for salary scale rates
Payroll Growth	3.62% per year. (Inflation + Productivity)
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.
Mortality (Pre-termination)*	Based upon 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/Firefighters, 50% of the time for Others.
Mortality (Post-termination)*	96% of all rates of the RP-2000 table, 2000 Base Year projected to 2018 with Projection Scale BB.
Total Turnover	Based upon the 2010-2013 actual withdrawal experience. (See Tables 4 and 5.)
Disability	Incidence rates based on 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/Firefighters, 50% of the time for Others.
Retirement	Retirement rates based upon the 2010-2013 actual experience in accordance with Tables 7 and 8. Deferred vested members are assumed to retire at their earliest unreduced retirement date for Others. For Peace Officer/Firefighter, Tier 1 deferred vested members are assumed to retire at age 55 and Tiers 2 and 3 deferred vested members are assumed to retire at age 60. The modified cash refund annuity is valued as a three-year certain and life annuity.
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% female members are assumed to be married.

\*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%.

Dependent Children	Benefits to dependent children have been valued assuming members who are married and between the ages of 25 and 45 have two dependent children.															
Contribution Refunds	For others, 10% of terminating members with vested benefits are assumed to have their contributions refunded. For Peace Officers/Firefighters, 15% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with non-vested benefits are assumed to have their contributions refunded.															
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.															
COLA	Of those benefit recipients who are eligible for the COLA, 70% of Others and 65% of Peace Officers/Firefighters are assumed to remain in Alaska and receive the COLA.															
Post-Retirement Pension Adjustment	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.															
Expenses	The investment return assumption is net of all expenses.															
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.															
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.															
Per Capita Claims Cost	Sample claims cost rates adjusted to age 65 for FY16 medical and prescription are shown below: <table border="1"> <thead> <tr> <th></th> <th>Medical</th> <th>Prescription Drugs</th> </tr> </thead> <tbody> <tr> <td>Pre-Medicare</td> <td>\$ 11,724</td> <td>\$ 2,753</td> </tr> <tr> <td>Medicare Parts A &amp; B</td> <td>\$ 1,461</td> <td>\$ 2,753</td> </tr> <tr> <td>Medicare Part B Only</td> <td>\$ 6,700</td> <td>\$ 2,753</td> </tr> <tr> <td>Medicare Part D</td> <td>N/A</td> <td>\$ 496</td> </tr> </tbody> </table>		Medical	Prescription Drugs	Pre-Medicare	\$ 11,724	\$ 2,753	Medicare Parts A & B	\$ 1,461	\$ 2,753	Medicare Part B Only	\$ 6,700	\$ 2,753	Medicare Part D	N/A	\$ 496
	Medical	Prescription Drugs														
Pre-Medicare	\$ 11,724	\$ 2,753														
Medicare Parts A & B	\$ 1,461	\$ 2,753														
Medicare Part B Only	\$ 6,700	\$ 2,753														
Medicare Part D	N/A	\$ 496														
Third Party Administrator Fees	\$194.18 per person per year; assumed trend rate of 5% per year.															
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.															

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**Health Cost Trend**

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

	<b>Medical Pre-65</b>	<b>Medical Post-65</b>	<b>Prescription Drugs</b>
FY16	9.4%	5.9%	5.70%
FY17	8.8%	5.8%	5.40%
FY18	8.2%	5.7%	5.10%
FY19	7.6%	5.6%	4.80%
FY20	7.0%	5.6%	4.60%
FY21	6.5%	5.6%	4.40%
FY22	6.0%	5.6%	4.20%
FY25	5.6%	5.6%	4.00%
FY50	4.4%	4.0%	4.00%
FY100	4.4%	4.0%	4.00%

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

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**Aging Factors**

<b>Age</b>	<b>Prescription</b>	
	<b>Medical</b>	<b>Drugs</b>
0-44	2.0%	4.5%
45-54	2.5%	3.5%
55-64	3.5%	3.0%
65-73	4.0%	1.5%
74-83	1.5%	0.5%
84-93	0.5%	0.0%
94+	0.0%	0.0%

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 FY16 contributions based on monthly rates shown below for calendar 2015 and 2016 are assumed based on the coverage category for current retirees. The composite rate shown is used for current active and inactive members in tier 2 or 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled.

Coverage Category	Calendar 2016 Annual Contribution	Calendar 2016 Monthly Contribution	Calendar 2015 Monthly Contribution
Retiree Only	\$ 9,324	\$ 777	\$ 823
Retiree and Spouse	\$ 18,648	\$ 1,554	\$ 1,647
Retiree and Child(ren)	\$ 13,164	\$ 1,097	\$ 1,163
Retiree and Family	\$ 22,500	\$ 1,875	\$ 1,987
Composite	\$ 13,848	\$ 1,154	\$ 1,223

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, 6.6% is applied to the FY16 retired member medical contributions to get the FY17 retired member medical contributions.

Trend Assumptions	
FY16	6.6%
FY17	6.2%
FY18	5.8%
FY19	5.4%
FY20	5.0%
FY21	4.7%
FY25	4.1%
FY50	4.0%
FY100	4.0%

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

Healthcare Participation

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

**Table 1  
Alaska PERS  
Salary Scale**

**Peace Officer/Firefighter:**

Years of Service	% Increase
0	9.66%
1	8.66%
2	7.16%
3	7.03%
4	6.91%
5	6.41%
6	5.66%
7	4.92%
8	4.92%
9	4.92%
10	4.92%
11	4.92%
12	4.92%
13	4.92%
14	4.92%
15	4.92%
16	4.92%
17	4.92%
18	4.92%
19	4.92%
20+	4.92%

**Others:**

Years of Service	% Increase
0	8.55
1	7.36
2	6.35
3	6.11
4	5.71
5+	Age based

Age	% Increase	Age	% Increase
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%		

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

Age	Male	Female	Age	Male	Female
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

**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

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

**Peace Officer/Firefighter:**

Years of Service	Male (rounded)	Female (rounded)
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**

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

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

Others:

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

**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

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

Age at Retirement	Reduced	Unreduced	
	Unisex Rates	Male	Female
<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

**Table 8**  
**Alaska PERS Others**  
**Retirement Table**

Age at Retirement	Reduced		Unreduced	
	Male	Female	Male	Female
<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

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

Age	Male	Female	Age	Male	Female
≤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

# Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension or postemployment benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension or postemployment plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Projected Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension or postemployment benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution (ARC)	Disclosure measure of annual postretirement benefit cost under GASB 43 and 45.
GASB 25 and 27	Governmental Accounting Standards Board Statement Number 25, which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 27, which specifies Employer reporting of Pension Cost.
GASB 43 and 45	Governmental Accounting Standards Board Statement Number 43, which specifies how the ARC is to be calculated, and Number 45, which specifies Employer reporting of Other Postemployment Benefit (OPEB) Cost.
GASB 67 and 68	Governmental Accounting Standards Board Statement Number 67 amends Number 25 effective for the fiscal year beginning after June 15, 2013, and defines new financial reporting requirements for public pension plans.  Governmental Accounting Standards Board Statement Number 68 amends Number 27 effective for fiscal years beginning after June 15, 2014 and defines new accounting and financial reporting requirements for employers sponsoring public pension plans.
GASB 74 and 75	Governmental Accounting Standards Board Statement Number 74 amends Number 43 effective for the fiscal year beginning after June 15, 2016, and defines new financial reporting requirements for public postemployment benefit plans.  Governmental Accounting Standards Board Statement Number 75 amends Number 45 effective for fiscal years beginning after June 15, 2017, and defines new accounting and financial reporting requirements for employers sponsoring public postemployment benefit plans.
Liquidity Factor	Is calculated as the average annual Fair Value of Assets divided by the total annual benefit payments. This measures the approximate number of years that assets will cover benefit payments without contributions or investment return. Trend shows solvency risk.

Maturity Ratio	The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
Rate Payroll	Members' earnings used to determine contribution rates.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.
Valuation Payroll	Members' earnings used to determine Normal Cost and Actuarial Accrued Liability.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment