ALASKA RETIREMENT MANAGEMENT BOARD

Actuarial Committee Meeting

June 11, 2024

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD

ACTUARIAL COMMITTEE MEETING

June 11, 2024 – 1:00 PM

Atwood Conference Center, Rooms 102 & 104
550 W. 7th Ave., Anchorage, AK

Videoconference:	Join the meeting now Meeting ID: 245 181 744 563 Passcode: dpZy3y	**Teleconference:** Call-In #: 1-907-202-7104 Code: 216 821 463#

I. **Call to Order**

II. **Roll Call**

III. **Public Meeting Notice**

IV. **A. Approval of Agenda**
~~**B. Approval of Minutes – March 5, 2024**~~ *deferred to 9/17 meeting*

V. **Public / Member Participation, Communications and Appearances**
*(Three Minute Limit. Callers may need to press *6 to unmute.)*

VI. **Actuarial Review & Certification and Acceptance of FY2023 Valuations and Reports**

A. Introduction
Sandra Ryan, Chair

B. Explanation of PERS & TRS Projections
David Kershner, Principal, Consulting Actuary, Buck

C. Actuarial Review
Paul Wood, Actuary, Senior Consultant & Team Leader, GRS
Bill Detweiler, Consultant

D. Action Items

1. Resolution 2024-05 Relating to a Change in Actuarial Methodology for the Public Employees' Retirement System and Teachers' Retirement System

2. Committee Recommendation of Board Acceptance of GRS Certification for June 30, 2023, PERS & TRS DB / DCR valuation reports and JRS / NGNMRS roll-forward valuation report

3. Committee Recommendation of Board Acceptance of Buck Valuations for June 30, 2023, PERS & TRS DB / DCR valuation reports and JRS / NGNMRS roll-forward valuation report

VII. **Committee Performance – Self Assessment** *(per Charter)*

VIII. **Review of Committee Charter** *(per Charter)*

IX. Future Meetings

A. Calendar Review

1. 2024 Actuarial Committee Meeting Calendar
2. 2025 DRAFT Actuarial Committee Meeting Calendar

B. Agenda Items

C. Requests / Follow-Ups

X. Other Matters to Properly Come Before the Committee

XI. Public / Members Comments

*(Three Minute Limit. Callers may need to press *6 to unmute.)*

XII. Adjournment

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State of Alaska Retirement Systems

Presentation to ARMB Actuarial Committee

Proposed Change in Methodology for Calculating Contribution Rates for PERS and TRS

June 11, 2024

Background

- PERS and TRS are funded by investment income and member/employer/State contributions.
- Member contributions are set by Alaska Statutes.
- Employer and State contributions are determined as follows:
  - PERS non-State employers contribute 22% of total pay. TRS employers contribute 12.56% of total pay. A portion of these employer contribution rates are deposited to the DCR trusts, and the remainder is deposited to the DB trusts.
  - The Additional State Contributions are based on the excess of the actuarially determined contributions for the DB plans over the employer contributions deposited to the DB trusts.
  - Per SB 55 which became effective July 1, 2021, the State pays the actuarially determined contributions for PERS based on the payroll of State employees.

Background (cont'd)

- Timing of employer and State contributions deposited to the DB trusts:
  - Employer contributions – throughout the fiscal year every payroll period
  - Additional State Contributions – generally at the beginning of the fiscal year
- The costs for the year (Normal Cost and unfunded liability amortization amounts) are determined at the beginning of the fiscal year, so they accrue interest for the full year.
- Because the employer contributions are not contributed at the beginning of the year, there is a loss of ½ year's worth of interest each year.
  - Based on the layered amortization method that was adopted in 2018, each of these "contribution timing" losses is separately amortized (funded) over a 25-year period.
  - This extends the year in which the DB pension trusts are projected to reach 100% funding*.

* The DB healthcare trusts are projected to remain above 100% funded assuming no future adverse experience, so we have focused on the DB pension trusts in this presentation.

Proposed Change in Methodology

- We propose changing the methodology that is used to determine employer contributions:
  - Add a ½ year interest adjustment to the Normal Cost and unfunded liability amortizations that are used to calculate the actuarially determined contribution rates for PERS and TRS.
  - Since the Additional State Contributions are deposited to the DB trusts at the beginning of the year, the ½ year interest adjustment would be backed out when calculating the Additional State Contributions.
  - **In effect, we will be funding the ½ year interest loss from employer contributions in the year the loss occurs, rather than funding the loss over 25 years.**
- Impact of making this change:
  - — The actuarially determined contribution rates for the current year will be ***increased***.
  - — The pension trusts will be projected to reach 100% funding ***sooner***.

Impact of Proposed Change – FY26 and Beyond

- Estimated impact of the proposed change in methodology (assuming post-6/30/23 experience matches the assumptions):
  - Slide 6: FY26 contribution rates
  - Slides 7 and 8: State contributions for FY26-FY39
  - Slide 9: Pension funded ratios
- FY26 contribution rates on slide 6 are expressed as a percentage of projected total payroll (DB/DCR).

Impact on FY26 State DB Contributions

($000's)

The color-shaded cells highlight the NC rates and amortization rates that are increased by ½ year of interest.

		PERS				TRS	
		Non-State Employers		State as Employer			
		Current	Proposed	Current	Proposed	Current	Proposed
1.	DB/DCR Payroll	$ 1,306,175	$ 1,306,175	$ 1,292,661	$ 1,292,661	$ 767,012	$ 767,012
2.	Pension Normal Cost Rate						
2a.	• Total	3.72%	3.85%	3.72%	3.85%	4.58%	4.74%
2b.	• Member Rate	(1.71%)	(1.71%)	(1.71%)	(1.71%)	(2.53%)	(2.53%)
2c.	• Employer Rate [2a + 2b]	2.01%	2.14%	2.01%	2.14%	2.05%	2.21%
3.	Healthcare Normal Cost Rate	1.90%	1.97%	1.90%	1.97%	2.07%	2.15%
4.	Total Normal Cost Rate [2c + 3]	3.91%	4.11%	3.91%	4.11%	4.12%	4.36%
5.	Unfunded Liability Amortization Rate	18.27%	18.92%	18.27%	18.92%	20.82%	21.57%
6.	DB Contribution Rate [4 + 5]	22.18%	23.03%	22.18%	23.03%	24.94%	25.93%
7.	DCR Contribution Rate	6.90%	6.90%	6.90%	6.90%	7.65%	7.65%
8.	DB/DCR Contribution Rate [6 + 7]	29.08%	29.93%	29.08%	29.93%	32.59%	33.58%
9.	Statutory Employer Contribution Rate	22.00%	22.00%	n/a	n/a	12.56%	12.56%
10.	Additional State Contribution Rate						
10a.	• Before back out 1/2 year interest adjustment	7.08%	7.93%	n/a	n/a	20.03%	21.02%
10b.	• After back out 1/2 year interest adjustment	n/a	7.66%	n/a	n/a	n/a	20.30%
11.	State DB Contribution	$ 92,477	$ 100,053	$ 286,712	$ 297,699	$ 153,633	$ 155,703
	• **Increase**		**$ 7,576**		**$ 10,987**		**$ 2,070**

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Impact on Projected Additional State Contributions
($000's)

	PERS			TRS		
Fiscal Year	**Current**	**Proposed**	**Incr/(Decr)**	**Current**	**Proposed**	**Incr/(Decr)**
2026	$ 92,477	$ 100,053	$ 7,576	$ 153,633	$ 155,703	$ 2,070
2027	105,622	112,453	6,831	168,992	170,776	1,784
2028	108,660	114,748	6,088	172,484	173,897	1,413
2029	112,308	117,649	5,341	176,420	177,613	1,193
2030	115,980	120,575	4,595	180,658	181,627	969
2031	119,881	123,717	3,836	184,947	185,849	902
2032	124,298	127,496	3,198	189,609	190,193	584
2033	128,684	131,368	2,684	194,454	194,879	425
2034	133,352	135,220	1,868	199,377	199,725	348
2035	137,944	139,118	1,174	204,588	204,854	266
2036	142,443	142,893	450	209,982	209,982	-
2037	147,706	147,247	(459)	215,656	215,563	(93)
2038	152,473	151,533	(940)	221,432	221,242	(190)
2039	157,817	155,893	(1,924)	227,480	227,092	(388)
Total	**$ 1,779,645**	**$ 1,819,963**	**$ 40,318**	**$ 2,699,712**	**$ 2,708,995**	**$ 9,283**

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Impact on PERS State-as-an-Employer Contributions
($000's)

Fiscal Year	Current	Proposed	Incr/(Decr)
2026	$ 286,712	$ 297,699	$ 10,987
2027	297,596	308,387	10,791
2028	298,900	308,986	10,086
2029	301,455	310,838	9,383
2030	304,608	313,437	8,829
2031	308,601	316,737	8,136
2032	313,309	321,016	7,707
2033	318,592	325,861	7,269
2034	324,526	331,068	6,542
2035	331,272	337,372	6,100
2036	338,325	343,815	5,490
2037	346,339	351,040	4,701
2038	354,365	358,707	4,342
2039	363,320	366,970	3,650
Total	**$ 4,487,920**	**$ 4,591,933**	**$ 104,013**

Impact on Projected Pension Funded Ratios

	PERS		TRS	
	6/30/39	**FY Reach 100%**	**6/30/39**	**FY Reach 100%**
Current	92%	FY83*	95%	FY52
Proposed	94%	FY51	96%	FY51

* Reflects a change in the amortization period to 15 years beginning in FY61 and 5 years beginning in FY71.

Actuarial Certification

The purpose of this presentation is to provide the ARMB Actuarial Committee with details regarding a proposed change to the methodology that is used to project contribution rates for PERS and TRS.

All calculations are based on the data, assumptions, methods, and plan provisions described in the June 30, 2023 actuarial valuation reports, except as noted in this presentation. The June 30, 2023 actuarial valuation reports contain disclosures required by Actuarial Standards of Practice.

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e., purchase annuities) for a portion or all of its liabilities.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the actuarial assumptions, changes in assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

The results were prepared under the direction of David Kershner and Bob Besenhofer, both of whom meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice.

David Kershner
FSA, EA, MAAA, FCA
Principal, Retirement

Robert Besenhofer
ASA, MAAA, FCA
Director, Health

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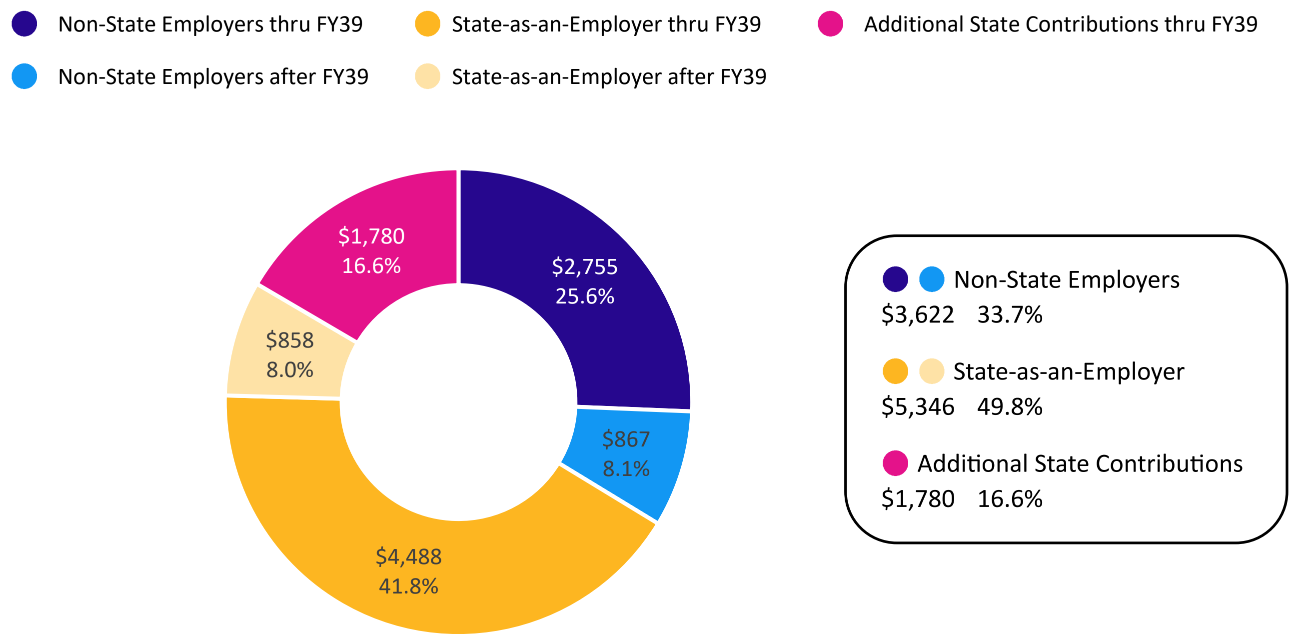
Handout provided at the 6/11 meeting.

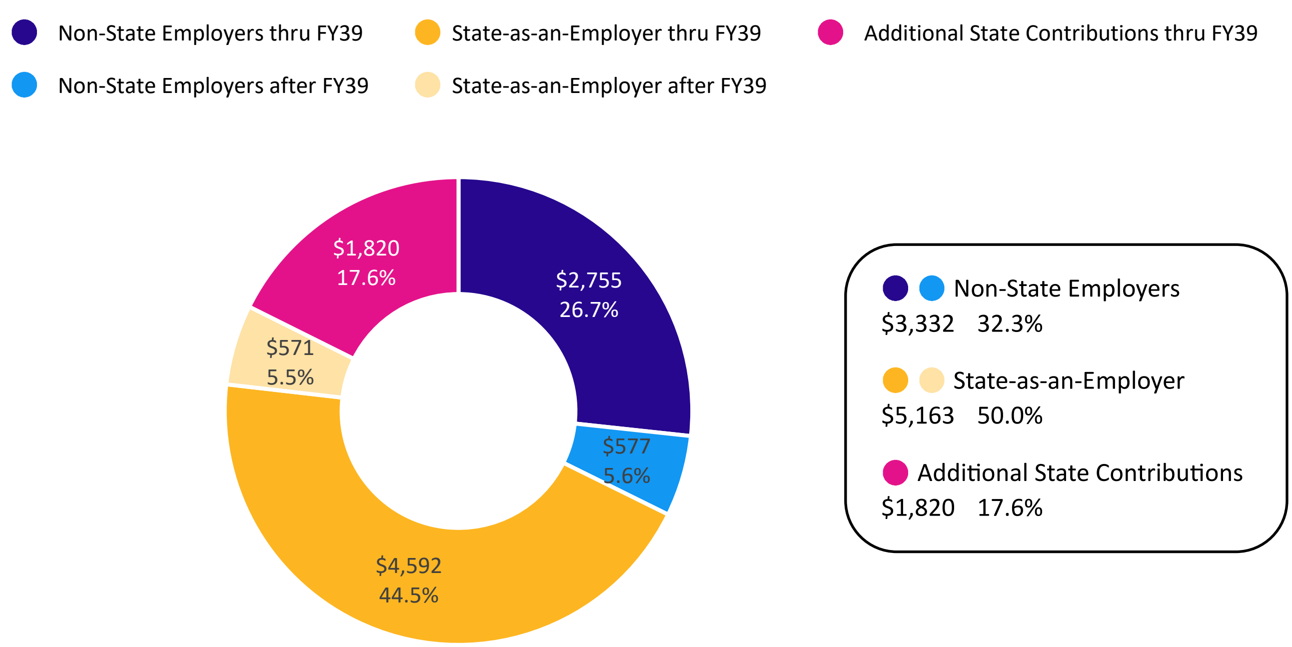
Future Contributions by Source (in $millions)

Based on June 30, 2023 Valuation Projections

PERS – Current



PERS – Proposed

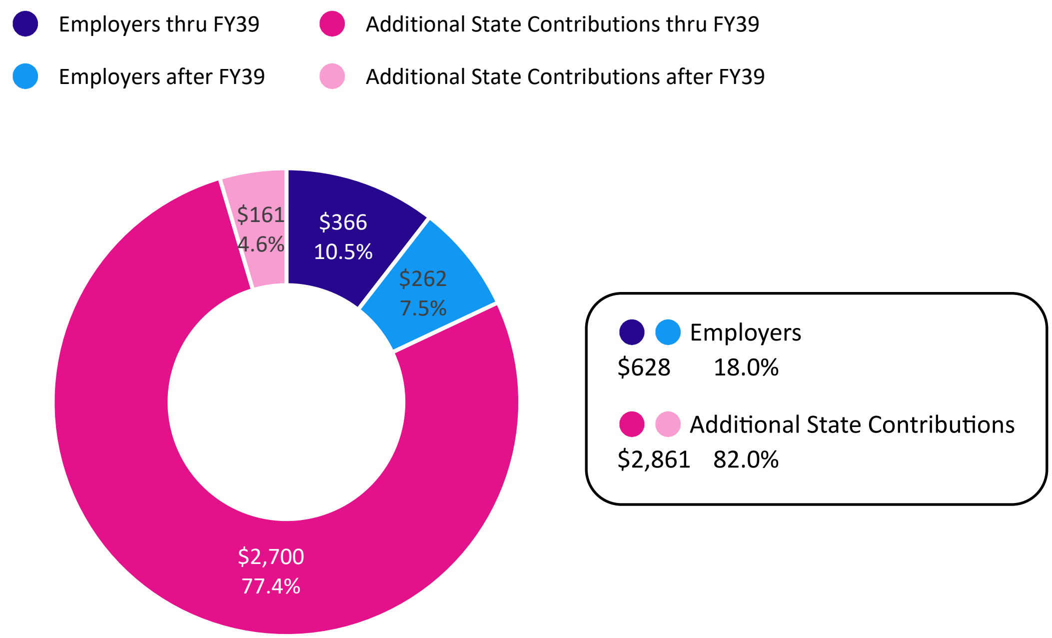


Handout provided at the 6/11 meeting.

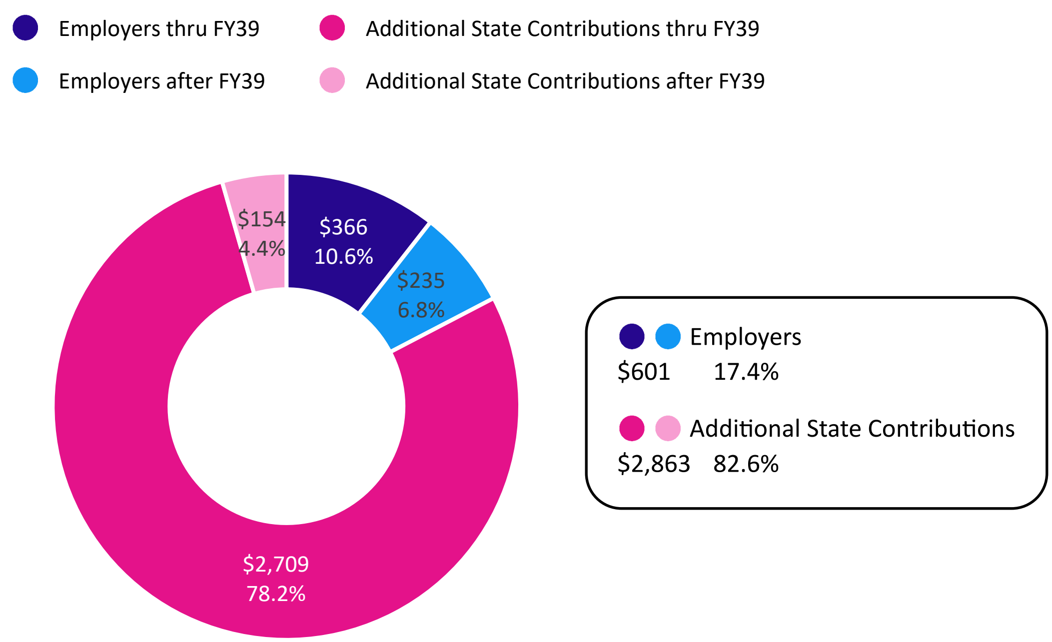
Future Contributions by Source (in $millions)

Based on June 30, 2023 Valuation Projections

TRS – Current



TRS – Proposed



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State of Alaska

Summary of Changes from Draft June 30, 2023 Actuarial Valuation Reports

For Discussion at June 11, 2024 Actuarial Committee Meeting

PERS and TRS

1. Cover Letter
   a. Added a sentence certifying that the Actuarially Determined Contribution meets the requirements of ASOP 4.
   b. Changed the wording regarding when the pension trust is expected to reach 100% funding.
2. Section 3.1
   a. Changed the description of the Section 3.6B projections.
3. Section 3.6A (PERS only)
   a. Updated the projections to reflect a minor adjustment to projected payroll.
4. Section 3.6B
   a. Added projections based on the proposed methodology reflecting ½ year interest adjustment to reflect the timing of employer contributions.
5. Section 6
   a. Changed the Contribution Volatility ratios from percentages to numbers.

PERS DCR and TRS DCR

1. Cover Letter
   a. Added a sentence certifying that the Actuarially Determined Contribution meets the requirements of ASOP 4.
   b. Added a sentence certifying that the combined effect of the assumptions is expected to have no bias.

JRS and NGNMRS

1. Cover Letter
   a. Added a sentence certifying that the Actuarially Determined Contribution meets the requirements of ASOP 4.

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State of Alaska Public Employees' Retirement System

Actuarial Valuation Report as of June 30, 2023

May 2024

May 3, 2024

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, 2023 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2023. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities, and other factors under PERS were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS as of June 30, 2023.

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 calculations of the Employer and State Contributions are reasonable actuarially determined contributions as defined in Actuarial Standard of Practice No. 4 (ASOP 4), and are consistent with the requirements set out in Alaska Statutes 37.10.220(a)(8). The funding objective for PERS is to pay required contributions that remain level as a percent of total PERS compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability (UAAL) as a level percentage of total PERS compensation over a closed 25-year period as required by Alaska state statutes. The closed 25-year period was originally established effective June 30, 2014. Effective June 30, 2018, the Board adopted a 25-year layered UAAL amortization method as described in Section 5.2. The UAAL amortization continues to be on a level percent of pay basis. 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. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the funded status of the pension trust is expected to increase to 100% in FY51 (based on the projections in Section 3.6B of this report). The funded status of the healthcare trust is expected to remain at or above 100%.

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 due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advanced review of any statement to be based on information contained in this report. Buck will accept no liability for any such statement made without its prior review.

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. In our professional judgment, the combined effect of the assumptions is expected to have no significant bias. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2017 to June 30, 2021. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2022 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the healthcare per capita claims cost rates effective June 30, 2023 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 5.2 and 5.3. We certify that the assumptions and methods used for funding purposes, as described in Sections 5.2 and 5.3 of this report, meet the requirements of all applicable Actuarial Standards of Practice.

Actuarial Standards of Practice No. 27 (ASOP 27) and No. 35 (ASOP 35) require the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with those that, in the actuary's professional judgment, are reasonable for the purpose of the measurement. Buck provides advice on reasonable assumptions when performing periodic experience studies. The Board selects the assumptions used, and the signing actuaries review the assumptions annually through discussions with the Board staff and analysis of actuarial experience.

In the case of the Board's selected expected return on assets, the signing actuaries have used economic information provided by Buck's Investment Consulting and Financial Risk Management practices. Buck's Capital Market Assumptions provide relevant expected returns, standard deviations, and correlations. Projected returns are then developed for the portfolio using the GEMS® Economic Scenario Generator from Conning. This sophisticated model uses a multifactor approach to create internally consistent, realistic economic scenarios for all asset classes that reflect the current economic environment as a starting point. Equity returns include stochastic volatility with jumps to reflect extreme, infrequent events. However, such scenarios do not typically impact the 5th through 95th percentiles of projected returns. Corporate bond yields are generated by adding credit spreads to the corresponding zero-coupon Treasury yields. The credit spreads are driven by several factors, including equity returns, and also contain a shock process to allow the model to generate such scenarios as the 2008 Financial Crisis. GEMS® does not, however, model specific risks such as war, pandemics, political risks, severe economic dislocations occurring with greater frequency or severity than predicted by the model, or the risk that relationships among macroeconomic variables may differ from those of the past. From these scenarios, a probabilistic model of expected returns is created, reflecting the duration of investment and the approximate allocation of assets in the portfolio to various asset classes.

Under current calibrations, GEMS® will tend to show higher expected returns for longer durations and a greater divergence between arithmetic and geometric average returns at higher standard deviations of portfolio return.

Based on their analysis, including consistency with other assumptions used in the valuation, the percentiles generated by the GEMS® model described above, and review of actuarial gain/loss analysis, the signing actuaries believe the assumptions, in their professional judgment, do not significantly conflict with what are reasonable for the purpose of the measurement.

ACFR Information

We have prepared the following information in this report for the Actuarial Section and Statistical Section of the ACFR: (i) member data tables in Section 4; (ii) analysis of financial experience in Section 1.6; (iii) summary of actuarial assumptions in Section 5.3; and (iv) historical information in Section 7.

Governmental Accounting Standards Board (GASB) Statement No. 67 (GASB 67) was effective for PERS beginning with fiscal year ending June 30, 2014, and Statement No. 74 (GASB 74) was effective for PERS beginning with fiscal year ending June 30, 2017. Please see our separate GASB 67 and GASB 74 reports for other information needed for the ACFR.

Risk Information

Actuarial Standard of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the healthcare portion of PERS. See Section 6 of this report for further details regarding ASOP 51. Section 6 also contains information on the Low-Default-Risk Obligation Measure (LDROM) now required to be disclosed under Actuarial Standard of Practice No. 4 (ASOP 4).

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries performing actuarial services that involve designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the GEMS® model disclosed above, Buck uses third-party software to perform annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to internally developed models that apply applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Buck maintains an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal models are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal models, extra checking and review are completed. Significant changes to the internal models that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Additional models used in valuing health benefits are described later in the report.

COVID-19

The potential impact of the ongoing COVID-19 pandemic on costs and liabilities was considered and no adjustments were made in setting the FY24 per capita claims cost assumption. Please see Section 5.2 for further details.

This report was prepared under the overall direction of David Kershner, who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Brett can be reached at 260-423-1072.

Respectfully submitted,

David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck, A Gallagher Company

Brett Hunter, ASA, EA, MAAA
Senior Consultant
Buck, A Gallagher Company

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

Robert Besenhofer, ASA, MAAA, FCA
Director
Buck, A Gallagher Company

Contents

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 plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the plan. This report presents the results of the actuarial valuation of PERS as of the valuation date of June 30, 2023.

Purpose

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

1. To determine the Employer/State contribution necessary to meet the Board's funding policy for the plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the plan and assess the funded status as an appropriate measure for determining future actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. 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 funded status and contribution patterns (see Section 3). The future funded status and contribution patterns would be different than those shown in Section 3 if future experience does not match the actuarial assumptions used in the projections.

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.

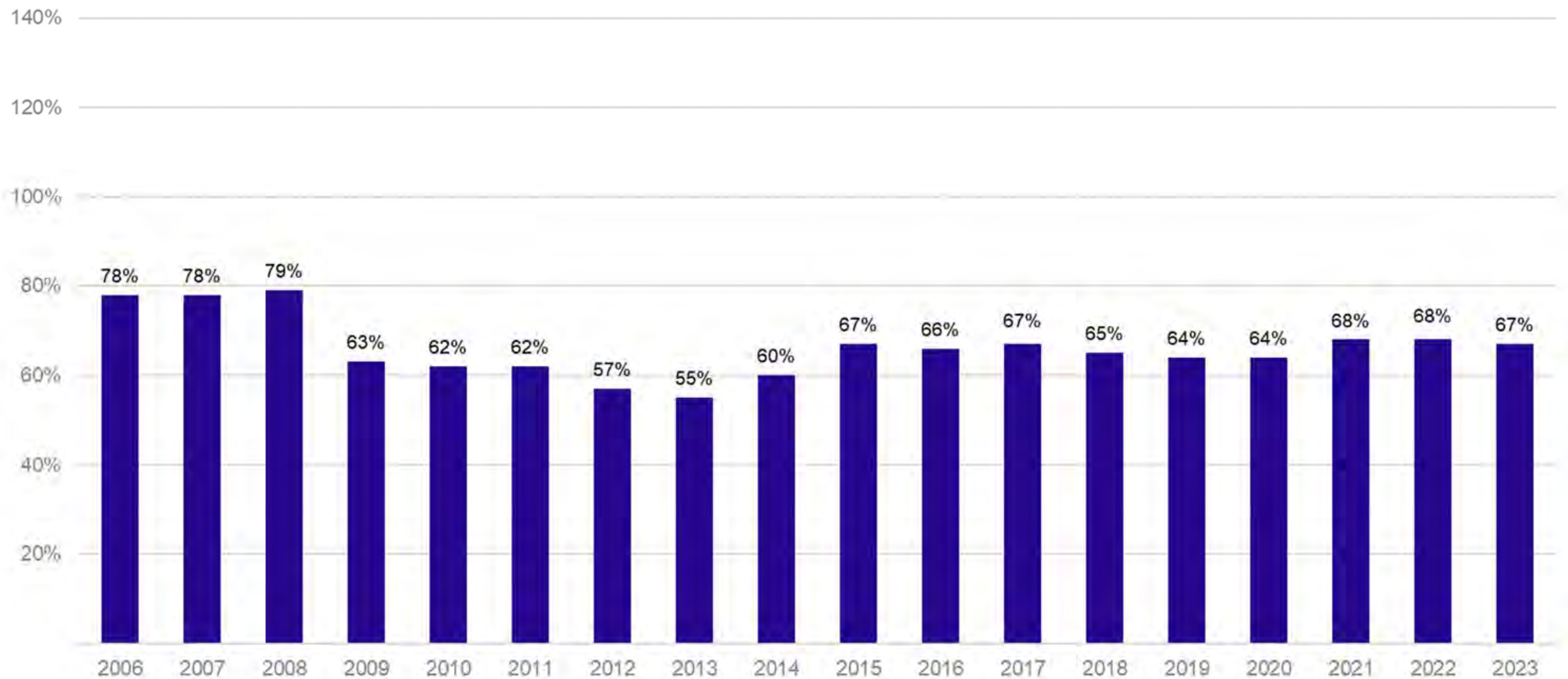
Funded Status

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Status as of June 30 ($'s in 000's)	2022	2023
Pension		
a. Actuarial Accrued Liability	$ 16,093,679	$ 16,835,581
b. Valuation Assets	10,961,498	11,272,339
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ 5,132,181	$ 5,563,242
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	68.1%	67.0%
e. Fair Value of Assets	$ 10,816,140	$ 11,137,489
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	67.2%	66.2%
Healthcare		
a. Actuarial Accrued Liability	$ 6,657,069	$ 7,085,823
b. Valuation Assets	8,979,943	9,180,231
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (2,322,874)	$ (2,094,408)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	134.9%	129.6%
e. Fair Value of Assets	$ 8,869,134	$ 9,076,222
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	133.2%	128.1%

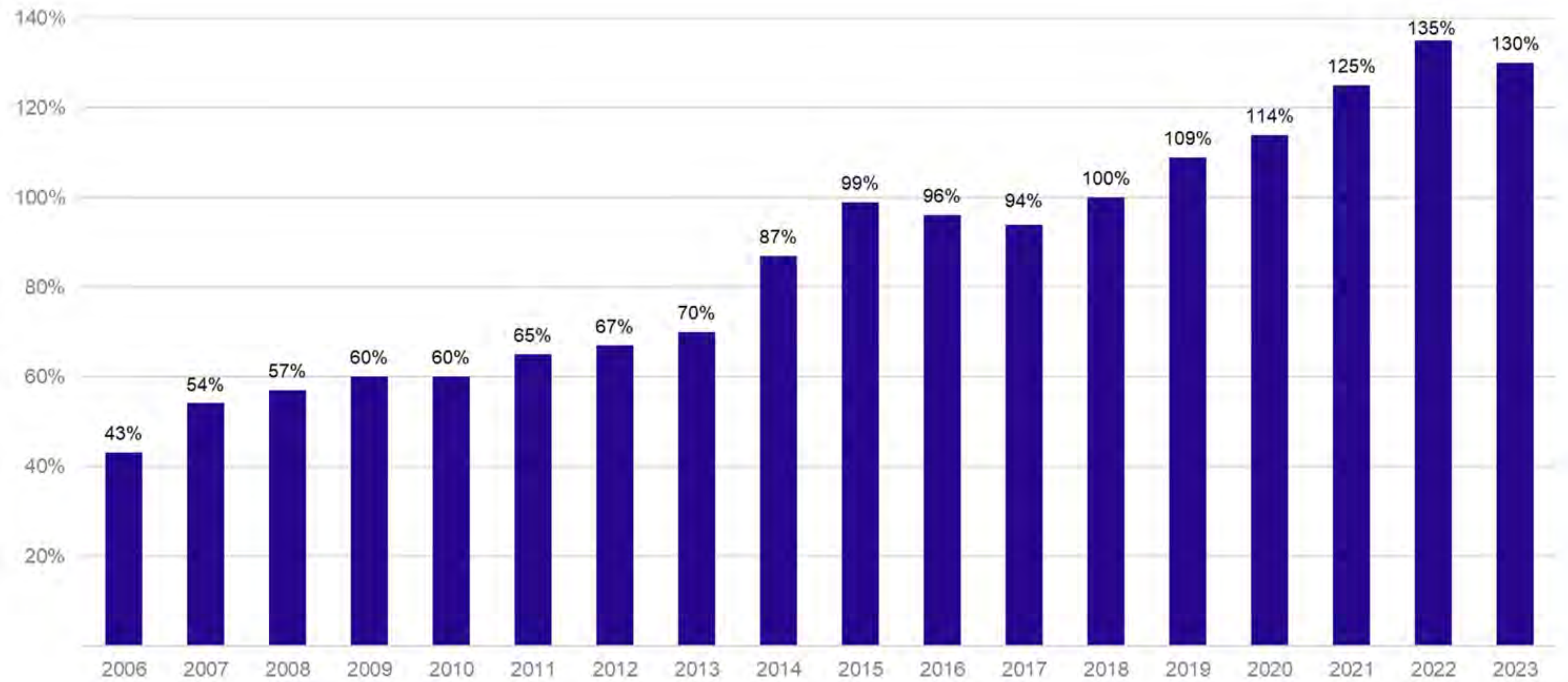
Funded Ratio History (Based on Valuation Assets)

Pension (2006 and later)



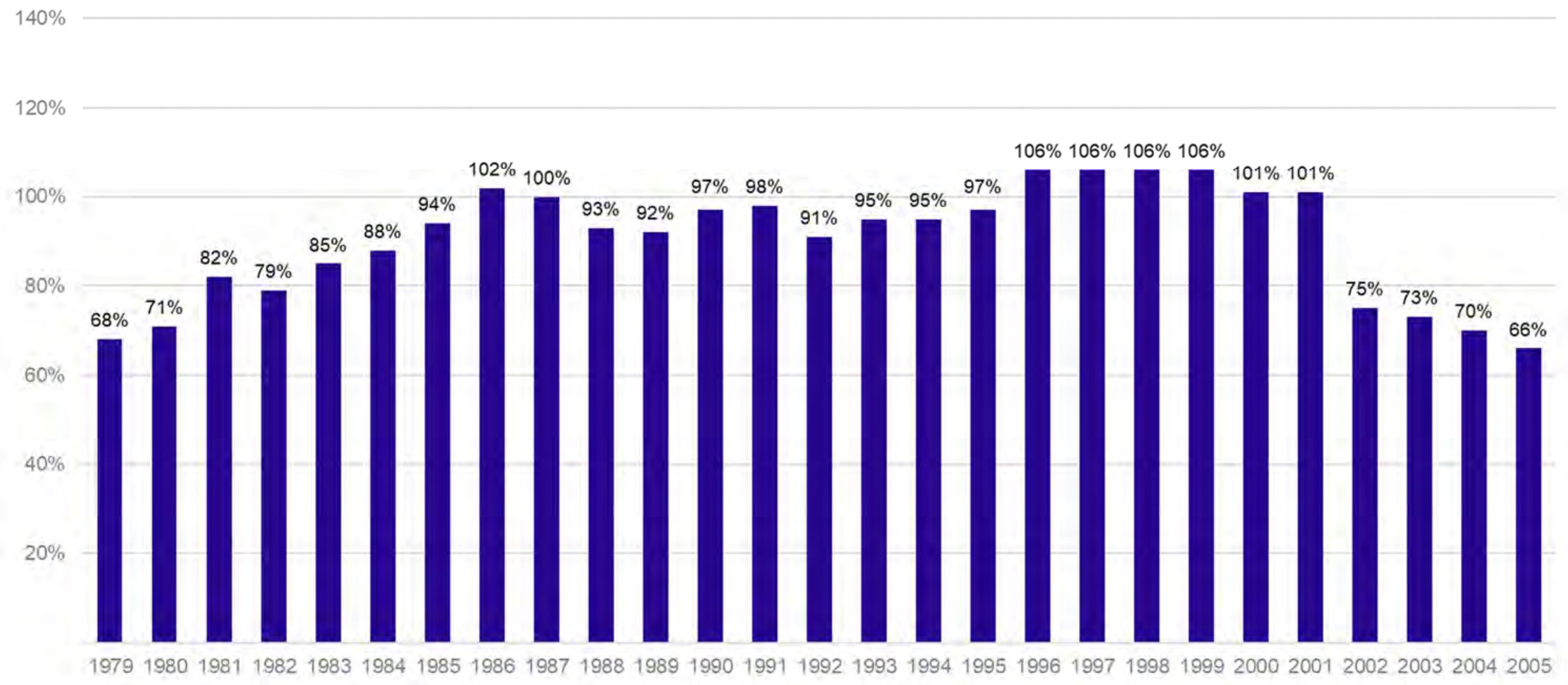
Funded Ratio History (Based on Valuation Assets)

Healthcare (2006 and later)



Funded Ratio History (Based on Valuation Assets)

Total (1979 – 2005) *



* Prior to 2006, assets and liabilities were provided in aggregate only (Pension and Healthcare combined).

The key reasons for the change in the funded status are explained below. 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. Future experience is likely to vary from assumptions, so there is potential for actuarial gains or losses.

1. **Investment Experience**

   The asset valuation method recognizes 20% of the investment gain or loss each year, for a period of five years. The FY23 investment return based on fair value of assets was approximately 7.6% compared to the expected investment return of 7.25% (net of investment expenses). This resulted in a market asset gain of approximately $35 million (pension) and $32 million (healthcare). Due to the recognition of investment gains and losses over a 5-year period, the FY23 investment return based on actuarial value of assets was approximately 7.4%, which resulted in an actuarial asset gain of approximately $14 million (pension) and $18 million (healthcare).

2. **Salary Increases**

   Salary increases for continuing active members during FY23 were higher than expected based on the valuation assumptions, resulting in a liability loss of approximately $94 million.

3. **Demographic Experience**

   Section 4 provides statistics on active and inactive members. The number of active members decreased 4.9% from 8,795 at June 30, 2022 to 8,361 at June 30, 2023 due to active members exiting the plan during the year (due to retirement, termination, death, and disability) and the closure of the plan to new entrants as of July 1, 2006. The average age of active members increased from 53.78 to 54.22 and average credited service increased from 19.52 to 19.53 years.

   The number of benefit recipients increased 1.0% from 38,243 to 38,639 and their average age increased from 71.61 to 72.12. The number of vested terminated participants decreased 2.9% from 4,955 to 4,812. Their average age increased from 54.37 to 54.98.

   The overall effect of the demographic experience during FY23 was a liability gain of approximately $2.5 million (pension) and a liability gain of approximately $0.7[1] million (healthcare).

4. **COLA / PRPA Experience**

   The cost-of-living increases (COLA) for benefit recipients during FY23 were less than expected based on the valuation assumptions, resulting in a liability gain of approximately $0.3 million. However, the CPI-based postretirement pension adjustments (PRPA) were more than expected, resulting in a liability loss of approximately $366 million.

5. **Retiree Medical Claims Experience**

   As described in Section 5.2, recent medical claims experience and changes in healthcare enrollment data provided to us for the June 30, 2023 valuation generated a liability loss of approximately $347 million. Healthcare benefits paid during FY23 were more than expected, which generated a liability loss of approximately $39 million. The EGWP subsidy received by the plan during FY23 was approximately $61 million; the expected EGWP subsidy for FY23 was approximately $55 million.

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[1] Includes the effects of changes in dependent coverage elections and Medicare Part B only experience.

6. Changes in Methods Since the Prior Valuation

There were no changes in actuarial methods since the prior valuation.

7. Changes in Assumptions Since the Prior Valuation

Healthcare claim costs are updated annually as described in Section 5.2. The amounts included in the Normal Cost for administrative expenses were updated based on the last two years of actual administrative expenses paid from plan assets. There were no other changes in actuarial assumptions since the prior valuation.

8. Changes in Benefit Provisions Since the Prior Valuation

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

Comparative Summary of Contribution Rates

		Actual FY 2025	Estimated FY 2026
Pension			
a.	Normal Cost Rate Net of Member Contributions	2.15%	2.01%
b.	Past Service Cost Rate	17.57%	18.27%
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)[1]	19.72%	20.28%
Healthcare			
a.	Normal Cost Rate	1.94%	1.90%
b.	Past Service Cost Rate	(7.19%)	(6.63%)
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)[1]	1.94%	1.90%
Total			
a.	Normal Cost Rate Net of Member Contributions	4.09%	3.91%
b.	Past Service Cost Rate	17.57%	18.27%
c.	Total Employer/State Contribution Rate, (a) + (b)[1]	21.66%	22.18%
d.	Board Adopted Total Employer/State Contribution Rate	20.03%[2]	TBD
e.	Defined Contribution Retirement (DCR) Rate Paid by Employers	6.73%	6.90%
f.	Board Adopted Total Rate, Including DCR Rate Paid by Employers, (d) + (e)	26.76%	TBD

Contribution rates are based on total (DB and DCR) payroll. The contribution rates shown above for FY26 are estimated assuming no actuarial gains/losses during FY24 and FY25. Actual FY26 contribution rates will be adopted by the Board in September 2024 reflecting FY24 asset experience.

Contribution rates include Employer contribution rates as limited by Alaska state statutes and the Additional State Contribution required under SB 125.

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[1] 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 “roll-forward” approach assuming 0% population growth. Investment gains and losses are recognized over a 5-year period beginning in FY15. Beginning with the June 30, 2018 valuation, the UAAL amortization was changed as described in Section 5.2.

[2] The FY25 contribution rates adopted by the Board in September 2023 were 20.03% for Pension and 0.00% for Healthcare. The FY25 adopted rates reflect a single 25-year amortization base that was established June 30, 2014.

Summary of Actuarial Accrued Liability 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, 2022 and June 30, 2023 based on DB and DCR payroll combined:

	Pension	Healthcare
1. Total Employer/State Contribution Rate as of June 30, 2022	19.64%	2.46%
2. Change due to:		
a. Health Claims Experience	N/A	0.10%
b. Salary Increases	0.23%	N/A
c. Investment Experience	(0.03%)	0.00%
d. Demographic Experience and Miscellaneous [1]	0.32%	(0.14%)
e. Actual vs Expected Contributions	0.00%	0.00%
f. Assumption/Method Changes	0.00%	0.00%
g. Plan Changes	0.00%	0.00%
h. Total Change, (a) + (b) + (c) + (d) + (e) + (f) + (g)	0.52%	(0.04%)
3. Total Employer/State Contribution Rate as of June 30, 2023, (1) + (2)(h)	20.16%	2.42%

The following table shows the FY23 gain/(loss) on actuarial accrued liability as of June 30, 2023 ($'s in 000's):

	Pension	Healthcare
Retirement Experience	$ (2,582)	$ (11,558)
Termination Experience	(7,047)	(9,299)
Disability Experience	(1,370)	(224)
Active Mortality Experience	6,952	2,547
Inactive Mortality Experience	6,531	1,605
Salary Increases	(93,860)	N/A
Rehires (Net of Rehire Load)	(7,776)	(2,631)
Transfers between PF and Others	6,001	(43)
Metcalfe Transfers[2]	(77,939)	(43,265)
COLA Increases	297	N/A
PRPA Increases	(365,537)	N/A
Benefit Payments Different than Expected	16,161	(38,937)
Per Capita Claims Cost	N/A	(346,557)
Medicare Part B Only Experience	N/A	(1,275)
Changes in Dependent Coverage Elections	N/A	18,880
Programming Changes[3]	2,321	70,228
Miscellaneous[4]	4,979	11,060
Total	$ (512,869)	$ (349,469)

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1 Includes the effects of census data changes between the two valuations.

2 As of June 30, 2023, 393 members have transferred from the DCR plan to the DB plan under the 2021 Alaska Supreme Court Metcalfe decision (380 transfers in FY23, 13 transfers in FY22).

3 Includes adjustments to the calculation of the lump sum death benefits to include the additional $1000 plus $100 for each year of service (pension), the calculation of COLA increases for participants in All Others who retire from occupational disability (pension), the calculation of the remaining period covered by retiree balances (pension), the default date of birth used for participants whose hire age is calculated to be less than 15 years old (pension), and removal of deferred participants who are also valued as a covered spouse of a retired participant (healthcare).

4 Includes the effects of various data changes that are typical when new census data is received for the annual valuation, as well as other items that do not fit neatly into any of the other categories.

The rehire gain/(loss) amount shown on the previous page is the difference between (i) the increase in Actuarial Accrued Liability at June 30, 2023 due to rehires during the most recent plan year, and (ii) the load that was added to the June 30, 2022 Normal Cost based on the rehire load assumption used in the June 30, 2022 valuation. The development of the FY23 rehire gain/(loss) amount is shown in the table below ($'s in 000's):

		Pension	Healthcare
1.	Increase/(Decrease) in Actuarial Accrued Liability at June 30, 2023 due to Rehires	$ 24,304	$ 4,048
2.	June 30, 2022 Normal Cost Rehire Load, with interest to June 30, 2023	$ 16,528	$ 1,417
3.	Rehire Gain/(Loss), (2) - (1)	$ (7,776)	$ (2,631)

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

Peace Officer / Firefighter

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Retirement Benefits	$ 908,586	$ 804,220
Termination Benefits	4,308	(1,533)
Disability Benefits	835	(1,690)
Death Benefits	4,876	2,672
Return of Contributions	450	(3,456)
Medical and Prescription Drug Benefits	340,041	291,069
Medicare Part D Subsidy	(28,017)	(24,029)
Indebtedness	(3,895)	(3,895)
Subtotal	$ 1,227,184	$ 1,063,358
Inactive Members		
Not Vested	$ 2,704	$ 2,704
Vested Terminations		
- Retirement Benefits	41,770	41,770
- Medical and Prescription Drug Benefits	97,243	97,243
- Medicare Part D Subsidy	(9,738)	(9,738)
- Indebtedness	(695)	(695)
Retirees & Beneficiaries		
- Retirement Benefits	1,997,995	1,997,995
- Medical and Prescription Drug Benefits	679,169	679,169
- Medicare Part D Subsidy	(90,271)	(90,271)
Subtotal	$ 2,718,177	$ 2,718,177
Total	**$ 3,945,361**	**$ 3,781,535**
Total Pension	**$ 2,956,934**	**$ 2,838,092**
Total Medical, Net of Part D Subsidy	**$ 988,427**	**$ 943,443**
Total Medical, Gross of Part D Subsidy	**$ 1,116,453**	**$ 1,067,481**

Peace Officer / Firefighter

As of June 30, 2023		Present Value of Projected Benefits		Actuarial Accrued (Past Service) Liability
By Tier				
Tier 1				
- Pension	$	993,037	$	992,378
- Medical, Net of Part D Subsidy		261,262		260,792
Tier 2				
- Pension		747,677		738,045
- Medical, Net of Part D Subsidy		271,975		268,235
Tier 3				
- Pension		1,216,220		1,107,669
- Medical, Net of Part D Subsidy		455,190		414,416
Total	**$**	**3,945,361**	**$**	**3,781,535**

As of June 30, 2023		Normal Cost
Active Members		
Retirement Benefits	$	21,132
Termination Benefits		1,242
Disability Benefits		535
Death Benefits		464
Return of Contributions		810
Medical and Prescription Drug Benefits		9,903
Medicare Part D Subsidy		(827)
Rehire Assumption (Pension)		3,700
Rehire Assumption (Medical)		218
Administrative Expenses (Pension)		2,040
Administrative Expenses (Medical)		611
Total	**$**	**39,828**
Total Pension	**$**	**29,923**
Total Medical, Net of Part D Subsidy	**$**	**9,905**
Total Medical, Gross of Part D Subsidy	**$**	**10,732**
By Tier		
Tier 1		
- Pension	$	335
- Medical, Net of Part D Subsidy		220
Tier 2		
- Pension		3,330
- Medical, Net of Part D Subsidy		1,128
Tier 3		
- Pension		26,258
- Medical, Net of Part D Subsidy		8,557
Total	**$**	**39,828**

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

Others

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Retirement Benefits	$ 3,295,859	$ 3,020,410
Termination Benefits	192,591	108,777
Disability Benefits	15,521	5,263
Death Benefits	24,415	18,731
Return of Contributions	10,191	(25,761)
Medical and Prescription Drug Benefits	1,733,470	1,436,781
Medicare Part D Subsidy	(214,774)	(182,306)
Indebtedness	(33,067)	(33,067)
Subtotal	$ 5,024,206	$ 4,348,828
Inactive Members		
Not Vested	$ 77,024	$ 77,024
Vested Terminations		
- Retirement Benefits	695,468	695,468
- Medical and Prescription Drug Benefits	846,906	846,906
- Medicare Part D Subsidy	(92,902)	(92,902)
- Indebtedness	(15,765)	(15,765)
Retirees & Beneficiaries		
- Retirement Benefits	10,146,409	10,146,409
- Medical and Prescription Drug Benefits	4,945,360	4,945,360
- Medicare Part D Subsidy	(811,459)	(811,459)
Subtotal	$ 15,791,041	$ 15,791,041
Total	**$ 20,815,247**	**$ 20,139,869**
Total Pension	**$ 14,408,646**	**$ 13,997,489**
Total Medical, Net of Part D Subsidy	**$ 6,406,601**	**$ 6,142,380**
Total Medical, Gross of Part D Subsidy	**$ 7,525,736**	**$ 7,229,047**

Others

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
By Tier		
Tier 1		
- Pension	$ 6,104,201	$ 6,087,207
- Medical, Net of Part D Subsidy	2,233,433	2,217,074
Tier 2		
- Pension	4,178,651	4,105,222
- Medical, Net of Part D Subsidy	1,902,988	1,850,705
Tier 3		
- Pension	4,125,794	3,805,060
- Medical, Net of Part D Subsidy	2,270,180	2,074,601
Total	**$ 20,815,247**	**$ 20,139,869**

As of June 30, 2023	Normal Cost
Active Members	
Retirement Benefits	$ 52,966
Termination Benefits	13,798
Disability Benefits	1,781
Death Benefits	1,069
Return of Contributions	6,264
Medical and Prescription Drug Benefits	54,447
Medicare Part D Subsidy	(6,064)
Rehire Assumption (Pension)	11,609
Rehire Assumption (Medical)	1,161
Administrative Expenses (Pension)	6,400
Administrative Expenses (Medical)	3,255
Total	**$ 146,686**
Total Pension	**$ 93,887**
Total Medical, Net of Part D Subsidy	**$ 52,799**
Total Medical, Gross of Part D Subsidy	**$ 58,863**
By Tier	
Tier 1	
- Pension	$ 6,633
- Medical, Net of Part D Subsidy	5,508
Tier 2	
- Pension	20,827
- Medical, Net of Part D Subsidy	12,695
Tier 3	
- Pension	66,427
- Medical, Net of Part D Subsidy	34,596
Total	**$ 146,686**

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

All Members

As of June 30, 2023		Present Value of Projected Benefits		Actuarial Accrued (Past Service) Liability
Active Members				
Retirement Benefits	$	4,204,445	$	3,824,630
Termination Benefits		196,899		107,244
Disability Benefits		16,356		3,573
Death Benefits		29,291		21,403
Return of Contributions		10,641		(29,217)
Medical and Prescription Drug Benefits		2,073,511		1,727,850
Medicare Part D Subsidy		(242,791)		(206,335)
Indebtedness		(36,962)		(36,962)
Subtotal	$	6,251,390	$	5,412,186
Inactive Members				
Not Vested	$	79,728	$	79,728
Vested Terminations				
- Retirement Benefits		737,238		737,238
- Medical and Prescription Drug Benefits		944,149		944,149
- Medicare Part D Subsidy		(102,640)		(102,640)
- Indebtedness		(16,460)		(16,460)
Retirees & Beneficiaries				
- Retirement Benefits		12,144,404		12,144,404
- Medical and Prescription Drug Benefits		5,624,529		5,624,529
- Medicare Part D Subsidy		(901,730)		(901,730)
Subtotal	$	18,509,218	$	18,509,218
Total	**$**	**24,760,608**	**$**	**23,921,404**
Total Pension	**$**	**17,365,580**	**$**	**16,835,581**
Total Medical, Net of Part D Subsidy	**$**	**7,395,028**	**$**	**7,085,823**
Total Medical, Gross of Part D Subsidy	**$**	**8,642,189**	**$**	**8,296,528**

All Members

As of June 30, 2023		Present Value of Projected Benefits		Actuarial Accrued (Past Service) Liability
By Tier				
Tier 1				
- Pension	$	7,097,238	$	7,079,585
- Medical, Net of Part D Subsidy		2,494,695		2,477,866
Tier 2				
- Pension		4,926,328		4,843,267
- Medical, Net of Part D Subsidy		2,174,963		2,118,940
Tier 3				
- Pension		5,342,014		4,912,729
- Medical, Net of Part D Subsidy		2,725,370		2,489,017
Total	**$**	**24,760,608**	**$**	**23,921,404**

As of June 30, 2023		Normal Cost
Active Members		
Retirement Benefits	$	74,098
Termination Benefits		15,040
Disability Benefits		2,316
Death Benefits		1,533
Return of Contributions		7,074
Medical and Prescription Drug Benefits		64,350
Medicare Part D Subsidy		(6,891)
Rehire Assumption (Pension)		15,309
Rehire Assumption (Medical)		1,379
Administrative Expenses (Pension)		8,440
Administrative Expenses (Medical)		3,866
Total	**$**	**186,514**
Total Pension	**$**	**123,810**
Total Medical, Net of Part D Subsidy	**$**	**62,704**
Total Medical, Gross of Part D Subsidy	**$**	**69,595**
By Tier		
Tier 1		
- Pension	$	6,968
- Medical, Net of Part D Subsidy		5,728
Tier 2		
- Pension		24,157
- Medical, Net of Part D Subsidy		13,823
Tier 3		
- Pension		92,685
- Medical, Net of Part D Subsidy		43,153
Total	**$**	**186,514**

Section 1.2: Actuarial Contributions as of June 30, 2023 ($'s in 000's)

Peace Officer / Firefighter

Normal Cost Rate		Pension		Healthcare
1. Total Normal Cost	$	29,923	$	9,905
2. DB Rate Payroll Projected for FY24		135,222		135,222
3. DCR Rate Payroll Projected for FY24		276,452		276,452
4. Total Rate Payroll Projected for FY24		411,674		411,674
5. Normal Cost Rate				
a. Based on DB Rate Payroll, (1) ÷ (2)		22.13%		7.32%
b. Based on Total Rate Payroll, (1) ÷ (4)		7.27%		2.41%
6. Average Member Contribution Rate		2.46%		0.00%
7. Employer Normal Cost, (5)(b) - (6)		4.81%		2.41%

Past Service Rate		Pension		Healthcare
1. Actuarial Accrued Liability	$	2,838,092	$	943,443
2. Valuation Assets[1]		1,900,257		1,222,303
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$	937,835	$	(278,860)
4. Funded Ratio, (2) ÷ (1)		67.0%		129.6%
5. Past Service Cost Amortization Payment		75,591		(19,330)
6. Total Rate Payroll Projected for FY24		411,674		411,674
7. Past Service Rate, (5) ÷ (6)		18.36%		(4.70%)
Total Employer / State Contribution Rate, not less than Normal Cost Rate		**23.17%**		**2.41%**

Normal Cost Rate by Tier (Total Employer and Member)[2]

	Pension	Healthcare
Tier 1	25.07%	16.47%
Tier 2	22.13%	7.50%
Tier 3	22.10%	7.20%

[1] Allocated between Peace Officer / Firefighter and Others in proportion to Actuarial Accrued Liability.

[2] Rates determined considering the payroll for members in each tier. DCR payroll is excluded from these calculations.

Peace Officer / Firefighter

Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	$ 731,232	$ 701,595	$ 59,311
Change in Assumptions	6/30/2018	20	88,162	88,547	6,454
FY19 Loss	6/30/2019	21	61,980	62,431	4,414
FY20 Loss	6/30/2020	22	31,158	31,409	2,159
FY21 Gain	6/30/2021	23	(83,489)	(84,069)	(5,627)
Change in Assumptions	6/30/2022	24	42,593	42,766	2,793
FY22 Loss	6/30/2022	24	9,774	9,813	641
FY23 Loss	6/30/2023	25	85,343	85,343	5,446
Total				**$ 937,835**	**$ 75,591**

Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	(30,991)	(29,735)	(2,514)
Change in Assumptions/Methods/EGWP	6/30/2018	20	27,556	27,676	2,017
FY19 Gain	6/30/2019	21	(77,575)	(78,140)	(5,524)
FY20 Gain	6/30/2020	22	(38,036)	(38,343)	(2,635)
Medical/Prescription Drug Plan Changes	6/30/2021	23	(7,361)	(7,412)	(496)
FY21 Gain	6/30/2021	23	(94,266)	(94,921)	(6,353)
Change in Assumptions	6/30/2022	24	4,475	4,493	293
FY22 Gain	6/30/2022	24	(88,254)	(88,612)	(5,786)
FY23 Loss	6/30/2023	25	26,134	26,134	1,668
Total				**$ (278,860)**	**$ (19,330)**

Section 1.2: Actuarial Contributions as of June 30, 2023 ($'s in 000's)

Others

Normal Cost Rate	Pension	Healthcare
1. Total Normal Cost	$ 93,887	$ 52,799
2. DB Rate Payroll Projected for FY24	657,583	657,583
3. DCR Rate Payroll Projected for FY24	1,519,626	1,519,626
4. Total Rate Payroll Projected for FY24	2,177,209	2,177,209
5. Normal Cost Rate		
a. Based on DB Rate Payroll, (1) ÷ (2)	14.28%	8.03%
b. Based on Total Rate Payroll, (1) ÷ (4)	4.31%	2.43%
6. Average Member Contribution Rate	2.06%	0.00%
7. Employer Normal Cost, (5)(b) - (6)	2.25%	2.43%

Past Service Rate	Pension	Healthcare
1. Actuarial Accrued Liability	$ 13,997,489	$ 6,142,380
2. Valuation Assets[1]	9,372,082	7,957,928
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ 4,625,407	$ (1,815,548)
4. Funded Ratio, (2) ÷ (1)	67.0%	129.6%
5. Past Service Cost Amortization Payment	377,557	(124,545)
6. Total Rate Payroll Projected for FY24	2,177,209	2,177,209
7. Past Service Rate, (5) ÷ (6)	17.34%	(5.72%)
Total Employer / State Contribution Rate, not less than Normal Cost Rate	**19.59%**	**2.43%**

Normal Cost Rate by Tier (Total Employer and Member)[2]

	Pension	Healthcare
Tier 1	18.81%	15.62%
Tier 2	14.14%	8.62%
Tier 3	13.98%	7.28%

[1] Allocated between Peace Officer / Firefighter and Others in proportion to Actuarial Accrued Liability.

[2] Rates determined considering the payroll for members in each tier. DCR payroll is excluded from these calculations.

Others

Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

	Amortization Period		Balances		
Layer	**Date Created**	**Years Remaining**	**Initial**	**Outstanding**	**Beginning-of-Year Payment**
Initial Amount	6/30/2018	16	$ 3,889,167	$ 3,731,541	$ 315,457
Change in Assumptions	6/30/2018	20	467,280	469,310	34,205
FY19 Loss	6/30/2019	21	235,559	237,271	16,774
FY20 Loss	6/30/2020	22	93,343	94,098	6,466
FY21 Gain	6/30/2021	23	(495,211)	(498,646)	(33,375)
Change in Assumptions	6/30/2022	24	163,298	163,962	10,706
FY22 Loss	6/30/2022	24	14,404	14,463	944
FY23 Loss	6/30/2023	25	413,408	413,408	26,380
Total				**$ 4,625,407**	**$ 377,557**

Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

	Amortization Period		Balances		
Layer	**Date Created**	**Years Remaining**	**Initial**	**Outstanding**	**Beginning-of-Year Payment**
Initial Amount	6/30/2018	16	(47,263)	(45,349)	(3,833)
Change in Assumptions/Methods/EGWP	6/30/2018	20	22,293	22,389	1,632
FY19 Gain	6/30/2019	21	(553,265)	(557,287)	(39,399)
FY20 Gain	6/30/2020	22	(253,711)	(255,758)	(17,576)
Medical/Prescription Drug Plan Changes	6/30/2021	23	(54,446)	(54,824)	(3,670)
FY21 Gain	6/30/2021	23	(613,647)	(617,905)	(41,357)
Change in Assumptions	6/30/2022	24	(92,867)	(93,245)	(6,089)
FY22 Gain	6/30/2022	24	(417,035)	(418,730)	(27,344)
FY23 Loss	6/30/2023	25	205,161	205,161	13,091
Total				**$ (1,815,548)**	**$ (124,545)**

Section 1.2: Actuarial Contributions as of June 30, 2023 ($'s in 000's)

All Members

Normal Cost Rate	Pension	Healthcare
1. Total Normal Cost	$ 123,810	$ 62,704
2. DB Rate Payroll Projected for FY24	792,805	792,805
3. DCR Rate Payroll Projected for FY24	1,796,078	1,796,078
4. Total Rate Payroll Projected for FY24	2,588,883	2,588,883
5. Normal Cost Rate		
a. Based on DB Rate Payroll, (1) ÷ (2)	15.62%	7.91%
b. Based on Total Rate Payroll, (1) ÷ (4)	4.78%	2.42%
6. Average Member Contribution Rate[1]	2.12%	0.00%
7. Employer Normal Cost, (5)(b) - (6)	2.66%	2.42%

Past Service Rate	Pension	Healthcare
1. Actuarial Accrued Liability	$ 16,835,581	$ 7,085,823
2. Valuation Assets	11,272,339	9,180,231
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ 5,563,242	$ (2,094,408)
4. Funded Ratio, (2) ÷ (1)	67.0%	129.6%
5. Past Service Cost Amortization Payment	453,148	(143,875)
6. Total Rate Payroll Projected for FY24	2,588,883	2,588,883
7. Past Service Rate, (5) ÷ (6)	17.50%	(5.56%)
Total Employer / State Contribution Rate, not less than Normal Cost Rate	**20.16%**	**2.42%**

Normal Cost Rate by Tier (Total Employer and Member)[2]

	Pension	Healthcare
Tier 1	19.04%	15.65%
Tier 2	14.89%	8.52%
Tier 3	15.61%	7.27%

1 7.5% for Peace Officer / Firefighter and 6.81% weighted average for Others

2 Rates determined considering the payroll for members in each tier. DCR payroll is excluded from these calculations.

All Members

Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

Layer	Amortization Period		Balances		
	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	$ 4,620,399	$ 4,433,136	$ 374,768
Change in Assumptions	6/30/2018	20	555,442	557,857	40,659
FY19 Loss	6/30/2019	21	297,539	299,702	21,188
FY20 Loss	6/30/2020	22	124,501	125,507	8,625
FY21 Gain	6/30/2021	23	(578,700)	(582,715)	(39,002)
Change in Assumptions	6/30/2022	24	205,891	206,728	13,499
FY22 Loss	6/30/2022	24	24,178	24,276	1,585
FY23 Loss	6/30/2023	25	498,751	498,751	31,826
Total				**$ 5,563,242**	**$ 453,148**

Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

Layer	Amortization Period		Balances		
	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	(78,254)	(75,084)	(6,347)
Change in Assumptions/Methods/EGWP	6/30/2018	20	49,849	50,065	3,649
FY19 Gain	6/30/2019	21	(630,840)	(635,427)	(44,923)
FY20 Gain	6/30/2020	22	(291,747)	(294,101)	(20,211)
Medical/Prescription Drug Plan Changes	6/30/2021	23	(61,807)	(62,236)	(4,166)
FY21 Gain	6/30/2021	23	(707,913)	(712,826)	(47,710)
Change in Assumptions	6/30/2022	24	(88,392)	(88,752)	(5,796)
FY22 Gain	6/30/2022	24	(505,289)	(507,342)	(33,130)
FY23 Loss	6/30/2023	25	231,295	231,295	14,759
Total				**$ (2,094,408)**	**$ (143,875)**

Section 1.3: Roll-Forward Contribution Rate Calculation for FY26 ($'s in 000's)

	Pension	Healthcare
1. Liability Roll Forward		
a. Actuarial Accrued Liability as of June 30, 2023	**$ 16,835,581**	**$ 7,085,823**
b. Normal Cost	115,370	58,838
c. Interest on (a) and (b) at 7.25%	1,228,944	517,988
d. Estimated Benefit Payments	(1,114,371)	(448,206)
e. Interest on (d) at 7.25%, adjusted for timing	(47,134)	(15,952)
f. Expected Actuarial Accrued Liability as of June 30, 2024	**$ 17,018,390**	**$ 7,198,491**
g. Projected Normal Cost	102,035	52,290
h. Interest on (f) and (g) at 7.25%	1,241,231	525,682
i. Estimated Benefit Payments	(1,164,315)	(468,686)
j. Interest on (i) at 7.25%, adjusted for timing	(46,747)	(17,009)
k. Expected Actuarial Accrued Liability as of June 30, 2025	**$ 17,150,594**	**$ 7,290,768**
2. Asset Roll Forward		
a. Actuarial Value of Assets as of June 30, 2023	**$ 11,272,339**	**$ 9,180,231**
b. Interest on (a) at 7.25%	817,245	665,567
c. Employee Contributions	60,416	0
d. Employer Contributions	437,830	0
e. State Assistance Contributions	37,942	0
f. Interest on (c) thru (e) at 7.25%, adjusted for timing*	20,496	0
g. Estimated Benefit Payments	(1,114,371)	(448,206)
h. Administrative Expenses	(8,440)	(3,866)
i. Interest on (g) and (h) at 7.25%, adjusted for timing	(47,434)	(16,089)
j. AVA Adjustments	41,763	38,333
k. Expected Actuarial Value of Assets as of June 30, 2024	**$ 11,517,786**	**$ 9,415,970**
l. Interest on (k) at 7.25%	835,039	682,658
m. Employee Contributions	55,374	0
n. Employer Contributions	456,615	0
o. State Assistance Contributions**	59,149	0
p. Interest on (m) thru (o) at 7.25%, adjusted for timing*	22,523	0
q. Estimated Benefit Payments	(1,164,315)	(468,686)
r. Administrative Expenses	(7,514)	(3,440)
s. Interest on (q) and (r) at 7.25%, adjusted for timing	(47,015)	(17,132)
t. AVA Adjustments	100,192	83,958
u. Expected Actuarial Value of Assets as of June 30, 2025	**$ 11,827,834**	**$ 9,693,328**
3. Expected Unfunded Actuarial Accrued Liability as of June 30, 2025, 1(k) - 2(u)	**$ 5,322,760**	**$ (2,402,560)**

* Employee and Employer Contributions are paid throughout the year. State Assistance Contributions are assumed to be paid on July 1, 2023 for FY24, and July 1, 2024 for FY25.
** The FY25 State Assistance Contribution is expected to be contributed 100% to pension.

	Pension		Healthcare	
4. Expected Annual Rate Payroll for FY26				
a. Defined Benefit Members	$	642,884	$	642,884
b. Defined Contribution Retirement Members		1,955,952		1,955,952
c. Total Rate Payroll	**$**	**2,598,836**	**$**	**2,598,836**
5. Expected FY26 Contribution Rate Calculation				
a. Projected Normal Cost for FY26	$	96,652	$	49,464
b. Projected Normal Cost Rate for FY26		3.72%		1.90%
c. Expected Member Contribution Rate for FY26		(1.71%)		0.00%
d. Expected Employer Normal Cost Rate for FY26		**2.01%**		**1.90%**
e. Expected Unfunded Liability as of June 30, 2025	$	5,322,760	$	(2,402,560)
f. FY26 Layered Amortization of Expected Unfunded Liability		474,885		(172,344)
g. Expected Past Service Cost Contribution Rate for FY26		**18.27%**		**(6.63%)**
h. Expected Total Contribution Rate for FY26, not less than Normal Cost Rate		**20.28%**		**1.90%**

The components of the expected FY26 amortization amounts are shown below (totals may not add due to rounding):

Expected FY26 Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining at 6/30/25	Balances: Initial	Balances: Outstanding at 6/30/25	Beginning-of-Year Payment for FY26
Initial Amount	6/30/2018	14	$ 4,620,399	$ 4,255,172	$ 395,663
Change in Assumptions	6/30/2018	18	555,442	550,105	42,926
FY19 Loss	6/30/2019	19	297,539	297,013	22,370
FY20 Loss	6/30/2020	20	124,501	124,940	9,106
FY21 Gain	6/30/2021	21	(578,700)	(582,430)	(41,176)
Change in Assumptions	6/30/2022	22	205,891	207,386	14,252
FY22 Loss	6/30/2022	22	24,178	24,353	1,674
FY23 Loss	6/30/2023	23	498,751	502,012	33,600
Expected FY24 Loss	6/30/2024	24	20,029	20,110	1,313
Expected FY25 Gain	6/30/2025	25	(75,901)	(75,901)	(4,843)
Total				**$ 5,322,760**	**$ 474,885**

Expected FY26 Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining at 6/30/25	Balances: Initial	Balances: Outstanding at 6/30/25	Beginning-of-Year Payment for FY26
Initial Amount	6/30/2018	14	$ (78,254)	$ (72,070)	$ (6,701)
Change in Assumptions/Methods/EGWP	6/30/2018	18	49,849	49,369	3,852
FY19 Gain	6/30/2019	19	(630,840)	(629,726)	(47,428)
FY20 Gain	6/30/2020	20	(291,747)	(292,771)	(21,338)
Medical/Prescription Drug Plan Changes	6/30/2021	21	(61,807)	(62,205)	(4,398)
FY21 Gain	6/30/2021	21	(707,913)	(712,478)	(50,370)
Change in Assumptions	6/30/2022	22	(88,392)	(89,034)	(6,119)
FY22 Gain	6/30/2022	22	(505,289)	(508,956)	(34,977)
FY23 Loss	6/30/2023	23	231,295	232,808	15,582
Expected FY24 Gain	6/30/2024	24	(125,532)	(126,043)	(8,231)
Expected FY25 Gain	6/30/2025	25	(191,454)	(191,454)	(12,216)
Total				**$ (2,402,560)**	**$ (172,344)**

The components of the expected FY26 amortization amounts are shown below (totals may not add due to rounding):

Section 1.4: Actuarial Gain/(Loss) for FY23 ($'s in 000's)

	Pension	Healthcare
1. Expected Actuarial Accrued Liability		
a. Actuarial Accrued Liability as of June 30, 2022	$ 16,093,679	$ 6,657,069
b. Normal Cost	116,137	56,376
c. Interest on (a) and (b) at 7.25%	1,175,212	486,725
d. Employer Group Waiver Plan	0	60,662
e. Benefit Payments	(1,012,696)	(508,527)
f. Refund of Contributions	(10,099)	0
g. Interest on (d) thru (f) at 7.25%, adjusted for timing	(39,521)	(15,951)
h. Assumptions/Methods Changes	0	0
i. Expected Actuarial Accrued Liability as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ 16,322,712	$ 6,736,354
2. Actual Actuarial Accrued Liability as of June 30, 2023	16,835,581	7,085,823
3. Liability Gain/(Loss), (1)(i) - (2)	**$ (512,869)**	**$ (349,469)**
4. Expected Actuarial Asset Value		
a. Actuarial Value of Assets as of June 30, 2022	$ 10,961,498	$ 8,979,943
b. Interest on (a) at 7.25%	794,709	651,046
c. Employee Contributions	79,968	0
d. Employer Contributions	438,011	555
e. State Assistance Contributions	33,933	0
f. Employer Group Waiver Plan	0	60,662
g. Interest on (c) thru (f) at 7.25%, adjusted for timing	20,908	2,180
h. Benefit Payments	(1,012,696)	(508,527)
i. Refund of Contributions	(10,099)	0
j. Administrative Expenses	(7,842)	(4,955)
k. Interest on (h) thru (j) at 7.25%, adjusted for timing	(39,800)	(18,288)
l. Expected Actuarial Asset Value as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h) + (i) + (j) + (k)	$ 11,258,590	$ 9,162,616
5. Actual Actuarial Asset Value as of June 30, 2023	11,272,339	9,180,231
6. Actuarial Asset Value Gain/(Loss), (5) - (4)(l)	**$ 13,749**	**$ 17,615**
7. Total Actuarial Gain/(Loss), (3) + (6)	**$ (499,120)**	**$ (331,854)**
8. Contribution Gain/(Loss)	**$ (771)**	**$ 101,596**
9. Administrative Expense Gain/(Loss)	**$ 1,140**	**$ (1,037)**
10. FY23 Gain/(Loss), (7) + (8) + (9)	**$ (498,751)**	**$ (231,295)**

Section 1.5: Development of Change in Unfunded Liability During FY23 ($'s in 000's)

	Pension	Healthcare
1. 2022 Unfunded Liability	$ 5,132,181	$ (2,322,874)
a. Interest on Unfunded Liability at 7.25%	$ 372,083	$ (168,408)
b. Normal Cost	116,137	56,376
c. Employee Contributions	(79,968)	0
d. Employer Contributions	(438,011)	(555)
e. State Assistance Contributions	(33,933)	0
f. Administrative Expenses	7,842	4,955
g. Interest on (b) thru (f) at 7.25%, adjusted for timing	(12,209)	4,244
h. Assumptions/Methods Changes	0	0
i. Expected Change in Unfunded Liability During FY23 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ (68,059)	$ (103,388)
2. Expected 2023 Unfunded Liability, (1) + (1)(i)	$ 5,064,122	$ (2,426,262)
a. Liability (Gain)/Loss During FY23	$ 512,869	$ 349,469
b. Actuarial Assets (Gain)/Loss During FY23	(13,749)	(17,615)
c. Total Actuarial (Gain)/Loss During FY23	$ 499,120	$ 331,854
3. Actual 2023 Unfunded Liability, (2) + (2)(c)	$ 5,563,242	$ (2,094,408)

Section 1.6: Analysis of Financial Experience

Pension
Change in Employer / State Contribution Rate as of Valuation Date
Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Five Fiscal Years
Resulting from Differences Between Assumed Experience and Actual Experience

	Change in Employer / State Contribution Rate During Fiscal Year				
	Pension				
Type of (Gain) or Loss	**2019**	**2020**	**2021**	**2022**	**2023**
1. Health Claims	N/A	N/A	N/A	N/A	N/A
2. Salary Experience	0.16%	(0.03%)	0.05%	0.13%	0.23%
3. Investment Experience	0.50%	0.44%	(1.06%)	(0.34%)	(0.03%)
4. Demographic Experience and Miscellaneous	(0.45%)	(0.19%)	(0.54%)	0.52%	0.32%
5. Actual vs Expected Contributions	0.11%	0.15%	(0.06%)	(0.14%)	0.00%
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	0.32%	0.37%	(1.61%)	0.17%	0.52%
7. Assumptions / Method Changes	0.00%	0.00%	0.00%	0.54%	0.00%
8. Plan Changes	0.00%	0.00%	0.00%	0.00%	0.00%
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	0.32%	0.37%	(1.61%)	0.71%	0.52%
10. Beginning Total Employer / State Contribution Rate	19.85%	20.17%	20.54%	18.93%	19.64%
11. Ending Valuation Year Employer / State Contribution Rate, (9) + (10)	20.17%	20.54%	18.93%	19.64%	20.16%
12. Fiscal Year Rates Adopted by ARMB					
a. Fiscal Year Employer / State Contribution Rate	20.89%	18.38%	18.47%	19.72%	20.28% *
b. Fiscal Year for which Rate Applies	FY22	FY23	FY24	FY25	FY26

* Expected rate. Actual rate to be determined

Healthcare
Change in Employer / State Contribution Rate as of Valuation Date
Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Five Fiscal Years
Resulting from Differences Between Assumed Experience and Actual Experience

	Change in Employer / State Contribution Rate During Fiscal Year				
	Healthcare				
Type of (Gain) or Loss	2019	2020	2021	2022	2023
1. Health Claims	(2.39%)	(0.87%)	(0.12%)	(0.11%)	0.10%
2. Salary Experience	N/A	N/A	N/A	N/A	N/A
3. Investment Experience	0.38%	0.31%	0.00%	0.00%	0.00%
4. Demographic Experience and Miscellaneous	1.16%	0.38%	(0.26%)	(0.37%)	(0.14%)
5. Actual vs Expected Contributions	0.02%	(0.16%)	0.00%	0.00%	0.00%
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(0.83%)	(0.34%)	(0.38%)	(0.48%)	(0.04%)
7. Assumptions / Method Changes	0.00%	0.00%	0.00%	(0.22%)	0.00%
8. Plan Changes	0.00%	0.00%	(0.03%)	0.00%	0.00%
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	(0.83%)	(0.34%)	(0.41%)	(0.70%)	(0.04%)
10. Beginning Total Employer / State Contribution Rate	4.74%	3.91%	3.57%	3.16%	2.46%
11. Ending Valuation Year Employer / State Contribution Rate, (9) + (10)	3.91%	3.57%	3.16%	2.46%	2.42%
12. Fiscal Year Rates Adopted by ARMB					
a. Fiscal Year Employer / State Contribution Rate	3.12%	0.00%	0.00%	1.94%	1.90% *
b. Fiscal Year for which Rate Applies	FY22	FY23	FY24	FY25	FY26

* Expected rate. Actual rate to be determined

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

Pension

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2006	$ 8,094,043	$ 6,331,065	78.2%	$ 1,762,978
June 30, 2007	8,662,324	6,739,004	77.8%	1,923,320
June 30, 2008	9,154,282	7,210,772	78.8%	1,943,510
June 30, 2009	9,702,086	6,108,528	63.0%	3,593,558
June 30, 2010	10,371,672	6,469,832	62.4%	3,901,840
June 30, 2011	10,919,047	6,762,149	61.9%	4,156,898
June 30, 2012	11,428,944	6,530,421	57.1%	4,898,523
June 30, 2013	11,945,881	6,510,749	54.5%	5,435,132
June 30, 2014	12,947,759	7,731,438	59.7%	5,216,321
June 30, 2015	13,337,929	8,931,160	67.0%	4,406,769
June 30, 2016	13,633,033	9,056,662	66.4%	4,576,371
June 30, 2017	13,832,130	9,229,703	66.7%	4,602,427
June 30, 2018	14,606,033	9,430,192	64.6%	5,175,841
June 30, 2019	15,039,180	9,576,693	63.7%	5,462,487
June 30, 2020	15,279,525	9,713,710	63.6%	5,565,815
June 30, 2021	15,419,975	10,466,709	67.9%	4,953,266
June 30, 2022	16,093,679	10,961,498	68.1%	5,132,181

Healthcare

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2006	$ 6,294,370	$ 2,709,843	43.1%	$ 3,584,527
June 30, 2007	5,908,609	3,161,956	53.5%	2,746,653
June 30, 2008	6,733,859	3,829,334	56.9%	2,904,525
June 30, 2009	6,877,285	4,134,450	60.1%	2,742,835
June 30, 2010	7,760,820	4,687,632	60.4%	3,073,188
June 30, 2011	7,821,503	5,051,625	64.6%	2,769,878
June 30, 2012	7,863,417	5,301,609	67.4%	2,561,808
June 30, 2013	8,046,878	5,651,877	70.2%	2,395,001
June 30, 2014	7,949,613	6,913,160	87.0%	1,036,453
June 30, 2015	7,310,734	7,242,299	99.1%	68,435
June 30, 2016	7,736,457	7,411,330	95.8%	325,127
June 30, 2017	8,049,265	7,557,068	93.9%	492,197
June 30, 2018	7,658,104	7,686,509	100.4%	(28,405)
June 30, 2019	7,151,694	7,810,491	109.2%	(658,797)
June 30, 2020	7,036,550	7,989,358	113.5%	(952,808)
June 30, 2021	6,856,170	8,581,155	125.2%	(1,724,985)
June 30, 2022	6,657,069	8,979,943	134.9%	(2,322,874)

Section 2: Plan Assets

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

As of June 30, 2023	Pension	Healthcare	Allocation Percent
Cash and Short-Term Investments			
- Cash and Cash Equivalents	$ 132,814	$ 85,721	1.1%
- Subtotal	$ 132,814	$ 85,721	1.1%
Fixed Income Investments			
- Domestic Fixed Income Pool	$ 2,025,160	$ 1,665,607	18.2%
- International Fixed Income Pool	0	0	0.0%
- Tactical Fixed Income Pool	0	0	0.0%
- High Yield Pool	0	0	0.0%
- Treasury Inflation Protection Pool	0	0	0.0%
- Emerging Debt Pool	0	0	0.0%
- Subtotal	$ 2,025,160	$ 1,665,607	18.2%
Equity Investments			
- Domestic Equity Pool	$ 2,753,739	$ 2,264,832	24.8%
- International Equity Pool	1,567,079	1,288,856	14.1%
- Private Equity Pool	1,806,808	1,486,022	16.3%
- Emerging Markets Equity Pool	342,774	281,917	3.1%
- Alternative Equity Strategies	905,251	744,530	8.1%
- Subtotal	$ 7,375,651	$ 6,066,157	66.4%
Other Investments			
- Real Estate Pool	$ 756,416	$ 619,752	6.8%
- Other Investments Pool	838,503	689,632	7.5%
- Absolute Return Pool	0	0	0.0%
- Other Assets	14	967	0.0%
- Subtotal	$ 1,594,933	$ 1,310,351	14.3%
Total Cash and Investments	$ 11,128,558	$ 9,127,836	100.0%
Net Accrued Receivables	8,931	(51,614)	
Net Assets	$ 11,137,489	$ 9,076,222	

Section 2.2: Changes in Fair Value of Assets During FY23 ($'s in 000's)

Fiscal Year 2023	Pension	Healthcare
1. Fair Value of Assets as of June 30, 2022	$ 10,816,140	$ 8,869,134
2. Additions:		
a. Employee Contributions	$ 79,968	$ 0
b. Employer Contributions	438,011	555
c. State Assistance Contributions	33,933	0
d. Interest and Dividend Income	170,979	141,761
e. Net Appreciation / Depreciation in Fair Value of Investments	658,417	541,145
f. Employer Group Waiver Plan	0	60,662
g. Other	168	390
h. Total Additions	$ 1,381,476	$ 744,513
3. Deductions:		
a. Medical Benefits	$ 0	$ 508,527
b. Retirement Benefits	1,012,696	0
c. Refund of Contributions	10,099	0
d. Investment Expenses	29,490	23,943
e. Administrative Expenses	7,842	4,955
f. Total Deductions	$ 1,060,127	$ 537,425
4. Fair Value of Assets as of June 30, 2023	$ 11,137,489	$ 9,076,222
5. Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	7.6%	7.6%

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

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

	Pension	Healthcare
1. Deferral of Investment Gain / (Loss) for FY23		
a. Fair Value of Assets as of June 30, 2022	$ 10,816,140	$ 8,869,134
b. Contributions	551,912	555
c. Employer Group Waiver Plan	0	60,662
d. Benefit Payments	1,022,795	508,527
e. Administrative Expenses	7,842	4,955
f. Actual Investment Return (net of investment expenses)	800,074	659,353
g. Expected Return Rate (net of investment expenses)	7.25%	7.25%
h. Expected Return, Weighted for Timing	765,278	626,904
i. Investment Gain / (Loss) for the Year, (f) - (h)	34,796	32,449
2. Actuarial Value as of June 30, 2023		
a. Fair Value as of June 30, 2023	$ 11,137,489	$ 9,076,222
b. Deferred Investment Gain / (Loss)	(134,850)	(104,009)
c. Actuarial Value as of June 30, 2023, (a) - (b)	11,272,339	9,180,231
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	101.2%	101.1%
4. Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses	7.4%	7.5%

The tables below show the development of the gains/(losses) to be recognized in the current year ($'s in 000's):

Pension				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (136,242)	$ (108,992)	$ (27,250)	$ 0
June 30, 2020	(310,824)	(186,495)	(62,165)	(62,164)
June 30, 2021	2,103,782	841,512	420,756	841,514
June 30, 2022	(1,570,061)	(314,012)	(314,012)	(942,037)
June 30, 2023	34,796	0	6,959	27,837
Total	**$ 121,451**	**$ 232,013**	**$ 24,288**	**$ (134,850)**

Healthcare				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (101,128)	$ (80,903)	$ (20,225)	$ 0
June 30, 2020	(244,753)	(146,853)	(48,950)	(48,950)
June 30, 2021	1,730,106	692,042	346,021	692,043
June 30, 2022	(1,288,435)	(257,687)	(257,687)	(773,061)
June 30, 2023	32,449	0	6,490	25,959
Total	**$ 128,239**	**$ 206,599**	**$ 25,649**	**$ (104,009)**

Section 2.4: Historical Asset Rates of Return

	Actuarial Value		Fair Value	
Year Ending	**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%	18.1%	6.9%
June 30, 2015	7.0%	7.1%	2.9%	6.5%
June 30, 2016	5.0%	6.9%	(0.7%)	5.9%
June 30, 2017	5.4%	6.8%	12.8%	6.4%
June 30, 2018	6.1%	6.8%	8.2%	6.5%
June 30, 2019	5.5%	6.7%	6.0%	6.5%
June 30, 2020	5.8%	6.6%	4.1%	6.3%
June 30, 2021	11.6%	6.9%	30.0%	7.6%
June 30, 2022	8.7%	7.0%	(6.0%)	6.8%
June 30, 2023	7.4%	7.0%	7.6%	6.8%

Rates of return are shown based on combined assets for Pension and Healthcare.

Cumulative since fiscal year ending June 30, 2005.

Section 3: Projections

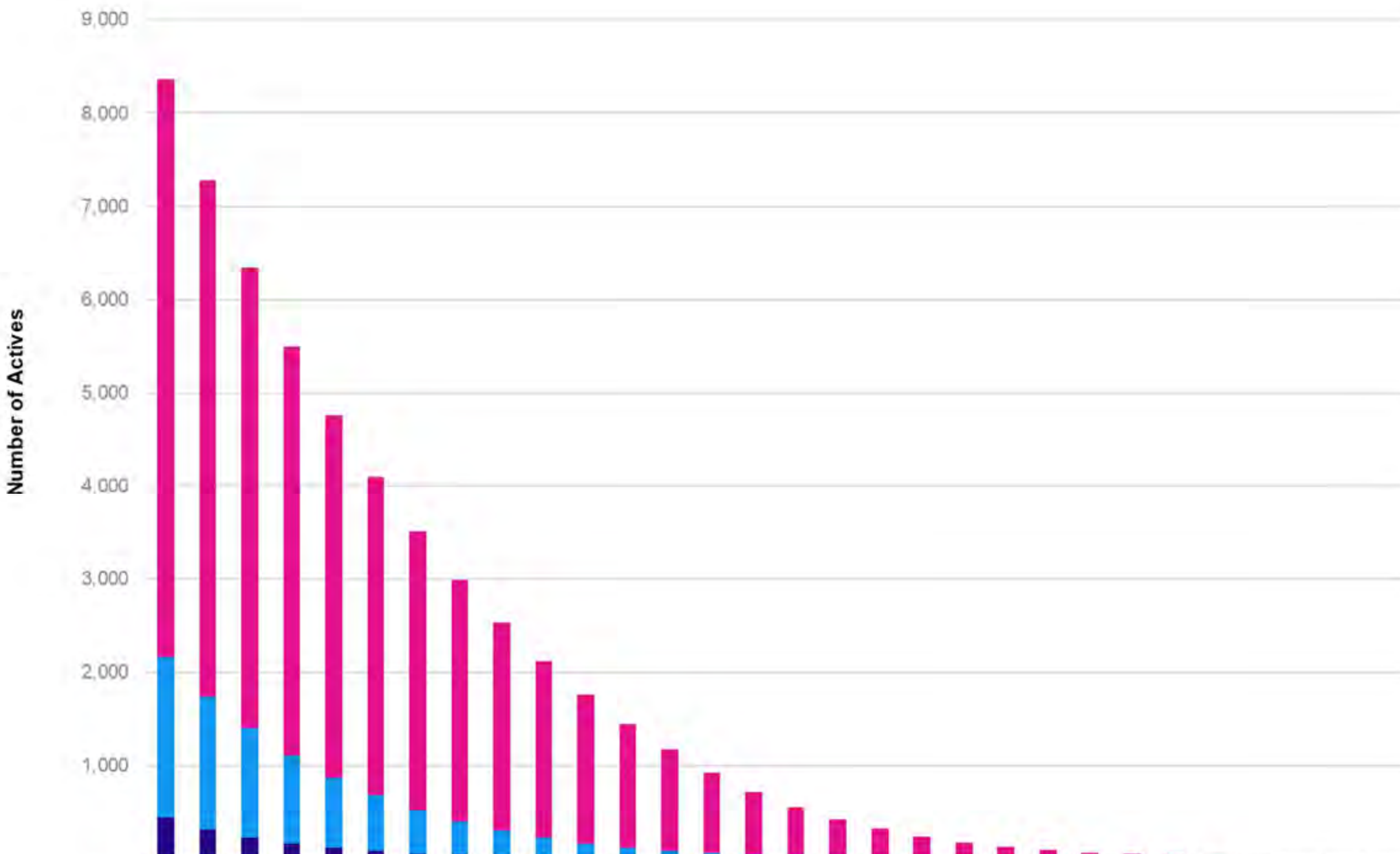
Section 3.1: Projection Assumptions and Methods

Key Assumptions

- 7.25% investment return (net of investment expenses) on the Fair Value of Assets in all future years.
- The Actuarial Value of Assets was 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 5. Experience after June 30, 2023 is assumed to match the assumptions.
- The actuarially calculated contribution rate using a two-year roll-forward approach is adopted each year.
- Projections assume a 0% increase in the total active member population. All new members are expected to enter the DCR plan.
- Contribution rates are determined as a percent of total DB and DCR payroll.
- The DCR contribution rate determined as of June 30, 2023 is assumed to remain constant in all future years.
- The active rehire assumption shown in Section 5 is assumed to grade to zero on a uniform basis over 20 years.
- The Normal Cost is increased by the administrative expenses shown in Section 5. For future years, the percent increase is assumed to remain constant.
- The % of total DB/DCR payroll represented by the State's employees based on the June 30, 2023 data was assumed to remain constant in all future years.
- Board-adopted contribution rates for FY24 and FY25 are reflected.
- The healthcare Normal Cost is assumed to be contributed to the healthcare trust in FY26 and beyond.
- The projections in Section 3.6B reflect adjusted Employer/State Contribution Rates in FY26 and beyond due to a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.2: Membership Projection

Projected Active Member Count

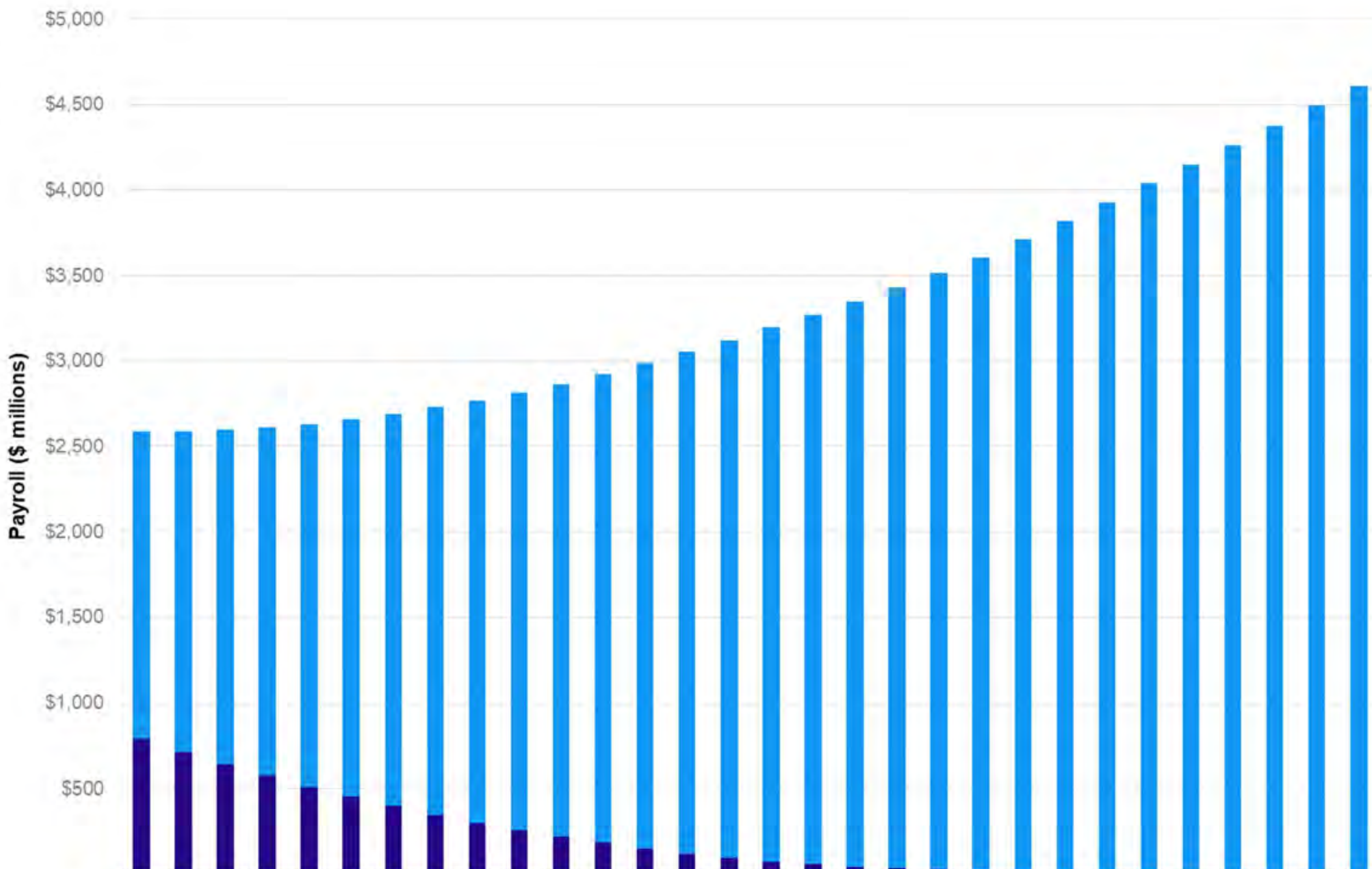


	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Tier 3	6,198	5,536	4,940	4,391	3,884	3,418	2,989	2,593	2,228	1,896	1,592	1,321	1,079	861	673
Tier 2	1,714	1,421	1,169	945	755	597	466	360	276	209	157	117	86	62	44
Tier 1	449	321	232	166	118	83	58	40	27	18	12	8	5	3	2

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Tier 3	521	401	306	231	173	128	94	68	49	35	25	17	12	8	6
Tier 2	31	22	16	11	7	5	3	2	1	1	1	0	0	0	0
Tier 1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Fiscal Year Ending June 30

Projected DB and DCR Payroll

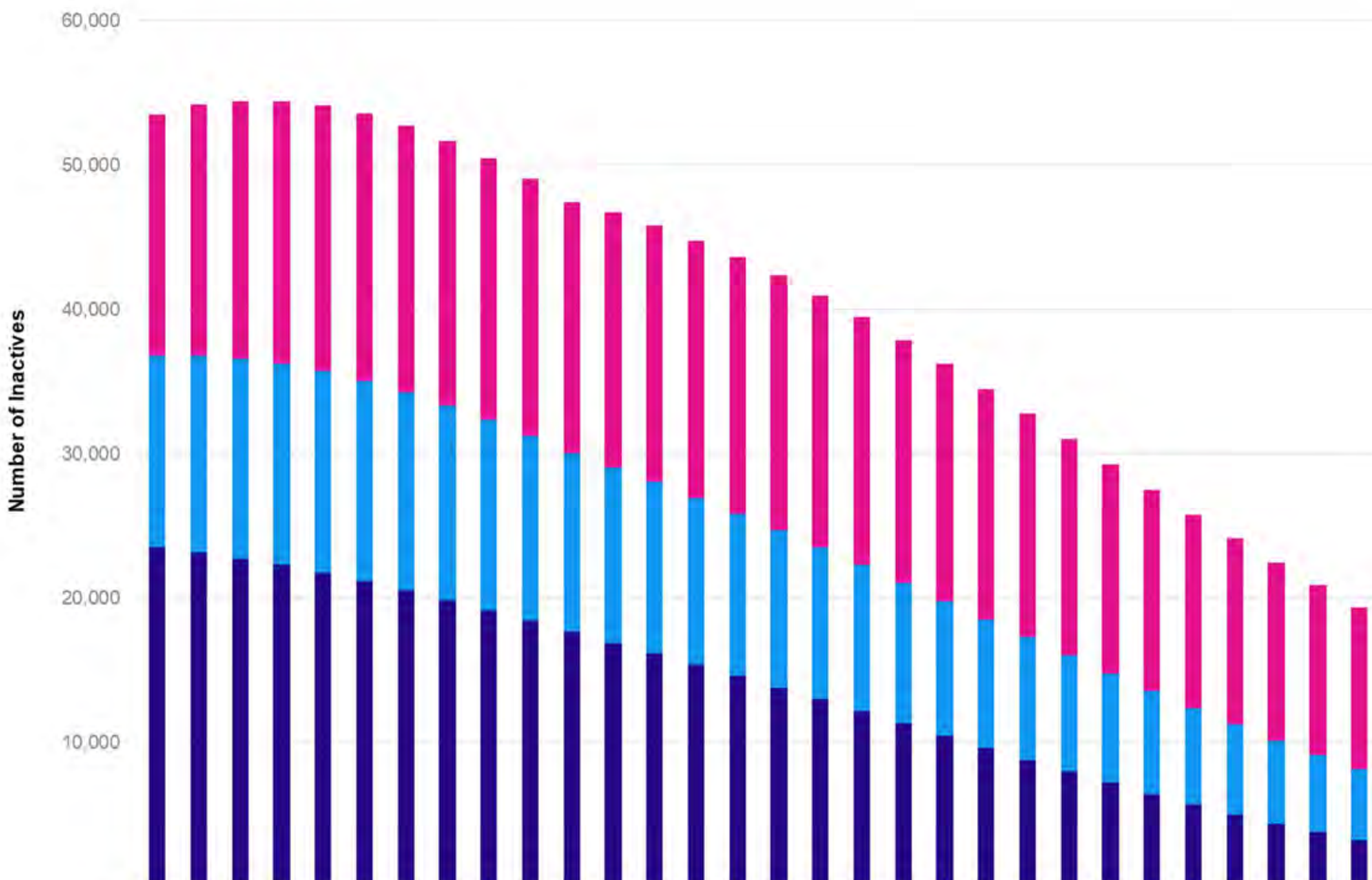


	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
DCR	1,796	1,875	1,956	2,039	2,122	2,205	2,293	2,380	2,467	2,555	2,643	2,739	2,834	2,929	3,024
DB	793	714	643	575	512	454	400	350	303	261	222	186	154	124	99

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DCR	3,119	3,212	3,304	3,397	3,490	3,584	3,696	3,808	3,920	4,033	4,147	4,261	4,376	4,492	4,610
DB	77	60	47	36	27	21	15	11	8	6	4	3	2	2	1

Fiscal Year Ending June 30

Projected Inactive Member Count



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Tier 3	16,727	17,350	17,814	18,148	18,370	18,450	18,416	18,296	18,074	17,764	17,371	17,613	17,755	17,823	17,798
Tier 2	13,317	13,638	13,850	13,977	13,998	13,911	13,743	13,508	13,201	12,848	12,429	12,167	11,869	11,559	11,234
Tier 1	23,477	23,174	22,772	22,298	21,761	21,174	20,542	19,870	19,161	18,418	17,640	16,924	16,183	15,415	14,629

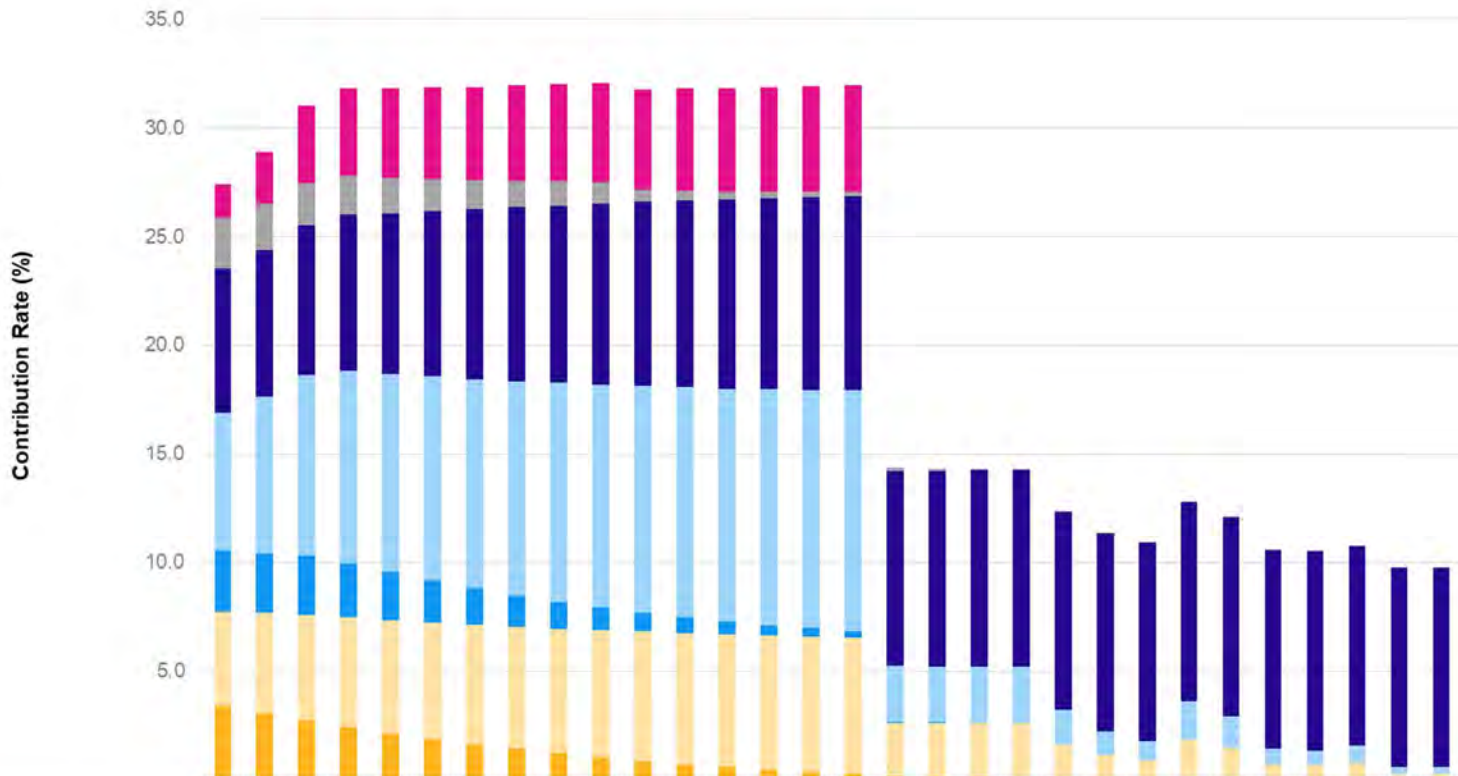
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Tier 3	17,671	17,459	17,173	16,818	16,420	15,958	15,487	14,981	14,467	13,927	13,385	12,852	12,310	11,764	11,217
Tier 2	10,880	10,502	10,113	9,714	9,306	8,883	8,449	8,006	7,555	7,099	6,641	6,183	5,728	5,276	4,837
Tier 1	13,823	13,004	12,172	11,334	10,495	9,660	8,835	8,027	7,243	6,487	5,765	5,083	4,444	3,852	3,310

Fiscal Year Ending June 30

Section 3.3A: Projected Employer/State Contribution Rates

Based on Total DB and DCR Payroll

These projections reflect the DB contribution rates shown in Section 3.6A.



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
State Assistance	1.56	2.39	3.56	4.05	4.12	4.22	4.30	4.39	4.47	4.56	4.64	4.70	4.76	4.83	4.87
DB EE Contributions	2.33	2.14	1.95	1.78	1.63	1.47	1.34	1.22	1.11	1.00	0.54	0.44	0.36	0.28	0.22
DCR ER Contributions	6.63	6.73	6.90	7.15	7.39	7.60	7.81	8.00	8.17	8.32	8.46	8.59	8.70	8.80	8.88
State as ER on DCR Pay	6.37	7.21	8.30	8.88	9.14	9.40	9.63	9.86	10.07	10.27	10.45	10.61	10.74	10.88	10.99
State as ER on DB Pay	2.81	2.75	2.73	2.51	2.21	1.94	1.68	1.45	1.24	1.05	0.88	0.72	0.58	0.46	0.36
DB ER Contributions on DCR Pay	4.34	4.62	4.85	5.03	5.19	5.35	5.49	5.62	5.74	5.85	5.95	6.04	6.12	6.18	6.25
DB ER Contributions on DB Pay	3.39	3.05	2.74	2.43	2.15	1.89	1.64	1.42	1.21	1.02	0.86	0.70	0.57	0.45	0.35

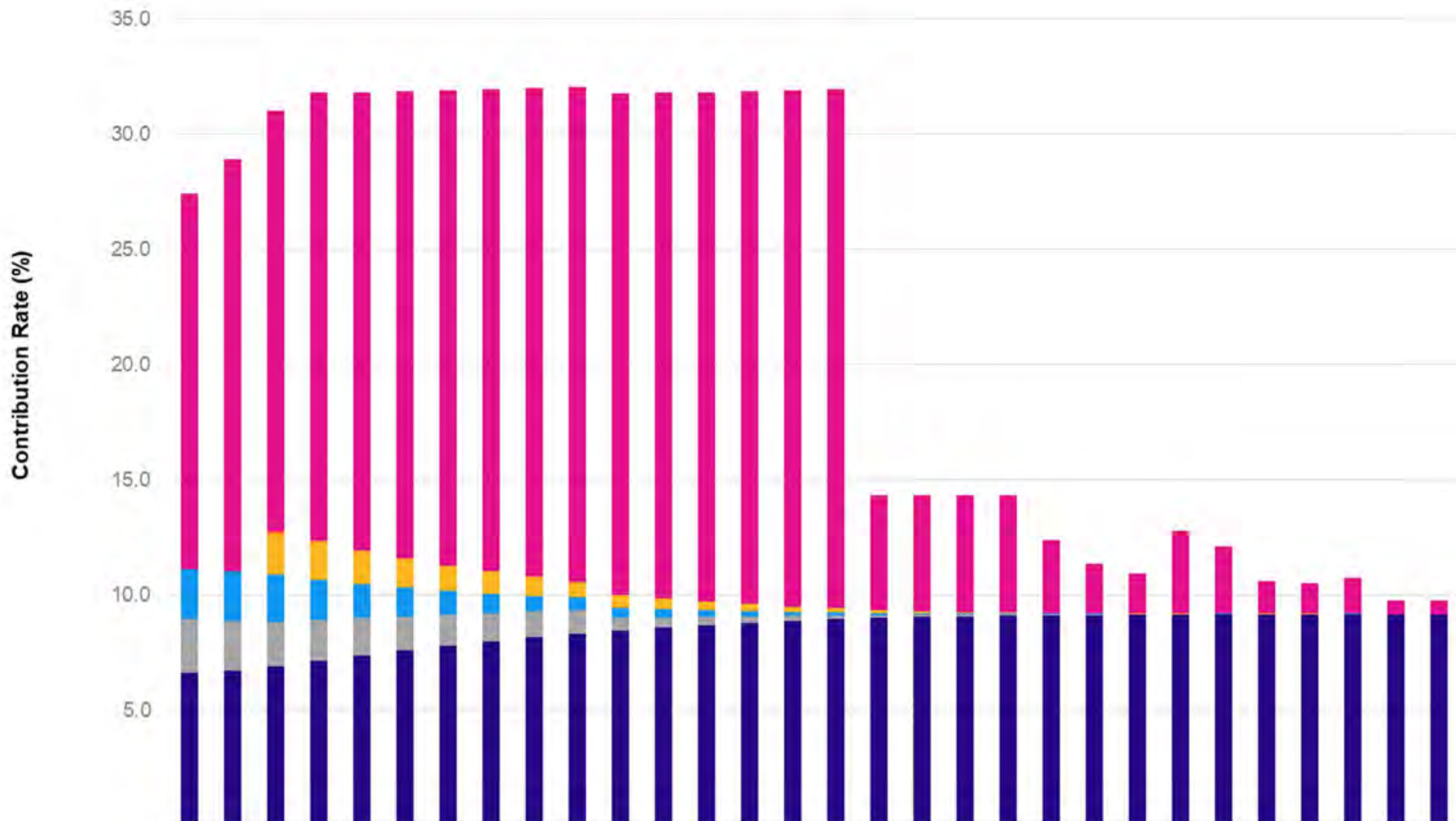
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
State Assistance	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DB EE Contributions	0.17	0.13	0.10	0.07	0.05	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00
DCR ER Contributions	8.95	9.00	9.04	9.07	9.10	9.12	9.13	9.14	9.15	9.16	9.16	9.16	9.17	9.17	9.17
State as ER on DCR Pay	11.09	2.55	2.55	2.55	2.56	1.60	1.09	0.88	1.80	1.45	0.70	0.67	0.78	0.29	0.29
State as ER on DB Pay	0.28	0.05	0.04	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DB ER Contributions on DCR Pay	6.29	2.50	2.51	2.53	2.55	1.59	1.09	0.88	1.81	1.45	0.70	0.67	0.79	0.30	0.29
DB ER Contributions on DB Pay	0.27	0.13	0.10	0.08	0.06	0.04	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00

Fiscal Year Ending June 30

Section 3.3B: Components of Projected Total Contribution Rates

Based on Total DB and DCR Payroll

These projections reflect the DB contribution rates shown in Section 3.6A.

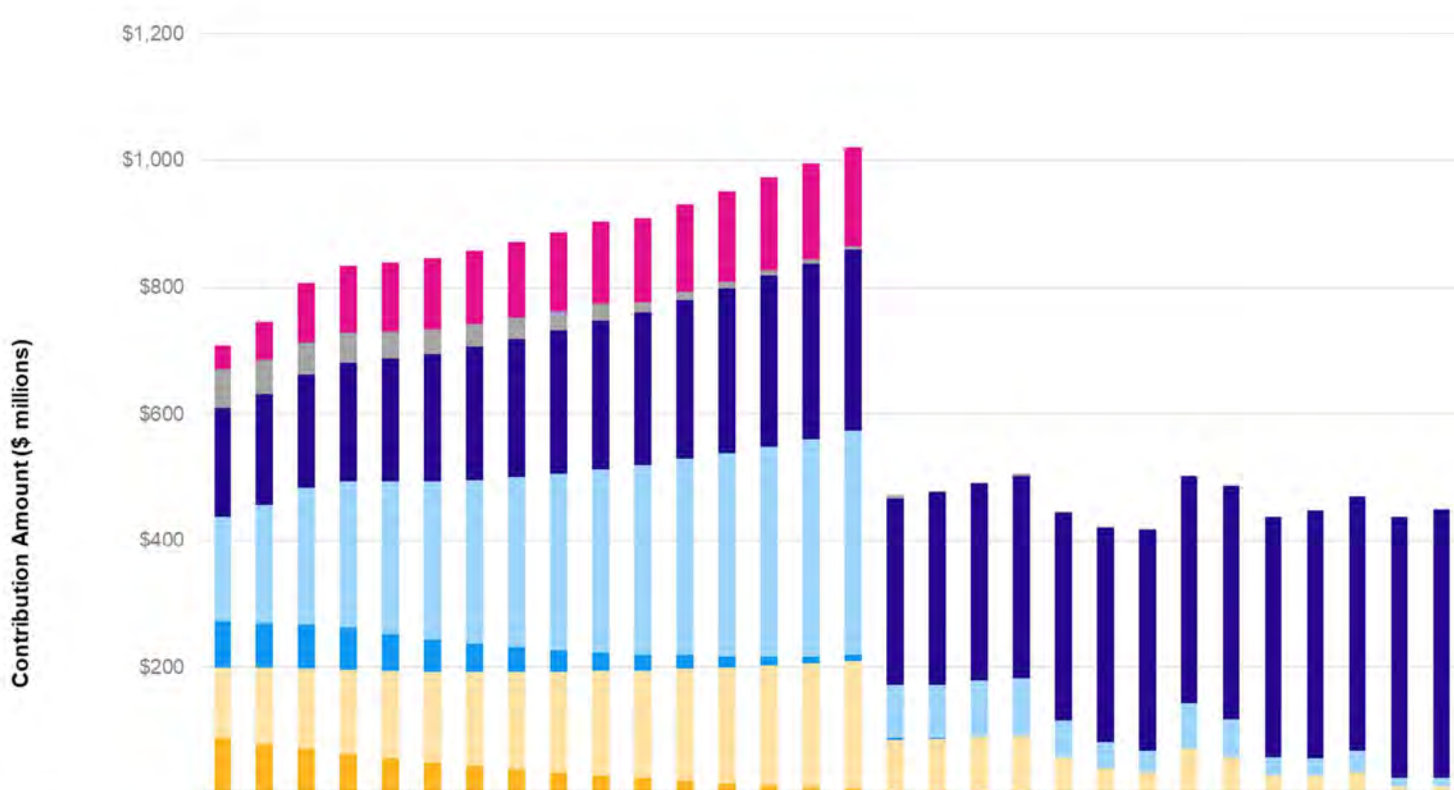


	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
DB Amortization	16.33	17.88	18.27	19.51	19.90	20.30	20.63	20.96	21.24	21.82	21.77	21.95	22.12	22.28	22.43
DB Healthcare Normal Cost	0.00	0.00	1.90	1.67	1.46	1.27	1.09	0.94	0.80	0.67	0.56	0.46	0.37	0.30	0.23
DB ER Pension Normal Cost	2.14	2.15	2.01	1.72	1.45	1.23	1.02	0.84	0.69	0.56	0.45	0.36	0.28	0.22	0.16
DB EE Pension Normal Cost	2.33	2.14	1.95	1.78	1.63	1.47	1.34	1.22	1.11	1.00	0.54	0.44	0.36	0.28	0.22
DCR ER Contribution	6.63	6.73	6.90	7.15	7.39	7.60	7.81	8.00	8.17	8.32	8.46	8.59	8.70	8.80	8.88

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DB Amortization	22.56	5.00	5.04	5.06	5.09	3.18	2.15	1.75	3.59	2.89	1.40	1.33	1.56	0.59	0.58
DB Healthcare Normal Cost	0.18	0.14	0.10	0.08	0.06	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00
DB ER Pension Normal Cost	0.12	0.09	0.06	0.05	0.04	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.01	0.00	0.00
DB EE Pension Normal Cost	0.17	0.13	0.10	0.07	0.05	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00
DCR ER Contribution	8.95	9.00	9.04	9.07	9.10	9.12	9.13	9.14	9.15	9.16	9.16	9.16	9.17	9.17	9.17

Fiscal Year Ending June 30

Section 3.4A: Projected Employer/State Contribution Amounts



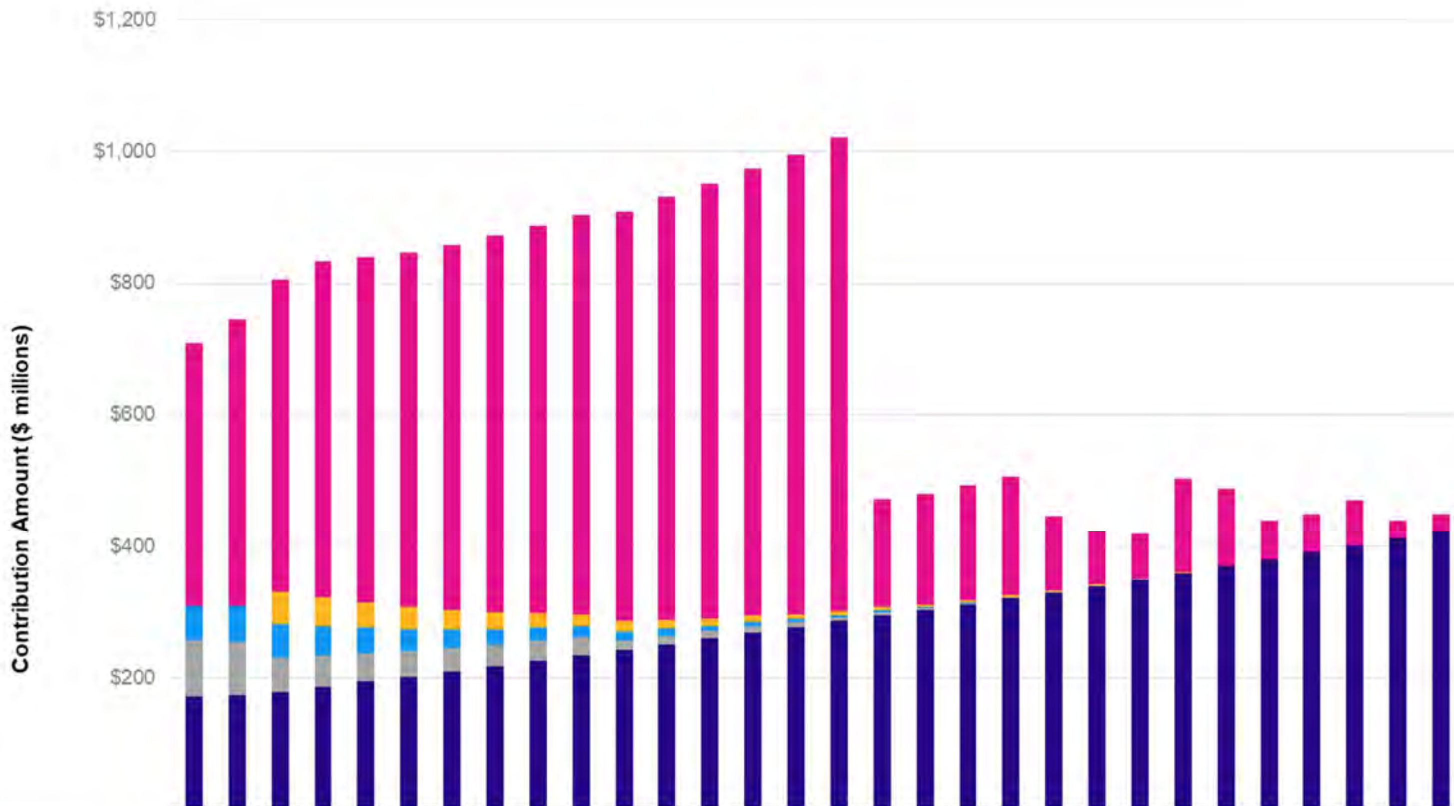
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
State Assistance	38	59	92	106	109	112	116	120	124	128	133	138	142	147	152
DB EE Contributions	60	55	51	47	43	39	36	33	31	28	15	13	11	9	7
DCR ER Contributions	172	174	179	187	195	202	210	218	226	234	242	251	260	269	277
State as ER on DCR Pay	165	187	216	232	241	250	259	269	279	289	299	310	321	332	343
State as ER on DB Pay	73	71	71	66	58	51	45	40	34	30	25	21	17	14	11
DB ER Contributions on DCR Pay	112	120	126	132	137	142	148	153	159	165	170	177	183	189	195
DB ER Contributions on DB Pay	88	79	71	64	57	50	44	39	34	29	25	21	17	14	11

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
State Assistance	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DB EE Contributions	5	4	3	2	2	1	1	1	0	0	0	0	0	0	0
DCR ER Contributions	286	295	303	311	320	329	339	349	359	370	380	391	401	412	423
State as ER on DCR Pay	354	84	85	88	90	58	41	34	71	58	29	28	34	13	13
State as ER on DB Pay	9	2	1	1	1	0	0	0	0	0	0	0	0	0	0
DB ER Contributions on DCR Pay	201	82	84	87	90	57	40	34	71	59	29	29	35	13	13
DB ER Contributions on DB Pay	9	4	3	3	2	1	1	1	1	0	0	0	0	0	0

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.4B: Components of Projected Total Contribution Amounts



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
DB Amortization	398	436	475	511	526	538	556	572	589	606	623	643	661	680	700
DB Healthcare Normal Cost	0	0	49	44	38	34	29	26	22	19	16	13	11	9	7
DB ER Pension Normal Cost	53	54	52	45	38	33	27	23	19	16	13	11	8	7	5
DB EE Pension Normal Cost	85	81	51	47	43	39	36	33	31	28	15	13	11	9	7
DCR ER Contributions	172	174	179	187	195	202	210	218	226	234	242	251	260	269	277

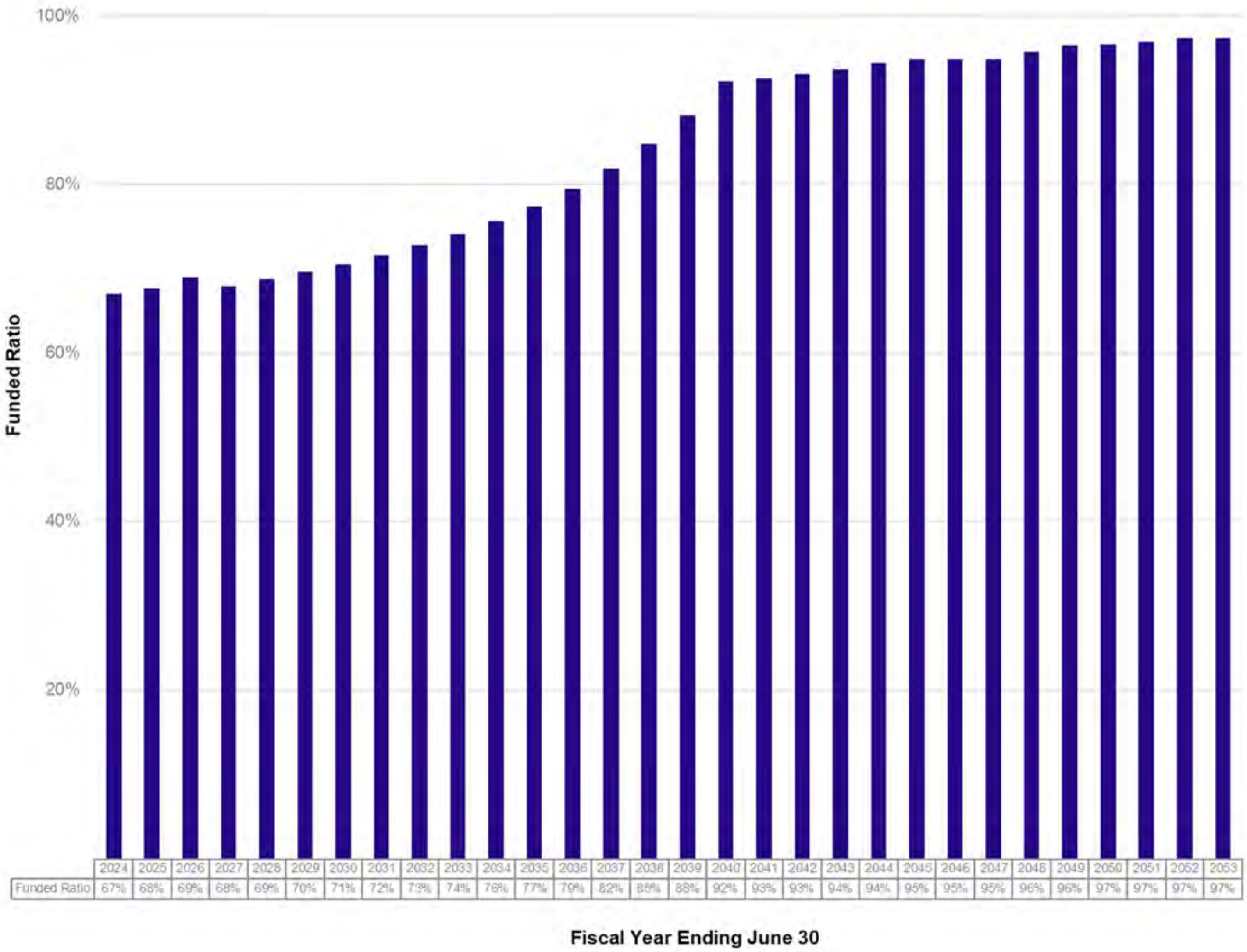
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DB Amortization	720	164	168	174	180	114	80	68	142	117	58	57	69	26	26
DB Healthcare Normal Cost	6	5	3	3	2	1	1	1	1	0	0	0	0	0	0
DB ER Pension Normal Cost	4	3	2	2	1	1	1	0	0	0	0	0	0	0	0
DB EE Pension Normal Cost	5	4	3	2	2	1	1	1	0	0	0	0	0	0	0
DCR ER Contributions	286	295	303	311	320	329	339	349	359	370	380	391	401	412	423

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.5A: Projection of Funded Ratios

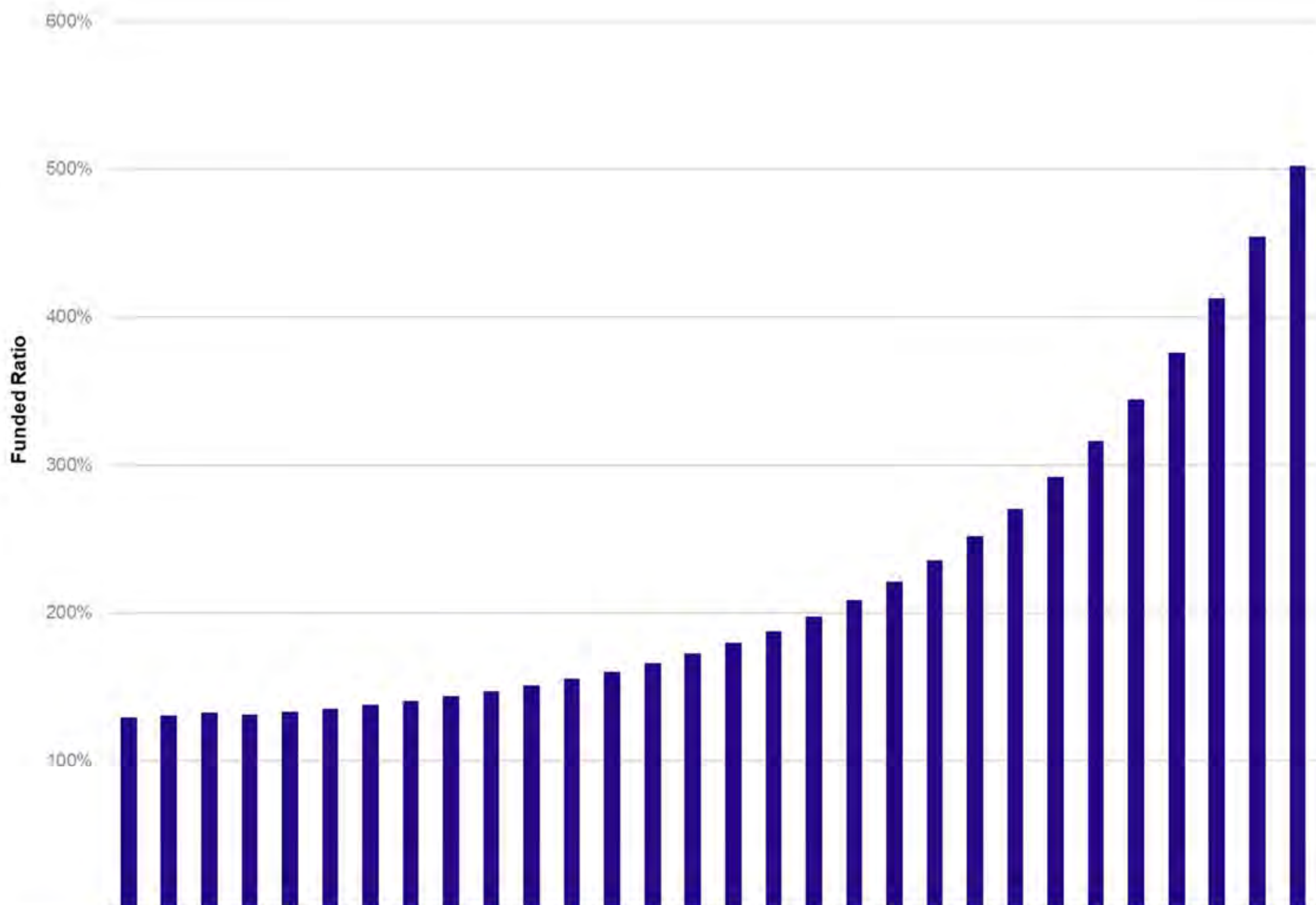
Pension



These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.5B: Projection of Funded Ratios

Healthcare



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Funded Ratio	130%	131%	133%	131%	133%	136%	138%	141%	144%	147%	151%	156%	161%	166%	172%

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Funded Ratio	180%	188%	198%	208%	221%	235%	252%	270%	292%	316%	344%	376%	412%	454%	502%

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.6A: Table of Projected Actuarial Results ($'s in 000's)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)				Cash Flow Amounts during Following 12 Months										Deferred Assed Gain / (Loss)	
	Pension		Healthcare			Actuarial Contrib. Rates			DB Contributions							
	Actuarial Assets	Accrued Liability	Actuarial Assets	Accrued Liability	Total Salaries	DB	DCR	Total	Non-State Employers	State as an Employer	State Assistance	Employee	Total	Benefit Payments	Pension	Healthcare
2024	$ 11,272,339	$ 16,835,581	$ 9,180,231	$ 7,085,823	$ 2,588,883	18.47%	6.63%	25.10%	$ 199,990	$ 237,840	$ 37,942	$ 60,416	$ 536,188	$ 1,562,577	$ (186,390)	$ (149,883)
2025	11,517,786	17,018,390	9,415,970	7,198,491	2,588,872	20.03%	6.73%	26.76%	198,688	257,927	59,149	55,374	571,138	1,633,001	(300,094)	(244,707)
2026	11,827,834	17,150,594	9,693,328	7,290,768	2,598,836	22.18%	6.90%	29.08%	197,232	286,712	92,477	50,789	627,210	1,699,107	6,959	6,490
2027	11,691,971	17,236,896	9,668,841	7,362,833	2,613,823	22.89%	7.15%	30.04%	195,086	297,596	105,622	46,792	645,096	1,758,060	0	0
2028	11,863,033	17,269,114	9,896,638	7,418,054	2,633,326	22.82%	7.39%	30.21%	193,365	298,900	108,660	42,835	643,760	1,813,755	0	0
2029	12,001,375	17,251,181	10,113,310	7,456,353	2,656,994	22.81%	7.60%	30.41%	192,299	301,455	112,308	39,157	645,219	1,865,588	0	0
2030	12,118,329	17,184,615	10,325,678	7,477,215	2,689,500	22.77%	7.81%	30.58%	191,812	304,608	115,980	36,062	648,462	1,916,464	0	0
2031	12,215,964	17,069,108	10,532,507	7,478,666	2,725,962	22.76%	7.99%	30.75%	191,947	308,601	119,881	33,216	653,645	1,965,660	0	0
2032	12,297,280	16,905,305	10,732,763	7,458,336	2,766,333	22.77%	8.17%	30.94%	192,287	313,309	124,298	30,617	660,511	2,010,836	0	0
2033	12,365,791	16,693,844	10,927,063	7,415,906	2,810,508	22.79%	8.32%	31.11%	193,238	318,592	128,684	28,263	668,777	2,052,038	0	0
2034	12,425,761	16,436,201	11,115,485	7,350,474	2,859,094	22.82%	8.46%	31.28%	194,567	324,526	133,352	15,439	667,884	2,073,263	0	0
2035	12,484,712	16,136,097	11,300,720	7,263,302	2,919,806	22.81%	8.59%	31.40%	196,791	331,272	137,944	12,847	678,854	2,101,135	0	0
2036	12,546,581	15,793,412	11,483,883	7,154,235	2,983,282	22.80%	8.70%	31.50%	199,420	338,325	142,443	10,740	690,928	2,123,365	0	0
2037	12,616,306	15,409,492	11,667,045	7,024,004	3,048,597	22.84%	8.80%	31.64%	202,254	346,339	147,706	8,536	704,835	2,140,806	0	0
2038	12,700,656	14,986,667	11,850,790	6,871,362	3,117,876	22.85%	8.88%	31.73%	205,596	354,365	152,473	6,859	719,293	2,148,900	0	0
2039	12,807,427	14,528,805	12,038,758	6,698,642	3,191,077	22.89%	8.95%	31.84%	209,301	363,320	157,817	5,425	735,863	2,150,368	0	0
2040	12,945,601	14,039,739	12,233,090	6,505,993	3,267,218	5.24%	9.00%	14.24%	86,046	85,156	0	4,247	175,449	2,140,543	0	0
2041	12,520,590	13,524,743	12,439,279	6,297,041	3,344,849	5.20%	9.04%	14.24%	87,418	86,514	0	3,345	177,277	2,121,922	0	0
2042	12,084,715	12,987,406	12,662,214	6,074,949	3,425,549	5.20%	9.07%	14.27%	89,527	88,601	0	2,398	180,526	2,094,014	0	0
2043	11,643,826	12,432,295	12,907,520	5,842,734	3,509,219	5.19%	9.10%	14.29%	91,538	90,590	0	1,755	183,883	2,058,543	0	0
2044	11,203,274	11,864,001	13,179,068	5,602,113	3,595,798	3.23%	9.12%	12.35%	58,374	57,770	0	1,438	117,582	2,011,861	0	0
2045	10,695,668	11,286,515	13,485,549	5,359,444	3,703,358	2.21%	9.13%	11.34%	41,135	40,710	0	1,111	82,956	1,959,380	0	0
2046	10,153,703	10,704,484	13,830,679	5,115,533	3,812,198	1.78%	9.14%	10.92%	34,105	33,752	0	762	68,619	1,899,873	0	0
2047	9,599,690	10,121,494	14,220,689	4,873,834	3,922,692	3.64%	9.15%	12.79%	71,764	71,022	0	392	143,178	1,834,193	0	0
2048	9,128,051	9,541,215	14,661,932	4,637,299	4,034,860	2.92%	9.16%	12.08%	59,215	58,603	0	403	118,221	1,766,086	0	0
2049	8,645,004	8,966,829	15,157,300	4,405,959	4,148,657	1.40%	9.16%	10.56%	29,192	28,889	0	415	58,496	1,694,458	0	0
2050	8,115,767	8,401,292	15,712,296	4,181,411	4,263,490	1.35%	9.16%	10.51%	28,928	28,629	0	426	57,983	1,623,578	0	0
2051	7,600,372	7,847,357	16,328,413	3,961,354	4,378,957	1.57%	9.17%	10.74%	34,639	34,281	0	0	68,920	1,550,655	0	0
2052	7,113,322	7,307,271	17,010,558	3,746,893	4,495,734	0.60%	9.17%	9.77%	13,617	13,477	0	0	27,094	1,478,291	0	0
2053	6,602,701	6,782,955	17,762,272	3,536,996	4,614,512	0.58%	9.17%	9.75%	13,494	13,353	0	0	26,847	1,406,134	0	0
								Total	$ 3,892,865	$ 5,715,034	$ 1,876,736	$ 500,059	$ 11,984,694			

The contribution rates, contribution amounts, and benefit payments are determined separately for Pension and Healthcare. They are aggregated solely for purposes of display in this exhibit.

Section 3.6A: Table of Projected Actuarial Results ($'s in 000's) (continued)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)			
	Funding Ratio		Unfunded Liability / (Surplus)	
	Pension	Healthcare	Pension	Healthcare
2024	67%	130%	$ 5,563,242	$ (2,094,408)
2025	68%	131%	5,500,604	(2,217,479)
2026	69%	133%	5,322,760	(2,402,560)
2027	68%	131%	5,544,925	(2,306,008)
2028	69%	133%	5,406,081	(2,478,584)
2029	70%	136%	5,249,806	(2,656,957)
2030	71%	138%	5,066,286	(2,848,463)
2031	72%	141%	4,853,144	(3,053,841)
2032	73%	144%	4,608,025	(3,274,427)
2033	74%	147%	4,328,053	(3,511,157)
2034	76%	151%	4,010,440	(3,765,011)
2035	77%	156%	3,651,385	(4,037,418)
2036	79%	161%	3,246,831	(4,329,648)
2037	82%	166%	2,793,186	(4,643,041)
2038	85%	173%	2,286,011	(4,979,428)
2039	88%	180%	1,721,378	(5,340,116)
2040	92%	188%	1,094,138	(5,727,097)
2041	93%	198%	1,004,153	(6,142,238)
2042	93%	208%	902,691	(6,587,265)
2043	94%	221%	788,469	(7,064,786)
2044	94%	235%	660,727	(7,576,955)
2045	95%	252%	590,847	(8,126,105)
2046	95%	270%	550,781	(8,715,146)
2047	95%	292%	521,804	(9,346,855)
2048	96%	316%	413,164	(10,024,633)
2049	96%	344%	321,825	(10,751,341)
2050	97%	376%	285,525	(11,530,885)
2051	97%	412%	246,985	(12,367,059)
2052	97%	454%	193,949	(13,263,665)
2053	97%	502%	180,254	(14,225,276)

Section 3.6B: Table of Projected Actuarial Results ($'s in 000's)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)				Cash Flow Amounts during Following 12 Months										Deferred Assed Gain / (Loss)	
	Pension		Healthcare			Actuarial Contrib. Rates			DB Contributions							
	Actuarial Assets	Accrued Liability	Actuarial Assets	Accrued Liability	Total Salaries	DB	DCR	Total	Non-State Employers	State as an Employer	State Assistance	Employee	Total	Benefit Payments	Pension	Healthcare
2024	$ 11,272,339	$ 16,835,581	$ 9,180,231	$ 7,085,823	$ 2,588,883	18.47%	6.63%	25.10%	$ 199,990	$ 237,840	$ 37,942	$ 60,416	$ 536,188	$ 1,562,577	$ (186,390)	$ (149,883)
2025	11,517,786	17,018,390	9,415,970	7,198,491	2,588,872	20.03%	6.73%	26.76%	198,688	257,927	59,149	55,374	571,138	1,633,001	(300,094)	(244,707)
2026	11,827,834	17,150,594	9,693,328	7,290,768	2,598,836	23.03%	6.90%	29.93%	197,233	297,699	100,053	50,789	645,774	1,699,107	6,959	6,490
2027	11,709,592	17,236,896	9,670,724	7,362,833	2,613,823	23.72%	7.15%	30.87%	195,085	308,387	112,453	46,792	662,717	1,758,060	0	0
2028	11,898,808	17,269,114	9,900,281	7,418,054	2,633,326	23.59%	7.39%	30.98%	193,365	308,986	114,748	42,835	659,934	1,813,755	0	0
2029	12,055,354	17,251,181	10,118,581	7,456,353	2,656,994	23.52%	7.60%	31.12%	192,299	310,838	117,649	39,157	659,943	1,865,588	0	0
2030	12,190,566	17,184,615	10,332,432	7,477,215	2,689,500	23.43%	7.81%	31.24%	191,813	313,437	120,575	36,062	661,887	1,916,464	0	0
2031	12,306,397	17,069,108	10,540,865	7,478,666	2,725,962	23.36%	7.99%	31.35%	191,947	316,737	123,717	33,216	665,617	1,965,660	0	0
2032	12,405,963	16,905,305	10,742,574	7,458,336	2,766,333	23.33%	8.17%	31.50%	192,287	321,016	127,496	30,617	671,416	2,010,836	0	0
2033	12,492,906	16,693,844	10,938,445	7,415,906	2,810,508	23.31%	8.32%	31.63%	193,238	325,861	131,368	28,263	678,730	2,052,038	0	0
2034	12,571,624	16,436,201	11,128,566	7,350,474	2,859,094	23.28%	8.46%	31.74%	194,567	331,068	135,220	15,439	676,294	2,073,263	0	0
2035	12,649,337	16,136,097	11,315,341	7,263,302	2,919,806	23.23%	8.59%	31.82%	196,791	337,372	139,118	12,847	686,128	2,101,135	0	0
2036	12,730,113	15,793,412	11,500,169	7,154,235	2,983,282	23.17%	8.70%	31.87%	199,420	343,815	142,893	10,740	696,868	2,123,365	0	0
2037	12,818,694	15,409,492	11,685,130	7,024,004	3,048,597	23.15%	8.80%	31.95%	202,254	351,040	147,247	8,536	709,077	2,140,806	0	0
2038	12,921,777	14,986,667	11,870,502	6,871,362	3,117,876	23.13%	8.88%	32.01%	205,596	358,707	151,533	6,859	722,695	2,148,900	0	0
2039	13,047,745	14,528,805	12,060,222	6,698,642	3,191,077	23.12%	8.95%	32.07%	209,300	366,970	155,893	5,425	737,588	2,150,368	0	0
2040	13,204,727	14,039,739	12,256,440	6,505,993	3,267,218	4.78%	9.00%	13.78%	78,493	77,680	0	4,247	160,420	2,140,543	0	0
2041	12,782,938	13,524,743	12,464,322	6,297,041	3,344,849	4.74%	9.04%	13.78%	79,685	78,861	0	3,345	161,891	2,121,922	0	0
2042	12,349,803	12,987,406	12,689,418	6,074,949	3,425,549	4.72%	9.07%	13.79%	81,263	80,422	0	2,398	164,083	2,094,014	0	0
2043	11,911,104	12,432,295	12,936,696	5,842,734	3,509,219	4.69%	9.10%	13.79%	82,719	81,863	0	1,755	166,337	2,058,543	0	0
2044	11,471,758	11,864,001	13,210,359	5,602,113	3,595,798	2.66%	9.12%	11.78%	48,073	47,575	0	1,438	97,086	2,011,861	0	0
2045	10,962,391	11,286,515	13,519,109	5,359,444	3,703,358	1.58%	9.13%	10.71%	29,408	29,105	0	1,111	59,624	1,959,380	0	0
2046	10,415,600	10,704,484	13,866,672	5,115,533	3,812,198	1.13%	9.14%	10.27%	21,651	21,427	0	762	43,840	1,899,873	0	0
2047	9,854,913	10,121,494	14,259,291	4,873,834	3,922,692	3.05%	9.15%	12.20%	60,132	59,510	0	392	120,034	1,834,193	0	0
2048	9,377,809	9,541,215	14,703,332	4,637,299	4,034,860	2.30%	9.16%	11.46%	46,642	46,160	0	403	93,205	1,766,086	0	0
2049	8,886,962	8,966,829	15,201,701	4,405,959	4,148,657	0.72%	9.16%	9.88%	15,013	14,857	0	415	30,285	1,694,458	0	0
2050	8,346,051	8,401,292	15,759,916	4,181,411	4,263,490	0.66%	9.16%	9.82%	14,142	13,996	0	426	28,564	1,623,578	0	0
2051	7,816,885	7,847,357	16,379,485	3,961,354	4,378,957	0.89%	9.17%	10.06%	19,676	19,473	0	0	39,149	1,550,655	0	0
2052	7,314,695	7,307,271	17,065,339	3,746,893	4,495,734	0.00%	9.17%	9.17%	149	148	0	0	297	1,478,291	0	0
2053	6,790,918	6,782,955	17,821,029	3,536,996	4,614,512	0.00%	9.17%	9.17%	103	102	0	0	205	1,406,134	0	0
								Total	$ 3,731,022	$ 5,658,879	$ 1,917,054	$ 500,059	$ 11,807,014			

The contribution rates, contribution amounts, and benefit payments are determined separately for Pension and Healthcare. They are aggregated solely for purposes of display in this exhibit.

These projections reflect a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.6B: Table of Projected Actuarial Results ($'s in 000's) (continued)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)			
	Funding Ratio		Unfunded Liability / (Surplus)	
	Pension	Healthcare	Pension	Healthcare
2024	67%	130%	$ 5,563,242	$ (2,094,408)
2025	68%	131%	5,500,604	(2,217,479)
2026	69%	133%	5,322,760	(2,402,560)
2027	68%	131%	5,527,304	(2,307,891)
2028	69%	134%	5,370,306	(2,482,227)
2029	70%	136%	5,195,827	(2,662,228)
2030	71%	138%	4,994,049	(2,855,217)
2031	72%	141%	4,762,711	(3,062,199)
2032	73%	144%	4,499,342	(3,284,238)
2033	75%	148%	4,200,938	(3,522,539)
2034	77%	151%	3,864,577	(3,778,092)
2035	78%	156%	3,486,760	(4,052,039)
2036	81%	161%	3,063,299	(4,345,934)
2037	83%	166%	2,590,798	(4,661,126)
2038	86%	173%	2,064,890	(4,999,140)
2039	90%	180%	1,481,060	(5,361,580)
2040	94%	188%	835,012	(5,750,447)
2041	95%	198%	741,805	(6,167,281)
2042	95%	209%	637,603	(6,614,469)
2043	96%	221%	521,191	(7,093,962)
2044	97%	236%	392,243	(7,608,246)
2045	97%	252%	324,124	(8,159,665)
2046	97%	271%	288,884	(8,751,139)
2047	97%	293%	266,581	(9,385,457)
2048	98%	317%	163,406	(10,066,033)
2049	99%	345%	79,867	(10,795,742)
2050	99%	377%	55,241	(11,578,505)
2051	100%	414%	30,472	(12,418,131)
2052	100%	456%	(7,424)	(13,318,446)
2053	100%	504%	(7,963)	(14,284,033)

These projections reflect a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.7: Projected Pension Benefit Recipients and Amounts ($'s in 000's)

Fiscal Year End	Pension Recipient Counts	Pension Benefit Amounts	Fiscal Year End	Pension Recipient Counts	Pension Benefit Amounts
2024	38,639	$ 1,114,371	2066	3,513	$ 349,347
2025	39,949	1,164,315	2067	3,065	313,765
2026	40,938	1,210,827	2068	2,661	280,141
2027	41,680	1,254,326	2069	2,298	248,516
2028	42,188	1,295,212	2070	1,974	218,928
2029	42,435	1,332,400	2071	1,685	191,414
2030	42,477	1,367,490	2072	1,428	166,004
2031	42,355	1,399,567	2073	1,202	142,714
2032	42,049	1,428,498	2074	1,003	121,548
2033	41,597	1,453,652	2075	830	102,492
2034	40,988	1,461,321	2076	681	85,510
2035	40,254	1,476,651	2077	553	70,540
2036	39,380	1,488,304	2078	445	57,504
2037	38,417	1,495,271	2079	353	46,289
2038	37,336	1,496,297	2080	278	36,773
2039	36,124	1,491,788	2081	216	28,811
2040	34,799	1,480,571	2082	167	22,248
2041	33,382	1,464,523	2083	126	16,921
2042	31,895	1,442,856	2084	95	12,670
2043	30,361	1,415,815	2085	70	9,335
2044	28,766	1,384,239	2086	52	6,768
2045	27,162	1,347,743	2087	37	4,830
2046	25,541	1,307,618	2088	26	3,394
2047	23,930	1,264,008	2089	20	2,352
2048	22,325	1,217,618	2090	14	1,611
2049	20,752	1,168,862	2091	10	1,093
2050	19,227	1,118,128	2092	7	740
2051	17,748	1,066,083	2093	5	501
2052	16,322	1,013,188	2094	4	342
2053	14,957	959,842	2095	2	238
2054	13,656	906,431	2096	2	169
2055	12,424	853,303	2097	2	123
2056	11,263	800,779	2098	1	92
2057	10,175	749,122	2099	1	70
2058	9,162	698,553	2100	1	54
2059	8,222	649,258	2101	1	42
2060	7,355	601,387	2102	0	0
2061	6,559	555,062	2103	0	0
2062	5,830	510,377	2104	0	0
2063	5,164	467,406	2105	0	0
2064	4,559	426,211	2106	0	0
2065	4,011	386,844	2107	0	0

Section 4: Member Data

Section 4.1: Summary of Members Included

As of June 30	2019	2020	2021	2022	2023
Active Members					
1. Number	12,152	11,033	9,888	8,795	8,361 [1]
2. Average Age	52.84	53.21	53.51	53.78	54.22
3. Average Credited Service	17.80	18.38	18.96	19.52	19.53
4. Average Entry Age	35.04	34.83	34.55	34.26	34.69
5. Average Annual Earnings	$ 82,192	$ 83,757	$ 86,316	$ 89,603	$ 93,767
6. Number Vested	11,868	10,791	9,675	8,604	7,976
7. Percent Who Are Vested	97.7%	97.8%	97.8%	97.8%	95.4%
Retirees, Disabilitants, and Beneficiaries					
1. Number	36,310	37,106	37,717	38,243	38,639
2. Average Age	70.29	70.77	71.17	71.61	72.12
3. Average Years Since Retirement	12.14	12.45	12.66	12.94	13.29
4. Average Monthly Pension Benefit					
a. Base	$ 1,660	$ 1,704	$ 1,752	$ 1,802	$ 1,846
b. COLA[2]	92	93	94	95	95
c. PRPA[2]	241	244	230	282	378
d. Adjustment	1	0	0	1	0
e. Total	$ 1,994	$ 2,041	$ 2,076	$ 2,180	$ 2,319
Vested Terminations (vested at termination, not refunded contributions, or commenced benefit)					
1. Number	5,499	5,327	5,135	4,955	4,812
2. Average Age	53.06	53.52	53.92	54.37	54.98
3. Average Monthly Pension Benefit	$ 1,123	$ 1,158	$ 1,205	$ 1,258	$ 1,306
Non-Vested Terminations (not vested at termination, not refunded contributions)					
1. Number	10,921	10,642	10,432	10,223	10,070
2. Average Account Balance	$ 6,923	$ 7,060	$ 7,325	$ 7,573	$ 7,917
Total Number of Members	**64,882**	**64,108**	**63,172**	**62,216**	**61,882**

[1] Includes 3,832 male active members and 4,529 female active members.

[2] 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, 2023	DB Tier 1	DB Tier 2	DB Tier 3	DB Total	DCR Tier 4	Grand Total
Active Members						
1. Number	449	1,714	6,198	8,361	25,448	33,809
2. Average Age	64.78	57.86	52.45	54.22	41.30	44.50
3. Average Credited Service	22.88	22.86	18.36	19.53	5.26	8.79
4. Average Entry Age	41.90	35.00	34.09	34.69	36.04	35.71
5. Annual Earnings						
a. Total (000's)	$ 36,703	$ 161,462	$ 585,824	$ 783,989	$ 1,768,186	$ 2,552,175
b. Average	$ 81,744	$ 94,202	$ 94,518	$ 93,767	$ 69,482	$ 75,488

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

As of June 30, 2023	Tier 1	Tier 2	Tier 3	Total
Retirees, Disabilitants, and Beneficiaries				
1. Number	22,320	9,990	6,329	38,639
2. Average Age	74.24	69.99	68.00	72.12
3. Average Years Since Retirement	17.01	9.40	6.29	13.29
4. Average Monthly Pension Benefit				
a. Base	$ 1,806	$ 2,080	$ 1,618	$ 1,846
b. COLA	121	66	49	95
c. PRPA	505	243	141	378
d. Adjustment	0	1	1	0
e. Total	$ 2,432	$ 2,390	$ 1,809	$ 2,319

Summary of Members Included

As of June 30, 2023	Active Members	Inactive Members: Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
Retiree Medical Participants						
1. Retiree Coverage Only	8,271	13,946	0	0	2,161	16,107
2. Retiree + Spouse	0	15,897	15,897	0	2,493	34,287
3. Retiree + Children / Dependents	0	246	0	304	0	550
4. Family	0	783	783	1,089	0	2,655
5. Total	8,271	30,872	16,680	1,393	4,654	53,599

As of June 30, 2023	Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
Retiree Medical Participants					
1. Pre-Medicare	5,519	4,730	1,393	4,437	16,079
2. Medicare Part A & B	25,108	11,857	0	217	37,182
3. Medicare Part B Only	245	93	0	0	338
4. Total	30,872	16,680	1,393	4,654	53,599

As of June 30, 2023	Retirees
Summary of Retiree Medical Data Received	
1. Retiree records on pension data	38,639
2. Remove duplicates on pension data	(1,259)
3. Valued in a different retiree healthcare plan[1]	(1,171)
4. Records without medical coverage	(5,560)
5. Medical only retirees	223
6. Total	30,872

As of June 30	2019	2020	2021	2022	2023
Retiree Medical Retirees					
1. Number	31,396	32,290	32,857	33,254	30,872
2. Average Age	70.06	70.41	70.87	71.31	72.27

[1] Each member's retiree medical benefits are valued in the plan indicated in the data from Aetna

Summary of Members Included

Active Members – DB Only

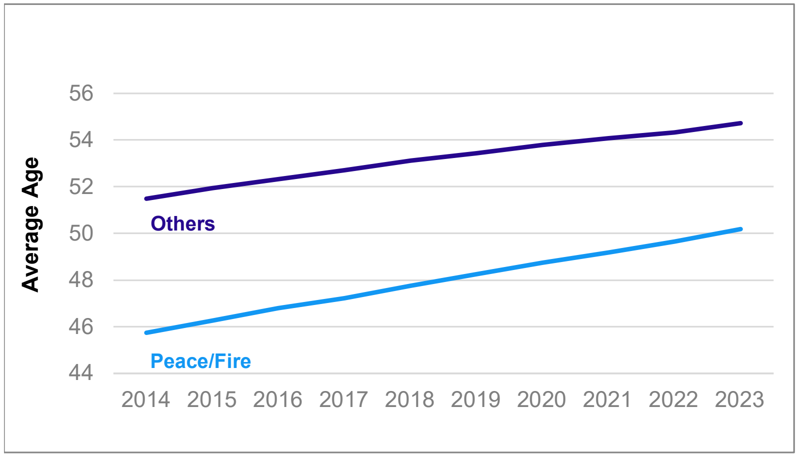
As of June 30	2019	2020	2021	2022	2023
Peace Officer / Firefighter					
1. Number	1,382	1,266	1,137	1,014	913 [1]
2. Average Age	48.25	48.74	49.18	49.64	50.18
3. Average Credited Service	18.90	19.45	20.15	20.82	21.44
4. Average Entry Age	29.35	29.29	29.03	28.82	28.74
5. Average Annual Earnings	$ 120,089	$ 123,436	$ 127,327	$ 135,357	$ 142,982
6. Number Vested	1,374	1,260	1,134	1,011	909
7. Percent Who Are Vested	99.4%	99.5%	99.7%	99.7%	99.6%
Others					
1. Number	10,770	9,767	8,751	7,781	7,448 [2]
2. Average Age	53.43	53.79	54.07	54.32	54.72
3. Average Credited Service	17.66	18.24	18.80	19.35	19.29
4. Average Entry Age	35.77	35.55	35.27	34.97	35.43
5. Average Annual Earnings	$ 77,329	$ 78,613	$ 80,987	$ 83,641	$ 87,735
6. Number Vested	10,494	9,531	8,541	7,593	7,067
7. Percent Who Are Vested	97.4%	97.6%	97.6%	97.6%	94.9%
Total					
1. Number	12,152	11,033	9,888	8,795	8,361
2. Average Age	52.84	53.21	53.51	53.78	54.22
3. Average Credited Service	17.80	18.38	18.96	19.52	19.53
4. Average Entry Age	35.04	34.83	34.55	34.26	34.69
5. Average Annual Earnings	$ 82,192	$ 83,757	$ 86,316	$ 89,603	$ 93,767
6. Number Vested	11,868	10,791	9,675	8,604	7,976
7. Percent Who Are Vested	97.7%	97.8%	97.8%	97.8%	95.4%

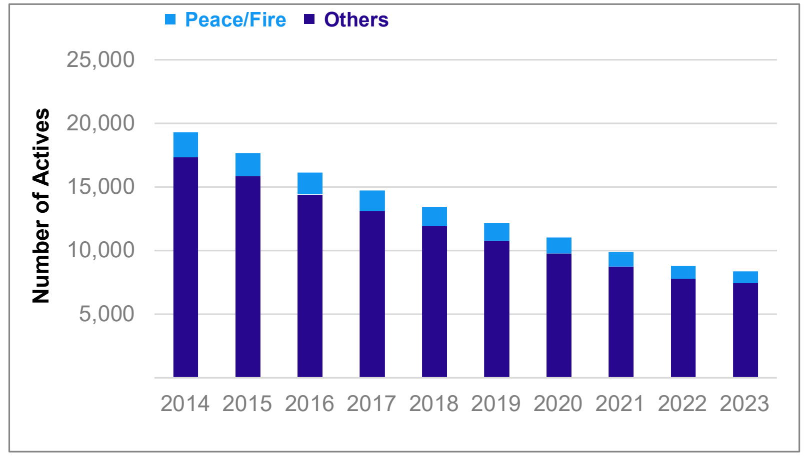
Average annual earnings (“valuation pay”) are the annualized earnings for the fiscal year ending on the valuation date.

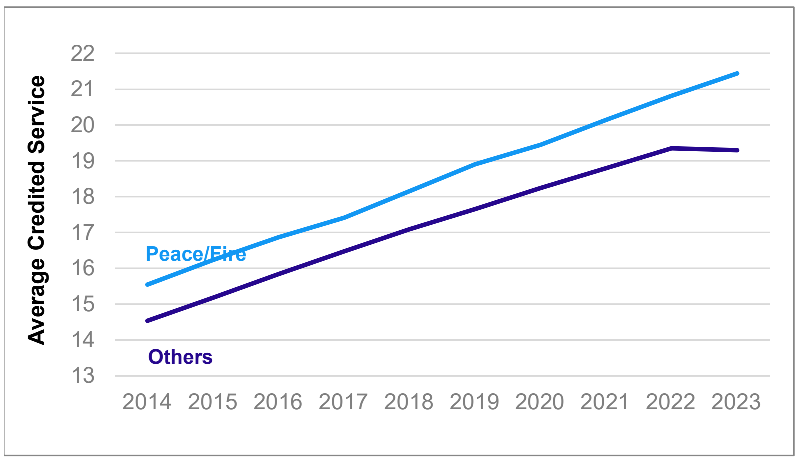
[1] Includes 795 male active members and 118 female active members.

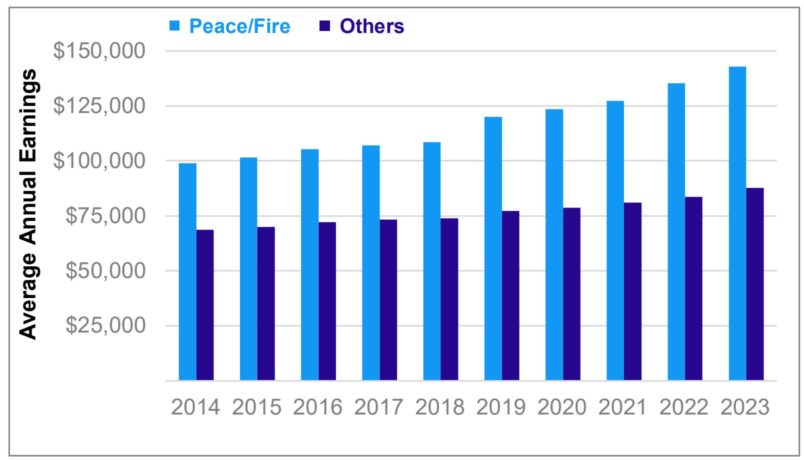
[2] Includes 3,037 male active members and 4,411 female active members.

Summary of Members Included - Active Members at June 30









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

Section 4.2: 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	0	0	0
30 - 34	0	0	0
35 - 39	27	3,619,978	134,073
40 - 44	172	24,989,294	145,287
45 - 49	261	38,225,638	146,458
50 - 54	259	38,036,906	146,861
55 - 59	141	18,877,480	133,883
60 - 64	40	5,388,430	134,711
65 - 69	11	1,156,944	105,177
70 - 74	2	247,654	123,827
75+	0	0	0
Total	**913**	**$ 130,542,324**	**$ 142,982**

Annual Earnings by Credited Service

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	0	$ 0	$ 0
1	0	0	0
2	1	100,725	100,725
3	0	0	0
4	1	98,883	98,883
0 - 4	**2**	**$ 199,608**	**$ 99,804**
5 - 9	8	788,133	98,517
10 - 14	30	3,017,525	100,584
15 - 19	317	44,415,282	140,111
20 - 24	387	55,816,401	144,228
25 - 29	145	22,713,862	156,647
30 - 34	21	3,175,165	151,198
35 - 39	2	275,233	137,617
40+	1	141,115	141,115
Total	**913**	**$ 130,542,324**	**$ 142,982**

Years of Credited Service by Age

	Years of Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	0	0	0	0	0	0	0	0	0	0
35 - 39	0	3	3	19	2	0	0	0	0	27
40 - 44	1	4	7	111	49	0	0	0	0	172
45 - 49	0	0	5	73	147	36	0	0	0	261
50 - 54	0	1	5	58	118	72	5	0	0	259
55 - 59	0	0	9	36	56	31	8	1	0	141
60 - 64	1	0	1	17	11	5	4	0	1	40
65 - 69	0	0	0	3	3	1	4	0	0	11
70 - 74	0	0	0	0	1	0	0	1	0	2
75+	0	0	0	0	0	0	0	0	0	0
Total	**2**	**8**	**30**	**317**	**387**	**145**	**21**	**2**	**1**	**913**

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	0	0	0
30 - 34	1	80,168	80,168
35 - 39	160	13,571,275	84,820
40 - 44	744	66,740,838	89,705
45 - 49	1,243	114,260,769	91,923
50 - 54	1,591	148,174,128	93,133
55 - 59	1,844	159,331,331	86,405
60 - 64	1,182	97,259,877	82,284
65 - 69	506	40,343,338	79,730
70 - 74	125	9,580,708	76,646
75+	52	4,105,215	78,946
Total	**7,448**	**$ 653,447,647**	**$ 87,735**

Annual Earnings by Credited Service

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	40	$ 1,799,641	$ 44,991
1	58	3,283,631	56,614
2	59	3,886,723	65,877
3	56	3,792,091	67,716
4	74	4,833,360	65,316
0 - 4	**287**	**$ 17,595,446**	**$ 61,308**
5 - 9	475	31,747,936	66,838
10 - 14	850	62,438,080	73,457
15 - 19	2,387	206,581,739	86,545
20 - 24	2,113	200,488,490	94,883
25 - 29	964	96,898,574	100,517
30 - 34	295	29,484,909	99,949
35 - 39	57	6,100,506	107,026
40+	20	2,111,967	105,598
Total	**7,448**	**$ 653,447,647**	**$ 87,735**

Years of Credited Service by Age

	Years of Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	0	0	0	1	0	0	0	0	0	1
35 - 39	12	20	44	81	3	0	0	0	0	160
40 - 44	39	58	116	386	144	1	0	0	0	744
45 - 49	58	90	137	451	427	80	0	0	0	1,243
50 - 54	52	93	163	469	536	244	33	1	0	1,591
55 - 59	57	101	185	510	528	360	93	10	0	1,844
60 - 64	39	66	137	340	326	165	96	10	3	1,182
65 - 69	18	34	53	115	118	88	54	18	8	506
70 - 74	8	10	10	27	17	21	12	13	7	125
75+	4	3	5	7	14	5	7	5	2	52
Total	**287**	**475**	**850**	**2,387**	**2,113**	**964**	**295**	**57**	**20**	**7,448**

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

Section 4.3: Member Data Reconciliation

Pension

	Active Members	Inactive Members: Due a Refund	Deferred Benefits	Retired Members		Disabled Members	Bene-ficiaries	Total
As of June 30, 2022	**8,795**	**10,223**	**4,955**	**33,417**	*	**118**	**4,722**	**62,230**
Vested Terminations	(346)	(6)	352	0		0	0	0
Non-Vested Terminations	(31)	36	(5)	0		0	0	0
Refund of Contributions	(13)	(133)	(29)	0		0	0	(175)
Disability Retirements	(6)	0	(2)	0		8	0	0
Age Retirements	(629)	(1)	(352)	998		(16)	0	0
Deaths With Beneficiary	(6)	0	(3)	(316)		(4)	329	0
Deaths Without Beneficiary	(16)	(36)	(13)	(475)		(3)	(180)	(723)
Expired Benefits	0	0	0	0		0	0	0
Data Corrections	0	0	1	(2)		1	0	0
Converted To/From DCR Plan	308	22	24	23		1	1	379
Transfers In/Out	(5)	0	(1)	0		0	0	(6)
Rehires	304	(35)	(122)	(17)		(1)	0	129
Pick Ups***	6	0	7	11		0	37	61
Net Change	**(434)**	**(153)**	**(143)**	**222**		**(14)**	**187**	**(335)**
As of June 30, 2023	**8,361**	**10,070**	**4,812**	**33,639**	**	**104**	**4,909**	**61,895**

* Includes 14 medical only retirees
** Includes 13 medical only retirees
*** Pickup beneficiaries are primarily new DROs.

Member Data Reconciliation

Healthcare

		Inactive Members				
	Active Members	Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
As of June 30, 2022	**8,730**	**33,758**	**13,486**	**1,408**	**5,198**	**53,850**
Vested Terminations	(290)	0	0	0	287	287
Non-Vested Terminations	(26)	0	0	0	0	0
Refund of Contributions	(13)	0	0	0	(28)	(28)
Disability Retirements	(5)	5	4	7	0	16
Age Retirements	(626)	626	427	134	0	1,187
Deferred Retirements	0	284	188	40	(284)	228
Retired without Medical Coverage	(71)	0	0	0	(5)	(5)
Deceased	(22)	(868)	(112)	(15)	(17)	(1,012)
New Beneficiaries	0	125	(125)	0	16	16
Added Retiree Medical Coverage	0	140	55	9	(103)	101
Added Dependent Coverage	0	0	70	64	0	134
Dropped Retiree Medical Coverage	0	(88)	(65)	(17)	8	(162)
Dropped Dependent Coverage	0	0	(381)	(234)	0	(615)
Change in Double Coverage	0	(3,122)	3,122	0	0	0
Removal of Spouse Duplicates	0	0	0	0	(326)	(326)
Rehires	295	(15)	(4)	(3)	(121)	(143)
Transfers In/Out	299	27	15	0	29	71
Net Change	**(459)**	**(2,886)**	**3,194**	**(15)**	**(544)**	**(251)**
As of June 30, 2023	**8,271**	**30,872**	**16,680**	**1,393**	**4,654**	**53,599**

Section 4.4: Schedule of Active Member Data

Peace Officer / Firefighter

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
June 30, 2023	913	$ 130,542	$ 142,982	5.6%	150
June 30, 2022	1,014	137,252	135,357	6.3%	150
June 30, 2021	1,137	144,771	127,327	3.2%	151
June 30, 2020	1,266	156,271	123,436	2.8%	153
June 30, 2019	1,382	165,963	120,089	10.6%	155
June 30, 2018	1,507	163,630	108,580	1.5%	155
June 30, 2017	1,606	171,821	106,987	1.6%	155
June 30, 2016	1,704	179,461	105,317	3.8%	155
June 30, 2015	1,827	185,350	101,450	2.5%	159
June 30, 2014	1,958	193,737	98,946	3.4%	159

Others

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
June 30, 2023	7,448	$ 653,448	$ 87,735	4.9%	150
June 30, 2022	7,781	650,807	83,641	3.3%	150
June 30, 2021	8,751	708,718	80,987	3.0%	151
June 30, 2020	9,767	767,817	78,613	1.7%	153
June 30, 2019	10,770	832,832	77,329	4.6%	155
June 30, 2018	11,927	881,716	73,926	1.0%	155
June 30, 2017	13,113	960,106	73,218	1.4%	155
June 30, 2016	14,401	1,039,960	72,214	3.2%	155
June 30, 2015	15,833	1,108,218	69,994	2.1%	159
June 30, 2014	17,339	1,188,918	68,569	3.4%	159

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

Section 4.5: Active Member Payroll Reconciliation

Payroll Field	Payroll Data (000's)
a) DRB actual reported salaries FY23 in employer list	$ 2,399,160
b) DRB actual reported salaries FY23 in valuation data	2,334,628
c) Annualized valuation data	2,552,175
d) Valuation payroll as of June 30, 2023	2,666,416
e) Rate payroll for FY24	2,588,883
f) Rate payroll for FY26	2,598,836

a) Actual reported salaries from DRB employer listing showing all payroll paid during FY23, including those who were not active as of June 30, 2023
b) Payroll from valuation data for people who are in active status as of June 30, 2023
c) Payroll from (b) annualized for both new entrants and part-timers
d) Payroll from (c) with one year of salary scale applied to estimate salaries payable for the upcoming year
e) Payroll from (d) with the part-timer annualization removed
f) Payroll from (e) with two years of assumed decrements and salary scale, and 0% population growth

Section 4.6: Summary of New Pension Benefit Recipients

Peace Officer / Firefighter

During the Year Ending June 30	2019	2020	2021	2022	2023
Service					
1. Number	109	118	129	117	106
2. Average Age at Commencement	55.61	55.52	55.30	55.39	55.01
3. Average Monthly Pension Benefit	$ 4,412	$ 5,199	$ 5,248	$ 5,647	$ 6,208
Survivor (including surviving spouse and DROs)					
1. Number	36	43	58	39	36
2. Average Age at Commencement	68.19	67.92	64.58	70.91	65.75
3. Average Monthly Pension Benefit	$ 1,842	$ 1,785	$ 1,971	$ 1,996	$ 1,951
Disability					
1. Number	4	3	4	1	1
2. Average Age at Commencement	50.44	51.72	52.10	54.74	47.86
3. Average Monthly Pension Benefit	$ 3,071	$ 5,276	$ 2,890	$ 5,427	$ 3,376
Total					
1. Number	149	164	191	157	143
2. Average Age at Commencement	58.51	58.70	58.05	59.24	57.66
3. Average Monthly Pension Benefit	$ 3,755	$ 4,305	$ 4,204	$ 4,739	$ 5,117

Summary of New Pension Benefit Recipients

Peace Officer / Firefighter

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/2022 – 6/30/2023:							
Average Monthly Pension	$ 2,787	$ 760	$ 2,484	$ 4,297	$ 6,322	$ 7,866	$ 8,927
Average Final Avg Salary	$ 93,744	$ 80,385	$ 104,037	$ 129,639	$ 143,492	$ 150,864	$ 149,341
Number of Recipients	2	2	5	14	56	21	7
Period 7/1/2021 – 6/30/2022:							
Average Monthly Pension	$ 0	$ 860	$ 2,227	$ 4,341	$ 5,743	$ 7,831	$ 7,566
Average Final Avg Salary	$ 0	$ 60,646	$ 97,870	$ 122,607	$ 137,018	$ 144,961	$ 119,732
Number of Recipients	0	2	7	33	42	27	7
Period 7/1/2020 – 6/30/2021:							
Average Monthly Pension	$ 2,612	$ 767	$ 1,619	$ 3,711	$ 5,196	$ 6,960	$ 7,970
Average Final Avg Salary	$ 68,013	$ 63,962	$ 79,481	$ 116,789	$ 129,218	$ 141,383	$ 135,765
Number of Recipients	2	5	9	26	42	40	9
Period 7/1/2019 – 6/30/2020:							
Average Monthly Pension	$ 0	$ 694	$ 2,212	$ 3,626	$ 5,531	$ 6,829	$ 8,636
Average Final Avg Salary	$ 0	$ 60,557	$ 107,689	$ 111,341	$ 131,016	$ 140,297	$ 127,620
Number of Recipients	0	6	11	23	40	32	9
Period 7/1/2018 – 6/30/2019:							
Average Monthly Pension	$ 3,792	$ 651	$ 1,933	$ 3,362	$ 4,786	$ 6,196	$ 5,688
Average Final Avg Salary	$ 94,797	$ 56,617	$ 89,247	$ 99,086	$ 114,079	$ 125,509	$ 110,542
Number of Recipients	2	5	11	25	38	26	6
Period 7/1/2017 – 6/30/2018:							
Average Monthly Pension	$ 0	$ 1,063	$ 2,133	$ 3,747	$ 4,847	$ 6,024	$ 7,717
Average Final Avg Salary	$ 0	$ 86,908	$ 91,941	$ 107,039	$ 115,635	$ 121,972	$ 132,459
Number of Recipients	0	4	18	19	35	30	3
Period 7/1/2016 – 6/30/2017:							
Average Monthly Pension	$ 0	$ 686	$ 2,075	$ 3,234	$ 4,462	$ 5,151	$ 6,376
Average Final Avg Salary	$ 0	$ 74,166	$ 83,315	$ 99,520	$ 109,258	$ 104,716	$ 108,035
Number of Recipients	0	8	9	28	41	23	14
Period 7/1/2015 – 6/30/2016:							
Average Monthly Pension	$ 0	$ 958	$ 1,742	$ 3,347	$ 4,622	$ 5,778	$ 7,221
Average Final Avg Salary	$ 0	$ 76,190	$ 87,241	$ 97,297	$ 109,236	$ 118,513	$ 115,323
Number of Recipients	0	6	11	19	30	28	16
Period 7/1/2014 – 6/30/2015:							
Average Monthly Pension	$ 0	$ 1,173	$ 1,621	$ 3,632	$ 4,436	$ 5,457	$ 6,863
Average Final Avg Salary	$ 0	$ 85,992	$ 76,254	$ 104,320	$ 105,430	$ 108,874	$ 102,705
Number of Recipients	0	8	9	26	24	25	7
Period 7/1/2013 – 6/30/2014:							
Average Monthly Pension	$ 290	$ 1,423	$ 2,002	$ 2,902	$ 4,014	$ 5,464	$ 6,299
Average Final Avg Salary	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
Number of Recipients	1	9	10	14	22	16	7

“Average Monthly Pension” includes postretirement pension adjustments and cost-of-living increases.

Beneficiaries are not included in the table above.

Summary of New Pension Benefit Recipients

Others

During the Year Ending June 30	2019	2020	2021	2022	2023
Service					
1. Number	1,288	1,166	1,171	1,121	909
2. Average Age at Commencement	61.38	61.70	62.03	62.03	61.77
3. Average Monthly Pension Benefit	$ 2,540	$ 2,701	$ 2,693	$ 2,915	$ 3,081
Survivor (including surviving spouse and DROs)					
1. Number	238	297	391	326	346
2. Average Age at Commencement	69.25	72.09	72.34	70.13	72.93
3. Average Monthly Pension Benefit	$ 1,249	$ 1,204	$ 1,265	$ 1,380	$ 1,352
Disability					
1. Number	17	9	14	6	8
2. Average Age at Commencement	52.95	54.21	53.39	47.91	52.27
3. Average Monthly Pension Benefit	$ 2,313	$ 2,422	$ 2,587	$ 2,533	$ 2,566
Total					
1. Number	1,543	1,472	1,576	1,453	1,263
2. Average Age at Commencement	62.50	63.75	64.51	63.79	64.77
3. Average Monthly Pension Benefit	$ 2,339	$ 2,397	$ 2,338	$ 2,569	$ 2,604

Summary of New Pension Benefit Recipients

Others

	Years of Credited Service						
	0 - 4	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30+**
Period 7/1/2022 – 6/30/2023:							
Average Monthly Pension	$ 1,389	$ 742	$ 1,284	$ 2,272	$ 3,416	$ 4,947	$ 6,593
Average Final Avg Salary	$ 56,785	$ 53,321	$ 61,779	$ 72,666	$ 84,997	$ 99,220	$ 106,748
Number of Recipients	16	113	148	194	184	165	97
Period 7/1/2021 – 6/30/2022:							
Average Monthly Pension	$ 1,453	$ 623	$ 1,340	$ 2,181	$ 3,373	$ 4,644	$ 6,822
Average Final Avg Salary	$ 61,752	$ 48,643	$ 63,167	$ 73,283	$ 84,361	$ 91,984	$ 105,569
Number of Recipients	6	147	181	286	227	165	115
Period 7/1/2020 – 6/30/2021:							
Average Monthly Pension	$ 553	$ 628	$ 1,317	$ 2,213	$ 3,091	$ 4,607	$ 6,054
Average Final Avg Salary	$ 37,456	$ 50,287	$ 62,986	$ 73,819	$ 78,565	$ 91,034	$ 98,834
Number of Recipients	17	163	228	281	194	188	114
Period 7/1/2019 – 6/30/2020:							
Average Monthly Pension	$ 492	$ 601	$ 1,311	$ 2,065	$ 3,040	$ 4,686	$ 6,213
Average Final Avg Salary	$ 42,520	$ 47,573	$ 61,357	$ 69,829	$ 78,632	$ 93,182	$ 100,366
Number of Recipients	32	165	218	258	183	197	122
Period 7/1/2018 – 6/30/2019:							
Average Monthly Pension	$ 652	$ 646	$ 1,301	$ 2,071	$ 3,058	$ 4,596	$ 5,685
Average Final Avg Salary	$ 49,840	$ 52,459	$ 60,651	$ 69,110	$ 76,946	$ 92,620	$ 94,857
Number of Recipients	21	190	266	289	222	205	105
Period 7/1/2017 – 6/30/2018:							
Average Monthly Pension	$ 414	$ 607	$ 1,299	$ 1,982	$ 3,034	$ 4,475	$ 6,085
Average Final Avg Salary	$ 34,603	$ 48,524	$ 61,668	$ 67,811	$ 78,675	$ 88,707	$ 97,703
Number of Recipients	26	221	351	280	223	214	127
Period 7/1/2016 – 6/30/2017:							
Average Monthly Pension	$ 381	$ 640	$ 1,271	$ 2,067	$ 3,119	$ 4,579	$ 6,224
Average Final Avg Salary	$ 39,320	$ 50,209	$ 61,150	$ 70,810	$ 79,613	$ 91,169	$ 98,661
Number of Recipients	27	254	375	233	212	191	115
Period 7/1/2015 – 6/30/2016:							
Average Monthly Pension	$ 434	$ 660	$ 1,240	$ 2,017	$ 3,059	$ 4,158	$ 6,583
Average Final Avg Salary	$ 44,649	$ 48,729	$ 60,599	$ 66,996	$ 78,592	$ 83,505	$ 103,143
Number of Recipients	30	323	387	266	192	161	135
Period 7/1/2014 – 6/30/2015:							
Average Monthly Pension	$ 430	$ 685	$ 1,260	$ 2,008	$ 3,086	$ 4,544	$ 6,195
Average Final Avg Salary	$ 41,184	$ 52,565	$ 61,224	$ 67,225	$ 77,440	$ 86,942	$ 96,468
Number of Recipients	42	284	304	213	198	169	98
Period 7/1/2013 – 6/30/2014:							
Average Monthly Pension	$ 503	$ 700	$ 1,189	$ 2,065	$ 3,021	$ 4,439	$ 5,490
Average Final Avg Salary	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
Number of Recipients	48	347	319	241	214	224	121

“Average Monthly Pension” includes postretirement pension adjustments and cost-of-living increases.

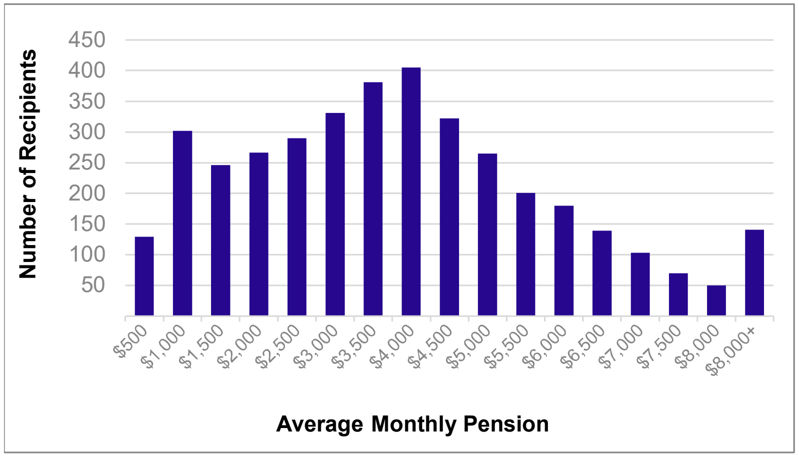
Beneficiaries are not included in the table above.

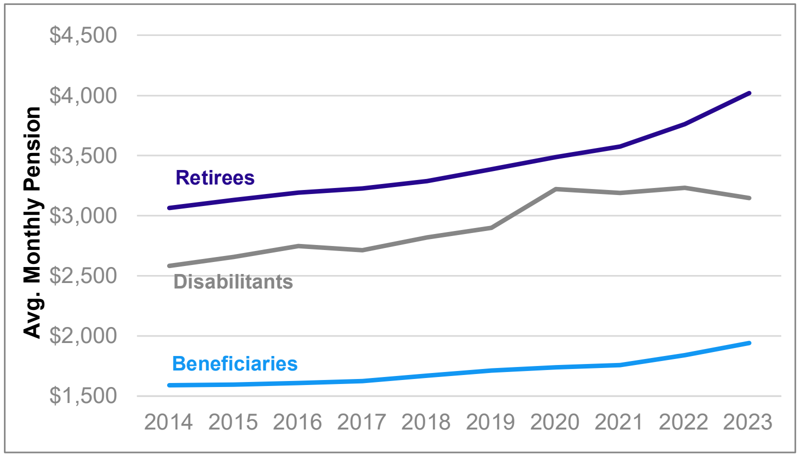
Section 4.7: Summary of All Pension Benefit Recipients

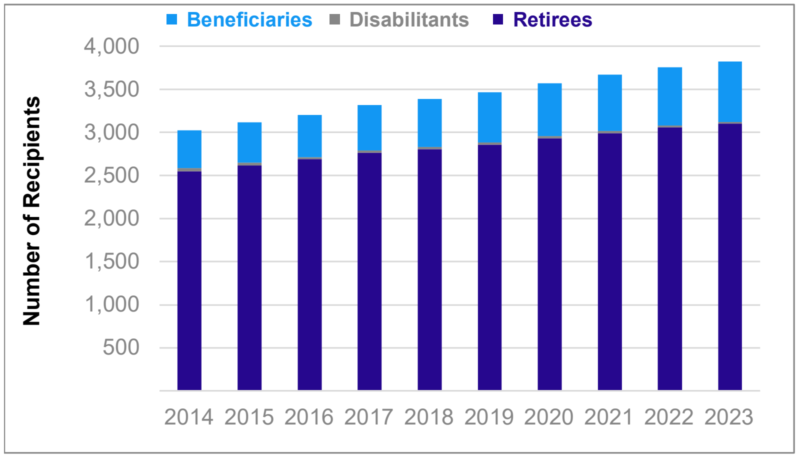
	Peace Officer / Firefighter	Others
Service		
1. Number as of June 30, 2022	3,056	30,347
2. Net Change During FY23	44	179
3. Number as of June 30, 2023	3,100	30,526
4. Average Age at Commencement	53.34	58.66
5. Average Current Age	69.08	72.19
6. Average Monthly Pension Benefit	$ 4,019	$ 2,302
Survivors (including surviving spouses and DROs)		
1. Number as of June 30, 2022	675	4,047
2. Net Change During FY23	27	160
3. Number as of June 30, 2023	702	4,207
4. Average Age at Commencement	59.14	64.37
5. Average Current Age	70.85	74.48
6. Average Monthly Pension Benefit	$ 1,941	$ 1,243
Disability		
1. Number as of June 30, 2022	24	94
2. Net Change During FY23	(5)	(9)
3. Number as of June 30, 2023	19	85
4. Average Age at Commencement	44.61	46.10
5. Average Current Age	51.59	54.92
6. Average Monthly Pension Benefit	$ 3,145	$ 2,294
Total		
1. Number as of June 30, 2022	3,755	34,488
2. Net Change During FY23	66	330
3. Number as of June 30, 2023	3,821	34,818
4. Average Age at Commencement	54.36	59.32
5. Average Current Age	69.32	72.42
6. Average Monthly Pension Benefit	$ 3,633	$ 2,174

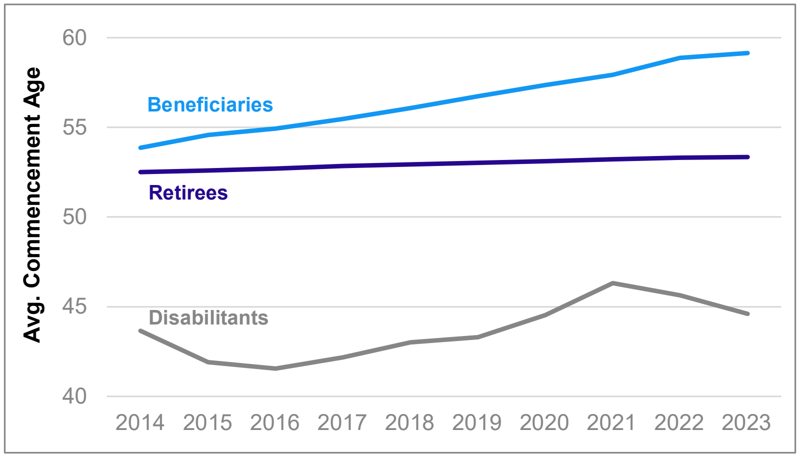
Summary of All Pension Benefit Recipients

Peace Officer / Firefighter



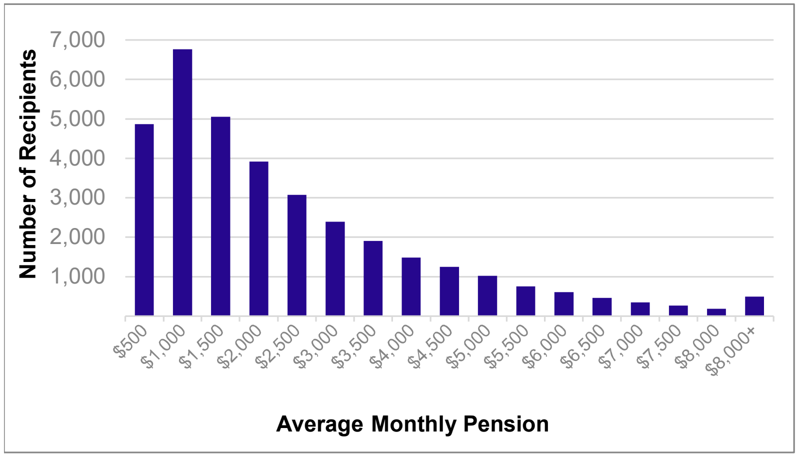


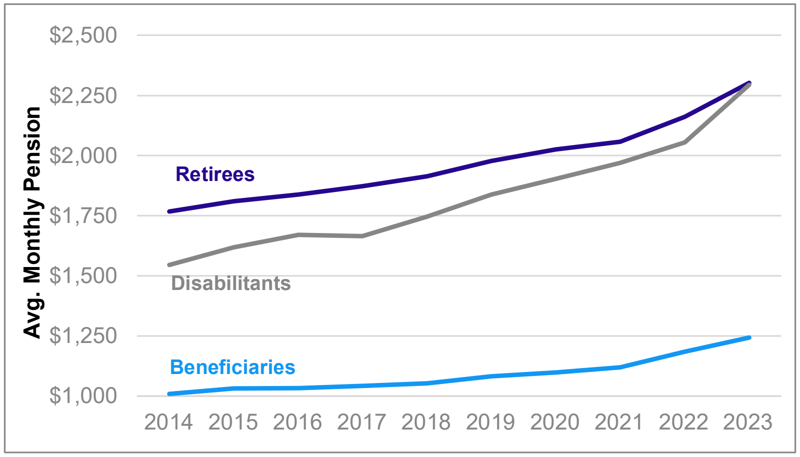


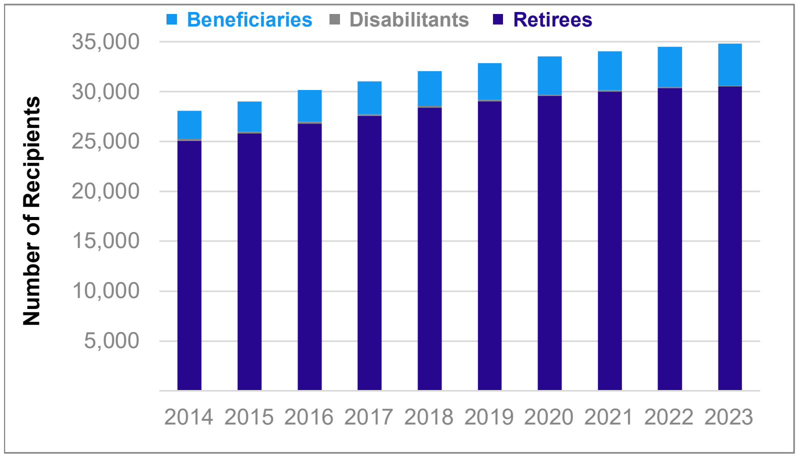


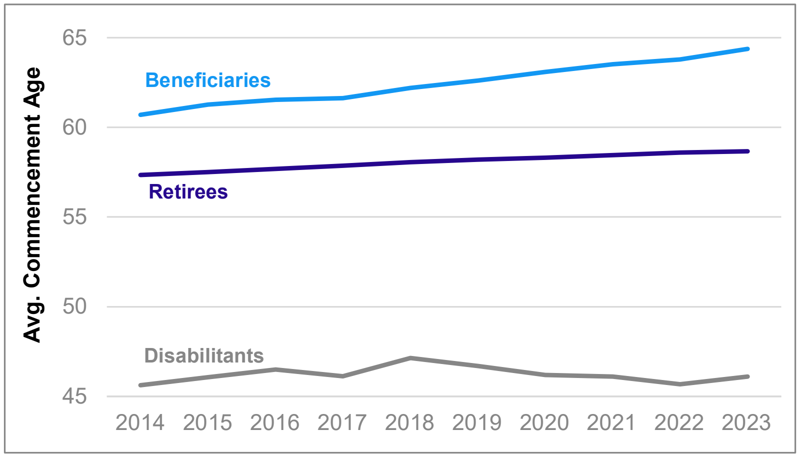
Summary of All Pension Benefit Recipients

Others









Summary of All Pension Benefit Recipients

Peace Officer / Firefighter

Annual Pension Benefit by Age

Age	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0 - 19	0	$ 0	$ 0
20 - 24	0	0	0
25 - 29	0	0	0
30 - 34	0	0	0
35 - 39	0	0	0
40 - 44	13	645,885	49,683
45 - 49	74	4,689,615	63,373
50 - 54	233	15,239,759	65,407
55 - 59	327	19,090,659	58,381
60 - 64	527	24,214,049	45,947
65 - 69	758	30,167,857	39,799
70 - 74	785	30,225,753	38,504
75+	1,104	42,295,725	38,311
Total	**3,821**	**$166,569,302**	**$ 43,593**

Annual Pension Benefit by Years Since Commenced

Years Since Comm.	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0	163	$ 9,598,483	$ 58,886
1	164	9,422,428	57,454
2	185	9,678,527	52,316
3	151	8,095,398	53,612
4	151	7,051,089	46,696
0 - 4	**814**	**$ 43,845,925**	**$ 53,865**
5 - 9	667	31,752,854	47,605
10 - 14	499	18,129,531	36,332
15 - 19	583	20,099,421	34,476
20 - 24	601	22,707,557	37,783
25 - 29	374	16,345,723	43,705
30 - 34	130	5,586,850	42,976
35 - 39	119	6,689,972	56,218
40+	34	1,411,469	41,514
Total	**3,821**	**$166,569,302**	**$ 43,593**

Years Since Commencement by Age

	Years Since Commencement									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0
40 - 44	9	2	1	1	0	0	0	0	0	13
45 - 49	66	8	0	0	0	0	0	0	0	74
50 - 54	165	56	10	1	1	0	0	0	0	233
55 - 59	165	120	30	7	2	1	2	0	0	327
60 - 64	184	158	81	77	26	1	0	0	0	527
65 - 69	93	182	146	162	144	26	3	1	1	758
70 - 74	48	81	153	189	206	91	12	3	2	785
75+	84	60	78	146	222	255	113	115	31	1,104
Total	**814**	**667**	**499**	**583**	**601**	**374**	**130**	**119**	**34**	**3,821**

Summary of All Pension 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	0	0	0
30 - 34	2	92,882	46,441
35 - 39	2	20,067	10,034
40 - 44	14	269,222	19,230
45 - 49	26	353,297	13,588
50 - 54	115	3,989,217	34,689
55 - 59	798	30,255,617	37,914
60 - 64	4,954	155,234,876	31,335
65 - 69	8,252	234,563,481	28,425
70 - 74	8,781	223,954,069	25,504
75+	11,874	259,694,129	21,871
Total	**34,818**	**$ 908,426,857**	**$ 26,091**

Annual Pension Benefit by Years Since Commenced

Years Since Comm.	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0	1,403	$ 43,235,785	$ 30,817
1	1,448	45,229,686	31,236
2	1,428	43,451,640	30,428
3	1,374	43,335,466	31,540
4	1,474	44,750,489	30,360
0 - 4	**7,127**	**$220,003,066**	**$ 30,869**
5 - 9	7,665	222,227,252	28,992
10 - 14	6,787	173,674,521	25,589
15 - 19	5,698	133,153,806	23,369
20 - 24	3,907	85,756,687	21,949
25 - 29	2,130	46,062,081	21,625
30 - 34	935	16,479,506	17,625
35 - 39	486	9,718,823	19,998
40+	83	1,351,115	16,278
Total	**34,818**	**$908,426,857**	**$ 26,091**

Years Since Commencement by Age

	Years Since Commencement									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	1	0	0	0	0	0	0	0	2
35 - 39	1	1	0	0	0	0	0	0	0	2
40 - 44	8	3	2	1	0	0	0	0	0	14
45 - 49	11	9	3	3	0	0	0	0	0	26
50 - 54	74	18	14	8	1	0	0	0	0	115
55 - 59	578	160	32	20	5	2	1	0	0	798
60 - 64	3,224	1,247	413	48	10	7	4	1	0	4,954
65 - 69	1,696	3,440	2,322	729	36	15	11	2	1	8,252
70 - 74	760	1,835	2,581	2,633	897	58	12	5	0	8,781
75+	774	951	1,420	2,256	2,958	2,048	907	478	82	11,874
Total	**7,127**	**7,665**	**6,787**	**5,698**	**3,907**	**2,130**	**935**	**486**	**83**	**34,818**

Section 4.8: Pension Benefit Recipients by Type of 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 – 500	129	61	68	0	85	18	7	4	15
501 – 1,000	302	163	138	1	186	64	24	15	13
1,001 – 1,500	246	132	113	1	157	51	19	8	11
1,501 – 2,000	266	170	96	0	162	51	37	9	7
2,001 – 2,500	290	216	72	2	130	83	54	11	12
2,501 – 3,000	331	258	69	4	150	103	52	15	11
3,001 – 3,500	381	329	47	5	142	145	68	16	10
3,501 – 4,000	405	350	51	4	151	156	64	19	15
4,001 – 4,500	322	305	16	1	103	138	58	20	3
4,501 – 5,000	265	254	11	0	71	117	55	20	2
5,001 – 5,500	201	193	7	1	54	95	33	15	4
5,501 – 6,000	180	174	6	0	45	93	33	9	0
6,001 – 6,500	139	136	3	0	43	59	28	6	3
6,501 – 7,000	103	98	5	0	36	44	15	8	0
7,001 – 7,500	70	70	0	0	21	31	16	2	0
7,501 – 8,000	50	50	0	0	16	21	12	1	0
8,000+	141	141	0	0	30	66	40	5	0
Total	3,821	3,100	702	19	1,582	1,335	615	183	106

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

Pension Benefit Recipients by Type of 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 – 500	4,864	3,782	1,081	1	2,577	1,005	700	204	378
501 – 1,000	6,766	5,594	1,161	11	3,652	1,534	1,113	292	175
1,001 – 1,500	5,051	4,346	695	10	2,583	1,178	977	199	114
1,501 – 2,000	3,912	3,433	465	14	1,895	1,043	769	126	79
2,001 – 2,500	3,070	2,726	328	16	1,462	823	586	125	74
2,501 – 3,000	2,389	2,191	181	17	1,071	649	512	89	68
3,001 – 3,500	1,906	1,782	121	3	838	570	397	68	33
3,501 – 4,000	1,484	1,406	73	5	603	469	318	64	30
4,001 – 4,500	1,246	1,201	43	2	499	412	265	50	20
4,501 – 5,000	1,018	988	26	4	380	334	241	44	19
5,001 – 5,500	755	741	14	0	287	240	184	35	9
5,501 – 6,000	611	603	7	1	213	216	142	33	7
6,001 – 6,500	459	452	6	1	163	164	106	20	6
6,501 – 7,000	341	339	2	0	121	119	83	16	2
7,001 – 7,500	268	268	0	0	90	94	64	19	1
7,501 – 8,000	183	183	0	0	67	50	42	22	2
8,000+	495	492	3	0	158	171	124	39	3
Total	34,818	30,527	4,206	85	16,659	9,071	6,623	1,445	1,020

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

Section 4.9: Pension Benefit Recipients Added to and Removed from Rolls

Peace Officer / Firefighter

	Added to Rolls		Removed from Rolls		Rolls at End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
Year Ended	No.[1]	Annual Pension Benefits[1]	No.[1]	Annual Pension Benefits[1]	No.	Annual Pension Benefits		
June 30, 2023	143	$ 8,780,772	77	$ (4,050,263)	3,821	$ 166,569,302	8.3%	$ 43,593
June 30, 2022	157	8,928,276	75	(1,692,346)	3,755	153,738,267	7.4%	40,942
June 30, 2021	191	9,635,568	86	2,931,719	3,673	143,117,645	4.9%	38,965
June 30, 2020	164	8,472,240	61	1,078,932	3,568	136,413,796	5.7%	38,233
June 30, 2019	149	6,713,940	71	233,335	3,465	129,020,488	5.3%	37,235
June 30, 2018	153	7,002,504	81	2,573,694	3,387	122,539,883	3.7%	36,179
June 30, 2017	165	6,971,580	54	2,132,027	3,315	118,111,073	4.3%	35,629
June 30, 2016	137	6,618,744	49	1,594,394	3,204	113,271,520	4.6%	35,353
June 30, 2015	136	5,617,344	46	633,046	3,116	108,247,168	4.8%	34,739
June 30, 2014	109	4,270,620	50	(145,771)	3,026	103,262,870	4.5%	34,125

[1] Numbers are estimated, and include other internal transfers.

Pension Benefit Recipients Added to and Removed from Rolls

Others

	Added to Rolls		Removed from Rolls		Rolls at End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
Year Ended	No.[1]	Annual Pension Benefits[1]	No.[1]	Annual Pension Benefits[1]	No.	Annual Pension Benefits		
June 30, 2023	1,263	$ 39,466,224	933	$(22,497,890)	34,818	$ 908,426,857	7.3%	$ 26,091
June 30, 2022	1,453	44,793,084	1,009	(5,580,072)	34,488	846,462,743	6.3%	24,544
June 30, 2021	1,576	44,216,256	1,070	20,522,550	34,044	796,089,587	3.1%	23,384
June 30, 2020	1,472	42,340,608	779	9,911,423	33,538	772,395,881	4.4%	23,030
June 30, 2019	1,543	43,301,707	765	3,096,594	32,845	739,966,696	5.7%	22,529
June 30, 2018	1,708	46,316,673	673	10,533,376	32,067	699,761,583	5.4%	21,823
June 30, 2017	1,699	44,619,382	816	14,610,212	31,032	663,978,286	4.7%	21,397
June 30, 2016	1,780	44,409,702	660	12,099,362	30,149	633,969,116	5.4%	21,028
June 30, 2015	1,583	39,939,292	627	7,232,812	29,029	601,658,776	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

[1] Numbers are estimated, and include other internal transfers.

Section 5: Basis of the Actuarial Valuation

Section 5.1: Summary of Plan Provisions

Effective Date

January 1, 1961, with amendments through June 30, 2023. Chapter 82, 1986 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under PERS before July 1, 1986 (Tier 1) are eligible for different benefits than members hired after June 30, 1986 (Tier 2). Chapter 4, 1996 Session Laws of Alaska created a third tier for members who were first hired after June 30, 1996 (Tier 3). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006. The 2021 Alaska Supreme Court Metcalfe decision allows certain members the option of transferring from the DCR plan to the DB plan.

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.

Employers Included

Currently there are 150 employers participating in PERS, including the State of Alaska and 149 political subdivisions and public organizations. Two additional political subdivisions participate in PERS for healthcare benefits only.

Membership

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

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

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

The 2021 Alaska Supreme Court Metcalfe decision allows certain members the option of transferring from the DCR plan to the DB plan.

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 on 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 PERS and TRS simultaneously;
- leave without pay service after June 13, 1987, while receiving Workers' Compensation;
- Village Public Safety Officer service; and
- service as a temporary employee of the legislature before July 1, 1979, but this service must have been claimed no later than July 1, 2003, or by the date of retirement, if sooner (not more than ten 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 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 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.

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. Effective June 30, 2018, each future year’s unfunded service liability is separately amortized on a level percent of pay basis over 25 years.

Employer rates cannot be less than the normal cost rate.

Pursuant to AS 39.35.255 effective July 1, 2008 and subsequently amended on July 1, 2021, each non-state PERS employer will pay a simple uniform contribution rate of 22% of non-state member payroll and the State as an employer will pay the total contribution rate, adopted by the Board, of State member payroll.

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 total employer contributions, will be sufficient to pay the total contribution rate adopted by the Board.

Member Contributions

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

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

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

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

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

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

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

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 age 60 or early retirement at age 55 if they were hired on or 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;
   (iii) 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;
   (iv) two years of paid-up PERS service and they are vested in TRS; or
   (v) 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, reduced benefits when they reach early retirement age and complete the service required. Benefits are reduced by 6% per year prior to a member's normal retirement date.

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

Benefit Calculations

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

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

Salaries are subject to compensation limits under IRC 401(a)(17) for members first hired on or after July 1, 1996. Retirement benefit amounts are subject to IRC 415(b) limits regardless of hire date.

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, 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.

Reemployment of Retired Members

Retirement and retiree healthcare benefits are suspended while retired members are reemployed under 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 will:

a. forfeit the three years of incentive credits that they received;

b. owe PERS 150% of the benefits that they received for state and political subdivision members, and 110% for school district employees, under the 1996-2000 RIP, which may include costs for health insurance, excluding amounts that they paid to participate for the 1986 and 1989 RIPs. Under prior RIPs, the penalty is 110% of the benefits received; and

c. be charged 7% interest from the date that they are reemployed until their indebtedness is paid in full or they retire again. If the indebtedness is not completely paid, future benefits will be actuarially reduced for life.

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

Postemployment Healthcare Benefits

Major medical benefits are provided to retirees and their surviving spouses by PERS for all employees hired before July 1, 1986 (Tier 1) and disabled retirees. Employees hired after June 30, 1986 (Tier 2) and their surviving spouses with five years of credited service (or ten years of credited service for those first hired after June 30, 1996 (Tier 3)) must pay the full monthly premium if they are under age sixty and will receive benefits paid by PERS if they are over age sixty. Tier 3 Members with between five and ten years of credited service must pay the full monthly premium regardless of their age. Tier 2 and Tier 3 Members with less than five years of credited service are not eligible for postemployment healthcare benefits. Tier 2 Members who are receiving a conditional benefit and are age eligible are eligible for postemployment healthcare benefits. In addition, Peace Officers and their surviving spouses with twenty-five years of Peace Officer membership service, Other employees and their surviving spouses with thirty years of membership service, and any disabled member receive benefits paid by PERS, regardless of their age or date of hire.

Medical, prescription drug, dental, vision, and audio coverage is provided through the AlaskaCare Retiree Health Plan. Health plan provisions do not vary by retirement tier or age, except for Medicare coordination. Participants in dental, vision, and audio coverage pay a full self-supporting rate and those benefits are not included in this valuation.

Starting in 2022, prior authorization is required for certain specialty medications for all participants. There is no change to the medications that are covered by the plan.

Starting in 2022, certain preventive benefits for pre-Medicare participants are covered by the plan.

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, excluding 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. Starting in 2019, the prescription drug coverage is through a Medicare Part D EGWP arrangement.

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.

At the time a disabled Peace Officer/Firefighter member retires, the retirement benefit will be increased by a percentage equal to the total cumulative percentage that has been applied to the disability benefit.

Non-occupational Disability

Members must be vested (five paid up years of PERS service) to be eligible for non-occupational disability benefits. Monthly benefits are calculated based on the member's average monthly compensation and PERS service on the date of termination from employment because of disability. Members do not earn PERS service while on non-occupational disability.

Death Benefits

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

Occupational Death

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

Death after Occupational Disability

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

Non-Occupational Death

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

Lump Sum Non-Occupational 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.

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, but excluding the Alaska COLA, times:

a. The lesser of 75% of the CPI increase in the preceding calendar year or 9%, if the recipient is at least age 65 or on PERS disability; or
b. The lesser of 50% of the CPI increase in the preceding calendar year or 6%, if the recipient is at least age 60, or under age 60 if the recipient 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 were first hired 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.

Alaska Cost-of-Living Allowance (COLA)

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

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

Changes in Benefit Provisions Valued Since the Prior Valuation

There were no changes in benefit provisions since the prior valuation.

Section 5.2: Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006. Changes in methods were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017. 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.

Actuarial Cost Method

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method, level percent of pay.

Effective June 30, 2018, the Board adopted a layered UAAL amortization method: Layer #1 equals the sum of (i) the UAAL at June 30, 2018 based on the 2017 valuation, plus (ii) the FY18 experience gain/loss. Layer #1 is amortized over the remainder of the 25-year closed period that was originally established in 2014[1]. Layer #2 equals the change in UAAL at June 30, 2018 due to the experience study and EGWP implementation. Layer #2 is amortized over a separate closed 25-year period starting in 2018. Future layers will be created each year based on the difference between actual and expected UAAL occurring that year, and will be amortized over separate closed 25-year periods. The UAAL amortization continues to be on a level percent of pay basis. 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 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.

[1] Layer #1 is referred to as “initial amount” in Sections 1.2 and 1.3.

Valuation of Assets

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

Changes in Methods Since the Prior Valuation

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

Valuation of Retiree Medical and Prescription Drug Benefits

This section outlines the detailed methodology used in the internal model developed by Buck to calculate the initial per capita claims cost rates for the PERS postemployment healthcare plan. Note that the methodology reflects the results of our annual experience rate update for the period from July 1, 2022 to June 30, 2023.

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

<u>Benefits</u>

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

<u>Administration and Data Sources</u>

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

Claims incurred for the period from July 2021 through June 2023 (FY22 through FY23) were provided by the State of Alaska from reports extracted from their data warehouse, which separated claims by Medicare status. Monthly enrollment data for the same period was provided by Aetna.

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

Aetna provided a snapshot file as of July 1, 2023 of retirees and dependents that included a coverage level indicator. The monthly enrollment data includes double coverage participants. These are participants whereby both the retiree and spouse are retirees from the State, and both are reflected with Couple coverage in the enrollment. In this case, such a couple would show up as four members in the monthly enrollment (each would be both a retiree and a spouse). As a result, the snapshot census file was used to adjust the total member counts in the monthly enrollment reports to estimate the number of unique participants enrolled in coverage. Based on the snapshot files from the last two valuations, the total member count in the monthly enrollment reports needs to be reduced by approximately 13% to account for the number of participants with double coverage.

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

Methodology

Buck projected historical claim data to FY24 for retirees using the following summarized steps:

1. Develop historical annual incurred claim cost rates – an analysis of medical costs was completed based on claims information and enrollment data provided by the State of Alaska and Aetna for each year in the experience period of FY22 through FY23.
    - Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs for the valuation year (e.g., from the experience period up through FY24).
    - Because the reports provided reflected incurred claims, no additional adjustment was needed to determine incurred claims to be used in the valuation.
    - An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. Alaska retirees who do not have 40 quarters of Medicare-covered compensation do not qualify for Medicare Part A coverage free of charge. This is a relatively small and closed group. Medicare was applied to State employment for all employees hired after March 31, 1986. For the “no-Part A” individuals who are required to enroll in Medicare Part B, the State is the primary payer for hospital bills and other Part A services. Claims experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. For Medicare Part B only participants, a lower average claims cost was applied to retirees covered by both Medicare Part A and B vs. retirees covered only by Medicare Part B based upon manual rate models that estimate the Medicare covered proportion of medical costs. To the extent that no-Part A claims can be isolated and applied strictly to the appropriate closed group, actuarial accrued liability will be more accurate.
    - Based on census data received from Aetna, less than 1% of the current retiree population was identified as having coverage only under Medicare Part B. We assume that 2% of actives hired before April 1, 1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.
    - Based upon a reconciliation of valuation census data to the snapshot eligibility files provided by Aetna as of July 1, 2022, and July 1, 2023, Buck adjusted member counts used for duplicate records where participants have double coverage; i.e. primary coverage as a retiree and secondary coverage as the covered spouse of another retiree. This is to reflect the total cost per distinct individual/member which is then applied to distinct members in the valuation census.
    - Buck understands that pharmacy claims reported do not reflect rebates. Based on actual pharmacy rebate information provided by Optum, rebates were assumed to be 20.1% of pre-Medicare, and 13.5% of Medicare prescription drug claims for FY22; and 31.8% of pre-Medicare, and 16.4% of Medicare prescription drug claims for FY23.
2. Develop estimated EGWP reimbursements – Segal provided estimated 2024 EGWP subsidies, developed with the assistance of OptumRx. These amounts are applicable only to Medicare-eligible participants.

3. Adjust for claim fluctuation, anomalous experience, etc. – explicit adjustments are often made for anticipated large claims or other anomalous experience. FY22 and FY23 experience was thoroughly reviewed to assess the impact of COVID-19 and whether an adjustment to FY22 and FY23 claims was appropriate for use in the June 30, 2023 valuation. Total medical and prescription drug claims experience for FY22 and FY23 was reasonable when compared to pre-COVID levels, so no adjustments were used in the per capita claims cost development. In addition, we did not make any large claim adjustments due to group size and demographics. We do blend both Alaska plan-specific and national trend factors as described below. Buck compared data utilized to lag reports and quarterly plan experience presentations provided by the State and Aetna to assess accuracy and reasonableness of data.
4. Trend all data points to the projection period – project prior years' experience forward to FY24 for retiree benefits on an incurred claim basis. Trend factors derived from historical Alaska-specific experience and national trend factors are shown in the table in item 5 below.
5. Apply credibility to prior experience – adjust prior year's data by assigning weight to recent periods, as shown at the right of the table below. The Board approved a change in the weighting of experience periods beginning with the June 30, 2017 valuation as outlined below. Note also that for FY23 to FY24 medical and both years of prescription drugs, we averaged projected plan costs using Alaska-specific trend factors and national trend factors, assigning 75% weight to Alaska-specific trends and 25% to national trends. For FY22 to FY23 medical, we applied 100% weight to national trends because the Alaska-specific trends were impacted by COVID-19:

Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year

Experience Period	Medical	Prescription	Weighting Factors
FY22 to FY23	7.4% Pre-Medicare / 5.6% Medicare	9.5%	50%
FY23 to FY24	11.1% Pre-Medicare / 7.4% Medicare	10.4%	50%

Trend assumptions used for rate development are assessed annually and as additional/improved reporting becomes available, we will incorporate into rate development as appropriate.

6. Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factors for pre-Medicare prescription drug, Medicare prescription drug, and EGWP costs were applied to claims experience incurred before January 1, 2022. Additionally, starting in 2022, certain preventive benefits for pre-Medicare participants are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factor for pre-Medicare medical costs was applied to claims experience incurred before January 1, 2022.
7. Develop separate administration costs – no adjustments were made for internal administrative costs. Third party retiree plan administration fees for FY24 are based upon total fees projected to 2024 by Segal based on actual FY23 fees. The annual per participant per year administrative cost rate for medical and prescription benefits is $497.

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions of the health reform legislation apply to the State plan. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We reviewed the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

Because Transitional Reinsurance fees are only in effect until 2016, we excluded these for valuation purposes.

The Further Consolidated Appropriations Act, 2020 passed in December 2019 repealed several healthcare-related taxes, including the Cadillac Tax.

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

The Inflation Reduction Act was signed into law on August 16, 2022. The law contains several provisions that are expected to impact Alaska's Medicare prescription drug plan (EGWP), which will be considered at the next measurement date.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

Data

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

The Division of Retirement and Benefits provided pension valuation census data, which for people currently in receipt of healthcare benefits was supplemented by coverage data from the healthcare claims administrator (Aetna).

Certain adjustments and assumptions were made to prepare the data for valuation:

- All records provided with retiree medical coverage on the Aetna data were included in this valuation and we relied on the Aetna data as the source of medical coverage for current retirees and their dependents.
- Some records in the Aetna data were duplicates due to the double coverage (i.e. coverage as a retiree and as a spouse of another retiree) allowed under the plan. Records were adjusted for these members so that each member was only valued once. Any additional value of the double coverage (due to coordination of benefits) is small and reflected in the per capita costs.
- Covered children included in the Aetna data were valued until age 23, unless disabled. We assumed that those dependents over 23 were only eligible and valued due to being disabled.
- 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.
- Some records in the pension data were duplicates due to being a covered spouse in the Aetna data. Records were adjusted for these members so that each inactive member was only valued once, removing the record that came in through the pension data.

We are not aware of any other data issues that would be expected to have a material impact on the results and there are no unresolved matters related to the data.

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

	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
A. Fiscal 2022				
1. Incurred Claims	$ 197,733,173	$ 98,249,082	$ 64,076,270	$ 230,832,315
2. Adjustments for Rx Rebates	0	0	(12,879,330)	(31,162,363)
3. Net incurred claims	$ 197,733,173	$ 98,249,082	$ 51,196,940	$ 199,669,953
4. Average Enrollment	17,072	48,698	17,072	48,698
5. Claim Cost Rate (3) / (4)	11,582	2,018	2,999	4,100
6. Trend to Fiscal 2024	1.193	1.134	1.207	1.207
7. Fiscal 2024 Incurred Cost Rate (5) x (6)	$ 13,820	$ 2,288	$ 3,619	$ 4,948
8. Adjustment Factor for 2022 Plan Changes	1.007	1.000	0.957	0.988
9. Adjusted Fiscal 2024 Incurred Cost Rate (7) x (8)	$ 13,916	$ 2,288	$ 3,462	$ 4,888
B. Fiscal 2023				
1. Incurred Claims	$ 211,125,808	$ 110,136,448	$ 66,184,443	$ 264,456,476
2. Adjustments for Rx Rebates	0	0	(21,046,653)	(43,370,862)
3. Net incurred claims	$ 211,125,808	$ 110,136,448	$ 45,137,790	$ 221,085,614
4. Average Enrollment	16,250	50,465	16,250	50,465
5. Claim Cost Rate (3) / (4)	12,992	2,182	2,778	4,381
6. Trend to Fiscal 2024	1.111	1.074	1.102	1.102
7. Fiscal 2024 Incurred Cost Rate (5) x (6)	$ 14,434	$ 2,344	$ 3,061	$ 4,828
8. Adjustment Factor for 2022 Plan Changes	1.000	1.000	1.000	1.000
9. Adjusted Fiscal 2024 Incurred Cost Rate (7) x (8)	$ 14,434	$ 2,344	$ 3,061	$ 4,828

	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
C. Adjusted Incurred Cost Rate by Fiscal Year				
1. Fiscal 2022 A.(9)	13,916	2,288	3,462	4,888
2. Fiscal 2023 B.(9)	14,434	2,344	3,061	4,828
D. Weighting by Fiscal Year				
1. Fiscal 2022	50%	50%	50%	50%
2. Fiscal 2023	50%	50%	50%	50%
E. Fiscal 2024 Incurred Cost Rate				
1. Rate at Average Age C x D	$ 14,175	$ 2,316	$ 3,261	$ 4,858
2. Average Aging Factor	0.818	1.288	0.826	1.130
3. Rate at Age 65 (1) / (2)	$ 17,338	$ 1,798	$ 3,947	$ 4,300
F. Development of Part A&B and Part B Only Cost from Pooled Rate Above				
1. Part A&B Average Enrollment		50,007		
2. Part B Only Average Enrollment		459		
3. Total Medicare Average Enrollment B(4)		50,465		
4. Cost ratio for those with Part B only to those with Parts A&B		3.300		
5. Factor to determine cost for those with Parts A&B (2) / (3) x (4) + (1) / (3) x 1.00		1.021		
6. Medicare per capita cost for all participants: E(3)		$ 1,798		
7. Cost for those eligible for Parts A&B: (6) / (5)		$ 1,761		
8. Cost for those eligible for Part B only: (7) x (4)		$ 5,812		

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, 2023 through June 30, 2024

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare EGWP Subsidy
45	$ 10,581	$ 10,581	$ 2,533	$ 0
50	11,971	11,971	3,009	0
55	13,544	13,544	3,573	0
60	15,324	15,324	3,755	0
65	1,761	5,812	4,300	1,267
70	1,944	6,417	4,771	1,406
75	2,147	7,085	5,293	1,560
80	2,393	7,899	5,214	1,536

Section 5.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2023 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board at the June 2022 meeting based on the experience study for the period July 1, 2017 to June 30, 2021.

Investment Return

7.25% per year, net of investment expenses.

Salary Scale

Salary scale rates based on the 2017-2021 actual experience (see Table 1).

Inflation – 2.50% per year.

Productivity – 0.25% per year.

Payroll Growth

2.75% 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 2.50% annually.

Mortality (Pre-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Employee mortality for Peace Officer/Firefighters in accordance with the following tables:

- Pension: Pub-2010 Safety Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Employee mortality for Others in accordance with the following tables:

- Pension: Pub-2010 General Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 General Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Deaths are assumed to result from occupational causes 70% of the time for Peace Officer/Firefighters, and 35% of the time for Others.

Mortality (Post-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Retiree mortality for Peace Officer/Firefighters in accordance with the following tables:

- Pension: Pub-2010 Safety Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retiree mortality for Others in accordance with the following tables:

- Pension: 98% of male and 106% of female rates of the Pub-2010 General Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 101% of male and 110% of female rates of the Pub-2010 General Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality for Peace Officer/Firefighters in accordance with the following tables. These tables are applied only after the death of the original member.

- Pension: Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality for Others in accordance with the following tables. These tables are applied only after the death of the original member.

- Pension: 102% of male and 108% of female rates of the Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 101% of male and 108% of female rates of the Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Turnover

Select and ultimate rates based on the 2017-2021 actual experience (see Tables 2a and 2b).

Disability

No changes to the incidence rates from the prior valuation due to insufficient 2017-2021 actual experience (see Tables 3a and 3b). Disability rates cease once a member is eligible for retirement.

Disabilities are assumed to be occupational 70% of the time for Peace Officer/Firefighters, and 35% of the time for Others.

Post-disability mortality for Peace Officer/Firefighters in accordance with the following tables:

- Pension: Pub-2010 Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Post-disability mortality for Others in accordance with the following tables:

- Pension: Pub-2010 Non-Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Non-Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retirement

Retirement rates based on the 2017-2021 actual experience (see Tables 4a and 4b).

Deferred vested members are assumed to retire at their earliest unreduced retirement date.

The modified cash refund annuity is valued as a three-year certain and life annuity.

Spouse Age Difference

Male members are assumed to be three years older than their wives. Female members are assumed to be two years younger than their husbands.

Percent Married for Pension

For Peace Officer/Firefighters, 85% of male members and 60% of female members are assumed to be married at termination from active service. For Others, 75% of male members and 70% of female members are assumed to be married at termination from active service.

Dependent Spouse Medical Coverage Election

Applies to members who do not have double medical coverage. For Peace Officer/Firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse. For Others, 60% of male members and 50% of female members are assumed to be married and cover a dependent spouse.

Dependent Children

- Pension: None
- Healthcare: Benefits for dependent children have been valued only for members currently covering their dependent children. These benefits are only valued through the dependent children’s age 23 (unless the child is disabled).

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.

Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

Active Data Adjustment

No adjustment was made to reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date.

Administrative Expenses

The Normal Cost as of June 30, 2023 was increased by the following amounts. These amounts are based on the average of actual administrative expenses during the last two fiscal years. For projections, the percent increase was assumed to remain constant in future years.

- Pension: $8,440,000
- Healthcare: $3,866,000

Rehire Assumption

The Normal Cost used for determining contribution rates and in the projections includes a rehire assumption to account for anticipated rehires. The Normal Cost shown in the report includes the following assumptions based on the four years of rehire loss experience through June 30, 2021. For projections, these assumptions were assumed to grade to zero uniformly over a 20-year period.

- Pension: 15.30%
- Healthcare: 2.40%

Re-Employment Option

All re-employed retirees are assumed to return to work under the Standard Option.

Service

Total credited service is provided by the State. This service is assumed to be the only service that should be used to calculate benefits. Additionally, the State provides claimed service (including Bureau of Indian Affairs Service). Claimed service is used for vesting and eligibility purposes as described in Section 5.1.

Part-Time Service

Peace Officer/Firefighter members are assumed to be full-time employees. For Other members, part-time employees are assumed to earn 0.75 years of service per year.

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.

Contribution Refunds

5% 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.

Early Retirement Factors

State of Alaska staff provided the early retirement factors, which reflect grandfathered factors.

Alaska Cost-of-Living Adjustments (COLA)

Of those benefit recipients who are eligible for the Alaska COLA, 60% of Peace Officers/Firefighters and 65% of Others are assumed to remain in Alaska and receive the COLA.

Postretirement Pension Adjustment (PRPA)

50% and 75% of assumed inflation, or 1.25% and 1.875% respectively, is valued for the annual automatic PRPA as specified in the statute.

Healthcare Participation

100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. For Peace Officer/Firefighters, 20% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. For Others, 25% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

Medicare Part B Only

We assume that 2% of actives hired before April 1, 1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.

Healthcare Per Capita Claims Cost

Sample claims cost rates adjusted to age 65 for FY24 medical and prescription drugs are shown below. The prescription drug costs reflect the plan change to require prior authorization for certain specialty medications. The pre-Medicare medical cost reflects the coverage of additional preventive benefits.

	Medical	Prescription Drugs
Pre-Medicare	$ 17,338	$ 3,947
Medicare Parts A & B	$ 1,761	$ 4,300
Medicare Part B Only	$ 5,812	$ 4,300
Medicare Part D – EGWP	N/A	$ 1,267

Members are assumed to attain Medicare eligibility at age 65. All costs are for the 2024 fiscal year (July 1, 2023 – June 30, 2024).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan’s Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

Healthcare Morbidity

Morbidity rates (also called aging factors) are used to estimate utilization of healthcare benefits at each age to reflect the fact that healthcare utilization typically increases with age. Separate morbidity rates are used for medical and prescription drug benefits. These rates are based on the 2017-2021 actual experience.

Age	Medical	Prescription Drugs
0 - 44	2.0%	4.5%
45 - 54	2.5%	3.5%
55 - 64	2.5%	1.0%
65 - 74	2.0%	2.1%
75 - 84	2.2%	(0.3%)
85 - 94	0.5%	(2.5%)
95+	0.0%	0.0%

Healthcare Third Party Administrator Fees

$497 per person per year; assumed to increase at 4.50% per year.

Healthcare Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 6.70% is applied to the FY24 pre-Medicare medical claims costs to get the FY25 pre-Medicare medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY24	6.70%	5.50%	7.20%
FY25	6.40%	5.40%	6.90%
FY26	6.20%	5.40%	6.65%
FY27	6.05%	5.35%	6.35%
FY28	5.85%	5.35%	6.10%
FY29	5.65%	5.30%	5.80%
FY30	5.45%	5.30%	5.55%
FY31-FY38	5.30%	5.30%	5.30%
FY39	5.25%	5.25%	5.25%
FY40	5.20%	5.20%	5.20%
FY41	5.10%	5.10%	5.10%
FY42	5.05%	5.05%	5.05%
FY43	4.95%	4.95%	4.95%
FY44	4.90%	4.90%	4.90%
FY45	4.80%	4.80%	4.80%
FY46	4.75%	4.75%	4.75%
FY47	4.70%	4.70%	4.70%
FY48	4.60%	4.60%	4.60%
FY49	4.55%	4.55%	4.55%
FY50+	4.50%	4.50%	4.50%

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska.

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 FY24 contributions based on monthly rates shown below for calendar 2024 are assumed based on the coverage category for current retirees. The retiree only rate shown is used for current active and inactive members and spouses in Tier 2 or 3 who are assumed to retire prior to age 60 with less than 30 years of service and who are not disabled. For dependent children, we value 1/3 of the annual retiree contribution to estimate the per child rate based on the assumed number of children in rates where children are covered.

Coverage Category	Calendar 2024 Annual Contribution	Calendar 2024 Monthly Contribution	Calendar 2023 Monthly Contribution
Retiree Only	$ 8,448	$ 704	$ 704
Retiree and Spouse	$ 16,896	$ 1,408	$ 1,408
Retiree and Child(ren)	$ 11,940	$ 995	$ 995
Retiree and Family	$ 20,388	$ 1,699	$ 1,699
Composite	$ 12,552	$ 1,046	$ 1,046

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, 4.0% is applied to the FY24 retired member medical contributions to get the FY25 retired member medical contributions.

Trend Assumptions	
FY24+	4.0%

Graded trend rates for retired member medical contributions are consistent with the rates used for the June 30, 2022 valuation. Actual FY24 retired member medical contributions are reflected in the valuation.

Changes in Assumptions Since the Prior Valuation

The healthcare per capita claims cost assumption is updated annually as described in Section 5.2. The amounts included in the Normal Cost for administrative expenses were changed from $8,635,000 to $8,440,000 for pension, and from $3,818,000 to $3,866,000 for healthcare (based on the most recent two years of actual administrative expenses paid from plan assets). There were no other changes in actuarial assumptions since the prior valuation.

Table 1: Salary Scales

Peace Officer / Firefighter		Others	
Years of Service	Percent Increase	Years of Service	Percent Increase
< 1	8.50%	< 1	6.75%
1	7.75%	1	6.00%
2	7.25%	2	5.50%
3	7.00%	3	5.00%
4	6.75%	4	4.75%
5	6.25%	5	4.25%
6	5.75%	6	4.05%
7	5.50%	7	3.95%
8	5.25%	8	3.75%
9	5.05%	9	3.55%
10	4.95%	10	3.45%
11	4.85%	11	3.25%
12	4.75%	12	3.10%
13	4.65%	13	3.05%
14	4.55%	14	3.00%
15	4.45%	15	2.95%
16	4.35%	16	2.90%
17	4.25%	17+	2.85%
18	4.05%		
19	4.05%		
20+	3.85%		

Table 2a: Turnover Rates for Peace Officer / Firefighter

Select Rates during the First 5 Years of Employment

Years of Service	Male	Female
< 1	15.00%	15.00%
1	12.00%	8.00%
2	7.20%	6.40%
3	5.67%	5.60%
4	6.48%	7.20%

Ultimate Rates after the First 5 Years of Employment

Age	Male	Female
< 30	2.40%	5.80%
30 - 34	2.00%	5.10%
35 - 39	1.60%	3.00%
40 - 44	1.30%	3.00%
45 - 49	1.50%	2.90%
50 - 54	3.00%	5.00%
55+	2.25%	1.80%

Table 2b: Turnover Rates for Others

Select Rates during the First 5 Years of Employment

Hire Age Under 35			Hire Age Over 35		
Years of Service	Male	Female	Years of Service	Male	Female
< 1	29.00%	29.00%	< 1	20.00%	20.00%
1	16.25%	20.00%	1	12.00%	15.00%
2	13.00%	16.00%	2	10.00%	12.50%
3	10.40%	12.80%	3	8.50%	10.00%
4	8.45%	10.40%	4	8.50%	9.00%

Ultimate Rates after the First 5 Years of Employment

Age	Male	Female
< 30	7.80%	8.20%
30 - 34	7.00%	7.10%
35 - 39	5.70%	5.50%
40 - 44	4.50%	5.20%
45 - 49	4.20%	4.40%
50 - 54	3.60%	4.70%
55+	2.90%	4.90%

Table 3a: Disability Rates for Peace Officer / Firefighter

Age	Male	Female	Age	Male	Female
< 23	0.0179%	0.0112%	46	0.1247%	0.0780%
23	0.0244%	0.0153%	47	0.1337%	0.0836%
24	0.0310%	0.0194%	48	0.1462%	0.0914%
25	0.0374%	0.0234%	49	0.1588%	0.0993%
26	0.0440%	0.0275%	50	0.1714%	0.1071%
27	0.0505%	0.0316%	51	0.1839%	0.1150%
28	0.0526%	0.0329%	52	0.1965%	0.1228%
29	0.0548%	0.0343%	53	0.2294%	0.1434%
30	0.0570%	0.0356%	54	0.2624%	0.1640%
31	0.0591%	0.0370%	55	0.2954%	0.1846%
32	0.0612%	0.0383%	56	0.3283%	0.2052%
33	0.0634%	0.0397%	57	0.3613%	0.2258%
34	0.0657%	0.0411%	58	0.4112%	0.2570%
35	0.0679%	0.0425%	59	0.4611%	0.2882%
36	0.0702%	0.0439%	60	0.5110%	0.3194%
37	0.0724%	0.0453%	61	0.5610%	0.3506%
38	0.0757%	0.0473%	62	0.6109%	0.3818%
39	0.0789%	0.0493%	63	0.6109%	0.3818%
40	0.0822%	0.0514%	64	0.6109%	0.3818%
41	0.0854%	0.0534%	65	0.6109%	0.3818%
42	0.0886%	0.0554%	66	0.6109%	0.3818%
43	0.0977%	0.0611%	67	0.6109%	0.3818%
44	0.1066%	0.0667%	68	0.4073%	0.2546%
45	0.1157%	0.0723%	69	0.2036%	0.1273%
			70+	0.2036%	0.1273%

Table 3b: Disability Rates for Others

Age	Male	Female	Age	Male	Female
< 23	0.0327%	0.0376%	46	0.1125%	0.1154%
23	0.0360%	0.0400%	47	0.1208%	0.1236%
24	0.0392%	0.0424%	48	0.1329%	0.1360%
25	0.0425%	0.0448%	49	0.1451%	0.1484%
26	0.0456%	0.0472%	50	0.1572%	0.1608%
27	0.0489%	0.0496%	51	0.1694%	0.1734%
28	0.0501%	0.0510%	52	0.1815%	0.1858%
29	0.0513%	0.0524%	53	0.2132%	0.2168%
30	0.0524%	0.0538%	54	0.2450%	0.2478%
31	0.0536%	0.0554%	55	0.2766%	0.2788%
32	0.0548%	0.0568%	56	0.3084%	0.3098%
33	0.0566%	0.0586%	57	0.3401%	0.3408%
34	0.0584%	0.0606%	58	0.4068%	0.4096%
35	0.0602%	0.0624%	59	0.4736%	0.4784%
36	0.0620%	0.0644%	60	0.5405%	0.5470%
37	0.0638%	0.0662%	61	0.6072%	0.6158%
38	0.0669%	0.0696%	62	0.6740%	0.6844%
39	0.0701%	0.0728%	63	0.8526%	0.8450%
40	0.0734%	0.0762%	64	1.0314%	1.0054%
41	0.0765%	0.0794%	65	1.2101%	1.1660%
42	0.0797%	0.0826%	66	1.3889%	1.3264%
43	0.0879%	0.0908%	67	1.5675%	1.4870%
44	0.0962%	0.0990%	68	1.0451%	0.9914%
45	0.1043%	0.1072%	69	0.5225%	0.4956%
			70+	0.5225%	0.4956%

Table 4a: Retirement Rates for Peace Officer / Firefighter

	Reduced		Unreduced	
Age	Male	Female	Male	Female
< 47	N/A	N/A	9.00%	7.50%
47	N/A	N/A	13.00%	18.50%
48	N/A	N/A	13.00%	18.50%
49	N/A	N/A	13.00%	18.50%
50	5.00%	5.00%	20.00%	21.00%
51	5.00%	5.00%	20.00%	21.00%
52	7.00%	7.00%	20.00%	21.00%
53	7.00%	7.00%	20.00%	21.00%
54	7.00%	7.00%	20.00%	21.00%
55	7.50%	7.50%	29.00%	20.00%
56	7.50%	7.50%	29.00%	20.00%
57	7.50%	7.50%	29.00%	20.00%
58	7.50%	7.50%	29.00%	20.00%
59	20.00%	20.00%	29.00%	20.00%
60 - 64	N/A	N/A	29.00%	31.50%
65 - 69	N/A	N/A	45.00%	45.00%
70+	N/A	N/A	100.00%	100.00%

Table 4b: Retirement Rates for Others

	Reduced		Unreduced	
Age	Male	Female	Male	Female
< 50	N/A	N/A	11.50%	11.50%
50	7.00%	8.50%	37.50%	40.50%
51	7.00%	8.50%	37.50%	40.50%
52	11.00%	8.50%	37.50%	40.50%
53	11.00%	8.50%	37.50%	40.50%
54	24.00%	16.50%	37.50%	40.50%
55	7.00%	6.50%	25.50%	24.00%
56	7.00%	6.50%	25.50%	24.00%
57	7.00%	6.50%	25.50%	24.00%
58	7.00%	6.50%	25.50%	24.00%
59	18.00%	22.00%	25.50%	24.00%
60 - 64	N/A	N/A	26.50%	24.50%
65 - 69	N/A	N/A	30.50%	28.50%
70 - 74	N/A	N/A	27.50%	27.50%
75 - 79	N/A	N/A	50.00%	50.00%
80+	N/A	N/A	100.00%	100.00%

Section 6: Risk Information

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities, current contribution requirements, and the funded status of the plan. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the plan. Understanding the risks to the funding of the plan is important.

Actuarial Standard of Practice No. 51 (ASOP 51)[1] requires certain disclosures of potential risks to the plan and provides useful information for intended users of actuarial reports that determine plan contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative, but all risk should be understood and accepted based on knowledge, judgment, and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the plan.

In the actuary's professional judgment, the following risks may reasonably be anticipated to significantly affect the pension plan's future financial condition and contribution requirements.

- Investment Risk – potential that the investment return will differ from the rate assumed in the actuarial valuation
- Contribution Risk – potential that actual contributions will differ from actuarially determined contributions
- Long-Term Return on Investment Risk – potential that changes in long-term capital market assumptions or the plan's asset allocation will create the need to update the long-term return on investment assumption
- Longevity Risk – potential that participants live longer than projected under valuation mortality assumptions
- Salary Increase Risk – potential that future salaries will differ from the valuation assumptions
- Inflation Risk – potential that the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage will differ from the rate assumed in the actuarial valuation
- Other Demographic Risk – potential that other demographic experience will differ from the valuation assumptions

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the plan. This list is not all-inclusive. It is an attempt to identify the more significant risks and how those risks might affect the results shown in this report.

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the plan sponsor to make contributions to the plan when due, or to assess the likelihood or consequences of potential future changes in law. In addition, this valuation report is not intended to provide investment advice or to provide guidance on the management or reduction of risk.

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[1] ASOP 51 does not apply to the healthcare portion of the plan. Accordingly, all figures in this section relate to the pension portion.

Assessment of Risks

Investment Risk

Plan costs are very sensitive to the market return.

- Any return on assets lower than assumed will increase costs.
- The plan uses an actuarial value of assets that smooths gains and losses on market returns over a five-year period to help control some of the volatility in costs due to investment risk.
- Historical experience of actual returns is shown in Section 2.4 of this report. This historical experience illustrates how returns can vary over time.

The plan invests in a diversified portfolio of assets with the objective of maximizing investment returns at a reasonable level of risk. Actuarial Standard of Practice No. 4 (ASOP 4) requires the actuary to disclose a Low-Default-Risk Obligation Measure (LDROM) of the plan's pension liability and provide commentary to help the intended users of this report understand the significance of the LDROM with respect to funded status, contributions, and participant benefit security.

The LDROM is based on discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of pension benefits expected to be paid in the future. The LDROM shown here represents what the plan's pension liability would be if the plan invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future pension benefit payments. Consequently, the difference between the LDROM and the Actuarial Accrued Liability represents the taxpayer savings from investing in a diversified portfolio of assets versus only investing in high-quality bonds. Furthermore, this difference also represents the cost of reducing investment risk.

As of June 30, 2023, the LDROM is $20.6B for the pension plan based on an interest rate of 5.35%. The interest rate used for the LDROM was determined by calculating a single equivalent discount rate using projected pension benefit payments and the Buck Above Median Yield Curve as of June 30, 2023. Please note that the interest rate used for the LDROM is based on bond yields as of the measurement date and will therefore vary for different measurement dates. All other assumptions are the same as those used for funding purposes as shown in this report.

Actuaries play a role in helping to determine funding methods and policies that can achieve affordable and appropriate contributions and risk management. The funded status based on the Actuarial Accrued Liability, as well as the actuarially determined contributions, are calculated using the expected return on assets, which reflects the actual investment portfolio. Since the assets are not invested solely in an all-bond portfolio, the LDROM does not indicate the plan's pension funded status or progress, nor does it provide information on necessary plan contributions.

Regarding participant benefit security, if this plan were to be funded on an LDROM basis, participant benefits currently accrued as of the measurement date might be considered more secure, since the investment risk would be significantly reduced. However, the fact that assets are invested in a diversified portfolio does not mean that the participants' benefits are not secure. The security of participant benefits relies on a combination of the assets in the plan, the investment returns generated from those assets, and the promise of future contributions from the plan sponsor. Reducing investment risk by investing solely in bonds may significantly increase the actuarially determined contributions, and thereby increase contribution risk by decreasing the ability of the plan sponsor to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security. Participant benefits will remain secure if reasonable and appropriate contributions with managed risk are calculated and paid.

Since this plan is closed to new entrants, the investment horizon of the funds will decrease over the long term. As this change happens, the asset allocation may shift to less risky assets, and the difference between the Actuarial Accrued Liability and LDROM will become smaller. Monitoring this difference may help the plan sponsor decide when the cost of less investment risk is advantageous.

Contribution Risk

There is a risk to the plan when the employer's and/or State's actual contribution amount and the actuarially determined contribution differ.

- If the actual contribution is lower than the actuarially determined contribution, the plan may not be sustainable in the long term.
- Any underpayment of the actuarially determined contribution will increase future contribution amounts to help pay off the additional Unfunded Actuarial Accrued Liability associated with the underpayment(s).
- As long as the Board consistently adopts the actuarially determined contributions, this risk is mitigated due to Alaska statutes requiring the State to contribute additional funds necessary to pay the total contributions adopted by the Board.

Long-Term Return on Investment Risk

Inherent in the long-term return on investment assumption is the expectation that the current rate will be used until the last benefit payment of the plan is made. There is a risk that sustained changes in economic conditions, changes in long-term future capital market assumptions, or changes to the plan's asset allocation will necessitate an update to the long-term return on investment assumption used.

- Under a lower long-term return on investment assumption, less investment return is available to pay plan benefits. This may lead to a need for increased employer contributions.
- The liabilities will be higher at a lower assumed rate of return because future benefits will have a lower discount rate applied when calculating the present value.
- A 1% decrease in the long-term return on investment assumption will increase actuarial accrued liability by approximately 11%.
- This risk may be increased due to the plan being closed to new entrants. As the plan continues to mature, the magnitude of negative cash flow discussed in the Plan Maturity Measures later in this section will grow, thereby creating a need for more liquid assets that may not garner the same long-term return as currently assumed.

Longevity Risk

Plan costs will be increased as participants are expected to live longer.

- Benefits are paid over a longer lifetime when life expectancy is expected to increase. The longer duration of payments leads to higher liabilities.
- Health care has been improving, which affects the life expectancy of participants. As health care improves, leading to longer life expectancies, costs to the plan could increase.
- The mortality assumption for the plan mitigates this risk by assuming future improvement in mortality. However, any improvement in future mortality greater than that expected under the current mortality assumption would lead to increased costs for the plan.
- The Postretirement Pension Adjustments and Alaska Cost-of-Living Allowance increase longevity risk because members who live longer than expected will incur more benefit payment increases than expected and therefore increase costs.

Salary Increase Risk

Plan costs will be increased if actual salary increases are larger than expected.

- Higher-than-expected salary increases will produce higher benefits.
- The higher benefits may be partially offset by increased employee contributions due to higher salaries.
- If future payroll grows at a rate different than assumed, contributions as a percentage of payroll will be affected.

Inflation Risk

Plan costs will be increased if the actual CPI for Anchorage is greater than the 2.5% assumed in the valuation.

- Retirement benefits will be greater than expected if the CPI is greater than the assumed rate, which will increase costs.
- This risk is mitigated by the 75% and 50% of CPI provisions and the 9% and 6% maximums.
- This risk is also mitigated by the age and time in payment requirements to receive an increase.
- Inflation risk may be associated with the interaction of inflation with other assumptions, but this is not significant as a standalone assumption, and therefore is considered as part of the associated assumption risk instead of being discussed here.

Other Demographic Risk

The plan is subject to risks associated with other demographic assumptions (e.g., retirement, termination, and retired members remaining in Alaska assumptions). Differences between actual and expected experience for these assumptions tend to have less impact on the overall costs of the plan. The demographic assumptions used in the valuation are re-evaluated regularly as part of the four-year experience studies to ensure the assumptions are consistent with long-term expectations.

Historical Information

Monitoring certain information over time may help understand risks faced by the plan. Historical information is included throughout this report. Some examples are:

- Funded Ratio History shown in the Executive Summary illustrates how the plan's funded status (comparison of actuarial accrued liabilities to actuarial value of assets) has changed over time.
- Section 1.6 shows historical analysis of financial experience including how contribution rates have changed over time.
- Section 2.4 shows the volatility of asset returns over time.
- Section 4 includes various historical information showing how member census data has changed over time.
- Section 7 includes historical information for the plan's funding progress, solvency test results, and changes in member demographics.

Plan Maturity Measures

There are certain measures that may aid in understanding the significant risks to the plan.

Ratio of Retired Liability to Total Liability ($'s in $000's)

As of June 30	2019	2020	2021	2022	2023
1. Retiree and Beneficiary Accrued Liability	$ 10,076,528	$ 10,472,466	$ 10,774,140	$ 11,426,889	$ 12,144,404
2. Total Accrued Liability	$ 15,039,180	$ 15,279,525	$ 15,419,975	$ 16,093,679	$ 16,835,581
3. Ratio, (1) ÷ (2)	67.0%	68.5%	69.9%	71.0%	72.1%

A high percentage of liability concentrated on participants in pay status indicates a mature plan (often a ratio above 60% - 65%). Because the plan was closed to new entrants in 2006, we expect the percentage in item #3 to continue to increase over time. An increasing percentage may indicate a need for a less risky asset allocation, which may lead to a lower long-term return on asset assumption and increased costs. Higher percentages may also indicate greater investment risk as benefit payments may be greater than contributions creating an increased reliance on investment returns. This ratio should be monitored each year in the future.

Ratio of Cash Flow to Assets ($'s in $000's)

During FYE June 30	2019	2020	2021	2022	2023
1. Contributions	$ 498,067	$ 504,029	$ 586,737	$ 579,650	$ 551,912
2. Benefit Payments	848,019	895,523	930,006	962,357	1,022,795
3. Cash Flow, (1) - (2)	$ (349,952)	$ (391,494)	$ (343,269)	$ (382,707)	$ (470,883)
4. Fair Value of Assets	$ 9,489,405	$ 9,469,161	$ 11,912,309	$ 10,816,140	$ 11,137,489
5. Ratio, (3) ÷ (4)	(3.7%)	(4.1%)	(2.9%)	(3.5%)	(4.2%)

When this cash flow ratio is negative, more cash is being paid out than deposited in the trust. Negative cash flow indicates the trust needs to rely on investment returns to cover benefit payments and / or may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not generate the same returns as less liquid assets, which can increase the investment risk. Currently, the low magnitude of the ratio implies there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. However, due to the plan being closed, we expect this measure to become increasingly negative over time. This maturity measure should be monitored in the future.

Contribution Volatility ($'s in $000's)

As of June 30	2019	2020	2021	2022	2023
1. Fair Value of Assets	$ 9,489,405	$ 9,469,161	$ 11,912,309	$ 10,816,140	$ 11,137,489
2. DB/DCR Payroll	$ 2,347,306	$ 2,373,078	$ 2,406,757	$ 2,442,007	$ 2,588,883
3. Asset to Payroll Ratio, (1) ÷ (2)	4.0	4.0	4.9	4.4	4.3
4. Accrued Liability	$ 15,039,180	$ 15,279,525	$ 15,419,975	$ 16,093,679	$ 16,835,581
5. Liability to Payroll Ratio, (4) ÷ (2)	6.4	6.4	6.4	6.6	6.5

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 10 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 5.

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, if an assumption change increases the liability of two plans by the same percent, the plan with a liability-to-payroll ratio of 10 may experience twice the contribution volatility than a plan with a liability-to-payroll ratio of 5.

Section 7: Historical Information[1]

Section 7.1: Funding Progress

Funding Progress - Pension ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 16,835,581	$ 11,272,339	67.0%	$ 5,563,242	$ 792,805	701.7%
June 30, 2022	16,093,679	10,961,498	68.1%	5,132,181	796,666	644.2%
June 30, 2021	15,419,975	10,466,709	67.9%	4,953,266	858,641	576.9%
June 30, 2020	15,279,525	9,713,710	63.6%	5,565,815	930,061	598.4%
June 30, 2019	15,039,180	9,576,693	63.7%	5,462,487	1,004,467	543.8%
June 30, 2018	14,606,033	9,430,192	64.6%	5,175,841	1,049,152	493.3%
June 30, 2017	13,832,130	9,229,703	66.7%	4,602,427	1,159,599	396.9%
June 30, 2016	13,633,033	9,056,662	66.4%	4,576,371	1,247,884	366.7%
June 30, 2015	13,337,929	8,931,160	67.0%	4,406,769	1,322,925	333.1%
June 30, 2014	12,947,759	7,731,438	59.7%	5,216,321	1,412,237	369.4%
June 30, 2013	11,945,881	6,510,749	54.5%	5,435,132	1,514,034	359.0%
June 30, 2012	11,428,944	6,530,421	57.1%	4,898,523	1,569,710	312.1%
June 30, 2011	10,919,047	6,762,149	61.9%	4,156,898	1,611,744	257.9%
June 30, 2010	10,371,672	6,469,832	62.4%	3,901,840	1,661,170	234.9%
June 30, 2009	9,702,086	6,108,528	63.0%	3,593,558	1,662,781	216.1%
June 30, 2008	9,154,282	7,210,772	78.8%	1,943,510	1,657,186	117.3%
June 30, 2007	8,662,324	6,739,004	77.8%	1,923,320	1,689,969	113.8%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2006 valuations.

Change in methods reflected in 2014 and 2006 valuations.

[1] GASB 67 replaced GASB 25 effective for the fiscal year ending June 30, 2014, and GASB 74 replaced GASB 43 effective for the fiscal year ending June 30, 2017. At the request of the State, historical accounting information has been included in this section as if GASB 25 and GASB 43 were still effective.

Funding Progress - Healthcare ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 7,085,823	$ 9,180,231	129.6%	$ (2,094,408)	$ 792,805	(264.2%)
June 30, 2022	6,657,069	8,979,943	134.9%	(2,322,874)	796,666	(291.6%)
June 30, 2021	6,856,170	8,581,155	125.2%	(1,724,985)	858,641	(200.9%)
June 30, 2020	7,036,550	7,989,358	113.5%	(952,808)	930,061	(102.4%)
June 30, 2019	7,151,694	7,810,491	109.2%	(658,797)	1,004,467	(65.6%)
June 30, 2018	7,658,104	7,686,509	100.4%	(28,405)	1,049,152	(2.7%)
June 30, 2017	8,049,265	7,557,068	93.9%	492,197	1,159,599	42.4%
June 30, 2016	7,736,457	7,411,330	95.8%	325,127	1,247,884	26.1%
June 30, 2015	7,310,734	7,242,299	99.1%	68,435	1,322,925	5.2%
June 30, 2014	7,949,613	6,913,160	87.0%	1,036,453	1,412,237	73.4%
June 30, 2013	8,046,878	5,651,877	70.2%	2,395,001	1,514,034	158.2%
June 30, 2012	7,863,417	5,301,609	67.4%	2,561,808	1,569,710	163.2%
June 30, 2011	7,821,503	5,051,625	64.6%	2,769,878	1,611,744	171.9%
June 30, 2010	7,760,820	4,687,632	60.4%	3,073,188	1,661,170	185.0%
June 30, 2009	6,877,285	4,134,450	60.1%	2,742,835	1,662,781	165.0%
June 30, 2008	6,733,859	3,829,334	56.9%	2,904,525	1,657,186	175.3%
June 30, 2007	5,908,609	3,161,956	53.5%	2,746,653	1,689,969	162.5%

Change in assumptions reflected in 2022, 2018, 2016, 2014, 2012, 2010, 2008, and 2006 valuations.

Change in methods reflected in 2018, 2014, 2006 valuations.

Section 7.2: Solvency Test

Solvency Test - Pension ($’s in 000’s)

Valuation Date	Actuarial Accrued Liability (AAL) (1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	Portion of AAL Covered by Valuation Assets (1)	(2)	(3)
June 30, 2023	$ 1,188,514	$ 12,944,910	$ 2,702,157	$ 11,272,339	100.0%	77.9%	0.0%
June 30, 2022	1,220,552	12,209,639	2,663,488	10,961,498	100.0%	79.8%	0.0%
June 30, 2021	1,291,313	11,524,330	2,604,332	10,466,709	100.0%	79.6%	0.0%
June 30, 2020	1,336,269	11,210,836	2,732,420	9,713,710	100.0%	74.7%	0.0%
June 30, 2019	1,375,913	10,801,729	2,861,538	9,576,693	100.0%	75.9%	0.0%
June 30, 2018	1,411,881	10,300,818	2,893,334	9,430,192	100.0%	77.8%	0.0%
June 30, 2017	1,435,091	9,505,267	2,891,772	9,229,703	100.0%	82.0%	0.0%
June 30, 2016	1,458,830	9,147,818	3,026,385	9,056,662	100.0%	83.1%	0.0%
June 30, 2015	1,475,852	8,762,863	3,099,214	8,931,160	100.0%	85.1%	0.0%
June 30, 2014	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	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%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2006 valuations.

Change in methods reflected in 2014 and 2006 valuations.

Solvency Test - Healthcare ($'s in 000's)

	Actuarial Accrued Liability (AAL)				Portion of AAL Covered by Valuation Assets		
	(1)	(2)	(3)				
Valuation Date	Active Member Contributions	Inactive Members	Active Members Employer Financed	Valuation Assets	(1)	(2)	(3)
June 30, 2023	$ 0	$ 5,564,308	$ 1,521,515	$ 9,180,231	100.0%	100.0%	100.0%
June 30, 2022	0	5,188,441	1,468,628	8,979,943	100.0%	100.0%	100.0%
June 30, 2021	0	5,260,804	1,595,366	8,581,155	100.0%	100.0%	100.0%
June 30, 2020	0	5,306,689	1,729,861	7,989,358	100.0%	100.0%	100.0%
June 30, 2019	0	5,304,790	1,846,904	7,810,491	100.0%	100.0%	100.0%
June 30, 2018	0	5,546,497	2,111,607	7,686,509	100.0%	100.0%	100.0%
June 30, 2017	0	5,671,509	2,377,756	7,557,068	100.0%	100.0%	79.3%
June 30, 2016	0	5,393,537	2,342,920	7,411,330	100.0%	100.0%	86.1%
June 30, 2015	0	5,159,283	2,151,451	7,242,299	100.0%	100.0%	96.8%
June 30, 2014	0	5,455,114	2,494,499	6,913,160	100.0%	100.0%	58.5%
June 30, 2013	0	5,298,380	2,748,498	5,651,877	100.0%	100.0%	12.9%
June 30, 2012	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	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	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%

Change in assumptions reflected in 2022, 2018, 2016, 2014, 2012, 2010, 2008, and 2006 valuations.

Change in methods reflected in 2018, 2014, 2006 valuations.

Section 7.3: Member Data

As of June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Active Members										
1. Number	19,297	17,660	16,105	14,719	13,434	12,152	11,033	9,888	8,795	8,361
2. Average Age	50.90	51.34	51.74	52.10	52.52	52.84	53.21	53.51	53.78	54.22
3. Average Credited Service	14.64	15.29	15.95	16.57	17.21	17.80	18.38	18.96	19.52	19.53
4. Average Entry Age	36.26	36.05	35.79	35.53	35.30	35.04	34.83	34.55	34.26	34.69
5. Average Annual Earnings	$ 71,651	$ 73,248	$ 75,717	$ 76,902	$ 77,813	$ 82,192	$ 83,757	$ 86,316	$ 89,603	$ 93,767
6. Number Vested	18,381	16,996	15,607	14,314	13,103	11,868	10,791	9,675	8,604	7,976
7. Percent Who Are Vested	95.3%	96.2%	96.9%	97.2%	97.5%	97.7%	97.8%	97.8%	97.8%	95.4%
Retirees, Disabilitants, and Beneficiaries										
1. Number	31,099	32,145	33,353	34,347	35,454	36,310	37,106	37,717	38,243	38,639
2. Average Age	68.15	68.60	69.02	69.42	69.85	70.29	70.77	71.17	71.61	72.12
3. Average Years Since Retirement	N/A	11.27	11.48	11.71	11.87	12.14	12.45	12.66	12.94	13.29
4. Average Monthly Pension Benefit	$ 1,800	$ 1,841	$ 1,868	$ 1,898	$ 1,933	$ 1,994	$ 2,041	$ 2,076	$ 2,180	$ 2,319
Vested Terminations (vested at termination, not refunded contributions, and not commenced benefit)										
1. Number	6,167	6,304	6,160	5,962	5,660	5,499	5,327	5,135	4,955	4,812
2. Average Age	51.15	51.80	52.08	52.45	52.56	53.06	53.52	53.92	54.37	54.98
3. Average Monthly Pension Benefit	$ 897	$ 991	$ 1,042	$ 1,080	$ 1,087	$ 1,123	$ 1,158	$ 1,205	$ 1,258	$ 1,306
Non-Vested Terminations (not vested at termination and not refunded contributions)										
1. Number	12,713	12,339	11,880	11,506	11,192	10,921	10,642	10,432	10,223	10,070
2. Average Account Balance	$ 5,765	$ 5,981	$ 6,212	$ 6,462	$ 6,558	$ 6,923	$ 7,060	$ 7,325	$ 7,573	$ 7,917
Total Number of Members	**69,276**	**68,448**	**67,498**	**66,534**	**65,740**	**64,882**	**64,108**	**63,172**	**62,216**	**61,882**

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

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.

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.

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.

BUCK
A Gallagher Company

State of Alaska Teachers' Retirement System

Actuarial Valuation Report
as of June 30, 2023

May 2024

May 3, 2024

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 Teachers' Retirement System (TRS) as of June 30, 2023 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2023. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities, and other factors under TRS 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 is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of TRS as of June 30, 2023.

TRS 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 calculations of the Employer and State Contributions are reasonable actuarially determined contributions as defined in Actuarial Standard of Practice No. 4 (ASOP 4), and are consistent with the requirements set out in Alaska Statutes 37.10.220(a)(8). The funding objective for TRS is to pay required contributions that remain level as a percent of total TRS compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability (UAAL) as a level percentage of total TRS compensation over a closed 25-year period as required by Alaska state statutes. The closed 25-year period was originally established effective June 30, 2014. Effective June 30, 2018, the Board adopted a 25-year layered UAAL amortization method as described in Section 5.2. The UAAL amortization continues to be on a level percent of pay basis. The compensation used to determine required contributions is the total compensation of all active members in TRS, 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. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the funded status of the pension trust is expected to increase to 100% in FY51 (based on the projections in Section 3.6B of this report). The funded status of the healthcare trust is expected to remain at or above 100%.

The Board and staff of the State of Alaska may use this report for the review of the operations of TRS. 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 due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advanced review of any statement to be based on information contained in this report. Buck will accept no liability for any such statement made without its prior review.

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. In our professional judgment, the combined effect of the assumptions is expected to have no significant bias. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2017 to June 30, 2021. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2022 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the healthcare per capita claims cost rates effective June 30, 2023 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 5.2 and 5.3. We certify that the assumptions and methods used for funding purposes, as described in Sections 5.2 and 5.3 of this report, meet the requirements of all applicable Actuarial Standards of Practice.

Actuarial Standards of Practice No. 27 (ASOP 27) and No. 35 (ASOP 35) require the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with those that, in the actuary's professional judgment, are reasonable for the purpose of the measurement. Buck provides advice on reasonable assumptions when performing periodic experience studies. The Board selects the assumptions used, and the signing actuaries review the assumptions annually through discussions with the Board staff and analysis of actuarial experience.

In the case of the Board's selected expected return on assets, the signing actuaries have used economic information provided by Buck's Investment Consulting and Financial Risk Management practices. Buck's Capital Market Assumptions provide relevant expected returns, standard deviations, and correlations. Projected returns are then developed for the portfolio using the GEMS® Economic Scenario Generator from Conning. This sophisticated model uses a multifactor approach to create internally consistent, realistic economic scenarios for all asset classes that reflect the current economic environment as a starting point. Equity returns include stochastic volatility with jumps to reflect extreme, infrequent events. However, such scenarios do not typically impact the 5th through 95th percentiles of projected returns. Corporate bond yields are generated by adding credit spreads to the corresponding zero-coupon Treasury yields. The credit spreads are driven by several factors, including equity returns, and also contain a shock process to allow the model to generate such scenarios as the 2008 Financial Crisis. GEMS® does not, however, model specific risks such as war, pandemics, political risks, severe economic dislocations occurring with greater frequency or severity than predicted by the model, or the risk that relationships among macroeconomic variables may differ from those of the past. From these scenarios, a probabilistic model of expected returns is created, reflecting the duration of investment and the approximate allocation of assets in the portfolio to various asset classes. Under current calibrations, GEMS® will tend to show higher expected returns for longer durations and a greater divergence between arithmetic and geometric average returns at higher standard deviations of portfolio return.

Based on their analysis, including consistency with other assumptions used in the valuation, the percentiles generated by the GEMS® model described above, and review of actuarial gain/loss analysis, the signing actuaries believe the assumptions, in their professional judgment, do not significantly conflict with what are reasonable for the purpose of the measurement.

ACFR Information

We have prepared the following information in this report for the Actuarial Section and Statistical Section of the ACFR: (i) member data tables in Section 4; (ii) analysis of financial experience in Section 1.6; (iii) summary of actuarial assumptions in Section 5.3; and (iv) historical information in Section 7.

Governmental Accounting Standards Board (GASB) Statement No. 67 (GASB 67) was effective for TRS beginning with fiscal year ending June 30, 2014, and Statement No. 74 (GASB 74) was effective for TRS beginning with fiscal year ending June 30, 2017. Please see our separate GASB 67 and GASB 74 reports for other information needed for the ACFR.

Risk Information

Actuarial Standard of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the healthcare portion of TRS. See Section 6 of this report for further details regarding ASOP 51. Section 6 also contains information on the Low-Default-Risk Obligation Measure (LDROM) now required to be disclosed under Actuarial Standard of Practice No. 4 (ASOP 4).

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries performing actuarial services that involve designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the GEMS® model disclosed above, Buck uses third-party software to perform annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to internally developed models that apply applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Buck maintains an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal models are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal models, extra checking and review are completed. Significant changes to the internal models that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Additional models used in valuing health benefits are described later in the report.

COVID-19

The potential impact of the ongoing COVID-19 pandemic on costs and liabilities was considered and no adjustments were made in setting the FY24 per capita claims cost assumption. Please see Section 5.2 for further details.

This report was prepared under the overall direction of David Kershner, who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Brett can be reached at 260-423-1072.

Respectfully submitted,

David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck, A Gallagher Company

Brett Hunter, ASA, EA, MAAA
Senior Consultant
Buck, A Gallagher Company

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

Robert Besenhofer, ASA, MAAA, FCA
Director
Buck, A Gallagher Company

Contents

Executive Summary

Overview

The State of Alaska Teachers' Retirement System (TRS) provides pension and postemployment healthcare benefits to teachers and other eligible participants. The Commissioner of the Department of Administration is responsible for administering the plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the plan. This report presents the results of the actuarial valuation of TRS as of the valuation date of June 30, 2023.

Purpose

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

1. To determine the Employer/State contribution necessary to meet the Board's funding policy for the plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the plan and assess the funded status as an appropriate measure for determining future actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. 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 TRS 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 funded status and contribution patterns (see Section 3). The future funded status and contribution patterns would be different than those shown in Section 3 if future experience does not match the actuarial assumptions used in the projections.

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.

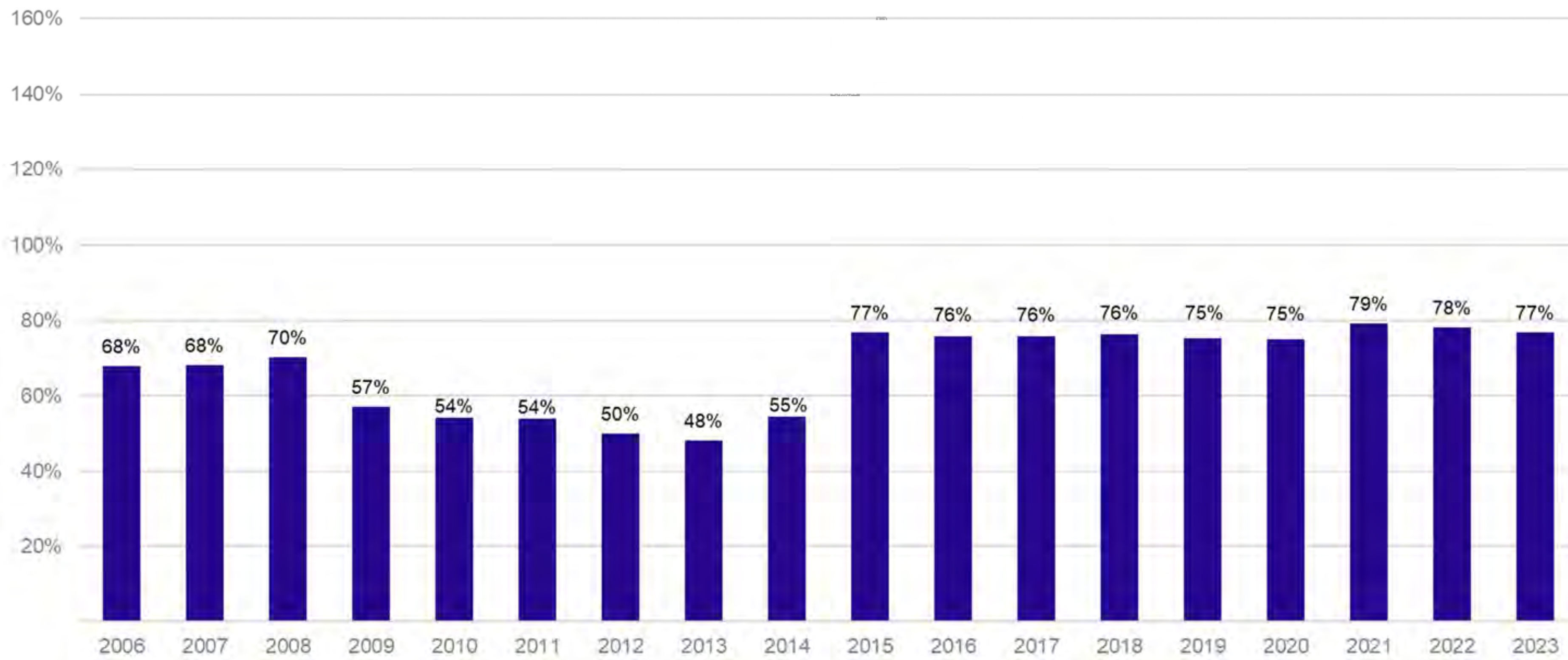
Funded Status

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Status as of June 30 ($'s in 000's)	2022	2023
Pension		
a. Actuarial Accrued Liability	$ 7,804,046	$ 8,036,685
b. Valuation Assets	6,100,204	6,171,460
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ 1,703,842	$ 1,865,225
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	78.2%	76.8%
e. Fair Value of Assets	$ 6,026,651	$ 6,099,520
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	77.2%	75.9%
Healthcare		
a. Actuarial Accrued Liability	$ 2,442,577	$ 2,617,821
b. Valuation Assets	3,437,216	3,547,973
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (994,639)	$ (930,152)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	140.7%	135.5%
e. Fair Value of Assets	$ 3,392,211	$ 3,506,595
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	138.9%	134.0%

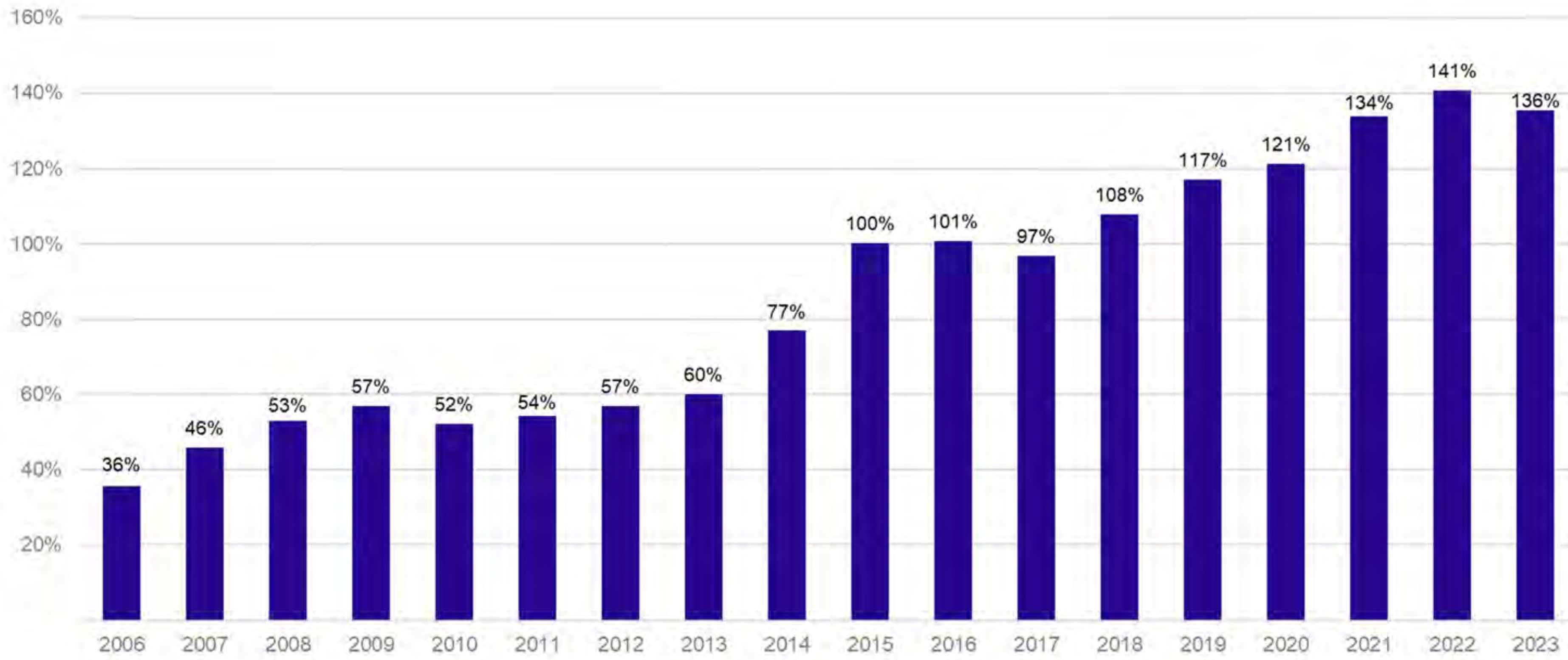
Funded Ratio History (Based on Valuation Assets)

Pension (2006 and later)



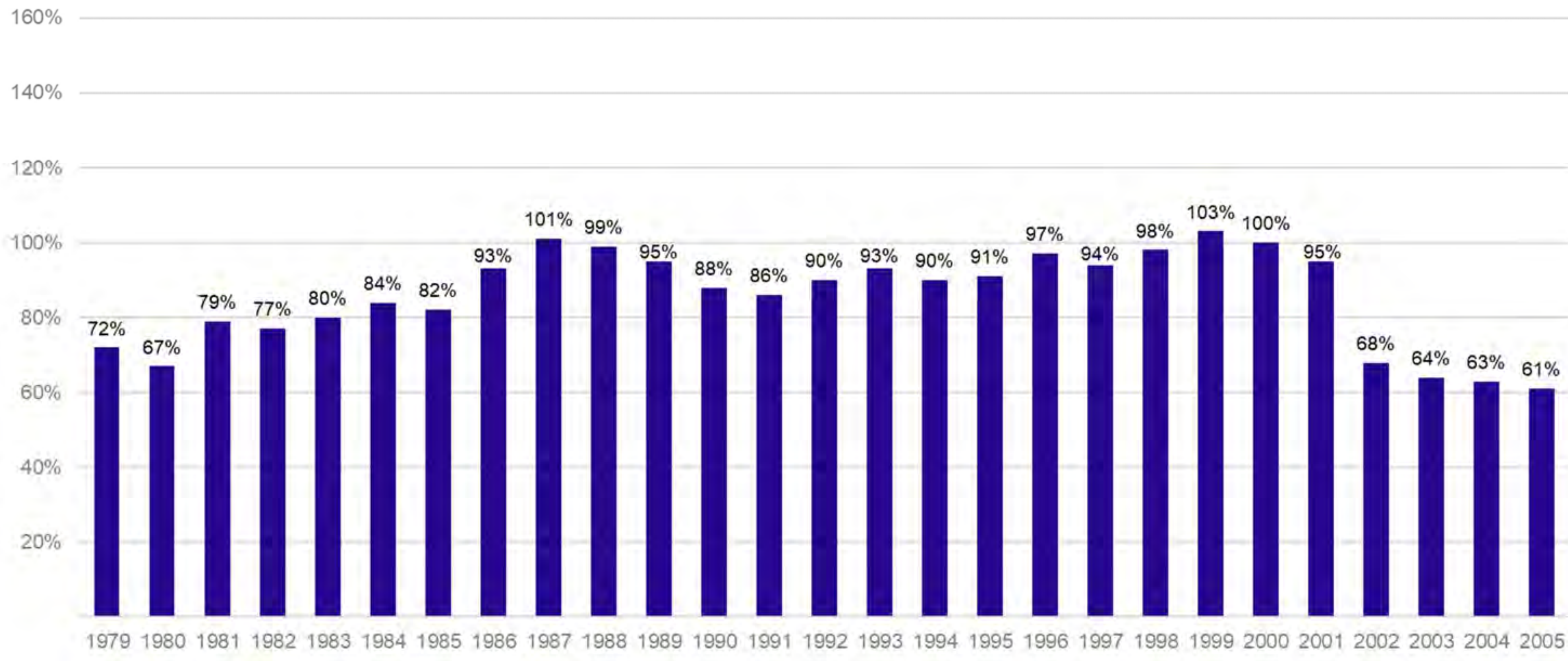
Funded Ratio History (Based on Valuation Assets)

Healthcare (2006 and later)



Funded Ratio History (Based on Valuation Assets)

Total (1979 – 2005) *



* Prior to 2006, assets and liabilities were provided in aggregate only (Pension and Healthcare combined).

The key reasons for the change in the funded status are explained below. 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. Future experience is likely to vary from assumptions so there is potential for actuarial gains or losses.

1. Investment Experience

The asset valuation method recognizes 20% of the investment gain or loss each year, for a period of five years. The FY23 investment return based on fair value of assets was approximately 7.6% compared to the expected investment return of 7.25% (net of investment expenses). This resulted in a market asset gain of approximately $16 million (pension) and $13 million (healthcare). Due to the recognition of investment gains and losses over a 5-year period, the FY23 investment return based on actuarial value of assets was approximately 7.4%, which resulted in an actuarial asset gain of approximately $9 million (pension) and $6 million (healthcare).

2. Salary Increases

Salary increases for continuing active members during FY23 were less than expected based on the valuation assumptions, resulting in a liability gain of approximately $18 million.

3. Demographic Experience

Section 4 provides statistics on active and inactive members. The number of active members decreased 9.6% from 3,023 at June 30, 2022 to 2,734 at June 30, 2023 due to active members exiting the plan during the year (due to retirement, termination, death, and disability) and the closure of the plan to new entrants as of July 1, 2006. The average age of active members increased from 52.57 to 52.95 and average credited service increased from 20.85 to 21.18 years.

The number of benefit recipients increased 0.9% from 14,126 to 14,255, and their average age increased from 72.60 to 73.10. The number of vested terminated participants increased 4.7% from 729 to 763. Their average age increased from 53.22 to 53.70.

The overall effect of the demographic experience during FY23 was a liability gain of approximately $4 million (pension) and a liability loss of approximately $17[1] million (healthcare).

4. COLA / PRPA Experience

The cost-of-living increases (COLA) for benefit recipients during FY23 were less than expected based on the valuation assumptions, resulting in a liability gain of approximately $3 million. However, the CPI-based postretirement pension adjustments (PRPA) were more than expected, resulting in a liability loss of approximately $189 million.

5. Retiree Medical Claims Experience

As described in Section 5.2, recent medical claims experience and changes in healthcare enrollment data provided to us for the June 30, 2023 valuation generated a liability loss of approximately $127 million. Healthcare benefits paid during FY23 were less than expected, which generated a liability gain of approximately $0.1 million. The EGWP subsidy received by the plan during FY23 was approximately $20 million; the expected EGWP subsidy for FY23 was approximately $20 million.

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[1] Includes the effects of changes in dependent coverage elections and Medicare Part B only experience.

6. Changes in Methods Since the Prior Valuation

There were no changes in actuarial methods since the prior valuation.

7. Changes in Assumptions Since the Prior Valuation

Healthcare claim costs are updated annually as described in Section 5.2. The amounts included in the Normal Cost for administrative expenses were updated based on the last two years of actual administrative expenses paid from plan assets. There were no other changes in actuarial assumptions since the prior valuation.

8. Changes in Benefit Provisions Since the Prior Valuation

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

Comparative Summary of Contribution Rates

		Actual FY 2025	Estimated FY 2026
Pension			
a.	Normal Cost Rate Net of Member Contributions	2.21%	2.05%
b.	Past Service Cost Rate	19.02%	20.82%
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)[1]	21.23%	22.87%
Healthcare			
a.	Normal Cost Rate	2.10%	2.07%
b.	Past Service Cost Rate	(10.26%)	(10.22%)
c.	Total Employer/State Contribution Rate, (a) + (b), not less than (a)[1]	2.10%	2.07%
Total			
a.	Normal Cost Rate Net of Member Contributions	4.31%	4.12%
b.	Past Service Cost Rate	19.02%	20.82%
c.	Total Employer/State Contribution Rate, (a) + (b)[1]	23.33%	24.94%
d.	Board Adopted Total Employer/State Contribution Rate	21.30%[2]	TBD
e.	Defined Contribution Retirement (DCR) Rate Paid by Employers	7.29%	7.65%
f.	Board Adopted Total Rate, Including DCR Rate Paid by Employers, (d) + (e)	28.59%	TBD

Contribution rates are based on total (DB and DCR) payroll. The contribution rates shown above for FY26 are estimated assuming no actuarial gains/losses during FY24 and FY25. Actual FY26 contribution rates will be adopted by the Board in September 2024 reflecting FY24 asset experience.

Contribution rates include Employer contribution rates as limited by Alaska state statutes and the Additional State Contribution required under SB 125.

[1] 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 “roll-forward” approach assuming 0% population growth. Investment gains and losses are recognized over a 5-year period beginning in FY15. Beginning with the June 30, 2018 valuation, the UAAL amortization was changed as described in Section 5.2.

[2] The FY25 contribution rates adopted by the Board in September 2023 were 21.30% for Pension and 0.00% for Healthcare. The FY25 adopted rates reflect a single 25-year amortization base that was established June 30, 2014.

Summary of Actuarial Accrued Liability 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, 2022 and June 30, 2023 based on DB and DCR payroll combined:

	Pension	Healthcare
1. Total Employer/State Contribution Rate as of June 30, 2022	21.00%	2.56%
2. Change due to:		
a. Health Claims Experience	N/A	0.11%
b. Salary Increases	(0.15%)	N/A
c. Investment Experience	(0.08%)	0.00%
d. Demographic Experience and Miscellaneous[1]	2.09%	(0.11%)
e. Actual vs Expected Contributions	0.14%	0.00%
f. Assumption/Method Changes	0.00%	0.00%
g. Plan Changes	0.00%	0.00%
h. Total Change, (a) + (b) + (c) + (d) + (e) + (f) + (g)	2.00%	0.00%
3. Total Employer/State Contribution Rate as of June 30, 2023, (1) + (2)(h)	23.00%	2.56%

The following table shows the FY23 gain/(loss) on actuarial accrued liability as of June 30, 2023 ($'s in 000's):

	Pension	Healthcare
Retirement Experience	$ 10,236	$ (16,924)
Termination Experience	(7,548)	(1,845)
Disability Experience	104	179
Active Mortality Experience	1,685	1,100
Inactive Mortality Experience	(474)	3,044
Salary Increases	17,683	N/A
Rehires (Net of Rehire Load)	7	(92)
Metcalfe Transfers[2]	(16,471)	(9,787)
COLA Increases	2,647	N/A
PRPA Increases	(189,020)	N/A
Benefit Payments Different than Expected	11,368	91
Per Capita Claims Cost	N/A	(126,535)
Medicare Part B Only Experience	N/A	(999)
Changes in Dependent Coverage Elections	N/A	(2,034)
Programming Changes[3]	840	32,254
Miscellaneous[4]	(9,778)	(225)
Total	$ (178,721)	$ (121,773)

[1] Includes the effects of census data changes between the two valuations.
[2] As of June 30, 2023, 73 members have transferred from the DCR plan to the DB plan under the 2021 Alaska Supreme Court Metcalfe decision (65 transfers in FY23, 8 transfers in FY22).
[3] Includes adjustment to the percent married assumption applied to spousal death benefits due to occupational causes (pension), adjustment to the COLA amount valued for Tier 2 disabled retirees under age 65 (pension), and removal of deferred participants who are also valued as a covered spouse of a retired participant (healthcare).
[4] Includes the effects of various data changes that are typical when new census data is received for the annual valuation, as well as other items that do not fit neatly into any of the other categories.

The rehire gain/(loss) amount shown on the previous page is the difference between (i) the increase in Actuarial Accrued Liability at June 30, 2023 due to rehires during the most recent plan year, and (ii) the load that was added to the June 30, 2022 Normal Cost based on the rehire load assumption used in the June 30, 2022 valuation. The development of the FY23 rehire gain/(loss) amount is shown in the table below ($'s in 000's):

		Pension	Healthcare
1.	Increase/(Decrease) in Actuarial Accrued Liability at June 30, 2023 due to Rehires	$ 5,049	$ 130
2.	June 30, 2022 Normal Cost Rehire Load, with interest to June 30, 2023	$ 5,056	$ 38
3.	Rehire Gain/(Loss), (2) - (1)	$ 7	$ (92)

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Retirement Benefits	$ 1,717,507	$ 1,572,556
Termination Benefits	16,703	(1,775)
Disability Benefits	1,058	(2,035)
Death Benefits	7,065	6,014
Return of Contributions	1,601	(25,976)
Medical and Prescription Drug Benefits	785,014	676,395
Medicare Part D Subsidy	(85,837)	(74,297)
Indebtedness	(23,467)	(23,467)
Subtotal	$ 2,419,644	$ 2,127,415
Inactive Members		
Not Vested	$ 38,521	$ 38,521
Vested Terminations		
- Retirement Benefits	203,610	203,610
- Medical and Prescription Drug Benefits	266,796	266,796
- Medicare Part D Subsidy	(30,260)	(30,260)
- Indebtedness	(5,328)	(5,328)
Retirees & Beneficiaries		
- Retirement Benefits	6,274,565	6,274,565
- Medical and Prescription Drug Benefits	2,110,884	2,110,884
- Medicare Part D Subsidy	(331,697)	(331,697)
Subtotal	$ 8,527,091	$ 8,527,091
Total	**$ 10,946,735**	**$ 10,654,506**
Total Pension	**$ 8,231,835**	**$ 8,036,685**
Total Medical, Net of Part D Subsidy	**$ 2,714,900**	**$ 2,617,821**
Total Medical, Gross of Part D Subsidy	**$ 3,162,694**	**$ 3,054,075**

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
By Tier		
Tier 1		
- Pension	$ 4,418,019	$ 4,413,956
- Medical, Net of Part D Subsidy	1,077,000	1,075,198
Tier 2		
- Pension	3,813,816	3,622,729
- Medical, Net of Part D Subsidy	1,637,900	1,542,623
Total	**$ 10,946,735**	**$ 10,654,506**

As of June 30, 2023	Normal Cost
Active Members	
Retirement Benefits	$ 26,659
Termination Benefits	3,394
Disability Benefits	563
Death Benefits	203
Return of Contributions	5,133
Medical and Prescription Drug Benefits	19,398
Medicare Part D Subsidy	(2,098)
Rehire Assumption (Pension)	4,314
Rehire Assumption (Medical)	35
Administrative Expenses (Pension)	3,558
Administrative Expenses (Medical)	1,956
Total	**$ 63,115**
Total Pension	**$ 43,824**
Total Medical, Net of Part D Subsidy	**$ 19,291**
Total Medical, Gross of Part D Subsidy	**$ 21,389**
By Tier	
Tier 1	
- Pension	$ 1,507
- Medical, Net of Part D Subsidy	582
Tier 2	
- Pension	42,317
- Medical, Net of Part D Subsidy	18,709
Total	**$ 63,115**

Section 1.2: Actuarial Contributions as of June 30, 2023 ($'s in 000's)

Normal Cost Rate	Pension	Healthcare
1. Total Normal Cost	$ 43,824	$ 19,291
2. DB Rate Payroll Projected for FY24	276,417	276,417
3. DCR Rate Payroll Projected for FY24	477,857	477,857
4. Total Rate Payroll Projected for FY24	754,274	754,274
5. Normal Cost Rate		
a. Based on DB Rate Payroll, (1) ÷ (2)	15.85%	6.98%
b. Based on Total Rate Payroll, (1) ÷ (4)	5.81%	2.56%
6. Average Member Contribution Rate[1]	3.17%	0.00%
7. Employer Normal Cost, (5)(b) - (6)	2.64%	2.56%

Past Service Rate	Pension	Healthcare
1. Actuarial Accrued Liability	$ 8,036,685	$ 2,617,821
2. Valuation Assets	6,171,460	3,547,973
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ 1,865,225	$ (930,152)
4. Funded Ratio, (2) ÷ (1)	76.8%	135.5%
5. Past Service Cost Amortization Payment	153,583	(64,990)
6. Total Rate Payroll Projected for FY24	754,274	754,274
7. Past Service Rate, (5) ÷ (6)	20.36%	(8.62%)
Total Employer / State Contribution Rate, not less than Normal Cost Rate	**23.00%**	**2.56%**
Normal Cost Rate by Tier (Total Employer and Member)[2]		
Tier 1	16.85%	6.51%
Tier 2	15.82%	6.99%

[1] Assumes no member contributions from members in the DCR plan, 9.65% contributions for Tier 1 members who elected supplemental coverage, and 8.65% for the remaining members.

[2] Rates determined considering the payroll for members in each tier. DCR payroll is excluded from these calculations.

Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining	Balances: Initial	Balances: Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	$ 1,720,344	$ 1,650,618	$ 139,540
Change in Assumptions	6/30/2018	20	14,346	14,407	1,050
FY19 Loss	6/30/2019	21	94,314	95,000	6,716
FY20 Loss	6/30/2020	22	44,395	44,754	3,076
FY21 Gain	6/30/2021	23	(285,576)	(287,559)	(19,247)
Change in Assumptions	6/30/2022	24	144,033	144,618	9,444
FY22 Loss	6/30/2022	24	17,525	17,597	1,149
FY23 Loss	6/30/2023	25	185,790	185,790	11,855
Total				**$ 1,865,225**	**$ 153,583**

Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining	Balances: Initial	Balances: Outstanding	Beginning-of-Year Payment
Initial Amount	6/30/2018	16	$ (48,285)	$ (46,329)	$ (3,917)
Change in Assumptions/Methods/EGWP	6/30/2018	20	(166,274)	(166,998)	(12,171)
FY19 Gain	6/30/2019	21	(213,757)	(215,312)	(15,222)
FY20 Gain	6/30/2020	22	(101,507)	(102,327)	(7,032)
Medical/Prescription Drug Plan Changes	6/30/2021	23	(21,763)	(21,914)	(1,467)
FY21 Gain	6/30/2021	23	(273,877)	(275,777)	(18,458)
Change in Assumptions	6/30/2022	24	20,542	20,625	1,347
FY22 Gain	6/30/2022	24	(185,832)	(186,587)	(12,184)
FY23 Loss	6/30/2023	25	64,467	64,467	4,114
Total				**$ (930,152)**	**$ (64,990)**

Section 1.3: Roll-Forward Contribution Rate Calculation for FY26 ($'s in 000's)

	Pension	Healthcare
1. Liability Roll Forward		
a. Actuarial Accrued Liability as of June 30, 2023	**$ 8,036,685**	**$ 2,617,821**
b. Normal Cost	40,266	17,335
c. Interest on (a) and (b) at 7.25%	585,579	191,049
d. Estimated Benefit Payments	(585,684)	(153,237)
e. Interest on (d) at 7.25%, adjusted for timing	(26,436)	(5,507)
f. Expected Actuarial Accrued Liability as of June 30, 2024	**$ 8,050,410**	**$ 2,667,461**
g. Projected Normal Cost	36,130	15,787
h. Interest on (f) and (g) at 7.25%	586,274	194,535
i. Estimated Benefit Payments	(602,632)	(161,186)
j. Interest on (i) at 7.25%, adjusted for timing	(26,097)	(6,068)
k. Expected Actuarial Accrued Liability as of June 30, 2025	**$ 8,044,085**	**$ 2,710,529**
2. Asset Roll Forward		
a. Actuarial Value of Assets as of June 30, 2023	**$ 6,171,460**	**$ 3,547,973**
b. Interest on (a) at 7.25%	447,431	257,228
c. Employee Contributions	26,892	0
d. Employer Contributions	41,711	0
e. State Assistance Contributions	98,766	0
f. Interest on (c) thru (e) at 7.25%, adjusted for timing*	9,604	0
g. Estimated Benefit Payments	(585,684)	(153,237)
h. Administrative Expenses	(3,558)	(1,956)
i. Interest on (g) and (h) at 7.25%, adjusted for timing	(26,563)	(5,577)
j. AVA Adjustments	25,542	13,722
k. Expected Actuarial Value of Assets as of June 30, 2024	**$ 6,205,601**	**$ 3,658,153**
l. Interest on (k) at 7.25%	449,906	265,216
m. Employee Contributions	24,840	0
n. Employer Contributions	40,031	0
o. State Assistance Contributions**	123,358	0
p. Interest on (m) thru (o) at 7.25%, adjusted for timing*	11,254	0
q. Estimated Benefit Payments	(602,632)	(161,186)
r. Administrative Expenses	(3,210)	(1,782)
s. Interest on (q) and (r) at 7.25%, adjusted for timing	(26,211)	(6,131)
t. AVA Adjustments	59,675	30,984
u. Expected Actuarial Value of Assets as of June 30, 2025	**$ 6,282,612**	**$ 3,785,254**
3. Expected Unfunded Actuarial Accrued Liability as of June 30, 2025, 1(k) - 2(u)	**$ 1,761,473**	**$ (1,074,725)**

* Employee and Employer Contributions are paid throughout the year. State Assistance Contributions are assumed to be paid on July 1, 2023 for FY24, and July 1, 2024 for FY25.

** The FY25 State Assistance Contribution is expected to be contributed 100% to pension.

	Pension	Healthcare
4. Expected Annual Rate Payroll for FY26		
a. Defined Benefit Members	$ 224,658	$ 224,658
b. Defined Contribution Retirement Members	542,354	542,354
c. Total Rate Payroll	**$ 767,012**	**$ 767,012**
5. Expected FY26 Contribution Rate Calculation		
a. Projected Normal Cost for FY26	$ 35,114	$ 15,907
b. Projected Normal Cost Rate for FY26	4.58%	2.07%
c. Expected Member Contribution Rate for FY26	(2.53%)	0.00%
d. Expected Employer Normal Cost Rate for FY26	**2.05%**	**2.07%**
e. Expected Unfunded Liability as of June 30, 2025	$ 1,761,473	$ (1,074,725)
f. FY26 Layered Amortization of Expected Unfunded Liability	159,728	(78,355)
g. Expected Past Service Cost Contribution Rate for FY26	**20.82%**	**(10.22%)**
h. Expected Total Contribution Rate for FY26, not less than Normal Cost Rate	**22.87%**	**2.07%**

The components of the expected FY26 amortization amounts are shown below (totals may not add due to rounding):

Expected FY26 Schedule of Past Service Cost Amortizations - Pension ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining at 6/30/25	Initial	Outstanding at 6/30/25	Beginning-of-Year Payment for FY26
Initial Amount	6/30/2018	14	$ 1,720,344	$ 1,584,355	$ 147,320
Change in Assumptions	6/30/2018	18	14,346	14,206	1,109
FY19 Loss	6/30/2019	19	94,314	94,148	7,091
FY20 Loss	6/30/2020	20	44,395	44,552	3,247
FY21 Gain	6/30/2021	21	(285,576)	(287,418)	(20,320)
Change in Assumptions	6/30/2022	22	144,033	145,078	9,970
FY22 Loss	6/30/2022	22	17,525	17,652	1,213
FY23 Loss	6/30/2023	23	185,790	187,005	12,516
Expected FY24 Loss	6/30/2024	24	9,073	9,110	595
Expected FY25 Gain	6/30/2025	25	(47,215)	(47,215)	(3,013)
Total				**$ 1,761,473**	**$ 159,728**

Expected FY26 Schedule of Past Service Cost Amortizations - Healthcare ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining at 6/30/25	Initial	Outstanding at 6/30/25	Beginning-of-Year Payment for FY26
Initial Amount	6/30/2018	14	$ (48,285)	$ (44,469)	$ (4,135)
Change in Assumptions/Methods/EGWP	6/30/2018	18	(166,274)	(164,678)	(12,850)
FY19 Gain	6/30/2019	19	(213,757)	(213,380)	(16,071)
FY20 Gain	6/30/2020	20	(101,507)	(101,864)	(7,424)
Medical/Prescription Drug Plan Changes	6/30/2021	21	(21,763)	(21,903)	(1,548)
FY21 Gain	6/30/2021	21	(273,877)	(275,642)	(19,487)
Change in Assumptions	6/30/2022	22	20,542	20,691	1,422
FY22 Gain	6/30/2022	22	(185,832)	(187,181)	(12,864)
FY23 Loss	6/30/2023	23	64,467	64,888	4,343
Expected FY24 Gain	6/30/2024	24	(62,807)	(63,062)	(4,118)
Expected FY25 Gain	6/30/2025	25	(88,125)	(88,125)	(5,623)
Total				**$ (1,074,725)**	**$ (78,355)**

Section 1.4: Actuarial Gain/(Loss) for FY23 ($'s in 000's)

	Pension	Healthcare
1. Expected Actuarial Accrued Liability		
a. Actuarial Accrued Liability as of June 30, 2022	$ 7,804,046	$ 2,442,577
b. Normal Cost	44,003	17,514
c. Interest on (a) and (b) at 7.25%	568,984	178,357
d. Employer Group Waiver Plan	0	20,499
e. Benefit Payments	(536,866)	(158,002)
f. Refund of Contributions	(1,404)	0
g. Interest on (d) thru (f) at 7.25%, adjusted for timing	(20,799)	(4,897)
h. Assumptions/Methods Changes	0	0
i. Expected Actuarial Accrued Liability as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ 7,857,964	$ 2,496,048
2. Actual Actuarial Accrued Liability as of June 30, 2023	8,036,685	2,617,821
3. Liability Gain/(Loss), (1)(i) - (2)	**$ (178,721)**	**$ (121,773)**
4. Expected Actuarial Asset Value		
a. Actuarial Value of Assets as of June 30, 2022	$ 6,100,204	$ 3,437,216
b. Interest on (a) at 7.25%	442,265	249,198
c. Employee Contributions	31,835	0
d. Employer Contributions	50,129	92
e. State Assistance Contributions	91,029	0
f. Employer Group Waiver Plan	0	20,499
g. Interest on (c) thru (f) at 7.25%, adjusted for timing	9,519	733
h. Benefit Payments	(536,866)	(158,002)
i. Refund of Contributions	(1,404)	0
j. Administrative Expenses	(3,310)	(1,867)
k. Interest on (h) thru (j) at 7.25%, adjusted for timing	(20,917)	(5,694)
l. Expected Actuarial Asset Value as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h) + (i) + (j) + (k)	$ 6,162,484	$ 3,542,175
5. Actual Actuarial Asset Value as of June 30, 2023	6,171,460	3,547,973
6. Actuarial Asset Value Gain/(Loss), (5) - (4)(l)	**$ 8,976**	**$ 5,798**
7. Total Actuarial Gain/(Loss), (3) + (6)	**$ (169,745)**	**$ (115,975)**
8. Contribution Gain/(Loss)	**$ (16,506)**	**$ 51,361**
9. Administrative Expense Gain/(Loss)	**$ 461**	**$ 147**
10. FY23 Gain/(Loss), (7) + (8) + (9)	**$ (185,790)**	**$ (64,467)**

Section 1.5: Development of Change in Unfunded Liability During FY23 ($'s in 000's)

	Pension	Healthcare
1. 2022 Unfunded Liability	$ 1,703,842	$ (994,639)
a. Interest on Unfunded Liability at 7.25%	$ 123,529	$ (72,111)
b. Normal Cost	44,003	17,514
c. Employee Contributions	(31,835)	0
d. Employer Contributions	(50,129)	(92)
e. State Assistance Contributions	(91,029)	0
f. Administrative Expenses	3,310	1,867
g. Interest on (b) thru (f) at 7.25%, adjusted for timing	(6,211)	1,334
h. Assumptions/Methods Changes	0	0
i. Expected Change in Unfunded Liability During FY23 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ (8,362)	$ (51,488)
2. Expected 2023 Unfunded Liability, (1) + (1)(i)	$ 1,695,480	$ (1,046,127)
a. Liability (Gain)/Loss During FY23	$ 178,721	$ 121,773
b. Actuarial Assets (Gain)/Loss During FY23	(8,976)	(5,798)
c. Total Actuarial (Gain)/Loss During FY23	$ 169,745	$ 115,975
3. Actual 2023 Unfunded Liability, (2) + (2)(c)	$ 1,865,225	$ (930,152)

Section 1.6: Analysis of Financial Experience

Pension
Change in Employer / State Contribution Rate as of Valuation Date
Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Five Fiscal Years
Resulting from Differences Between Assumed Experience and Actual Experience

	Change in Employer / State Contribution Rate During Fiscal Year				
	Pension				
Type of (Gain) or Loss	**2019**	**2020**	**2021**	**2022**	**2023**
1. Health Claims	N/A	N/A	N/A	N/A	N/A
2. Salary Experience	(0.06%)	(0.06%)	0.25%	0.26%	(0.15%)
3. Investment Experience	0.93%	0.83%	(1.95%)	(0.63%)	(0.08%)
4. Demographic Experience and Miscellaneous	0.75%	(0.28%)	(0.68%)	0.91%	2.09%
5. Actual vs Expected Contributions	(0.15%)	(0.17%)	(0.03%)	(0.25%)	0.14%
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	1.47%	0.32%	(2.41%)	0.29%	2.00%
7. Assumptions / Method Changes	0.00%	0.00%	0.00%	1.39%	0.00%
8. Plan Changes	0.00%	0.00%	0.00%	0.00%	0.00%
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	1.47%	0.32%	(2.41%)	1.68%	2.00%
10. Beginning Total Employer / State Contribution Rate	19.94%	21.41%	21.73%	19.32%	21.00%
11. Ending Valuation Year Employer / State Contribution Rate, (9) + (10)	21.41%	21.73%	19.32%	21.00%	23.00%
12. Fiscal Year Rates Adopted by ARMB					
a. Fiscal Year Employer / State Contribution Rate	22.51%	17.90%	18.49%	21.30%	22.87% *
b. Fiscal Year for which Rate Applies	FY22	FY23	FY24	FY25	FY26

* Expected rate. Actual rate to be determined

Healthcare
Change in Employer / State Contribution Rate as of Valuation Date
Due to (Gains) and Losses in Actuarial Accrued Liabilities During the Last Five Fiscal Years
Resulting from Differences Between Assumed Experience and Actual Experience

	Change in Employer / State Contribution Rate During Fiscal Year				
	Healthcare				
Type of (Gain) or Loss	**2019**	**2020**	**2021**	**2022**	**2023**
1. Health Claims	(2.51%)	(0.95%)	(0.11%)	(0.11%)	0.11%
2. Salary Experience	N/A	N/A	N/A	N/A	N/A
3. Investment Experience	0.45%	0.38%	0.00%	0.00%	0.00%
4. Demographic Experience and Miscellaneous	1.60%	0.49%	(0.23%)	(0.21%)	(0.11%)
5. Actual vs Expected Contributions	(0.02%)	(0.19%)	0.00%	0.00%	0.00%
6. (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(0.48%)	(0.27%)	(0.34%)	(0.32%)	0.00%
7. Assumptions / Method Changes	0.00%	0.00%	0.00%	(0.06%)	0.00%
8. Plan Changes	0.00%	0.00%	(0.02%)	0.00%	0.00%
9. Composite (Gain) or Loss During Year, (6) + (7) + (8)	(0.48%)	(0.27%)	(0.36%)	(0.38%)	0.00%
10. Beginning Total Employer / State Contribution Rate	4.05%	3.57%	3.30%	2.94%	2.56%
11. Ending Valuation Year Employer / State Contribution Rate, (9) + (10)	3.57%	3.30%	2.94%	2.56%	2.56%
12. Fiscal Year Rates Adopted by ARMB					
a. Fiscal Year Employer / State Contribution Rate	2.98%	0.00%	0.00%	0.00%	2.07% *
b. Fiscal Year for which Rate Applies	FY22	FY23	FY24	FY25	FY26

* Expected rate. Actual rate to be determined

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

Pension

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2006	$ 4,859,336	$ 3,296,934	67.8%	$ 1,562,402
June 30, 2007	5,043,448	3,441,867	68.2%	1,601,581
June 30, 2008	5,231,654	3,670,086	70.2%	1,561,568
June 30, 2009	5,463,987	3,115,719	57.0%	2,348,268
June 30, 2010	6,006,981	3,259,868	54.3%	2,747,113
June 30, 2011	6,196,104	3,345,949	54.0%	2,850,155
June 30, 2012	6,399,777	3,194,994	49.9%	3,204,783
June 30, 2013	6,589,553	3,170,313	48.1%	3,419,240
June 30, 2014	6,921,362	3,771,139	54.5%	3,150,223
June 30, 2015	7,051,724	5,422,651	76.9%	1,629,073
June 30, 2016	7,159,788	5,428,687	75.8%	1,731,101
June 30, 2017	7,217,525	5,476,835	75.9%	1,740,690
June 30, 2018	7,276,290	5,541,600	76.2%	1,734,690
June 30, 2019	7,388,020	5,563,931	75.3%	1,824,089
June 30, 2020	7,447,036	5,587,064	75.0%	1,859,972
June 30, 2021	7,471,887	5,910,369	79.1%	1,561,518
June 30, 2022	7,804,046	6,100,204	78.2%	1,703,842
June 30, 2023	8,036,685	6,171,460	76.8%	1,865,225

Healthcare

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2006	$ 2,370,515	$ 844,766	35.6%	$ 1,525,749
June 30, 2007	2,145,955	982,532	45.8%	1,163,423
June 30, 2008	2,387,524	1,266,890	53.1%	1,120,634
June 30, 2009	2,383,527	1,357,239	56.9%	1,026,288
June 30, 2010	2,840,807	1,479,260	52.1%	1,361,547
June 30, 2011	2,932,691	1,591,988	54.3%	1,340,703
June 30, 2012	2,946,667	1,674,160	56.8%	1,272,507
June 30, 2013	3,002,554	1,803,763	60.1%	1,198,791
June 30, 2014	2,919,670	2,248,135	77.0%	671,535
June 30, 2015	2,677,393	2,686,272	100.3%	(8,879)
June 30, 2016	2,747,836	2,771,704	100.9%	(23,868)
June 30, 2017	2,927,093	2,836,802	96.9%	90,291
June 30, 2018	2,684,150	2,898,709	108.0%	(214,559)
June 30, 2019	2,518,644	2,947,562	117.0%	(428,918)
June 30, 2020	2,489,675	3,021,283	121.4%	(531,608)
June 30, 2021	2,439,603	3,267,737	133.9%	(828,134)
June 30, 2022	2,442,577	3,437,216	140.7%	(994,639)
June 30, 2023	2,617,821	3,547,973	135.5%	(930,152)

Section 2: Plan Assets

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

As of June 30, 2023	Pension	Healthcare	Allocation Percent
Cash and Short-Term Investments			
- Cash and Cash Equivalents	$ 71,429	$ 33,681	1.1%
- Subtotal	$ 71,429	$ 33,681	1.1%
Fixed Income Investments			
- Domestic Fixed Income Pool	$ 1,109,941	$ 642,873	18.2%
- International Fixed Income Pool	0	0	0.0%
- Alternative Fixed Income Pool	166,899	96,667	2.7%
- High Yield Pool	0	0	0.0%
- Treasury Inflation Protection Pool	0	0	0.0%
- Emerging Debt Pool	0	0	0.0%
- Subtotal	$ 1,276,840	$ 739,540	20.9%
Equity Investments			
- Domestic Equity Pool	$ 1,509,258	$ 874,155	24.8%
- International Equity Pool	858,878	497,458	14.1%
- Private Equity Pool	990,268	573,558	16.3%
- Emerging Markets Equity Pool	187,866	108,811	3.1%
- Alternative Equity Strategies	329,248	190,699	5.4%
- Subtotal	$ 3,875,518	$ 2,244,681	63.7%
Other Investments			
- Real Estate Pool	$ 414,574	$ 239,204	6.8%
- Other Investments Pool	459,563	266,177	7.5%
- Absolute Return Pool	0	0	0.0%
- Other Assets	0	318	0.0%
- Subtotal	$ 874,137	$ 505,699	14.3%
Total Cash and Investments	$ 6,097,924	$ 3,523,601	100.0%
Net Accrued Receivables	1,596	(17,006)	
Net Assets	$ 6,099,520	$ 3,506,595	

Section 2.2: Changes in Fair Value of Assets During FY23 ($'s in 000's)

Fiscal Year 2023	Pension	Healthcare
1. Fair Value of Assets as of June 30, 2022	$ 6,026,651	$ 3,392,211
2. Additions:		
a. Employee Contributions	$ 31,835	$ 0
b. Employer Contributions	50,129	92
c. State Assistance Contributions	91,029	0
d. Interest and Dividend Income	95,086	54,453
e. Net Appreciation / Depreciation in Fair Value of Investments	362,776	208,241
f. Employer Group Waiver Plan	0	20,499
g. Other	31	173
h. Total Additions	$ 630,886	$ 283,458
3. Deductions:		
a. Medical Benefits	$ 0	$ 158,002
b. Retirement Benefits	536,866	0
c. Refund of Contributions	1,404	0
d. Investment Expenses	16,437	9,205
e. Administrative Expenses	3,310	1,867
f. Total Deductions	$ 558,017	$ 169,074
4. Fair Value of Assets as of June 30, 2023	$ 6,099,520	$ 3,506,595
5. Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	7.6%	7.6%

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

The actuarial value of asset was set equal to the fair value as of 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
1. Deferral of Investment Gain / (Loss) for FY23		
a. Fair Value of Assets as of June 30, 2022	$ 6,026,651	$ 3,392,211
b. Contributions	172,993	92
c. Employer Group Waiver Plan	0	20,499
d. Benefit Payments	538,270	158,002
e. Administrative Expenses	3,310	1,867
f. Actual Investment Return (net of investment expenses)	441,456	253,662
g. Expected Return Rate (net of investment expenses)	7.25%	7.25%
h. Expected Return, Weighted for Timing	425,534	240,975
i. Investment Gain / (Loss) for the Year, (f) - (h)	15,922	12,687
2. Actuarial Value as of June 30, 2023		
a. Fair Value as of June 30, 2023	$ 6,099,520	$ 3,506,595
b. Deferred Investment Gain / (Loss)	(71,940)	(41,378)
c. Actuarial Value as of June 30, 2023, (a) - (b)	6,171,460	3,547,973
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	101.2%	101.2%
4. Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses	7.4%	7.4%

The tables below show the development of the gains/(losses) to be recognized in the current year ($'s in 000's):

Pension				
Fiscal Year Ending	Asset Gain / (Loss)	Gain / (Loss) Recognized in Prior Years	Gain / (Loss) Recognized This Year	Gain / (Loss) Deferred to Future Years
June 30, 2019	$ (82,246)	$ (65,797)	$ (16,449)	$ 0
June 30, 2020	(181,816)	(109,089)	(36,363)	(36,364)
June 30, 2021	1,200,625	480,250	240,125	480,250
June 30, 2022	(880,940)	(176,188)	(176,188)	(528,564)
June 30, 2023	15,922	0	3,184	12,738
Total	**$ 71,545**	**$ 129,176**	**$ 14,309**	**$ (71,940)**

Healthcare				
Fiscal Year Ending	Asset Gain / (Loss)	Gain / (Loss) Recognized in Prior Years	Gain / (Loss) Recognized This Year	Gain / (Loss) Deferred to Future Years
June 30, 2019	$ (38,309)	$ (30,647)	$ (7,662)	$ 0
June 30, 2020	(92,367)	(55,420)	(18,473)	(18,474)
June 30, 2021	655,144	262,058	131,029	262,057
June 30, 2022	(491,853)	(98,371)	(98,371)	(295,111)
June 30, 2023	12,687	0	2,537	10,150
Total	**$ 45,302**	**$ 77,620**	**$ 9,060**	**$ (41,378)**

Section 2.4: Historical Asset Rates of Return

	Actuarial Value		Fair Value	
Year Ending	Annual	Cumulative	Annual	Cumulative
June 30, 2005	9.1%	9.1%	8.5%	8.5%
June 30, 2006	9.6%	9.3%	11.4%	9.9%
June 30, 2007	11.9%	10.2%	18.5%	12.7%
June 30, 2008	10.2%	10.2%	(3.0%)	8.6%
June 30, 2009	(7.9%)	6.3%	(21.0%)	1.9%
June 30, 2010	8.1%	6.6%	10.6%	3.3%
June 30, 2011	6.9%	6.6%	20.5%	5.6%
June 30, 2012	0.7%	5.9%	0.2%	4.9%
June 30, 2013	3.7%	5.6%	12.2%	5.7%
June 30, 2014	22.7%	7.2%	18.2%	6.9%
June 30, 2015	7.2%	7.2%	3.2%	6.5%
June 30, 2016	5.1%	7.1%	(0.7%)	5.9%
June 30, 2017	5.6%	6.9%	12.9%	6.4%
June 30, 2018	6.2%	6.9%	8.2%	6.6%
June 30, 2019	5.5%	6.8%	5.9%	6.5%
June 30, 2020	5.8%	6.7%	4.1%	6.4%
June 30, 2021	11.6%	7.0%	30.1%	7.6%
June 30, 2022	8.7%	7.1%	(6.0%)	6.8%
June 30, 2023	7.4%	7.1%	7.6%	6.9%

Rates of return are shown based on combined assets for Pension and Healthcare.

Cumulative returns are since fiscal year ending June 30, 2005.

Section 3: Projections

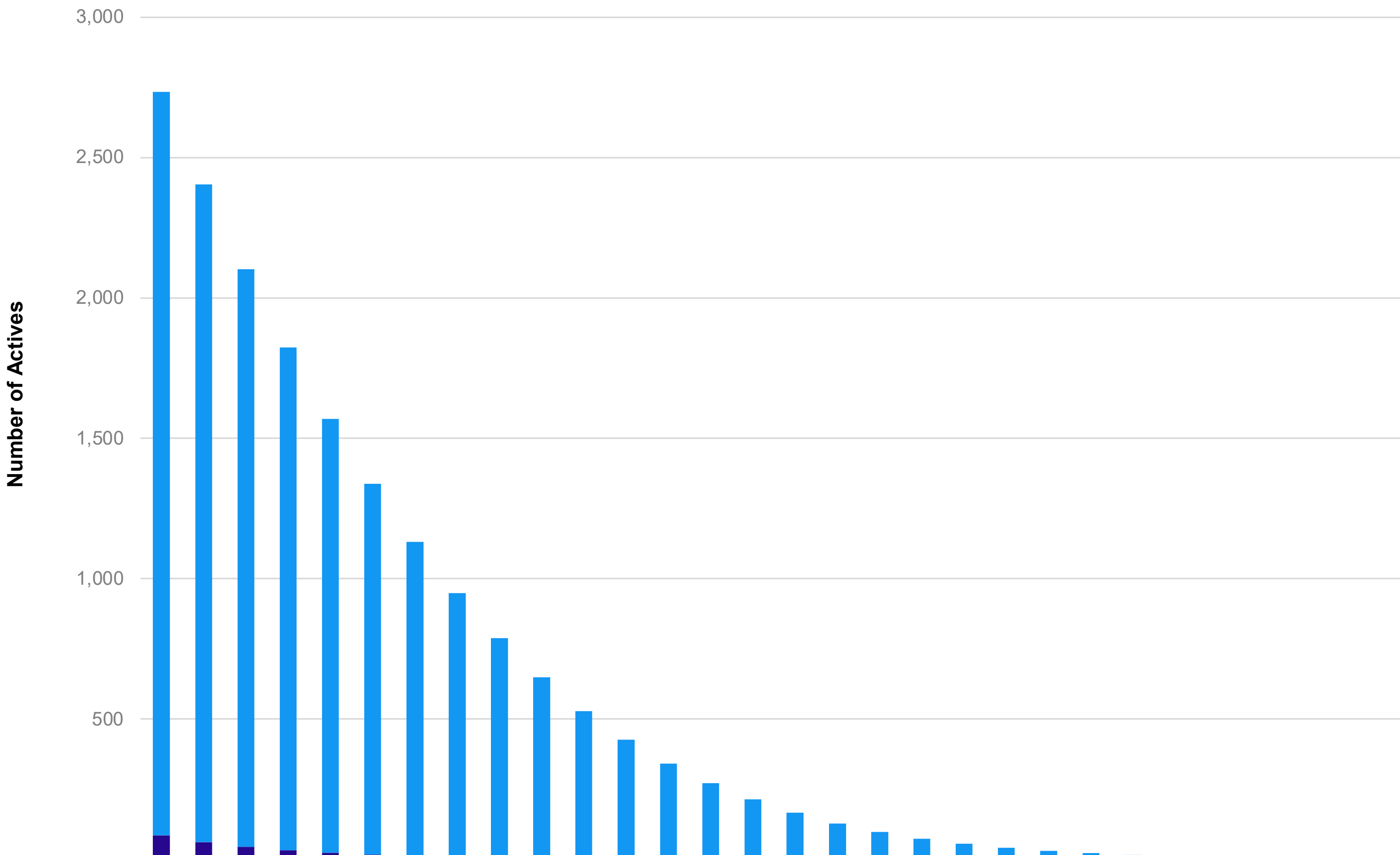
Section 3.1: Projection Assumptions and Methods

Key Assumptions

- 7.25% investment return (net of investment expenses) on the Fair Value of Assets in all future years.
- The Actuarial Value of Assets was 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 5. Experience after June 30, 2023 is assumed to match the assumptions.
- The actuarially calculated contribution rate using a two-year roll-forward approach is adopted each year.
- Projections assume a 0% increase in the total active member population. All new members are expected to enter the DCR plan.
- Contribution rates are determined as a percent of total DB and DCR payroll.
- The DCR contribution rate determined as of June 30, 2023 is assumed to remain constant in all future years.
- The active rehire assumption shown in Section 5 is assumed to grade to zero on a uniform basis over 20 years.
- The Normal Cost is increased by the administrative expenses shown in Section 5. For future years, the percent increase is assumed to remain constant.
- Board-adopted contribution rates for FY24 and FY25 are reflected.
- The healthcare Normal Cost is assumed to be contributed to the healthcare trust in FY26 and beyond.
- The projections in Section 3.6B reflect adjusted Employer/State Contribution Rates in FY26 and beyond due to a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.2: Membership Projection

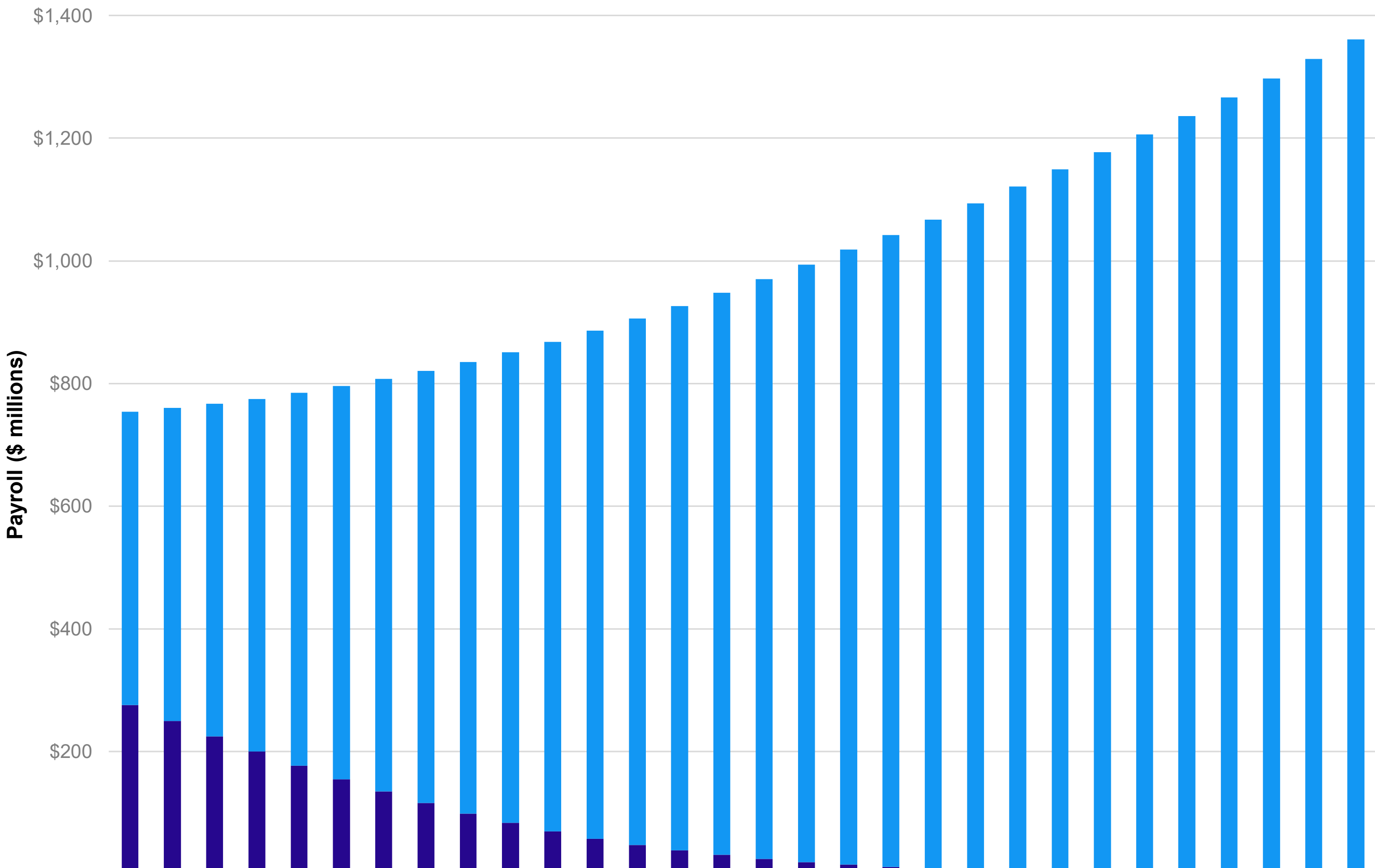
Projected Active Member Count



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Tier 2	2,649	2,343	2,058	1,791	1,545	1,321	1,119	940	782	644	525	425	340	270	213	166	128	98	74	56	41	30	22	16	11	8	6	4	2	2
Tier 1	85	61	45	33	24	17	12	9	6	4	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Fiscal Year Ending June 30

Projected DB and DCR Payroll

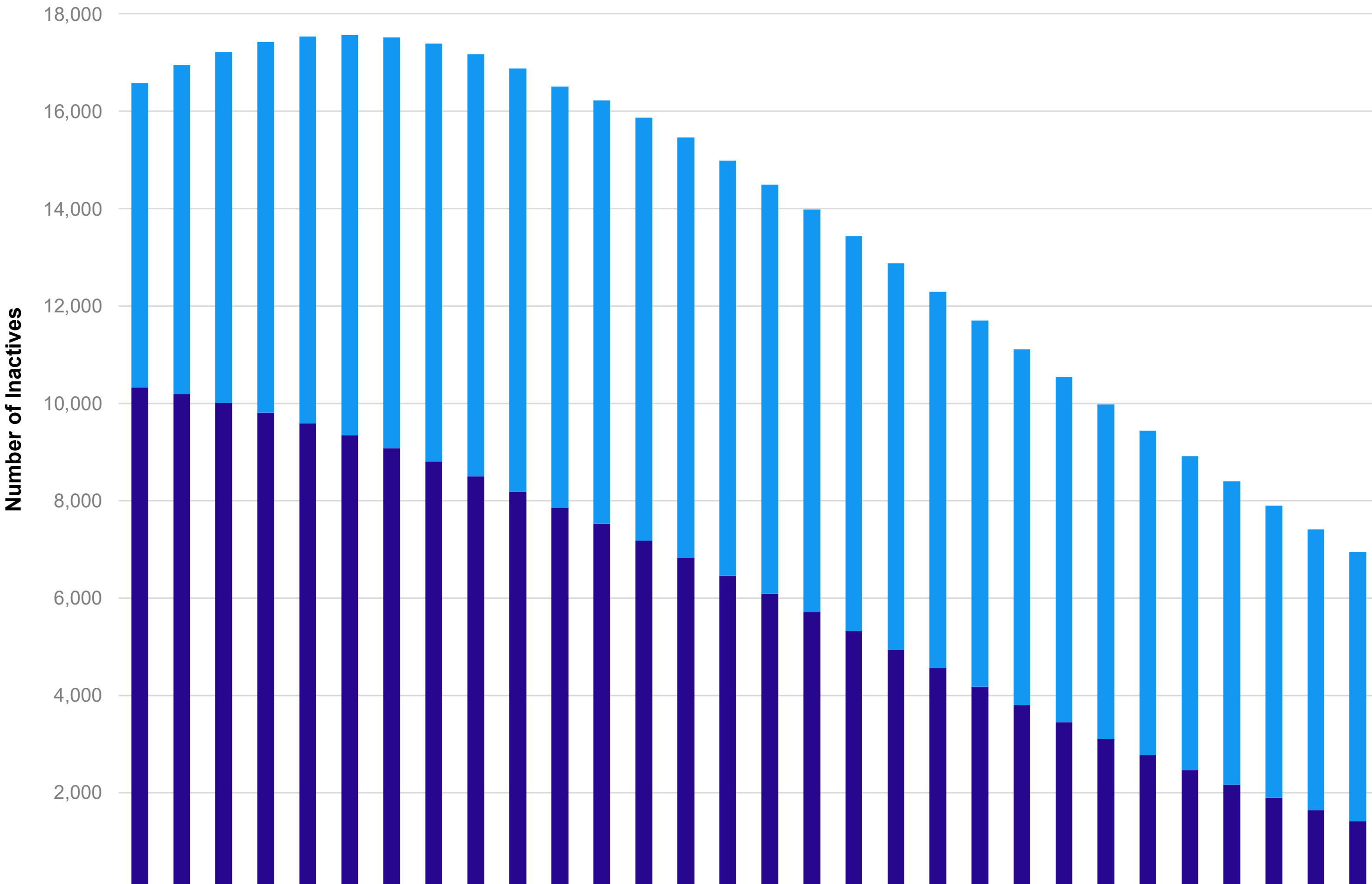


	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
DCR	478	510	542	575	608	641	673	705	736	767	798	828	858	887	916
DB	276	250	225	200	177	155	135	116	99	84	70	58	48	39	32

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DCR	945	974	1,002	1,030	1,058	1,087	1,116	1,145	1,174	1,204	1,234	1,265	1,296	1,328	1,361
DB	25	20	16	12	9	7	5	4	3	2	2	1	1	1	0

Fiscal Year Ending June 30

Projected Inactive Member Count



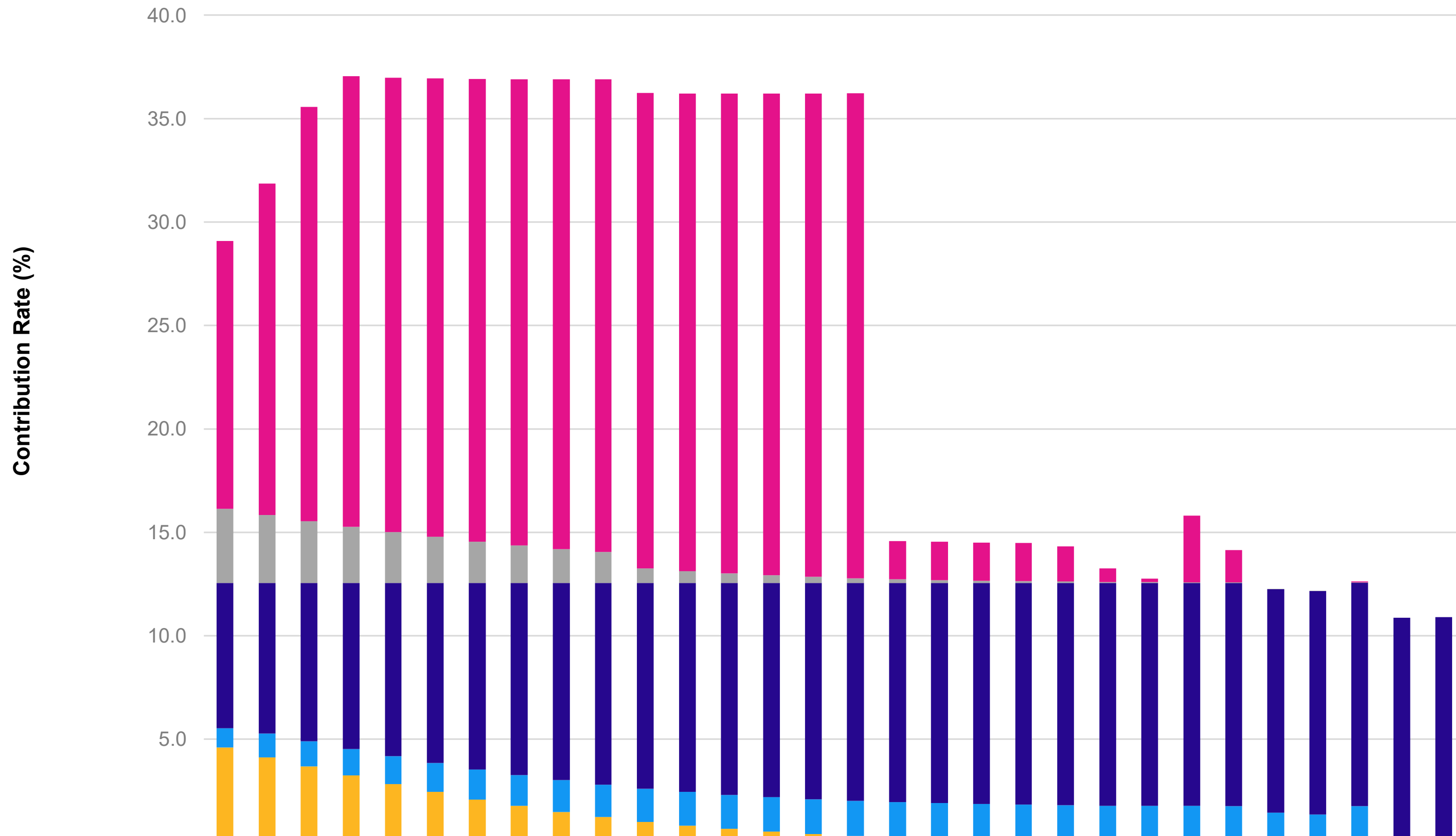
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Tier 2	6,250	6,759	7,211	7,610	7,948	8,224	8,436	8,590	8,671	8,695	8,656	8,699	8,686	8,636	8,527
Tier 1	10,328	10,183	10,008	9,807	9,586	9,344	9,080	8,799	8,499	8,182	7,849	7,521	7,180	6,825	6,460

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Tier 2	8,406	8,276	8,115	7,936	7,736	7,524	7,309	7,095	6,878	6,663	6,450	6,229	6,000	5,765	5,523
Tier 1	6,085	5,705	5,322	4,937	4,555	4,175	3,804	3,446	3,101	2,771	2,460	2,167	1,896	1,646	1,419

Fiscal Year Ending June 30

Section 3.3A: Projected Employer/State Contribution Rates

Based on Total DB and DCR Payroll



These projections reflect the DB contribution rates shown in Section 3.6A.

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
State Assistance	12.96	16.03	20.03	21.79	21.97	22.17	22.37	22.54	22.71	22.86	22.98	23.09	23.19	23.29	23.37
DB EE Contributions	3.57	3.27	2.98	2.70	2.45	2.22	1.99	1.80	1.64	1.49	0.70	0.57	0.46	0.36	0.29
DCR ER Contributions	7.03	7.29	7.65	8.03	8.38	8.71	9.02	9.29	9.54	9.76	9.95	10.11	10.25	10.36	10.46
DB ER Contributions on DCR Pay	0.93	1.14	1.23	1.29	1.35	1.40	1.45	1.49	1.53	1.56	1.60	1.63	1.65	1.67	1.68
DB ER Contributions on DB Pay	4.60	4.13	3.68	3.24	2.83	2.45	2.09	1.78	1.49	1.24	1.01	0.82	0.66	0.53	0.42

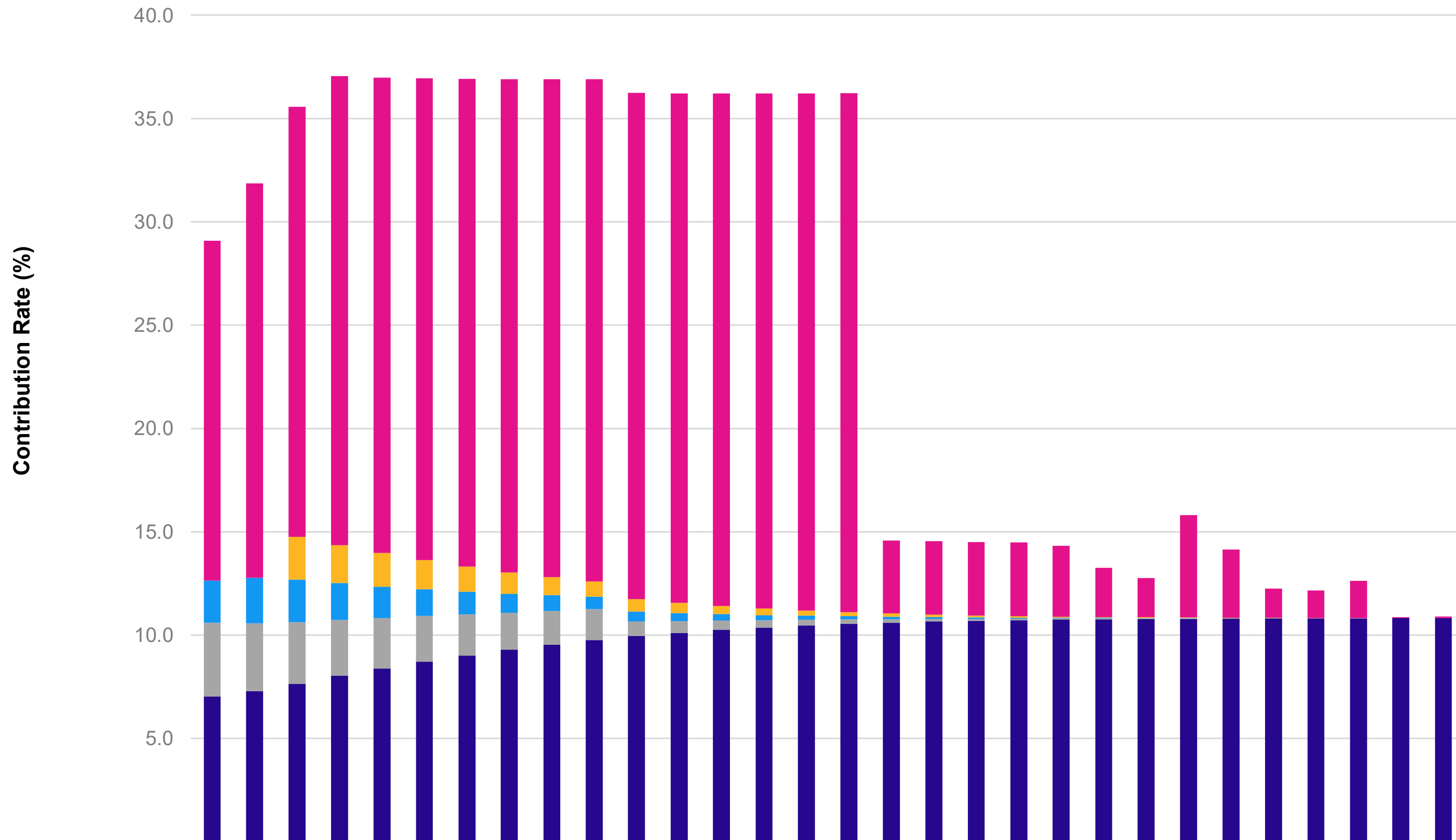
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
State Assistance	23.45	1.84	1.85	1.84	1.85	1.70	0.66	0.17	3.23	1.56	0.00	0.00	0.05	0.00	0.00
DB EE Contributions	0.22	0.17	0.13	0.10	0.08	0.06	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.00
DCR ER Contributions	10.54	10.60	10.65	10.69	10.72	10.75	10.77	10.78	10.79	10.80	10.81	10.81	10.81	10.82	10.82
DB ER Contributions on DCR Pay	1.69	1.71	1.72	1.72	1.73	1.73	1.73	1.74	1.74	1.74	1.42	1.34	1.75	0.05	0.08
DB ER Contributions on DB Pay	0.33	0.25	0.19	0.15	0.11	0.08	0.06	0.04	0.03	0.02	0.02	0.01	0.01	0.00	0.00

Fiscal Year Ending June 30

Section 3.3B: Components of Projected Total Contribution Rates

Based on Total DB and DCR Payroll

These projections reflect the DB contribution rates shown in Section 3.6A.

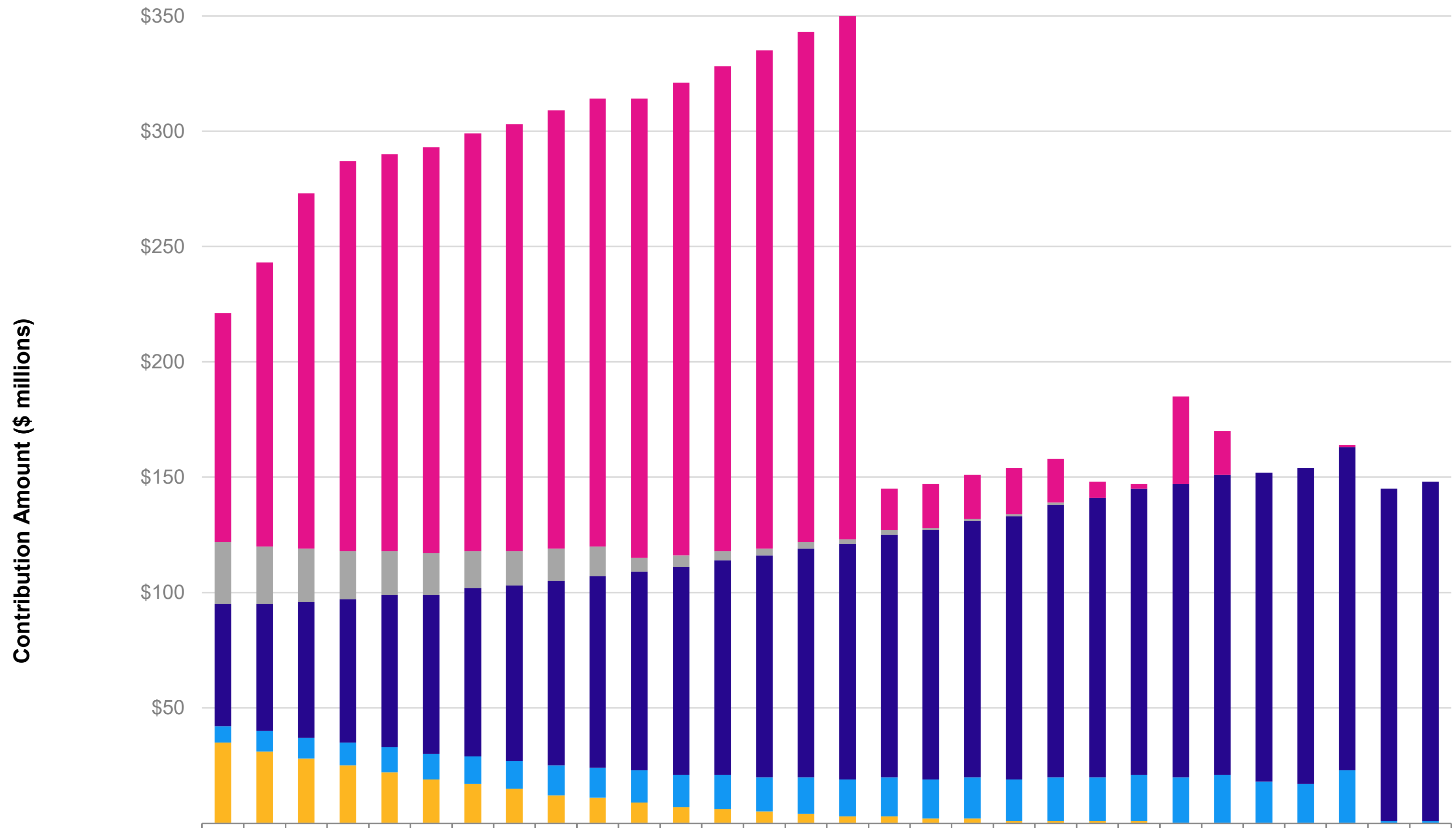


	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
DB Amortization	16.44	19.09	20.82	22.70	23.01	23.32	23.61	23.87	24.11	24.32	24.50	24.66	24.80	24.92	25.03
DB Healthcare Normal Cost	0.00	0.00	2.07	1.84	1.62	1.41	1.21	1.03	0.87	0.73	0.60	0.49	0.39	0.32	0.25
DB ER Pension Normal Cost	2.05	2.21	2.05	1.78	1.52	1.29	1.09	0.91	0.75	0.61	0.49	0.39	0.31	0.25	0.19
DB EE Pension Normal Cost	3.57	3.27	2.98	2.70	2.45	2.22	1.99	1.80	1.64	1.49	0.70	0.57	0.46	0.36	0.29
DCR ER Contribution	7.03	7.29	7.65	8.03	8.38	8.71	9.02	9.29	9.54	9.76	9.95	10.11	10.25	10.36	10.46

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DB Amortization	25.12	3.53	3.55	3.56	3.58	3.43	2.38	1.90	4.96	3.30	1.42	1.34	1.81	0.04	0.08
DB Healthcare Normal Cost	0.20	0.15	0.12	0.09	0.07	0.05	0.04	0.03	0.02	0.01	0.01	0.01	0.00	0.00	0.00
DB ER Pension Normal Cost	0.15	0.12	0.09	0.06	0.04	0.03	0.03	0.02	0.02	0.01	0.01	0.00	0.00	0.01	0.00
DB EE Pension Normal Cost	0.22	0.17	0.13	0.10	0.08	0.06	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.00	0.00
DCR ER Contribution	10.54	10.60	10.65	10.69	10.72	10.75	10.77	10.78	10.79	10.80	10.81	10.81	10.81	10.82	10.82

Fiscal Year Ending June 30

Section 3.4A: Projected Employer/State Contribution Amounts



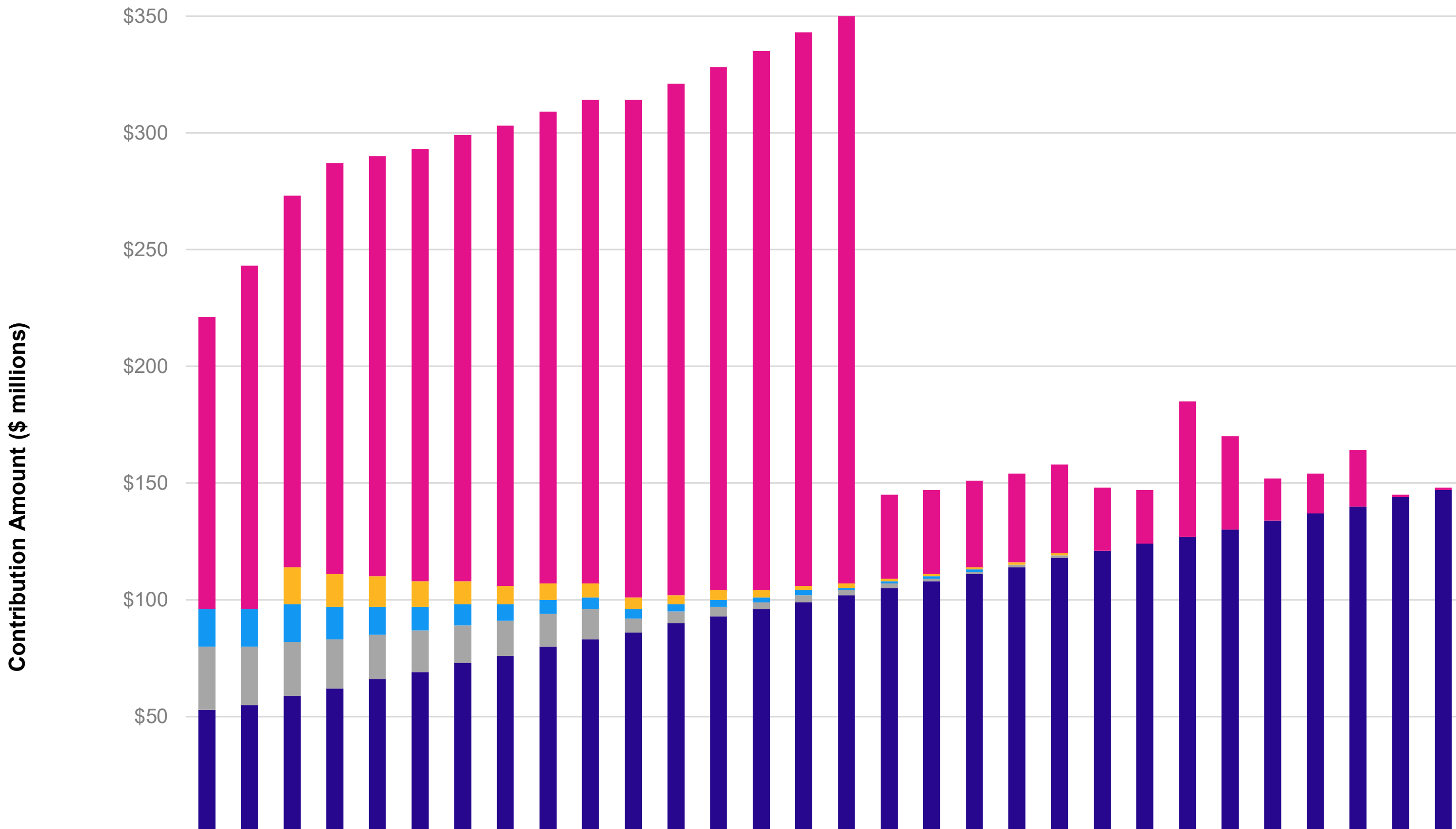
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
State Assistance	99	123	154	169	172	176	181	185	190	194	199	205	210	216	221
DB EE Contributions	27	25	23	21	19	18	16	15	14	13	6	5	4	3	3
DCR ER Contributions	53	55	59	62	66	69	73	76	80	83	86	90	93	96	99
DB ER Contributions on DCR Pay	7	9	9	10	11	11	12	12	13	13	14	14	15	15	16
DB ER Contributions on DB Pay	35	31	28	25	22	19	17	15	12	11	9	7	6	5	4

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
State Assistance	227	18	19	19	20	19	7	2	38	19	0	0	1	0	0
DB EE Contributions	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0
DCR ER Contributions	102	105	108	111	114	118	121	124	127	130	134	137	140	144	147
DB ER Contributions on DCR Pay	16	17	17	18	18	19	19	20	20	21	18	17	23	1	1
DB ER Contributions on DB Pay	3	3	2	2	1	1	1	1	0	0	0	0	0	0	0

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.4B: Components of Projected Total Contribution Amounts



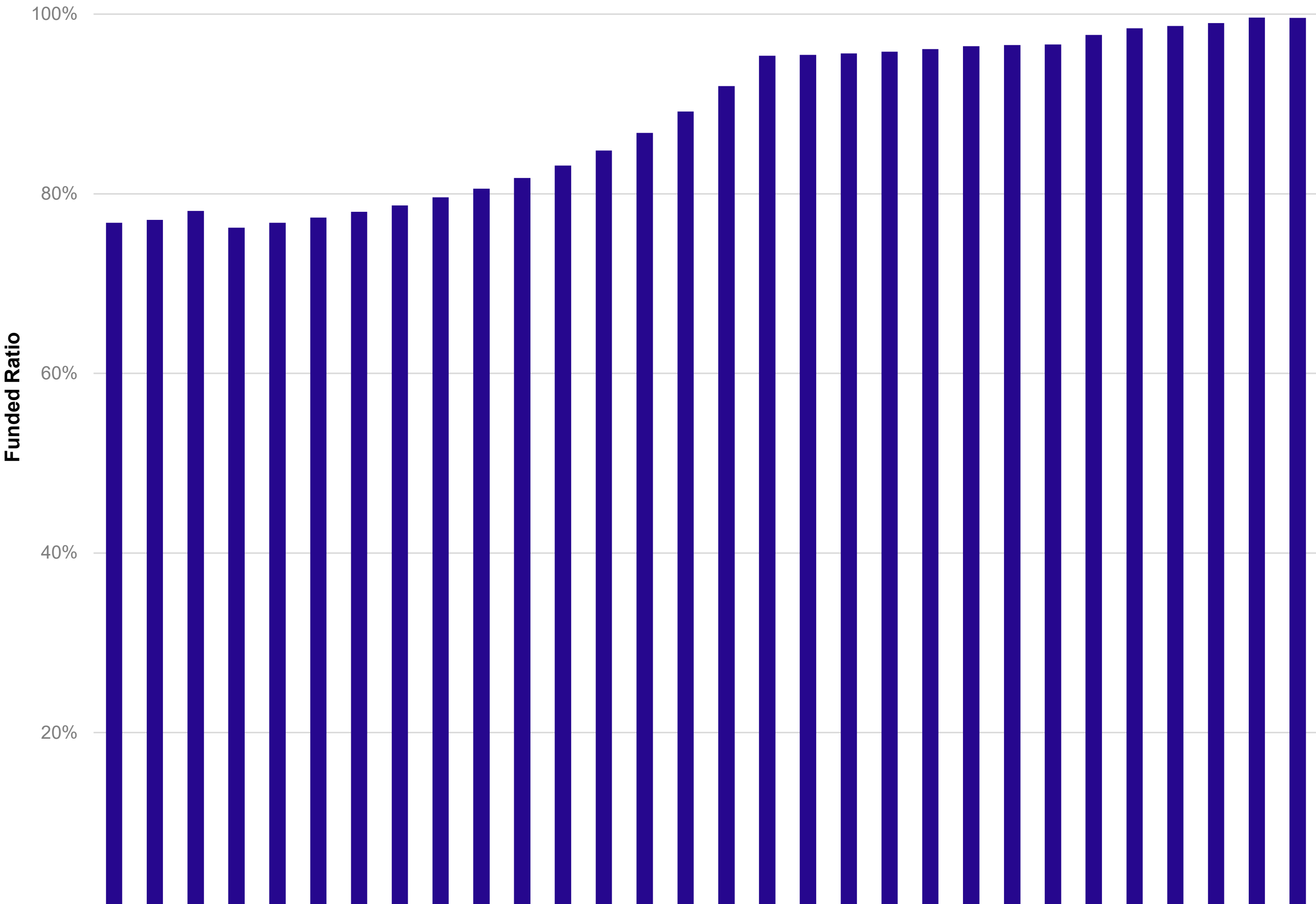
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
DB Amortization	125	147	159	176	180	185	191	197	202	207	213	219	224	231	237	243	36	36	37	38	38	27	23	58	40	18	17	24	1	1
DB Healthcare Normal Cost	0	0	16	14	13	11	10	8	7	6	5	4	4	3	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0
DB ER Pension Normal Cost	16	16	16	14	12	10	9	7	6	5	4	3	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
DB EE Pension Normal Cost	27	25	23	21	19	18	16	15	14	13	6	5	4	3	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0
DCR ER Contribution	53	55	59	62	66	69	73	76	80	83	86	90	93	96	99	102	105	108	111	114	118	121	124	127	130	134	137	140	144	147

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.5A: Projection of Funded Ratios

Pension



	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Funded Ratio	77%	77%	78%	76%	77%	77%	78%	79%	80%	81%	82%	83%	85%	87%	89%

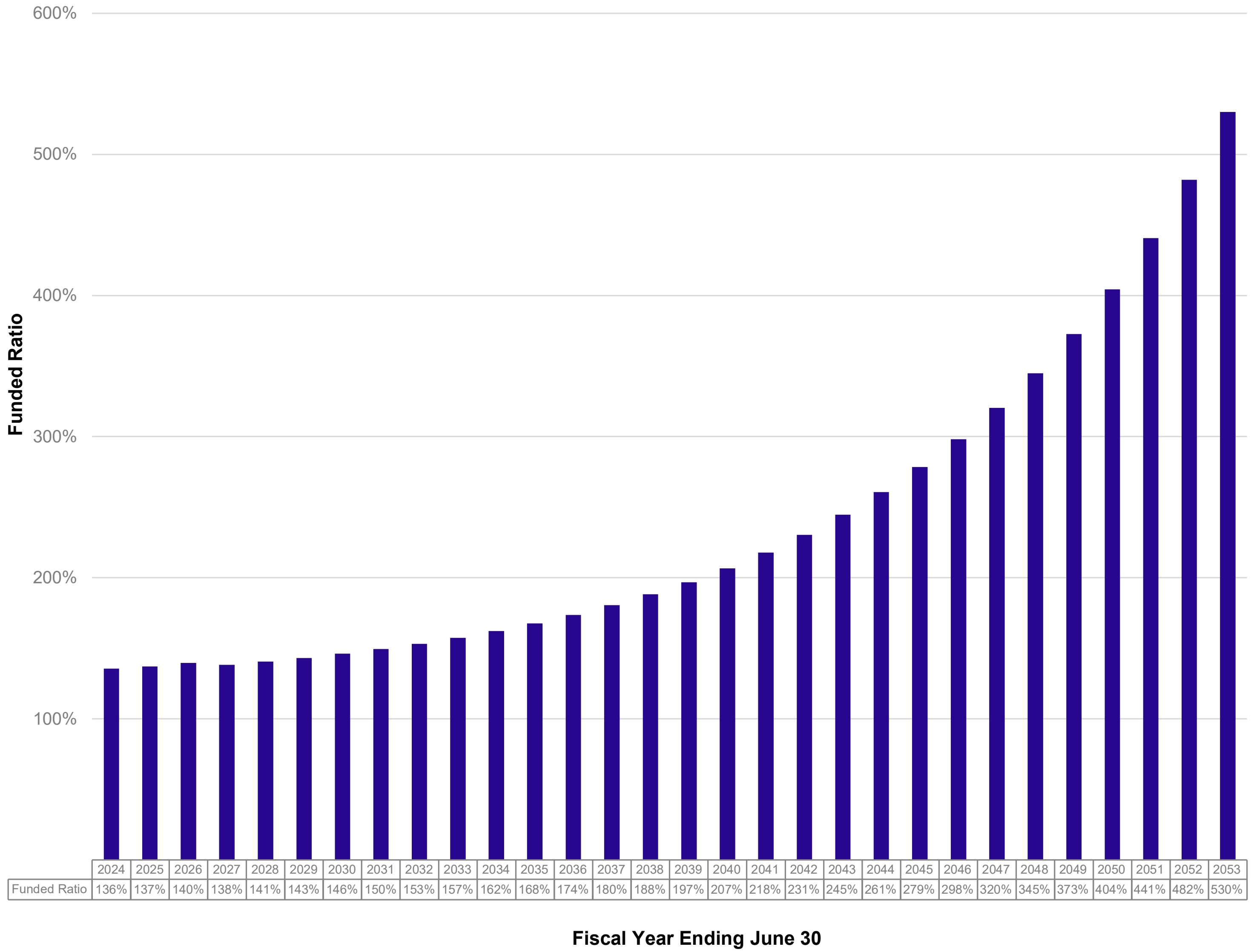
	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053
Funded Ratio	92%	95%	95%	96%	96%	96%	96%	97%	97%	98%	98%	99%	99%	100%	100%

Fiscal Year Ending June 30

These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.5B: Projection of Funded Ratios

Healthcare



These projections reflect the DB contribution rates shown in Section 3.6A.

Section 3.6A: Table of Projected Actuarial Results ($'s in 000's)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)				Cash Flow Amounts during Following 12 Months									Deferred Asset Gain / (Loss)	
	Pension		Healthcare			Actuarial Contrib. Rates			DB Contributions						
	Actuarial Assets	Accrued Liability	Actuarial Assets	Accrued Liability	Total Salaries	DB	DCR	Total	Employer	State Assistance	Employee	Total	Benefit Payments	Pension	Healthcare
2024	$ 6,171,460	$ 8,036,685	$ 3,547,973	$ 2,617,821	$ 754,274	18.49%	7.03%	25.52%	$ 41,711	$ 98,766	$ 26,892	$ 167,369	$ 738,921	$ (102,698)	$ (58,100)
2025	6,205,601	8,050,410	3,658,153	2,667,461	759,599	21.30%	7.29%	28.59%	40,031	123,358	24,840	188,229	763,818	(169,819)	(93,296)
2026	6,282,612	8,044,085	3,785,254	2,710,529	767,012	24.94%	7.65%	32.59%	37,660	153,633	22,819	214,112	787,516	3,184	2,537
2027	6,115,456	8,020,478	3,796,331	2,746,843	775,550	26.32%	8.03%	34.35%	35,132	168,992	20,948	225,072	809,797	0	0
2028	6,123,764	7,973,923	3,903,769	2,775,950	785,088	26.15%	8.38%	34.53%	32,816	172,484	19,218	224,518	831,749	0	0
2029	6,116,868	7,906,862	4,005,673	2,796,486	795,759	26.02%	8.71%	34.73%	30,637	176,420	17,630	224,687	852,568	0	0
2030	6,099,680	7,820,036	4,103,791	2,807,285	807,592	25.91%	9.02%	34.93%	28,589	180,658	16,104	225,351	871,344	0	0
2031	6,073,460	7,713,889	4,198,468	2,808,296	820,527	25.81%	9.29%	35.10%	26,831	184,947	14,799	226,577	886,978	0	0
2032	6,040,120	7,589,525	4,290,740	2,800,086	834,912	25.73%	9.54%	35.27%	25,215	189,609	13,724	228,548	900,816	0	0
2033	6,001,299	7,447,489	4,381,017	2,782,539	850,629	25.66%	9.76%	35.42%	23,818	194,454	12,712	230,984	912,590	0	0
2034	5,959,077	7,288,991	4,469,345	2,755,147	867,613	25.59%	9.95%	35.54%	22,645	199,377	6,073	228,095	913,945	0	0
2035	5,916,428	7,115,653	4,557,714	2,719,396	886,047	25.54%	10.11%	35.65%	21,709	204,588	5,050	231,347	917,282	0	0
2036	5,875,894	6,928,550	4,647,806	2,676,333	905,483	25.50%	10.25%	35.75%	20,916	209,982	4,165	235,063	917,563	0	0
2037	5,840,236	6,729,140	4,740,793	2,626,547	925,959	25.49%	10.36%	35.85%	20,371	215,656	3,333	239,360	914,755	0	0
2038	5,812,393	6,519,008	4,838,126	2,570,648	947,505	25.47%	10.46%	35.93%	19,898	221,432	2,748	244,078	908,598	0	0
2039	5,795,297	6,299,502	4,941,665	2,509,870	970,065	25.47%	10.54%	36.01%	19,595	227,480	2,134	249,209	900,331	0	0
2040	5,792,298	6,072,445	5,051,902	2,443,822	993,529	3.80%	10.60%	14.40%	19,473	18,281	1,689	39,443	889,806	0	0
2041	5,575,849	5,839,363	5,169,705	2,372,611	1,017,314	3.76%	10.65%	14.41%	19,431	18,820	1,323	39,574	875,293	0	0
2042	5,357,020	5,601,596	5,298,252	2,298,375	1,042,083	3.71%	10.69%	14.40%	19,487	19,174	1,042	39,703	857,752	0	0
2043	5,137,409	5,360,701	5,439,641	2,222,294	1,067,612	3.69%	10.72%	14.41%	19,644	19,751	854	40,249	836,131	0	0
2044	4,918,813	5,118,063	5,597,560	2,146,950	1,094,097	3.51%	10.75%	14.26%	19,803	18,600	656	39,059	812,897	0	0
2045	4,700,667	4,874,858	5,773,611	2,072,852	1,121,264	2.45%	10.77%	13.22%	20,071	7,400	449	27,920	787,186	0	0
2046	4,473,415	4,632,315	5,970,568	2,001,483	1,148,946	1.95%	10.78%	12.73%	20,452	1,953	345	22,750	761,687	0	0
2047	4,243,721	4,391,467	6,188,792	1,931,925	1,177,192	5.00%	10.79%	15.79%	20,836	38,023	235	59,094	736,240	0	0
2048	4,056,672	4,153,215	6,429,027	1,863,543	1,206,103	3.32%	10.80%	14.12%	21,228	18,815	241	40,284	711,989	0	0
2049	3,856,785	3,918,364	6,691,046	1,794,620	1,235,749	1.44%	10.81%	12.25%	17,795	0	124	17,919	687,669	0	0
2050	3,639,768	3,687,616	6,976,188	1,724,775	1,266,055	1.35%	10.81%	12.16%	17,092	0	127	17,219	663,746	0	0
2051	3,427,743	3,461,523	7,285,483	1,653,304	1,296,847	1.80%	10.81%	12.61%	22,755	648	130	23,533	639,329	0	0
2052	3,228,524	3,240,534	7,621,025	1,580,515	1,328,479	0.05%	10.82%	10.87%	705	0	0	705	614,893	0	0
2053	3,012,759	3,025,028	7,984,786	1,506,339	1,361,052	0.08%	10.82%	10.90%	1,116	0	0	1,116	590,414	0	0
								Total	**$ 687,462**	**$ 3,083,301**	**$ 220,404**	**$ 3,991,167**			

The contribution rates, contribution amounts, and benefit payments are determined separately for Pension and Healthcare. They are aggregated solely for purposes of display in this exhibit.

Section 3.6A: Table of Projected Actuarial Results ($'s in 000's) (continued)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)			
	Funded Ratio		Unfunded Liability / (Surplus)	
	Pension	Healthcare	Pension	Healthcare
2024	77%	136%	$ 1,865,225	$ (930,152)
2025	77%	137%	1,844,809	(990,692)
2026	78%	140%	1,761,473	(1,074,725)
2027	76%	138%	1,905,022	(1,049,488)
2028	77%	141%	1,850,159	(1,127,819)
2029	77%	143%	1,789,994	(1,209,187)
2030	78%	146%	1,720,356	(1,296,506)
2031	79%	150%	1,640,429	(1,390,172)
2032	80%	153%	1,549,405	(1,490,654)
2033	81%	157%	1,446,190	(1,598,478)
2034	82%	162%	1,329,914	(1,714,198)
2035	83%	168%	1,199,225	(1,838,318)
2036	85%	174%	1,052,656	(1,971,473)
2037	87%	181%	888,904	(2,114,246)
2038	89%	188%	706,615	(2,267,478)
2039	92%	197%	504,205	(2,431,795)
2040	95%	207%	280,147	(2,608,080)
2041	96%	218%	263,514	(2,797,094)
2042	96%	231%	244,576	(2,999,877)
2043	96%	245%	223,292	(3,217,347)
2044	96%	261%	199,250	(3,450,610)
2045	96%	279%	174,191	(3,700,759)
2046	97%	298%	158,900	(3,969,085)
2047	97%	320%	147,746	(4,256,867)
2048	98%	345%	96,543	(4,565,484)
2049	98%	373%	61,579	(4,896,426)
2050	99%	405%	47,848	(5,251,413)
2051	99%	441%	33,780	(5,632,179)
2052	100%	482%	12,010	(6,040,510)
2053	100%	530%	12,269	(6,478,447)

Section 3.6B: Table of Projected Actuarial Results ($'s in 000's)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)				Cash Flow Amounts during Following 12 Months									Deferred Asset Gain / (Loss)	
	Pension		Healthcare			Actuarial Contrib. Rates			DB Contributions						
	Actuarial Assets	Accrued Liability	Actuarial Assets	Accrued Liability	Total Salaries	DB	DCR	Total	Employer	State Assistance	Employee	Total	Benefit Payments	Pension	Healthcare
2024	$ 6,171,460	$ 8,036,685	$ 3,547,973	$ 2,617,821	$ 754,274	18.49%	7.03%	25.52%	$ 41,711	$ 98,766	$ 26,892	$ 167,369	$ 738,921	$ (102,698)	$ (58,100)
2025	6,205,601	8,050,410	3,658,153	2,667,461	759,599	21.30%	7.29%	28.59%	40,031	123,358	24,840	188,229	763,818	(169,819)	(93,296)
2026	6,282,612	8,044,085	3,785,254	2,710,529	767,012	25.93%	7.65%	33.58%	37,661	155,703	22,819	216,183	787,516	3,184	2,537
2027	6,117,041	8,020,478	3,796,967	2,746,843	775,550	27.33%	8.03%	35.36%	35,132	170,776	20,948	226,856	809,797	0	0
2028	6,126,815	7,973,923	3,905,014	2,775,950	785,088	27.12%	8.38%	35.50%	32,817	173,897	19,218	225,932	831,749	0	0
2029	6,121,249	7,906,862	4,007,415	2,796,486	795,759	26.97%	8.71%	35.68%	30,637	177,613	17,630	225,880	852,568	0	0
2030	6,105,246	7,820,036	4,106,071	2,807,285	807,592	26.83%	9.02%	35.85%	28,589	181,627	16,104	226,320	871,344	0	0
2031	6,080,134	7,713,889	4,201,248	2,808,296	820,527	26.73%	9.29%	36.02%	26,832	185,849	14,799	227,480	886,978	0	0
2032	6,047,906	7,589,525	4,294,063	2,800,086	834,912	26.61%	9.54%	36.15%	25,214	190,193	13,724	229,131	900,816	0	0
2033	6,010,016	7,447,489	4,384,840	2,782,539	850,629	26.53%	9.76%	36.29%	23,818	194,879	12,712	231,409	912,590	0	0
2034	5,968,706	7,288,991	4,473,621	2,755,147	867,613	26.45%	9.95%	36.40%	22,644	199,725	6,073	228,442	913,945	0	0
2035	5,926,948	7,115,653	4,562,479	2,719,396	886,047	26.39%	10.11%	36.50%	21,708	204,854	5,050	231,612	917,282	0	0
2036	5,887,278	6,928,550	4,653,100	2,676,333	905,483	26.33%	10.25%	36.58%	20,916	209,982	4,165	235,063	917,563	0	0
2037	5,852,258	6,729,140	4,746,658	2,626,547	925,959	26.31%	10.36%	36.67%	20,371	215,563	3,333	239,267	914,755	0	0
2038	5,825,090	6,519,008	4,844,512	2,570,648	947,505	26.28%	10.46%	36.74%	19,898	221,242	2,748	243,888	908,598	0	0
2039	5,808,612	6,299,502	4,948,612	2,509,870	970,065	26.26%	10.54%	36.80%	19,595	227,092	2,134	248,821	900,331	0	0
2040	5,806,162	6,072,445	5,059,353	2,443,822	993,529	3.83%	10.60%	14.43%	19,474	17,983	1,689	39,146	889,806	0	0
2041	5,590,296	5,839,363	5,177,800	2,372,611	1,017,314	3.77%	10.65%	14.42%	19,431	18,312	1,323	39,066	875,293	0	0
2042	5,371,970	5,601,596	5,306,934	2,298,375	1,042,083	3.72%	10.69%	14.41%	19,487	18,653	1,042	39,182	857,752	0	0
2043	5,152,885	5,360,701	5,448,953	2,222,294	1,067,612	3.69%	10.72%	14.41%	19,644	19,110	854	39,608	836,131	0	0
2044	4,934,724	5,118,063	5,607,547	2,146,950	1,094,097	3.49%	10.75%	14.24%	19,803	17,724	656	38,183	812,897	0	0
2045	4,716,793	4,874,858	5,784,322	2,072,852	1,121,264	2.39%	10.77%	13.16%	20,071	6,503	449	27,023	787,186	0	0
2046	4,489,748	4,632,315	5,982,056	2,001,483	1,148,946	1.87%	10.78%	12.65%	20,452	1,034	345	21,831	761,687	0	0
2047	4,260,252	4,391,467	6,201,113	1,931,925	1,177,192	5.03%	10.79%	15.82%	20,836	37,082	235	58,153	736,240	0	0
2048	4,073,393	4,153,215	6,442,241	1,863,543	1,206,103	3.28%	10.80%	14.08%	21,228	17,730	241	39,199	711,989	0	0
2049	3,873,555	3,918,364	6,705,218	1,794,620	1,235,749	1.33%	10.81%	12.14%	16,436	0	124	16,560	687,669	0	0
2050	3,656,346	3,687,616	6,991,387	1,724,775	1,266,055	1.23%	10.81%	12.04%	15,573	0	127	15,700	663,746	0	0
2051	3,443,950	3,461,523	7,301,784	1,653,304	1,296,847	1.70%	10.81%	12.51%	22,108	0	130	22,238	639,329	0	0
2052	3,244,539	3,240,534	7,638,510	1,580,515	1,328,479	0.01%	10.82%	10.83%	175	0	0	175	614,893	0	0
2053	3,029,385	3,025,028	8,003,539	1,506,339	1,361,052	0.00%	10.82%	10.82%	76	0	0	76	590,414	0	0
								Total	$ 682,368	$ 3,085,250	$ 220,404	$ 3,988,022			

The contribution rates, contribution amounts, and benefit payments are determined separately for Pension and Healthcare. They are aggregated solely for purposes of display in this exhibit.

These projections reflect a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.6B: Table of Projected Actuarial Results ($'s in 000's) (continued)

Fiscal Year End	Valuation Amounts on July 1 (Beginning of FY)			
	Funded Ratio		Unfunded Liability / (Surplus)	
	Pension	Healthcare	Pension	Healthcare
2024	77%	136%	$ 1,865,225	$ (930,152)
2025	77%	137%	1,844,809	(990,692)
2026	78%	140%	1,761,473	(1,074,725)
2027	76%	138%	1,903,437	(1,050,124)
2028	77%	141%	1,847,108	(1,129,064)
2029	77%	143%	1,785,613	(1,210,929)
2030	78%	146%	1,714,790	(1,298,786)
2031	79%	150%	1,633,755	(1,392,952)
2032	80%	153%	1,541,619	(1,493,977)
2033	81%	158%	1,437,473	(1,602,301)
2034	82%	162%	1,320,285	(1,718,474)
2035	83%	168%	1,188,705	(1,843,083)
2036	85%	174%	1,041,272	(1,976,767)
2037	87%	181%	876,882	(2,120,111)
2038	89%	189%	693,918	(2,273,864)
2039	92%	197%	490,890	(2,438,742)
2040	96%	207%	266,283	(2,615,531)
2041	96%	218%	249,067	(2,805,189)
2042	96%	231%	229,626	(3,008,559)
2043	96%	245%	207,816	(3,226,659)
2044	96%	261%	183,339	(3,460,597)
2045	97%	279%	158,065	(3,711,470)
2046	97%	299%	142,567	(3,980,573)
2047	97%	321%	131,215	(4,269,188)
2048	98%	346%	79,822	(4,578,698)
2049	99%	374%	44,809	(4,910,598)
2050	99%	405%	31,270	(5,266,612)
2051	100%	442%	17,573	(5,648,480)
2052	100%	483%	(4,005)	(6,057,995)
2053	100%	531%	(4,357)	(6,497,200)

These projections reflect a ½ year interest adjustment to account for the monthly timing of Employer Contributions.

Section 3.7: Projected Pension Benefit Recipients and Amounts ($'s in 000's)

Fiscal Year End	Pension Recipient Counts	Pension Benefit Amounts
2024	14,255	$ 585,684
2025	14,694	602,632
2026	15,066	618,570
2027	15,380	633,073
2028	15,623	646,407
2029	15,789	657,926
2030	15,873	667,955
2031	15,884	675,928
2032	15,810	682,450
2033	15,665	686,895
2034	15,442	682,887
2035	15,150	682,358
2036	14,792	679,737
2037	14,387	674,972
2038	13,918	668,363
2039	13,425	659,519
2040	12,919	648,831
2041	12,380	636,563
2042	11,825	622,590
2043	11,251	607,150
2044	10,669	590,534
2045	10,097	572,769
2046	9,538	554,112
2047	8,993	534,745
2048	8,468	514,818
2049	7,964	494,476
2050	7,474	473,907
2051	7,000	453,246
2052	6,542	432,585
2053	6,102	411,997
2054	5,680	391,536
2055	5,277	371,245
2056	4,893	351,154
2057	4,526	331,284
2058	4,177	311,651
2059	3,844	292,265
2060	3,528	273,138
2061	3,227	254,283

Fiscal Year End	Pension Recipient Counts	Pension Benefit Amounts
2062	2,941	$ 235,723
2063	2,669	217,484
2064	2,410	199,606
2065	2,165	182,141
2066	1,933	165,151
2067	1,716	148,709
2068	1,511	132,897
2069	1,321	117,799
2070	1,144	103,495
2071	983	90,066
2072	835	77,581
2073	703	66,096
2074	584	55,653
2075	481	46,277
2076	389	37,974
2077	312	30,728
2078	246	24,501
2079	191	19,238
2080	147	14,865
2081	110	11,297
2082	82	8,438
2083	60	6,194
2084	43	4,465
2085	30	3,165
2086	21	2,206
2087	15	1,514
2088	10	1,027
2089	7	691
2090	4	464
2091	4	313
2092	2	214
2093	2	150
2094	1	106
2095	1	77
2096	1	57
2097	0	0
2098	0	0
2099	0	0

Counts include retirees, disabilitants, and beneficiaries.

Section 4: Member Data

Section 4.1: Summary of Members Included

As of June 30	2019	2020	2021	2022	2023
Active Members					
1. Number	4,044	3,789	3,396	3,023	2,734[1]
2. Average Age	51.48	51.92	52.14	52.57	52.95
3. Average Credited Service	19.21	19.76	20.31	20.85	21.18
4. Average Entry Age	32.27	32.16	31.83	31.72	31.77
5. Average Annual Earnings	$ 88,879	$ 90,564	$ 94,143	$ 97,702	$ 98,820
6. Number Vested	4,044	3,789	3,396	3,023	2,734
7. Percent Who Are Vested	100.0%	100.0%	100.0%	100.0%	100.0%
Retirees, Disabilitants, and Beneficiaries					
1. Number	13,491	13,689	13,972	14,126	14,255
2. Average Age	71.30	71.85	72.26	72.60	73.10
3. Average Years Since Retirement	14.74	15.06	15.24	15.51	15.80
4. Average Monthly Pension Benefit					
a. Base	$ 2,303	$ 2,330	$ 2,363	$ 2,411	$ 2,445
b. COLA[2]	126	126	125	123	122
c. PRPA[2]	518	519	491	561	692
d. Adjustment	0	0	(1)	0	(1)
e. Sick	67	68	70	72	74
f. Total	$ 3,014	$ 3,043	$ 3,048	$ 3,167	$ 3,332
Vested Terminations (vested at termination, not refunded contributions, and not commenced benefit)					
1. Number	812	764	727	729	763
2. Average Age	51.71	52.37	52.68	53.22	53.70
3. Average Monthly Pension Benefit	$ 1,534	$ 1,579	$ 1,635	$ 1,725	$ 1,967
Non-Vested Terminations (not vested at termination and not refunded contributions)					
1. Number	1,810	1,744	1,679	1,616	1,560
2. Average Account Balance	$ 21,612	$ 22,591	$ 23,388	$ 23,906	$ 24,693
Total Number of Members	**20,157**	**19,986**	**19,774**	**19,494**	**19,312**

[1] Includes 825 male active members and 1,909 female active members.

[2] 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, 2023	DB Tier 1	DB Tier 2	DB Total	DCR Tier 3	Grand Total
Active Members					
1. Number	85	2,649	2,734	5,877	8,611
2. Average Age	65.23	52.56	52.95	42.44	45.78
3. Average Credited Service	30.16	20.89	21.18	6.72	11.31
4. Average Entry Age	35.07	31.67	31.77	35.72	34.47
5. Annual Earnings					
a. Total	$ 8,775,277	$ 261,398,875	$ 270,174,152	$ 459,104,767	$ 729,278,919
b. Average	$ 103,239	$ 98,678	$ 98,820	$ 78,119	$ 84,692

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

As of June 30, 2023	Tier 1	Tier 2	Total
Retirees, Disabilitants, and Beneficiaries			
1. Number	10,104	4,151	14,255
2. Average Age	75.76	66.61	73.10
3. Average Years Since Retirement	19.47	6.85	15.80
4. Average Monthly Pension Benefit			
a. Base	$ 2,399	$ 2,557	$ 2,445
b. COLA	147	61	122
c. PRPA	888	215	692
d. Adjustment	(1)	0	(1)
e. Sick	71	83	74
f. Total	$ 3,504	$ 2,916	$ 3,332

Summary of Members Included

As of June 30, 2023	Active Members	Inactive Members: Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
Retiree Medical Participants						
1. Retiree Coverage Only	2,700	4,659	0	0	398	5,057
2. Retiree + Spouse	0	5,690	5,690	0	486	11,866
3. Retiree + Children / Dependents	0	119	0	130	0	249
4. Family	0	363	363	515	0	1,241
5. Total	2,700	10,831	6,053	645	884	18,413

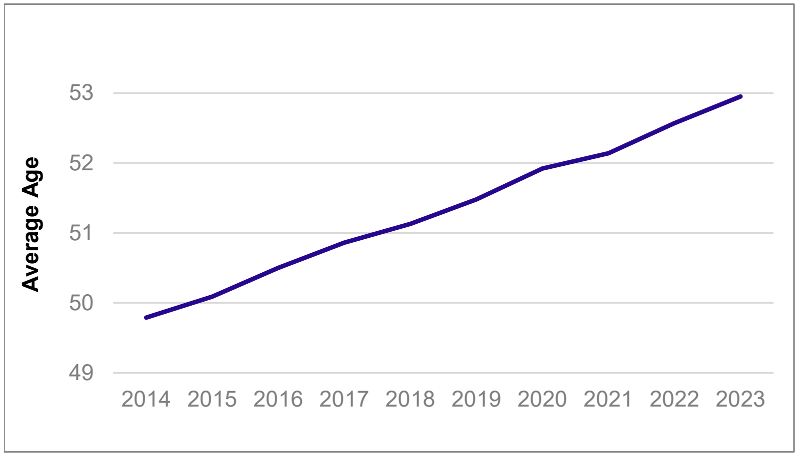
As of June 30, 2023	Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
Retiree Medical Participants					
1. Pre-Medicare	1,886	1,482	645	872	4,885
2. Medicare Part A & B	8,759	4,510	0	12	13,281
3. Medicare Part B Only	186	61	0	0	247
4. Total	10,831	6,053	645	884	18,413

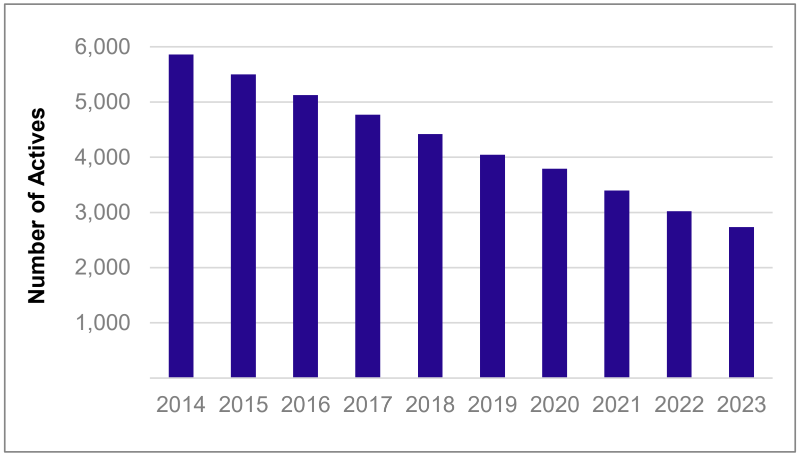
As of June 30, 2023	Retirees
Summary of Retiree Medical Data Received	
1. Retiree records on pension data	14,255
2. Remove duplicates on pension data	(565)
3. Valued in a different retiree healthcare plan[1]	(858)
4. Records without medical coverage	(2,100)
5. Medical only retirees	99
6. Total	10,831

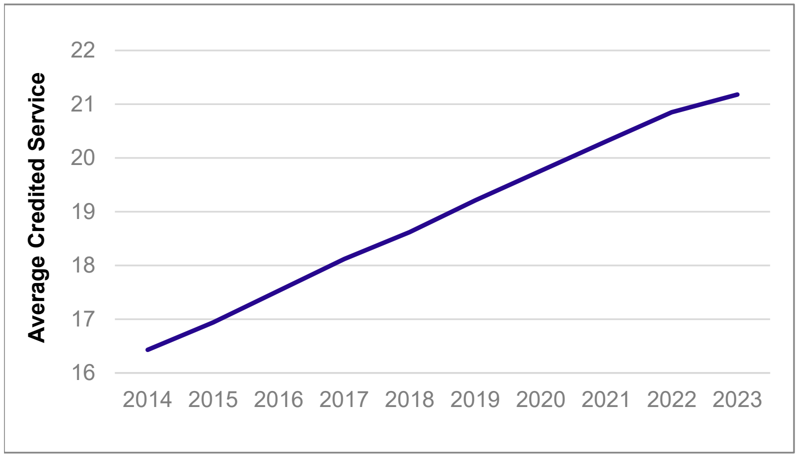
As of June 30	2019	2020	2021	2022	2023
Retiree Medical Retirees					
1. Number	11,914	12,019	12,138	12,325	10,831
2. Average Age	71.47	72.02	72.48	72.80	73.25

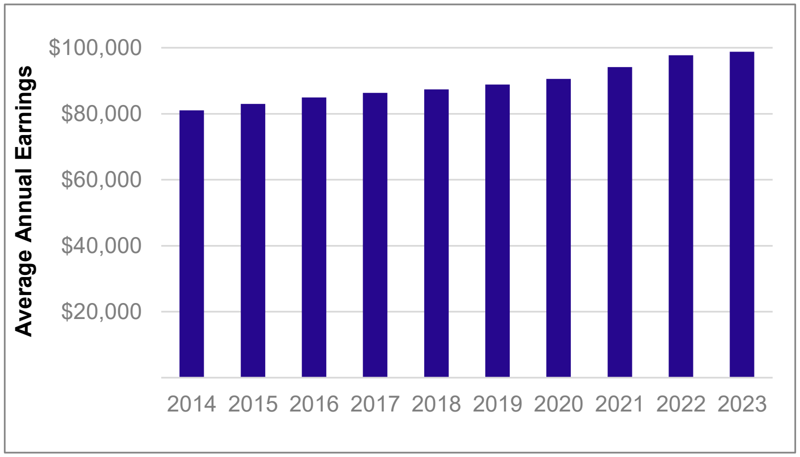
[1] Each member's retiree medical benefits are valued in the plan indicated in the data from Aetna

Summary of Members Included - Active Members at June 30









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

Section 4.2: Age and Service Distribution of Active Members

Annual Earnings by Age

Age	Number	Total Annual Earnings	Average Annual Earnings
0 - 19	0	$ 0	$ 0
20 - 24	0	0	0
25 - 29	0	0	0
30 - 34	0	0	0
35 - 39	0	0	0
40 - 44	303	28,798,180	95,043
45 - 49	669	66,021,366	98,687
50 - 54	849	84,676,272	99,736
55 - 59	520	51,635,441	99,299
60 - 64	233	22,994,280	98,688
65 - 69	106	10,575,452	99,768
70 - 74	30	3,034,033	101,134
75+	24	2,439,128	101,630
Total	**2,734**	**$270,174,152**	**$ 98,820**

Annual Earnings by Credited Service

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	1	$ 71,842	$ 71,842
1	1	57,187	57,187
2	2	144,378	72,189
3	5	396,396	79,279
4	3	205,049	68,350
0 - 4	**12**	**$ 874,852**	**$ 72,904**
5 - 9	90	6,896,419	76,627
10 - 14	166	14,635,986	88,169
15 - 19	756	72,540,549	95,953
20 - 24	1,103	111,593,788	101,173
25 - 29	470	48,971,999	104,196
30 - 34	105	11,137,485	106,071
35 - 39	24	2,600,567	108,357
40+	8	922,507	115,313
Total	**2,734**	**$270,174,152**	**$ 98,820**

Years of Credited Service by Age

	Years of Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0
40 - 44	2	12	30	194	65	0	0	0	0	303
45 - 49	3	18	57	222	329	40	0	0	0	669
50 - 54	3	32	40	183	371	210	10	0	0	849
55 - 59	2	18	21	92	210	130	44	3	0	520
60 - 64	1	6	11	35	81	61	31	7	0	233
65 - 69	0	3	6	22	27	22	13	10	3	106
70 - 74	1	1	0	4	12	5	5	0	2	30
75+	0	0	1	4	8	2	2	4	3	24
Total	**12**	**90**	**166**	**756**	**1,103**	**470**	**105**	**24**	**8**	**2,734**

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

Section 4.3: Member Data Reconciliation

Pension

	Active Members	Inactive Members: Due a Refund	Deferred Benefits	Retired Members	Disabled Members	Bene-ficiaries	Total
As of June 30, 2022	**3,023**	**1,616**	**729**	**12,570**	**16**	**1,540**	**19,494**
Vested Terminations	(164)	(1)	165	0	0	0	0
Non-Vested Terminations	0	0	0	0	0	0	0
Refund of Contributions	0	(48)	(1)	0	0	(1)	(50)
Disability Retirements	0	0	0	0	0	0	0
Age Retirements	(236)	(2)	(90)	334	(6)	0	0
Deaths With Beneficiary	(7)	(1)	0	(131)	0	139	0
Deaths Without Beneficiary	(1)	(5)	(1)	(149)	0	(55)	(211)
Data Corrections	0	0	0	0	0	(1)	(1)
Transfers In/Out	50	5	7	3	0	0	65
Rehires	65	(10)	(46)	(9)	0	0	0
Pick Ups*	4	6	0	0	0	5	15
Net Change	**(289)**	**(56)**	**34**	**48**	**(6)**	**87**	**(182)**
As of June 30, 2023	**2,734**	**1,560**	**763**	**12,618**	**10**	**1,627**	**19,312**

* Pickup beneficiaries are primarily new DROs.

Healthcare

		Inactive Members				
	Active Members	Retirees	Covered Spouses	Covered Children / Dependents	Deferred	Total Inactive Members
As of June 30, 2022	**2,997**	**12,325**	**4,314**	**636**	**966**	**18,241**
Vested Terminations	(92)	0	0	0	92	92
Non-Vested Terminations	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(1)	(1)
Disability Retirements	0	0	0	0	0	0
Age Retirements	(265)	265	174	114	0	553
Deferred Retirements	0	45	27	8	(45)	35
Retired without Medical Coverage	(46)	0	0	0	28	28
Deceased	(8)	(302)	(34)	0	(1)	(337)
New Beneficiaries	0	41	(41)	0	0	0
Added Retiree Medical Coverage	0	37	18	10	(24)	41
Added Dependent Coverage	0	0	133	33	0	166
Dropped Retiree Medical Coverage	0	(31)	(17)	(5)	13	(40)
Dropped Dependent Coverage	0	0	(68)	(149)	0	(217)
Change in Double Coverage	0	(1,546)	1,546	0	0	0
Removal of Spouse Duplicates	0	0	0	0	(107)	(107)
Rehires	65	(6)	(1)	(3)	(45)	(55)
Transfers In/Out	49	3	2	1	8	14
Net Change	**(297)**	**(1,494)**	**1,739**	**9**	**(82)**	**172**
As of June 30, 2023	**2,700**	**10,831**	**6,053**	**645**	**884**	**18,413**

Section 4.4: Schedule of Active Member Data

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
June 30, 2023	2,734	$ 270,174	$ 98,820	1.1%	57
June 30, 2022	3,023	295,354	97,702	3.8%	57
June 30, 2021	3,396	319,711	94,143	4.0%	56
June 30, 2020	3,789	343,146	90,564	1.9%	56
June 30, 2019	4,044	359,426	88,879	1.7%	56
June 30, 2018	4,418	386,016	87,374	1.2%	56
June 30, 2017	4,772	411,951	86,327	1.6%	57
June 30, 2016	5,123	435,222	84,954	2.4%	57
June 30, 2015	5,502	456,636	82,995	2.4%	58
June 30, 2014	5,861	474,873	81,023	2.1%	58

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

Section 4.5: Active Member Payroll Reconciliation

Payroll Field	Payroll Data (000's)
a) DRB actual reported salaries FY23 in employer list	$ 817,946
b) DRB actual reported salaries FY23 in valuation data	717,639
c) Annualized valuation data	729,279
d) Valuation payroll as of June 30, 2023	760,228
e) Rate payroll for FY24	754,274
f) Rate payroll for FY26	767,012

a) Actual reported salaries from DRB employer listing showing all payroll paid during FY23, including those who were not active as of June 30, 2023
b) Payroll from valuation data for people who are in active status as of June 30, 2023
c) Payroll from (b) annualized for both new entrants and part-timers
d) Payroll from (c) with one year of salary scale applied to estimate salaries payable for the upcoming year
e) Payroll from (d) with the part-timer annualization removed
f) Payroll from (e) with two years of assumed decrements and salary scale, and 0% population growth

Section 4.6: Summary of New Pension Benefit Recipients

During the Year Ending June 30	2019	2020	2021	2022	2023
Service					
1. Number	367	331	447	394	334
2. Average Age at Commencement	59.87	59.71	59.79	58.49	58.97
3. Average Monthly Pension Benefit	$ 3,562	$ 3,693	$ 3,593	$ 4,079	$ 4,092
Survivor (including surviving spouse and DROs)					
1. Number	96	127	145	135	144
2. Average Age at Commencement	74.36	74.16	76.80	73.76	75.00
3. Average Monthly Pension Benefit	$ 1,795	$ 1,903	$ 1,951	$ 2,071	$ 2,052
Disability					
1. Number	5	2	1	0	0
2. Average Age at Commencement	51.51	53.65	54.35	0.00	0.00
3. Average Monthly Pension Benefit	$ 4,182	$ 3,019	$ 4,886	$ 0	$ 0
Total					
1. Number	468	460	593	529	478
2. Average Age at Commencement	62.75	63.67	63.94	62.39	63.80
3. Average Monthly Pension Benefit	$ 3,206	$ 3,196	$ 3,194	$ 3,567	$ 3,477

Summary of New Pension Benefit Recipients

Average Pension Benefit Payments

	Years of Credited Service						
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+
Period 7/1/2022 – 6/30/2023:							
Average Monthly Pension	$ 191	$ 698	$ 1,431	$ 2,705	$ 4,018	$ 4,919	$ 6,375
Average Final Avg Salary	$ 32,298	$ 45,878	$ 69,642	$ 89,836	$ 99,759	$ 103,676	$ 107,194
Number of Recipients	1	9	26	46	118	89	45
Period 7/1/2021 – 6/30/2022:							
Average Monthly Pension	$ 1,073	$ 994	$ 1,828	$ 2,952	$ 3,984	$ 4,743	$ 6,936
Average Final Avg Salary	$ 56,500	$ 63,629	$ 79,736	$ 92,533	$ 98,208	$ 101,942	$ 112,372
Number of Recipients	5	19	15	69	139	101	46
Period 7/1/2020 – 6/30/2021:							
Average Monthly Pension	$ 451	$ 764	$ 1,509	$ 2,684	$ 3,625	$ 4,659	$ 6,090
Average Final Avg Salary	$ 43,545	$ 54,444	$ 71,764	$ 88,437	$ 94,909	$ 97,881	$ 98,847
Number of Recipients	8	24	33	83	142	112	46
Period 7/1/2019 – 6/30/2020:							
Average Monthly Pension	$ 243	$ 1,054	$ 1,647	$ 2,600	$ 3,616	$ 4,874	$ 6,772
Average Final Avg Salary	$ 35,203	$ 70,014	$ 76,621	$ 86,341	$ 91,619	$ 96,657	$ 107,454
Number of Recipients	8	19	26	72	90	78	40
Period 7/1/2018 – 6/30/2019:							
Average Monthly Pension	$ 334	$ 891	$ 1,540	$ 2,760	$ 3,567	$ 4,666	$ 6,777
Average Final Avg Salary	$ 21,317	$ 57,735	$ 72,728	$ 85,580	$ 92,422	$ 96,096	$ 104,880
Number of Recipients	4	23	39	87	93	85	41
Period 7/1/2017 – 6/30/2018:							
Average Monthly Pension	$ 204	$ 899	$ 1,583	$ 2,583	$ 3,422	$ 4,580	$ 6,083
Average Final Avg Salary	$ 34,164	$ 56,061	$ 75,433	$ 85,174	$ 90,449	$ 94,803	$ 102,076
Number of Recipients	5	21	61	85	109	130	57
Period 7/1/2016 – 6/30/2017:							
Average Monthly Pension	$ 426	$ 795	$ 1,626	$ 2,433	$ 3,549	$ 4,536	$ 6,351
Average Final Avg Salary	$ 37,851	$ 56,206	$ 75,706	$ 81,394	$ 91,313	$ 95,651	$ 101,423
Number of Recipients	10	22	60	75	100	64	48
Period 7/1/2015 – 6/30/2016:							
Average Monthly Pension	$ 245	$ 1,002	$ 1,535	$ 2,540	$ 3,445	$ 4,472	$ 6,168
Average Final Avg Salary	$ 33,030	$ 59,102	$ 74,725	$ 85,087	$ 89,590	$ 91,468	$ 98,446
Number of Recipients	11	31	82	69	105	74	54
Period 7/1/2014 – 6/30/2015:							
Average Monthly Pension	$ 349	$ 1,041	$ 1,342	$ 2,205	$ 3,267	$ 4,220	$ 5,900
Average Final Avg Salary	$ 30,580	$ 66,389	$ 66,444	$ 75,510	$ 88,520	$ 90,069	$ 96,693
Number of Recipients	11	33	70	67	137	125	94
Period 7/1/2013 – 6/30/2014:							
Average Monthly Pension	$ 235	$ 904	$ 1,435	$ 2,398	$ 3,016	$ 4,073	$ 7,485
Average Final Avg Salary	$ 32,410	$ 57,124	$ 63,001	$ 75,489	$ 84,962	$ 93,746	$ 111,694
Number of Recipients	8	31	31	28	22	18	12

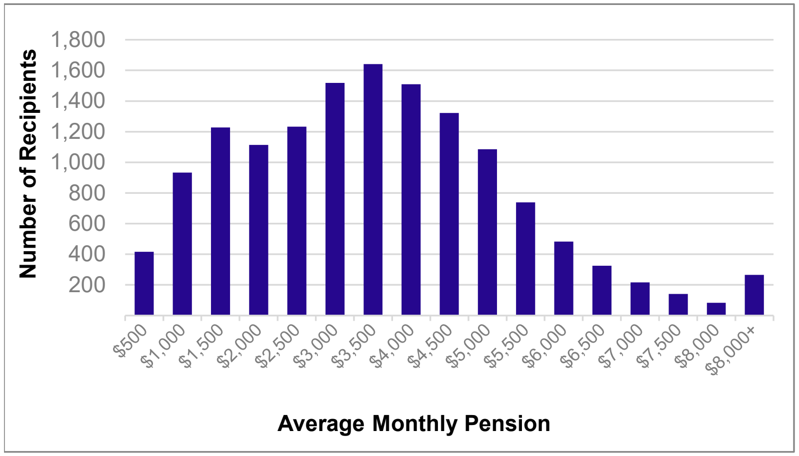
"Average Monthly Pension" includes postretirement pension adjustments and cost-of-living increases.

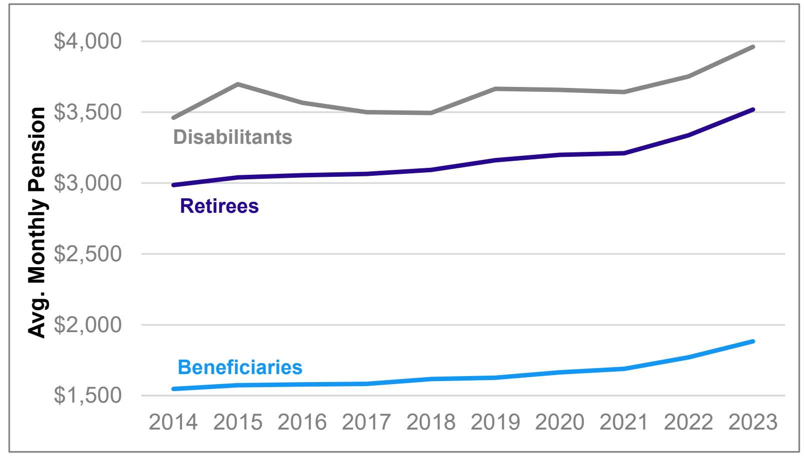
Beneficiaries are not included in the table above.

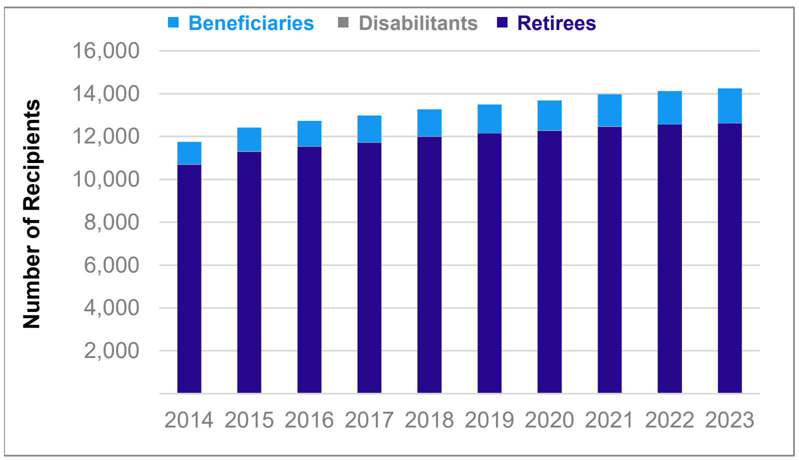
Section 4.7: Summary of All Pension Benefit Recipients

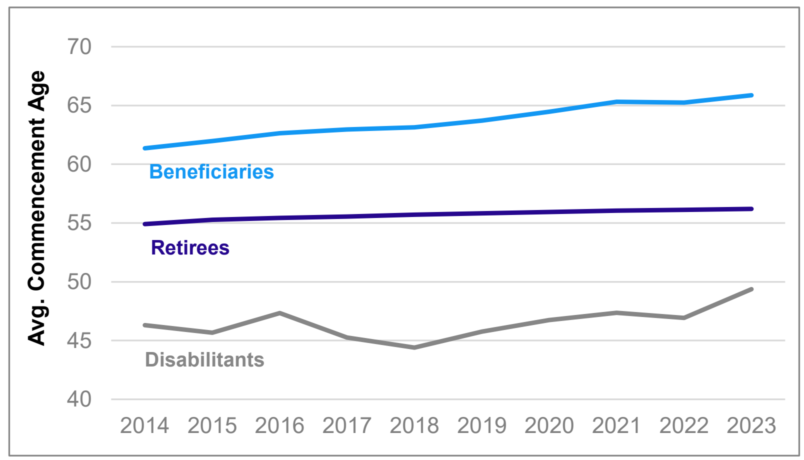
As of June 30	2019	2020	2021	2022	2023
Service					
1. Number, Fiscal Year Start	11,988	12,147	12,267	12,459	12,570
2. Net Change	159	120	192	111	48
3. Number, Fiscal Year End	12,147	12,267	12,459	12,570	12,618
4. Average Age at Commencement	55.82	55.93	56.05	56.12	56.20
5. Average Current Age	70.99	71.50	71.85	72.20	72.64
6. Average Monthly Pension Benefit	$ 3,161	$ 3,199	$ 3,210	$ 3,338	$ 3,519
Surviving Spouse (including DROs)					
1. Number, Fiscal Year Start	1,261	1,315	1,400	1,493	1,540
2. Net Change	54	85	93	47	87
3. Number, Fiscal Year End	1,315	1,400	1,493	1,540	1,627
4. Average Age at Commencement	63.73	64.49	65.32	65.24	65.87
5. Average Current Age	74.65	75.26	75.97	76.13	76.67
6. Average Monthly Pension Benefit	$ 1,629	$ 1,665	$ 1,688	$ 1,770	$ 1,883
Survivor (other than spouse)					
1. Number, Fiscal Year Start	3	3	2	0	0
2. Net Change	0	(1)	(2)	0	0
3. Number, Fiscal Year End	3	2	0	0	0
4. Average Age at Commencement	53.85	53.94	0.00	0.00	0.00
5. Average Current Age	61.65	61.56	0.00	0.00	0.00
6. Average Monthly Pension Benefit	$ 765	$ 705	$ 0	$ 0	$ 0
Disability					
1. Number, Fiscal Year Start	25	26	20	20	16
2. Net Change	1	(6)	0	(4)	(6)
3. Number, Fiscal Year End	26	20	20	16	10
4. Average Age at Commencement	45.75	46.74	47.37	46.92	49.37
5. Average Current Age	51.08	51.73	52.85	53.23	55.92
6. Average Monthly Pension Benefit	$ 3,666	$ 3,658	$ 3,643	$ 3,752	$ 3,962
Total					
1. Number, Fiscal Year Start	13,277	13,491	13,689	13,972	14,126
2. Net Change	214	198	283	154	129
3. Number, Fiscal Year End	13,491	13,689	13,972	14,126	14,255
4. Average Age at Commencement	56.56	56.79	57.02	57.09	57.30
5. Average Current Age	71.30	71.85	72.26	72.60	73.10
6. Average Monthly Pension Benefit	$ 3,014	$ 3,043	$ 3,048	$ 3,167	$ 3,332

Summary of All Pension Benefit Recipients









Summary of All Pension Benefit Recipients

Distribution of Annual Pension Benefits for Benefit Recipients

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	0	0	0
30 - 34	0	0	0
35 - 39	0	0	0
40 - 44	4	121,819	30,455
45 - 49	71	2,698,215	38,003
50 - 54	301	14,233,227	47,286
55 - 59	669	31,221,811	46,669
60 - 64	1,503	61,657,733	41,023
65 - 69	2,381	93,695,566	39,351
70 - 74	3,327	125,141,784	37,614
75+	5,999	241,298,719	40,223
Total	**14,255**	**$570,068,874**	**$ 39,991**

Annual Pension Benefit by Years Since Commenced

Years Since Comm.	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0	431	$ 17,182,334	$ 39,866
1	511	22,794,897	44,608
2	529	22,467,153	42,471
3	458	18,927,677	41,327
4	461	19,203,457	41,656
0 - 4	**2,390**	**$100,575,518**	**$ 42,082**
5 - 9	2,441	101,520,269	41,590
10 - 14	2,216	86,044,106	38,829
15 - 19	2,011	69,779,002	34,699
20 - 24	1,981	71,037,755	35,860
25 - 29	1,843	79,111,475	42,925
30 - 34	748	32,732,829	43,760
35 - 39	495	24,456,921	49,408
40+	130	4,810,999	37,008
Total	**14,255**	**$570,068,874**	**$ 39,991**

Years Since Commencement by Age

	Years Since Commencement									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
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	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0
40 - 44	3	1	0	0	0	0	0	0	0	4
45 - 49	64	7	0	0	0	0	0	0	0	71
50 - 54	251	45	3	1	0	1	0	0	0	301
55 - 59	398	197	62	11	1	0	0	0	0	669
60 - 64	716	439	209	116	19	3	1	0	0	1,503
65 - 69	360	852	609	340	176	42	1	0	1	2,381
70 - 74	222	534	848	803	581	312	24	2	1	3,327
75+	376	366	485	740	1,204	1,485	722	493	128	5,999
Total	**2,390**	**2,441**	**2,216**	**2,011**	**1,981**	**1,843**	**748**	**495**	**130**	**14,255**

Section 4.8: Pension Benefit Recipients by Type of Benefit and Option Elected

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected			
		1	2	3	1	2	3	4
$ 1 – 500	416	277	139	0	260	76	65	15
501 – 1,000	934	690	244	0	528	170	181	55
1,001 – 1,500	1,228	955	273	0	737	232	214	45
1,501 – 2,000	1,114	805	309	0	655	216	212	31
2,001 – 2,500	1,233	991	242	0	629	274	284	46
2,501 – 3,000	1,519	1,345	174	0	699	358	419	43
3,001 – 3,500	1,641	1,518	118	5	712	396	483	50
3,501 – 4,000	1,510	1,456	53	1	604	341	520	45
4,001 – 4,500	1,322	1,288	33	1	552	278	452	40
4,501 – 5,000	1,086	1,071	14	1	449	212	395	30
5,001 – 5,500	738	728	9	1	286	143	290	19
5,501 – 6,000	483	473	9	1	196	101	170	16
6,001 – 6,500	325	316	9	0	130	46	132	17
6,501 – 7,000	216	216	0	0	79	36	88	13
7,001 – 7,500	141	140	1	0	49	28	58	6
7,501 – 8,000	84	84	0	0	35	14	31	4
8,000+	265	265	0	0	87	48	116	14
Total	14,255	12,618	1,627	10	6,687	2,969	4,110	489

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

Section 4.9: Pension Benefit Recipients Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls at End of Year		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	No.[1]	Annual Pension Benefits[1]	No.[1]	Annual Pension Benefits[1]	No.	Annual Pension Benefits		
June 30, 2023	478	$ 19,944,072	349	$(13,224,262)	14,255	$ 570,068,874	6.2%	$ 39,991
June 30, 2022	529	22,643,316	375	(3,174,745)	14,126	536,900,540	5.1%	38,008
June 30, 2021	593	22,728,504	310	11,391,465	13,972	511,082,479	2.3%	36,579
June 30, 2020	460	17,641,920	262	5,527,983	13,689	499,745,440	2.5%	36,507
June 30, 2019	468	18,004,896	254	871,684	13,491	487,631,503	3.6%	36,145
June 30, 2018	555	21,924,986	261	6,926,129	13,277	470,498,291	3.3%	35,437
June 30, 2017	487	17,151,684	230	7,736,025	12,983	455,499,434	2.1%	35,084
June 30, 2016	530	18,364,581	222	6,144,109	12,726	446,083,775	2.8%	35,053
June 30, 2015	888	34,120,658	220	3,531,501	12,418	433,863,303	7.6%	34,938
June 30, 2014	226	5,964,256	181	(1,150,187)	11,750	403,274,146	1.8%	34,321

[1] Numbers are estimated, and include other internal transfers.

Section 5: Basis of the Actuarial Valuation

Section 5.1: Summary of Plan Provisions

Effective Date

July 1, 1955, with amendments through June 30, 2023. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under TRS before July 1, 1990 (Tier 1) are eligible for different benefits than members hired after June 30, 1990 (Tier 2). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006. The 2021 Alaska Supreme Court Metcalfe decision allows certain members the option of transferring from the DCR plan to the DB plan.

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 Teachers' 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 TRS funds.

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

Employers Included

Currently, there are 57 employers participating in TRS, including the State of Alaska, 53 school districts, and three other eligible organizations.

Membership

Membership in TRS is mandatory for the following employees hired before July 1, 2006:

- certificated full-time and part-time elementary and secondary teachers, certificated school nurses, and certificated employees in positions requiring teaching certificates;
- positions requiring a teaching certificate as a condition of employment in the Department of Education and Early Development and the Department of Labor and Workforce Development;
- University of Alaska full-time and part-time teachers, and full-time administrative employees in positions requiring academic standing if approved by the TRS administrator;
- certain full-time or part-time teachers of Alaska Native language or culture who have elected to be covered under TRS;
- members on approved sabbatical leave under AS 14.20.310;
- certain State legislators who have elected to be covered under TRS; and
- a teacher who has filed for worker's compensation benefits due to an on-the-job assault and who, as a result of the physical injury, is placed on leave without pay.

Employees participating in the University of Alaska's Optional Retirement Plan or other retirement plans funded by the State are not covered by TRS.

Employees who work half-time in TRS and Public Employees' Retirement System (PERS) simultaneously are eligible for half-time TRS and PERS 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.

The 2021 Alaska Supreme Court Metcalfe decision allows certain members the option of transferring from the DCR plan to the DB plan.

Credited Service

TRS members receive a year of membership credit if they work a minimum of 172 days during the school year (July 1 through June 30 of the following year). Fractional credit is determined based on the number of days worked. Part-time members who work at least 50% of full-time receive membership credit for each day in proportion to full-time service. Credit is granted for all Alaskan public school service.

Members may claim other types of service, including:

- Outside teaching service in out-of-state schools or Alaska private schools (not more than ten years may be claimed);
- Military service (not more than five years of military service or ten years of combined outside and military service may be claimed);
- Alaska Bureau of Indian Affairs (BIA) service;
- Retroactive Alaskan service that was not creditable at the time it occurred, but later became creditable because of legislative change;
- Unused sick leave credit after members retire; and
- Leave of absence without pay.

Except for retroactive Alaska service that occurred before July 1, 1955, and unused sick leave, contributions are required for all claimed service.

Members receiving TRS disability benefits continue to earn TRS credit while disabled.

Survivors who are receiving occupational death benefits continue to earn TRS service credit while occupational survivor benefits are being paid.

Employer Contributions

TRS 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. Effective June 30, 2018, each future year's unfunded service liability is separately amortized on a level percent of pay basis over 25 years.

Employer rates cannot be less than the normal cost rate.

Pursuant to AS14.25.070 effective July 1, 2008, each TRS employer will pay a simple uniform contribution rate of 12.56% of member payroll.

Additional State Contributions

Pursuant to AS14.25.085 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 of 12.56%, will be sufficient to pay the total contribution rate adopted by the Board.

Member Contributions

Mandatory Contributions

Members are required to contribute 8.65% of their base salaries. Members' contributions are deducted from gross salaries before federal income taxes are withheld.

Contributions for Claimed Service

Member contributions are also required for most of the claimed service described above.

1% Supplemental Contributions

Members who joined the system before July 1, 1982 and elected to participate in the supplemental contributions provision are required to contribute an additional 1% of their salaries. Supplemental contributions are deducted from gross salaries after federal income taxes are withheld. Under the supplemental provision, an eligible spouse or dependent child will receive a survivor's allowance or spouse's pension if the member dies (see below). Supplemental contributions are only refundable upon death (see below).

Interest

Members' contributions earn 4.5% interest, compounded annually on June 30.

Refund of Contributions

Terminated members may receive refunds of their member contribution accounts which includes their mandatory 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 TRS service may be reinstated upon reemployment in TRS. Interest accrues on refunds until paid in full or members retire.

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, 1990 (Tier 1), and age 60 or early retirement at age 55 if they were hired on or after July 1, 1990 (Tier 2). Additionally, they must have at least:

   (i) eight years of paid-up membership service;

   (ii) 15 years of paid-up creditable service, the last five years of which are membership service, and they were first hired under TRS before July 1, 1975;

   (iii) five years of paid-up membership service and three years of paid-up Alaska Bureau of Indian Affairs service;

   (iv) 12 years of combined part-time and full-time paid-up membership service;

   (v) two years of paid-up membership service if they are vested in PERS; or

   (vi) one year of paid-up membership service if they are retired from PERS.

b. Members may retire at any age when they have:
   (i) 25 years of paid-up creditable service, the last five years of which are membership service;
   (ii) 20 years of paid-up membership service;
   (iii) 20 years of combined paid-up membership and Alaska Bureau of Indian Affairs service, the last five years of which are membership service; or
   (iv) 20 years of combined paid-up part-time and full-time membership 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 to retire at any age under (b) above. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Members may select joint and survivor options and a last survivor 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 base salary (ABS) times the total TRS service times the percentage multiplier. The ABS is determined by averaging the salaries earned during the three highest school years. Members must earn at least 115 days of credit in a school year to include it in the ABS calculation. TRS pays a minimum benefit of $25 per month for each year of service when the calculated benefit is less.

The percentage multipliers are 2% for the first 20 years and 2.5% for all remaining service. Service before July 1, 1990 is calculated at 2%.

Salaries are subject to compensation limits under IRC 401(a)(17) for members first hired on or after July 1, 1996. Retirement benefit amounts are subject to IRC 415(b) limits regardless of hire date.

Indebtedness

Members who terminate and refund their TRS contributions are not eligible to retire unless they return to TRS employment and pay back their refunds plus interest or accrue additional service which qualifies them for retirement. TRS refunds must be paid in full if the corresponding service is to count toward the minimum service requirements for retirement. Refunded TRS service is included in total service for the purpose of calculating retirement benefits. However, 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.

Reemployment of Retired Members

Retirees who return to work in a permanent full-time or part-time TRS position after a normal retirement are eligible to return under the Standard Option.

Under the Standard Option, retirement and retiree healthcare benefits are suspended while retired members are reemployed under TRS. During reemployment, members earn additional TRS service and contributions are withheld from their wages.

Members retired under the Retirement Incentive Programs (RIPs) who return to employment will:

a. forfeit the three years of incentive credits that they received;
b. owe TRS 110% of the benefits that they received under the RIP, which may include costs for health insurance, excluding amounts that they paid to participate; 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.

Postemployment Healthcare Benefits

When pension benefits begin, major medical benefits are provided by TRS to (1) all employees first hired before July 1, 1990 (Tier 1) and their surviving spouses and (2) members and their surviving spouses who have 25 years of membership service, are disabled or age 60 or older, regardless of their initial hire dates. Employees first hired after June 30, 1990 (Tier 2) and their surviving spouses may receive major medical benefits prior to age 60 by paying premiums.

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. Participants in dental, vision, and audio coverage pay a full self-supporting rate and those benefits are not included in this valuation.

Starting in 2022, prior authorization is required for certain specialty medications for all participants. There is no change to the medications that are covered by the plan.

Starting in 2022, certain preventive benefits for pre-Medicare participants are covered by the plan.

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 (Tier 2), 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, excluding 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. Starting in 2019, the prescription drug coverage is through a Medicare Part D EGWP arrangement.

Disability Benefits

Monthly disability benefits are paid to permanently disabled members until they die, recover, or become eligible for normal retirement. To be eligible, members must have at least five years of paid-up membership service.

Disability benefits are equal to 50% of the member's base salary at the time of disability. The benefit is increased by 10% of the base salary for each minor child, up to a maximum of 40%. Members continue to earn TRS service until eligible for normal retirement.

Members are appointed to normal retirement on the first of the month after they become eligible.

Death Benefits

Death benefits may be paid to a spouse, dependent children, or a designated beneficiary upon the death of a member.

Occupational Death

When an active member dies from occupational causes, a monthly survivor's pension may be paid to the spouse or to the member's dependent children if there is no spouse, unless benefits are payable under the supplemental contributions provision. The pension equals 40% of the member's base salary on the date of death or disability. On the member's normal retirement date, the benefit converts to a normal retirement benefit based on the member's average base salary on the date of death and TRS service, including service accumulated from the date of death to normal retirement date.

If there is no surviving spouse or dependent children, the designated beneficiary receives the member's contribution account, which includes mandatory contributions, supplemental contributions, indebtedness payments, and interest earned. The designated beneficiary also receives a lump sum payment equal to $1,000 plus $100 for each year of TRS service, up to a maximum of $3,000.

Non-Occupational Death

When a vested member dies from non-occupational causes, the surviving spouse may elect to receive a monthly 50% joint and survivor benefit or a lump sum benefit (see below), unless benefits are payable under the supplemental contributions provision. The monthly benefit is based on the member's average base salary and TRS service accrued on the date of death.

Upon the death of an active member who has less than one year of service or an inactive member who is not vested, the designated beneficiary receives the member's contribution account, which includes mandatory contributions, supplemental contributions, indebtedness payments, and interest earned. If the member has more than one year of TRS service or is vested, the designated beneficiary also receives a lump sum payment equal to $1,000 plus $100 for each year of TRS service, up to a maximum of $3,000. An additional $500 may be payable if the member is survived by dependent children.

Supplemental Contributions Provision

Members are eligible for supplemental coverage if they joined TRS before July 1, 1982, elected to participate in the supplemental provision, and made the required contributions. A survivor's allowance or spouse's pension may be payable if the member made supplemental contributions for at least one year and dies while in membership service or while disabled under TRS. In addition, the allowance and pension may be payable if the member dies while retired or in deferred vested status if supplemental contributions were made for at least five years.

Survivor's Allowance

If the member is survived by dependent children, the surviving spouse and dependent children are entitled to a survivor's allowance. The allowance for the spouse is equal to 35% of the member's base salary at the time of death or disability, plus 10% for each dependent child up to a maximum of 40%. The allowance terminates and a spouse's pension becomes payable when there is no longer an eligible dependent child.

Spouse's Pension

A monthly spouse's pension is payable to the surviving spouse if there are no dependent children. The spouse's pension is equal to 50% of the retirement benefit that the deceased member was receiving or the unreduced retirement benefit that the deceased member would have received if retired at the time of death. The spouse's pension begins on the first of the month after the member's death or termination of the survivor's allowance.

Death After Retirement

If a joint and survivor option was selected at retirement, the eligible spouse receives continuing, lifetime monthly benefits after the member dies. A survivor's allowance or spouse's pension may be payable if the member participated in the supplemental contributions provision. If a joint and survivor option was not selected and benefits are not payable under the supplemental contributions provision, the designated beneficiary receives the member's contribution account, less any benefits already paid and the member's last benefit check.

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, but excluding the Alaska COLA, times:

a. The lesser of 75% of the CPI increase in the preceding calendar year or 9% if the recipient is at least age 65 or on TRS disability; or
b. The lesser of 50% of the CPI increase in the preceding calendar year or 6% if the recipient is at least age 60, or under age 60 if the recipient has been receiving benefits for at least eight years.

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who were first hired before July 1, 1990 (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.

Alaska Cost-of-Living Allowance (COLA)

Eligible benefit recipients who reside in Alaska receive an Alaska COLA equal to 10% of their base benefits. The following benefit recipients are eligible:

a. members who were first hired under TRS before July 1, 1990 (Tier 1) and their survivors;
b. members who were first hired under TRS after June 30, 1990 (Tier 2) and their survivors if they are at least age 65; and
c. all disabled members.

Changes in Benefit Provisions Valued Since the Prior Valuation

There were no changes in benefit provisions since the prior valuation.

Section 5.2: Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006. Changes in methods were adopted by the Board in January 2019 based on the experience study for the period July 1, 2013 to June 30, 2017. 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.

Actuarial Cost Method

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method, level percent of pay.

Effective June 30, 2018, the Board adopted a layered UAAL amortization method: Layer #1 equals the sum of (i) the UAAL at June 30, 2018 based on the 2017 valuation, plus (ii) the FY18 experience gain/loss. Layer #1 is amortized over the remainder of the 25-year closed period that was originally established in 2014[1]. Layer #2 equals the change in UAAL at June 30, 2018 due to the experience study and EGWP implementation. Layer #2 is amortized over a separate closed 25-year period starting in 2018. Future layers will be created each year based on the difference between actual and expected UAAL occurring that year, and will be amortized over separate closed 25-year periods. The UAAL amortization continues to be on a level percent of pay basis. 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 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.

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[1] Layer #1 is referred to as "initial amount" in Sections 1.2 and 1.3.

Valuation of Assets

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

Changes in Methods Since the Prior Valuation

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

Valuation of Retiree Medical and Prescription Drug Benefits

This section outlines the detailed methodology used in the internal model developed by Buck to calculate the initial per capita claims cost rates for the TRS postemployment healthcare plan. Note that the methodology reflects the results of our annual experience rate update for the period from July 1, 2022 to June 30, 2023.

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

<u>Benefits</u>

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

<u>Administration and Data Sources</u>

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

Claims incurred for the period from July 2021 through June 2023 (FY22 through FY23) were provided by the State of Alaska from reports extracted from their data warehouse, which separated claims by Medicare status. Monthly enrollment data for the same period was provided by Aetna.

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

Aetna provided a snapshot file as of July 1, 2023 of retirees and dependents that included a coverage level indicator. The monthly enrollment data includes double coverage participants. These are participants whereby both the retiree and spouse are retirees from the State and both are reflected with Couple coverage in the enrollment. In this case, such a couple would show up as four members in the monthly enrollment (each would be both a retiree and a spouse). As a result, the snapshot census file was used to adjust the total member counts in the monthly enrollment reports to estimate the number of unique participants enrolled in coverage. Based on the snapshot files from the last two valuations, the total member count in the monthly enrollment reports needs to be reduced by approximately 13% to account for the number of participants with double coverage.

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

Methodology

Buck projected historical claim data to FY24 for retirees using the following summarized steps:

1. Develop historical annual incurred claim cost rates – an analysis of medical costs was completed based on claims information and enrollment data provided by the State of Alaska and Aetna for each year in the experience period of FY22 through FY23.

    - Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs for the valuation year (e.g., from the experience period up through FY24).
    - Because the reports provided reflected incurred claims, no additional adjustment was needed to determine incurred claims to be used in the valuation.
    - An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. Alaska retirees who do not have 40 quarters of Medicare-covered compensation do not qualify for Medicare Part A coverage free of charge. This is a relatively small and closed group. Medicare was applied to State employment for all employees hired after March 31, 1986. For the "no-Part A" individuals who are required to enroll in Medicare Part B, the State is the primary payer for hospital bills and other Part A services. Claims experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. For Medicare Part B only participants, a lower average claims cost was applied to retirees covered by both Medicare Part A and B vs. retirees covered only by Medicare Part B based upon manual rate models that estimate the Medicare covered proportion of medical costs. To the extent that no-Part A claims can be isolated and applied strictly to the appropriate closed group, actuarial accrued liability will be more accurate.
    - Based on census data received from Aetna, less than 1% of the current retiree population was identified as having coverage only under Medicare Part B. We assume that 2% of actives hired before April 1, 1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.
    - Based upon a reconciliation of valuation census data to the snapshot eligibility files provided by Aetna as of July 1, 2022, and July 1, 2023, Buck adjusted member counts used for duplicate records where participants have double coverage; i.e. primary coverage as a retiree and secondary coverage as the covered spouse of another retiree. This is to reflect the total cost per distinct individual/member which is then applied to distinct members in the valuation census.
    - Buck understands that pharmacy claims reported do not reflect rebates. Based on actual pharmacy rebate information provided by Optum, rebates were assumed to be 20.1% of pre-Medicare, and 13.5% of Medicare prescription drug claims for FY22; and 31.8% of pre-Medicare, and 16.4% of Medicare prescription drug claims for FY23.

2. Develop estimated EGWP reimbursements – Segal provided estimated 2024 EGWP subsidies, developed with the assistance of OptumRx. These amounts are applicable only to Medicare-eligible participants.

3. Adjust for claim fluctuation, anomalous experience, etc. – explicit adjustments are often made for anticipated large claims or other anomalous experience. FY22 and FY23 experience was thoroughly reviewed to assess the impact of COVID-19 and whether an adjustment to FY22 and FY23 claims was appropriate for use in the June 30, 2023 valuation. Total medical and prescription drug claims experience for FY22 and FY23 was reasonable when compared to pre-COVID levels, so no adjustments were used in the per capita claims cost development. In addition, we did not make any large claim adjustments due to group size and demographics. We do blend both Alaska plan-specific and national trend factors as described below. Buck compared data utilized to lag reports and quarterly plan experience presentations provided by the State and Aetna to assess accuracy and reasonableness of data.

4. Trend all data points to the projection period – project prior years' experience forward to FY24 for retiree benefits on an incurred claim basis. Trend factors derived from historical Alaska-specific experience and national trend factors are shown in the table in item 5 below.

5. Apply credibility to prior experience – adjust prior year's data by assigning weight to recent periods, as shown at the right of the table below. The Board approved a change in the weighting of experience periods beginning with the June 30, 2017 valuation as outlined below. Note also that for FY23 to FY24 medical and both years of prescription drugs, we averaged projected plan costs using Alaska-specific trend factors and national trend factors, assigning 75% weight to Alaska-specific trends and 25% to national trends. For FY22 to FY23 medical, we applied 100% weight to national trends because the Alaska-specific trends were impacted by COVID-19:

   Alaska-Specific and National Average Weighted Trend from Experience Period to Valuation Year

Experience Period	Medical	Prescription	Weighting Factors
FY22 to FY23	7.4% Pre-Medicare / 5.6% Medicare	9.5%	50%
FY23 to FY24	11.1% Pre-Medicare / 7.4% Medicare	10.4%	50%

   Trend assumptions used for rate development are assessed annually and as additional/improved reporting becomes available, we will incorporate into rate development as appropriate.

6. Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factors for pre-Medicare prescription drug, Medicare prescription drug, and EGWP costs were applied to claims experience incurred before January 1, 2022. Additionally, starting in 2022, certain preventive benefits for pre-Medicare participants are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factor for pre-Medicare medical costs was applied to claims experience incurred before January 1, 2022.

7. Develop separate administration costs – no adjustments were made for internal administrative costs. Third party retiree plan administration fees for FY24 are based upon total fees projected to 2024 by Segal based on actual FY23 fees. The annual per participant per year administrative cost rate for medical and prescription benefits is $497.

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions of the health reform legislation apply to the State plan. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We reviewed the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

Because Transitional Reinsurance fees are only in effect until 2016, we excluded these for valuation purposes.

The Further Consolidated Appropriations Act, 2020 passed in December 2019 repealed several healthcare-related taxes, including the Cadillac Tax.

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

The Inflation Reduction Act was signed into law on August 16, 2022. The law contains several provisions that are expected to impact Alaska's Medicare prescription drug plan (EGWP), which will be considered at the next measurement date.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

Data

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

The Division of Retirement and Benefits provided pension valuation census data, which for people currently in receipt of healthcare benefits was supplemented by coverage data from the healthcare claims administrator (Aetna).

Certain adjustments and assumptions were made to prepare the data for valuation:

- All records provided with retiree medical coverage on the Aetna data were included in this valuation and we relied on the Aetna data as the source of medical coverage for current retirees and their dependents.
- Some records in the Aetna data were duplicates due to the double coverage (i.e. coverage as a retiree and as a spouse of another retiree) allowed under the plan. Records were adjusted for these members so that each member was only valued once. Any additional value of the double coverage (due to coordination of benefits) is small and reflected in the per capita costs.
- Covered children included in the Aetna data were valued until age 23, unless disabled. We assumed that those dependents over 23 were only eligible and valued due to being disabled.
- 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.
- Some records in the pension data were duplicates due to being a covered spouse in the Aetna data. Records were adjusted for these members so that each inactive member was only valued once, removing the record that came in through the pension data.

We are not aware of any other data issues that would be expected to have a material impact on the results and there are no unresolved matters related to the data.

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

	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
A. Fiscal 2022				
1. Incurred Claims	$ 197,733,173	$ 98,249,082	$ 64,076,270	$ 230,832,315
2. Adjustments for Rx Rebates	0	0	(12,879,330)	(31,162,363)
3. Net incurred claims	$ 197,733,173	$ 98,249,082	$ 51,196,940	$ 199,669,953
4. Average Enrollment	17,072	48,698	17,072	48,698
5. Claim Cost Rate (3) / (4)	11,582	2,018	2,999	4,100
6. Trend to Fiscal 2024	1.193	1.134	1.207	1.207
7. Fiscal 2024 Incurred Cost Rate (5) x (6)	$ 13,820	$ 2,288	$ 3,619	$ 4,948
8. Adjustment Factor for 2022 Plan Changes	1.007	1.000	0.957	0.988
9. Adjusted Fiscal 2024 Incurred Cost Rate (7) x (8)	$ 13,916	$ 2,288	$ 3,462	$ 4,888
B. Fiscal 2023				
1. Incurred Claims	$ 211,125,808	$ 110,136,448	$ 66,184,443	$ 264,456,476
2. Adjustments for Rx Rebates	0	0	(21,046,653)	(43,370,862)
3. Net incurred claims	$ 211,125,808	$ 110,136,448	$ 45,137,790	$ 221,085,614
4. Average Enrollment	16,250	50,465	16,250	50,465
5. Claim Cost Rate (3) / (4)	12,992	2,182	2,778	4,381
6. Trend to Fiscal 2024	1.111	1.074	1.102	1.102
7. Fiscal 2024 Incurred Cost Rate (5) x (6)	$ 14,434	$ 2,344	$ 3,061	$ 4,828
8. Adjustment Factor for 2022 Plan Changes	1.000	1.000	1.000	1.000
9. Adjusted Fiscal 2024 Incurred Cost Rate (7) x (8)	$ 14,434	$ 2,344	$ 3,061	$ 4,828

	Medical		Prescription Drugs (Rx)	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
C. Adjusted Incurred Cost Rate by Fiscal Year				
1. Fiscal 2022 A.(9)	13,916	2,288	3,462	4,888
2. Fiscal 2023 B.(9)	14,434	2,344	3,061	4,828
D. Weighting by Fiscal Year				
1. Fiscal 2022	50%	50%	50%	50%
2. Fiscal 2023	50%	50%	50%	50%
E. Fiscal 2024 Incurred Cost Rate				
1. Rate at Average Age C x D	$ 14,175	$ 2,316	$ 3,261	$ 4,858
2. Average Aging Factor	0.818	1.288	0.826	1.130
3. Rate at Age 65 (1) / (2)	$ 17,338	$ 1,798	$ 3,947	$ 4,300

F. Development of Part A&B and Part B Only Cost from Pooled Rate Above	
1. Part A&B Average Enrollment	50,007
2. Part B Only Average Enrollment	459
3. Total Medicare Average Enrollment B(4)	50,465
4. Cost ratio for those with Part B only to those with Parts A&B	3.300
5. Factor to determine cost for those with Parts A&B (2) / (3) x (4) + (1) / (3) x 1.00	1.021
6. Medicare per capita cost for all participants: E(3)	$ 1,798
7. Cost for those eligible for Parts A&B: (6) / (5)	$ 1,761
8. Cost for those eligible for Part B only: (7) x (4)	$ 5,812

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, 2023 through June 30, 2024

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare EGWP Subsidy
45	$ 10,581	$ 10,581	$ 2,533	$ 0
50	11,971	11,971	3,009	0
55	13,544	13,544	3,573	0
60	15,324	15,324	3,755	0
65	1,761	5,812	4,300	1,267
70	1,944	6,417	4,771	1,406
75	2,147	7,085	5,293	1,560
80	2,393	7,899	5,214	1,536

Section 5.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2023 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board at the June 2022 meeting based on the experience study for the period July 1, 2017 to June 30, 2021.

Investment Return

7.25% per year, net of investment expenses.

Salary Scale

Salary scale rates based on the 2017-2021 actual experience (see Table 1).

Inflation – 2.50% per year.

Productivity – 0.25% per year.

Payroll Growth

2.75% 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 2.50% annually.

Mortality (Pre-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

- Pension: Pub-2010 Teachers Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Teachers Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Deaths are assumed to result from occupational causes 15% of the time.

Mortality (Post-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Retiree mortality in accordance with the following tables:

- Pension: 97% of male and 97% of female rates of the Pub-2010 Teachers Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 98% of male and 100% of female rates of the Pub-2010 Teachers Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality in accordance with the following tables. These tables are applied only after the death of the original member.

- Pension: 100% of male and 95% of female rates of the Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 100% of male and 94% of female rates of the Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Turnover

Select and ultimate rates based on the 2017-2021 actual experience (see Table 2).

Disability

No changes to the incidence rates from the prior valuation due to insufficient 2017-2021 actual experience (see Table 3). Disability rates cease once a member is eligible for retirement.

Post-disability mortality in accordance with the following tables:

- Pension: Pub-2010 Non-Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Non-Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retirement

Retirement rates based on the 2017-2021 actual experience (see Table 4).

Deferred vested members are assumed to retire at their earliest unreduced retirement date.

The modified cash refund annuity is valued as a three-year certain and life annuity.

Spouse Age Difference

Male members are assumed to be three years older than their wives. Female members are assumed to be two years younger than their husbands.

Percent Married for Pension

85% of male members and 75% of female members are assumed to be married at termination from active service.

Dependent Spouse Medical Coverage Election

Applies to members who do not have double medical coverage. 60% of male members and 50% of female members are assumed to be married and cover a dependent spouse.

Dependent Children

- Pension: For the participants who are assumed to be married, those between ages 25 and 45 are assumed to have two dependent children.
- Healthcare: Benefits for dependent children have been valued only for members currently covering their dependent children. These benefits are only valued through the dependent children's age 23 (unless the child is disabled).

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.

Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

Active Data Adjustment

No adjustment was made to reflect participants who terminate employment before the valuation date and are subsequently rehired after the valuation date.

Administrative Expenses

The Normal Cost as of June 30, 2023 was increased by the following amounts. These amounts are based on the average of actual administrative expenses during the last two fiscal years. For projections, the percent increase was assumed to remain constant in future years.

- Pension: $3,558,000
- Healthcare: $1,956,000

Rehire Assumption

The Normal Cost used for determining contribution rates and in the projections includes a rehire assumption to account for anticipated rehires. The Normal Cost shown in the report includes the following assumptions based on the four years of rehire loss experience through June 30, 2021. For projections, these assumptions were assumed to grade to zero uniformly over a 20-year period.

- Pension: 12.00%
- Healthcare: 0.20%

Re-Employment Option

All re-employed retirees are assumed to return to work under the Standard Option.

Service

Total credited service is provided by the State. This service is assumed to be the only service that should be used to calculate benefits. Additionally, the State provides claimed service (including Bureau of Indian Affairs Service). Claimed service is used for vesting and eligibility purposes as described in Section 5.1.

Part-Time Service

Part-time employees are assumed to earn 0.75 years of credited service per year.

Unused Sick Leave

5.25 days of unused sick leave for each year of service are assumed to be available to be credited once the member is retired, terminates, or dies.

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.

Contribution Refunds

0% 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.

Early Retirement Factors

State of Alaska staff provided the early retirement factors, which reflect grandfathered factors.

Alaska Cost-of-Living Adjustments (COLA)

Of those benefit recipients who are eligible for the Alaska COLA, 60% are assumed to remain in Alaska and receive the COLA.

Postretirement Pension Adjustment (PRPA)

50% and 75% of assumed inflation, or 1.25% and 1.875% respectively, is valued for the annual automatic PRPA as specified in the statute.

Healthcare Participation

100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 20% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible.

Medicare Part B Only

We assume that 2% of actives hired before April 1, 1986 and current retirees who are not yet Medicare eligible will not be eligible for Medicare Part A.

Healthcare Per Capita Claims Cost

Sample claims cost rates adjusted to age 65 for FY24 medical and prescription drugs are shown below. The prescription drug costs reflect the plan change to require prior authorization for certain specialty medications. The pre-Medicare medical cost reflects the coverage of additional preventive benefits.

	Medical	Prescription Drugs
Pre-Medicare	$ 17,338	$ 3,947
Medicare Parts A & B	$ 1,761	$ 4,300
Medicare Part B Only	$ 5,812	$ 4,300
Medicare Part D – EGWP	N/A	$ 1,267

Members are assumed to attain Medicare eligibility at age 65. All costs are for the 2024 fiscal year (July 1, 2023 – June 30, 2024).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

Healthcare Morbidity

Morbidity rates (also called aging factors) are used to estimate utilization of healthcare benefits at each age to reflect the fact that healthcare utilization typically increases with age. Separate morbidity rates are used for medical and prescription drug benefits. These rates are based on the 2017-2021 actual experience.

Age	Medical	Prescription Drugs
0 - 44	2.0%	4.5%
45 - 54	2.5%	3.5%
55 - 64	2.5%	1.0%
65 - 74	2.0%	2.1%
75 - 84	2.2%	(0.3%)
85 - 94	0.5%	(2.5%)
95+	0.0%	0.0%

Healthcare Third Party Administrator Fees

$497 per person per year; assumed to increase at 4.50% per year.

Healthcare Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 6.70% is applied to the FY24 pre-Medicare medical claims costs to get the FY25 pre-Medicare medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY24	6.70%	5.50%	7.20%
FY25	6.40%	5.40%	6.90%
FY26	6.20%	5.40%	6.65%
FY27	6.05%	5.35%	6.35%
FY28	5.85%	5.35%	6.10%
FY29	5.65%	5.30%	5.80%
FY30	5.45%	5.30%	5.55%
FY31-FY38	5.30%	5.30%	5.30%
FY39	5.25%	5.25%	5.25%
FY40	5.20%	5.20%	5.20%
FY41	5.10%	5.10%	5.10%
FY42	5.05%	5.05%	5.05%
FY43	4.95%	4.95%	4.95%
FY44	4.90%	4.90%	4.90%
FY45	4.80%	4.80%	4.80%
FY46	4.75%	4.75%	4.75%
FY47	4.70%	4.70%	4.70%
FY48	4.60%	4.60%	4.60%
FY49	4.55%	4.55%	4.55%
FY50+	4.50%	4.50%	4.50%

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska.

Retired Member Contributions for Medical Benefits

Currently, contributions are required for TRS members who are under age 60 and have less than 25 years of service. Eligible Tier 1 members are exempt from contribution requirements. Annual FY24 contributions based on monthly rates shown below for calendar 2024 are assumed based on the coverage category for current retirees. The retiree only rate shown is used for current active and inactive members and spouses in Tier 2 who are assumed to retire prior to age 60 with less than 25 years of service and who are not disabled. For dependent children, we value 1/3 of the annual retiree contribution to estimate the per child rate based on the assumed number of children in rates where children are covered.

Coverage Category	Calendar 2024 Annual Contribution	Calendar 2024 Monthly Contribution	Calendar 2023 Monthly Contribution
Retiree Only	$ 8,448	$ 704	$ 704
Retiree and Spouse	$ 16,896	$ 1,408	$ 1,408
Retiree and Child(ren)	$ 11,940	$ 995	$ 995
Retiree and Family	$ 20,388	$ 1,699	$ 1,699
Composite	$ 12,552	$ 1,046	$ 1,046

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, 4.0% is applied to the FY24 retired member medical contributions to get the FY25 retired member medical contributions.

Trend Assumptions	
FY24+	4.0%

Graded trend rates for retired member medical contributions are consistent with the rates used for the June 30, 2022 valuation. Actual FY24 retired member medical contributions are reflected in the valuation.

Changes in Assumptions Since the Prior Valuation

The healthcare per capita claims cost assumption is updated annually as described in Section 5.2. The amounts included in the Normal Cost for administrative expenses were changed from $3,626,000 to $3,558,000 for pension, and from $1,940,000 to $1,956,000 for healthcare (based on the most recent two years of actual administrative expenses paid from plan assets). There were no other changes in actuarial assumptions since the prior valuation.

Table 1: Salary Scale

Years of Service	Percent Increase
< 1	7.00%
1	6.50%
2	6.00%
3	5.75%
4	5.50%
5	5.25%
6	5.00%
7	4.75%
8	4.50%
9	4.25%
10	4.00%
11	3.75%
12	3.50%
13	3.45%
14	3.35%
15	3.25%
16	3.15%
17	3.05%
18	3.00%
19	2.95%
20+	2.85%

Table 2: Turnover Rates

Select Rates during the First 8 Years of Employment

Years of Service	Male	Female
< 1	20.40%	17.00%
1	20.40%	17.00%
2	16.80%	14.00%
3	14.40%	12.00%
4	12.00%	10.00%
5	10.80%	9.00%
6	9.00%	7.50%
7	7.20%	6.00%

Ultimate Rates after the First 8 Years of Employment

Age	Male	Female
< 30	3.60%	4.60%
30 - 34	3.60%	5.40%
35 - 39	3.60%	3.90%
40 - 44	3.10%	2.60%
45 - 49	3.10%	2.60%
50 - 54	4.60%	4.80%
55+	2.80%	4.80%

Table 3: Disability Rates

Age	Male	Female	Age	Male	Female
< 31	0.0337%	0.0612%	50	0.0601%	0.1093%
31	0.0337%	0.0613%	51	0.0634%	0.1152%
32	0.0337%	0.0613%	52	0.0666%	0.1211%
33	0.0342%	0.0622%	53	0.0746%	0.1356%
34	0.0347%	0.0631%	54	0.0826%	0.1501%
35	0.0353%	0.0641%	55	0.0905%	0.1645%
36	0.0357%	0.0650%	56	0.0985%	0.1790%
37	0.0362%	0.0659%	57	0.1064%	0.1935%
38	0.0371%	0.0674%	58	0.1245%	0.2263%
39	0.0379%	0.0689%	59	0.1426%	0.2592%
40	0.0387%	0.0703%	60	0.1606%	0.2920%
41	0.0395%	0.0718%	61	0.1787%	0.3249%
42	0.0403%	0.0733%	62	0.1967%	0.3577%
43	0.0423%	0.0770%	63	0.2253%	0.4096%
44	0.0443%	0.0806%	64	0.2572%	0.4677%
45	0.0464%	0.0843%	65	0.2933%	0.5332%
46	0.0483%	0.0879%	66	0.3343%	0.6079%
47	0.0504%	0.0916%	67	0.3812%	0.6930%
48	0.0536%	0.0975%	68	0.4345%	0.7900%
49	0.0569%	0.1034%	69	0.4953%	0.9006%
			70+	0.5647%	1.0267%

Table 4: Retirement Rates

	Reduced		Unreduced	
Age	Male	Female	Male	Female
< 45	N/A	N/A	3.00%	3.00%
45	N/A	N/A	5.50%	7.00%
46	N/A	N/A	5.50%	7.00%
47	N/A	N/A	5.50%	7.00%
48	N/A	N/A	5.50%	7.00%
49	N/A	N/A	5.50%	7.00%
50	5.00%	5.00%	12.50%	13.00%
51	5.00%	5.00%	12.50%	13.00%
52	5.00%	10.00%	12.50%	13.00%
53	5.00%	5.00%	12.50%	13.00%
54	10.00%	5.00%	12.50%	13.00%
55	14.50%	11.00%	20.00%	17.50%
56	9.50%	11.00%	20.00%	17.50%
57	9.50%	11.00%	20.00%	17.50%
58	9.50%	11.00%	20.00%	17.50%
59	9.50%	11.00%	20.00%	17.50%
60 - 64	N/A	N/A	19.50%	23.50%
65 - 69	N/A	N/A	28.00%	23.50%
70 - 74	N/A	N/A	30.00%	36.00%
75 - 79	N/A	N/A	50.00%	50.00%
80+	N/A	N/A	100.00%	100.00%

Section 6: Risk Information

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities, current contribution requirements, and the funded status of the plan. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the plan. Understanding the risks to the funding of the plan is important.

Actuarial Standard of Practice No. 51 (ASOP 51)[1] requires certain disclosures of potential risks to the plan and provides useful information for intended users of actuarial reports that determine plan contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative, but all risk should be understood and accepted based on knowledge, judgment, and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the plan.

In the actuary's professional judgment, the following risks may reasonably be anticipated to significantly affect the pension plan's future financial condition and contribution requirements.

- Investment Risk – potential that the investment return will differ from the rate assumed in the actuarial valuation
- Contribution Risk – potential that actual contributions will differ from actuarially determined contributions
- Long-Term Return on Investment Risk – potential that changes in long-term capital market assumptions or the plan's asset allocation will create the need to update the long-term return on investment assumption
- Longevity Risk – potential that participants live longer than projected under valuation mortality assumptions
- Salary Increase Risk – potential that future salaries will differ from the valuation assumptions
- Inflation Risk – potential that the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage will differ from the rate assumed in the actuarial valuation
- Other Demographic Risk – potential that other demographic experience will differ from the valuation assumptions

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the plan. This list is not all-inclusive. It is an attempt to identify the more significant risks and how those risks might affect the results shown in this report.

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the plan sponsor to make contributions to the plan when due, or to assess the likelihood or consequences of potential future changes in law. In addition, this valuation report is not intended to provide investment advice or to provide guidance on the management or reduction of risk.

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[1] ASOP 51 does not apply to the healthcare portion of the plan. Accordingly, all figures in this section relate to the pension portion.

Assessment of Risks

Investment Risk

Plan costs are very sensitive to the market return.

- Any return on assets lower than assumed will increase costs.
- The plan uses an actuarial value of assets that smooths gains and losses on market returns over a five-year period to help control some of the volatility in costs due to investment risk.
- Historical experience of actual returns is shown in Section 2.4 of this report. This historical experience illustrates how returns can vary over time.

The plan invests in a diversified portfolio of assets with the objective of maximizing investment returns at a reasonable level of risk. Actuarial Standard of Practice No. 4 (ASOP 4) requires the actuary to disclose a Low-Default-Risk Obligation Measure (LDROM) of the plan's pension liability and provide commentary to help the intended users of this report understand the significance of the LDROM with respect to funded status, contributions, and participant benefit security.

The LDROM is based on discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of pension benefits expected to be paid in the future. The LDROM shown here represents what the plan's pension liability would be if the plan invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future pension benefit payments. Consequently, the difference between the LDROM and the Actuarial Accrued Liability represents the taxpayer savings from investing in a diversified portfolio of assets versus only investing in high-quality bonds. Furthermore, this difference also represents the cost of reducing investment risk.

As of June 30, 2023, the LDROM is $9.8 billion for the pension plan based on an interest rate of 5.35%. The interest rate used for the LDROM was determined by calculating a single equivalent discount rate using projected pension benefit payments and the Buck Above Median Yield Curve as of June 30, 2023. Please note that the interest rate used for the LDROM is based on bond yields as of the measurement date and will therefore vary for different measurement dates. All other assumptions are the same as those used for funding purposes as shown in this report.

Actuaries play a role in helping to determine funding methods and policies that can achieve affordable and appropriate contributions and risk management. The funded status based on the Actuarial Accrued Liability, as well as the actuarially determined contributions, are calculated using the expected return on assets, which reflects the actual investment portfolio. Since the assets are not invested solely in an all-bond portfolio, the LDROM does not indicate the plan's pension funded status or progress, nor does it provide information on necessary plan contributions.

Regarding participant benefit security, if this plan were to be funded on an LDROM basis, participant benefits currently accrued as of the measurement date might be considered more secure, since the investment risk would be significantly reduced. However, the fact that assets are invested in a diversified portfolio does not mean that the participants' benefits are not secure. The security of participant benefits relies on a combination of the assets in the plan, the investment returns generated from those assets, and the promise of future contributions from the plan sponsor. Reducing investment risk by investing solely in bonds may significantly increase the actuarially determined contributions, and thereby increase contribution risk by decreasing the ability of the plan sponsor to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security. Participant benefits will remain secure if reasonable and appropriate contributions with managed risk are calculated and paid.

Since this plan is closed to new entrants, the investment horizon of the funds will decrease over the long term. As this change happens, the asset allocation may shift to less risky assets, and the difference between the Actuarial Accrued Liability and LDROM will become smaller. Monitoring this difference may help the plan sponsor decide when the cost of less investment risk is advantageous.

Contribution Risk

There is a risk to the plan when the employer's and/or State's actual contribution amount and the actuarially determined contribution differ.

- If the actual contribution is lower than the actuarially determined contribution, the plan may not be sustainable in the long term.
- Any underpayment of the actuarially determined contribution will increase future contribution amounts to help pay off the additional Unfunded Actuarial Accrued Liability associated with the underpayment(s).
- As long as the Board consistently adopts the actuarially determined contributions, this risk is mitigated due to Alaska statutes requiring the State to contribute additional funds necessary to pay the total contributions adopted by the Board.

Long-Term Return on Investment Risk

Inherent in the long-term return on investment assumption is the expectation that the current rate will be used until the last benefit payment of the plan is made. There is a risk that sustained changes in economic conditions, changes in long-term future capital market assumptions, or changes to the plan's asset allocation will necessitate an update to the long-term return on investment assumption used.

- Under a lower long-term return on investment assumption, less investment return is available to pay plan benefits. This may lead to a need for increased employer contributions.
- The liabilities will be higher at a lower assumed rate of return because future benefits will have a lower discount rate applied when calculating the present value.
- A 1% decrease in the long-term return on investment assumption will increase the actuarial accrued liability by approximately 11%.
- This risk may be increased due to the plan being closed to new entrants. As the plan continues to mature, the magnitude of negative cash flow discussed in the Plan Maturity Measures later in this section will grow, thereby creating a need for more liquid assets that may not garner the same long-term return as currently assumed.

Longevity Risk

Plan costs will be increased as participants are expected to live longer.

- Benefits are paid over a longer lifetime when life expectancy is expected to increase. The longer duration of payments leads to higher liabilities.
- Health care has been improving, which affects the life expectancy of participants. As health care improves, leading to longer life expectancies, costs to the plan could increase.
- The mortality assumption for the plan mitigates this risk by assuming future improvement in mortality. However, any improvement in future mortality greater than that expected under the current mortality assumption would lead to increased costs for the plan.
- The Postretirement Pension Adjustments and Alaska Cost-of-Living Allowance increase longevity risk because members who live longer than expected will incur more benefit payment increases than expected and therefore increase costs.

Salary Increase Risk

Plan costs will be increased if actual salary increases are larger than expected.

- Higher-than-expected salary increases will produce higher benefits.
- The higher benefits may be partially offset by increased employee contributions due to higher salaries.
- If future payroll grows at a rate different than assumed, contributions as a percentage of payroll will be affected.

Inflation Risk

Plan costs will be increased if the actual CPI for Anchorage is greater than the 2.5% assumed in the valuation.

- Retirement benefits will be greater than expected if the CPI is greater than the assumed rate, which will increase costs.
- This risk is mitigated by the 75% and 50% of CPI provisions and the 9% and 6% maximums.
- This risk is also mitigated by the age and time in payment requirements to receive an increase.
- Inflation risk may be associated with the interaction of inflation with other assumptions, but this is not significant as a standalone assumption, and therefore is considered as part of the associated assumption risk instead of being discussed here.

Other Demographic Risk

The plan is subject to risks associated with other demographic assumptions (e.g., retirement, termination, and retired members remaining in Alaska assumptions). Differences between actual and expected experience for these assumptions tend to have less impact on the overall costs of the plan. The demographic assumptions used in the valuation are re-evaluated regularly as part of the four-year experience studies to ensure the assumptions are consistent with long-term expectations.

Historical Information

Monitoring certain information over time may help understand risks faced by the plan. Historical information is included throughout this report. Some examples are:

- Funded Ratio History shown in the Executive Summary illustrates how the plan's funded status (comparison of actuarial accrued liabilities to actuarial value of assets) has changed over time.
- Section 1.6 shows historical analysis of financial experience including how contribution rates have changed over time.
- Section 2.4 shows the volatility of asset returns over time.
- Section 4 includes various historical information showing how member census data has changed over time.
- Section 7 includes historical information for the plan's funding progress, solvency test results, and changes in member demographics.

Plan Maturity Measures

There are certain measures that may aid in understanding the significant risks to the plan.

Ratio of Retired Liability to Total Liability ($'s in $000's)

As of June 30	2019	2020	2021	2022	2023
1. Retiree and Beneficiary Accrued Liability	$ 5,495,907	$ 5,570,625	$ 5,657,056	$ 5,977,257	$ 6,274,565
2. Total Accrued Liability	$ 7,388,020	$ 7,447,036	$ 7,471,887	$ 7,804,046	$ 8,036,685
3. Ratio, (1) ÷ (2)	74.4%	74.8%	75.7%	76.6%	78.1%

A high percentage of liability concentrated on participants in pay status indicates a mature plan (often a ratio above 60% - 65%). Because the plan was closed to new entrants in 2006, we expect the percentage in item #3 to continue to increase over time. An increasing percentage may indicate a need for a less risky asset allocation, which may lead to a lower long-term return on asset assumption and increased costs. Higher percentages may also indicate greater investment risk as benefit payments may be greater than contributions creating an increased reliance on investment returns. This ratio should be monitored each year in the future.

Ratio of Cash Flow to Assets ($'s in $000's)

During FYE June 30	2019	2020	2021	2022	2023
1. Contributions	$ 199,933	$ 207,899	$ 196,748	$ 202,459	$ 172,993
2. Benefit Payments	472,717	490,447	501,429	511,762	538,270
3. Cash Flow, (1) - (2)	$ (272,784)	$ (282,548)	$ (304,681)	$ (309,303)	$ (365,277)
4. Fair Value of Assets	$ 5,511,929	$ 5,444,799	$ 6,731,481	$ 6,026,651	$ 6,099,520
5. Ratio, (3) ÷ (4)	(4.9%)	(5.2%)	(4.5%)	(5.1%)	(6.0%)

When this cash flow ratio is negative, more cash is being paid out than deposited in the trust. Negative cash flow indicates the trust needs to rely on investment returns to cover benefit payments and / or may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not generate the same returns as less liquid assets, which can increase the investment risk. Currently, the low magnitude of the ratio implies there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. However, due to the plan being closed, we expect this measure to become increasingly negative over time. This maturity measure should be monitored in the future.

Contribution Volatility ($'s in $000's)

As of June 30	2019	2020	2021	2022	2023
1. Fair Value of Assets	$ 5,511,929	$ 5,444,799	$ 6,731,481	$ 6,026,651	$ 6,099,520
2. DB/DCR Payroll	$ 725,659	$ 741,090	$ 750,334	$ 758,938	$ 754,274
3. Asset to Payroll Ratio, (1) ÷ (2)	7.6	7.3	9.0	7.9	8.1
4. Accrued Liability	$ 7,388,020	$ 7,447,036	$ 7,471,887	$ 7,804,046	$ 8,036,685
5. Liability to Payroll Ratio, (4) ÷ (2)	10.2	10.0	10.0	10.3	10.7

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 10 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 5.

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, if an assumption change increases the liability of two plans by the same percent, the plan with a liability-to-payroll ratio of 10 may experience twice the contribution volatility than a plan with a liability-to-payroll ratio of 5.

Section 7: Historical Information[1]

Section 7.1: Funding Progress

Funding Progress - Pension ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 8,036,685	$ 6,171,460	76.8%	$ 1,865,225	$ 276,417	674.8%
June 30, 2022	7,804,046	6,100,204	78.2%	1,703,842	303,011	562.3%
June 30, 2021	7,471,887	5,910,369	79.1%	1,561,518	326,551	478.2%
June 30, 2020	7,447,036	5,587,064	75.0%	1,859,972	349,236	532.6%
June 30, 2019	7,388,020	5,563,931	75.3%	1,824,089	366,037	498.3%
June 30, 2018	7,276,290	5,541,600	76.2%	1,734,690	392,609	441.8%
June 30, 2017	7,217,525	5,476,835	75.9%	1,740,690	425,841	408.8%
June 30, 2016	7,159,788	5,428,687	75.8%	1,731,101	449,629	385.0%
June 30, 2015	7,051,724	5,422,651	76.9%	1,629,073	473,734	343.9%
June 30, 2014	6,921,362	3,771,139	54.5%	3,150,223	490,667	642.0%
June 30, 2013	6,589,553	3,170,313	48.1%	3,419,240	527,474	648.2%
June 30, 2012	6,399,777	3,194,994	49.9%	3,204,783	554,277	578.2%
June 30, 2011	6,196,104	3,345,949	54.0%	2,850,155	571,143	499.0%
June 30, 2010	6,006,981	3,259,868	54.3%	2,747,113	591,943	464.1%
June 30, 2009	5,463,987	3,115,719	57.0%	2,348,268	583,746	402.3%
June 30, 2008	5,231,654	3,670,086	70.2%	1,561,568	575,946	271.1%
June 30, 2007	5,043,448	3,441,867	68.2%	1,601,581	582,743	274.8%
June 30, 2006	4,859,336	3,296,934	67.8%	1,562,402	603,035	259.1%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2006 valuations.

Change in methods reflected in 2014 and 2006 valuations.

[1] GASB 67 replaced GASB 25 effective for the fiscal year ending June 30, 2014, and GASB 74 replaced GASB 43 effective for the fiscal year ending June 30, 2017. At the request of the State, historical accounting information has been included in this section as if GASB 25 and GASB 43 were still effective.

Funding Progress - Healthcare ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 2,617,821	$ 3,547,973	135.5%	$ (930,152)	$ 276,417	(336.5%)
June 30, 2022	2,442,577	3,437,216	140.7%	(994,639)	303,011	(328.3%)
June 30, 2021	2,439,603	3,267,737	133.9%	(828,134)	326,551	(253.6%)
June 30, 2020	2,489,675	3,021,283	121.4%	(531,608)	349,236	(152.2%)
June 30, 2019	2,518,644	2,947,562	117.0%	(428,918)	366,037	(117.2%)
June 30, 2018	2,684,150	2,898,709	108.0%	(214,559)	392,609	(54.6%)
June 30, 2017	2,927,093	2,836,802	96.9%	90,291	425,841	21.2%
June 30, 2016	2,747,836	2,771,704	100.9%	(23,868)	449,629	(5.3%)
June 30, 2015	2,677,393	2,686,272	100.3%	(8,879)	473,734	(1.9%)
June 30, 2014	2,919,670	2,248,135	77.0%	671,535	490,667	136.9%
June 30, 2013	3,002,554	1,803,763	60.1%	1,198,791	527,474	227.3%
June 30, 2012	2,946,667	1,674,160	56.8%	1,272,507	554,277	229.6%
June 30, 2011	2,932,691	1,591,988	54.3%	1,340,703	571,143	234.7%
June 30, 2010	2,840,807	1,479,260	52.1%	1,361,547	591,943	230.0%
June 30, 2009	2,383,527	1,357,239	56.9%	1,026,288	583,746	175.8%
June 30, 2008	2,387,524	1,266,890	53.1%	1,120,634	575,946	194.6%
June 30, 2007	2,145,955	982,532	45.8%	1,163,423	582,743	199.6%
June 30, 2006	2,370,515	844,766	35.6%	1,525,749	603,035	253.0%

Change in assumptions reflected in 2022, 2018, 2016, 2014, 2012, 2010, 2008, and 2006 valuations.

Change in methods reflected in 2018, 2014, 2006 valuations.

Section 7.2: Solvency Test

Solvency Test - Pension ($'s in 000's)

	Actuarial Accrued Liability (AAL)				Portion of AAL Covered by Valuation Assets		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	(1)	(2)	(3)
June 30, 2023	$ 557,567	$ 6,511,368	$ 967,750	$ 6,171,460	100.0%	86.2%	0.0%
June 30, 2022	594,033	6,169,712	1,040,301	6,100,204	100.0%	89.2%	0.0%
June 30, 2021	634,029	5,833,812	1,004,046	5,910,369	100.0%	90.4%	0.0%
June 30, 2020	668,105	5,749,353	1,029,578	5,587,064	100.0%	85.6%	0.0%
June 30, 2019	673,540	5,672,003	1,042,477	5,563,931	100.0%	86.2%	0.0%
June 30, 2018	690,775	5,502,418	1,083,097	5,541,600	100.0%	88.2%	0.0%
June 30, 2017	706,772	5,418,948	1,091,805	5,476,835	100.0%	88.0%	0.0%
June 30, 2016	709,903	5,329,673	1,120,212	5,428,687	100.0%	88.5%	0.0%
June 30, 2015	714,422	5,192,935	1,144,367	5,422,651	100.0%	90.7%	0.0%
June 30, 2014	718,694	5,042,250	1,160,418	3,771,139	100.0%	60.5%	0.0%
June 30, 2013	726,139	4,726,282	1,137,132	3,170,313	100.0%	51.7%	0.0%
June 30, 2012	727,435	4,532,982	1,139,360	3,194,994	100.0%	54.4%	0.0%
June 30, 2011	717,819	4,352,035	1,126,250	3,345,949	100.0%	60.4%	0.0%
June 30, 2010	716,675	4,153,119	1,137,187	3,259,868	100.0%	61.2%	0.0%
June 30, 2009	692,105	3,815,020	956,862	3,115,719	100.0%	63.5%	0.0%
June 30, 2008	654,662	3,700,812	876,180	3,670,086	100.0%	81.5%	0.0%
June 30, 2007	638,420	3,567,894	837,134	3,441,867	100.0%	78.6%	0.0%
June 30, 2006	615,207	3,432,703	811,426	3,296,934	100.0%	78.1%	0.0%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2006 valuations.

Change in methods reflected in 2014 and 2006 valuations.

Solvency Test - Healthcare ($'s in 000's)

Valuation Date	Actuarial Accrued Liability (AAL) (1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	Portion of AAL Covered by Valuation Assets (1)	(2)	(3)
June 30, 2023	$ 0	$ 2,015,723	$ 602,098	$ 3,547,973	100.0%	100.0%	100.0%
June 30, 2022	0	1,841,588	600,989	3,437,216	100.0%	100.0%	100.0%
June 30, 2021	0	1,778,645	660,958	3,267,737	100.0%	100.0%	100.0%
June 30, 2020	0	1,776,704	712,971	3,021,283	100.0%	100.0%	100.0%
June 30, 2019	0	1,788,124	730,520	2,947,562	100.0%	100.0%	100.0%
June 30, 2018	0	1,874,333	809,817	2,898,709	100.0%	100.0%	100.0%
June 30, 2017	0	1,980,148	946,945	2,836,802	100.0%	100.0%	90.5%
June 30, 2016	0	1,853,084	894,752	2,771,704	100.0%	100.0%	100.0%
June 30, 2015	0	1,870,987	806,406	2,686,272	100.0%	100.0%	100.0%
June 30, 2014	0	2,008,223	911,447	2,248,135	100.0%	100.0%	26.3%
June 30, 2013	0	2,012,114	990,440	1,803,763	100.0%	89.6%	0.0%
June 30, 2012	0	1,933,288	1,013,379	1,674,160	100.0%	86.6%	0.0%
June 30, 2011	0	1,879,564	1,053,127	1,591,988	100.0%	84.7%	0.0%
June 30, 2010	0	1,755,961	1,084,846	1,479,260	100.0%	84.2%	0.0%
June 30, 2009	0	1,477,788	905,739	1,357,239	100.0%	91.8%	0.0%
June 30, 2008	0	1,480,864	906,660	1,266,890	100.0%	85.6%	0.0%
June 30, 2007	0	1,344,131	801,824	982,532	100.0%	73.1%	0.0%
June 30, 2006	0	1,493,219	877,296	844,766	100.0%	56.6%	0.0%

Change in assumptions reflected in 2022, 2018, 2016, 2014, 2012, 2010, 2008, and 2006 valuations.

Change in methods reflected in 2018, 2014, 2006 valuations.

Section 7.3: Member Data

As of June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Active Members										
1. Number	5,861	5,502	5,123	4,772	4,418	4,044	3,789	3,396	3,023	2,734
2. Average Age	49.79	50.09	50.50	50.86	51.13	51.48	51.92	52.14	52.57	52.95
3. Average Credited Service	16.43	16.94	17.53	18.12	18.62	19.21	19.76	20.31	20.85	21.18
4. Average Entry Age	33.36	33.15	32.97	32.74	32.51	32.27	32.16	31.83	31.72	31.77
5. Average Annual Earnings	$ 81,023	$ 82,995	$ 84,954	$ 86,327	$ 87,374	$ 88,879	$ 90,564	$ 94,143	$ 97,702	$ 98,820
6. Number Vested	5,586	5,297	4,966	4,772	4,418	4,044	3,789	3,396	3,023	2,734
7. Percent Who Are Vested	95.3%	96.3%	96.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Retirees, Disabilitants, and Beneficiaries										
1. Number	11,750	12,418	12,726	12,983	13,277	13,491	13,689	13,972	14,126	14,255
2. Average Age	69.09	69.35	69.85	70.36	70.78	71.30	71.85	72.26	72.60	73.10
3. Average Years Since Retirement	N/A	13.50	13.78	14.13	14.40	14.74	15.06	15.24	15.51	15.80
4. Average Monthly Pension Benefit	$ 2,860	$ 2,912	$ 2,921	$ 2,924	$ 2,954	$ 3,014	$ 3,043	$ 3,048	$ 3,167	$ 3,332
Vested Terminations (vested at termination, not refunded contributions, and not commenced benefit)										
1. Number	1,274	890	875	876	797	812	764	727	729	763
2. Average Age	52.56	50.09	50.25	50.82	51.01	51.71	52.37	52.68	53.22	53.70
3. Average Monthly Pension Benefit	$ 1,916	$ 1,273	$ 1,352	$ 1,441	$ 1,350	$ 1,534	$ 1,579	$ 1,635	$ 1,725	$ 1,967
Non-Vested Terminations (not vested at termination and not refunded contributions)										
1. Number	2,328	2,218	2,103	1,994	1,900	1,810	1,744	1,679	1,616	1,560
2. Average Account Balance	$ 18,452	$ 18,962	$ 19,728	$ 20,290	$ 20,872	$ 21,612	$ 22,591	$ 23,388	$ 23,906	$ 24,693
Total Number of Members	**21,213**	**21,028**	**20,827**	**20,625**	**20,392**	**20,157**	**19,986**	**19,774**	**19,494**	**19,312**

Average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

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.

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.

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.

BUCK
A Gallagher Company

State of Alaska

Public Employees' Retirement System

Defined Contribution Retirement Plan

For Occupational Death & Disability and Retiree Medical Benefits

Actuarial Valuation Report
as of June 30, 2023

May 2024

May 3, 2024

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

Certification of Actuarial Valuation

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

This report summarizes the annual actuarial valuation results of the State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan as of June 30, 2023 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2023. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under PERS DCR were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of PERS DCR as of June 30, 2023.

PERS DCR is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The calculations of the Employer Contributions are reasonable actuarially determined contributions as defined in Actuarial Standard of Practice No. 4 (ASOP 4). The funding objective for PERS DCR is to pay required contributions that remain level as a percent of PERS DCR compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of PERS DCR compensation over closed layered 25-year periods. This objective is currently being met and is projected to continue to be met as required by the Alaska State statutes. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the funded status of the occupational death & disability trust and the retiree medical trust are expected to remain at or above 100%.

The Board and staff of the State of Alaska may use this report for the review of the operations of PERS DCR. Use of this report for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advanced review of any statement to be based on information contained in this report. Buck will accept no liability for any such statement made without its prior review.

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. In our professional judgment, the combined effect of the assumptions is expected to have no significant bias. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2017 to June 30, 2021. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2022 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the healthcare per capita claims cost rates effective June 30, 2023 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 4.2 and 4.3. We certify that the assumptions and methods used for funding purposes, as described in Sections 4.2 and 4.3 of this report, meet the requirements of all applicable Actuarial Standards of Practice.

Actuarial Standards of Practice No. 27 (ASOP 27) and No. 35 (ASOP 35) require the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with those that, in the actuary's professional judgment, are reasonable for the purpose of the measurement. Buck provides advice on reasonable assumptions when performing periodic experience studies. The Board selects the assumptions used, and the signing actuaries review the assumptions annually through discussions with the Board staff and analysis of actuarial experience.

In the case of the Board's selected expected return on assets, the signing actuaries have used economic information provided by Buck's Investment Consulting and Financial Risk Management practices. Buck's Capital Market Assumptions provide relevant expected returns, standard deviations, and correlations. Projected returns are then developed for the portfolio using the GEMS® Economic Scenario Generator from Conning. This sophisticated model uses a multifactor approach to create internally consistent, realistic economic scenarios for all asset classes that reflect the current economic environment as a starting point. Equity returns include stochastic volatility with jumps to reflect extreme, infrequent events. However, such scenarios do not typically impact the 5th through 95th percentiles of projected returns. Corporate bond yields are generated by adding credit spreads to the corresponding zero-coupon Treasury yields. The credit spreads are driven by several factors, including equity returns, and also contain a shock process to allow the model to generate such scenarios as the 2008 Financial Crisis. GEMS® does not, however, model specific risks such as war, pandemics, political risks, severe economic dislocations occurring with greater frequency or severity than predicted by the model, or the risk that relationships among macroeconomic variables may differ from those of the past. From these scenarios, a probabilistic model of expected returns is created, reflecting the duration of investment and the approximate allocation of assets in the portfolio to various asset classes. Under current calibrations, GEMS® will tend to show higher expected returns for longer durations and a greater divergence between arithmetic and geometric average returns at higher standard deviations of portfolio return.

Based on their analysis, including consistency with other assumptions used in the valuation, the percentiles generated by the GEMS® model described above, and review of actuarial gain/loss analysis, the signing actuaries believe the assumptions, in their professional judgment, do not significantly conflict with what are reasonable for the purpose of the measurement.

ACFR Information

We have prepared the following information in this report for the Actuarial Section and Statistical Section of the ACFR: (i) member data tables in Section 3; (ii) summary of actuarial assumptions in Section 4.3; and (iii) historical information in Section 5.

Governmental Accounting Standards Board (GASB) Statement No. 74 (GASB 74) was effective for PERS DCR beginning with fiscal year ending June 30, 2017. Please see our separate GASB 74 report for other information needed for the ACFR.

Risk Information

Actuarial Standards of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the retiree medical portion of PERS DCR. We also believe ASOP 51 does not apply to the occupational death & disability portion of PERS DCR. Therefore, information related to ASOP 51 is not included in this report. However, it may be beneficial to review the ASOP 51 information provided in the PERS DB valuation report for information on risks that may also relate to the occupational death & disability benefits provided by this plan.

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries performing actuarial services that involve designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the GEMS® model disclosed above, Buck uses third-party software to perform annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Buck maintains an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal model are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan, and to reflect the different Medicare coordination methods between the two plans. The manual rate models are intended to provide benchmark data and pricing capabilities, calculate per capita costs, and calculate actuarial values of different commercial health plans. Buck relied on the models, which were developed using industry data by actuaries and consultants at OptumInsight.

COVID-19

The potential impact of the ongoing COVID-19 pandemic on costs and liabilities was considered and no adjustments were made in setting the FY24 per capita claims cost assumption. A more detailed explanation on these adjustments is shown in Sections 4.2 and 4.3 and in the valuation report for the DB plan.

This report was prepared under the overall direction of David Kershner, who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Brett can be reached at 260-423-1072.

Respectfully submitted,

David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck, A Gallagher Company

Brett Hunter, ASA, EA, MAAA
Senior Consultant
Buck, A Gallagher Company

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

Robert Besenhofer, ASA, MAAA, FCA
Director
Buck, A Gallagher Company

Contents

Executive Summary

Overview

The State of Alaska Public Employees' Retirement System Defined Contribution Retirement (PERS DCR) Plan provides occupational death & disability and retiree medical benefits to eligible members hired after June 30, 2006 or who have elected participation in this plan. The Commissioner of the Department of Administration is responsible for administering the plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the plan. This report presents the results of the actuarial valuation of PERS DCR as of the valuation date of June 30, 2023.

Purpose

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

1. To determine the Employer contribution necessary to meet the Board's funding policy for the plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the plan and assess the funded status as an appropriate measure for determining actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. 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 DCR based on the plan provisions, membership data, assets, and actuarial methods and assumptions as of the valuation date.

Funded Status

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Status as of June 30 ($'s in 000's)		2022	2023
Occupational Death & Disability			
a.	Actuarial Accrued Liability	$ 14,952	$ 18,064
b.	Valuation Assets	62,938	73,068
c.	Unfunded Actuarial Accrued Liability, (a) - (b)	$ (47,986)	$ (55,004)
d.	Funded Ratio based on Valuation Assets, (b) ÷ (a)	420.9%	404.5%
e.	Fair Value of Assets	$ 61,458	$ 71,888
f.	Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	411.0%	398.0%

Funded Status as of June 30 ($'s in 000's)		2022	2023
Retiree Medical			
a.	Actuarial Accrued Liability	$ 169,396	$ 204,540
b.	Valuation Assets	212,638	246,953
c.	Unfunded Actuarial Accrued Liability, (a) - (b)	$ (43,242)	$ (42,413)
d.	Funded Ratio based on Valuation Assets, (b) ÷ (a)	125.5%	120.7%
e.	Fair Value of Assets	$ 207,686	$ 242,977
f.	Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	122.6%	118.8%

The key reasons for the change in the funded status are explained below. 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. Future experience is likely to vary from assumptions so there is potential for actuarial gains or losses.

1. Investment Experience

The asset valuation method recognizes 20% of the investment gain or loss each year, for a period of five years. The FY23 investment return based on fair value of assets was approximately 7.7% compared to the expected investment return of 7.25% (net of investment expenses). This resulted in a market asset gain of approximately $314,000 (occupational death & disability) and $1,061,000 (retiree medical). Due to the recognition of investment gains and losses over a 5-year period, the FY23 investment return based on actuarial value of assets was approximately 7.1%, which resulted in an actuarial asset loss of approximately $93,000 (occupational death & disability) and $274,000 (retiree medical).

2. Salary Increases

Salary increases for continuing active members during FY23 were higher than expected based on the valuation assumptions, resulting in a liability loss of approximately $296,000.

3. Demographic Experience

The number of active members increased 3.0% from 24,702 at June 30, 2022 to 25,448 at June 30, 2023. The average age of active members decreased from 41.35 to 41.30 and average credited service increased from 5.11 to 5.26 years.

The demographic experience gains/losses are shown on page 5.

4. Retiree Medical Claims Experience

Please refer to the State of Alaska Public Employees' Retirement System (PERS) Defined Benefit Plan Actuarial Valuation Report as of June 30, 2023 for a full description of the assumptions and costs of the retiree medical plan. Adjustments to these costs and assumptions are described in this report.

The recent claims experience described in Section 4.2 of this report (Section 5.2 of the PERS DB report) created an actuarial loss of approximately $12,317,000. The EGWP subsidy received by the plan during FY23 was approximately $161,000; the expected EGWP subsidy for FY23 was approximately $234,000.

5. Changes in Methods Since the Prior Valuation

There were no changes in actuarial methods since the prior valuation.

6. Changes in Assumptions Since the Prior Valuation

Healthcare claim costs are updated annually as described in Section 4.2. The amounts included in the Normal Cost for administrative expenses were updated based on the last two years of actual administrative expenses paid from plan assets. There were no other changes in actuarial assumptions since the prior valuation.

7. Changes in Benefit Provisions Since the Prior Valuation

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

Comparative Summary of Contribution Rates

Occupational Death & Disability		FY 2025	FY 2026
Peace Officer/Firefighter			
a.	Employer Normal Cost Rate	0.69%	0.69%
b.	Past Service Cost Rate	(0.20)%	(0.19)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.69%	0.69%
Others			
a.	Employer Normal Cost Rate	0.24%	0.24%
b.	Past Service Cost Rate	(0.22)%	(0.24)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.24%	0.24%

Retiree Medical		FY 2025	FY 2026
a.	Employer Normal Cost Rate	0.83%	0.86%
b.	Past Service Cost Rate	(0.14)%	(0.13)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.83%	0.86%

Total		FY 2025	FY 2026
Peace Officer/Firefighter			
a.	Employer Normal Cost Rate	1.52%	1.55%
b.	Past Service Cost Rate	(0.34)%	(0.32)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	1.52%	1.55%
Others			
a.	Employer Normal Cost Rate	1.07%	1.10%
b.	Past Service Cost Rate	(0.36)%	(0.37)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	1.07%	1.10%

The exhibit below shows the historical Board-adopted employer contribution rates for PERS DCR.

		Total Employer Contribution Rate		
Valuation Date	Fiscal Year	Occupational Death & Disability (PF / Others)	Retiree Medical	Total (PF / Others)
June 30, 2008	FY11	1.18% / 0.31%	0.55%	1.73% / 0.86%
June 30, 2009	FY12	0.97% / 0.11%	0.51%	1.48% / 0.62%
June 30, 2010	FY13	0.99% / 0.14%	0.48%	1.47% / 0.62%
June 30, 2011	FY14	1.14% / 0.20%	0.48%	1.62% / 0.68%
June 30, 2012	FY15	1.06% / 0.22%	1.66%	2.72% / 1.88%
June 30, 2013	FY16	1.05% / 0.22%	1.68%	2.73% / 1.90%
June 30, 2014	FY17	0.49% / 0.17%	1.18%	1.67% / 1.35%
June 30, 2015	FY18	0.43% / 0.16%	1.03%	1.46% / 1.19%
June 30, 2016	FY19	0.76% / 0.26%	0.94%	1.70% / 1.20%
June 30, 2017	FY20	0.72% / 0.26%	1.32%	2.04% / 1.58%
June 30, 2018	FY21	0.70% / 0.31%	1.27%	1.97% / 1.58%
June 30, 2019	FY22	0.68% / 0.31%	1.07%	1.75% / 1.38%
June 30, 2020	FY23	0.68% / 0.30%	1.10%	1.78% / 1.40%
June 30, 2021	FY24	0.68% / 0.30%	1.01%	1.69% / 1.31%
June 30, 2022	FY25	0.69% / 0.24%	0.83%	1.52% / 1.07%
June 30, 2023	FY26	TBD	TBD	TBD

Summary of Actuarial Accrued Liability Gain/(Loss)

The following table shows the FY23 gain/(loss) on actuarial accrued liability as of June 30, 2023 ($'s in 000's):

	Occupational Death & Disability	Retiree Medical
Retirement Experience	$ (1)	$ 1,195
Termination Experience	(64)	683
Disability Experience	2,294	293
Active Mortality Experience	1,641	(33)
Inactive Mortality Experience	(688)	(87)
Salary Increases	(296)	N/A
New Entrants	(689)	(1,306)
Rehires	(59)	(3,804)
Transfers Between P/F and Others	(68)	82
Metcalfe Transfers	136	3,879
Benefit Payments Different than Expected	240	644
Per Capita Claims Cost	N/A	(12,317)
Miscellaneous[1]	312	2,366
Total	$ 2,758	$ (8,405)

[1] Includes the effects of various data changes that are typical when new census data is received for the annual valuation, as well as other items that do not fit neatly into any of the other categories.

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

Peace Officer / Firefighter

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Occupational Death Benefits	$ 4,065	$ (110)
Occupational Disability Benefits	18,417	6,319
Medical and Prescription Drug Benefits	53,035	29,030
Medicare Part D Subsidy	(9,907)	(5,464)
Subtotal	$ 65,610	$ 29,775
Benefit Recipients		
Survivor Benefits	$ 1,028	$ 1,028
Disability Benefits	7,482	7,482
Medical and Prescription Drug Benefits	1,581	1,581
Medicare Part D Subsidy	(286)	(286)
Subtotal	$ 9,805	$ 9,805
Total	**$ 75,415**	**$ 39,580**
Total Occupational Death & Disability	**$ 30,992**	**$ 14,719**
Total Retiree Medical, Net of Part D Subsidy	**$ 44,423**	**$ 24,861**
Total Retiree Medical, Gross of Part D Subsidy	**$ 54,616**	**$ 30,611**

As of June 30, 2023	Normal Cost
Active Members	
Occupational Death Benefits	$ 516
Occupational Disability Benefits	1,373
Medical and Prescription Drug Benefits	2,558
Medicare Part D Subsidy	(476)
Subtotal	$ 3,971
Administrative Expense Load	
Occupational Death & Disability	$ 12
Retiree Medical	18
Subtotal	$ 30
Total	**$ 4,001**
Total Occupational Death & Disability	**$ 1,901**
Total Retiree Medical, Net of Part D Subsidy	**$ 2,100**
Total Retiree Medical, Gross of Part D Subsidy	**$ 2,576**

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

Others

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Occupational Death Benefits	$ 7,420	$ 610
Occupational Disability Benefits	15,614	1,686
Medical and Prescription Drug Benefits	304,947	208,797
Medicare Part D Subsidy	(61,224)	(42,113)
Subtotal	$ 266,757	$ 168,980
Benefit Recipients		
Survivor Benefits	$ 0	$ 0
Disability Benefits	1,049	1,049
Medical and Prescription Drug Benefits	16,374	16,374
Medicare Part D Subsidy	(3,379)	(3,379)
Subtotal	$ 14,044	$ 14,044
Total	**$ 280,801**	**$ 183,024**
Total Occupational Death & Disability	**$ 24,083**	**$ 3,345**
Total Retiree Medical, Net of Part D Subsidy	**$ 256,718**	**$ 179,679**
Total Retiree Medical, Gross of Part D Subsidy	**$ 321,321**	**$ 225,171**

As of June 30, 2023	Normal Cost
Active Members	
Occupational Death Benefits	$ 1,151
Occupational Disability Benefits	2,443
Medical and Prescription Drug Benefits	16,722
Medicare Part D Subsidy	(3,338)
Subtotal	$ 16,978
Administrative Expense Load	
Occupational Death & Disability	$ 22
Retiree Medical	33
Subtotal	$ 55
Total	**$ 17,033**
Total Occupational Death & Disability	**$ 3,616**
Total Retiree Medical, Net of Part D Subsidy	**$ 13,417**
Total Retiree Medical, Gross of Part D Subsidy	**$ 16,755**

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

All Members

As of June 30, 2023		Present Value of Projected Benefits		Actuarial Accrued (Past Service) Liability
Active Members				
Occupational Death Benefits	$	11,485	$	500
Occupational Disability Benefits		34,031		8,005
Medical and Prescription Drug Benefits		357,982		237,827
Medicare Part D Subsidy		(71,131)		(47,577)
Subtotal	$	332,367	$	198,755
Benefit Recipients				
Survivor Benefits	$	1,028	$	1,028
Disability Benefits		8,531		8,531
Medical and Prescription Drug Benefits		17,955		17,955
Medicare Part D Subsidy		(3,665)		(3,665)
Subtotal	$	23,849	$	23,849
Total	**$**	**356,216**	**$**	**222,604**
Total Occupational Death & Disability	**$**	**55,075**	**$**	**18,064**
Total Retiree Medical, Net of Part D Subsidy	**$**	**301,141**	**$**	**204,540**
Total Retiree Medical, Gross of Part D Subsidy	**$**	**375,937**	**$**	**255,782**

As of June 30, 2023		Normal Cost
Active Members		
Occupational Death Benefits	$	1,667
Occupational Disability Benefits		3,816
Medical and Prescription Drug Benefits		19,280
Medicare Part D Subsidy		(3,814)
Subtotal	$	20,949
Administrative Expense Load		
Occupational Death & Disability	$	34
Retiree Medical		51
Subtotal	$	85
Total	**$**	**21,034**
Total Occupational Death & Disability	**$**	**5,517**
Total Retiree Medical, Net of Part D Subsidy	**$**	**15,517**
Total Retiree Medical, Gross of Part D Subsidy	**$**	**19,331**

Section 1.2: Actuarial Contributions as of June 30, 2023 for FY26 ($'s in 000's)

Peace Officer / Firefighter

Normal Cost Rate	Occupational Death & Disability	Retiree Medical
1. Total Normal Cost	$ 1,901	$ 2,100
2. DCR Plan Rate Payroll Projected for FY24	276,452	276,452
3. Employer Normal Cost Rate, (1) ÷ (2)	0.69%	0.76%

Past Service Rate	Occupational Death & Disability	Retiree Medical
1. Actuarial Accrued Liability	$ 14,719	$ 24,861
2. Valuation Assets	21,294	30,016
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ (6,575)	$ (5,155)
4. Funded Ratio based on Valuation Assets	144.7%	120.7%
5. Past Service Cost Amortization Payment	(522)	(294)
6. DCR Plan Rate Payroll Projected for FY24	276,452	276,452
7. Past Service Cost Rate, (5) ÷ (6)	(0.19%)	(0.11%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.69%**	**0.76%**

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

Total Employer Contribution Rate as Percent of Total Payroll	Occupational Death & Disability	Retiree Medical
1. Total Normal Cost	$ 1,901	$ 2,100
2. Total DB and DCR Plan Rate Payroll Projected for FY24	411,674	411,674
3. Employer Normal Cost Rate, (1) ÷ (2)	0.46%	0.51%
4. Past Service Cost Amortization Payment	(522)	(294)
5. Past Service Cost Rate, (4) ÷ (2)	(0.13%)	(0.07%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.46%**	**0.51%**

Peace Officer / Firefighter

Schedule of Past Service Cost Amortizations - Occupational Death & Disability ($'s in 000's)

	Amortization Period		Balances		
Layer	**Date Created**	**Years Remaining**	**Initial**	**Outstanding**	**Beginning-of-Year Payment**
Initial Unfunded Liability	06/30/2007	9	$ (100)	$ (84)	$ (11)
FY08 Gain	06/30/2008	10	(586)	(508)	(61)
Change in Assumptions	06/30/2009	11	(104)	(94)	(10)
FY09 Loss	06/30/2009	11	446	402	45
Change in Assumptions	06/30/2010	12	79	73	8
FY10 Gain	06/30/2010	12	(282)	(264)	(28)
FY11 Loss	06/30/2011	13	73	68	7
FY12 Gain	06/30/2012	14	(349)	(340)	(32)
FY13 Gain	06/30/2013	15	(204)	(201)	(18)
Change in Assumptions	06/30/2014	16	(1,274)	(1,270)	(107)
PRPA Modification	06/30/2014	16	(91)	(90)	(8)
FY14 Gain	06/30/2014	16	(95)	(95)	(8)
FY15 Gain	06/30/2015	17	(664)	(665)	(54)
FY16 Loss	06/30/2016	18	4	4	0
FY17 Gain	06/30/2017	19	(525)	(530)	(40)
FY18 Gain	06/30/2018	20	(262)	(263)	(19)
Change in Assumptions	06/30/2018	20	(633)	(637)	(46)
FY19 Loss	06/30/2019	21	219	220	16
FY20 Gain	06/30/2020	22	(792)	(799)	(55)
FY21 Gain	06/30/2021	23	(1,842)	(1,854)	(124)
Change in Assumptions	06/30/2022	24	1,590	1,597	104
FY22 Gain	06/30/2022	24	(887)	(890)	(58)
FY23 Gain	06/30/2023	25	(355)	(355)	(23)
Total				**$ (6,575)**	**$ (522)**

Peace Officer / Firefighter

Schedule of Past Service Cost Amortizations - Retiree Medical ($'s in 000's)

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining	Balances: Initial	Balances: Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (21)	$ (19)	$ (2)
Change in Assumptions	06/30/2008	10	17	13	2
FY08 Gain	06/30/2008	10	(62)	(55)	(7)
Change in Assumptions	06/30/2009	11	(8)	(8)	(1)
FY09 Gain	06/30/2009	11	(38)	(35)	(4)
Change in Assumptions	06/30/2010	12	41	38	4
FY10 Gain	06/30/2010	12	(46)	(40)	(4)
FY11 Loss	06/30/2011	13	70	65	6
Change in Assumptions	06/30/2012	14	3,085	2,999	279
FY12 Gain	06/30/2012	14	(273)	(265)	(25)
FY13 Loss	06/30/2013	15	880	869	77
Change in Assumptions	06/30/2014	16	(3,034)	(3,022)	(255)
FY14 Loss	06/30/2014	16	1,213	1,209	102
FY15 Gain	06/30/2015	17	(712)	(714)	(58)
EGWP Gain	06/30/2016	18	(1,675)	(1,688)	(132)
FY16 Loss	06/30/2016	18	1,116	1,125	88
Change in Assumptions	06/30/2017	19	2,244	2,260	170
FY17 Gain	06/30/2017	19	(50)	(51)	(4)
FY18 Gain	06/30/2018	20	(231)	(233)	(17)
Change in Assumptions/Methods	06/30/2018	20	(649)	(652)	(48)
FY19 Gain	06/30/2019	21	(1,291)	(1,300)	(92)
Change in Assumptions	06/30/2020	22	1,116	1,125	77
FY20 Gain	06/30/2020	22	(1,082)	(1,091)	(75)
Prescription Drug Plan Changes	06/30/2021	23	(235)	(237)	(16)
FY21 Gain	06/30/2021	23	(1,726)	(1,739)	(116)
Change in Assumptions	06/30/2022	24	(1,769)	(1,776)	(116)
FY22 Gain	06/30/2022	24	(1,976)	(1,984)	(130)
FY23 Loss	06/30/2023	25	51	51	3
Total				**$ (5,155)**	**$ (294)**

Section 1.2: Actuarial Contributions as of June 30, 2023 for FY26 ($'s in 000's)

Others

Normal Cost Rate		Occupational Death & Disability		Retiree Medical
1. Total Normal Cost	$	3,616	$	13,417
2. DCR Plan Rate Payroll Projected for FY24		1,519,626		1,519,626
3. Employer Normal Cost Rate, (1) ÷ (2)		0.24%		0.88%

Past Service Rate				
1. Actuarial Accrued Liability	$	3,345	$	179,679
2. Valuation Assets		51,774		216,937
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$	(48,429)	$	(37,258)
4. Funded Ratio based on Valuation Assets		1,547.8%		120.7%
5. Past Service Cost Amortization Payment		(3,573)		(2,003)
6. DCR Plan Rate Payroll Projected for FY24		1,519,626		1,519,626
7. Past Service Cost Rate, (5) ÷ (6)		(0.24%)		(0.13%)
Total Employer Contribution Rate, not less than Normal Cost Rate		**0.24%**		**0.88%**

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

Total Employer Contribution Rate as Percent of Total Payroll		Occupational Death & Disability		Retiree Medical
1. Total Normal Cost	$	3,616	$	13,417
2. Total DB and DCR Plan Rate Payroll Projected for FY24		2,177,209		2,177,209
3. Employer Normal Cost Rate, (1) ÷ (2)		0.17%		0.61%
4. Past Service Cost Amortization Payment		(3,573)		(2,003)
5. Past Service Cost Rate, (4) ÷ (2)		(0.16%)		(0.10%)
Total Employer Contribution Rate, not less than Normal Cost Rate		**0.17%**		**0.61%**

Others

Schedule of Past Service Cost Amortizations - Occupational Death & Disability ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (40)	$ (34)	$ (4)
FY08 Gain	06/30/2008	10	(318)	(278)	(34)
Change in Assumptions	06/30/2009	11	(92)	(83)	(10)
FY09 Gain	06/30/2009	11	(1,924)	(1,732)	(193)
Change in Assumptions	06/30/2010	12	24	22	2
FY10 Gain	06/30/2010	12	(994)	(923)	(96)
FY11 Gain	06/30/2011	13	(1,184)	(1,127)	(111)
FY12 Gain	06/30/2012	14	(1,233)	(1,197)	(111)
FY13 Gain	06/30/2013	15	(779)	(769)	(68)
Change in Assumptions	06/30/2014	16	(51)	(49)	(5)
PRPA Modification	06/30/2014	16	(27)	(27)	(2)
FY14 Gain	06/30/2014	16	(2,003)	(1,993)	(169)
FY15 Gain	06/30/2015	17	(1,850)	(1,855)	(150)
FY16 Gain	06/30/2016	18	(2,361)	(2,376)	(185)
FY17 Gain	06/30/2017	19	(2,377)	(2,393)	(180)
FY18 Gain	06/30/2018	20	(2,590)	(2,603)	(190)
Change in Assumptions	06/30/2018	20	(272)	(274)	(20)
FY19 Gain	06/30/2019	21	(3,984)	(4,012)	(284)
FY20 Gain	06/30/2020	22	(4,803)	(4,841)	(333)
FY21 Gain	06/30/2021	23	(7,268)	(7,319)	(490)
Change in Assumptions	06/30/2022	24	(368)	(370)	(24)
FY22 Gain	06/30/2022	24	(7,196)	(7,226)	(472)
FY23 Gain	06/30/2023	25	(6,970)	(6,970)	(444)
Total				**$ (48,429)**	**$ (3,573)**

Others

Schedule of Past Service Cost Amortizations - Retiree Medical ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (335)	$ (279)	$ (37)
Change in Assumptions	06/30/2008	10	165	145	17
FY08 Gain	06/30/2008	10	(702)	(607)	(73)
Change in Assumptions	06/30/2009	11	(122)	(109)	(12)
FY09 Gain	06/30/2009	11	(438)	(395)	(44)
Change in Assumptions	06/30/2010	12	(572)	(531)	(55)
FY10 Loss	06/30/2010	12	579	534	56
FY11 Loss	06/30/2011	13	820	783	77
Change in Assumptions	06/30/2012	14	25,180	24,463	2,275
FY12 Loss	06/30/2012	14	1,451	1,408	131
FY13 Loss	06/30/2013	15	9,974	9,833	870
Change in Assumptions	06/30/2014	16	(21,822)	(21,744)	(1,839)
FY14 Loss	06/30/2014	16	7,002	6,977	590
FY15 Gain	06/30/2015	17	(8,726)	(8,753)	(710)
EGWP Gain	06/30/2016	18	(17,884)	(17,993)	(1,404)
FY16 Loss	06/30/2016	18	10,367	10,430	814
Change in Assumptions	06/30/2017	19	21,288	21,428	1,614
FY17 Gain	06/30/2017	19	(1,658)	(1,668)	(125)
FY18 Loss	06/30/2018	20	118	119	9
Change in Assumptions/Methods	06/30/2018	20	(8,993)	(9,033)	(658)
FY19 Gain	06/30/2019	21	(10,841)	(10,921)	(772)
Change in Assumptions	06/30/2020	22	6,369	6,420	442
FY20 Gain	06/30/2020	22	(6,288)	(6,338)	(436)
Prescription Drug Plan Changes	06/30/2021	23	(1,794)	(1,806)	(121)
FY21 Gain	06/30/2021	23	(13,896)	(13,990)	(937)
Change in Assumptions	06/30/2022	24	(20,579)	(20,663)	(1,349)
FY22 Gain	06/30/2022	24	(6,360)	(6,386)	(417)
FY23 Loss	06/30/2023	25	1,418	1,418	91
Total				**$ (37,258)**	**$ (2,003)**

Section 1.2: Actuarial Contributions as of June 30, 2023 for FY26 ($'s in 000's)

All Members

Normal Cost Rate	Occupational Death & Disability	Retiree Medical
1. Total Normal Cost	$ 5,517	$ 15,517
2. DCR Plan Rate Payroll Projected for FY24	1,796,078	1,796,078
3. Employer Normal Cost Rate, (1) ÷ (2)	0.31%	0.86%

Past Service Rate		
1. Actuarial Accrued Liability	$ 18,064	$ 204,540
2. Valuation Assets	73,068	246,953
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ (55,004)	$ (42,413)
4. Funded Ratio based on Valuation Assets	404.5%	120.7%
5. Past Service Cost Amortization Payment	(4,095)	(2,297)
6. DCR Plan Rate Payroll Projected for FY24	1,796,078	1,796,078
7. Past Service Cost Rate, (5) ÷ (6)	(0.23%)	(0.13%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.31%**	**0.86%**

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

Total Employer Contribution Rate as Percent of Total Payroll	Occupational Death & Disability	Retiree Medical
1. Total Normal Cost	$ 5,517	$ 15,517
2. Total DB and DCR Plan Rate Payroll Projected for FY24	2,588,883	2,588,883
3. Employer Normal Cost Rate, (1) ÷ (2)	0.21%	0.60%
4. Past Service Cost Amortization Payment	(4,095)	(2,297)
5. Past Service Cost Rate, (4) ÷ (2)	(0.16%)	(0.09%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.21%**	**0.60%**

All Members

Schedule of Past Service Cost Amortizations - Occupational Death & Disability ($'s in 000's)

Layer	Amortization Period Date Created	Amortization Period Years Remaining	Balances Initial	Balances Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (140)	$ (118)	$ (15)
FY08 Gain	06/30/2008	10	(904)	(786)	(95)
Change in Assumptions	06/30/2009	11	(196)	(177)	(20)
FY09 Gain	06/30/2009	11	(1,478)	(1,330)	(148)
Change in Assumptions	06/30/2010	12	103	95	10
FY10 Gain	06/30/2010	12	(1,276)	(1,187)	(124)
FY11 Gain	06/30/2011	13	(1,111)	(1,059)	(104)
FY12 Gain	06/30/2012	14	(1,582)	(1,537)	(143)
FY13 Gain	06/30/2013	15	(983)	(970)	(86)
Change in Assumptions	06/30/2014	16	(1,325)	(1,319)	(112)
PRPA Modification	06/30/2014	16	(118)	(117)	(10)
FY14 Gain	06/30/2014	16	(2,098)	(2,088)	(177)
FY15 Gain	06/30/2015	17	(2,514)	(2,520)	(204)
FY16 Gain	06/30/2016	18	(2,357)	(2,372)	(185)
FY17 Gain	06/30/2017	19	(2,902)	(2,923)	(220)
FY18 Gain	06/30/2018	20	(2,852)	(2,866)	(209)
Change in Assumptions	06/30/2018	20	(905)	(911)	(66)
FY19 Gain	06/30/2019	21	(3,765)	(3,792)	(268)
FY20 Gain	06/30/2020	22	(5,595)	(5,640)	(388)
FY21 Gain	06/30/2021	23	(9,110)	(9,173)	(614)
Change in Assumptions	06/30/2022	24	1,222	1,227	80
FY22 Gain	06/30/2022	24	(8,083)	(8,116)	(530)
FY23 Gain	06/30/2023	25	(7,325)	(7,325)	(467)
Total				**$ (55,004)**	**$ (4,095)**

All Members

Schedule of Past Service Cost Amortizations - Retiree Medical ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (356)	$ (298)	$ (39)
Change in Assumptions	06/30/2008	10	182	158	19
FY08 Gain	06/30/2008	10	(764)	(662)	(80)
Change in Assumptions	06/30/2009	11	(130)	(117)	(13)
FY09 Gain	06/30/2009	11	(476)	(430)	(48)
Change in Assumptions	06/30/2010	12	(531)	(493)	(51)
FY10 Loss	06/30/2010	12	533	494	52
FY11 Loss	06/30/2011	13	890	848	83
Change in Assumptions	06/30/2012	14	28,265	27,462	2,554
FY12 Loss	06/30/2012	14	1,178	1,143	106
FY13 Loss	06/30/2013	15	10,854	10,702	947
Change in Assumptions	06/30/2014	16	(24,856)	(24,766)	(2,094)
FY14 Loss	06/30/2014	16	8,215	8,186	692
FY15 Gain	06/30/2015	17	(9,438)	(9,467)	(768)
EGWP Gain	06/30/2016	18	(19,559)	(19,681)	(1,536)
FY16 Loss	06/30/2016	18	11,483	11,555	902
Change in Assumptions	06/30/2017	19	23,532	23,688	1,784
FY17 Gain	06/30/2017	19	(1,708)	(1,719)	(129)
FY18 Gain	06/30/2018	20	(113)	(114)	(8)
Change in Assumptions/Methods	06/30/2018	20	(9,642)	(9,685)	(706)
FY19 Gain	06/30/2019	21	(12,132)	(12,221)	(864)
Change in Assumptions	06/30/2020	22	7,485	7,545	519
FY20 Gain	06/30/2020	22	(7,370)	(7,429)	(511)
Prescription Drug Plan Changes	06/30/2021	23	(2,029)	(2,043)	(137)
FY21 Gain	06/30/2021	23	(15,622)	(15,729)	(1,053)
Change in Assumptions	06/30/2022	24	(22,348)	(22,439)	(1,465)
FY22 Gain	06/30/2022	24	(8,336)	(8,370)	(547)
FY23 Loss	06/30/2023	25	1,469	1,469	94
Total				**$ (42,413)**	**$ (2,297)**

Section 1.3: Actuarial Gain/(Loss) for FY23 ($'s in 000's)

	Occupational Death & Disability	Retiree Medical
1. Expected Actuarial Accrued Liability		
a. Actuarial Accrued Liability as of June 30, 2022	$ 14,952	$ 169,396
b. Normal Cost	5,068	13,669
c. Interest on (a) and (b) at 7.25%	1,451	13,272
d. Employer Group Waiver Plan	0	161
e. Benefit Payments	(625)	(356)
f. Interest on (d) and (e) at 7.25%, adjusted for timing	(24)	(7)
g. Experience Study Assumptions/Methods	0	0
h. Expected Actuarial Accrued Liability as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g)	$ 20,822	$ 196,135
2. Actual Actuarial Accrued Liability as of June 30, 2023	18,064	204,540
3. Liability Gain/(Loss), (1)(h) - (2)	**$ 2,758**	**$ (8,405)**
4. Expected Actuarial Asset Value		
a. Actuarial Asset Value as of June 30, 2022	$ 62,938	$ 212,638
b. Interest on (a) at 7.25%	4,563	15,416
c. Employer Contributions	6,126	18,753
d. Employer Group Waiver Plan	0	161
e. Interest on (c) and (d) at 7.25%, adjusted for timing	218	674
f. Benefit Payments	(625)	(356)
g. Administrative Expenses	(34)	(45)
h. Interest on (f) and (g) at 7.25%, adjusted for timing	(25)	(14)
i. Expected Actuarial Asset Value as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ 73,161	$ 247,227
5. Actuarial Asset Value as of June 30, 2023	73,068	246,953
6. Actuarial Asset Gain/(Loss), (5) - (4)(i)	**$ (93)**	**$ (274)**
7. Total Actuarial Gain/(Loss), (3) + (6)	**$ 2,665**	**$ (8,679)**
8. Contribution Gain/(Loss)	**$ 4,660**	**$ 7,215**
9. Administrative Expense Gain/(Loss)	**$ -**	**$ (5)**
10. FY23 Gain/(Loss), (7) + (8) + (9)	**$ 7,325**	**$ (1,469)**

Section 1.4: History of Unfunded Liability and Funded Ratio ($'s in 000's)

Occupational Death & Disability

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2007	$ 48	$ 188	391.7%	$ (140)
June 30, 2008	242	1,288	532.2%	(1,046)
June 30, 2009	403	3,138	778.7%	(2,735)
June 30, 2010	853	4,801	562.8%	(3,948)
June 30, 2011	1,949	7,049	361.7%	(5,100)
June 30, 2012	2,412	9,142	379.0%	(6,730)
June 30, 2013	3,603	11,373	315.7%	(7,770)
June 30, 2014	3,627	14,995	413.4%	(11,368)
June 30, 2015	5,049	19,014	376.6%	(13,965)
June 30, 2016	6,763	23,176	342.7%	(16,413)
June 30, 2017	7,540	26,944	357.3%	(19,404)
June 30, 2018	7,713	30,961	401.4%	(23,248)
June 30, 2019	9,774	36,701	375.5%	(26,927)
June 30, 2020	10,634	43,029	404.6%	(32,395)
June 30, 2021	11,740	53,075	452.1%	(41,335)
June 30, 2022	14,952	62,938	420.9%	(47,986)

Retiree Medical

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2007	$ 711	$ 1,067	150.1%	$ (356)
June 30, 2008	1,776	2,719	153.1%	(943)
June 30, 2009	3,913	5,475	139.9%	(1,562)
June 30, 2010	7,185	8,767	122.0%	(1,582)
June 30, 2011	11,302	12,009	106.3%	(707)
June 30, 2012	44,509	15,773	35.4%	28,736
June 30, 2013	60,282	20,336	33.7%	39,946
June 30, 2014	50,217	26,466	52.7%	23,751
June 30, 2015	58,683	44,188	75.3%	14,495
June 30, 2016	70,289	63,851	90.8%	6,438
June 30, 2017	109,703	81,559	74.3%	28,144
June 30, 2018	118,598	100,097	84.4%	18,501
June 30, 2019	124,946	118,783	95.1%	6,163
June 30, 2020	150,701	144,747	96.0%	5,954
June 30, 2021	168,472	180,536	107.2%	(12,064)
June 30, 2022	169,396	212,638	125.5%	(43,242)

Section 2: Plan Assets

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

As of June 30, 2023	Occupational Death & Disability	Retiree Medical	Allocation Percent
Cash and Short-Term Investments			
- Cash and Cash Equivalents	$ 937	$ 3,111	1.3%
- Subtotal	$ 937	$ 3,111	1.3%
Fixed Income Investments			
- Domestic Fixed Income Pool	$ 13,036	$ 44,081	18.2%
- International Fixed Income Pool	0	0	0.0%
- Tactical Fixed Income Pool	0	0	0.0%
- High Yield Pool	0	0	0.0%
- Treasury Inflation Protection Pool	0	0	0.0%
- Emerging Debt Pool	0	0	0.0%
- Subtotal	$ 13,036	$ 44,081	18.2%
Equity Investments			
- Domestic Equity Pool	$ 17,727	$ 59,940	24.7%
- International Equity Pool	10,088	34,110	14.1%
- Private Equity Pool	11,631	39,328	16.2%
- Emerging Markets Equity Pool	2,207	7,461	3.1%
- Alternative Equity Strategies	5,826	19,704	8.1%
- Subtotal	$ 47,479	$ 160,543	66.2%
Other Investments			
- Real Estate Pool	$ 4,851	$ 16,402	6.8%
- Other Investments Pool	5,397	18,251	7.5%
- Absolute Return Pool	0	0	0.0%
- Other Assets	0	0	0.0%
- Subtotal	$ 10,248	$ 34,653	14.3%
Total Cash and Investments	$ 71,700	$ 242,388	100.0%
Net Accrued Receivables	188	589	
Net Assets	$ 71,888	$ 242,977	
Peace Officer / Firefighter	$ 20,950	N/A	
Others	50,938	N/A	
All Members	$ 71,888	$ 242,977	

Section 2.2: Changes in Fair Value of Assets During FY23 ($'s in 000's)

Fiscal Year 2023	Occupational Death & Disability	Retiree Medical
1. Fair Value of Assets as of June 30, 2022	$ 61,458	$ 207,686
2. Additions:		
a. Member Contributions	$ 0	$ 0
b. Employer Contributions	6,126	18,753
c. Interest and Dividend Income	1,039	3,516
d. Net Appreciation/(Depreciation) in Fair Value of Investments	4,103	13,864
e. Employer Group Waiver Plan	0	161
f. Other	0	2
g. Total Additions	$ 11,268	$ 36,296
3. Deductions:		
a. Medical Benefits	$ 0	$ 356
b. Death & Disability Benefits	625	0
c. Investment Expenses	179	604
d. Administrative Expenses	34	45
e. Total Deductions	$ 838	$ 1,005
4. Fair Value of Assets as of June 30, 2023	$ 71,888	$ 242,977
5. Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	7.7%	7.7%

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

The actuarial value of assets and the fair value were $0 at June 30, 2006. Investment gains and losses are recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

	Occupational Death & Disability	Retiree Medical
1. Investment Gain/(Loss) for FY23		
a. Fair Value as of June 30, 2022	$ 61,458	$ 207,686
b. Contributions	6,126	18,753
c. Employer Group Waiver Plan	0	161
d. Benefit Payments	625	356
e. Administrative Expenses	34	45
f. Actual Investment Return (net of investment expenses)	4,963	16,778
g. Expected Return Rate (net of investment expenses)	7.25%	7.25%
h. Expected Return	4,649	15,717
i. Investment Gain/(Loss) for the Year (f) - (h)	314	1,061
2. Actuarial Value as of June 30, 2023		
a. Fair Value as of June 30, 2023	$ 71,888	$ 242,977
b. Deferred Investment Gain/(Loss)	(1,180)	(3,976)
c. Preliminary Actuarial Value as of June 30, 2023, (a) - (b)	73,068	246,953
d. Upper Limit: 120% of Fair Value as of June 30, 2023	86,265	291,572
e. Lower Limit: 80% of Fair Value as of June 30, 2023	57,511	194,382
f. Actuarial Value at June 30, 2023, (c) limited by (d) and (e)	73,068	246,953
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	101.6%	101.6%
4. Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses	7.1%	7.1%
5. Actuarial Value Allocation[1]		
a. Peace Officer / Firefighter	$ 21,294	$ 30,016
b. Others	51,774	216,937
c. All Members	$ 73,068	$ 246,953

[1] Occupational death & disability allocated using fair value of assets. Retiree medical allocated based on retiree medical actuarial accrued liability.

The tables below show the development of the gains/(losses) to be recognized in the current year ($'s in 000's):

Occupational Death & Disability				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (370)	$ (296)	$ (74)	$ 0
June 30, 2020	(1,178)	(708)	(236)	(234)
June 30, 2021	9,901	3,960	1,980	3,961
June 30, 2022	(8,596)	(1,719)	(1,719)	(5,158)
June 30, 2023	314	0	63	251
Total	**$ 71**	**$ 1,237**	**$ 14**	**$ (1,180)**

Retiree Medical				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (1,212)	$ (968)	$ (244)	$ 0
June 30, 2020	(3,825)	(2,295)	(765)	(765)
June 30, 2021	33,513	13,406	6,703	13,404
June 30, 2022	(29,106)	(5,821)	(5,821)	(17,464)
June 30, 2023	1,061	0	212	849
Total	**$ 431**	**$ 4,322**	**$ 85**	**$ (3,976)**

Section 2.4: Historical Asset Rates of Return

	Actuarial Value		Fair Value	
Year Ending	Annual	Cumulative	Annual	Cumulative
June 30, 2008	5.0%	5.0%	(7.1%)	(7.1%)
June 30, 2009	2.4%	3.7%	(13.0%)	(10.1%)
June 30, 2010	3.9%	3.8%	6.6%	(4.8%)
June 30, 2011	7.3%	4.6%	19.2%	0.7%
June 30, 2012	6.9%	5.1%	2.0%	0.9%
June 30, 2013	7.9%	5.5%	11.8%	2.7%
June 30, 2014	10.9%	6.3%	18.0%	4.7%
June 30, 2015	9.5%	6.7%	3.3%	4.6%
June 30, 2016	6.7%	6.7%	0.2%	4.1%
June 30, 2017	7.8%	6.8%	12.6%	4.9%
June 30, 2018	7.9%	6.9%	7.9%	5.2%
June 30, 2019	6.6%	6.9%	6.2%	5.2%
June 30, 2020	6.4%	6.8%	4.3%	5.2%
June 30, 2021	11.3%	7.2%	29.6%	6.7%
June 30, 2022	8.2%	7.2%	(6.3%)	5.8%
June 30, 2023	7.1%	7.2%	7.7%	5.9%

Rates of return are shown based on combined assets for OD&D and Retiree Medical.

Cumulative returns are since fiscal year ending June 30, 2008.

Section 3: Member Data

Section 3.1: Summary of Members Included

As of June 30	2019	2020	2021	2022	2023
Active Members - Peace Officer / Firefighter					
1. Number	2,038	2,228	2,350	2,482	2,548 [1]
2. Average Age	35.76	35.92	36.40	36.65	36.84
3. Average Credited Service	5.09	5.36	5.71	5.91	6.22
4. Average Entry Age	30.67	30.56	30.69	30.74	30.62
5. Average Annual Earnings	$ 84,593	$ 87,365	$ 90,022	$ 95,429	$ 103,066
Active Members - Others					
1. Number	19,864	20,695	21,583	22,220	22,900 [2]
2. Average Age	41.49	41.78	41.79	41.87	41.80
3. Average Credited Service	4.25	4.59	4.84	5.02	5.15
4. Average Entry Age	37.24	37.19	36.95	36.85	36.65
5. Average Annual Earnings	$ 58,223	$ 59,603	$ 61,129	$ 62,371	$ 65,746
Active Members - Total					
1. Number	21,902	22,923	23,933	24,702	25,448 [3]
2. Average Age	40.96	41.21	41.26	41.35	41.30
3. Average Credited Service	4.33	4.66	4.93	5.11	5.26
4. Average Entry Age	36.63	36.55	36.33	36.24	36.04
5. Average Annual Earnings	$ 60,676	$ 62,302	$ 63,966	$ 65,693	$ 69,483
Disabilitants and Beneficiaries (Occupational Death & Disability)					
1. Number	16	15	14	16	18
2. Average Age	42.28	44.66	47.27	46.22	46.69
3. Average Monthly Death & Disability Benefit	$ 2,404	$ 2,698	$ 2,601	$ 2,791	$ 3,161
Retirees, Surviving Spouses, and Dependent Spouses (Retiree Medical)					
1. Number	43	66	93	166	241
2. Average Age	69.72	68.85	69.75	69.46	69.45
Total Number of Members	**21,961**	**23,004**	**24,040**	**24,884**	**25,707**

Average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

[1] Includes 2,122 male active members and 426 female active members.

[2] Includes 9,965 male active members and 12,935 female active members.

[3] Includes 12,087 male active members and 13,361 female active members.

Section 3.2: Age and Service Distribution of Active Members

Annual Earnings by Age

Age	Number	Total Annual Earnings	Average Annual Earnings
0 - 19	143	$ 5,378,986	$ 37,615
20 - 24	1,517	75,148,590	49,538
25 - 29	3,053	185,336,531	60,706
30 - 34	4,164	286,365,469	68,772
35 - 39	4,141	310,775,487	75,048
40 - 44	3,475	262,666,273	75,587
45 - 49	2,628	193,235,695	73,530
50 - 54	2,343	169,026,128	72,141
55 - 59	1,857	132,227,768	71,205
60 - 64	1,443	99,829,595	69,182
65 - 69	515	36,480,948	70,837
70 - 74	130	9,363,700	72,028
75+	39	2,351,172	60,286
Total	**25,448**	**$1,768,186,342**	**$ 69,482**

Annual Earnings by Credited Service

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	4,585	$ 235,247,729	$ 51,308
1	3,411	200,557,849	58,797
2	2,479	158,155,465	63,798
3	2,107	139,685,242	66,296
4	2,030	141,460,353	69,685
0 - 4	**14,612**	**$ 875,106,638**	**$ 59,890**
5 - 9	6,347	489,054,190	77,053
10 - 14	3,614	315,892,775	87,408
15 - 19	874	88,031,212	100,722
20 - 24	1	101,527	101,527
25 - 29	0	0	0
30 - 34	0	0	0
35 - 39	0	0	0
40+	0	0	0
Total	**25,448**	**$1,768,186,342**	**$ 69,482**

Years of Credited Service by Age

	Years of Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
0 - 19	143	0	0	0	0	0	0	0	0	143
20 - 24	1,508	9	0	0	0	0	0	0	0	1,517
25 - 29	2,664	382	7	0	0	0	0	0	0	3,053
30 - 34	2,761	1,153	248	2	0	0	0	0	0	4,164
35 - 39	2,054	1,227	731	129	0	0	0	0	0	4,141
40 - 44	1,623	975	683	194	0	0	0	0	0	3,475
45 - 49	1,212	741	529	146	0	0	0	0	0	2,628
50 - 54	1,052	685	473	133	0	0	0	0	0	2,343
55 - 59	760	546	427	124	0	0	0	0	0	1,857
60 - 64	582	418	343	100	0	0	0	0	0	1,443
65 - 69	188	167	131	28	1	0	0	0	0	515
70 - 74	52	28	36	14	0	0	0	0	0	130
75+	13	16	6	4	0	0	0	0	0	39
Total	**14,612**	**6,347**	**3,614**	**874**	**1**	**0**	**0**	**0**	**0**	**25,448**

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

Section 3.3: Member Data Reconciliation

	Actives	Retirees and Surviving Spouses	Dependent Spouses	OD&D Disabilitants	OD&D Beneficiaries	Total
As of June 30, 2022 [1]	**24,702**	**124**	**42**	**15**	**1**	**24,884**
New Entrants	4,225	0	0	0	0	4,225
Rehires	787	0	0	0	0	787
Vested Terminations	(768)	0	0	0	0	(768)
Non-Vested Terminations	(2,366)	0	0	0	0	(2,366)
Refund of Contributions	(778)	0	0	0	0	(778)
Disability Retirements	(1)	0	0	2	0	1
Age Retirements	(55)	55	25	0	0	25
Deaths With Beneficiary	(29)	0	0	0	0	(29)
Deaths Without Beneficiary	(2)	0	0	0	1	(1)
Converted To/From DB Plan	(304)	0	0	0	0	(304)
Added Dependent Coverage	0	0	5	0	0	5
Dropped Dependent Coverage	0	0	(1)	0	0	(1)
Transfers In/Out	22	0	0	(1)	0	21
Data Corrections	15	(9)	0	0	0	6
Net Change	**746**	**46**	**29**	**1**	**1**	**823**
As of June 30, 2023 [2]	**25,448**	**170**	**71**	**16**	**2**	**25,707**

[1] 94 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

[2] 90 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

Section 3.4: Schedule of Active Member Data

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
June 30, 2023	25,448	$ 1,768,186	$ 69,482	5.8%	151
June 30, 2022	24,702	1,622,742	65,693	2.7%	151
June 30, 2021	23,933	1,530,905	63,966	2.7%	151
June 30, 2020	22,923	1,428,140	62,302	2.7%	153
June 30, 2019	21,902	1,328,934	60,676	2.3%	155
June 30, 2018	20,378	1,209,152	59,336	2.3%	155
June 30, 2017	19,171	1,112,398	58,025	1.5%	157
June 30, 2016	18,215	1,041,437	57,175	3.4%	157
June 30, 2015	17,098	945,496	55,299	1.9%	159
June 30, 2014	15,800	857,150	54,250	3.7%	159

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

Note: The number of participating employers as of June 30, 2022 was changed from 150 to 151 based on the audited financial statements.

Section 3.5: Active Member Payroll Reconciliation

Payroll Field	Payroll Data (000's)
a) DRB actual reported salaries FY23 in employer list	$ 1,652,928
b) DRB actual reported salaries FY23 in valuation data	1,577,264
c) Annualized valuation data	1,768,186
d) Valuation payroll as of June 30, 2023	1,857,424
e) Rate payroll for FY24	1,796,078

a) Actual reported salaries from DRB employer listing showing all payroll paid during FY23, including those who were not active as of June 30, 2023
b) Payroll from valuation data for people who are in active status as of June 30, 2023
c) Payroll from (b) annualized for both new entrants and part-timers
d) Payroll from (c) with one year of salary scale applied to estimate salaries payable for the upcoming year
e) Payroll from (d) with the part-timer annualization removed

Section 4: Basis of the Actuarial Valuation

Section 4.1: Summary of Plan Provisions

Effective Date

July 1, 2006, with amendments through June 30, 2023.

Administration of Plan

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

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

Employers Included

Currently there are 151 employers participating in PERS DCR, including the State of Alaska, and 150 political subdivisions and public organizations.

Membership

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

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

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

Member Contributions

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

Retiree Medical Benefits

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

Plan Design Feature	In-Network[1]	Out-of-Network[1 2]
Deductible (single / family)	$300 / $600	
Medical services (participant share)	20%	40%
Emergency Room Copay (non-emergent use)	$100	$100
Medical Out-of-Pocket Maximum (single / family, including deductible)	$1,500 / $3,000	$3,000 / $6,000
Medicare Coordination	Exclusion	Exclusion
Pharmacy	No Deductible	No Deductible
Retail Generic (per 30-day fill)	20% $10 min / $50 max	
Retail Non-Formulary Brand (per 30-day fill)	25% $25 min / $75 max	40%
Retail Formulary Brand (per 30-day fill)	35% $80 min / $150 max	
Mail-Order Generic	$20 copay	
Mail-Order Non-Formulary Brand	$50 copay	40%
Mail-Order Formulary Brand	$100 copay	
Pharmacy Out-of-Pocket Max (single / family)	$1,000 / $2,000	
Medicare Pharmacy Arrangement	Retiree Drug Subsidy / Employer Group Waiver Plan effective 1/1/2019	
Wellness / Preventative	100% covered, not subject to deductible	20%, after deductible

1 Section 1.1 of the AlaskaCare Defined Contribution Retiree Benefit Plan states that this health plan shall be updated from time to time to reflect changes in benefits, including annual adjustments to the premium, deductible, coinsurance, medical out-of-pocket limit, and prescription drug out-of-pocket limit.

2 OON applies only to non-Medicare eligible participants.

- Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree medical plan value to the DB retiree medical plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits to estimate corresponding values for the DCR retiree medical plan design. These factors are noted in Section 4.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. The estimated 2024 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates). We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost so no further adjustment was needed for the DCR retiree medical plan. The medical network differential is reflected in the relative plan value adjustments.
- Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan.
- The retiree medical plan's coverage is supplemental to Medicare. Medicare coordination is described in the DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage is through a Medicare Part D EGWP arrangement.
- The premium for Medicare-eligible retirees will be based on the member's years of service. The percentage of premium paid by the member is as follows:

Years of Service	Percent of Premium Paid by Member
< 15	30%
15 – 19	25%
20 – 24	20%
25 – 29	15%
30+	10%

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

Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- For Peace Officer and Firefighters there is a Disability Benefit Adjustment such that:
  - The disability benefit is increased by 75% of the cost-of-living increase in the preceding calendar year or 9%, whichever is less.
  - At the time the disabled member retires, the retirement benefit will be increased by a percentage equal to the total cumulative percentage that has been applied to the disability benefit. Monthly annuity payments are made from the member's contribution balance until the fund is exhausted, at which the plan pays all remaining payments.
- For Others, there is no increase in the occupational disability benefit after commencement.
- Member earns service while on occupational disability.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service for Others members or 25 years of service for Peace Officer/Firefighter members.
- Peace Officer/Firefighter members may select the defined contribution account or the monthly benefit payable as if they were retiring under Tier 3 (service continues during disability, final average salary is as of date of disability), but with payments first made from the member's DC account until it's exhausted.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Occupational Death Benefits

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

Changes in Benefit Provisions Valued Since the Prior Valuation

There were no changes in benefit provisions since the prior valuation.

Section 4.2: Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006, and was modified as part of the experience study for the period July 1, 2013 to June 30, 2017. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

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

Actuarial Cost Method

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method, level percent of pay. Each year's difference between actual and expected unfunded actuarial accrued liability is amortized over 25 years as a level percentage of expected payroll.

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

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

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

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

Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method was phased in over five years. Fair Value of Assets was $0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

Changes in Methods Since the Prior Valuation

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

Valuation of Retiree Medical and Prescription Drug Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 5.2 of the State of Alaska Public Employees' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2023.

Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factors for pre-Medicare prescription drug, Medicare prescription drug, and EGWP costs were applied to claims experience incurred before January 1, 2022. Those base claims costs were used for the DCR valuation with further adjustments as noted below. Additionally, starting in 2022, certain common preventive benefits are covered for the DB plan. The resulting adjustment factor for pre-Medicare medical costs was applied to claims experience incurred before January 1, 2022. However, preventive benefits were already covered under the DCR plan so the pre-65 DCR medical adjustment factor referenced below was increased from 3.1% to 4.4%.

Due to the lack of experience for the DCR retiree medical plan, base claims costs are based on those described in the actuarial valuation as of June 30, 2023 for the Defined Benefit (DB) retiree medical plan covering TRS and PERS. The DB rates were used with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles, and out-of-pocket limits, projected FY24 claims costs were reduced 4.4% for pre-Medicare medical claims, 3.1% for Medicare medical claims, and 8.9% for prescription drugs. In addition, to account for the difference in Medicare coordination, projected FY24 medical claims costs for Medicare eligible retirees were further reduced 29.5%.

FY22 and FY23 experience was thoroughly reviewed to assess the impact of COVID-19 and whether an adjustment to FY22 and FY23 claims was appropriate for use in the June 30, 2023 valuation. FY22 and FY23 per capita claims were reasonable when compared to pre-COVID levels, so no adjustments were made to the claims used in the per capita claims cost development.

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

The State transitioned to an Employer Group Waiver Program (EGWP) for DCR participants effective January 1, 2019. The estimated 2024 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates).

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions.

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

The Further Consolidated Appropriations Act, 2020 passed in December 2019 repealed several healthcare-related taxes, including the Cadillac Tax.

The Tax Cuts and Jobs Act passed in December 2017 included the elimination of the individual mandate penalty and changed the inflation measure for purposes of determining the limits for the High Cost Excise

Tax to use chained CPI. It is our understanding the law does not directly impact other provisions of the ACA. While the nullification of the ACA’s individual mandate penalty does not directly impact employer group health plans, it could contribute to the destabilization of the individual market and increase the number of uninsured. Such destabilization could translate to increased costs for employers. We have considered this when setting our healthcare cost trend assumptions and will continue to monitor this issue.

The Inflation Reduction Act was signed into law on August 16, 2022. The law contains several provisions that are expected to impact Alaska's Medicare prescription drug plan (EGWP), which will be considered at the next measurement date.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

Section 4.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2023 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board at the June 2022 meeting based on the experience study for the period July 1, 2017 to June 30, 2021.

Investment Return

7.25% per year, net of investment expenses.

Salary Scale

Salary scale rates based on the 2017-2021 actual experience (see Table 1).

Inflation – 2.50% per year.

Productivity – 0.25% per year.

Payroll Growth

2.75% 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 2.50% annually.

Mortality (Pre-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Employee mortality for Peace Officer/Firefighters in accordance with the following tables:

- Occ D&D: Pub-2010 Safety Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Employee mortality for Others in accordance with the following tables:

- Occ D&D: Pub-2010 General Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 General Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Deaths are assumed to result from occupational causes 70% of the time for Peace Officer/Firefighters, and 35% of the time for Others.

Mortality (Post-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Retiree mortality for Peace Officer/Firefighters in accordance with the following tables:

- Occ D&D: Pub-2010 Safety Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retiree mortality for Others in accordance with the following tables:

- Occ D&D: 98% of male and 106% of female rates of the Pub-2010 General Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 101% of male and 110% of female rates of the Pub-2010 General Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality for Peace Officer/Firefighters in accordance with the following tables. These tables are applied only after the death of the original member.

- Occ D&D: Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality for Others in accordance with the following tables. These tables are applied only after the death of the original member.

- Occ D&D: 102% of male and 108% of female rates of the Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 101% of male and 108% of female rates of the Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Turnover

Select and ultimate rates based on the 2017-2021 actual experience (see Tables 2a and 2b).

Disability

No changes to the incidence rates from the prior valuation due to insufficient 2017-2021 actual experience (see Tables 3a and 3b). For retiree medical benefits, the disability rates cease once a member is eligible for retirement. However, the disability rates continue after retirement eligibility for occupational death & disability benefits.

Disabilities are assumed to be occupational 70% of the time for Peace Officer/Firefighters, and 35% of the time for Others.

For Peace Officer/Firefighters, members are assumed to take the monthly annuity 100% of the time.

Post-disability mortality for Peace Officer/Firefighters in accordance with the following tables:

- Occ D&D: Pub-2010 Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Post-disability mortality for Others in accordance with the following tables:

- Occ D&D: Pub-2010 Non-Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Non-Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retirement

Retirement rates based on the 2017-2021 actual experience (see Table 4).

Spouse Age Difference

Males are assumed to be three years older than their wives. Females are assumed to be two years younger than their husbands.

Percent Married for Occupational Death & Disability

For Others, 75% of male members and 70% of female members are assumed to be married at termination from active service. For Peace Officer/Firefighters, 85% of male members and 60% of female members are assumed to be married at termination from active service.

Dependent Spouse Medical Coverage Election

Applies to members who do not have double medical coverage. For Peace Officer/Firefighters, 75% of male members and 50% of female members are assumed to be married and cover a dependent spouse. For Others, 60% of male members and 50% of female members are assumed to be married and cover a dependent spouse.

Part-Time Service

Peace Officer/Firefighter members are assumed to be full-time employees. For Other members, part-time employees are assumed to earn 0.75 years of service per year.

Peace Officer / Firefighter Occupational Disability Retirement Benefit Commencement

The occupational disability retirement benefit is assumed to be first payable from the member's DC account and the retirement benefit payable from the occupational death & disability trust will commence five years later.

Imputed Data

Data changes from the prior year which are deemed to have immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data.

Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

Administrative Expenses

The Normal Cost as of June 30, 2023 was increased by $34,000 for occupational death & disability and $51,000 for retiree medical. These amounts are based on the average of actual administrative expenses during the last two fiscal years.

Retiree Medical Participation

Death / Disability Decrement		Retirement Decrement		
Age	Percent Participation	Age	Percent Participation*	
< 56	75.0%	55	50.0%	
56	77.5%	56	55.0%	
57	80.0%	57	60.0%	
58	82.5%	58	65.0%	
59	85.0%	59	70.0%	
60	87.5%	60	75.0%	
61	90.0%	61	80.0%	
62	92.5%	62	85.0%	
63	95.0%	63	90.0%	
64	97.5%	64	95.0%	
65+	100.0%	65+	**Years of Service**	
			< 15	75.0%
			15 – 19	80.0%
			20 – 24	85.0%
			25 – 29	90.0%
			30+	95.0%

* Participation assumption is a combination of (i) the service-based rates for retirement from employment at age 65+ and (ii) the age-based rates for retirement from employment before age 65. These rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market. This assumption is based on observed trends in participation from a range of other plans.

Healthcare Per Capita Claims Cost

Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY24 medical and prescription drugs are shown below. The prescription drug costs reflect the plan change to require prior authorization for certain specialty medications.

	Medical	Prescription Drugs
Pre-Medicare	$ 17,338	$ 3,947
Medicare Parts A & B	$ 1,761	$ 4,300
Medicare Part D – EGWP	N/A	$ 1,267

Members are assumed to attain Medicare eligibility at age 65. All costs are for the 2024 fiscal year (July 1, 2023 – June 30, 2024).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

Base Claims Cost Adjustments

Due to higher initial copays, deductibles, out-of-pocket limits, and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:

- 0.956 for the pre-Medicare plan.
- 0.674 for both the Medicare medical plan and Medicare coordination method (3.1% reduction for the medical plan and 29.5% reduction for the coordination method).
- 0.911 for the prescription drug plan.

Healthcare Morbidity

Morbidity rates (also called aging factors) are used to estimate utilization of healthcare benefits at each age to reflect the fact that healthcare utilization typically increases with age. Separate morbidity rates are used for medical and prescription drug benefits. These rates are based on the 2017-2021 actual experience.

Age	Medical	Prescription Drugs
0 - 44	2.0%	4.5%
45 - 54	2.5%	3.5%
55 - 64	2.5%	1.0%
65 - 74	2.0%	2.1%
75 - 84	2.2%	(0.3%)
85 - 94	0.5%	(2.5%)
95+	0.0%	0.0%

Healthcare Third Party Administrator Fees

$497 per person per year; assumed to increase at 4.50% per year.

Healthcare Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 6.70% is applied to the FY24 pre-Medicare medical claims costs to get the FY25 medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY24	6.70%	5.50%	7.20%
FY25	6.40%	5.40%	6.90%
FY26	6.20%	5.40%	6.65%
FY27	6.05%	5.35%	6.35%
FY28	5.85%	5.35%	6.10%
FY29	5.65%	5.30%	5.80%
FY30	5.45%	5.30%	5.55%
FY31-FY38	5.30%	5.30%	5.30%
FY39	5.25%	5.25%	5.25%
FY40	5.20%	5.20%	5.20%
FY41	5.10%	5.10%	5.10%
FY42	5.05%	5.05%	5.05%
FY43	4.95%	4.95%	4.95%
FY44	4.90%	4.90%	4.90%
FY45	4.80%	4.80%	4.80%
FY46	4.75%	4.75%	4.75%
FY47	4.70%	4.70%	4.70%
FY48	4.60%	4.60%	4.60%
FY49	4.55%	4.55%	4.55%
FY50+	4.50%	4.50%	4.50%

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska.

Changes in Assumptions Since the Prior Valuation

The healthcare per capita claims cost assumption is updated annually as described in Section 4.2. The amounts included in the Normal Cost for administrative expenses were changed from $33,000 to $34,000 for occupational death & disability, and from $39,000 to $51,000 for retiree medical (based on the most recent two years of actual administrative expenses paid from plan assets). There were no other changes in actuarial assumptions since the prior valuation.

Table 1: Salary Scales

Peace Officer / Firefighter	
Years of Service	Percent Increase
< 1	8.50%
1	7.75%
2	7.25%
3	7.00%
4	6.75%
5	6.25%
6	5.75%
7	5.50%
8	5.25%
9	5.05%
10	4.95%
11	4.85%
12	4.75%
13	4.65%
14	4.55%
15	4.45%
16	4.35%
17	4.25%
18	4.05%
19	4.05%
20+	3.85%

Others	
Years of Service	Percent Increase
< 1	6.75%
1	6.00%
2	5.50%
3	5.00%
4	4.75%
5	4.25%
6	4.05%
7	3.95%
8	3.75%
9	3.55%
10	3.45%
11	3.25%
12	3.10%
13	3.05%
14	3.00%
15	2.95%
16	2.90%
17+	2.85%

Table 2a: Turnover Rates for Peace Officer / Firefighter

Select Rates during the First 5 Years of Employment

Years of Service	Male	Female
< 1	17.00%	27.00%
1	12.00%	21.00%
2	11.00%	15.00%
3	11.00%	13.00%
4	10.00%	9.00%

Ultimate Rates after the First 5 Years of Employment

Age	Male	Female
< 30	6.60%	10.20%
30 - 34	6.80%	10.00%
35 - 39	6.70%	9.90%
40 - 44	6.50%	9.50%
45 - 49	6.50%	9.30%
50 - 54	8.50%	9.10%
55 - 59	9.80%	9.60%
60 - 64	12.50%	10.30%
65+	19.20%	10.70%

Table 2b: Turnover Rates for Others

Select Rates during the First 5 Years of Employment

Years of Service	Male	Female
< 1	28.00%	29.00%
1	20.00%	24.00%
2	16.00%	19.00%
3	14.00%	16.00%
4	12.00%	14.00%

Ultimate Rates after the First 5 Years of Employment

Age	Male	Female
< 30	13.70%	15.80%
30 - 34	12.20%	11.20%
35 - 39	9.70%	10.20%
40 - 44	8.50%	10.60%
45 - 49	8.90%	8.90%
50 - 54	8.40%	8.70%
55 - 59	8.70%	9.50%
60 - 64	10.10%	11.80%
65+	11.20%	15.70%

Table 3a: Disability Rates for Peace Officer / Firefighter

Age	Male	Female	Age	Male	Female
< 23	0.0179%	0.0112%	46	0.1247%	0.0780%
23	0.0244%	0.0153%	47	0.1337%	0.0836%
24	0.0310%	0.0194%	48	0.1462%	0.0914%
25	0.0374%	0.0234%	49	0.1588%	0.0993%
26	0.0440%	0.0275%	50	0.1714%	0.1071%
27	0.0505%	0.0316%	51	0.1839%	0.1150%
28	0.0526%	0.0329%	52	0.1965%	0.1228%
29	0.0548%	0.0343%	53	0.2294%	0.1434%
30	0.0570%	0.0356%	54	0.2624%	0.1640%
31	0.0591%	0.0370%	55	0.2954%	0.1846%
32	0.0612%	0.0383%	56	0.3283%	0.2052%
33	0.0634%	0.0397%	57	0.3613%	0.2258%
34	0.0657%	0.0411%	58	0.4112%	0.2570%
35	0.0679%	0.0425%	59	0.4611%	0.2882%
36	0.0702%	0.0439%	60	0.5110%	0.3194%
37	0.0724%	0.0453%	61	0.5610%	0.3506%
38	0.0757%	0.0473%	62	0.6109%	0.3818%
39	0.0789%	0.0493%	63	0.6109%	0.3818%
40	0.0822%	0.0514%	64	0.6109%	0.3818%
41	0.0854%	0.0534%	65	0.6109%	0.3818%
42	0.0886%	0.0554%	66	0.6109%	0.3818%
43	0.0977%	0.0611%	67	0.6109%	0.3818%
44	0.1066%	0.0667%	68	0.4073%	0.2546%
45	0.1157%	0.0723%	69	0.2036%	0.1273%
			70+	0.2036%	0.1273%

Table 3b: Disability Rates for Others

Age	Male	Female	Age	Male	Female
< 23	0.0327%	0.0376%	46	0.1125%	0.1154%
23	0.0360%	0.0400%	47	0.1208%	0.1236%
24	0.0392%	0.0424%	48	0.1329%	0.1360%
25	0.0425%	0.0448%	49	0.1451%	0.1484%
26	0.0456%	0.0472%	50	0.1572%	0.1608%
27	0.0489%	0.0496%	51	0.1694%	0.1734%
28	0.0501%	0.0510%	52	0.1815%	0.1858%
29	0.0513%	0.0524%	53	0.2132%	0.2168%
30	0.0524%	0.0538%	54	0.2450%	0.2478%
31	0.0536%	0.0554%	55	0.2766%	0.2788%
32	0.0548%	0.0568%	56	0.3084%	0.3098%
33	0.0566%	0.0586%	57	0.3401%	0.3408%
34	0.0584%	0.0606%	58	0.4068%	0.4096%
35	0.0602%	0.0624%	59	0.4736%	0.4784%
36	0.0620%	0.0644%	60	0.5405%	0.5470%
37	0.0638%	0.0662%	61	0.6072%	0.6158%
38	0.0669%	0.0696%	62	0.6740%	0.6844%
39	0.0701%	0.0728%	63	0.8526%	0.8450%
40	0.0734%	0.0762%	64	1.0314%	1.0054%
41	0.0765%	0.0794%	65	1.2101%	1.1660%
42	0.0797%	0.0826%	66	1.3889%	1.3264%
43	0.0879%	0.0908%	67	1.5675%	1.4870%
44	0.0962%	0.0990%	68	1.0451%	0.9914%
45	0.1043%	0.1072%	69	0.5225%	0.4956%
			70+	0.5225%	0.4956%

Table 4: Retirement Rates

Age	Rate
< 55	2.00%
55	3.00%
56	3.00%
57	3.00%
58	3.00%
59	3.00%
60	5.00%
61	5.00%
62	10.00%
63	5.00%
64	5.00%
65	25.00%
66	25.00%
67	25.00%
68	20.00%
69	20.00%
70+	100.00%

Section 5: Historical Information[1]

Section 5.1: Funding Progress

Funding Progress - Occupational Death & Disability ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 18,064	$ 73,068	404.5%	$ (55,004)	$ 1,796,078	(3.1%)
June 30, 2022	14,952	62,938	420.9%	(47,986)	1,645,341	(2.9%)
June 30, 2021	11,740	53,075	452.1%	(41,335)	1,548,116	(2.7%)
June 30, 2020	10,634	43,029	404.6%	(32,395)	1,443,017	(2.2%)
June 30, 2019	9,774	36,701	375.5%	(26,927)	1,342,839	(2.0%)
June 30, 2018	7,713	30,961	401.4%	(23,248)	1,218,186	(1.9%)
June 30, 2017	7,540	26,944	357.3%	(19,404)	1,131,441	(1.7%)
June 30, 2016	6,763	23,176	342.7%	(16,413)	1,059,791	(1.5%)
June 30, 2015	5,049	19,014	376.6%	(13,965)	958,135	(1.5%)
June 30, 2014	3,627	14,995	413.4%	(11,368)	865,146	(1.3%)
June 30, 2013	3,603	11,373	315.7%	(7,770)	802,645	(1.0%)
June 30, 2012	2,412	9,142	379.0%	(6,730)	675,976	(1.0%)
June 30, 2011	1,949	7,049	361.7%	(5,100)	564,434	(0.9%)
June 30, 2010	853	4,801	562.8%	(3,948)	455,113	(0.9%)
June 30, 2009	403	3,138	778.7%	(2,735)	340,360	(0.8%)
June 30, 2008	242	1,288	532.2%	(1,046)	221,931	(0.5%)
June 30, 2007	48	188	391.7%	(140)	115,329	(0.1%)

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2009 valuations.

[1] GASB 74 replaced GASB 43 effective for the fiscal year ending June 30, 2017. At the request of the State, historical accounting information has been included in this section as if GASB 43 were still effective.

Funding Progress - Retiree Medical ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 204,540	$ 246,953	120.7%	$ (42,413)	$ 1,796,078	(2.4%)
June 30, 2022	169,396	212,638	125.5%	(43,242)	1,645,341	(2.6%)
June 30, 2021	168,472	180,536	107.2%	(12,064)	1,548,116	(0.8%)
June 30, 2020	150,701	144,747	96.0%	5,954	1,443,017	0.4%
June 30, 2019	124,946	118,783	95.1%	6,163	1,342,839	0.5%
June 30, 2018	118,598	100,097	84.4%	18,501	1,218,186	1.5%
June 30, 2017	109,703	81,559	74.3%	28,144	1,131,441	2.5%
June 30, 2016	70,289	63,851	90.8%	6,438	1,059,791	0.6%
June 30, 2015	58,683	44,188	75.3%	14,495	958,135	1.5%
June 30, 2014	50,217	26,466	52.7%	23,751	865,146	2.7%
June 30, 2013	60,282	20,336	33.7%	39,946	802,645	5.0%
June 30, 2012	44,509	15,773	35.4%	28,736	675,976	4.3%
June 30, 2011	11,302	12,009	106.3%	(707)	564,434	(0.1%)
June 30, 2010	7,185	8,767	122.0%	(1,582)	455,113	(0.3%)
June 30, 2009	3,913	5,475	139.9%	(1,562)	340,360	(0.5%)
June 30, 2008	1,776	2,719	153.1%	(943)	221,931	(0.4%)
June 30, 2007	711	1,067	150.1%	(356)	115,329	(0.3%)

Change in assumptions reflected in 2022, 2020, 2018, 2017, 2014, 2012, 2011, 2010, 2009, and 2008 valuations.

Change in methods reflected in 2018 valuation.

Change in plan provisions reflected in 2021 and 2016 valuations.

Section 5.2: Solvency Test

Solvency Test - Occupational Death & Disability ($'s in 000's)

	Actuarial Accrued Liability (AAL)				Portion of AAL Covered by Valuation Assets		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	(1)	(2)	(3)
June 30, 2023	$ 0	$ 9,559	$ 8,505	$ 73,068	100.0%	100.0%	100.0%
June 30, 2022	0	7,593	7,359	62,938	100.0%	100.0%	100.0%
June 30, 2021	0	5,743	5,997	53,075	100.0%	100.0%	100.0%
June 30, 2020	0	5,432	5,202	43,029	100.0%	100.0%	100.0%
June 30, 2019	0	5,350	4,424	36,701	100.0%	100.0%	100.0%
June 30, 2018	0	3,978	3,735	30,961	100.0%	100.0%	100.0%
June 30, 2017	0	3,437	4,103	26,944	100.0%	100.0%	100.0%
June 30, 2016	0	3,147	3,616	23,176	100.0%	100.0%	100.0%
June 30, 2015	0	2,502	2,547	19,014	100.0%	100.0%	100.0%
June 30, 2014	0	1,367	2,260	14,995	100.0%	100.0%	100.0%
June 30, 2013	0	666	2,937	11,373	100.0%	100.0%	100.0%
June 30, 2012	0	197	2,215	9,142	100.0%	100.0%	100.0%
June 30, 2011	0	228	1,721	7,049	100.0%	100.0%	100.0%
June 30, 2010	0	0	853	4,801	100.0%	100.0%	100.0%
June 30, 2009	0	0	403	3,138	100.0%	100.0%	100.0%
June 30, 2008	0	0	242	1,288	100.0%	100.0%	100.0%
June 30, 2007	0	0	48	188	100.0%	100.0%	100.0%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2009 valuations.

Solvency Test - Retiree Medical ($'s in 000's)

Valuation Date	Actuarial Accrued Liability (AAL) (1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	Portion of AAL Covered by Valuation Assets (1)	(2)	(3)
June 30, 2023	$ 0	$ 14,290	$ 190,250	$ 246,953	100.0%	100.0%	100.0%
June 30, 2022	0	9,069	160,327	212,638	100.0%	100.0%	100.0%
June 30, 2021	0	5,191	163,281	180,536	100.0%	100.0%	100.0%
June 30, 2020	0	3,885	146,816	144,747	100.0%	100.0%	95.9%
June 30, 2019	0	2,647	122,299	118,783	100.0%	100.0%	95.0%
June 30, 2018	0	1,915	116,683	100,097	100.0%	100.0%	84.1%
June 30, 2017	0	982	108,721	81,559	100.0%	100.0%	74.1%
June 30, 2016	0	528	69,761	63,851	100.0%	100.0%	90.8%
June 30, 2015	0	339	58,344	44,188	100.0%	100.0%	75.2%
June 30, 2014	0	124	50,093	26,466	100.0%	100.0%	52.6%
June 30, 2013	0	101	60,181	20,336	100.0%	100.0%	33.6%
June 30, 2012	0	0	44,509	15,773	100.0%	100.0%	35.4%
June 30, 2011	0	0	11,302	12,009	100.0%	100.0%	100.0%
June 30, 2010	0	0	7,185	8,767	100.0%	100.0%	100.0%
June 30, 2009	0	0	3,913	5,475	100.0%	100.0%	100.0%
June 30, 2008	0	0	1,776	2,719	100.0%	100.0%	100.0%
June 30, 2007	0	0	711	1,067	100.0%	100.0%	100.0%

Change in assumptions reflected in 2022, 2020, 2018, 2017, 2014, 2012, 2011, 2010, 2009, and 2008 valuations.

Change in methods reflected in 2018 valuation.

Change in plan provisions reflected in 2021 and 2016 valuations.

Section 5.3: Member Data

As of June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Active Members - Peace Officer / Firefighter										
1. Number	1,313	1,438	1,605	1,701	1,905	2,038	2,228	2,350	2,482	2,548
2. Average Age	34.80	34.93	35.17	35.59	35.63	35.76	35.92	36.40	36.65	36.84
3. Average Credited Service	3.28	3.71	4.12	4.65	4.83	5.09	5.36	5.71	5.91	6.22
4. Average Entry Age	31.52	31.22	31.05	30.94	30.80	30.67	30.56	30.69	30.74	30.62
5. Average Annual Earnings	$ 69,904	$ 71,839	$ 76,213	$ 77,800	$ 78,603	$ 84,593	$ 87,365	$ 90,022	$ 95,429	$ 103,066
Active Members - Others										
1. Number	14,487	15,660	16,610	17,470	18,473	19,864	20,695	21,583	22,220	22,900
2. Average Age	40.19	40.54	40.90	41.22	41.34	41.49	41.78	41.79	41.87	41.80
3. Average Credited Service	2.94	3.24	3.51	3.83	4.08	4.25	4.59	4.84	5.02	5.15
4. Average Entry Age	37.25	37.30	37.39	37.39	37.26	37.24	37.19	36.95	36.85	36.65
5. Average Annual Earnings	$ 52,831	$ 53,780	$ 55,335	$ 56,100	$ 57,349	$ 58,223	$ 59,603	$ 61,129	$ 62,371	$ 65,746
Active Members - Total										
1. Number	15,800	17,098	18,215	19,171	20,378	21,902	22,923	23,933	24,702	25,448
2. Average Age	39.74	40.07	40.39	40.72	40.80	40.96	41.21	41.26	41.35	41.30
3. Average Credited Service	2.97	3.28	3.56	3.90	4.15	4.33	4.66	4.93	5.11	5.26
4. Average Entry Age	36.77	36.79	36.83	36.82	36.65	36.63	36.55	36.33	36.24	36.04
5. Average Annual Earnings	$ 54,250	$ 55,299	$ 57,175	$ 58,025	$ 59,336	$ 60,676	$ 62,302	$ 63,966	$ 65,693	$ 69,483
Disabilitants and Beneficiaries (Occupational Death & Disability)										
1. Number	6	12	12	14	15	16	15	14	16	18
2. Average Age	34.00	43.00	44.00	42.00	43.66	42.28	44.66	47.27	46.22	46.69
3. Average Monthly Death & Disability Benefit	2,554	2,399	2,442	2,199	2,285	2,404	$ 2,698	$ 2,601	$ 2,791	$ 3,161
Retirees, Surviving Spouses, and Dependent Spouses (Retiree Medical)										
1. Number	0	0	0	9	23	43	66	93	166	241
2. Average Age	N/A	N/A	N/A	70.76	69.97	69.72	68.85	69.75	69.46	69.45
Total Number of Members	**15,806**	**17,110**	**18,227**	**19,194**	**20,416**	**21,961**	**23,004**	**24,040**	**24,884**	**25,707**

Average annual earnings ("valuation pay") are the annualized earnings for the fiscal year ending on the valuation date.

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.

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.

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.

BUCK
A Gallagher Company

State of Alaska

Teachers' Retirement System

Defined Contribution Retirement Plan

For Occupational Death & Disability and Retiree Medical Benefits

Actuarial Valuation Report
as of June 30, 2023

May 2024

May 3, 2024

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 Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan as of June 30, 2023 performed by Buck Global, LLC (Buck).

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP, member data provided by the Division of Retirement and Benefits, and medical enrollment data provided by the healthcare claims administrator (Aetna), as summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2023. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities, and other factors under TRS DCR were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of TRS DCR as of June 30, 2023.

TRS DCR is funded by Employer Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The calculations of the Employer Contributions are reasonable actuarially determined contributions as defined in Actuarial Standard of Practice No. 4 (ASOP 4). The funding objective for TRS DCR is to pay required contributions that remain level as a percent of TRS DCR compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of TRS DCR compensation over closed layered 25-year periods. This objective is currently being met and is projected to continue to be met as required by the Alaska State statutes. Absent future gains/losses, actuarially determined contributions are expected to remain level as a percent of pay and the funded status of the occupational death & disability trust and the retiree medical trust are expected to remain at or above 100%.

The Board and staff of the State of Alaska may use this report for the review of the operations of TRS DCR. Use of this report for any other purpose or by anyone other than the Board or staff of the State of Alaska may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advanced review of any statement to be based on information contained in this report. Buck will accept no liability for any such statement made without its prior review.

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

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the plan. In our professional judgment, the combined effect of the assumptions is expected to have no significant bias. The actuary performs an analysis of plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed for the period July 1, 2017 to June 30, 2021. Based on that experience study, the Board adopted new assumptions effective beginning with the June 30, 2022 valuation to better reflect expected future experience. Based on our annual analysis of recent claims experience, changes were made to the healthcare per capita claims cost rates effective June 30, 2023 to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation is shown in Sections 4.2 and 4.3. We certify that the assumptions and methods used for funding purposes, as described in Sections 4.2 and 4.3 of this report, meet the requirements of all applicable Actuarial Standards of Practice.

Actuarial Standards of Practice No. 27 (ASOP 27) and No. 35 (ASOP 35) require the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with those that, in the actuary's professional judgment, are reasonable for the purpose of the measurement. Buck provides advice on reasonable assumptions when performing periodic experience studies. The Board selects the assumptions used, and the signing actuaries review the assumptions annually through discussions with the Board staff and analysis of actuarial experience.

In the case of the Board's selected expected return on assets, the signing actuaries have used economic information provided by Buck's Investment Consulting and Financial Risk Management practices. Buck's Capital Market Assumptions provide relevant expected returns, standard deviations, and correlations. Projected returns are then developed for the portfolio using the GEMS® Economic Scenario Generator from Conning. This sophisticated model uses a multifactor approach to create internally consistent, realistic economic scenarios for all asset classes that reflect the current economic environment as a starting point. Equity returns include stochastic volatility with jumps to reflect extreme, infrequent events. However, such scenarios do not typically impact the 5th through 95th percentiles of projected returns. Corporate bond yields are generated by adding credit spreads to the corresponding zero-coupon Treasury yields. The credit spreads are driven by several factors, including equity returns, and also contain a shock process to allow the model to generate such scenarios as the 2008 Financial Crisis. GEMS® does not, however, model specific risks such as war, pandemics, political risks, severe economic dislocations occurring with greater frequency or severity than predicted by the model, or the risk that relationships among macroeconomic variables may differ from those of the past. From these scenarios, a probabilistic model of expected returns is created, reflecting the duration of investment and the approximate allocation of assets in the portfolio to various asset classes. Under current calibrations, GEMS® will tend to show higher expected returns for longer durations and a greater divergence between arithmetic and geometric average returns at higher standard deviations of portfolio return.

Based on their analysis, including consistency with other assumptions used in the valuation, the percentiles generated by the GEMS® model described above, and review of actuarial gain/loss analysis, the signing actuaries believe the assumptions, in their professional judgment, do not significantly conflict with what are reasonable for the purpose of the measurement.

ACFR Information

We have prepared the following information in this report for the Actuarial Section and Statistical Section of the ACFR: (i) member data tables in Section 3; (ii) summary of actuarial assumptions in Section 4.3; and (iii) historical information in Section 5.

Governmental Accounting Standards Board (GASB) Statement No. 74 (GASB 74) was effective for TRS DCR beginning with fiscal year ending June 30, 2017. Please see our separate GASB 74 report for other information needed for the ACFR.

Risk Information

Actuarial Standard of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the retiree medical portion of TRS DCR. We also believe ASOP 51 does not apply to the occupational death & disability portion of TRS DCR. Therefore, information related to ASOP 51 is not included in this report. However, it may be beneficial to review the ASOP 51 information provided in the TRS valuation report for information on risks that may also relate to the occupational death & disability benefits provided by this plan.

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries performing actuarial services that involve designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the GEMS® model disclosed above, Buck uses third-party software to perform annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Buck maintains an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal model are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan, and to reflect the different Medicare coordination methods between the two plans. The manual rate models are intended to provide benchmark data and pricing capabilities, calculate per capita costs, and calculate actuarial values of different commercial health plans. Buck relied on the models, which were developed using industry data by actuaries and consultants at OptumInsight.

COVID-19

The potential impact of the ongoing COVID-19 pandemic on costs and liabilities was considered and no adjustments were made in setting the FY24 per capita claims cost assumption. A more detailed explanation on these adjustments is shown in Sections 4.2 and 4.3 and in the valuation report for the DB plan.

This report was prepared under the overall direction of David Kershner, who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Brett can be reached at 260-423-1072.

Respectfully submitted,

David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck, A Gallagher Company

Brett Hunter, ASA, EA, MAAA
Senior Consultant
Buck, A Gallagher Company

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

Robert Besenhofer, ASA, MAAA, FCA
Director
Buck, A Gallagher Company

Contents

Executive Summary

Overview

The State of Alaska Teachers' Retirement System Defined Contribution Retirement (TRS DCR) Plan provides occupational death & disability and retiree medical benefits to teachers and other eligible members hired after June 30, 2006 or who have elected participation in this plan. The Commissioner of the Department of Administration is responsible for administering the plan. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the plan. This report presents the results of the actuarial valuation of TRS DCR as of the valuation date of June 30, 2023.

Purpose

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

1. To determine the Employer contribution necessary to meet the Board's funding policy for the plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To review the current funded status of the plan and assess the funded status as an appropriate measure for determining actuarially determined contributions;
4. To compare actual and expected experience under the plan during the last fiscal year; and
5. 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 TRS DCR based on the plan provisions, membership data, assets, and actuarial methods and assumptions as of the valuation date.

Funded Status

Where presented, references to "funded ratio" and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funded Status as of June 30 ($'s in 000's)	2022	2023
Occupational Death & Disability		
a. Actuarial Accrued Liability	$ 199	$ 190
b. Valuation Assets	6,700	7,568
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (6,501)	$ (7,378)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	3,366.8%	3,983.2%
e. Fair Value of Assets	$ 6,557	$ 7,447
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	3,295.0%	3,919.5%

Funded Status as of June 30 ($'s in 000's)	2022	2023
Retiree Medical		
a. Actuarial Accrued Liability	$ 47,797	$ 57,093
b. Valuation Assets	68,403	77,815
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (20,606)	$ (20,722)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	143.1%	136.3%
e. Fair Value of Assets	$ 66,909	$ 76,557
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	140.0%	134.1%

The key reasons for the change in the funded status are explained below. 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. Future experience is likely to vary from assumptions so there is potential for actuarial gains or losses.

1. Investment Experience

The asset valuation method recognizes 20% of the investment gain or loss each year, for a period of five years. The FY23 investment return based on fair value of assets was approximately 7.6% compared to the expected investment return of 7.25% (net of investment expenses). This resulted in a market asset gain of approximately $26,000 (occupational death & disability) and $266,000 (retiree medical). Due to the recognition of investment gains and losses over a 5-year period, the FY23 investment return based on actuarial value of assets was approximately 7.1%, which resulted in an actuarial asset loss of approximately $7,000 (occupational death & disability) and $78,000 (retiree medical).

2. Salary Increases

Salary increases for continuing active members during FY23 were slightly higher than expected based on the valuation assumptions, resulting in a very small liability loss (less than $1,000).

3. Demographic Experience

The number of active members increased 3.3% from 5,688 at June 30, 2022 to 5,877 at June 30, 2023. The average age of active members increased from 42.26 to 42.44 and average credited service increased from 6.60 to 6.72 years.

The demographic experience gains/losses are shown on page 4.

4. Retiree Medical Claims Experience

Please refer to the State of Alaska Teachers' Retirement System (TRS) Defined Benefit Plan Actuarial Valuation Report as of June 30, 2023 for a full description of the assumptions and costs of the retiree medical plan. Adjustments to these costs and assumptions are described in this report.

The recent claims experience described in Section 4.2 of this report (Section 5.2 of the TRS DB report) created an actuarial loss of approximately $3,496,000. The EGWP subsidy received by the plan during FY23 was approximately $31,000; the expected EGWP subsidy for FY23 was approximately $43,000.

5. Changes in Methods Since the Prior Valuation

There were no changes in actuarial methods since the prior valuation.

6. Changes in Assumptions Since the Prior Valuation

Healthcare claim costs are updated annually as described in Section 4.2. The amounts included in the Normal Cost for administrative expenses were updated based on the last two years of actual administrative expenses paid from plan assets. There were no other changes in actuarial assumptions since the prior valuation.

7. Changes in Benefit Provisions Since the Prior Valuation

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

Comparative Summary of Contribution Rates

		FY 2025	FY 2026
Occupational Death & Disability			
a.	Employer Normal Cost Rate	0.08%	0.08%
b.	Past Service Cost Rate	(0.11)%	(0.12)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.08%	0.08%
Retiree Medical			
a.	Employer Normal Cost Rate	0.68%	0.74%
b.	Past Service Cost Rate	(0.29)%	(0.28)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.68%	0.74%
Total			
a.	Employer Normal Cost Rate	0.76%	0.82%
b.	Past Service Cost Rate	(0.40)%	(0.40)%
c.	Total Employer Contribution Rate, (a) + (b), not less than (a)	0.76%	0.82%

The exhibit below shows the historical Board-adopted employer contribution rates for TRS DCR.

		Total Employer Contribution Rate		
Valuation Date	Fiscal Year	Occupational Death & Disability	Retiree Medical	Total
June 30, 2012	FY15	0.00%	2.04%	2.04%
June 30, 2013	FY16	0.00%	2.04%	2.04%
June 30, 2014	FY17	0.00%	1.05%	1.05%
June 30, 2015	FY18	0.00%	0.91%	0.91%
June 30, 2016	FY19	0.08%	0.79%	0.87%
June 30, 2017	FY20	0.08%	1.09%	1.17%
June 30, 2018	FY21	0.08%	0.93%	1.01%
June 30, 2019	FY22	0.08%	0.83%	0.91%
June 30, 2020	FY23	0.08%	0.87%	0.95%
June 30, 2021	FY24	0.08%	0.82%	0.90%
June 30, 2022	FY25	0.08%	0.68%	0.76%
June 30, 2023	FY26	TBD	TBD	TBD

Summary of Actuarial Accrued Liability Gain/(Loss)

The following table shows the FY23 gain/(loss) on actuarial accrued liability as of June 30, 2023 ($'s in 000's):

	Occupational Death & Disability	Retiree Medical
Retirement Experience	$ 0	$ (150)
Termination Experience	(10)	2,618
Disability Experience	251	(40)
Active Mortality Experience	116	(57)
Inactive Mortality Experience	(1)	(17)
Salary Increases	0	N/A
New Entrants	0	(591)
Rehires	0	(1,985)
Metcalfe Transfers	5	768
Benefit Payments Different than Expected	6	94
Per Capita Claims Cost	N/A	(3,496)
Miscellaneous[1]	(7)	263
Total	$ 360	$ (2,593)

[1] Includes the effects of various data changes that are typical when new census data is received for the annual valuation, as well as other items that do not fit neatly into any of the other categories.

Section 1: Actuarial Funding Results

Section 1.1: Actuarial Liabilities and Normal Cost ($'s in 000's)

As of June 30, 2023	Present Value of Projected Benefits	Actuarial Accrued (Past Service) Liability
Active Members		
Occupational Death Benefits	$ 776	$ 107
Occupational Disability Benefits	1,538	(84)
Medical and Prescription Drug Benefits	96,496	67,989
Medicare Part D Subsidy	(19,762)	(13,920)
Subtotal	$ 79,048	$ 54,092
Benefit Recipients		
Survivor Benefits	$ 0	$ 0
Disability Benefits	167	167
Medical and Prescription Drug Benefits	3,804	3,804
Medicare Part D Subsidy	(780)	(780)
Subtotal	$ 3,191	$ 3,191
Total	**$ 82,239**	**$ 57,283**
Total Occupational Death & Disability	**$ 2,481**	**$ 190**
Total Retiree Medical, Net of Part D Subsidy	**$ 79,758**	**$ 57,093**
Total Retiree Medical, Gross of Part D Subsidy	**$ 100,300**	**$ 71,793**

As of June 30, 2023	Normal Cost
Active Members	
Occupational Death Benefits	$ 108
Occupational Disability Benefits	247
Medical and Prescription Drug Benefits	4,422
Medicare Part D Subsidy	(906)
Subtotal	$ 3,871
Administrative Expense Load	
Occupational Death & Disability	$ 10
Retiree Medical	36
Subtotal	$ 46
Total	**$ 3,917**
Total Occupational Death & Disability	**$ 365**
Total Retiree Medical, Net of Part D Subsidy	**$ 3,552**
Total Retiree Medical, Gross of Part D Subsidy	**$ 4,458**

Section 1.2: Actuarial Contributions as of June 30, 2023 for FY26 ($'s in 000's)

Normal Cost Rate	**Occupational Death & Disability**	**Retiree Medical**
1. Total Normal Cost	$ 365	$ 3,552
2. DCR Plan Rate Payroll Projected for FY24	477,857	477,857
3. Employer Normal Cost Rate, (1) ÷ (2)	0.08%	0.74%

Past Service Cost Rate		
1. Actuarial Accrued Liability	$ 190	$ 57,093
2. Valuation Assets	7,568	77,815
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ (7,378)	$ (20,722)
4. Funded Ratio based on Valuation Assets	3,983.2%	136.3%
5. Past Service Cost Amortization Payment	(590)	(1,338)
6. DCR Plan Rate Payroll Projected for FY24	477,857	477,857
7. Past Service Cost Rate, (5) ÷ (6)	(0.12%)	(0.28%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.08%**	**0.74%**

The table below shows the total employer contribution rate based on total DB and DCR Plan payroll for informational purposes.

Total Employer Contribution Rate as Percent of Total Payroll	**Occupational Death & Disability**	**Retiree Medical**
1. Total Normal Cost	$ 365	$ 3,552
2. Total DB and DCR Plan Rate Payroll Projected for FY24	754,274	754,274
3. Employer Normal Cost Rate, (1) ÷ (2)	0.05%	0.47%
4. Past Service Cost Amortization Payment	(590)	(1,338)
5. Past Service Cost Rate, (4) ÷ (2)	(0.08%)	(0.18%)
Total Employer Contribution Rate, not less than Normal Cost Rate	**0.05%**	**0.47%**

Schedule of Past Service Cost Amortizations - Occupational Death & Disability ($'s in 000's)

Layer	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Remaining	Initial	Outstanding	
Initial Unfunded Liability	06/30/2007	9	$ 16	$ 12	$ 2
FY08 Gain	06/30/2008	10	(392)	(336)	(40)
Change in Assumptions	06/30/2009	11	(82)	(72)	(8)
FY09 Gain	06/30/2009	11	(594)	(536)	(60)
Change in Assumptions	06/30/2010	12	(7)	(8)	(1)
FY10 Gain	06/30/2010	12	(479)	(445)	(46)
FY11 Gain	06/30/2011	13	(560)	(532)	(52)
FY12 Gain	06/30/2012	14	(129)	(127)	(12)
FY13 Gain	06/30/2013	15	(149)	(145)	(13)
Change in Assumptions	06/30/2014	16	(50)	(53)	(4)
PRPA Modification	06/30/2014	16	(25)	(25)	(2)
FY14 Gain	06/30/2014	16	(255)	(254)	(21)
FY15 Gain	06/30/2015	17	(275)	(275)	(22)
FY16 Gain	06/30/2016	18	(209)	(212)	(17)
FY17 Gain	06/30/2017	19	(251)	(251)	(19)
Change in Assumptions[1]	06/30/2018	20	0	0	0
FY18 Gain	06/30/2018	20	(257)	(258)	(19)
FY19 Gain	06/30/2019	21	(338)	(340)	(24)
FY20 Gain	06/30/2020	22	(637)	(642)	(44)
FY21 Gain	06/30/2021	23	(985)	(991)	(66)
Change in Assumptions[1]	06/30/2022	24	0	0	0
FY22 Gain	06/30/2022	24	(927)	(931)	(61)
FY23 Gain	06/30/2023	25	(957)	(957)	(61)
Total				**$ (7,378)**	**$ (590)**

[1] The net effect of changing assumptions was less than $1,000.

Schedule of Past Service Cost Amortizations - Retiree Medical ($'s in 000's)

	Amortization Period		Balances		
Layer	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability	06/30/2007	9	$ (239)	$ (198)	$ (26)
Change in Assumptions	06/30/2008	10	84	75	9
FY08 Gain	06/30/2008	10	(393)	(336)	(40)
Change in Assumptions	06/30/2009	11	(69)	(60)	(7)
FY09 Gain	06/30/2009	11	(281)	(254)	(28)
Change in Assumptions[1]	06/30/2010	12	0	0	0
FY10 Gain	06/30/2010	12	(545)	(506)	(53)
FY11 Gain	06/30/2011	13	(94)	(88)	(9)
Change in Assumptions	06/30/2012	14	11,518	11,192	1,041
FY12 Gain	06/30/2012	14	(60)	(55)	(5)
FY13 Loss	06/30/2013	15	3,439	3,394	300
Change in Assumptions	06/30/2014	16	(9,736)	(9,703)	(820)
FY14 Loss	06/30/2014	16	1,616	1,609	136
FY15 Gain	06/30/2015	17	(3,485)	(3,494)	(283)
EGWP Impact	06/30/2016	18	(6,400)	(6,440)	(503)
FY16 Loss	06/30/2016	18	958	967	75
Change in Assumptions	06/30/2017	19	7,645	7,695	580
FY17 Gain	06/30/2017	19	(1,451)	(1,461)	(110)
Change in Assumptions/Methods	06/30/2018	20	(9,505)	(9,545)	(696)
FY18 Loss	06/30/2018	20	2,491	2,502	182
FY19 Gain	06/30/2019	21	(4,904)	(4,941)	(349)
Change in Assumptions	06/30/2020	22	2,153	2,171	149
FY20 Gain	06/30/2020	22	(1,655)	(1,668)	(115)
Prescription Drug Plan Changes	06/30/2021	23	(528)	(531)	(36)
FY21 Gain	06/30/2021	23	(5,449)	(5,487)	(367)
Change in Assumptions	06/30/2022	24	(3,374)	(3,388)	(221)
FY22 Gain	06/30/2022	24	(2,147)	(2,156)	(141)
FY23 Gain	06/30/2023	25	(16)	(16)	(1)
Total				**$ (20,722)**	**$ (1,338)**

[1] The net effect of changing assumptions was less than $1,000. The demographic assumption changes decreased liability by $133,000 and the economic assumptions changes increased the liability by $133,000. Therefore, the net effect of all assumptions changes is $0 for amortization purposes.

Section 1.3: Actuarial Gain/(Loss) for FY23 ($'s in 000's)

	Occupational Death & Disability	Retiree Medical
1. Expected Actuarial Accrued Liability		
a. Actuarial Accrued Liability as of June 30, 2022	$ 199	$ 47,797
b. Normal Cost	339	3,072
c. Interest on (a) and (b) at 7.25%	39	3,688
d. Employer Group Waiver Plan	0	31
e. Benefit Payments	(26)	(86)
f. Interest on (d) and (e) at 7.25%, adjusted for timing	(1)	(2)
g. Assumptions/Methods Changes	0	0
h. Expected Actuarial Accrued Liability as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g)	$ 550	$ 54,500
2. Actual Actuarial Accrued Liability as of June 30, 2023	190	57,093
3. Liability Gain/(Loss), (1)(h) - (2)	**$ 360**	**$ (2,593)**
4. Expected Actuarial Asset Value		
a. Actuarial Asset Value as of June 30, 2022	$ 6,700	$ 68,403
b. Interest on (a) at 7.25%	486	4,959
c. Employer Contributions	411	4,467
d. Employer Group Waiver Plan	0	31
e. Interest on (c) and (d) at 7.25%, adjusted for timing	15	160
f. Benefit Payments	(26)	(86)
g. Administrative Expenses	(10)	(37)
h. Interest on (f) and (g) at 7.25%, adjusted for timing	(1)	(4)
i. Expected Actuarial Asset Value as of June 30, 2023 (a) + (b) + (c) + (d) + (e) + (f) + (g) + (h)	$ 7,575	$ 77,893
5. Actuarial Asset Value as of June 30, 2023	7,568	77,815
6. Actuarial Asset Gain/(Loss), (5) - (4)(i)	**$ (7)**	**$ (78)**
7. Total Actuarial Gain/(Loss), (3) + (6)	**$ 353**	**$ (2,671)**
8. Contribution Gain/(Loss)	**$ 605**	**$ 2,688**
9. Administrative Expense Gain/(Loss)	**$ (1)**	**$ (1)**
10. FY23 Gain/(Loss), (7) + (8) + (9)	**$ 957**	**$ 16**

Section 1.4: History of Unfunded Liability and Funded Ratio ($'s in 000's)

Occupational Death & Disability

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2007	$ 16	$ 0	0.0%	$ 16
June 30, 2008	44	420	954.5%	(376)
June 30, 2009	14	1,071	7,650.0%	(1,057)
June 30, 2010	18	1,577	8,761.1%	(1,559)
June 30, 2011	57	2,193	3,847.4%	(2,136)
June 30, 2012	63	2,348	3,727.0%	(2,285)
June 30, 2013	80	2,532	3,165.0%	(2,452)
June 30, 2014	23	2,820	12,260.9%	(2,797)
June 30, 2015	29	3,114	10,737.9%	(3,085)
June 30, 2016	19	3,323	17,489.5%	(3,304)
June 30, 2017	26	3,588	13,800.0%	(3,562)
June 30, 2018	30	3,845	12,816.7%	(3,815)
June 30, 2019	240	4,359	1,816.3%	(4,119)
June 30, 2020	223	4,933	2,212.1%	(4,710)
June 30, 2021	205	5,843	2,850.2%	(5,638)
June 30, 2022	199	6,700	3,366.8%	(6,501)
June 30, 2023	190	7,568	3,983.2%	(7,378)

Retiree Medical

Valuation Date	Total Actuarial Accrued Liability	Valuation Assets	Assets as a Percent of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2007	$ 358	$ 597	166.8%	$ (239)
June 30, 2008	757	1,308	172.8%	(551)
June 30, 2009	1,446	2,353	162.7%	(907)
June 30, 2010	2,430	3,895	160.3%	(1,465)
June 30, 2011	3,801	5,373	141.4%	(1,572)
June 30, 2012	16,811	6,937	41.3%	9,874
June 30, 2013	22,058	8,614	39.1%	13,444
June 30, 2014	16,273	10,791	66.3%	5,482
June 30, 2015	19,768	17,733	89.7%	2,035
June 30, 2016	21,988	25,410	115.6%	(3,422)
June 30, 2017	33,681	30,998	92.0%	2,683
June 30, 2018	32,429	36,776	113.4%	(4,347)
June 30, 2019	32,981	42,307	128.3%	(9,326)
June 30, 2020	40,634	49,554	122.0%	(8,920)
June 30, 2021	44,396	59,380	133.8%	(14,984)
June 30, 2022	47,797	68,403	143.1%	(20,606)
June 30, 2023	57,093	77,815	136.3%	(20,722)

Section 2: Plan Assets

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

As of June 30, 2023	Occupational Death & Disability	Retiree Medical	Allocation Percent
Cash and Short-Term Investments			
- Cash and Cash Equivalents	$ 111	$ 1,160	1.5%
- Subtotal	$ 111	$ 1,160	1.5%
Fixed Income Investments			
- Domestic Fixed Income Pool	$ 1,345	$ 13,822	18.1%
- International Fixed Income Pool	0	0	0.0%
- Alternative Fixed Income Pool	202	2,078	2.7%
- High Yield Pool	0	0	0.0%
- Treasury Inflation Protection Pool	0	0	0.0%
- Emerging Debt Pool	0	0	0.0%
- Subtotal	$ 1,547	$ 15,900	20.8%
Equity Investments			
- Domestic Equity Pool	$ 1,830	$ 18,794	24.7%
- International Equity Pool	1,041	10,695	14.0%
- Private Equity Pool	1,200	12,331	16.2%
- Emerging Markets Equity Pool	228	2,339	3.1%
- Alternative Equity Strategies	399	4,100	5.4%
- Subtotal	$ 4,698	$ 48,259	63.4%
Other Investments			
- Real Estate Pool	$ 501	$ 5,143	6.8%
- Other Investments Pool	557	5,723	7.5%
- Absolute Return Pool	0	0	0.0%
- Other Assets	0	0	0.0%
- Subtotal	$ 1,058	$ 10,866	14.3%
Total Cash and Investments	$ 7,414	$ 76,185	100.0%
Net Accrued Receivables	33	372	
Net Assets	$ 7,447	$ 76,557	

Section 2.2: Changes in Fair Value of Assets During FY23 ($'s in 000's)

Fiscal Year 2023	Occupational Death & Disability	Retiree Medical
1. Fair Value of Assets as of June 30, 2022	$ 6,557	$ 66,909
2. Additions:		
a. Member Contributions	$ 0	$ 0
b. Employer Contributions	411	4,467
c. Interest and Dividend Income	109	1,113
d. Net Appreciation/(Depreciation) in Fair Value of Investments	426	4,367
e. Employer Group Waiver Plan	0	31
f. Other	0	0
g. Total Additions	$ 946	$ 9,978
3. Deductions:		
a. Medical Benefits	$ 0	$ 86
b. Death & Disability Benefits	26	0
c. Investment Expenses	20	207
d. Administrative Expenses	10	37
e. Total Deductions	$ 56	$ 330
4. Fair Value of Assets as of June 30, 2023	$ 7,447	$ 76,557
5. Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	7.6%	7.6%

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

The actuarial value of assets and the fair value were $0 at June 30, 2006. Investment gains and losses are recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

	Occupational Death & Disability	Retiree Medical
1. Investment Gain/(Loss) for FY23		
a. Fair Value as of June 30, 2022	$ 6,557	$ 66,909
b. Contributions	411	4,467
c. Employer Group Waiver Plan	0	31
d. Benefit Payments	26	86
e. Administrative Expenses	10	37
f. Actual Investment Return (net of investment expenses)	515	5,273
g. Expected Return Rate (net of investment expenses)	7.25%	7.25%
h. Expected Return	489	5,007
i. Investment Gain/(Loss) for the Year (f) - (h)	26	266
2. Actuarial Value as of June 30, 2023		
a. Fair Value as of June 30, 2023	$ 7,447	$ 76,557
b. Deferred Investment Gain/(Loss)	(121)	(1,258)
c. Preliminary Actuarial Value as of June 30, 2023, (a) - (b)	7,568	77,815
d. Upper Limit: 120% of Fair Value as of June 30, 2023	8,936	91,868
e. Lower Limit: 80% of Fair Value as of June 30, 2023	5,958	61,246
f. Actuarial Value at June 30, 2023, (c) limited by (d) and (e)	7,568	77,815
3. Ratio of Actuarial Value of Assets to Fair Value of Assets	101.6%	101.6%
4. Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses	7.2%	7.1%

The tables below show the development of the gains/(losses) to be recognized in the current year ($'s in 000's):

Occupational Death & Disability				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (48)	$ (40)	$ (8)	$ 0
June 30, 2020	(140)	(84)	(28)	(28)
June 30, 2021	1,103	442	220	441
June 30, 2022	(925)	(185)	(185)	(555)
June 30, 2023	26	0	5	21
Total	**$ 16**	**$ 133**	**$ 4**	**$ (121)**

Retiree Medical				
Fiscal Year Ending	**Asset Gain / (Loss)**	**Gain / (Loss) Recognized in Prior Years**	**Gain / (Loss) Recognized This Year**	**Gain / (Loss) Deferred to Future Years**
June 30, 2019	$ (460)	$ (368)	$ (92)	$ 0
June 30, 2020	(1,367)	(819)	(274)	(274)
June 30, 2021	11,132	4,452	2,227	4,453
June 30, 2022	(9,418)	(1,884)	(1,884)	(5,650)
June 30, 2023	266	0	53	213
Total	**$ 153**	**$ 1,381**	**$ 30**	**$ (1,258)**

Section 2.4: Historical Asset Rates of Return

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative	Annual	Cumulative
June 30, 2008	6.4%	6.4%	(0.3%)	(0.3%)
June 30, 2009	3.2%	4.8%	(12.0%)	(6.3%)
June 30, 2010	4.2%	4.6%	6.4%	(2.3%)
June 30, 2011	7.4%	5.3%	18.9%	2.6%
June 30, 2012	6.9%	5.6%	1.6%	2.4%
June 30, 2013	7.7%	6.0%	11.9%	3.9%
June 30, 2014	10.9%	6.6%	18.0%	5.8%
June 30, 2015	9.5%	7.0%	3.1%	5.5%
June 30, 2016	6.5%	6.9%	(0.1%)	4.9%
June 30, 2017	7.6%	7.0%	12.6%	5.6%
June 30, 2018	7.8%	7.1%	8.0%	5.8%
June 30, 2019	6.4%	7.0%	6.2%	5.9%
June 30, 2020	6.3%	7.0%	4.3%	5.7%
June 30, 2021	11.3%	7.3%	29.5%	7.3%
June 30, 2022	8.3%	7.3%	(6.2%)	6.3%
June 30, 2023	7.1%	7.3%	7.6%	6.4%

Rates of return are shown based on combined assets for OD&D and Retiree Medical.

Cumulative returns are since fiscal year ending June 30, 2008.

Section 3: Member Data

Section 3.1: Summary of Members Included

As of June 30	2019	2020	2021	2022	2023
Active Members					
1. Number	4,998	5,332	5,521	5,688	5,877 [1]
2. Average Age	41.06	41.63	41.90	42.26	42.44
3. Average Credited Service	5.67	6.03	6.34	6.60	6.72
4. Average Entry Age	35.39	35.60	35.56	35.66	35.72
5. Average Annual Earnings	$ 69,619	$ 71,118	$ 74,045	$ 76,956	$ 78,119
Disabilitants and Beneficiaries (Occupational Death & Disability)					
1. Number	1	1	1	1	1
2. Average Age	53.45	54.45	55.45	56.45	57.45
3. Average Monthly Death & Disability Benefit	$ 2,024	$ 2,024	$ 2,024	$ 2,170	$ 2,299
Retirees, Surviving Spouses, and Dependent Spouses (Retiree Medical)					
1. Number	12	17	24	35	51
2. Average Age	68.54	68.79	67.71	69.66	70.58
Total Number of Members	**5,011**	**5,350**	**5,546**	**5,724**	**5,929**

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

[1] Includes 1,548 male active members and 4,329 female active members.

Section 3.2: Age and Service Distribution of Active Members

Annual Earnings by Age

Age	Number	Total Annual Earnings	Average Annual Earnings
0 - 19	0	$ 0	$ 0
20 - 24	112	6,307,635	56,318
25 - 29	547	34,325,861	62,753
30 - 34	873	63,152,967	72,340
35 - 39	1,120	87,984,264	78,557
40 - 44	1,115	89,906,565	80,634
45 - 49	737	60,608,262	82,236
50 - 54	571	48,923,314	85,680
55 - 59	398	33,328,551	83,740
60 - 64	269	23,133,459	85,998
65 - 69	98	8,486,977	86,602
70 - 74	30	2,407,932	80,264
75+	7	538,980	76,997
Total	**5,877**	**$459,104,767**	**$ 78,119**

Annual Earnings by Credited Service

Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0	262	$ 15,709,478	$ 59,960
1	760	49,976,413	65,758
2	565	39,360,670	69,665
3	471	33,734,970	71,624
4	430	32,100,454	74,652
0 - 4	**2,488**	**$170,881,985**	**$ 68,682**
5 - 9	1,732	138,507,087	79,969
10 - 14	1,178	104,568,265	88,768
15 - 19	476	44,846,288	94,215
20 - 24	3	301,142	100,381
25 - 29	0	0	0
30 - 34	0	0	0
35 - 39	0	0	0
40+	0	0	0
Total	**5,877**	**$459,104,767**	**$ 78,119**

Years of Credited Service by Age

	Years of Service									
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total
0 - 19	0	0	0	0	0	0	0	0	0	0
20 - 24	112	0	0	0	0	0	0	0	0	112
25 - 29	453	93	1	0	0	0	0	0	0	547
30 - 34	442	374	57	0	0	0	0	0	0	873
35 - 39	393	357	323	47	0	0	0	0	0	1,120
40 - 44	381	293	300	140	1	0	0	0	0	1,115
45 - 49	262	211	166	98	0	0	0	0	0	737
50 - 54	191	151	147	82	0	0	0	0	0	571
55 - 59	127	134	84	52	1	0	0	0	0	398
60 - 64	70	87	71	41	0	0	0	0	0	269
65 - 69	41	19	25	12	1	0	0	0	0	98
70 - 74	13	11	3	3	0	0	0	0	0	30
75+	3	2	1	1	0	0	0	0	0	7
Total	**2,488**	**1,732**	**1,178**	**476**	**3**	**0**	**0**	**0**	**0**	**5,877**

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

Section 3.3: Member Data Reconciliation

	Actives	Retirees and Surviving Spouses	Dependent Spouses	OD&D Disabilitants	OD&D Beneficiaries	Total
As of June 30, 2022 [1]	**5,688**	**27**	**8**	**1**	**0**	**5,724**
New Entrants	874	0	0	0	0	874
Rehires	253	0	0	0	0	253
Vested Terminations	(379)	0	0	0	0	(379)
Non-Vested Terminations	(436)	0	0	0	0	(436)
Refund of Contributions	(60)	0	0	0	0	(60)
Disability Retirements	0	0	0	0	0	0
Age Retirements	(9)	9	6	0	0	6
Deaths With Beneficiary	0	0	0	0	0	0
Deaths Without Beneficiary	(3)	0	0	0	0	(3)
Added Retiree Medical Coverage	0	0	0	0	0	0
Dropped Retiree Medical Coverage	0	(1)	0	0	0	(1)
Transfers In/Out	(50)	2	0	0	0	(48)
Data Corrections	(1)	0	0	0	0	(1)
Net Change	**189**	**10**	**6**	**0**	**0**	**205**
As of June 30, 2023 [2]	**5,877**	**37**	**14**	**1**	**0**	**5,929**

[1] 124 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

[2] 130 participants are expected to receive retiree medical benefits in a different plan and are included for OD&D benefits only.

Section 3.4: Schedule of Active Member Data

Valuation Date	Number	Annual Earnings (000's)	Annual Average Earnings	Percent Increase in Average Earnings	Number of Participating Employers
June 30, 2023	5,877	$ 459,105	$ 78,119	1.5%	57
June 30, 2022	5,688	437,728	76,956	3.9%	57
June 30, 2021	5,521	408,805	74,045	4.1%	57
June 30, 2020	5,332	379,201	71,118	2.2%	57
June 30, 2019	4,998	347,957	69,619	2.2%	57
June 30, 2018	4,915	334,803	68,119	2.4%	57
June 30, 2017	4,694	312,347	66,542	2.0%	57
June 30, 2016	4,383	285,854	65,219	2.5%	58
June 30, 2015	4,095	260,584	63,635	2.7%	58
June 30, 2014	3,547	219,701	61,940	2.4%	58

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

Section 3.5: Active Member Payroll Reconciliation

Payroll Field	Payroll Data (000's)
a) DRB actual reported salaries FY23 in employer list	$ 512,714
b) DRB actual reported salaries FY23 in valuation data	449,165
c) Annualized valuation data	459,105
d) Valuation payroll as of June 30, 2023	481,866
e) Rate payroll for FY24	477,857

a) Actual reported salaries from DRB employer listing showing all payroll paid during FY23, including those who were not active as of June 30, 2023
b) Payroll from valuation data for people who are in active status as of June 30, 2023
c) Payroll from (b) annualized for both new entrants and part-timers
d) Payroll from (c) with one year of salary scale applied to estimate salaries payable for the upcoming year
e) Payroll from (d) with the part-timer annualization removed

Section 4: Basis of the Actuarial Valuation

Section 4.1: Summary of Plan Provisions

Effective Date

July 1, 2006, with amendments through June 30, 2023.

Administration of Plan

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

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

Employers Included

Currently, there are 57 employers participating in TRS DCR, including the State of Alaska, 53 school districts, and three other eligible organizations.

Membership

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

- Permanent full-time or part-time elementary or secondary teachers, school nurses, or a person in a position requiring a teaching certificate as a condition of hire in a public school of the State of Alaska, the Department of Education and Early Development, or in the Department of Labor and Workforce Development.
- Full-time or part-time teachers at the University of Alaska or persons occupying full-time administrative positions requiring academic standing who are not in the University's Optional Retirement Plan.

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

Member Contributions

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

Retiree Medical Benefits

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

Plan Design Feature	In-Network[1]	Out-of-Network[1 2]
Deductible (single / family)	$300 / $600	
Medical services (participant share)	20%	40%
Emergency Room Copay (non-emergent use)	$100	$100
Medical Out-of-Pocket Maximum (single / family, including deductible)	$1,500 / $3,000	$3,000 / $6,000
Medicare Coordination	Exclusion	Exclusion
Pharmacy	No Deductible	No Deductible
Retail Generic (per 30-day fill)	20% $10 min / $50 max	
Retail Non-Formulary Brand (per 30-day fill)	25% $25 min / $75 max	40%
Retail Formulary Brand (per 30-day fill)	35% $80 min / $150 max	
Mail-Order Generic	$20 copay	
Mail-Order Non-Formulary Brand	$50 copay	40%
Mail-Order Formulary Brand	$100 copay	
Pharmacy Out-of-Pocket Max (single / family)	$1,000 / $2,000	
Medicare Pharmacy Arrangement	Retiree Drug Subsidy / Employer Group Waiver Plan effective 1/1/2019	
Wellness / Preventative	100% covered, not subject to deductible	20%, after deductible

[1] Section 1.1 of the AlaskaCare Defined Contribution Retiree Benefit Plan states that this health plan shall be updated from time to time to reflect changes in benefits, including annual adjustments to the premium, deductible, coinsurance, medical out-of-pocket limit, and prescription drug out-of-pocket limit.
[2] OON applies only to non-Medicare eligible participants.

- Buck used manual rate models to determine relative plan values for the defined benefit (DB) retiree medical plan and the DCR retiree medical plan outlined above. We applied the ratio of the DCR retiree medical plan value to the DB retiree medical plan value to the per capita costs determined for each of pre/post-Medicare medical and pharmacy benefits to estimate corresponding values for the DCR retiree medical plan design. These factors are noted in Section 4.3. We further adjusted the Medicare medical manual rate to reflect the Medicare coordination method adopted. The estimated 2024 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates). We reflect estimated discounts and pharmacy rebates in the defined benefit medical cost so no further adjustment was needed for the DCR retiree medical plan. The medical network differential is reflected in the relative plan value adjustments.
- Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan.
- The retiree medical plan's coverage is supplemental to Medicare. Medicare coordination is described in the DCR Plan Handbook, referred to in the industry as exclusion coordination: Medicare payment is deducted from the Medicare allowable expense and plan parameters are applied to the remaining amount. Starting in 2019, the prescription drug coverage is through a Medicare Part D EGWP arrangement.
- The premium for Medicare-eligible retirees will be based on the member's years of service. The percentage of premium paid by the member is as follows:

Years of Service	Percent of Premium Paid by Member
< 15	30%
15 – 19	25%
20 – 24	20%
25 – 29	15%
30+	10%

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

Occupational Disability Benefits

- Benefit is 40% of salary at date of disability.
- Disability Benefit Adjustment: The disability benefit is increased by 75% of the cost-of-living increase in the preceding calendar year or 9%, whichever is less.
- Member earns service while on occupational disability.
- Benefits cease when the member becomes eligible for normal retirement at Medicare-eligible age and 10 years of service, or at any age with 30 years of service.
- No subsidized retiree medical benefits are provided until normal retirement eligibility. The member's premium is 100% of the estimated cost until they are Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Occupational Death Benefits

- Benefit is 40% of salary.
- Survivor's Pension Adjustment: A survivor's pension is increased by 50% of the cost-of-living increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60 on July 1, or under age 60 if the recipient has been receiving TRS benefits for at least 8 years as of July 1.
- Benefits cease when the member would have become eligible for normal retirement.
- The period during which the survivor is receiving benefits is counted as service credit toward retiree medical benefits.
- No subsidized retiree medical benefits are provided until the member would have been eligible for normal retirement. The surviving spouse's premium is 100% of the estimated cost until the member would have been Medicare eligible. Medicare-eligible premiums follow the service-based schedule above.

Changes in Benefit Provisions Valued Since the Prior Valuation

There were no changes in benefit provisions since the prior valuation.

Section 4.2: Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006, and was modified as part of the experience study for the period July 1, 2013 to June 30, 2017. The asset smoothing method used to determine valuation assets was implemented effective June 30, 2006.

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

Actuarial Cost Method

Liabilities and contributions shown in the report are computed using the Entry Age Normal Actuarial Cost Method, level percent of pay. Each year's difference between actual and expected unfunded actuarial accrued liability is amortized over 25 years as a level percentage of expected payroll.

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

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

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

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

Valuation of Assets

Effective June 30, 2006, the asset valuation method recognizes 20% of the investment gain or loss in each of the current and preceding four years. This method was phased in over five years. Fair Value of Assets was $0 as of June 30, 2006. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

Changes in Methods Since the Prior Valuation

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

Valuation of Retiree Medical and Prescription Drug Benefits

The methodology used for the valuation of the retiree medical benefits is described in Section 5.2 of the State of Alaska Teachers' Retirement System Defined Benefit Plan Actuarial Valuation Report as of June 30, 2023.

Starting in 2022, prior authorization is required for certain specialty medications. There is no change to the medications that are covered by the plan. Segal provided an estimate of the impact of this change to the DB retiree health plan cost for calendar year 2022. The resulting adjustment factors for pre-Medicare prescription drug, Medicare prescription drug, and EGWP costs were applied to claims experience incurred before January 1, 2022. Those base claims costs were used for the DCR valuation with further adjustments as noted below. Additionally, starting in 2022, certain common preventive benefits are covered for the DB plan. The resulting adjustment factor for pre-Medicare medical costs was applied to claims experience incurred before January 1, 2022. However, preventive benefits were already covered under the DCR plan so the pre-65 DCR medical adjustment factor referenced below was increased from 3.1% to 4.4%.

Due to the lack of experience for the DCR retiree medical plan, base claims costs are based on those described in the actuarial valuation as of June 30, 2023 for the Defined Benefit (DB) retiree medical plan covering TRS and PERS. The DB rates were used with some adjustments. The claims costs were adjusted to reflect the differences between the DCR medical plan and the DB medical plan. These differences include network steerage, different coverage levels, different Medicare coordination for medical benefits, and an indexing of the retiree out-of-pocket dollar amounts. To account for higher initial copays, deductibles, and out-of-pocket limits, projected FY24 claims costs were reduced 4.4% for pre-Medicare medical claims, 3.1% for Medicare medical claims, and 8.9% for prescription drugs. In addition, to account for the difference in Medicare coordination, projected FY24 medical claims costs for Medicare eligible retirees were further reduced 29.5%.

FY22 and FY23 experience was thoroughly reviewed to assess the impact of COVID-19 and whether an adjustment to FY22 and FY23 claims was appropriate for use in the June 30, 2023 valuation. FY22 and FY23 per capita claims were reasonable when compared to pre-COVID levels, so no adjustments were made to the claims used in the per capita claims cost development.

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

The State transitioned to an Employer Group Waiver Program (EGWP) for DCR participants effective January 1, 2019. The estimated 2024 reimbursements under EGWP were provided by Segal Consulting (who worked with the EGWP administrator, Optum, to develop those estimates).

Healthcare Reform

Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact due to these provisions.

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

The Further Consolidated Appropriations Act, 2020 passed in December 2019 repealed several healthcare-related taxes, including the Cadillac Tax.

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

The Inflation Reduction Act was signed into law on August 16, 2022. The law contains several provisions that are expected to impact Alaska's Medicare prescription drug plan (EGWP), which will be considered at the next measurement date.

We have not identified any other specific provisions of healthcare reform or its potential repeal that would be expected to have a significant impact on the measured obligation. We will continue to monitor legislative activity.

Section 4.3: Summary of Actuarial Assumptions

The demographic and economic assumptions used in the June 30, 2023 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board at the June 2022 meeting based on the experience study for the period July 1, 2017 to June 30, 2021.

Investment Return

7.25% per year, net of investment expenses.

Salary Scale

Salary scale rates based on the 2017-2021 actual experience (see Table 1).

Inflation – 2.50% per year.

Productivity – 0.25% per year.

Payroll Growth

2.75% 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 2.50% annually.

Mortality (Pre-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

- Occ D&D: Pub-2010 Teachers Employee table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Teachers Employee table, headcount-weighted, and projected with MP-2021 generational improvement.

Deaths are assumed to result from occupational causes 15% of the time.

Mortality (Post-Commencement)

Mortality rates based on the 2017-2021 actual experience, to the extent the experience was statistically credible.

Retiree mortality in accordance with the following tables:

- Occ D&D: 97% of male and 97% of female rates of the Pub-2010 Teachers Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 98% of male and 100% of female rates of the Pub-2010 Teachers Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Beneficiary mortality in accordance with the following tables. These tables are applied only after the death of the original member.

- Occ D&D: 100% of male and 95% of female rates of the Pub-2010 Contingent Survivor table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: 100% of male and 94% of female rates of the Pub-2010 Contingent Survivor table, headcount-weighted, and projected with MP-2021 generational improvement.

Turnover

Select and ultimate rates based on the 2017-2021 actual experience (see Table 2).

Disability

No changes to the incidence rates from the prior valuation due to insufficient 2017-2021 actual experience (see Table 3). For retiree medical benefits, the disability rates cease once a member is eligible for retirement. However, the disability rates continue after retirement eligibility for occupational death & disability benefits.

Disabilities are assumed to be occupational 15% of the time.

Post-disability mortality in accordance with the following tables:

- Occ D&D: Pub-2010 Non-Safety Disabled Retiree table, amount-weighted, and projected with MP-2021 generational improvement.
- Healthcare: Pub-2010 Non-Safety Disabled Retiree table, headcount-weighted, and projected with MP-2021 generational improvement.

Retirement

Retirement rates based on the 2017-2021 actual experience (see Table 4).

Spouse Age Difference

Male members are assumed to be three years older than their wives. Female members are assumed to be two years younger than their husbands.

Percent Married for Occupational Death & Disability

85% of male members and 75% of female members are assumed to be married at termination from active service.

Dependent Spouse Medical Coverage Election

Applies to members who do not have double medical coverage. 60% of male members and 50% of female members are assumed to be married and cover a dependent spouse.

Part-Time Service

Part-time employees are assumed to earn 0.75 years of service per year.

Imputed Data

Data changes from the prior year which are deemed to have immaterial impact on liabilities and contribution rates are assumed to be correct in the current year's client data.

Non-vested terminations with appropriate refund dates are assumed to have received a full refund of contributions. Active members with missing salary and service are assumed to be terminated with status based on their vesting percentage.

Administrative Expenses

The Normal Cost as of June 30, 2023 was increased by $10,000 for occupational death & disability and $36,000 for retiree medical. These amounts are based on the average of actual administrative expenses during the last two fiscal years.

Retiree Medical Participation

Death / Disability Decrement		Retirement Decrement	
Age	**Percent Participation**	**Age**	**Percent Participation***
< 56	75.0%	55	50.0%
56	77.5%	56	55.0%
57	80.0%	57	60.0%
58	82.5%	58	65.0%
59	85.0%	59	70.0%
60	87.5%	60	75.0%
61	90.0%	61	80.0%
62	92.5%	62	85.0%
63	95.0%	63	90.0%
64	97.5%	64	95.0%
65+	100.0%	65+	**Years of Service**
			< 15 75.0%
			15 – 19 80.0%
			20 – 24 85.0%
			25 – 29 90.0%
			30+ 95.0%

* Participation assumption is a combination of (i) the service-based rates for retirement from employment at age 65+ and (ii) the age-based rates for retirement from employment before age 65. These rates reflect the expected plan election rate that varies by reason for decrement, duration that a member may pay full cost prior to Medicare eligibility, and availability of alternative and/or lower cost options, particularly in the Medicare market. This assumption is based on observed trends in participation from a range of other plans.

Healthcare Per Capita Claims Cost

Sample claims cost rates (before base claims cost adjustments described below) adjusted to age 65 for FY24 medical and prescription drugs are shown below. The prescription drug costs reflect the plan change to require prior authorization for certain specialty medications.

	Medical	Prescription Drugs
Pre-Medicare	$ 17,338	$ 3,947
Medicare Parts A & B	$ 1,761	$ 4,300
Medicare Part D – EGWP	N/A	$ 1,267

Members are assumed to attain Medicare eligibility at age 65. All costs are for the 2024 fiscal year (July 1, 2023 – June 30, 2024).

The EGWP subsidy is assumed to increase in future years by the trend rates shown on the following pages. No future legislative changes or other events are anticipated to impact the EGWP subsidy. If any legislative or other changes occur in the future that impact the EGWP subsidy (which could either increase or decrease the plan's Actuarial Accrued Liability), those changes will be evaluated and quantified when they occur.

Base Claims Cost Adjustments

Due to higher initial copays, deductibles, out-of-pocket limits, and member cost sharing compared to the DB medical plan, the following cost adjustments are applied to the per capita claims cost rates above:

- 0.956 for the pre-Medicare plan.
- 0.674 for both the Medicare medical plan and Medicare coordination method (3.1% reduction for the medical plan and 29.5% reduction for the coordination method).
- 0.911 for the prescription drug plan.

Healthcare Morbidity

Morbidity rates (also called aging factors) are used to estimate utilization of healthcare benefits at each age to reflect the fact that healthcare utilization typically increases with age. Separate morbidity rates are used for medical and prescription drug benefits. These rates are based on the 2017-2021 actual experience.

Age	Medical	Prescription Drugs
0 - 44	2.0%	4.5%
45 - 54	2.5%	3.5%
55 - 64	2.5%	1.0%
65 - 74	2.0%	2.1%
75 - 84	2.2%	(0.3%)
85 - 94	0.5%	(2.5%)
95+	0.0%	0.0%

Healthcare Third Party Administrator Fees

$497 per person per year; assumed to increase at 4.50% per year.

Healthcare Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 6.70% is applied to the FY24 pre-Medicare medical claims costs to get the FY25 medical claims costs.

	Medical Pre-65	Medical Post-65	Prescription Drugs / EGWP
FY24	6.70%	5.50%	7.20%
FY25	6.40%	5.40%	6.90%
FY26	6.20%	5.40%	6.65%
FY27	6.05%	5.35%	6.35%
FY28	5.85%	5.35%	6.10%
FY29	5.65%	5.30%	5.80%
FY30	5.45%	5.30%	5.55%
FY31-FY38	5.30%	5.30%	5.30%
FY39	5.25%	5.25%	5.25%
FY40	5.20%	5.20%	5.20%
FY41	5.10%	5.10%	5.10%
FY42	5.05%	5.05%	5.05%
FY43	4.95%	4.95%	4.95%
FY44	4.90%	4.90%	4.90%
FY45	4.80%	4.80%	4.80%
FY46	4.75%	4.75%	4.75%
FY47	4.70%	4.70%	4.70%
FY48	4.60%	4.60%	4.60%
FY49	4.55%	4.55%	4.55%
FY50+	4.50%	4.50%	4.50%

For the June 30, 2014 valuation and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model estimates trend amounts that are projected out for 80 years. The model has been populated with assumptions that are specific to the State of Alaska.

Changes in Assumptions Since the Prior Valuation

The healthcare per capita claims cost assumption is updated annually as described in Section 4.2. The amounts included in the Normal Cost for administrative expenses were changed from $9,000 to $10,000 for occupational death & disability, and from $35,000 to $36,000 for retiree medical (based on the most recent two years of actual administrative expenses paid from plan assets). There were no other changes in actuarial assumptions since the prior valuation.

Table 1: Salary Scale

Years of Service	Percent Increase
< 1	7.25%
1	6.75%
2	6.25%
3	5.75%
4	5.25%
5	5.00%
6	4.75%
7	4.50%
8	4.25%
9	4.00%
10	3.75%
11	3.50%
12	3.25%
13	3.05%
14	3.00%
15	2.95%
16	2.90%
17+	2.85%

Table 2: Turnover Rates

Select Rates during the First 6 Years of Employment

Years of Service	Male	Female
< 1	28.00%	31.00%
1	28.00%	21.00%
2	19.00%	18.00%
3	17.00%	13.00%
4	13.00%	13.00%
5	13.00%	10.00%

Ultimate Rates after the First 6 Years of Employment

Age	Male	Female
< 30	10.50%	8.70%
30 - 34	10.50%	8.70%
35 - 39	10.40%	8.60%
40 - 44	10.30%	8.60%
45 - 49	10.00%	8.40%
50 - 54	9.50%	8.10%
55 - 59	8.80%	7.90%
60 - 64	9.30%	8.70%
65+	10.90%	7.40%

Table 3: Disability Rates

Age	Male	Female	Age	Male	Female
< 31	0.0337%	0.0612%	50	0.0601%	0.1093%
31	0.0337%	0.0613%	51	0.0634%	0.1152%
32	0.0337%	0.0613%	52	0.0666%	0.1211%
33	0.0342%	0.0622%	53	0.0746%	0.1356%
34	0.0347%	0.0631%	54	0.0826%	0.1501%
35	0.0353%	0.0641%	55	0.0905%	0.1645%
36	0.0357%	0.0650%	56	0.0985%	0.1790%
37	0.0362%	0.0659%	57	0.1064%	0.1935%
38	0.0371%	0.0674%	58	0.1245%	0.2263%
39	0.0379%	0.0689%	59	0.1426%	0.2592%
40	0.0387%	0.0703%	60	0.1606%	0.2920%
41	0.0395%	0.0718%	61	0.1787%	0.3249%
42	0.0403%	0.0733%	62	0.1967%	0.3577%
43	0.0423%	0.0770%	63	0.2253%	0.4096%
44	0.0443%	0.0806%	64	0.2572%	0.4677%
45	0.0464%	0.0843%	65	0.2933%	0.5332%
46	0.0483%	0.0879%	66	0.3343%	0.6079%
47	0.0504%	0.0916%	67	0.3812%	0.6930%
48	0.0536%	0.0975%	68	0.4345%	0.7900%
49	0.0569%	0.1034%	69	0.4953%	0.9006%
			70+	0.5647%	1.0267%

Table 4: Retirement Rates

Age	Rate
< 55	2.00%
55	3.00%
56	3.00%
57	3.00%
58	3.00%
59	3.00%
60	5.00%
61	5.00%
62	10.00%
63	5.00%
64	5.00%
65	25.00%
66	25.00%
67	25.00%
68	20.00%
69	20.00%
70+	100.00%

Section 5: Historical Information[1]

Section 5.1: Funding Progress

Funding Progress - Occupational Death & Disability ($'s in 000's)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 190	$ 7,568	3,983.2%	$ (7,378)	$ 477,857	(1.5%)
June 30, 2022	199	6,700	3,366.8%	(6,501)	455,927	(1.4%)
June 30, 2021	205	5,843	2,850.2%	(5,638)	423,783	(1.3%)
June 30, 2020	223	4,933	2,212.1%	(4,710)	391,854	(1.2%)
June 30, 2019	240	4,359	1,816.3%	(4,119)	359,622	(1.1%)
June 30, 2018	30	3,845	12,816.7%	(3,815)	346,044	(1.1%)
June 30, 2017	26	3,588	13,800.0%	(3,562)	327,765	(1.1%)
June 30, 2016	19	3,323	17,489.5%	(3,304)	300,750	(1.1%)
June 30, 2015	29	3,114	10,737.9%	(3,085)	274,892	(1.1%)
June 30, 2014	23	2,820	12,260.9%	(2,797)	232,051	(1.2%)
June 30, 2013	80	2,532	3,165.0%	(2,452)	210,004	(1.2%)
June 30, 2012	63	2,348	3,727.0%	(2,285)	189,680	(1.2%)
June 30, 2011	57	2,193	3,847.4%	(2,136)	160,509	(1.3%)
June 30, 2010	18	1,577	8,761.1%	(1,559)	126,520	(1.2%)
June 30, 2009	14	1,071	7,650.0%	(1,057)	95,141	(1.1%)
June 30, 2008	44	420	954.5%	(376)	59,750	(0.6%)
June 30, 2007	16	0	0.0%	16	30,113	0.1%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2009 valuations.

[1] GASB 74 replaced GASB 43 effective for the fiscal year ending June 30, 2017. At the request of the State, historical accounting information has been included in this section as if GASB 43 were still effective.

Funding Progress - Retiree Medical ($’s in 000’s)

Valuation Date	Actuarial Accrued Liability	Valuation Assets	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Active Member Payroll	UAAL as Pct. of Active Member Payroll
June 30, 2023	$ 57,093	$ 77,815	136.3%	$ (20,722)	$ 477,857	(4.3%)
June 30, 2022	47,797	68,403	143.1%	(20,606)	455,927	(4.5%)
June 30, 2021	44,396	59,380	133.8%	(14,984)	423,783	(3.5%)
June 30, 2020	40,634	49,554	122.0%	(8,920)	391,854	(2.3%)
June 30, 2019	32,981	42,307	128.3%	(9,326)	359,622	(2.6%)
June 30, 2018	32,429	36,776	113.4%	(4,347)	346,044	(1.3%)
June 30, 2017	33,681	30,998	92.0%	2,683	327,765	0.8%
June 30, 2016	21,988	25,410	115.6%	(3,422)	300,750	(1.1%)
June 30, 2015	19,768	17,733	89.7%	2,035	274,892	0.7%
June 30, 2014	16,273	10,791	66.3%	5,482	232,051	2.4%
June 30, 2013	22,058	8,614	39.1%	13,444	210,004	6.4%
June 30, 2012	16,811	6,937	41.3%	9,874	189,680	5.2%
June 30, 2011	3,801	5,373	141.4%	(1,572)	160,509	(1.0%)
June 30, 2010	2,430	3,895	160.3%	(1,465)	126,520	(1.2%)
June 30, 2009	1,446	2,353	162.7%	(907)	95,141	(1.0%)
June 30, 2008	757	1,308	172.8%	(551)	59,750	(0.9%)
June 30, 2007	358	597	166.8%	(239)	30,113	(0.8%)

Change in assumptions reflected in 2022, 2020, 2018, 2017, 2014, 2012, 2011, 2010, 2009, and 2008 valuations.

Change in methods reflected in 2018 valuation.

Change in plan provisions reflected in 2021 and 2016 valuations.

Section 5.2: Solvency Test

Solvency Test - Occupational Death & Disability ($'s in 000's)

	Actuarial Accrued Liability (AAL)				Portion of AAL Covered by Valuation Assets		
Valuation Date	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	(1)	(2)	(3)
June 30, 2023	$ 0	$ 167	$ 23	$ 7,568	100.0%	100.0%	100.0%
June 30, 2022	0	174	25	6,700	100.0%	100.0%	100.0%
June 30, 2021	0	177	28	5,843	100.0%	100.0%	100.0%
June 30, 2020	0	196	27	4,933	100.0%	100.0%	100.0%
June 30, 2019	0	209	31	4,359	100.0%	100.0%	100.0%
June 30, 2018	0	0	30	3,845	100.0%	100.0%	100.0%
June 30, 2017	0	0	26	3,588	100.0%	100.0%	100.0%
June 30, 2016	0	0	19	3,323	100.0%	100.0%	100.0%
June 30, 2015	0	0	29	3,114	100.0%	100.0%	100.0%
June 30, 2014	0	0	23	2,820	100.0%	100.0%	100.0%
June 30, 2013	0	0	80	2,532	100.0%	100.0%	100.0%
June 30, 2012	0	0	63	2,348	100.0%	100.0%	100.0%
June 30, 2011	0	0	57	2,193	100.0%	100.0%	100.0%
June 30, 2010	0	0	18	1,577	100.0%	100.0%	100.0%
June 30, 2009	0	0	14	1,071	100.0%	100.0%	100.0%
June 30, 2008	0	0	44	420	100.0%	100.0%	100.0%
June 30, 2007	0	0	16	0	100.0%	100.0%	0.0%

Change in assumptions reflected in 2022, 2018, 2014, 2010, and 2009 valuations.

Solvency Test - Retiree Medical ($'s in 000's)

Valuation Date	Actuarial Accrued Liability (AAL) (1) Active Member Contributions	(2) Inactive Members	(3) Active Members Employer Financed	Valuation Assets	Portion of AAL Covered by Valuation Assets (1)	(2)	(3)
June 30, 2023	$ 0	$ 3,024	$ 54,069	$ 77,815	100.0%	100.0%	100.0%
June 30, 2022	0	1,913	45,884	68,403	100.0%	100.0%	100.0%
June 30, 2021	0	1,265	43,131	59,380	100.0%	100.0%	100.0%
June 30, 2020	0	925	39,709	49,554	100.0%	100.0%	100.0%
June 30, 2019	0	647	32,334	42,307	100.0%	100.0%	100.0%
June 30, 2018	0	534	31,895	36,776	100.0%	100.0%	100.0%
June 30, 2017	0	199	33,482	30,998	100.0%	100.0%	92.0%
June 30, 2016	0	0	21,988	25,410	100.0%	100.0%	100.0%
June 30, 2015	0	0	19,768	17,733	100.0%	100.0%	89.7%
June 30, 2014	0	0	16,273	10,791	100.0%	100.0%	66.3%
June 30, 2013	0	0	22,058	8,614	100.0%	100.0%	39.1%
June 30, 2012	0	0	16,811	6,937	100.0%	100.0%	41.3%
June 30, 2011	0	0	3,801	5,373	100.0%	100.0%	100.0%
June 30, 2010	0	0	2,430	3,895	100.0%	100.0%	100.0%
June 30, 2009	0	0	1,446	2,353	100.0%	100.0%	100.0%
June 30, 2008	0	0	757	1,308	100.0%	100.0%	100.0%
June 30, 2007	0	0	358	597	100.0%	100.0%	100.0%

Change in assumptions reflected in 2022, 2020, 2018, 2017, 2014, 2012, 2011, 2010, 2009, and 2008 valuations.

Change in methods reflected in 2018 valuation.

Change in plan provisions reflected in 2021 and 2016 valuations.

Section 5.3: Member Data

As of June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Active Members										
1. Number	3,547	4,095	4,383	4,694	4,915	4,998	5,332	5,521	5,688	5,877
2. Average Age	38.52	39.15	39.57	40.21	40.64	41.06	41.63	41.90	42.26	42.44
3. Average Credited Service	3.90	4.19	4.50	4.88	5.30	5.67	6.03	6.34	6.60	6.72
4. Average Entry Age	34.62	34.96	35.07	35.33	35.34	35.39	35.60	35.56	35.66	35.72
5. Average Annual Earnings	$ 61,940	$ 63,635	$ 65,219	$ 66,542	$ 68,119	$ 69,619	$ 71,118	$ 74,045	$ 76,956	$ 78,119
Disabilitants and Beneficiaries (Occupational Death & Disability)										
1. Number	0	0	0	0	0	1	1	1	1	1
2. Average Age	N/A	N/A	N/A	N/A	N/A	53.45	54.45	55.45	56.45	57.45
3. Average Monthly Death & Disability Benefit	N/A	N/A	N/A	N/A	N/A	$ 2,024	$ 2,024	$ 2,024	$ 2,170	$ 2,299
Retirees, Surviving Spouses, and Dependent Spouses (Retiree Medical)										
1. Number	0	0	0	4	9	12	17	24	35	51
2. Average Age	N/A	N/A	N/A	69.72	68.59	68.54	68.79	67.71	69.66	70.58
Total Number of Members	**3,547**	**4,095**	**4,383**	**4,698**	**4,924**	**5,011**	**5,350**	**5,546**	**5,724**	**5,929**

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

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.

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.

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.

BUCK
A Gallagher Company

May 3, 2024

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

Re: Judicial Retirement System and National Guard and Naval Militia Retirement System Roll-Forward Actuarial Valuations as of June 30, 2023

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

We have completed the roll-forward actuarial valuations for the State of Alaska Judicial Retirement System (JRS) and the National Guard and Naval Militia Retirement System (NGNMRS) as of June 30, 2023. The valuations have been performed by a projection or “roll forward” of liabilities and costs from the last valuation date of June 30, 2022 to June 30, 2023. Actual asset values as of June 30, 2023 were reflected. A summary of results and description of assumptions and methods are included in this report.

The purposes of these roll-forward valuations are to (i) determine the employer contributions necessary to meet the Board’s funding policy for each System, (ii) disclose the funding assets and liability measures as of the valuation date, and (iii) review the current funded status of each System and assess the funded status as an appropriate measure for determining future actuarially determined contributions. The calculations of the Employer and State Contributions are reasonable actuarially determined contributions as defined in Actuarial Standard of Practice No. 4 (ASOP 4).

The Board and staff of the State of Alaska may use this report for the review of the operations of JRS and NGNMRS. 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 due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advanced review any statement to be based on information contained in this report. Buck will accept no liability for any such statement made without its prior review.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the actuarial assumptions, changes in assumptions, changes 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 these valuations.

Actuarial Assumptions and Methods

In lieu of collecting new participant data as of June 30, 2023 and performing a full actuarial valuation, the actuarial liabilities were projected or "rolled forward" from the June 30, 2022 valuation date to June 30, 2023 by assuming the actuarial assumptions during the year were exactly realized.

The actuarial value of assets was calculated as of June 30, 2023 using actual assets and cash flows during FY23. The asset valuation method recognizes 20% of the investment gain or loss each year, for a period of five years. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

All data, actuarial assumptions, methods, and plan provisions are the same as those shown in the June 30, 2022 valuation reports dated August 15, 2023 (JRS) and May 31, 2023 (NGNMRS), with the following exceptions:

- For JRS, the salary increase and pensioner benefit increase assumptions were modified effective June 30, 2023 to be 5% for FY23, 0% for FY24, 5% for FY25, 0% for FY26-FY28, and 3% per year thereafter to better reflect expected short-term experience.
- For JRS, the amounts included in the Normal Cost for administrative expenses were changed from $102,000 to $103,000 for pension and remained level at $34,000 for healthcare, based on the most recent two years of actual administrative expenses paid from plan assets.
- For NGNMRS, the amount included in the Normal Cost for administrative expenses was changed from $331,000 to $327,000, based on the most recent two years of actual administrative expenses paid from plan assets.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of each System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under each System. A description of the assumption-setting process is provided in the June 30, 2022 valuation reports. In our professional judgment, the combined effect of the assumptions is expected to have no significant bias. We certify that the assumptions and methods used for funding purposes meet the requirements of all applicable Actuarial Standards of Practice.

Actuarial Standards of Practice No. 27 (ASOP 27) and No. 35 (ASOP 35) require the actuary to disclose the information and analysis used to support the actuary's determination that the assumptions selected by the plan sponsor do not significantly conflict with those that, in the actuary's professional judgment, are reasonable for the purpose of the measurement. Buck provides advice on reasonable assumptions when performing periodic experience studies. The Board selects the assumptions used, and the signing actuaries review the assumptions annually through discussions with the Board staff and analysis of actuarial experience.

In the case of the Board's selected expected return on assets, the signing actuaries have used economic information provided by Buck's Investment Consulting and Financial Risk Management practices. Buck's Capital Market Assumptions provide relevant expected returns, standard deviations, and correlations. Projected returns are then developed for the portfolio using the GEMS® Economic Scenario Generator from Conning. This sophisticated model uses a multifactor approach to create internally consistent, realistic economic scenarios for all asset classes that reflect the current economic environment as a starting point. Equity returns include stochastic volatility with jumps to reflect extreme, infrequent events. However, such scenarios do not typically impact the 5th through 95th percentiles of projected returns. Corporate bond yields are generated by adding credit spreads to the corresponding zero-coupon Treasury yields. The credit spreads are driven by several factors, including equity returns, and also contain a shock process to allow the model to generate such scenarios as the 2008 Financial Crisis. GEMS® does not, however, model specific risks such as war, pandemics, political risks, severe economic dislocations occurring with greater frequency or severity than predicted by the model, or the risk that relationships among macroeconomic variables may differ from those of the past. From these scenarios, a probabilistic model of expected returns is created, reflecting the duration of investment and the approximate allocation of assets in the portfolio to various asset classes. Under current calibrations, GEMS® will tend to show higher expected returns for longer durations and a greater divergence between arithmetic and geometric average returns at higher standard deviations of portfolio return.

Based on their analysis, including consistency with other assumptions used in the valuation, the percentiles generated by the GEMS® model described above, and review of actuarial gain/loss analysis, the signing actuaries believe the assumptions, in their professional judgment, do not significantly conflict with what are reasonable for the purpose of the measurement.

Funded Status

Where presented, references to "funded ratio", "funded status", and "unfunded actuarial accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded actuarial accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but make no assessment regarding the funded status of the plans if the plans were to settle (i.e. purchase annuities) for a portion or all of their liabilities.

Summary of Results

The results of the June 30, 2023 roll-forward valuations are shown below (results from the June 30, 2022 valuations are shown for comparison purposes):

	June 30, 2022	June 30, 2023
Judicial Retirement System		
• Funded Status[1]		
o Pension	101.6%	112.6%
o Healthcare	228.7%	226.5%
• Employer/State Contribution Rates[2]		
o Pension	52.49%	40.48%
o Healthcare	6.75%	6.93%
o Total	59.24%	47.41%
National Guard and Naval Militia Retirement System		
• Funded Status[1]	162.9%	160.1%
• Actuarially Determined Contribution, not less than zero[3]	$ 0	$ 0

[1] The funded status shown is based on the actuarial value of assets. The funded status is different based on the fair value of assets.

[2] The June 30, 2022 valuation determined the contribution rates for FY25. The June 30, 2023 valuation determines the contribution rates for FY26. Total contribution rates are not less than the Normal Cost rate.

[3] The June 30, 2022 valuation determined the contribution for FY25. The June 30, 2023 valuation determines the contribution for FY26.

The following table summarizes the FY23 actuarial gains/(losses). Net actuarial gains/losses decrease/increase the unfunded actuarial accrued liability versus what was expected based on the previous valuation. Figures in the tables below for JRS are combined for pension and healthcare.

	JRS	NGNMRS
Asset Gain/(Loss)	$ 149,000	$ (458,000)
Liability Gain/(Loss)	N/A	N/A
Healthcare Benefit Payment Gain/(Loss)	(169,000)	N/A
Contribution Gain/(Loss)	4,799,000	0
Administrative Expense Gain/(Loss)	11,000	47,000
Total Gain/(Loss)	$ 4,790,000	$ (411,000)

Other items that increased/(decreased) the actuarial accrued liability as of June 30, 2023 are shown below:

	JRS	NGNMRS
New Salary/Pensioner Benefit Increase Assumptions	$ (17,196,000)	$ N/A

Risk Information

Actuarial Standard of Practice No. 51 (ASOP 51) applies to actuaries performing funding calculations related to a pension plan. ASOP 51 does not apply to actuaries performing services in connection with other post-employment benefits, such as medical benefits. Accordingly, ASOP 51 does not apply to the healthcare portion of JRS. Please see pages 16-19 of this report for further details regarding ASOP 51, as well as information on the Low-Default-Risk Obligation Measure (LDROM) now required to be disclosed under Actuarial Standard of Practice No. 4 (ASOP 4).

Use of Models

Actuarial Standard of Practice No. 56 (ASOP 56) provides guidance to actuaries performing actuarial services that involve designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the GEMS® model disclosed above, Buck uses third-party software to perform actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of each plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to internally developed models that apply applicable funding methods and policies to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Buck maintains an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal models are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding methods, as well as the manner in which the model generates its output. If significant changes are made to the internal models, extra checking and review are completed. Significant changes to the internal models that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

Additional models used in valuing health benefits for JRS are described in Section 4.2 of the June 30, 2022 report dated August 15, 2023.

This report was prepared under the overall direction of David Kershner, who meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. He is a Fellow of the Society of Actuaries, an Enrolled Actuary, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries.

We are available to discuss this report with you at your convenience. David can be reached at 602-803-6174 and Brett can be reached at 260-423-1072.

Respectfully submitted,

David J. Kershner, FSA, EA, MAAA, FCA
Principal
Buck, A Gallagher Company

Brett Hunter, ASA, EA, MAAA
Senior Consultant
Buck, A Gallagher Company

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

Robert Besenhofer, ASA, MAAA, FCA
Director
Buck, A Gallagher Company

Attachments

cc: Mr. Kevin Worley, State of Alaska

Judicial Retirement System

Funded Status as of June 30	2022	2023
Pension		
a. Actuarial Accrued Liability	$ 227,227,808	$ 215,813,907
b. Valuation Assets	230,801,847	243,016,248
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (3,574,039)	$ (27,202,341)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	101.6%	112.6%
e. Fair Value of Assets	$ 227,181,866	$ 239,742,591
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	100.0%	111.1%
Healthcare		
a. Actuarial Accrued Liability	$ 17,864,257	$ 19,234,976
b. Valuation Assets	40,855,819	43,561,548
c. Unfunded Actuarial Accrued Liability, (a) - (b)	$ (22,991,562)	$ (24,326,572)
d. Funded Ratio based on Valuation Assets, (b) ÷ (a)	228.7%	226.5%
e. Fair Value of Assets	$ 40,267,620	$ 43,039,373
f. Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	225.4%	223.8%

Comparative Summary of Contribution Rates	FY 2025	FY 2026
Pension		
a. Normal Cost Rate Net of Member Contributions	35.32%	32.29%
b. Past Service Cost Rate	17.17%	8.19%
c. Total Employer/State Contribution Rate, (a) + (b), not less than (a)	52.49%	40.48%
Healthcare		
a. Normal Cost Rate	6.75%	6.93%
b. Past Service Cost Rate	(10.19%)	(11.01%)
c. Total Employer/State Contribution Rate, (a) + (b), not less than (a)	6.75%	6.93%
Total		
a. Normal Cost Rate Net of Member Contributions	42.07%	39.22%
b. Past Service Cost Rate	17.17%	8.19%
c. Total Employer/State Contribution Rate, (a) + (b)	59.24%	47.41%

Judicial Retirement System (continued)

Actuarial Contributions as of June 30, 2023 for FY26	Pension	Healthcare
Normal Cost Rate		
1. Total Normal Cost	$ 5,422,765	$ 972,119
2. Base Salaries for Upcoming Fiscal Year	14,035,020	14,035,020
3. Normal Cost Rate, (1) ÷ (2)	38.64%	6.93%
4. Average Member Contribution Rate	6.35%	0.00%
5. Employer Normal Cost Rate, (3) - (4)	32.29%	6.93%
Past Service Rate		
1. Actuarial Accrued Liability	$ 215,813,907	$ 19,234,976
2. Valuation Assets	243,016,248	43,561,548
3. Unfunded Actuarial Accrued Liability, (1) - (2)	$ (27,202,341)	$ (24,326,572)
4. Funded Ratio, (2) ÷ (1)	112.6%	226.5%
5. Past Service Cost Amortization Payment	1,150,003	(1,545,624)
6. Base Salaries for Upcoming Fiscal Year	14,035,020	14,035,020
7. Past Service Rate, (5) ÷ (6)	8.19%	(11.01%)
Total Employer / State Contribution Rate, not less than Normal Cost Rate	**40.48%**	**6.93%**

Judicial Retirement System (continued)

Schedule of Past Service Cost Amortizations - Pension

Layer	Amortization Period: Date Created	Amortization Period: Years Remaining	Balances: Initial	Balances: Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability[1]	6/30/2002	4	$ 5,864,449	$ 2,894,036	$ 770,670
FY03/04 Loss[1]	6/30/2004	6	855,068	562,111	104,003
Revaluation of Liabilities[1]	6/30/2005	7	9,115,451	6,589,591	1,066,626
FY05/06 Loss[1]	6/30/2006	8	18,186,558	14,164,135	2,047,207
FY07 Loss	6/30/2007	9	1,364,721	1,127,971	147,863
FY08 Gain	6/30/2008	10	(29,014,739)	(25,165,577)	(3,028,936)
FY09 Loss	6/30/2009	11	21,273,454	19,171,541	2,139,732
Change in Assumptions	6/30/2010	12	13,976,981	12,981,395	1,354,507
FY10 Loss	6/30/2010	12	6,474,780	6,013,578	627,470
FY11 Loss	6/30/2011	13	7,397,917	7,048,258	692,246
FY12 Loss	6/30/2012	14	11,916,371	11,578,829	1,076,647
FY13 Loss	6/30/2013	15	7,033,497	6,701,863	592,913
Change in Assumptions	6/30/2014	16	4,219,851	4,204,556	355,444
FY14 Gain	6/30/2014	16	(14,458,986)	(14,406,592)	(1,217,902)
FY15 Gain	6/30/2015	17	(3,325,706)	(3,335,671)	(270,474)
FY16 Gain	6/30/2016	18	(9,932,623)	(9,995,267)	(779,951)
FY17 Gain	6/30/2017	19	(1,137,538)	(1,145,106)	(86,244)
Change in Assumptions	6/30/2018	20	10,343,783	10,388,773	757,175
FY18 Gain	6/30/2018	20	(12,096,419)	(12,149,034)	(885,470)
Change in Assumptions	6/30/2019	21	(14,775,890)	(14,883,353)	(1,052,217)
FY19 Loss	6/30/2019	21	3,344,559	3,368,884	238,172
Change in Assumptions	6/30/2020	22	(21,604,253)	(21,778,605)	(1,496,681)
FY20 Loss	6/30/2020	22	5,424,705	5,468,482	375,808
FY21 Gain	6/30/2021	23	(11,633,233)	(11,713,960)	(784,029)
Change in Assumptions	6/30/2022	24	(1,189,628)	(1,194,461)	(77,999)
FY22 Gain	6/30/2022	24	(2,902,472)	(2,914,265)	(190,303)
Change in Assumptions	6/30/2023	25	(17,358,229)	(17,358,229)	(1,107,644)
FY23 Gain	6/30/2023	25	(3,426,224)	(3,426,224)	(218,630)
Total				**$ (27,202,341)**	**$ 1,150,003**

[1] The pension and healthcare split was done based on the ratio of unfunded actuarial accrued liability as of June 30, 2006.

Judicial Retirement System (continued)

Schedule of Past Service Cost Amortizations - Healthcare

Layer	Amortization Period		Balances		
	Date Created	Years Remaining	Initial	Outstanding	Beginning-of-Year Payment
Initial Unfunded Liability[1]	6/30/2002	4	$ 2,295,257	$ 1,132,684	$ 301,629
FY03/04 Loss[1]	6/30/2004	6	334,660	220,001	40,705
Revaluation of Liabilities[1]	6/30/2005	7	3,567,649	2,579,064	417,461
FY05/06 Loss[1]	6/30/2006	8	7,117,943	5,543,627	801,246
FY07 Gain	6/30/2007	9	(810,073)	(669,542)	(87,769)
Change in Assumptions	6/30/2008	10	789,072	684,393	82,374
FY08 Gain	6/30/2008	10	(14,011,596)	(12,152,786)	(1,462,713)
FY09 Loss	6/30/2009	11	901,355	812,299	90,661
Change in Assumptions	6/30/2010	12	2,006,196	1,863,293	194,420
FY10 Gain	6/30/2010	12	(1,930,656)	(1,793,132)	(187,099)
FY11 Loss	6/30/2011	13	550,376	524,362	51,500
Change in Assumptions	6/30/2012	14	353,605	343,587	31,948
FY12 Gain	6/30/2012	14	(5,516,210)	(5,359,961)	(498,391)
FY13 Loss	6/30/2013	15	226,259	223,110	19,739
Change in Assumptions	6/30/2014	16	772,305	769,506	65,052
FY14 Gain	6/30/2014	16	(3,342,464)	(3,330,353)	(281,541)
FY15 Gain	6/30/2015	17	(1,416,996)	(1,421,242)	(115,242)
Change in Method	6/30/2016	18	(3,567,789)	(3,590,291)	(280,158)
FY16 Gain	6/30/2016	18	(425,711)	(428,396)	(33,429)
FY17 Gain	6/30/2017	19	(586,113)	(590,013)	(44,437)
Change in Assumptions/Methods/EGWP	6/30/2018	20	1,009,960	1,014,353	73,930
FY18 Gain	6/30/2018	20	(2,148,478)	(2,157,822)	(157,271)
Change in Assumptions	6/30/2019	21	126,754	127,674	9,026
FY19 Gain	6/30/2019	21	(155,028)	(156,155)	(11,040)
Change in Assumptions	6/30/2020	22	200,955	202,577	13,922
FY20 Gain	6/30/2020	22	(2,842,610)	(2,865,549)	(196,928)
FY21 Gain	6/30/2021	23	(1,754,192)	(1,766,365)	(118,225)
Change in Assumptions	6/30/2022	24	(802,844)	(806,106)	(52,639)
Medical/Prescription Drug Plan Changes	6/30/2022	24	(223,750)	(224,659)	(14,670)
FY22 Gain	6/30/2022	24	(1,845,814)	(1,853,313)	(121,022)
Change in Assumptions	6/30/2023	25	162,192	162,192	10,350
FY23 Gain	6/30/2023	25	(1,363,609)	(1,363,609)	(87,013)
Total				**$ (24,326,572)**	**$ (1,545,624)**

1 The pension and healthcare split was done based on the ratio of unfunded actuarial accrued liability as of June 30, 2006.

Judicial Retirement System (continued)

Changes in Fair Value of Assets During FY23		Pension	Healthcare
1.	Fair Value of Assets as of June 30, 2022	$ 227,181,866	$ 40,267,620
2.	Additions:		
	a. Employee Contributions	$ 906,106	$ 0
	b. Employer Contributions	7,518,356	921,731
	c. State Appropriation	3,225,000	0
	d. Interest and Dividend Income	3,643,436	655,621
	e. Net Appreciation / Depreciation in Fair Value of Investments	14,066,948	2,525,508
	f. Employer Group Waiver Plan	0	199,648
	g. Other	0	4,725
	h. Total Additions	$ 29,359,846	$ 4,307,233
3.	Deductions:		
	a. Medical Benefits	$ 0	$ 1,391,918
	b. Retirement Benefits	16,032,039	0
	c. Refund of Contributions	39,292	0
	d. Investment Expenses	629,801	110,878
	e. Administrative Expenses	97,989	32,684
	f. Total Deductions	$ 16,799,121	$ 1,535,480
4.	Fair Value of Assets as of June 30, 2023	$ 239,742,591	$ 43,039,373
5.	Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	7.6%	7.7%

Judicial Retirement System (continued)

Development of Actuarial Value of Assets		Pension	Healthcare
1.	Deferral of Investment Gain / (Loss) for FY23		
a.	Fair Value of Assets as of June 30, 2022	$ 227,181,866	$ 40,267,620
b.	Contributions	11,649,462	921,731
c.	Employer Group Waiver Plan	0	199,648
d.	Benefit Payments	16,071,331	1,391,918
e.	Administrative Expenses	97,989	32,684
f.	Actual Investment Return (net of investment expenses)	17,080,583	3,074,976
g.	Expected Return Rate (net of investment expenses)	7.25%	7.25%
h.	Expected Return, Weighted for Timing	16,380,049	2,908,603
i.	Investment Gain / (Loss) for the Year, (f) - (h)	700,534	166,373
2.	Actuarial Value as of June 30, 2023		
a.	Fair Value as of June 30, 2023	$ 239,742,591	$ 43,039,373
b.	Deferred Investment Gain / (Loss)	(3,273,657)	(522,175)
c.	Preliminary Actuarial Value at June 30, 2023, (a) - (b)	243,016,248	43,561,548
d.	Upper Limit: 120% of Fair Value as of June 30, 2023	287,691,109	51,647,248
e.	Lower Limit: 80% of Fair Value as of June 30, 2023	191,794,073	34,431,498
f.	Actuarial Value as of June 30, 2023, (c) limited by (d) and (e)	243,016,248	43,561,548
3.	Ratio of Actuarial Value of Assets to Fair Value of Assets	101.4%	101.2%
4.	Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses	7.3%	7.4%

Judicial Retirement System (continued)

Pension				
Fiscal Year Ending	Asset Gain / (Loss)	Gain / (Loss) Recognized in Prior Years	Gain / (Loss) Recognized This Year	Gain / (Loss) Deferred to Future Years
June 30, 2019	$ (2,647,188)	$ (2,117,751)	$ (529,437)	$ 0
June 30, 2020	(6,148,327)	(3,688,995)	(1,229,666)	(1,229,666)
June 30, 2021	42,620,191	17,048,076	8,524,038	17,048,077
June 30, 2022	(32,754,159)	(6,550,832)	(6,550,832)	(19,652,495)
June 30, 2023	700,534	0	140,107	560,427
Total	**$ 1,771,051**	**$ 4,690,498**	**$ 354,210**	**$ (3,273,657)**

Healthcare				
Fiscal Year Ending	Asset Gain / (Loss)	Gain / (Loss) Recognized in Prior Years	Gain / (Loss) Recognized This Year	Gain / (Loss) Deferred to Future Years
June 30, 2019	$ (409,783)	$ (327,827)	$ (81,956)	$ 0
June 30, 2020	(1,023,945)	(614,367)	(204,789)	(204,789)
June 30, 2021	7,559,703	3,023,882	1,511,940	3,023,881
June 30, 2022	(5,790,607)	(1,158,121)	(1,158,121)	(3,474,365)
June 30, 2023	166,373	0	33,275	133,098
Total	**$ 501,741**	**$ 923,567**	**$ 100,349**	**$ (522,175)**

National Guard and Naval Militia Retirement System

Funded Status as of June 30		2022	2023
a.	Actuarial Accrued Liability	$ 28,366,668	$ 28,928,732
b.	Valuation Assets	46,215,854	46,312,767
c.	Unfunded Actuarial Accrued Liability, (a) - (b)	$ (17,849,186)	$ (17,384,035)
d.	Funded Ratio based on Valuation Assets, (b) ÷ (a)	162.9%	160.1%
e.	Fair Value of Assets	$ 44,088,041	$ 44,501,184
f.	Funded Ratio based on Fair Value of Assets, (e) ÷ (a)	155.4%	153.8%

Actuarial Determined Contribution Amounts		FY 2025	FY 2026
a.	Normal Cost	$ 690,172	$ 690,172
b.	Administrative Expense Load	331,000	327,000
c.	Past Service Cost	(2,691,240)	(2,621,106)
d.	Total Annual Contribution, (a) + (b) + (c), not less than 0	$ 0	$ 0

National Guard and Naval Militia Retirement System (continued)

Changes in Fair Value of Assets During FY23

1.	Fair Value of Assets as of June 30, 2022	$ 44,088,041
2.	Additions:	
	a. Employer Contributions	$ 0
	b. Investment Income	2,551,427
	c. Other	0
	d. Total Additions	$ 2,551,427
3.	Deductions:	
	a. Retirement Benefits	$ 1,745,217
	b. Investment Expenses	98,026
	c. Administrative Expenses	295,041
	d. Total Deductions	$ 2,138,284
4.	Fair Value of Assets as of June 30, 2023	$ 44,501,184
5.	Approximate Fair Value Investment Return Rate during FY23 Net of Investment Expenses	5.7%

National Guard and Naval Militia Retirement System (continued)

Development of Actuarial Value of Assets

1.	Deferral of Investment Gain / (Loss) for FY23		
	a. Fair Value of Assets as of June 30, 2022	$	44,088,041
	b. Contributions		0
	c. Benefit Payments		1,745,217
	d. Administrative Expenses		295,041
	e. Actual Investment Return (net of investment expenses)		2,453,401
	f. Expected Return Rate (net of investment expenses)		5.75%
	g. Expected Return, Weighted for Timing		2,473,039
	h. Investment Gain / (Loss) for the Year, (e) - (g)		(19,638)
2.	Actuarial Value as of June 30, 2023		
	a. Fair Value as of June 30, 2023	$	44,501,184
	b. Deferred Investment Gain / (Loss)		(1,811,583)
	c. Preliminary Actuarial Value at June 30, 2023, (a) - (b)		46,312,767
	d. Upper Limit: 120% of Fair Value as of June 30, 2023		53,401,421
	e. Lower Limit: 80% of Fair Value as of June 30, 2023		35,600,947
	f. Actuarial Value as of June 30, 2023, (c) limited by (d) and (e)		46,312,767
3.	Ratio of Actuarial Value of Assets to Fair Value of Assets		104.1%
4.	Approximate Actuarial Value Investment Return Rate during FY23 Net of Investment Expenses		4.7%

Fiscal Year Ending	Asset Gain / (Loss)	Gain / (Loss) Recognized in Prior Years	Gain / (Loss) Recognized This Year	Gain / (Loss) Deferred to Future Years
June 30, 2019	$ (407,413)	$ (325,932)	$ (81,481)	$ 0
June 30, 2020	(685,847)	(411,507)	(137,169)	(137,171)
June 30, 2021	6,594,160	2,637,664	1,318,832	2,637,664
June 30, 2022	(7,160,610)	(1,432,122)	(1,432,122)	(4,296,366)
June 30, 2023	(19,638)	0	(3,928)	(15,710)
Total	**$ (1,679,348)**	**$ 468,103**	**$ (335,868)**	**$ (1,811,583)**

Risk Information

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities, current contribution requirements, and the funded status of the plans. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the plans. Understanding the risks to the funding of the plans is important.

Actuarial Standard of Practice No. 51 (ASOP 51)[1] requires certain disclosures of potential risks to the plans and provides useful information for intended users of actuarial reports that determine plan contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative, but all risk should be understood and accepted based on knowledge, judgment, and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the plan.

In the actuary's professional judgment, the following risks may reasonably be anticipated to significantly affect the pension plans' future financial condition and contribution requirements.

- Investment Risk – potential that the investment return will differ from the rate assumed in the actuarial valuation (7.25% for JRS and 5.75% for NGNMRS)
- Contribution Risk – potential that actual contributions will differ from actuarially determined contributions
- Long-Term Return on Investment Risk – potential that changes in long-term capital market assumptions or the plan's asset allocation will create the need to update the long-term return on investment assumption
- Longevity Risk – potential that participants live longer than projected under valuation mortality assumptions
- Salary Increase Risk[2] – potential that future salaries will differ from the valuation assumptions
- Inflation Risk[2] – potential that the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage will differ from the rate assumed in the actuarial valuation (2.50% for JRS)
- Other Demographic Risk – potential that other demographic experience will differ from the valuation assumptions

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the plan. This list is not all-inclusive. It is an attempt to identify the more significant risks and how those risks might affect the results shown in this report.

[1] ASOP 51 does not apply to the healthcare portion of JRS. Accordingly, all comments in this section relate to the pension portion of JRS and to NGNMRS.

[2] Salary increase risk and inflation risk apply to JRS only.

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the plan sponsor to make contributions to the plans when due, or to assess the likelihood or consequences of potential future changes in law. In addition, this valuation report is not intended to provide investment advice or to provide guidance on the management or reduction of risk.

Assessment of Risks

Investment Risk

Plan costs are very sensitive to the market return.

- Any return on assets lower than assumed will increase costs.
- The plans use an actuarial value of assets that smooths gains and losses on market returns over a five-year period to help control some of the volatility in costs due to investment risk.
- Historical experience of actual returns is shown in Section 2.5 (JRS) and Section 2.4 (NGNMRS) of the June 30, 2022 reports dated August 15, 2023 (JRS) and May 31, 2023 (NGNMRS). This historical experience illustrates how returns can vary over time.

The plans invest in diversified portfolios of assets with the objective of maximizing investment returns at reasonable levels of risk. Actuarial Standard of Practice No. 4 (ASOP 4) requires the actuary to disclose a Low-Default-Risk Obligation Measure (LDROM) of each plan's pension liabilities and provide commentary to help the intended users of this report understand the significance of the LDROM with respect to funded status, contributions, and participant benefit security.

The LDROM for each plan is based on a discount rate derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of pension benefits expected to be paid in the future. The LDROM amounts shown here represent what the plans' pension liabilities would be if each plan invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future pension benefit payments. Consequently, the difference between the LDROM and the Actuarial Accrued Liability represents the taxpayer savings from investing in a diversified portfolio of assets versus only investing in high-quality bonds. Furthermore, this difference also represents the cost of reducing investment risk.

As of June 30, 2023, the LDROM for the JRS pension plan is $260.3 million based on an interest rate of 5.37%. As of the same date, the LDROM for NGNMRS is $30.1 million based on an interest rate of 5.34%. The interest rates used for the LDROM were determined separately for each plan by calculating a single equivalent discount rate using projected pension benefit payments and the Buck Above Median Yield Curve as of June 30, 2023. Please note that the interest rates used for the LDROM are based on bond yields as of the measurement date and will therefore vary for different measurement dates. For NGNMRS, the LDROM is also based on lump sums calculated at an interest rate of 5.34%. All other assumptions are the same as those used for funding purposes.

Actuaries play a role in helping to determine funding methods and policies that can achieve affordable and appropriate contributions and risk management. The funded status based on the Actuarial Accrued Liability, as well as the actuarially determined contributions, are calculated using the expected return on assets, which reflects the actual investment portfolio. Since the assets are not invested solely in an all-bond portfolio, the LDROM does not indicate a plan's pension funded status or progress, nor does it provide information on necessary plan contributions.

Regarding participant benefit security, if a plan were to be funded on an LDROM basis, participant benefits currently accrued as of the measurement date might be considered more secure, since the investment risk would be significantly reduced. However, the fact that assets are invested in a diversified portfolio does not mean that the participants' benefits are not secure. The security of participant benefits relies on a combination of the assets in the plan, the investment returns generated from those assets, and the promise of future contributions from the plan sponsor. Reducing investment risk by investing solely in bonds may significantly increase the actuarially determined contributions, and thereby increase contribution risk by decreasing the ability of the plan sponsor to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security. Participant benefits will remain secure if reasonable and appropriate contributions with managed risk are calculated and paid.

Contribution Risk

There is a risk to the plans when the employer's and/or State's actual contribution amount and the actuarially determined contribution differ.

- If the actual contributions are lower than the actuarially determined contributions, the plans may not be sustainable in the long term.
- Any underpayment of the actuarially determined contribution will increase future contribution amounts to help pay off the additional Unfunded Actuarial Accrued Liability associated with the underpayment(s).
- As long as the Board consistently adopts the actuarially determined contributions, this risk is mitigated due to Alaska statutes requiring the State to contribute additional funds necessary to pay the total contributions adopted by the Board.

Long-Term Return on Investment Risk

Inherent in the long-term return on investment assumption is the expectation that the current rate will be used until the last benefit payment of the plan is made. There is a risk that sustained changes in economic conditions, changes in long-term future capital market assumptions, or changes to the plans' asset allocations will necessitate an update to the long-term return on investment assumption used.

- Under a lower long-term return on investment assumption, less investment return is available to pay plan benefits. This may lead to a need for increased employer contributions.
- The liabilities will be higher at a lower assumed rate of return because future benefits will have a lower discount rate applied when calculating the present value.
- A 1% decrease in the long-term return on investment assumption will increase the actuarial accrued liability by approximately 10% for JRS and 9% for NGNMRS.

Longevity Risk

Plan costs will be increased as participants are expected to live longer.

- Benefits are paid over a longer lifetime when life expectancy is expected to increase. The longer duration of payments leads to higher liabilities.
- Health care has been improving, which affects the life expectancy of participants. As health care improves, leading to longer life expectancies, costs to the plans could increase.
- The mortality assumptions for the plans mitigate this risk by assuming future improvement in mortality. However, any improvement in future mortality greater than that expected under the current mortality assumptions would lead to increased costs for the plans.

JRS provides cost-of-living adjustments on retirement benefits (based on salary changes of sitting judges) that increase longevity risk because members who live longer than expected will incur more benefit payment increases than expected and therefore increase costs.

Salary Increase Risk[1]

Plan costs will be increased if actual salary increases are larger than expected.

- Higher-than-expected salary increases will produce higher benefits.
- The higher benefits may be partially offset by increased employee contributions due to higher salaries.
- If future payroll grows at a rate different than assumed, contributions as a percentage of payroll will be affected.

Inflation Risk[1]

Inflation risk may be associated with the interaction of inflation with other assumptions, but this is not significant as a standalone assumption, and therefore is considered as part of the associated assumption risk instead of being discussed here.

Other Demographic Risk

The plans are subject to risks associated with other demographic assumptions (e.g., retirement and termination). Differences between actual and expected experience for these assumptions tend to have less impact on the overall costs of the plans. The demographic assumptions used in the valuations are re-evaluated regularly as part of the four-year experience studies to ensure the assumptions are consistent with long-term expectations.

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[1] Salary increase risk and inflation risk apply to JRS only.

State of Alaska
Timeline for June 30, 2023 Valuations (PERS, TRS, PERS DCR, TRS DCR)

Item #	Task	Original Deadline	Revised Deadline	Date Completed	Team Responsible	Comments / Notes
1	Monthly audit discussion with GRS / Buck	7/12/23		7/12/23	GRS / Buck	
2	Enrollment data request to Aetna	7/14/23		7/13/23	Buck	
3	Valuation data request to DRB	7/14/23		7/14/23	Buck	
4	Monthly audit discussion with GRS / Buck	8/9/23		8/9/23	GRS / Buck	
5	Preliminary 6/30/23 assets to Buck (to be used for FY25 contribution rates only)	8/18/23		8/18/23	DRB	Updated TRS statement provided on 8/21.
6	Valuation data to Buck	9/1/23		9/5/23	DRB	
7	Monthly audit discussion with GRS / Buck	9/6/23	9/7/23	9/7/23	GRS / Buck	
8	Send valuation data files received from DRB to GRS	9/8/23		9/6/23	Buck	
9	**Actuarial Committee Meeting - FY25 contribution rates (based on 6/30/22 valuations)**	9/13/23		9/13/23	All	**Anchorage**. Deadline for meeting materials is 8/26.
10	Audit data and sample lives request to Buck	9/15/23		9/18/23	GRS	
11	Claims data request to Segal/DRB	9/22/23		9/6/23	Buck	Incurred claims through 6/30/23 that are paid through 8/31/23.
12	Data questions to DRB	9/22/23		9/27/23	Buck	PERS sent on 9/26. TRS sent on 9/27. Additional questions sent on 10/4.
13	Data answers to Buck	10/6/23		10/11/23	DRB	Updated responses to data questions received on 10/25.
14	Monthly audit discussion with GRS / Buck	10/11/23		not needed	GRS / Buck	
15	Final 6/30/23 assets to Buck (to be used for 6/30/23 valuations)	10/13/23		10/16/23	DRB	
16	Claims data to Buck	10/20/23		11/1/23	Segal / DRB	Incurred claims through 6/30/23 that are paid through 8/31/23.
17	6/30/23 valuation data and DRB data questions to GRS	10/27/23		11/14/23	Buck	Pension files sent on 11/6. OPEB files sent on 11/14.
18	Monthly audit discussion with GRS / Buck	11/8/23		11/8/23	GRS / Buck	
19	Sample life information to GRS	11/10/23		11/17/23	Buck	Revised PERS sent on 12/15. DCR plans sent on 1/4.
20	Preliminary valuation results and PVB's by individual to GRS	11/17/23		11/17/23	Buck	Revised PERS sent on 12/15. DCR plans sent on 1/4.
21	**Actuarial Committee Meeting - 6/30/23 valuation results (preliminary)**	12/6/23		12/6/23	All	**Anchorage**.
22	Monthly audit discussion with GRS / Buck	12/13/23		12/13/23	GRS / Buck	
23	Draft DCR valuation reports to GRS	1/5/24		1/5/24	Buck	Updated draft reports (minor wording changes) sent on 1/18.
24	Monthly audit discussion with GRS / Buck	1/10/24		1/10/24	GRS / Buck	
25	Draft DB valuation reports to GRS	1/19/24		1/25/24	Buck	JRS/NGNMRS roll-forward valuation report sent on 2/13.
26	Monthly audit discussion with GRS / Buck	2/14/24	2/15/24	2/15/24	GRS / Buck	
27	**Actuarial Committee Meeting - 6/30/23 valuation results (full), projections, sensitivity analysis, draft valuation reports**	3/5/24		3/5/24	All	**Juneau**.
28	Draft actuarial review report to Buck	3/8/24		3/8/24	GRS	
29	Monthly audit discussion with GRS / Buck	4/10/24		not needed	GRS / Buck	
30	**ARMB Meeting - follow-up to March meeting (if needed)**	April 2024 - TBD		not needed	All	**Teleconference.**
31	Monthly audit discussion with GRS / Buck	5/8/24	5/14/24	not needed	GRS / Buck	
32	Monthly audit discussion with GRS / Buck	6/5/24			GRS / Buck	
33	**Actuarial Committee Meeting - final valuation reports**	6/11/24			All	**Anchorage**.

Note: All deadline and completion dates are specific to PERS and TRS.

Alaska Retirement Management Board

Actuarial Review of Pension and Postemployment Healthcare Plans for PERS and TRS

Actuarial Review of the Public employees' Tier IV and Teachers' Tier III Defined Contribution Retirement Plan - for Occupational Death and Disability and Retiree Medical Benefits

May 28, 2024

GRS

P: 720.274.7270 | www.grsconsulting.com

May 28, 2024

Mr. Zach Hanna
Chief Investment Officer
Department of Revenue, Treasury Division
Alaska Retirement Management Board
P.O. Box 110405
Juneau, AK 99811-0405

Subject: **Actuarial Review of June 30, 2023 Valuations for the State of Alaska Public Employees' Retirement System Defined Benefit Retirement Plan (PERS DB) and Teachers' Retirement System Defined Benefit Retirement Plan (TRS DB)**

Actuarial Review of June 30, 2023 Valuations for the State of Alaska Public Employees' Retirement System Defined Contribution Retirement Plan (PERS DCR) and Teachers' Retirement System Defined Contribution Retirement Plan (TRS DCR)

Dear Zach:

We have performed an actuarial review of the June 30, 2023 Actuarial Valuations for PERS DB, TRS DB, PERS DCR, and TRS DCR.

This report includes a review of:

- Pension Assumptions and Benefits
- Occupational Death and Disability Assumptions and Benefits
- Health Care Cost Assumptions
- Actuarial Valuation Methods and Procedures
- Contribution Rate Determination
- Actuarial Valuation Report
- Potential Areas for Future Review

A major part of the review is a thorough analysis of the test lives provided by Buck. The report includes exhibits that summarize the detailed analysis of these sample test cases, as well as a comparison of the results between Buck and GRS. We wish to thank the staff of the State of Alaska Treasury Division and Buck, without whose willing cooperation this review could not have been completed.

Sincerely,

Gabriel, Roeder, Smith & Company

Paul Wood, ASA, FCA, MAAA
Senior Consultant

Bill Detweiler, ASA, EA, FCA, MAAA
Consultant

cc: Ms. Pamela Leary
Ms. Alysia Jones

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SECTION 1

EXECUTIVE SUMMARY

Executive Summary

Gabriel, Roeder, Smith & Co. was engaged by the Alaska Retirement Management Board (ARMB) to review the June 30, 2023 Actuarial Valuation of the State of Alaska Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) including both the Defined Benefit Plans and the Defined Contribution Plans.

This report presents our findings in the following areas:

- General Approach
- Review of Assumptions
- Review of Actuarial Valuation Methods and Procedures (including the test lives review)
- Review of Contribution Rate Determination
- Review of Actuarial Valuation Report
- Potential Areas for Future Review
- Summary and Conclusions

In general, we found that Buck's actuarial results and reports were reasonable and find the assumptions consistent with generally accepted actuarial practice.

Monthly conference calls conducted between Buck and GRS were made again this year and contributed greatly to resolving issues more quickly and thoroughly. Those issues, even if resolved, are highlighted in this report.

Key Findings From The Audit Of The June 30, 2023 Valuations

- We recommend Buck continues to track the medical claims experience closely, particularly any impact from legislative changes.
- We recommend Buck continue to disclose the nature and impact of all programming changes included in the valuation.
- We recommend Buck generate a new gain/loss item that tracks the experience of the EGWP savings assumption.
- We recommend that Buck implement the changes to their valuation methods as detailed in Section 6 of this report.
- We recommend Buck make some small modifications to their valuation reports to improve communication and disclosures.

Buck's Implementation of Recommendations from Prior Review Report

As part of last year's actuarial review and full replication audit, we made several recommendations. These recommendations included the following:

Changes to their valuation methods as detailed below.

- **Dates of Birth** – A PERS DB Others member was using a different date of birth than was reported from Alaska. We recommend Buck always use the date of births reported from Alaska.

- **Salary Increase Rate for PERS PF** – The PERS PF salary increase rate at 1 year of service is using 7.50%, rather than the 7.75% listed in the final experience study report and draft June 30, 2022 valuation report. We recommend Buck make sure the salary increase rates being used are consistent with those being disclosed in the reports.

- **Occupational Death Marriage Assumption for TRS DB** - For TRS DB, the occupational death married benefits don't appear to be applying the marriage assumption. We recommend Buck apply the marriage assumption to these death benefits.

- **Occupational Death Single Lump Sum Benefits for PERS DB -** For PERS DB, the occupational death single lump sum amount appears to be including the additional lump sum piece ($1,000 + $100 for each year of service), but we believe this should only be included for non-occupational death. We recommend Buck remove this additional lump sum piece from the occupational death single lump sum calculation.

- **Timing of Alaska COLA for Disability -** One of our prior findings was that the 10% Alaska COLA should be applied immediately to members who have retired from disability. It appears Buck is now applying the 10% Alaska COLA immediately, but they are not applying it consistently with healthy retirees who are eligible to receive the 10% Alaska COLA immediately. For healthy retirees who are eligible to receive the 10% Alaska COLA immediately, Buck assumes those currently receiving it will continue to receive it, and those currently not receiving it will never receive it. We recommend Buck treat the 10% Alaska COLA for members who have retired from disability the same way they treat healthy retired members who are eligible to receive the 10% Alaska COLA immediately.

We also recommended Buck make some small modifications to their valuation reports to improve communication and make them more consistent.

We appreciate Buck considering these changes for the June 30, 2023 valuations. We confirmed most of them have been made to the valuations and have noted those that we believe still need consideration in this report.

Summary Of Test Life Review

According to the Actuarial Standards of Practice, materiality is defined as:

> *"An item or a combination of related items is material if its omission or misstatement could influence a decision of an intended user"*

We have included as a part of this report a detailed test life results summary.

- We matched the present value of benefits closely in total on all test lives submitted. We have included exhibits in Sections 6 and 7 of the report, which summarize the differences in calculations by decrement for the test lives analyzed. Differences between actuarial firms will always occur due to system differences and other nuances in the calculations.

- We identified the following eight findings related to the valuation. While they may be viewed as immaterial in the context described above, they should, at the very least, be updated in future valuations, subject to Actuarial Committee discretion.
  - Certain Period Calculations
  - Duplicate Spouse Records
  - Retirement Decrements
  - PERS PF DB Deferred Vested Benefit Calculation
  - Medicare Part B Only Assumption
  - Spouse Participation Rates
  - PERS DCR Disability Benefit Calculation
  - DCR Disability Participation Rate

Buck has reviewed and concurred with these eight findings and already reflected changes for two of them in the current June 30, 2023 valuation. They plan to reflect the other changes in the next valuation.

SECTION 2

GENERAL APPROACH

General Approach

Gabriel, Roeder, Smith & Co. was charged with reviewing the actuarial assumptions of the pension and health care provisions of the actuarial valuations of PERS DB, TRS DB, PERS DCR, and TRS DCR.

We requested a number of items from Buck in order to perform the actuarial review and health cost assumption review:

1. In November of 2023 through January of 2024, we received valuation data for pension and healthcare for both plans, we received the pension and healthcare test lives for PERS DB, TRS DB, PERS DCR and TRS DCR, and we received preliminary liabilities.
2. We received draft reports in January 2024.
3. Monthly conference calls between Buck and GRS occurred, with the agenda items including timing of deliverables and the discussion of audit matters.

In performing our review, we:

1. Reviewed actuarial assumptions – We checked to see if they were consistent, comprehensive, and appeared reasonable.
2. Reviewed the actuarial valuation reports, as of June 30, 2023, for completeness and reviewed the financial determinations.
3. Reviewed, in detail, the sample members provided us – This provided us with a perspective on the actuarial process utilized by Buck with respect to the plan and allowed us to review the valuation methods and procedures.
4. Reviewed the health cost assumptions and trend.

KEY ACTUARIAL CONCEPTS

An actuarial valuation is a detailed statistical simulation of the future operation of a retirement system using the set of actuarial assumptions adopted by the Board. It is designed to simulate all of the dynamics of such a system for each current system member including:

1. Earning future service and making contributions,
2. Receiving changes in compensation,
3. Leaving the system through job change, disablement, death, or retirement, and
4. Determination of and payment of benefits from the System.

This simulated dynamic is applied to each active member of the System. It results in a set of expected future benefit payments to that member. Bringing those expected payments to present value, at the assumed rate of investment return, produces the Present Value (PV) of future Benefits for that member. In like manner, a PV of future salaries is determined.

The PV of future benefits and the PV of future salaries for the entire System are the total of these values across all members. The remainder of the actuarial valuation process depends upon these building blocks.

Once the basic results are derived, an actuarial method is applied in order to develop information on contribution levels and funding status. An actuarial method splits the PV of future benefits into two components:

1. PV of Future Normal Costs, and
2. Actuarial Accrued Liability ("AAL").

The actuarial method in use by the State of Alaska is known as the Entry Age Normal (EAN) method. Under EAN, the Normal Cost for a member is that portion of the PV of the increase in the value of that member's benefit for service during the upcoming year. The AAL is the difference between the total PVB and the PV of all future normal costs.

For TRS DB and PERS DB, the PV of future benefits applies to the following benefits:

- Retirement benefits
- Withdrawal benefits
- Disability benefits
- Death benefits
- Return of contributions
- Medical benefits
- Indebtedness (from contributions which might be redeposited)

For TRS DCR and PERS DCR plans, the actuarial present value of future benefits applies to the following benefits:

- Occupational Disability benefits
- Occupational Death benefits
- Retiree Medical benefits

The medical benefits are based on potential future health care benefits, while the others are a type of post-employment income replacement benefit, based on salary. For the medical benefits, estimates must be made of the future health care costs. This is done by determining current per capita health care claim costs by age of retiree, and projecting them into the future based on anticipated future health care inflation.

SECTION 3

REVIEW OF GAINS AND LOSSES

Review of Gains and Losses

As a part of the annual audit, we take a historical look at the gains and losses on the accrued liability. Gains and losses may measure "how closely" experience matches the actuarial assumption. Recurring gains or losses may indicate an assumption that is not meeting the actual experience for this population. In the tables below, we detail the recent historical gains and losses for each plan. In addition, we have shown the gain or loss as a percent of the beginning of year (BOY) accrued liability (AL).

New assumptions were adopted for all of the plans as of June 30, 2022, based on Buck's most recent experience study. The gains and losses in the 2023 valuations are based on the first year of experience under these new assumptions. Therefore, we focused our review of the gains and losses by analyzing how experience in the 2023 valuation differed from the prior four years, to see if the new assumptions appear to be more in line with actual experience or not. It should be noted that this is only one year of experience, and it should be analyzed over multiple years to see if any patterns start to emerge before new assumptions are considered again.

Table 1-PERS DB Pension Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2020 Valuation	2019 Valuation
Retirement	$ (2,582)	$ (20,482)	$ (7,211)	$ (1,285)	$ (3,126)
Termination	(7,047)	(6,115)	(7,963)	(4,857)	6,714
Mortality	13,483	26,078	12,825	(6,421)	12,459
Disability	(1,370)	120	6,650	(901)	(1,435)
Rehires	(7,776)	8,458	15,067	8,418	(13,297)
Salary	(93,860)	(50,545)	(17,126)	11,228	(59,955)
COLA and PRPA	(365,240)	(160,894)	155,142	78,795	(8,371)
Metcalfe Transfers	(77,939)	-	-	-	-
Other	29,462	1,548	3,449	5,835	(8,534)
Total G/L	**$ (512,869)**	**$ (201,832)**	**$ 160,833**	**$ 90,812**	**$ (75,545)**
Total AL at BOY	**$ 16,093,679**	**$ 15,419,975**	**$ 15,279,525**	**$ 15,039,180**	**$ 14,606,033**
G/L as a % of AL	**-3.19%**	**-1.31%**	**1.05%**	**0.60%**	**-0.52%**

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The $513 million loss in the most recent valuation is predominantly made up of unfavorable experience on the postretirement pension adjustments (PRPA). The adjustments that occurred in 2023 were significantly higher than those assumed in the actuarial valuation. This piece is based on inflation, which was historically high during calendar year 2022. Inflation decreased during calendar year 2023, so we are not expecting a large loss for this piece in the next valuation.

There was also a large salary loss, even though the new assumptions generally increased salary increases for all years of service, particularly for PF members. We will continue to monitor this assumption to see if salary should be assumed to increase even more.

The retirement category generated a loss, although it was smaller than the last couple of years. The retirement assumptions were appropriately increased in the most recent experience study to reflect this pattern, particularly in age and service years where the experience was significantly more than expected, and it helped lower the magnitude of the loss this year.

The new assumptions generally lowered the termination rates, but there continues to be losses this year. This assumption should be monitored going forward to see if the assumed rates should be lowered even more.

The rehired category generated a loss. The liabilities for rehires were more than what was assumed with the normal cost rehire load. The new assumption was lowered to reflect these gains in past years, but this should be monitored going forward to make sure it wasn't lowered too much.

Finally, a new loss developed this year for Metcalfe Transfers. These are liabilities that came in for members who were allowed to transfer from the DCR plan. We expect their contribution balances will also be transferred over and added to the assets, creating an offsetting gain on the unfunded actuarial accrued liability, although we were told that amount is unknown.

Table 2-PERS DB Healthcare Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2020 Valuation	2019 Valuation
Retirement	$ (11,558)	$ (9,371)	$ 7,125	$ 4,857	$ 1,098
Termination	(9,299)	(12,796)	(10,409)	(8,049)	(946)
Mortality	4,152	9,905	1,939	156	2,976
Disability	(224)	282	10,858	867	(981)
Rehires	(2,631)	11,563	14,045	15,996	10,708
Medical Claims	(346,557)	251,976	272,205	278,796	642,081
Modified Part B Assumption	(1,275)	5,064	5,743	6,345	6,164
Dependent Coverage Election	18,880	17,064	15,017	23,400	18,580
COVID-19	-	-	-	25,856	-
Plan Changes	-	-	61,807	-	-
Metcalfe Transfers	(43,265)	-	-	-	-
Other	42,308	5,564	5,394	1,735	95,602
Total	**$ (349,469)**	**$ 279,251**	**$ 383,724**	**$ 349,959**	**$ 775,282**
Total AL at BOY	**$ 6,657,069**	**$ 6,856,170**	**$ 7,036,550**	**$ 7,151,694**	**$ 7,658,104**
G/L as a % of AL	**-5.25%**	**4.07%**	**5.45%**	**4.89%**	**10.12%**

Note: 2019 - 2022 gains and losses are prior to the implementation of new assumptions.

Overall, there was a $349 million loss on the PERS DB Healthcare results. This is mostly entirely due to negative experience on the medical claims. Previously there were medical claims gains for six years in a row.

Based on our recommendation as part of our prior audits, Buck included separate gain loss items to detail gains and losses attributable to both the modified Part B assumption and dependent coverage elections. Over the past few years, we have clearly been seeing patterns that indicate fewer members are eligible for Part B than assumed and fewer dependents are electing coverage than assumed. The assumption for the percentage of members that are eligible for Part B was significantly lowered from 5% to 2%, reflecting those consistent gains, and this was reflected in the 2023 experience, as there was a small loss for this piece. Similarly, the percentage of spouses eligible to participate was lowered for PERS Others, although we still saw a sizeable gain, so the assumption should continue to be monitored to see if it should be lowered further.

For this valuation, the Other category had a much larger gain than in prior years. We recommend Buck try to keep the dollar amount in this category as small as possible by breaking out or noting any appropriate gain/loss items.

Table 3- TRS DB Pension Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2020 Valuation	2019 Valuation
Retirement	$ 10,236	$ (3,443)	$ 4,502	$ 4,822	$ 4,611
Termination	(7,548)	(6,589)	(7,088)	(8,327)	(4,692)
Mortality	1,211	2,470	(4,778)	(11,161)	(6,628)
Disability	104	265	(103)	(337)	(1,732)
Rehires	7	131	3,085	(691)	2,148
Salary	17,683	(30,870)	(29,192)	6,443	7,272
COLA and PRPA	(186,373)	(84,890)	81,655	43,389	(5,231)
Metcalfe Transfers	(16,471)	-	-	-	-
Other	2,430	2,367	7,486	(3,258)	(3,295)
Total	**$ (178,721)**	**$ (120,559)**	**$ 55,567**	**$ 30,880**	**$ (7,547)**
Total Al at BOY	**$ 7,804,046**	**$ 7,471,887**	**$ 7,447,036**	**$ 7,388,020**	**$ 7,276,290**
G/L as a % of AL	**-2.29%**	**-1.61%**	**0.75%**	**0.42%**	**-0.10%**

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

TRS DB also saw an overall loss, again predominantly made up of negative experience on the PRPAs.

The large salary losses over the last couple of years were addressed in the experience study by increasing the assumed salary increase rates, and it showed with a gain this valuation.

The consistent termination losses were addressed in the experience study by lowering the assumed termination rates, although there continued to be losses this year, so the assumption should continue to be monitored to see if it needs to be lowered further.

Table 4-TRS DB Healthcare Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2020 Valuation	2019 Valuation
Retirement	$ (16,924)	$ (13,048)	$ (2,282)	$ 2,189	$ 3,344
Termination	(1,845)	(3,293)	(2,979)	(1,260)	(2,555)
Mortality	4,144	937	(2,440)	(2,276)	(3,198)
Disability	179	209	220	31	(19)
Rehires	(92)	1,927	3,476	5,506	1,710
Medical Claims	(126,535)	94,487	96,861	96,760	225,987
Modified Part B Assumption	(999)	1,235	1,278	2,089	1,594
Dependent Coverage Election	(2,034)	1,071	9,126	7,435	15,195
COVID-19	-	-	-	17,345	-
Plan Changes	-	-	21,763	-	-
Metcalfe Transfers	(9,787)	-	-	-	-
Other	32,120	1,813	6,314	(4,433)	20,341
Total	**$ (121,773)**	**$ 85,338**	**$ 131,337**	**$ 123,386**	**$ 262,399**
Total AL at BOY	**$ 2,442,577**	**$ 2,439,603**	**$ 2,489,675**	**$ 2,518,644**	**$ 2,684,150**
G/L as a % of AL	**-4.99%**	**3.50%**	**5.28%**	**4.90%**	**9.78%**

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The TRS DB healthcare plans experienced the same losses attributable to medical claims experience. The same discussions on PERS DB applies to TRS DB as well.

Table 5-PERS DCR Total Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2020 Valuation	2019 Valuation
Mortality	$ 833	$ 1,890	$ 2,415	$ 2,018	$ 1,197
Termination	619	4,594	2,579	867	1,579
Disability	2,587	2,464	3,687	2,850	1,696
New Entrants	(1,995)	(1,963)	(1,409)	(1,440)	(1,593)
Rehires	(3,863)	(3,091)	(3,115)	(3,363)	(2,671)
Salary Increases	(296)	(160)	(8)	(25)	(80)
Trend Rates/Cadillac Tax*	-	-	-	(7,485)	1,233
Plan Changes	-	-	2,029	-	-
Medical Claims Costs	(12,317)	3,679	7,066	7,863	15,366
Metcalfe Transfers	4,015	-	-	-	-
Other	4,770	2,412	948	1,433	2,481
Total	**$ (5,647)**	**$ 9,825**	**$ 14,192**	**$ 2,718**	**$ 19,208**
Total AL at BOY	**$ 184,348**	**$ 180,212**	**$ 161,335**	**$ 134,720**	**$ 126,311**
G/L as a % of AL	**-3.06%**	**5.45%**	**8.80%**	**2.02%**	**15.21%**

**Trend rate gain/loss applicable to 2020 and the Cadillac tax is applicable to 2019.*

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The table above shows the combined gains and losses for the PERS DCR. Similar to the DB plans, there were large losses coming from the medical claims costs.

As expected, there also continues to be losses to this plan due to the new entrants and rehired members. We would prefer Buck implement an assumption in the DCR plans similar to the rehire assumption in the DB plans and have these losses be paid for upfront through normal cost, rather than in the future through past service cost. However, we understand the current funding structure allows the overfunded DCR plans to absorb these losses and potentially allocate more money to the underfunded DB plans.

Note that the Metcalfe Transfers piece is a gain for the DCR plans, since the liabilities are being transferred out to the DB plans. We expect an offsetting loss on the asset side, as their balances are also transferred out, although as previously stated, we were told these amounts are unknown.

Table 6-PERS DCR Healthcare Only Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2021 Valuation	2019 Valuation
Mortality	$ (120)	$ (50)	$ 536	$ 243	$ (387)
Termination	683	4,563	2,669	985	1,567
Disability	293	355	341	354	317
New Entrants	(1,306)	(1,887)	(1,320)	(1,301)	(1,476)
Rehires	(3,804)	(3,029)	(3,068)	(3,327)	(2,630)
Salary Increases	-	-	-	-	-
Trend Rates/Cadillac Tax*	-	-	-	(7,485)	1,233
Plan Changes	-	-	2,029	-	-
Medical Claims Costs	(12,317)	3,679	7,066	7,863	15,366
Metcalfe Transfers	3,879	-	-	-	-
Other	4,287	1,933	1,196	860	2,401
Total	**$ (8,405)**	**$ 5,564**	**$ 9,449**	**$ (1,808)**	**$ 16,391**
Total AL at BOY	**$ 169,396**	**$ 168,472**	**$ 150,701**	**$ 124,946**	**$ 118,598**
G/L as a % of AL	**-4.96%**	**3.30%**	**6.27%**	**-1.45%**	**13.82%**

**Trend rate gain/loss applicable to 2020 and the Cadillac tax is applicable to 2019.*

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The table above isolates the gains and losses on the PERS DCR retiree healthcare plan only. Aside from disability and mortality, these numbers are very similar to the plan in total, showing that a large portion of the gains and losses for PERS DCR come from the healthcare plan.

Table 7-TRS DCR Total Gains and (Losses) by Source (000's)

Source	2023 Valuation	2022 Valuation	2021 Valuation	2021 Valuation	2019 Valuation
Mortality	$ 41	$ 48	$ 67	$ 60	$ 123
Termination	2,608	2,154	2,354	740	1,921
Disability	211	200	162	178	171
New Entrants	(591)	(630)	(581)	(495)	(808)
Rehires	(1,985)	(2,402)	(2,037)	(2,313)	(874)
Salary Increases	-	-	-	-	1
Trend Rates/Cadillac Tax*	-	-	-	(2,153)	389
Plan Changes	-	-	528	-	-
Medical Claims Costs	(3,496)	1,006	1,883	2,162	4,135
Metcalfe Transfers	773	-	-	-	-
Other	206	67	669	98	(31)
Total	**$ (2,233)**	**$ 443**	**$ 3,045**	**$ (1,723)**	**$ 5,027**
Total AL at BOY	**$ 47,996**	**$ 44,601**	**$ 40,857**	**$ 33,221**	**$ 32,459**
G/L as a % of AL	**-4.65%**	**0.99%**	**7.45%**	**-5.19%**	**15.49%**

**Trend rate gain/loss applicable to 2020 and the Cadillac tax is applicable to 2019.*

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The table above shows the combined gains and losses for the TRS DCR. Similar to the DB plans, there are losses coming from the medical claims cost.

As expected, there also continues to be losses to this plan due to the new entrants and rehired members. We would prefer Buck implement an assumption in the DCR plans similar to the rehire assumption in the DB plans and have these losses be paid for upfront through normal cost, rather than in the future through past service cost. However, we understand the current funding structure allows the overfunded DCR plans to absorb these losses and potentially allocate more money to the underfunded DB plans.

Table 8-TRS DCR Healthcare Only Gains and (Losses) by Source

Source	2023 Valuation	2022 Valuation	2021 Valuation	2021 Valuation	2019 Valuation
Mortality	$ (74)	$ (73)	$ (39)	$ (50)	$ 15
Termination	2,618	2,157	2,361	744	1,926
Disability	(40)	(35)	(57)	(21)	(20)
New Entrants	(591)	(630)	(581)	(495)	(600)
Rehires	(1,985)	(2,402)	(2,038)	(2,314)	(873)
Salary Increases	-	-	-	-	-
Trend Rates/Cadillac Tax*	-	-	-	(2,153)	389
Plan Changes	-	-	528	-	-
Medical Claims Costs	(3,496)	1,006	1,883	2,162	4,135
Metcalfe Transfers	768	-	-	-	-
Other	207	67	644	89	(4)
Total	**$ (2,593)**	**$ 90**	**$ 2,701**	**$ (2,038)**	**$ 4,968**
Total AL at BOY	**$ 47,797**	**$ 44,396**	**$ 40,634**	**$ 32,981**	**$ 32,429**
G/L as a % of AL	**-5.43%**	**0.20%**	**6.65%**	**-6.18%**	**15.32%**

**Trend rate gain/loss applicable to 2020 and the Cadillac tax is applicable to 2019.*

Note: 2019-2022 gains and losses are prior to the implementation of new assumptions.

The table above isolates the gains and losses on the TRS DCR retiree healthcare plan only. These numbers are very similar to the plan in total, showing that the majority of the gains and losses for TRS DCR come from the healthcare plan.

Summary of recommendations Resulting from a Review of Gains and Losses

Based on our review above, we recommend the following be considered by Buck:

- Examine experience under the current assumptions in the next experience study to determine if they are working as intended or need to be modified.
- Continue to track the medical claims experience closely, particularly any impact from legislative changes.
- Continue to disclose the nature and impact of all programming changes included in the valuation.

SECTION 4

REVIEW OF ASSUMPTIONS

Review of Pension Assumptions

Buck released an experience study in 2022 and the Board approved a new assumption set to be used beginning with the actuarial valuation as of June 30, 2022. GRS issued a supplemental report that reviewed this new experience study and the adopted assumptions. General conclusions for the current assumptions are included in this report.

Although this audit examines many assumptions and methods, not all of them are equal in terms of their ultimate impact on contribution rates. It is not the intention of this audit to imply that all proposed changes would have a similar impact on the liabilities. For example, the investment return assumption may be the greatest lever in influencing contribution rates. Thus, where options exist for spending time and resources studying assumptions, we recommend studying those with the largest impact first.

Economic Assumptions

General

These assumptions simulate the impact of economic forces on the amounts and values of future benefits. Key economic assumptions are the assumed rate of investment return and assumed rates of future salary increase.

Economic assumptions are normally defined by an underlying inflation assumption. Buck has cited 2.50% as the current inflation assumption. In the past couple of years, actual inflation was historically high, although forecasts generally showed it declining back down to something near the current assumption. This has played out recently, as current inflation levels are now much lower. We do find the assumption to be reasonable at this time, but expect a significant amount of scrutiny to continue to be paid to this particular assumption over the short term.

Investment Return Assumption

The nominal investment return assumption is 7.25%. The assumption is net of all investment expenses (an assumption for administrative expenses is valued explicitly). Combined with the 2.50% inflation assumption, this yields a 4.75% real net rate of return. While we find this assumption to still be reasonable, it should be noted that many other large state pension plans are continuing to decrease their return expectations as capital market assumptions continue to come in lower. This assumption will need to be very carefully analyzed as it is one of the most impactful assumptions used in the valuation.

Member Pay Increase Assumption

In actuarial models, assumed rates of pay increase are often constructed as the total of several components:

Base salary increases – base pay increases that include price inflation and general "standard of living" or productivity increases.

An allowance for Merit, Promotion, and Longevity – This portion of the assumption is not related to inflation. In the context of a typical pay grid, pay levels are set out for various employment grades with step increases for longevity.

The base salary increase assumption reflects overall growth in the entire grid, and the Merit, Promotion, and Longevity pay increase assumption reflects movement of members through the grid, both step increases and promotional increases.

Base Salary Increase Assumption

The Base Salary Increase Assumption (also known as the wage inflation assumption) is 2.75%. The 2.75% is comprised of 2.50% for general inflation and 0.25% for productivity increases.

Merit, Promotion, and Longevity Pay Increase Assumption

As described above, the Merit, Promotion, and Longevity pay increase assumption represents pay increases due to movement through the pay grid. This is based on longevity and job performance. In most models, it is recognized that step increases and promotions are very rare late in careers. Thus, this allowance should trail away from relatively high levels for young or short service members to virtually nothing late in careers. We would expect that, as members approach retirement, this component would fade away.

The pay increase assumption will need to be monitored to ensure that any developing patterns of gains or losses do not continue.

We would also offer that the manner in which pay changes over time for teachers in comparison to public employees tends to differ. Since most teachers have a specific skill set, the approach to their compensation tends to follow a more consistent trend. Public Employees however (except for Peace officers and Firefighters) tend to represent a multitude of different skills – from a more generalized, labor intensive capacity (e.g., custodial) to more specialized training (ex. Accounting).

COLA and PRPA

We find these assumptions to be reasonable. The inflation rate is a component of investment return, salary increase and the PRPA, so it has a ripple effect throughout all the economic assumptions. As noted earlier, the high inflation environment experienced during 2021 and 2022 create large PRPA losses, but we expect those to diminish now that inflation levels have significantly decreased.

Demographic Assumptions

Mortality

The Pub-2010 mortality tables, tailored to each specific group with various credibility adjustments, projected with the most recent generational improvement scale published by the Society of Actuaries, are reasonable.

Withdrawal from Service before Retirement (Termination)

The rates look reasonable based on the data presented in the most recent experience study report.

Retirement

The rates look reasonable based on the data presented in the most recent experience study report.

Disability

The rates look reasonable based on the data presented in the most recent experience study report.

Withdrawal of Contributions at Termination

The rates look reasonable based on the data presented in the most recent experience study report.

Payroll Growth

Contribution rates are based on a percent of total DB and DCR payroll. The assumption used in the valuation is that payroll will grow at a rate of 2.75 percent per year. In 2023, the total payroll, based on the annualized earnings for the fiscal year ending on the valuation date, grew by about 4%. The following table 9 shows the payroll growth over the past ten years.

Table 9-Historical Payroll Growth			
Year	DB Plans Only	DCR Plans Only	Combined DB and DCR
2023	-3%	8%	4%
2022	-8%	6%	1%
2021	-7%	7%	1%
2020	-7%	8%	1%
2019	-5%	9%	2%
2018	-7%	8%	0%
2017	-7%	7%	0%
2016	-5%	10%	1%
2015	-6%	12%	1%
2014	-5%	14%	1%

Payroll growth is significant because the unfunded accrued liability (UAL) is amortized as a level percentage of pay. That is the same as expecting all future amortization payments to grow at the same rate as total payroll. When payroll does not grow as assumed then the UAL is not going to be paid off as assumed. In order for the UAL to be paid off according to the current amortization schedule, payroll must grow at the assumed payroll growth rate. If payroll does not grow at that rate, as has generally been the case (with 2023 being the exception) over the last decade, there will be upward pressure on the contribution rate because contributions that are less than anticipated are flowing in to the plan. We expect Buck to examine this assumption in more detail during the upcoming experience study and consider lowering it.

Summary

We believe the current assumptions and methods are reasonable. However, the economic environment is continuing to rapidly evolve and change. These assumptions should be carefully monitored to see if any biased patterns start to develop and updated accordingly.

Review of Health Care Cost Assumptions

General

Change in Data

Data was received from a data warehouse, and in the 2023 valuation report, Buck has provided a reconciliation of the data provided. Buck still must estimate the number of members with dual coverage and the dependent's Medicare status.

Table 10 below shows the distribution of these counts by coverage and then by Medicare status. Although the totals remained fairly consistent from year to year, we did notice a sizeable shift in the counts from retiree and spouse to retiree coverage only. We asked Buck about this and we were told the data they received this year contained these differences and the impact on liabilities was mostly offset by the number of records without medical coverage removed.

Table 10-Summary of Retiree Medical Data Received

	PERS		TRS		Total	
	Total for 2022	Total for 2023	Total for 2022	Total for 2023	Total for 2022	Total for 2023
Retiree coverage only	22,292	16,107	8,237	5,057	30,529	21,164
Retiree and spouse	28,375	34,287	8,535	11,866	36,910	46,153
Retiree and children and other dependents	689	550	328	249	1,017	799
Family	2,494	2,655	1,141	1,241	3,635	3,896
Total by Coverage	**53,850**	**53,599**	**18,241**	**18,413**	**72,091**	**72,012**
Pre-Medicare	17,444	16,079	5,043	4,885	22,487	20,964
Medicare A & B	36,101	37,182	12,946	13,281	49,047	50,463
Medicare part B only	305	338	252	247	557	585
Total by Medicare Status	**53,850**	**53,599**	**18,241**	**18,413**	**72,091**	**72,012**

On page 89 of the PERS DB valuation report, the total incurred claims are spread over the eligible population. For Fiscal Year 2023, the average enrollment for the pre-Medicare group is 16,250 and for the Medicare group is 50,465. The total average enrollment for fiscal year 2023 is the sum of these two groups, or 66,715. The counts in the table above include deferred members. When these counts are adjusted for deferred members, it demonstrates the claims are being spread over the appropriate eligible group.

Claims Cost and Medicare Offset

We analyzed the trend in the per capita claim costs over the last 15 years. Table 11(a) below shows the per capita claim costs since 2009. Table 11(b) shows the change year over year. A change in per capita claim costs also includes changes due to changes in the population as well as the method changes that have been used to estimate the eligible population. Thus, it is important not to read these results as strictly changes in the cost of health care since so much of the change is due to the changes in the population counts. Table 11(c) summarizes the overall changes in claim costs and the impact on the valuation results.

Table 11(a)-PERS and TRS Age 65 Per Capitas for Fiscal Year Ending

Medicare Status:	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Medical: Pre-Medicare	7,670	7,503	8,606	9,497	9,856	11,125	12,362	11,724	14,380	13,682	13,535	14,464	15,360	15,926	15,706	17,338
Medical: Medicare A&B only	1,296	1,336	1,563	1,551	1,628	1,726	1,657	1,461	1,707	1,485	1,468	1,534	1,618	1,619	1,625	1,761
Medical: Medicare B only	3,384	4,754	6,654	6,936	6,219	6,676	7,920	6,700	8,562	4,722	4,667	4,880	5,340	5,341	5,363	5,812
Rx - Medicare	2,379	2,419	2,600	2,799	2,736	2,621	2,624	2,753	3,320	3,706	3,764	3,501	3,340	3,474	3,907	4,300

Table 11(b)-PERS and TRS Health Care Cost Trend Year over Year Changes

Medicare Status:	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Avg.
Medical: Pre-Medicare	-2.2%	14.7%	10.4%	3.8%	12.9%	11.1%	-5.2%	22.7%	-4.9%	-1.1%	6.9%	6.2%	3.7%	-1.4%	10.4%	**6.0%**
Medical: Medicare A&B only	3.1%	17.0%	-0.8%	5.0%	6.0%	-4.0%	-11.8%	16.8%	-13.0%	-1.1%	4.5%	5.5%	0.1%	0.4%	8.4%	**2.2%**
Medical: Medicare B only	40.5%	40.0%	4.2%	-10.3%	7.3%	18.6%	-15.4%	27.8%	-44.8%	-1.2%	4.6%	9.4%	0.0%	0.4%	8.4%	**3.9%**
Rx - Medicare	1.7%	7.5%	7.7%	-2.3%	-4.2%	0.1%	4.9%	20.6%	11.6%	1.6%	-7.0%	-4.6%	4.0%	12.5%	10.1%	**4.3%**

Table 11(c)-PERS and TRS Health Care Cost Trend Actual to Assumed

Medicare Status:	23-24 Actual	23-24 Assumed	Gain/ Loss
Medical: Pre-Medicare	10.4%	7.0%	Loss
Medical: Medicare A&B only	8.4%	5.5%	Loss
Medical: Medicare B only	8.4%	5.5%	Loss
Rx - Medicare	10.1%	7.5%	Loss

Medical costs increased more than assumed, leading to losses. This is the primary reason for the large losses seen in the previous section. Note that these losses would have been even larger if it weren't for the Pre-Medicare prescription drug costs increasing less than expected and creating some offsetting gains.

Healthcare Trend Assumptions

The healthcare trend rates follow the Society of Actuaries' Healthcare Cost Trend model and the model has been populated with assumptions that are specific to the State of Alaska. The trend rates are reasonable.

EGWP assumption

We understand Alaska has moved to an EGWP effective January 1, 2019. Buck obtained a savings estimate from the EGWP vendor and used that as the basis for the valuation. We concur with that approach. Buck is assuming the EGWP subsidy will last in perpetuity. While this is not an unreasonable approach, we would recommend that Buck detail the risk associated with this assumption, especially if EGWP subsidies wear away over time. Furthermore, we recommend that Buck monitor the estimated savings each year and determine if an update to their model is necessary.

Medicare Part B Assumption

In 2018, Buck used a new methodology for determining the number of members eligible for Part B only, where 5% of pre-Medicare members are assumed to be eligible for Part B only. This change in assumption is reasonable, but created large gains in 2018 and we recommended that Buck explicitly track the experience of this assumption and provide a gain/loss item in the report each year, which they have done since then. The gains have continued every year since then, and Buck just lowered the assumption to 2% in their most recent experience study. We believe this new assumption more accurately reflects actual experience and demonstrates why it is important to explicitly track items like this each year.

DCR Base Claims Cost Adjustments

Relative value refers to the value of the DCR retiree medical benefits compared to those provided by the Defined Benefit retiree medical plan. Since the DCR plan does not yet have enough membership to create credible experience, they use the same claims costs developed under the DB plan, adjusted by the assumed relative value factors. Based on additional information previously provided by Buck, we find these relative value factors to be reasonable.

The basis for these relative value factors rests with higher initial copays, deductibles, out of pocket limits and member cost sharing compared to the DB medical plan. As experience emerges we recommend the discount from the DB plan to the DCR plan continue to be tested to ensure this assumption is supporting the liabilities of the plan. When the DCR plans have enough credible claims experience, they should have their own claim cost assumptions set.

SECTION 5

REVIEW OF ACTUARIAL VALUATION METHODS AND PROCEDURES

Review of Actuarial Valuation Methods and Procedures

I. Background

An actuarial valuation is a detailed statistical simulation of the future operation of a retirement system using the set of actuarial assumptions adopted by the Board.

The actuarial values generated from this process are based not only on these assumptions, but also on the additional assumptions built into each actuarial firm's pension valuation software.

Our scope for performing the review did not include a complete replication of the valuation results as determined by Buck at June 30, 2023. Rather, we reviewed a number of sample test lives from Buck in great detail, and made our determinations as to whether the methods and assumptions being employed were being done so properly. We also reviewed the report in order to examine the aggregate results and conclusions of this actuarial valuation.

Though this approach is not intended to meet the rigors of a full scale replication of results – it still serves as a strong indicator of the appropriateness of the assumptions and methods being used to value the liabilities and determine the costs for these plans.

II. Process:

Our review process can be summarized as follows:

Computation: Valuation Liabilities

We analyzed test cases to compare the Actuarial Liability under the EAN funding method for the test cases of the PERS and TRS Systems. As a starting point, we first replicate Buck test case liabilities by using their assumptions and methods to ensure that the computations were in sync with the descriptions listed in the valuation report.

When conducting an actuarial audit, and reviewing the test lives, we look at the projected benefits at each age for each decrement type. We also look at the component of the benefit (final average earnings and years of service). This is critical to understanding what the valuation system is actually valuing and making sure that the valuation is not "right for the wrong reasons", (meaning, errors could occur in two different directions making total liabilities approximate a correct value.)

We also review the construction of the commutation functions- the varying probabilities for each decrement and the discounting to the valuation date.

A more detailed analysis of the test lives we reviewed and our findings is shown in the next section.

Tying Test Lives to Total Liabilities

The basis of the audit is that the test lives reviewed tie directly to the liabilities being submitted in the valuation. As a result of learning of a discrepancy discovered several years ago, we now request that Buck also supply a list of every member with their total liability. We check that the total liability on the test life matches that from the larger group, and the larger group matches the total in the valuation report. That way we can be certain that the test life we review is directly tied to the final liabilities.

Actuarial Method:

Findings:

An actuarial cost method is a mathematical process for allocating the dollar amount of the total present value of plan benefits (PVB) between future normal costs and actuarial accrued liability (AAL). The retained actuary uses the Entry Age Normal actuarial cost method (EAN Method), characterized by:

(1) Normal Cost – the level percent of payroll contribution, paid from each participant's date of hire to date of retirement, which will accumulate enough assets at retirement to fund the participant's projected benefits from retirement to death.

(2) Actuarial Accrued Liability – the assets which would have accumulated to date had contributions been made at the level of the normal cost since the date of the first benefit accrual, if all actuarial assumptions had been exactly realized, and there had been no benefit changes.

The EAN Method is the most prevalent funding method in the public sector. It is appropriate for the public sector because it produces costs that remain stable as a percentage of payroll over time, resulting in intergenerational equity for taxpayers and budget predictability. A prior Public Fund Survey included 199 retirement systems (mostly statewide). Over 82% of the plans reported using the EAN Method. Therefore, the retained actuary's stated funding methods for TRS and PERS are certainly in line with national trends.

Application of Cost Method

In order to determine the normal cost as a level percentage of pay, the valuation must first determine the future compensation that each individual member is expected to receive over the course of their career (which is also the compensation used to generate contributions). The projection of the future compensation should be based on the salary that the participant is expected to receive according to the timing of the expected departures from active service (or, decrements).

Conclusion:

The level percent of pay method for both amortization of the unfunded accrued liability and the normal cost are both appropriate as a funding policy, considering that the payroll is not closed (as promulgated under SB 123.)

SECTION 6

SAMPLE LIFE REVIEW – PERS DB AND TRS DB

Sample Life Review – PERS DB and TRS DB

BACKGROUND

We reviewed sample test cases used for the June 30, 2023 valuation draft reports. In order to perform the review, we requested a number of sample cases from Buck. We combined this with our understanding of the plan provisions and reviewed the liability values produced by Buck for these sample cases only.

Note that the active test lives analyzed are not necessarily exposed to all of the possible benefits under the plans (i.e. already beyond the eligibility period for certain benefits, or not eligible for particular benefits). Therefore, findings may occur for these other benefits in future audits depending on the set of test lives chosen for review at that time. However, the vast majority of the liability for each plan is due to the retirement benefits (included for all active test lives), and retirement-related withdrawal benefits (one active test life included per plan), so any future findings are also expected to be de minimis. Also, the impact for any one test life may not be representative of the impact on the total plan.

When employing Buck's methods and assumptions, we mostly matched the present value of benefits in total closely for the test cases submitted under the Pension plans for PERS and TRS, and present value of retirement benefits under the PERS and TRS Retiree Health plan. In addition, we have analyzed the calculations of the ancillary benefits and have provided a summary of this detailed analysis at the end of this section. These exhibits provide a comparison of the calculations by decrement provided to us from Buck against our replication of those benefits as we interpret them from the plan provisions and assumptions.

In matching the present value of benefits, it is being determined that, unless noted, all benefits are being valued, and that the valuation of the liability for those benefits is consistent with the stated assumptions and methods.

FINDINGS

Generally speaking, the assumptions, provisions, and methods were employed properly. The review this year focused on any large differences we saw during our full replication of the June 30, 2022 liabilities under the new assumptions. The test lives chosen this year did also have some unique characteristics. As a result, we identified the following six minor findings related to the assumptions, calculations, and the valuation of certain benefits:

1. **Certain Period Calculations** – A PERS DB member was using a certain period amount that we were unable to replicate. After asking Buck for additional details, they identified an issue with their calculation of some certain periods. They updated those for the valuation this year, and indicated that it resulted in a gain of approximately $145 thousand.

2. **Duplicate Spouse Records** – One of the inactive test lives we requested this year was previously being valued with retiree medical benefits twice – once as a deferred retiree, and once as a spouse of a current retiree. Buck updated their data process this year to only value members in this situation once, and indicated that it resulted in gains of approximately $70.2 million for PERS and $32.2 million for TRS. While these amounts are not insignificant, they do not impact contributions for the retiree medical plans.

3. **No Retirement Decrement** – Buck is not applying a retirement decrement to a TRS active employee who is eligible for unreduced retirement. Retirement decrements should be applied at every age active employees are eligible to retire. Buck confirmed this finding, but indicated it is a very unique circumstance due to their different service amounts, and is determining if their valuation system can account for it.

4. **PERS Peace Officer/Firefighter DB Deferred Vested Benefit –** We were unable to replicate the accrued benefit amount Buck was valuing at the assumed retirement age for the PERS Peace Officer/Firefighter DB deferred vested test life we received. Buck confirmed that they were incorrectly applying an ERF to this accrued benefit, along with other Peace Officer/Firefighter deferred vested members. They plan to update this calculation correctly in the next valuation.

5. **Medicare Part B Only Assumption –** Buck assumes 2% of active members hired before April 1, 1986 will be covered by Medicare Part B only. However, one of the test lives we received fell into this category, but Buck was only applying this assumption. They were not assuming any portion of this member was covered by Medicare Part B only. Buck confirmed this finding and plans to update the application of this assumption properly in the next valuation.

6. **Spouse Participation Rates –** Buck assumes that male members are assumed to be three years older than their spouse and female members are assumed to be two years younger than the spouse. Retiree medical participation is based on the member age, so the participation rates for spouses are dependent on the assumed age differences. We determined that the spouse participation rates Buck was applying were one year off for all test lives we received. Buck confirmed this finding and indicated the age differences for males/females were flipped. They plan to update this assumption appropriately in the next valuation.

We believe that while the impacts of these findings are immaterial, any that have not already been updated for should, at the very least, be considered for future valuations, subject to Actuarial Committee discretion.

Quantitative Results

When performing the replication, we were mostly able to match the total present value of future benefits for all test cases (active and inactive, PERS and TRS, pension and healthcare) closely. This would be considered as an overall match for purposes of the valuation.

Actuarial Review - June 30, 2023
Comparison of Present Value of Benefits

Active Pension		GRS	Buck	% Diff
TRS	Active Test Case 1 - Tier 1	818,254	818,401	0.0%
TRS	Active Test Case 2 - Tier 2	797,415	794,627	0.4%
TRS	Active Test Case 3 - Tier 2	706,428	706,427	0.0%
PERS	Active Test Case 1 - Others Tier 2	219,424	219,425	0.0%
PERS	Active Test Case 2 - Others Tier 3	143,098	143,098	0.0%
PERS	Active Test Case 3 - Peace Officer/Firefighter Tier 3	410,343	410,342	0.0%
Inactive Pension		**GRS**	**Buck**	**% Diff**
TRS	TRS - Retiree - Female, Tier 2	714,007	714,007	0.0%
TRS	TRS - Beneficiary - Male, Tiers 1 & 2	253,895	253,895	0.0%
TRS	TRS - Deferred Vested - Female, Tier 1	203,758	203,777	0.0%
PERS	PERS Peace Officer/Firefighter - Retiree	621,257	621,257	0.0%
PERS	PERS Peace Officer/Firefighter - Beneficiary	777,164	777,164	0.0%
PERS	PERS Peace Officer/Firefighter - DV	860,088	755,859	13.8%
PERS	PERS Others - Retiree	19,475	19,475	0.0%
PERS	PERS Others - Beneficiary	40,432	40,432	0.0%
PERS	PERS Others - DV	52,907	52,912	0.0%
Active Healthcare		**GRS**	**Buck**	**% Diff**
TRS	Active Test Case 1 - Tier 1	111,926	110,005	1.7%
TRS	Active Test Case 2 - Tier 2	325,688	307,052	6.1%
TRS	Active Test Case 3 - Tier 2	252,798	251,722	0.4%
PERS	Active Test Case 1 - Others Tier 2	253,296	250,294	1.2%
PERS	Active Test Case 2 - Others Tier 3	157,111	154,327	1.8%
PERS	Active Test Case 3 - Peace Officer/Firefighter Tier 3	241,084	227,151	6.1%
Inactive Healthcare		**GRS**	**Buck**	**% Diff**
TRS	TRS - Retiree - Female, Tier 2	228,882	228,882	0.0%
TRS	TRS - Beneficiary - Male, Tiers 1 & 2	151,866	151,866	0.0%
TRS	TRS - Deferred Vested - Female, Tier 1	351,702	351,702	0.0%
PERS	PERS Peace Officer/Firefighter - Retiree	297,252	297,252	0.0%
PERS	PERS Peace Officer/Firefighter - Beneficiary	197,560	197,560	0.0%
PERS	PERS Peace Officer/Firefighter - DV	348,473	348,473	0.0%
PERS	PERS Others - Retiree	102,201	102,201	0.0%
PERS	PERS Others - Beneficiary	25,415	25,415	0.0%
PERS	PERS Others - DV	401,444	401,444	0.0%

NOTE

Ancillary or non-retirement benefits such as death and disability tend to be low probability events (and hence low liability) and they also tend to have many “bells and whistles” which can be valued in different ways by different actuaries. When looking at the test life results, it may be most informative to review the decrement (retirement, termination, disability, death) totals rather than each particular segment of the decrement (married non-occupational death, etc.). For all ancillary benefits comprising less than 0.1% of the total PVB for that individual, we checked the amounts for reasonableness, but did not always replicate.

Comparison of Present Value of Benefits - **TRS Active Pension**
Active Test Case 1 - Tier 1

Basic Data:	Current Age	Credited Service	Gender
	75.4	39.0	Female
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	772,707	772,833	0.0%
AK COLA	40,922	40,928	0.0%
Total Retirement PVB	**813,629**	**813,761**	**0.0%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	-	-	0.0%
Vested Term AK COLA	-	-	0.0%
Vested Term Dth Single Refund	-	-	0.0%
Vested Term Dth Marr	-	-	0.0%
Vested Term Dth Marr AK COLA	-	-	0.0%
Total Withdrawal PVB	**-**	**-**	**0.0%**
Death:			
Non Vested Dth (Refund)	-	-	0.0%
Non Vested Dth LS	-	-	0.0%
NonOcc Dth Single (Refund)	-	-	0.0%
NonOcc Dth Single LS	-	-	0.0%
NonOcc Dth Marr	-	-	0.0%
NonOcc Dth Marr AK COLA	-	-	0.0%
Occ Dth Single (Refund)	-	-	0.0%
Occ Dth Single LS	-	-	0.0%
Occ Dth Marr (Pre-NR Conversion Benefit)	-	-	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	4,386	4,400	-0.3%
Occ Dth Marr AK COLA (Post-NR)	239	240	-0.3%
Total Death PVB	**4,625**	**4,640**	**-0.3%**
Disability:			
Non-vested LS Ben	-	-	0.0%
NonOcc Dis	-	-	0.0%
NonOcc Dis AK COLA	-	-	0.0%
Occ Dis (Pre-NR Conversion Benefit)	-	-	0.0%
Occ Dis (Post-NR Conversion Benefit)	-	-	0.0%
Occ Dis AK COLA (Pre-NR)	-	-	0.0%
Occ Dis AK COLA (Post-NR)	-	-	0.0%
Dis Death Ben	-	-	0.0%
Dis Death Ben AK COLA	-	-	0.0%
Total Disability PVB	**-**	**-**	**0.0%**
GRAND TOTAL PVB	**818,254**	**818,401**	**0.0%**

Comparison of Present Value of Benefits - **TRS Active Pension**
Active Test Case 2 - Tier 2

Basic Data:	Current Age	Credited Service	Gender
	51.2	26.5	Female

Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	774,503	770,492	0.5%
AK COLA	20,728	21,658	-4.3%
Total Retirement PVB	**795,231**	**792,150**	**0.4%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	-	-	0.0%
Vested Term AK COLA	-	-	0.0%
Vested Term Dth Single Refund	-	-	0.0%
Vested Term Dth Marr	-	-	0.0%
Vested Term Dth Marr AK COLA	-	-	0.0%
Total Withdrawal PVB	**-**	**-**	**0.0%**
Death:			
Non Vested Dth (Refund)	-	-	0.0%
Non Vested Dth LS	-	-	0.0%
NonOcc Dth Single (Refund)	254	288	-11.9%
NonOcc Dth Single LS	3	3	-11.3%
NonOcc Dth Marr	1,333	1,510	-11.7%
NonOcc Dth Marr AK COLA	35	40	-12.2%
Occ Dth Single (Refund)	45	51	-11.9%
Occ Dth Single LS	1	1	-12.1%
Occ Dth Marr (Pre-NR Conversion Benefit)	6	-	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	494	570	-13.2%
Occ Dth Marr AK COLA (Post-NR)	13	15	-12.2%
Total Death PVB	**2,184**	**2,477**	**-11.8%**
Disability:			
Non-vested LS Ben	-	-	0.0%
Dis (Pre-NR Conversion Benefit)	-	-	0.0%
Dis (Post-NR Conversion Benefit)	-	-	0.0%
Dis AK COLA (Pre-NR)	-	-	0.0%
Dis AK COLA (Post-NR)	-	-	0.0%
Dis Death Ben	-	-	0.0%
Dis Death Ben AK COLA	-	-	0.0%
Dis Child Ben	-	-	0.0%
Dis Child Ben AK COLA	-	-	0.0%
Total Disability PVB	**-**	**-**	**0.0%**
GRAND TOTAL PVB	**797,415**	**794,627**	**0.4%**

Comparison of Present Value of Benefits - **TRS Active Pension**
Active Test Case 3 - Tier 2

Basic Data:	Current Age	Credited Service	Gender
	48.9	19.4	Male
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	617,349	617,349	0.0%
AK COLA	18,090	18,090	0.0%
Total Retirement PVB	**635,439**	**635,439**	**0.0%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	61,744	61,744	0.0%
Vested Term AK COLA	2,038	2,038	0.0%
Vested Term Dth Single Refund	67	67	0.0%
Vested Term Dth Marr	342	341	0.4%
Vested Term Dth Marr AK COLA	11	11	0.4%
Total Withdrawal PVB	**64,202**	**64,201**	**0.0%**
Death:			
Non Vested Dth (Refund)	-	-	0.0%
Non Vested Dth LS	-	-	0.0%
NonOcc Dth Single (Refund)	416	416	0.0%
NonOcc Dth Single LS	3	3	0.0%
NonOcc Dth Marr	3,183	3,183	0.0%
NonOcc Dth Marr AK COLA	86	86	0.0%
Occ Dth Single (Refund)	74	74	0.0%
Occ Dth Single LS	1	1	0.0%
Occ Dth Marr (Pre-NR Conversion Benefit)	47	47	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	1,234	1,234	0.0%
Occ Dth Marr AK COLA (Post-NR)	34	34	0.0%
Total Death PVB	**5,077**	**5,078**	**0.0%**
Disability:			
Non-vested LS Ben	-	-	0.0%
Dis (Pre-NR Conversion Benefit)	264	264	0.0%
Dis (Post-NR Conversion Benefit)	1,360	1,361	0.0%
Dis AK COLA (Pre-NR)	16	16	0.0%
Dis AK COLA (Post-NR)	68	68	0.0%
Dis Death Ben	1	1	-0.8%
Dis Death Ben AK COLA	0	0	0.0%
Dis Child Ben	-	-	0.0%
Dis Child Ben AK COLA	-	-	0.0%
Total Disability PVB	**1,709**	**1,710**	**0.0%**
GRAND TOTAL PVB	**706,428**	**706,427**	**0.0%**

Comparison of Present Value of Benefits - **PERS Active Pension**
Active Test Case 1 - Others Tier 2

Basic Data:	Current Age	Credited Service	Gender
	58.4	6.5	Male
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	208,320	208,320	0.0%
AK COLA	8,953	8,953	0.0%
Total Retirement PVB	**217,273**	**217,273**	**0.0%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	-	-	0.0%
Vested Term AK COLA	-	-	0.0%
Vested Term (take LS)	-	-	0.0%
Vested Term (death during deferral)	-	-	0.0%
Vested Term (death during deferral AK COLA)	-	-	0.0%
Total Withdrawal PVB	**-**	**-**	**0.0%**
Death:			
Non Vested NonOcc <1 svc LS Dth	-	-	0.0%
Non Vested NonOcc 1<svc<5 LS Dth	-	-	0.0%
NonOcc Dth Marr	735	735	0.0%
NonOcc Dth Marr AK COLA	31	31	0.0%
NonOcc Dth Marr LS	31	31	0.0%
NonOcc Dth Single LS	203	203	0.0%
Occ Dth Marr (Pre-NR Conversion Benefit)	52	52	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	952	952	0.0%
Occ Dth Marr AK COLA (Post-NR)	41	41	0.0%
Occ Dth Single LS	107	107	0.0%
Total Death PVB	**2,152**	**2,152**	**0.0%**
Disability:			
Non-vested LS Ben	-	-	0.0%
NonOcc Dis	-	-	0.0%
NonOcc Dis AK COLA	-	-	0.0%
Occ Dis (Pre-NR Conversion Benefit)	-	-	0.0%
Occ Dis (Post-NR Conversion Benefit)	-	-	0.0%
Occ Dis AK COLA (Pre-NR)	-	-	0.0%
Occ Dis AK COLA (Post-NR)	-	-	0.0%
Dis Death Ben	-	-	0.0%
Dis Death Ben AK COLA	-	-	0.0%
Total Disability PVB	**-**	**-**	**0.0%**
GRAND TOTAL PVB	**219,424**	**219,425**	**0.0%**

Comparison of Present Value of Benefits - **PERS Active Pension**
Active Test Case 2 - Others Tier 3

Basic Data:	Current Age	Credited Service	Gender
	51.3	7.3	Female
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	122,694	122,694	0.0%
AK COLA	4,945	4,945	0.0%
Total Retirement PVB	**127,639**	**127,639**	**0.0%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	12,142	12,142	0.0%
Vested Term AK COLA	432	432	0.0%
Vested Term (take LS)	507	507	0.0%
Vested Term (death during deferral)	31	31	1.0%
Vested Term (death during deferral AK COLA)	1	1	1.0%
Total Withdrawal PVB	**13,113**	**13,112**	**0.0%**
Death:			
Non Vested NonOcc <1 svc LS Dth	-	-	0.0%
Non Vested NonOcc 1<svc<5 LS Dth	-	-	0.0%
NonOcc Dth Marr	353	353	0.0%
NonOcc Dth Marr AK COLA	11	11	0.0%
NonOcc Dth Marr LS	18	18	0.0%
NonOcc Dth Single LS	158	158	0.0%
Occ Dth Marr (Pre-NR Conversion Benefit)	132	132	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	388	388	0.0%
Occ Dth Marr AK COLA (Post-NR)	15	15	-0.1%
Occ Dth Single LS	83	83	0.0%
Total Death PVB	**1,159**	**1,159**	**0.0%**
Disability:			
Non-vested LS Ben	-	-	0.0%
NonOcc Dis	560	560	0.0%
NonOcc Dis AK COLA	30	30	0.0%
Occ Dis (Pre-NR Conversion Benefit)	281	281	0.0%
Occ Dis (Post-NR Conversion Benefit)	283	283	0.0%
Occ Dis AK COLA (Pre-NR)	17	17	0.0%
Occ Dis AK COLA (Post-NR)	16	16	0.0%
Dis Death Ben	-	-	0.0%
Dis Death Ben AK COLA	-	-	0.0%
Total Disability PVB	**1,188**	**1,188**	**0.0%**
GRAND TOTAL PVB	**143,098**	**143,098**	**0.0%**

Comparison of Present Value of Benefits - **PERS Active Pension**
Active Test Case 3 - Peace Officer/Firefighter Tier 3

Basic Data:	Current Age	Credited Service	Gender
	54.2	7.2	Male
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**
Retirement:			
Main Retirement Benefit	379,727	379,727	0.0%
AK COLA	13,992	13,992	0.0%
Total Retirement PVB	**393,720**	**393,720**	**0.0%**
Withdrawal:			
Non Vested Term	-	-	0.0%
Vested Term	5,523	5,523	0.0%
Vested Term AK COLA	179	179	0.0%
Vested Term (take LS)	120	120	0.0%
Vested Term (death during deferral)	25	24	3.4%
Vested Term (death during deferral AK COLA)	1	1	2.6%
Total Withdrawal PVB	**5,847**	**5,846**	**0.0%**
Death:			
Non Vested NonOcc <1 svc LS Dth	-	-	0.0%
Non Vested NonOcc 1<svc<5 LS Dth	-	-	0.0%
NonOcc Dth Marr	681	681	0.0%
NonOcc Dth Marr AK COLA	22	22	0.0%
NonOcc Dth Marr LS	21	21	0.0%
NonOcc Dth Single LS	75	75	0.0%
Occ Dth Marr (Pre-NR Conversion Benefit)	977	977	0.0%
Occ Dth Marr (Post-NR Conversion Benefit)	6,813	6,813	0.0%
Occ Dth Marr AK COLA (Post-NR)	243	243	0.0%
Occ Dth Single LS	173	173	0.0%
Total Death PVB	**9,006**	**9,006**	**0.0%**
Disability:			
Non-vested LS Ben	-	-	0.0%
NonOcc Dis	244	244	0.0%
NonOcc Dis AK COLA	12	12	0.0%
Occ Dis (Pre-NR Conversion Benefit)	471	471	0.0%
Occ Dis (Post-NR Conversion Benefit)	972	972	0.0%
Occ Dis AK COLA (Pre-NR)	27	27	0.0%
Occ Dis AK COLA (Post-NR)	44	44	0.0%
Dis Death Ben	-	-	0.0%
Dis Death Ben AK COLA	-	-	0.0%
Total Disability PVB	**1,771**	**1,771**	**0.0%**
GRAND TOTAL PVB	**410,343**	**410,342**	**0.0%**

Actuarial Review of Pension and Health Plans Active Pension Test Case Legend	
Benefit	**Extended Description**
Retirement:	
Main Retirement Benefit	Early/Normal Retirement (base) Benefit
AK COLA	Alaska Cost of Living Allowance (10% of Ret base benefit)
Withdrawal:	
Non Vested Term	Refund of employee contributions upon termination of non-vested member
Vested Term	Deferred retirement (base) Benefit (deferred to early retirement eligibility)
Vested Term AK COLA	Alaska Cost of Living Allowance (10% of Term base benefit)
Vested Term (take LS)	Refund of employee contributions upon termination of (vested) member
Vested Term (death during deferral)	Death (base) Benefit payable upon death after withdrawal but before benefit commencement
Vested Term (death during deferral AK COLA)	Alaska Cost of Living Allowance (10% of DV Dth base benefit)
Vested Term (death, single)	Return of employee contributions upon death during deferral period for single members
Death:	
Non Vested NonOcc 1<svc<5 LS Dth	Refund of employee contributions upon death of non-vested member
NonOcc Dth Marr	Non-Occupational Death (base) benefit
NonOcc Dth Marr AK COLA	Alaska Cost of Living Allowance (10% of Non-Occupational Dth base benefit)
NonOcc Married LS Dth	Refund of employee contributions upon non-occupational death of married (vested) member
NonOcc Single LS Dth	Refund of employee contributions upon non-occupational death of single (vested) member
Occ Dth Marr (Pre-NR Conversion Benefit)	Occupational Death (base) benefit until normal retirement conversion
Occ Dth Marr (Post-NR Conversion Benefit)	Occupational Death (base) benefit after normal retirement conversion
Occ Dth Marr AK COLA (Pre-NR)	Alaska Cost of Living Allowance (10% of Occupational Dth base benefit pre-conversion)
Occ Dth Marr AK COLA (Post-NR)	Alaska Cost of Living Allowance (10% of Occupational Dth base benefit post-conversion)
Occ Single LS Dth	Refund of employee contributions upon occupational death of single (vested) member
Disability:	
Non-vested LS Ben	Refund of employee contributions payable upon disability before vested
Dis (Pre-NR Conversion Benefit)	Disability benefit prior to normal retirement conversion
Dis (Post-NR Conversion Benefit)	Disability benefit after normal retirement conversion
Dis AK COLA (Pre-NR)	Alaska Cost of Living Allowance (10% of pre-conversion disability benefit)
Dis AK COLA (Post-NR)	Alaska Cost of Living Allowance (10% of post-conversion disability benefit)
Dis Death Ben	Death (base) Benefit payable upon death after disability
Dis Death Ben AK COLA	Alaska Cost of Living Allowance (10% of Dis Dth base benefit)
Dis Child Ben	Disability (base) Child Benefit payable until eligible for normal retirement
Dis Child Ben AK COLA	Alaska Cost of Living Allowance (10% of Temp Dis Child base benefit)

Actuarial Review of Pension and Health Plans - June 30, 2023

Comparison of Present Value of Benefits - **TRS Retiree Health**

Actives	**Test Case 1 - Tier 1**			**Test Case 2 - Tier 2**			**Test Case 3 - Tier 2**		
Basic Data:									
Sex	Female			Male			Female		
Current Age	75.39			48.90			51.20		
Current Credited Service	39.00			19.40			26.50		
Present Value of Benefits (PVB)	**GRS**	**Buck**	**% Diff**	**GRS**	**Buck**	**% Diff**	**GRS**	**Buck**	**% Diff**
Retirement:									
Tier x <Member>	97,910	96,543	1.4%	163,491	163,491	0.0%	248,389	235,936	5.3%
Tier x <Spouse>	39,339	38,784	1.4%	116,375	115,299	0.9%	108,691	102,445	6.1%
Post 65 Part D Tier x <Member>	(18,097)	(18,097)	0.0%	(15,742)	(15,742)	0.0%	(21,199)	(21,157)	0.2%
Post 65 Part D Tier x <Spouse>	(7,226)	(7,226)	0.0%	(9,373)	(9,373)	0.0%	(10,192)	(10,172)	0.2%
Contrib <Member>	-	-	0.0%	(1,219)	(1,219)	0.0%	-	-	0.0%
Contrib <Spouse>	-	-	0.0%	(734)	(734)	0.0%	-	-	0.0%
Total Retirement PVB	**111,926**	**110,005**	**1.7%**	**252,798**	**251,722**	**0.4%**	**325,688**	**307,052**	**6.1%**

Inactives - PVB	**GRS**	**Buck**	**% Diff**
TRS - Retiree - Female, Tier 2	228,882	228,882	0.0%
TRS - Beneficiary - Male, Tier 2*	151,866	151,866	0.0%
TRS - Deferred Vested - Female, Tier 1	351,702	351,702	0.0%

Benefits - Buck Valuation Terminology	**Description**
Retirement:	
Tier x <Member>	Base Benefit Paid to Employee
Tier x <Spouse>	Base Benefit Paid to Spouse
Contrib <Member>	Employee Pre-Retirement Contributions
Contrib <Spouse>	Spouse Pre-Retirement Contributions
Post 65 Part D <Member>	Employee Post-Age 65 Medicare Part D Reimbursement
Post 65 Part D <Spouse>	Spouse Post-Age 65 Medicare Part D Reimbursement

Actuarial Review of Pension and Health Plans - June 30, 2023

Comparison of Present Value of Benefits - **PERS Retiree Health**

Actives	**Test Case 1 - Other Tier 2**			**Test Case 2 - Other Tier 3**			**Test Case 3 - PF Tier 3**		
Basic Data:									
Sex	Male			Female			Male		
Current Age	58.36			51.29			54.25		
Current Credited Service	6.54			7.32			7.23		
Present Value of Benefits (PVB)	**GRS***	**Buck**	**% Diff**	**GRS**	**Buck**	**% Diff**	**GRS**	**Buck**	**% Diff**
Retirement:									
Tier x <Member>	161,267	161,267	0.0%	129,935	129,935	0.0%	139,728	133,941	4.3%
Tier x <Spouse>	125,656	123,036	2.1%	52,256	49,763	5.0%	133,715	124,774	7.2%
Contrib Tier x <Member>	(365)	(365)	0.0%	(1,073)	(1,073)	0.0%	(1,889)	(2,103)	-10.2%
Contrib Tier x <Spouse>	(219)	(602)	-63.5%	(534)	(826)	-35.4%	(1,426)	(1,589)	-10.2%
Post 65 Part D Tier x <Member>	(20,399)	(20,399)	0.0%	(15,944)	(15,944)	0.0%	(16,467)	(15,803)	4.2%
Post 65 Part D Tier x <Spouse>	(12,644)	(12,644)	0.0%	(7,530)	(7,530)	0.0%	(12,576)	(12,069)	4.2%
Total Retirement PVB	**253,296**	**250,294**	**1.2%**	**157,111**	**154,327**	**1.8%**	**241,084**	**227,151**	**6.1%**

Inactives - PVB	**GRS**	**Buck**	**% Diff**
PERS Peace Officer/Firefighter - Retiree	297,252	297,252	0.0%
PERS Peace Officer/Firefighter - Beneficiary	197,560	197,560	0.0%
PERS Peace Officer/Firefighter - DV	348,473	348,473	0.0%
PERS Others - Retiree	102,201	102,201	0.0%
PERS Others - Beneficiary	25,415	25,415	0.0%
PERS Others - DV*	401,444	401,444	0.0%

Benefits - Buck Valuation Terminology	**Description**
Retirement:	
Tier x <Member>	Base Benefit Paid to Employee
Tier x <Spouse>	Base Benefit Paid to Spouse
Contrib <Member>	Employee Pre-Retirement Contributions
Contrib <Spouse>	Spouse Pre-Retirement Contributions
Post 65 Part D <Member>	Employee Post-age 65 Medicare Part D Reimbursement
Post 65 Part D <Spouse>	Spouse Post-age 65 Medicare Part D Reimbursement

SECTION 7

SAMPLE LIFE REVIEW – PERS DCR AND TRS DCR

Sample Life Review – PERS DCR and TRS DCR

We reviewed sample test cases used for the DCR June 30, 2023, valuation draft reports. In order to accomplish this, we requested a number of sample cases from Buck with intermediate statistics to assist us in analyzing the results.

We combined this with our understanding of the plan provisions in an attempt to analyze the liability values produced by Buck for these sample cases only.

Conclusion and Results:

The exhibits that follow provide a comparison of the calculations by decrement provided to us from Buck against our replication of those benefits as we interpret them from the plan provisions and assumptions. We completed this detail for three active test lives under the PERS and TRS DCR and for three disabled test lives.

FINDINGS

Generally speaking, the assumptions and methods were employed properly. We did identify two minor findings:

1. **PERS Peace Officer/Firefighter Disability Benefit** – We were unable to replicate the accrued benefit Buck was valuing at the future retirement date in a test life we received for a PERS Peace Officer/Firefighter member currently receiving disability benefits. Buck confirmed they were calculating the benefit as if the service amount reported was as of the date of disability, but it should have been calculated as if the service amount reported was as of the valuation date. They plan to update this calculation in the valuation next year. Note that this was one of the findings in our review completed two years ago that was correctly updated last year.

2. **Disability Retiree Medical Participation Rate** – All of the test lives we received for members currently receiving disability benefits had a 94% participation rate being applied to the retiree medical benefits, when the assumptions indicate it should be 100%. Buck confirmed this finding and plans to update in the valuation next year.

We believe that while the impact of these findings will be immaterial, they should, at the very least, be considered in future valuations, subject to Actuarial Committee discretion.

Comparison of Present Value of Benefits - **DCR PERS and TRS Pension**

Actives	**Test Case 1 - PERS Others**		
Basic Data:		*Basic Data:*	
Sex	Female	Tier	4
Current Age	38.56	Full time %	100%
Current Credited Service	15.06		
Present Value of Benefits (PVB)	**GRS***	**Buck**	**% Diff**
Disability:			
DCR	545	545	0.0%
DCR Death during Disability	16	16	0.0%
Total Disability PVB	**561**	**561**	**0.0%**
Death:			
DCR - married only	213	213	0.0%
Total Death PVB	**213**	**213**	**0.0%**
GRAND TOTAL PVB	**774**	**774**	**0.0%**

Actives	**Test Case 2 - PERS PF**		
Basic Data:		*Basic Data:*	
Sex	Male	Tier	4
Current Age	27.19	Full time %	100%
Current Credited Service	8.74		
Present Value of Benefits (PVB)	**GRS***	**Buck**	**% Diff**
Disability:			
DCR Deferred - single	933	933	0.0%
DCR Deferred - married	5,427	5,425	0.0%
DCR Immediate	1,157	1,157	0.0%
DCR Imm. Death during Disability	11	11	-0.2%
Total Disability PVB	**7,528**	**7,526**	**0.0%**
Death:			
DCR - married only	1,175	1,175	0.0%
Total Death PVB	**1,175**	**1,175**	**0.0%**
GRAND TOTAL PVB	**8,703**	**8,701**	**0.0%**

Actives	**Test Case 3 - TRS**		
Basic Data:		*Basic Data:*	
Sex	Female	Tier	3
Current Age	37.29	Full time %	100%
Current Credited Service	7.50		
Present Value of Benefits (PVB)	**GRS***	**Buck**	**% Diff**
Disability:			
DCR	293	293	0.0%
DCR Death during Disability	14	14	0.0%
Total Disability PVB	**307**	**307**	**0.0%**
Death:			
DCR - married only	111	110	0.1%
Total Death PVB	**111**	**110**	**0.1%**
GRAND TOTAL PVB	**417**	**417**	**0.0%**

Benefits - Buck Valuation Terminology	
Disability:	
DCR Deferred Ben	Disability benefit payable upon eligibility for retirement (based on ret plan formula)
DCR Immed Ben	Disability benefit payable until eligible for normal retirement (based on ret plan formula)
DCR	Occupational base disability benefit based on percent of pay (40% of salary)
DCR Death during Disable	Death benefit payable upon death while on disability
Death:	
DCR - married only	Occupational death benefit payable as annuity to spouse

** GRS' audit of Buck's calculation includes review of the benefit amounts, annuity values, assumptions and other factors related to the PVB calculation at each projected age. Differences may exist due to different interpretations of the statutes, as well as additional items as discussed throughout this audit report.*

Comparison of Present Value of Benefits - **DCR Disability**

Retirees	**Test Case 4 - PERS Other**		
Basic Data:		*Basic Data:*	
Sex	Male	Tier	4
Current Age	57.70	Type	Disability
Annual Benefit	29,766	Stop date	10/31/2030
	GRS*	**Buck**	**% Diff**
PVB - Disability Benefit	166,122	165,898	0.1%
PVB - Post-retirement Medical Benefits	97,758	91,893	6.4%

Retirees	**Test Case 5 - PERS PF**		
Basic Data:		*Basic Data:*	
Sex	Male	Tier	4
Current Age	53.71	Type	Disability
Annual Benefit	35,225	Stop date	6/30/2034
	GRS*	**Buck**	**% Diff**
PVB - Disability Benefit	567,924	676,717	-16.1%
PVB - Post-retirement Medical Benefits	123,382	115,979	6.4%

Retirees	**Test Case 6 - TRS**		
Basic Data:		*Basic Data:*	
Sex	Male	Tier	3
Current Age	57.45	Type	Disability
Annual Benefit	27,588	Stop date	1/31/2031
	GRS*	**Buck**	**% Diff**
PVB - Disability Benefit	167,934	166,631	0.8%
PVB - Post-retirement Medical Benefits	97,954	92,077	6.4%

** GRS' audit of Buck's calculation includes review of the benefit amounts, annuity values, assumptions and other factors related to the PVB calculation at each projected age. Differences may exist due to different interpretations of the statutes, as well as additional items as discussed throughout this audit report.*

SECTION 8

REVIEW OF CONTRIBUTION RATE DETERMINATION

Review of Contribution Rate Determination

Beginning with the actuarial valuations as of June 30, 2014, in accordance with Senate Bill 119 and House Bill 385, a contribution calculation methodology was incorporated in order to recognize the timing lag and recognize expected changes in the unfunded liability during the two-year delay.

GRS analyzed the roll forward methodology for the FY2026 Contribution Rate Calculation and verified the contribution rate computation (as shown in pages 23 - 25 of the PERS valuation report and pages 15 - 17 of the TRS valuation report). We verified the calculation of the layered amortization amount for FY26.

As noted in the Buck report, the compensation used to develop the rates is a combination of both this plan's compensation, as well as the DCR compensation.

Finally, Buck has determined two different compensation amounts-the "valuation" compensation which is the compensation used to determine future plan benefits and the liabilities for those benefits. This compensation annualizes permanent-part timer pay. The "rate" payroll is the payroll upon which the contributions are expected to be made, and does not annualize permanent part timer pay.

FINDINGS:

The calculations were generally reasonable and consistent with actuarial practice.

SECTION 9

REVIEW OF ACTUARIAL VALUATION REPORT

Review of Actuarial Valuation Report

VALUATION REPORT:

GRS reviewed the June 30, 2023 valuation reports for scope as well as content to determine if actuarial statistics were being reflected fairly and if the details of the plans were being correctly communicated. GRS did not review GASB 67/68/74/75 Accounting Information.

We consider the scope and content of Buck's reports to be effective in communicating the financial position and contribution requirements of PERS and TRS.

Actuarial Standard of Practice (ASOP) #4 was updated for pension valuations completed on or after June 30, 2023. We reviewed Buck's pension valuation reports for the following relevant changes in the new ASOP #4:

- Amortization Methods – The amortization methods used in the pension valuations meet the requirement of the new standard.

- Reasonable Actuarially Determined Contribution – The Actuarially Determined Contribution in the pension valuations meet the requirement of the new standard, however, we recommend Buck make an affirmative statement in their reports that the contribution calculation is reasonable according to ASOP #4.

- Performance of a Gain and Loss Analysis – The gain and loss analysis performed and disclosed in the pension valuations meets the requirement of the new standard.

- Contribution Lags – The treatment of contribution lags in the pension valuations meet the requirement of the new standard.

- Low Default Risk Obligation Measure (LDROM) – The LDROM calculations and disclosures in the pension valuations meet the requirement of the new standard.

We also recommend the following in order to better communicate the benefits for PERS and TRS:

- In the plan provisions section of the PERS & TRS DB reports, the 'Death Benefits' sections should be more consistent, when appropriate, between the two reports. The benefits described in these sections should also be consistent with how they are being administered and calculated in the valuation.

- Buck does not value post-65 retiree medical benefits for PERS Tier 3 members with 5-10 years of service, since they are required to pay premiums, and premiums over age 65 are assumed to cover the entire cost of Medicare claims. We recommend Buck disclose this information in the PERS DB report.

- Buck indicates in their DB reports that "Retirement benefit amounts are subject to IRC 415(b) limits regardless of hire date." It is our understanding that the State of Alaska is paying retirement benefit amounts above the 415(b) limits from the same trusts as all other benefits, but is currently reviewing these administrative practices. We recommend Buck closely follow the State's conclusions on this matter and update their report and valuation methods, if necessary.

Alaska Retirement Management Board

Actuarial Review of the
National Guard and Naval Militia Retirement System
Pension Plan; and
Judicial Retirement System Pension and Health Plans
Roll-Forward Actuarial Valuations

May 28, 2024

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May 28, 2024

Mr. Zach Hanna
Chief Investment Officer
Department of Revenue, Treasury Division
Alaska Retirement Management Board
P.O. Box 110405
Juneau, AK 99811-0405

Subject: Actuarial Review of the Roll-Forward June 30, 2023 Valuations for the State of Alaska National Guard and Naval Militia Retirement System (NGNMRS) and Judicial Retirement System (JRS)

Dear Zach:

We have performed an actuarial review of the June 30, 2023 Roll-Forward Actuarial Valuation for NGNMRS and JRS.

This audit includes a review of the results of the roll forward calculations using actuarial methods, assumptions and procedures from the most recent actuarial valuation reports and the Buck draft letter dated February 13, 2024 (re: Judicial Retirement System and National Guard and Naval Militia Retirement System Roll-Forward Actuarial Valuations as of June 30, 2023). The steps of the process of our audit, including potential areas for future review, are as follows:

1. Reviewing the calculations shown in the Roll-Forward letter to confirm that the results shown as of June 30, 2022 in the Roll-Forward letter match Buck's June 30, 2022 actuarial valuation reports. We confirmed that the results do match.

2. Calculating the actuarial value of assets as of June 30, 2023 using the financial statements provided and the historical gains and losses shown in the June 30, 2022 report. We matched the results very closely.

3. Verifying Buck's June 30, 2023 Roll-Forward calculations using information from the most recent June 30, 2022 Buck actuarial valuations, the Roll Forward letter, and the financial statements for the fiscal year ending June 30, 2023. We completed this review by estimating these results using the appropriate methods, assumptions and procedure. Our audit results were very close for the NGNMRS and JRS Pension plans.

4. Reviewing the contribution rate calculations using the past service base and payment information, and estimating the FY23 Gain/Loss noted in Buck's Roll Forward letter. Overall, we found the results to be reasonable and were able to match them closely for the NGNMRS and JRS Pension plans.

5. Reviewing the Roll-Forward letter to determine if the details of the calculations were being communicated correctly and effectively. While we found that the most of the necessary information is reflected fairly, in order to improve communication and provide additional details on the calculations, we recommend the following for JRS:

    - Disclose the assumed benefit payments used in the roll forward calculation of the healthcare benefits.
    - Disclose the assumed timing of the state assistance contributions used for the expected return calculations in the development of the actuarial value of assets.
    - Break out the actuarial gains/(losses) between pension and healthcare.
    - In order to comply with new Actuarial Standard of Practice (ASOP) #4, disclose that consideration was given to account for the contribution lag.

In general, the roll forward procedures and results were reasonable.

We wish to thank the staff of the State of Alaska Treasury Division and Buck without whose willing cooperation this review could not have been completed.

Sincerely,

Gabriel, Roeder, Smith & Company

Paul Wood, ASA, FCA, MAAA	Bill Detweiler, ASA, EA, FCA, MAAA
Senior Consultant	Consultant

ALASKA RETIREMENT MANAGEMENT BOARD

Actuarial Committee

SUBJECT:	Change in Actuarial Methodology for PERS and TRS DB valuation reports	ACTION:	X
DATE:	June 11, 2024	INFORMATION:	

BACKGROUND:

AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability.

STATUS:

Buck, A Gallagher Company (Buck), the Department of Administration's and Systems' actuary, and Gabriel Roeder Smith & Company (GRS), the Board's review actuary, have monthly calls during GRS' review of actuarial valuation reports for the Systems administered by the Division of Retirement and Benefits (Division). During a call in February 2024, Buck and GRS discussed employer contributions and the impact of interest accrual for the year. Since the normal cost and the unfunded liability amortization amounts are determined at the beginning of a fiscal year, those costs accrue a full year's interest. However, it was determined that it would make sense to adjust the methodology related to the interest accrual on the employer contributions that are received over the course of the fiscal year as there is a loss of ½ years' worth of interest, which is a contribution timing loss that is separately amortized over a 25-year period.

Buck proposes changing the actuarial methodology that is used to determine employer contributions by doing the following:

(1) Add a ½ year interest adjustment to the normal cost and unfunded liability amortizations that are used to calculate the actuarially determined contribution rates for Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS);
(2) Since the PERS and TRS Additional State Contributions are deposited in the defined benefit trusts at the beginning of the year, the ½ year interest adjustment would be backed out when calculating the Additional State Contributions; and
(3) In effect, the employer contributions will be funding the ½ year interest loss from the employer contributions in the year the loss occurs, rather than funding the loss over 25-years.

The analysis and results were presented to the Actuarial Committee on June 11, 2024.

GRS has reviewed this methodology change and provided their support of this methodology change to the Actuarial Committee.

RECOMMENDATION:

The Actuarial Committee recommends that the Alaska Retirement Management Board approve Resolution 2024-05, accepting the change in actuarial methodology related to the interest adjustment used on employer contributions made during a fiscal year as explained by Buck at the June 11, 2024 actuarial committee meeting.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to a Change in Actuarial Methodology for the
Public Employees' Retirement System and Teachers' Retirement System
Valuation Reports

Resolution 2024-05

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10. 220(a)(2) and (3), the Board is to establish and determine the investment objectives and policy for the funds of the Public Employees' Retirement System and Teachers' Retirement System; and

WHEREAS, AS 37.10.210(a) and AS 37.10.071(c) require the Board to apply the prudent investor rule and exercise its fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries with impartiality;

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability;

WHEREAS, Buck and GRS discussed an actuarial methodology change related to employer contributions and the interest accrual for the fiscal year, which impacts the normal cost and the unfunded liability amortization amounts that are determined at the beginning of a fiscal year and accrue a full year’s interest;

WHEREAS, Buck and GRS determined that the methodology related to the interest accrual on the employer contributions that are received over the course of the fiscal year should be modified as there is a loss of ½ years’ worth of interest, which is a contribution timing loss that is separately amortized over a 25-year;

WHEREAS, Buck proposes changing the actuarial methodology that is used to determine employer contributions by (i) adding a ½ year interest adjustment to the Normal Cost and unfunded liability amortizations that are used to calculate the actuarially determined contribution rates for Public Employees’ Retirement System (PERS) and Teachers’ Retirement System (TRS); and (ii) backing out the ½ year interest adjustment when calculating the Additional State Contributions since they are generally contributed at the beginning of each fiscal year, thereby allowing the systems to fund the ½ year interest loss from the employer contributions in the year the loss occurs, rather than funding the loss over 25-years;

NOW THEREFORE BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Board adopt the actuarial methodology change related to the employer contribution interest accrual as described.

DATED at Anchorage, Alaska this 12th day of June, 2024.

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Chair

ATTEST:

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Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

Actuarial Committee

SUBJECT:	Certification of Actuarial Review	ACTION:	X
DATE:	June 11, 2024	INFORMATION:	

BACKGROUND:

AS 37.10.220(a)(9) prescribes certain duties and reports that the Alaska Retirement Management Board is responsible for securing from a member of the American Academy of Actuaries. Additionally, it contains a requirement that "the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board."

STATUS:

Buck, a Gallagher Company (Buck), the board's primary actuary, has completed actuarial valuations as of June 30, 2023 for:

- the Public Employees' Retirement System (PERS);
- the Teachers' Retirement System (TRS);
- the Public Employees' Retirement System – Defined Contribution Retirement Plan (for Occupational Death and Disability and Retiree Medical Benefits); and
- the Teachers' Retirement System - Defined Contribution Retirement Plan (for Occupational Death and Disability and Retiree Medical Benefits).

Additionally, Buck completed roll-forward valuations as of June 30, 2023 for:

- the Judicial Retirement System (JRS); and
- the National Guard and Naval Militia Retirement System (NGNMRS).

Gabriel Roeder Smith & Company (GRS), the Board's review actuary, has reviewed the valuation reports prepared by Buck and provided a letter and report to the Actuarial Committee and the Board describing the review of the above listed valuation reports. The report also includes an audit findings list setting out recommendations and suggestions from GRS for further discussion or action.

RECOMMENDATION:

The Actuarial Committee recommends that the Alaska Retirement Management Board accept the review and certification of the FY 2023 actuarial reports by GRS.

ALASKA RETIREMENT MANAGEMENT BOARD

Actuarial Committee

SUBJECT:	Acceptance of Actuarial Valuation Reports PERS / TRS DB & DCR, JRS, NGNMRS	ACTION:	X
DATE:	June 11, 2024	INFORMATION:	

BACKGROUND:

AS 37.10.220(a)(8) prescribes that the Alaska Retirement Management Board (Board) "coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system."

AS 37.10.220(a)(9) provides that "the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the Board."

STATUS:

Buck, A Gallagher Company (Buck), the Department of Administration's and Plans' actuary, has completed and reviewed the following results and reports with the Board's Actuarial Committee on December 6, 2023, March 5, 2024, and June 11, 2024:

1) an actuarial valuation of the Public Employees' Retirement System as of June 30, 2023
2) an actuarial valuation of the Teachers' Retirement System as of June 30, 2023
3) an actuarial valuation of the Public Employees' Retirement System – Defined Contribution Retirement Plan (for Occupational Death and Disability and Retiree Medical Benefits) as of June 30, 2023
4) an actuarial valuation of the Teachers' Retirement System – Defined Contribution Retirement Plan (for Occupational Death and Disability and Retiree Medical Benefits) as of June 30, 2023
5) a roll-forward actuarial valuation of the Judicial Retirement System (JRS) and the National Guard and Naval Militia Retirement System (NGNMRS) as of June 30, 2023

There are three assumption changes recommended and presented in the final reports:

1) Healthcare claim costs are updated annually and described in Section 5.2 for the PERS and TRS DB and Section 4.2 for the PERS DCR and TRS DCR actuarial valuation reports; and
2) The Normal Cost load for administrative expenses was updated based on the most recent two years of actual amounts paid from plan assets; and
3) The JRS salary increase and pensioner benefit increase assumptions were modified effective June 30, 2023 to be 5% for FY23, 0% for FY24, 5% for FY25, 0% for FY26-FY28, and 3% per year thereafter to better reflect expected short-term experience.

Gabriel Roeder Smith & Company (GRS), the Board's actuary, has reviewed the listed actuarial valuations and provided their reports and audit findings to the Actuarial Committee and the Board.

RECOMMENDATION:

The Actuarial Committee recommends that the Alaska Retirement Management Board accept the actuarial valuation reports prepared by Buck for the Public Employees', Teachers', Public Employees' Defined Contribution (for Occupational Death and Disability and Retiree Medical Benefits), Teachers' Defined Contribution (for Occupational Death and Disability and Retiree Medical Benefits), and the roll-forward actuarial valuation reports for the Judicial and National Guard and Naval Militia retirement systems as of June 30, 2023.

Alaska Retirement Management Board

COMMITTEE SELF-ASSESSMENT

Actuarial Committee

Self-assessment within the meaning of the committee's charter may be achieved by discussion, at least twice a year, of the following questions:

	YES	NO
1. Are discussions at the committee level meaningful and, if not, what can be done about it?		
2. Is the committee touching on key issues; what key issuesare being missed?		
3. Is the committee giving appropriate time to key issues?		
4. Does the work of the Actuarial Committee appropriately meet the needs of the Board by reducing necessary Board meeting time spent on the matters that come before the Actuarial Committee?		

Alaska Retirement Management Board

CHARTER OF THE ACTUARIAL COMMITTEE

I. Actuarial Committee Purpose.

The Actuarial Committee (Committee) assists the Alaska Retirement Management Board (Board) in fulfilling the Board's function of independent oversight of the integrity of the Alaska Retirement Management Board' s (Board) retirement systems ' actuarial valuations, experience analyses, and other requested reports and analysis, including compliance with legal, accounting., and regulatory requirements. It also serves as a conduit of communication between the Actuary, the Review Actuary, the Audit Actuary, Department of Administration (DOA) and Department of Revenue (DOR) staff, and the Board.

The Committee has the authority to conduct any review appropriate to fulfilling its responsibilities and it has direct access to the independent actuaries, as well as DOR and DOA management and staff, and legal counsel. The Committee may recommend that the Board retain, at Board expense and consistent with applicable procurement requirements, special legal, accounting, or other consultants or experts it considers necessary in the performance of its duties.

II. Actuarial Committee Responsibilities and Duties.

A. The Committee shall assist the Board in carrying out the following responsibilities:

1. Coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system (A) an appropriate contribution rate for normal costs; (B) an appropriate contribution rate for liquidating any past service liability; in this subparagraph, the appropriate contribution rate for liquidating the past service liability of the defined benefit retirement plan under AS 14.25.009 - 14.25.220 or the past service liability of the defined benefit retirement plan under AS 39.35.095 - 39.35.680 must be determined by a level percent of pay method based on amortization of the past service liability for a closed term of 25 years;

2. Review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually; the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board.

3. Review the annual actuarial valuations and any actuarial experience analysis prepared by the Actuary and the report prepared by the Review Actuary prior to presentation or distribution of any report.

4. Coordinate with staff to conduct an independent audit of the state's actuary not less than once every four years and review any audit report prepared by the Audit Actuary prior to presentation or distribution to the Board.

5. In consultation with management and the independent actuaries, consider the integrity of the actuarial reporting processes and controls, including the process for "closure" on the audit findings.

6. Review any significant changes to applicable actuarial principles and any items required to be communicated by the independent actuaries.

7. Review the independence and performance of the actuaries and periodically recommend to the Board the appointment of the independent actuaries or recommend approval of any discharge of actuaries when circumstances warrant.

8. Review, discuss and recommend for Board consideration any strategic issues related to the actuarial work.

9. Review and assess the adequacy of this Charter at least annually and submit recommended changes to it to the Board for approval.

10. Review and periodically perform self-assessment of the Committee's performance.

B. The Committee shall have the following responsibilities with respect to the ARMB's independent actuaries:

1. Schedule an annual pre-valuation entrance conference with the Actuary that includes DOA and DOR staff and the Review Actuary to discuss scope, staffing, locations, timeline , reliance upon management, and general approach to the annual valuation conducted for the retirement systems; and in the year that an actuarial experience analysis is conducted, schedule a similar entrance conference.

2. Discuss with management and the independent actuaries the actuarial principles and provide input as to the underlying assumptions and methods used in the preparation of the retirement systems' valuation reports and experience analyses to ensure the integrity of actuarial number s used in preparation of accounting reports, compliance with GASB or other regulatory bodies, consistency with the actuarial policies of the plan, and alignment with the purpose of the reporting.

3. Review the Actuary's draft valuation and the Review Actuary's draft report (and the experience analysis and review when conducted); discuss the contents with the actuaries and monitor the follow-up on significant observations, findings, and recommendations.

4. Discuss with the independent actuaries the clarity and format of the presentations in appearances before the committee and the Board.

5. Meet with the actuaries, in the absence of management, to review findings, recommendations or other pertinent subjects.

6. Review Audit Actuary report (conducted every four years); discuss any significant findings with Actuary and management.

C. In addition to the foregoing, the Committee shall:

1. Perform such other activities consistent with this Charter, and governing law as the Committee considers necessary or appropriate or as the Board may otherwise request.

2. Maintain minutes of Committee meetings and periodically report to the Board on significant results of the Committee's activities.

Alaska Retirement Management Board
Actuarial Committee
Remaining Meetings - 2024

June 11, 2024 (Anchorage/ Videoconference)

1. Review and discussion of final review reports and valuations, including any items brought forward from March meeting
2. Action: Recommendations from committee to board for acceptance of review reports and valuations
3. Recommendation from committee to board for action on Audit Findings List
4. FY2023 valuation discussion
    a. Valuation Timeline
    b. Actuarial principles and underlying assumptions; any proposed new assumptions
    c. Outstanding audit issues (Audit Findings List)
5. Committee Performance – Self Assessment
6. Education Topic:

September 17, 2024 (Fairbanks/ Videoconference)

1. Review contribution rate resolutions/action memos for recommendation to Board
2. Status/Follow-up from previous meetings
3. Education Topic:

December 3, 2024 (Anchorage/ Videoconference)

1. Status Report/Discussion on Draft Actuarial Valuation and Second Actuary Review Process
2. Discussion of new trends and findings in actuarial matters
3. Committee Performance – Self Assessment
4. Education topic:

Periodic and As Needed Meeting Topics

1. Updates by DOA on actuary procurement
2. Actuarial Committee training.

Alaska Retirement Management Board

Actuarial Committee

PROPOSED SCHEDULE OF 2025 MEETINGS

March 11, 2025 (Juneau/ Videoconference)

1. Discuss Draft Review Actuary Report
2. Review Draft Valuation Reports - requests or recommendations for edits or corrections
3. Review Audit Findings List - proposed resolution and recommendations
4. Education Topic:

April TBD, 2025 (Videoconference) - *Tentative*

1. Follow up on discussion/findings/questions from March meeting if needed

June 17, 2025 (Anchorage/ Videoconference)

1. Review and discussion of final review reports and valuations, including any items brought forward from March meeting
2. Action: Recommendations from committee to board for acceptance of review reports and valuations
3. Recommendation from committee to board for action on Audit Findings List
4. FY2024 valuation discussion
    a. Valuation Timeline
    b. Actuarial principles and underlying assumptions; any proposed new assumptions
    c. Outstanding audit issues (Audit Findings List)
5. Committee Performance – Self Assessment
6. Education Topic:

September 16, 2025 (Fairbanks/ Videoconference)

1. Review contribution rate resolutions/action memos for recommendation to Board
2. Status/Follow-up from previous meetings
3. Education Topic:

December 2, 2025 (Anchorage/ Videoconference)

1. Status Report/Discussion on Draft Actuarial Valuation and Second Actuary Review Process
2. Discussion of new trends and findings in actuarial matters
3. Committee Performance – Self Assessment
4. Education topic:

Periodic and As Needed Meeting Topics

1. Updates by DOA on actuary procurement
2. Actuarial Committee training