

Rhode Island State Employees' and Electing Teachers OPEB

Actuarial Valuation Report

June 30, 2021



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March 17, 2022

The OPEB Board
Rhode Island State Employees' and Electing Teachers OPEB
Providence, Rhode Island

Re: Rhode Island State Employees' and Electing Teachers OPEB Actuarial Valuation as of June 30, 2021

Dear Board Members:

The results of the June 30, 2021 Annual Actuarial Valuation of the Rhode Island State Employees' and Electing Teachers OPEB are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress and to determine the employer contribution rate for the fiscal year ending June 30, 2024. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different. This report does not satisfy GASB Statements No. 74 and No. 75. Please see the report dated December 17, 2021 for information related to GASB Statement No. 74 reporting. A separate report that incorporates GASB Statement No. 75 will be issued at a later date.

The computed contribution rates and amounts in this report are determined using the actuarial assumptions and methods disclosed in Section E of this report. This report includes risk metrics on pages A-8 and A-9 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The computed contribution rates and amounts shown on page 3 may be considered as minimum contributions that comply with State statute. Users of this report should be aware that contributions made at these rates do not guarantee benefit security. Given the importance of benefit security to any OPEB system, we suggest that contributions to the OPEB System in excess of those presented in this report be considered.

The findings in this report are based on census data as of June 30, 2021 and other information through June 30, 2021. The valuation was based upon information furnished by the State of Rhode Island concerning OPEB benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the State.

This report was prepared using assumptions adopted by the Board as authorized under RIGL 36-12.1-17 and 18. All actuarial assumptions used in this report are reasonable for the purposes of this valuation. Additional information about the actuarial assumptions is included in the section of this report entitled Actuarial Cost Method and Actuarial Assumptions.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Rhode Island State Employees' and Electing Teachers OPEB as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Jeffrey T. Tebeau, Abra D. Hill and Kevin T. Noelke are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

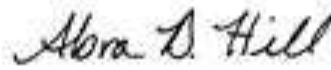
Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Jeffrey T. Tebeau, FSA, EA, MAAA, FCA



Abra D. Hill, ASA, MAAA, FCA



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JTT/ADH/KTN:ah

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EXECUTIVE SUMMARY

Executive Summary

Introduction

This is the June 30, 2021 actuarial valuation of the Rhode Island State Employees' and Electing Teachers OPEB which covers State Employees, State Police, Judges, Legislators, Teachers and the Board of Education. This report describes the current actuarial condition of the plan, determines the recommended employer contribution rates, and analyzes the changes in principal values.

The contribution rates are determined actuarially based on the plan provisions in effect as of the valuation date, the actuarial assumptions adopted by the OPEB Board, and the methodology set forth in the statutes. The OPEB Board's current policy is that the contribution rates determined by a given actuarial valuation become effective two years after the valuation date. For example, the rates determined by this June 30, 2021 valuation will be applicable for the year July 1, 2023 through June 30, 2024.

This valuation incorporates census data, healthcare premium rates, claims, and asset information as of June 30, 2021.

Plan Experience

Overall plan experience was favorable resulting in an actuarial gain among all groups, except for the Board of Education.

Investment experience was favorable in fiscal year 2021, resulting in a decrease in unfunded liabilities relative to expectations.

Demographic experience was mixed. State Employees, Teachers, and Board of Education saw losses while the other groups experienced gains.

Health care experience for the pre-65 plans was favorable overall, resulting in gains for groups with significant pre-65 liabilities (i.e., State Employees and State Police). Post-65 experience on the Medicare Advantage HMO was favorable, while the Plan 65 premium experience was unfavorable. However, this experience primarily affects the Board of Education.

The health care trend assumption is reviewed each valuation as part of the premium rate development process. Based on recent experience and national trends, the trend assumption has been set to 7.50% in 2022 grading down to 3.50% by 2033 for pre-65 plans and to 6.25% in 2022 grading down to 3.50% by 2033 for post-65 plans. The trend assumption is similar to the one used for the June 30, 2020 valuation, however, the first-year trend for this valuation would have been 0.25% to 0.50% lower if based on the prior assumption. Therefore, resetting the trend assumption increased liabilities slightly.

Additional information on gains and losses can be found on page A-4.



Executive Summary

Financing Objectives

The actuarial cost method and the maximum amortization periods are set by statute. Contribution rates and liabilities are computed using the Entry Age Normal actuarial cost method. The employer contribution rate is the sum of two pieces: the normal cost rate and the amortization rate. The normal cost rate is determined as a percent of pay. The amortization rate is determined as a level percent of pay for Judges, Legislators, State Employees, State Police and the Board of Education, and as a level dollar for Teachers. It is the amount required to amortize the Unfunded Actuarial Accrued Liability over a closed period (30 years as of June 30, 2006, 15 years remaining as of June 30, 2021). Separate employer contribution rates are determined for State Employees, State Police, Judges, Legislators, Teachers and the Board of Education. The amortization period for Teachers is based on the statutory contribution, subject to statutory restriction. Due to the current funding status of the Judges and Legislators plans, the amortization period is set to 30-years.

A summary of principal valuation results is shown on the following page.

Executive Summary

(All Dollars in Thousands)

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
Valuation Date	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021
ADEC for Fiscal Year Ending	June 30, 2024	June 30, 2024	June 30, 2024	June 30, 2024	June 30, 2024	June 30, 2024
Actuarially Determined Employer Contributions (ADEC)						
Annual Amount (Total for all groups)	\$ -	\$ -	\$ 37,309	\$ -	\$ 5,551	\$ 3,180
Percentage of Projected Covered Payroll	0.00%	0.00%	4.55%	N/A	17.81%	2.15%
Employer Contribution*	0.00%	0.00%	4.52%	-	17.81%	2.15%
Membership (as of June 30, 2021)						
Number of						
Active Members	62	113	10,761	-	294	1,799
Retirees and Beneficiaries	26	18	7,575	66	164	967
Inactive, Nonretired Members	-	-	-	-	-	-
Total	88	131	18,336	66	458	2,766
Covered Payroll	\$ 11,932	\$ 1,897	\$ 750,392	N/A	\$ 28,525	\$ 135,335
Assets						
Actuarial Value	\$ 5,148	\$ 3,673	\$ 306,413	\$ 14,661	\$ 74,498	\$ 54,633
Actuarial Information						
Employer Normal Cost	0.07%	1.49%	1.99%	N/A	15.83%	1.09%
Actuarial Accrued Liability (AAL)	\$ 252	\$ 938	\$ 595,281	\$ 7,716	\$ 85,196	\$ 74,799
Unfunded Actuarial Accrued Liability (UAAL)	(4,896)	(2,735)	288,868	(6,945)	10,698	20,166
Funded Ratio	2,043%	392%	51%	190%	87%	73%
UAAL as % of Covered Payroll	(41.0)%	(144.2)%	38.5%	N/A	37.5%	14.9%
Equivalent Single Amortization Period	30 years	30 years	15 years	N/A	15 years	15 years

* For the 2024 fiscal year, the employer contribution for State Employees is the ADEC net of a credit for the health windows contributions.



Executive Summary

Contribution Rates

The total Actuarially Determined Employer Contribution (ADEC) for the fiscal year beginning July 1, 2023 was determined to be \$46,039,621. The contribution rates as a percent of payroll changed from 4.52% in the prior fiscal year to 4.55% for State Employees, 20.67% to 17.81% for State Police, remained at 0.00% for Judges, remained at 0.00% for Legislators, and 1.83% to 2.15% for the Board of Education. Contributions as a dollar amount are \$0 for Teachers.

For additional details, please see Sections A and D of the report.

Benefit Provisions

There were no reported material changes in benefit provisions since the prior valuation. A description of the Plan provisions used in this valuation is in Section D of this report.

Actuarial Assumptions

Changes in actuarial assumptions include the updated healthcare trend assumption. The effect of this change is included in the “assumption changes” line item throughout this report.

It is our understanding that by receiving and accepting this report, the Board approves the assumptions used herein.

Actuarial Methods

There were no changes in actuarial methods.

Data

The State supplied data for retired and active members as of June 30, 2021. We did not audit this data, but we did apply a number of validation tests to the data.

SECTION A

VALUATION RESULTS

Valuation Results

Development of the Actuarially Determined Employer Contributions as of July 1, 2023

Contributions for	Development of the Actuarially Determined Employer Contributions for the July 1, 2023 - June 30, 2024 Fiscal Year					
	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
Total Normal Cost	\$ 9,061	\$ 30,885	\$ 16,317,481	\$ 0	\$ 4,934,140	\$ 2,942,896
Active Member Contribution	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,330,959</u>
Employer Normal Cost	\$ 9,061	\$ 30,885	\$ 16,317,481	\$ 0	\$ 4,934,140	\$ 1,611,937
<i>Percentage of Projected Payroll</i>	<i>0.07%</i>	<i>1.49%</i>	<i>1.99%</i>	<i>N/A</i>	<i>15.83%</i>	<i>1.09%</i>
Amortization of Unfunded Actuarial Accrued Liabilities	(9,061)	(30,885)	20,991,332	0	617,157	1,567,574
<i>Percentage of Projected Payroll</i>	<i>(0.07)%</i>	<i>(1.49)%</i>	<i>2.56%</i>	<i>N/A</i>	<i>1.98%</i>	<i>1.06%</i>
Amortization Period	30 Years	30 Years	15 Years	N/A	15 Years	15 Years
Level Percent	Level Percent	Level Percent	Level Percent	Level Dollar	Level Percent	Level Percent
Actuarially Determined Employer Contribution (ADEC)	\$ 0	\$ 0	\$ 37,308,813	\$ 0	\$ 5,551,297	\$ 3,179,511
<i>Percentage of Projected Payroll</i>	<i>0.00%</i>	<i>0.00%</i>	<i>4.55%</i>	<i>N/A</i>	<i>17.81%</i>	<i>2.15%</i>
Total Projected Health Windows Revenue			245,453			
<i>Percentage of Projected Payroll</i>			<i>0.03%</i>			
Net Employer Contribution*			37,063,360			
<i>Percentage of Projected Payroll</i>			<i>4.52%</i>			
Projected Payroll for the Fiscal Year Beginning July 1, 2023	\$12,943,920	\$2,072,865	\$819,973,922	N/A	\$31,169,553	\$147,884,295

* For the 2024 fiscal year, the employer contribution for State Employees is the ADEC net of a credit for the health windows contributions.

Contribution notes apply to the fiscal year ending June 30, 2024. The assumptions used to calculate the results shown above include a 5.00% investment return rate.

The Unfunded Actuarial Accrued Liabilities were amortized as a level percent of active member payroll for State Employees, State Police, and the Board of Education, and as a level dollar amount for Judges, Legislature and Teachers over the periods shown. For the fiscal year ending June 30, 2024, the amortization factors used are 21.7655 and 22.4628 for the 30-year level percent of pay amortization for Judges and Legislators, respectively; 12.8402 for the 15-year level percent of pay amortization for State Police, State Employees and Board of Education.



Valuation Results

Determination of Unfunded Actuarial Accrued Liability as of June 30, 2021

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
A. Present Value of Future Benefits						
1. Retirees and Beneficiaries	\$ 174,193	\$ 744,272	\$296,982,850	\$ 7,716,423	\$ 35,292,193	\$ 34,022,467
2. Vested Terminated Members	0	0	0	0	0	0
3. Active Members	<u>120,202</u>	<u>422,366</u>	<u>463,728,190</u>	<u>0</u>	<u>95,498,191</u>	<u>67,571,826</u>
Total Present Value of Future Benefits	\$ 294,395	\$ 1,166,638	\$760,711,040	\$ 7,716,423	\$130,790,384	\$101,594,293
B. Present Value of Future Total Normal Costs	42,284	228,441	165,429,762	0	45,594,017	26,795,184
C. Actuarial Accrued Liability (A.-B.)	\$ 252,111	\$ 938,197	\$595,281,278	\$ 7,716,423	\$ 85,196,367	\$ 74,799,109
D. Actuarial Value of Assets	5,147,887	3,672,906	306,413,232	14,661,245	74,498,495	54,632,623
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$(4,895,776)	\$(2,734,709)	\$288,868,046	\$(6,944,822)	\$ 10,697,872	\$ 20,166,486
F. Funded Ratio (D./C.)	2,042%	391%	51%	190%	87%	73%
G. Market Value of Assets	\$ 5,973,864	\$ 4,262,222	\$355,577,136	\$17,013,637	\$ 86,451,754	\$ 63,398,410
H. Funded Ratio, Market Value (G./C.)	2,370%	454%	60%	220%	101%	85%

Development of Actuarial Value of Assets

Year Ended June 30:	2019	2020	2021	2022	2023	2024
A. Actuarial Value Beginning of Year						
A1. Preliminary Actuarial Value Beginning of Year	\$ 265,312,934	\$ 320,059,968	\$ 385,535,738			
A2. Adjustment	244,989	-	(44,600)			
A3. Final Actuarial Value Beginning of Year	265,557,923	320,059,968	385,491,138			
B. Market Value End of Year	338,244,433	404,098,758	532,677,023			
C. Market Value Beginning of Year						
C1. Preliminary Market Value Beginning of Year	278,170,257	338,244,433	404,098,758			
C2. Adjustment	244,989	-	(44,600)			
C3. Final Market Value Beginning of Year	278,415,246	338,244,433	404,054,158			
D. Non-Investment Net Cash Flow	31,546,550	36,685,699	23,465,183			
E. Investment Income						
E1. Market Total: B - C3 - D	28,282,637	29,168,626	105,157,682			
E2. Amount for Immediate Recognition (5%)	14,066,560	16,920,141	19,861,186			
E3. Amount for Phased-In Recognition: E1-E2	14,216,077	12,248,485	85,296,496			
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.25 x E3	3,554,019	3,062,121	21,324,124			
F2. First Prior Year	2,268,616	3,554,019	3,062,121	\$ 21,324,124		
F3. Second Prior Year	2,985,174	2,268,616	3,554,019	3,062,121	\$ 21,324,124	
F4. Fourth Prior Year	81,126	2,985,174	2,268,617	3,554,020	3,062,122	\$21,324,124
F5. Total Recognized Investment Gain	8,888,935	11,869,930	30,208,881	27,940,265	24,386,246	21,324,124
G. Preliminary Actuarial Value End of Year: A3 + D + E2 + F5	320,059,968	385,535,738	459,026,388			
H. 80% of Market Value End of Year: 80% x B	270,595,546	323,279,006	426,141,618			
I. 120% of Market Value End of Year: 120% x B	405,893,320	484,918,510	639,212,428			
J. Additional Recognized G/L due to Corridor	-	-	-			
K. Final Actuarial Value after 20% Corridor	320,059,968	385,535,738	459,026,388			
L. Difference between Market & Actuarial Value: B-K	18,184,465	18,563,020	73,650,635			
M. Recognized Rate of Return	8.17%	8.51%	12.60%			
N. Market Rate of Return	9.61%	8.18%	25.29%			
O. Ratio of Actuarial Value to Market Value: K / B	95%	95%	86%			

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. The Funding Value of Assets is unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If assumed rates are exactly realized for four consecutive years, it will become equal to Market Value.



Valuation Results Gain/Loss Analysis as of June 30, 2021

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
(1) UAAL* at prior valuation date	\$ (4,310,593)	\$ (2,347,636)	\$ 317,215,316	\$ (5,576,325)	\$ 19,225,039	\$ 20,043,337
(2) Employer normal cost from last valuation	7,156	27,521	15,492,079	-	4,053,965	1,288,237
(3) Employer contributions	-	-	41,024,947	-	6,178,412	3,944,538
(4) Interest accrual: $[(1)+1/2 [(2)-(3)]] \times .05$	(215,351)	(116,694)	15,222,444	(278,816)	908,141	935,759
(5) Expected UAAL end of year: (1)+(2)-(3)+(4)	\$ (4,518,788)	\$ (2,436,809)	\$ 306,904,892	\$ (5,855,141)	\$ 18,008,733	\$ 18,322,795
(6) Impact of Plan Changes	-	-	-	-	-	-
(7) Impact of Method/Assumption Changes	12,682	34,929	(1,922,638)	128,589	3,323,601	1,615,385
(8) Expected UAAL after changes: Sum (5) through (7)	\$ (4,506,106)	\$ (2,401,880)	\$ 304,982,254	\$ (5,726,552)	\$ 21,332,334	\$ 19,938,180
(9) Actual UAAL at end of year	\$ (4,895,776)	\$ (2,734,709)	\$ 288,868,046	\$ (6,944,822)	\$ 10,697,872	\$ 20,166,486
(10) Gain/(loss) as of the valuation date (9)-(8)	389,670	332,829	16,114,208	1,218,270	10,634,462	(228,306)
(11) Gain/(loss) as percent of actuarial accrued liabilities at prior valuation date	138.9 %	32.5 %	2.8 %	14.9 %	12.9 %	(0.3)%
Gain/(loss) by Source						
Investment Experience [^]	\$ 338,786	\$ 241,717	\$ 20,165,292	\$ 964,868	\$ 4,902,803	\$ 3,595,415
Demographic Experience / Other	47,187	116,280	(10,998,062)	(146,564)	679,150	(2,324,142)
Premium Rate Setting - Pre-65	3,697	(25,168)	6,946,343	42,292	5,052,509	62,685
Premium Rate Setting - Post-65	-	-	635	357,674	-	(1,562,264)
Total	\$ 389,670	\$ 332,829	\$ 16,114,208	\$ 1,218,270	\$ 10,634,462	\$ (228,306)

* *Unfunded Actuarial Accrued Liabilities – All groups valued at 5.0% interest.*

[^] *Based on the Actuarial Value of Assets and allocated to each group based on the market value as of the valuation date.*



Comments

Comment A: Legislation 2008-H7204 requires a 30-year amortization period beginning June 30, 2006 with 15 years remaining as of the June 30, 2021, valuation. In an underfunded plan, shorter amortization periods would result in higher ADECs. The contribution rates shown include amortization of the unfunded actuarial accrued liability over 30 years for Judges and Legislators and 15 years for the other groups, excluding Teachers. The Judges and Legislators plans are currently over 100% funded. We recommend continuing to amortize the funding surplus using a 30-year open percent of pay factor and applying the credit as an offset to the normal cost contribution for those groups. The Teachers group is over 100% funded and the amortization period is based on the statutory contribution, provided by the State, and is subject to statutory restriction. The State Employees, Police, and Board of Education remain open plans and are therefore amortized as a level percent of payroll.

For the Teachers, we understand that the State generally allocates a fixed dollar contribution. The Teachers plan is fully funded as of June 30, 2021. Therefore, this report anticipated no additional State contributions beyond the valuation date. Contributions received after this date may provide a provision against adverse deviation.

Comment B: A summary of the changes and their impact on the ADEC is shown below. Note that the prior ADEC is based on the June 30, 2020 valuation. All percentages shown are expressed as a percent of payroll. The rates for State Employees are prior to any adjustment for the Health Windows contribution.

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
Prior ADEC	0.00%	0.00%	4.52%	\$ -	20.67%	1.83%
Impact of plan experience	0.00%	0.00%	0.14%	N/A	(2.30)%	0.02%
Impact of premium rate setting	0.00%	0.00%	(0.10)%	N/A	(2.43)%	0.14%
Impact of assumption changes	0.00%	0.00%	(0.01)%	-	1.87%	0.16%
ADEC determined by this valuation	0.00%	0.00%	4.55%	\$ -	17.81%	2.15%

Overall, the plan had favorable experience since the last valuation. The plan recognized gains for all groups due to favorable investment experience. The rate of return on the actuarial value of assets was 12.6% for 2021 (market value return was 25.3%) compared to the assumed rate of 5.0%. This resulted in a gain of \$30.2M on the unfunded liabilities for the plan in total.

Demographic experience (i.e., experience related to member activities) was unfavorable overall for the plan. The State Employees, Teachers, and Board of Education groups experienced losses. The Judges, Legislature, and State Police all experienced modest gains relative to their total experience. It is important to note that the demographic experience accounts for two years' worth of experience because the census data is collected biennially.

In addition to the aforementioned experience, the plan realized gains related to lower than expected per capita claims costs on its Pre-65 medical plans. Post-65 per capita health care premiums saw increases that were greater than expected, driven by the Medicare Supplement Plan ("Plan65") experience. Future expectations of increases in claims costs (i.e., health care trend assumptions) utilized in this valuation are similar to those used in last valuation, resulting in a slight increase in the liabilities of the plan and the computed contribution rates. Future known HRA amounts for State Employees were built into the prior valuation. However, the health care trend assumption for the HRA was modelled using the Post-65 trend assumption, resulting in a slight decrease in HRA liabilities.

Comments

Comment C: The health care trend assumption is 7.50% for pre-65 plans and 6.25% for post-65 plans in the first year, trending down to 3.5% over 12 years. The short-term trend of 7.50%/6.25% is a reasonable expectation of current health care inflation. The transition from short-term to long-term trend is supported by the Society of Actuaries' Getzen model which results in a macroeconomic estimate that health care expenditures will increase from 20% of Gross Domestic Product (GDP) in 2029 to 25% of GDP in 2050 assuming 4.0% annual GDP growth.

Comment D: Effective September 30, 2008, the Tier II subsidy was eliminated. Subsequent to that date, a separate Early Retiree premium was introduced to reflect the full cost of pre-65 retiree health care with the retirees and the State sharing in the cost of the full premium. In practice, the Early Retiree premium has not always increased as rapidly as the aggregate health care cost on a per capita basis.

In effect, material differences between the increases in aggregate costs and the illustrative premiums can create an implicit subsidy. It is important to note that if future premiums are not accurately adjusted to reflect experience, the valuation must reflect future expected implicit subsidies which could result in substantially higher employer costs.

Comment E: The State received contributions in the amount of \$245,453 in fiscal year 2021 for employees who retired under an early retirement incentive program. The cost of retiree health benefits for these individuals is charged as an annual operating cost to the department or agency from which they were employed immediately prior to retirement. The employer contribution rate for the affected groups is adjusted down from the ADEC on page A-1 to reflect this procedure (referred to as the Health Windows contributions).

Comment F: The June 30, 2018 valuation was the first valuation performed in an even year and began the cycle of annual valuations (rather than the previous biennial valuation schedule). However, census data will continue to be collected on a biennial basis (for the odd-year valuations). Therefore, liabilities for the 2022 valuation will be calculated as of the most recent census data date (June 30, 2021) and rolled forward to the valuation date. Premium, claims, and asset information will be updated each valuation.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected System Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 5.0% on the actuarial value of assets), it is expected that:

- (1) The employer normal cost as a percentage of pay will be sufficient to finance benefits accruing each year.
- (2) The Unfunded Actuarial Accrued Liabilities (UAAL) will be fully amortized after 15 years (June 30, 2038) for State Employees, State Police, and Board of Education.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio (Judges, Legislature, and Teachers will remain 100% funded).

The above statements assume that the full Actuarially Determined Employer Contribution (ADEC) is contributed each year.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- (1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, for example: transferring the liability to an unrelated third party in a market value type transaction.
- (2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy (funding policy), affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. Even if the funded status measurement in this report was 100%, it would not be synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
- (3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Healthcare-Related Risk** – actual medical inflation trend rates and/or changes in healthcare plan designs may differ from expected resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive benefits for a period of time other than assumed; and
6. **Other Demographic Risks** – members may elect coverage, terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contributions shown on page A-1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Measures – All Groups Combined

(\$ in millions)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Actuarial Valuation Date (6/30)	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (3) - (2)	Payroll	Funded Ratio (2) / (3)	Market Value Funded Ratio (1) / (3)	Retiree Liabilities (RetLiab)	RetLiab / AAL (8)/(3)	AAL / Payroll (3) / (5)	Assets / Payroll (2) / (5)	UAAL / Payroll (4) / (5)	Non-Invest. Cash Flow (NICF)	NICF / Assets (13)/(1)	Market Rate of Return	5-year Trailing Average
2017	\$ 228.4	\$ 219.2	\$ 844.5	\$ 625.3	\$ 867.7	26.0%	27.0%	\$ 401.4	47.5%	97.3%	25.3%	72.1%	\$ 26.8	11.7%	11.1%	9.3%
2018	278.2	265.3	772.2	506.9	867.7	34.4%	36.0%	358.3	46.4%	89.0%	30.6%	63.7%	29.0	10.4%	8.5%	9.3%
2019	338.2	320.1	781.2	461.1	912.7	41.0%	43.3%	373.6	47.8%	85.6%	35.1%	50.5%	31.5	9.3%	9.6%	7.8%
2020	404.1	385.5	729.8	344.2	912.7	52.8%	55.4%	323.2	44.3%	80.0%	42.2%	37.7%	36.7	9.1%	8.2%	8.5%
2021	532.7	459.0	764.2	305.2	928.1	60.1%	69.7%	374.9	49.1%	82.3%	49.5%	32.9%	23.5	4.4%	25.3%	12.4%

(6) and (7). The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(8) and (9). The ratio of retiree liabilities to total accrued liabilities gives an indication of the maturity of the System. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. A ratio on the order of 50% indicates a maturing System.

(10) and (11). The ratio of liabilities and assets to payroll gives an indication of both maturity and volatility. Many Systems have ratios between 500% and 700%. Ratios significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

(12). The ratio of unfunded liability to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded liability. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded liability within a reasonable time frame.

(13) and (14). The ratio of Non-Investment Cash Flow to assets is an important measure of sustainability. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

(15) and (16). Investment return is probably the largest single risk that most Systems face. The year-by-year return and the five-year geometric average both give an indication of the reasonableness of the System's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on an actuarial estimation method and will differ modestly from figures reported by the investment consultant.

SECTION B

FUNDING PROJECTIONS

Funding Projections as of June 30, 2021

Judges

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Accrued Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 5.15	\$ 0.25	\$ (4.90)	2041.91%		\$ 5.97	2,369.54%
6/30/2022	5.72	0.23	(5.49)	2455.19%	\$ -	6.23	2,675.26%
6/30/2023	6.27	0.22	(6.05)	2855.56%	-	6.51	2,964.46%
6/30/2024	6.81	0.21	(6.60)	3210.39%	-	6.81	3,210.39%
6/30/2025	7.13	0.21	(6.92)	3364.49%	-	7.13	3,364.49%
6/30/2026	7.46	0.21	(7.25)	3531.49%	-	7.46	3,531.49%
6/30/2027	7.81	0.21	(7.60)	3738.47%	-	7.81	3,738.47%
6/30/2028	8.18	0.21	(7.97)	3945.56%	-	8.18	3,945.56%
6/30/2029	8.57	0.21	(8.36)	4163.45%	-	8.57	4,163.45%
6/30/2030	8.97	0.20	(8.77)	4418.41%	-	8.97	4,418.41%
6/30/2031	9.40	0.20	(9.20)	4663.09%	-	9.40	4,663.09%
6/30/2032	9.84	0.20	(9.64)	4916.86%	-	9.84	4,916.86%
6/30/2033	10.32	0.20	(10.11)	5074.89%	-	10.32	5,074.89%
6/30/2034	10.82	0.21	(10.61)	5069.90%	-	10.82	5,069.90%
6/30/2035	11.35	0.23	(11.13)	5033.88%	-	11.35	5,033.88%
6/30/2036	11.91	0.24	(11.67)	4965.54%	-	11.91	4,965.54%
6/30/2037	12.50	0.26	(12.24)	4884.53%	-	12.50	4,884.53%
6/30/2038	13.11	0.27	(12.84)	4822.15%	-	13.11	4,822.15%
6/30/2039	13.75	0.29	(13.47)	4809.45%	-	13.75	4,809.45%
6/30/2040	14.43	0.30	(14.13)	4754.03%	-	14.43	4,754.03%
6/30/2041	15.14	0.33	(14.82)	4639.34%	-	15.14	4,639.34%
6/30/2042	15.89	0.35	(15.54)	4532.40%	-	15.89	4,532.40%
6/30/2043	16.68	0.38	(16.30)	4437.80%	-	16.68	4,437.80%
6/30/2044	17.51	0.40	(17.10)	4353.63%	-	17.51	4,353.63%

* For the year ending on the actuarial valuation date.

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Funding Projections as of June 30, 2021

Legislature

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 3.67	\$ 0.94	\$ (2.73)	391.49%		\$ 4.26	454.30%
6/30/2022	4.05	0.95	(3.09)	424.29%	\$ -	4.41	462.62%
6/30/2023	4.40	0.96	(3.43)	455.75%	-	4.57	473.43%
6/30/2024	4.72	0.97	(3.75)	488.39%	-	4.72	488.39%
6/30/2025	4.86	0.95	(3.91)	511.36%	-	4.86	511.36%
6/30/2026	4.98	0.91	(4.07)	545.39%	-	4.98	545.39%
6/30/2027	5.10	0.86	(4.24)	593.48%	-	5.10	593.48%
6/30/2028	5.21	0.80	(4.41)	653.20%	-	5.21	653.20%
6/30/2029	5.38	0.78	(4.60)	689.40%	-	5.38	689.40%
6/30/2030	5.55	0.77	(4.79)	725.82%	-	5.55	725.82%
6/30/2031	5.75	0.76	(4.99)	760.16%	-	5.75	760.16%
6/30/2032	5.95	0.75	(5.20)	796.37%	-	5.95	796.37%
6/30/2033	6.19	0.77	(5.42)	804.26%	-	6.19	804.26%
6/30/2034	6.46	0.81	(5.65)	796.57%	-	6.46	796.57%
6/30/2035	6.74	0.86	(5.88)	785.99%	-	6.74	785.99%
6/30/2036	7.04	0.90	(6.13)	778.54%	-	7.04	778.54%
6/30/2037	7.35	0.96	(6.39)	768.75%	-	7.35	768.75%
6/30/2038	7.68	1.02	(6.67)	755.39%	-	7.68	755.39%
6/30/2039	8.02	1.07	(6.95)	747.06%	-	8.02	747.06%
6/30/2040	8.38	1.13	(7.25)	741.54%	-	8.38	741.54%
6/30/2041	8.74	1.19	(7.56)	737.11%	-	8.74	737.11%
6/30/2042	9.14	1.26	(7.88)	724.42%	-	9.14	724.42%
6/30/2043	9.55	1.33	(8.22)	717.23%	-	9.55	717.23%
6/30/2044	9.97	1.40	(8.57)	714.39%	-	9.97	714.39%

* For the year ending on the actuarial valuation date.

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Funding Projections as of June 30, 2021

State Employees

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 306.41	\$ 595.28	\$ 288.87	51.47%		\$ 355.58	59.73%
6/30/2022	354.81	610.55	255.74	58.11%	\$ 41.20	385.32	63.11%
6/30/2023	396.26	626.34	230.08	63.27%	35.98	410.50	65.54%
6/30/2024	437.26	642.39	205.12	68.07%	37.31	437.26	68.07%
6/30/2025	464.76	658.73	193.97	70.55%	37.70	464.76	70.55%
6/30/2026	492.67	675.03	182.36	72.98%	38.10	492.67	72.98%
6/30/2027	520.70	690.98	170.29	75.36%	38.51	520.70	75.36%
6/30/2028	548.82	706.54	157.72	77.68%	38.93	548.82	77.68%
6/30/2029	577.26	721.90	144.64	79.96%	39.37	577.26	79.96%
6/30/2030	606.30	737.34	131.04	82.23%	39.82	606.30	82.23%
6/30/2031	636.47	753.35	116.87	84.49%	40.28	636.47	84.49%
6/30/2032	668.28	770.40	102.13	86.74%	40.76	668.28	86.74%
6/30/2033	701.97	788.75	86.78	89.00%	41.25	701.97	89.00%
6/30/2034	737.74	808.53	70.80	91.24%	41.75	737.74	91.24%
6/30/2035	775.69	829.85	54.16	93.47%	42.27	775.69	93.47%
6/30/2036	815.66	852.50	36.84	95.68%	42.81	815.66	95.68%
6/30/2037	857.79	876.58	18.79	97.86%	43.36	857.79	97.86%
6/30/2038	902.05	902.05	-	100.00%	43.93	902.05	100.00%
6/30/2039	928.75	928.75	-	100.00%	25.42	928.75	100.00%
6/30/2040	956.61	956.61	-	100.00%	26.18	956.61	100.00%
6/30/2041	985.89	985.89	-	100.00%	26.97	985.89	100.00%
6/30/2042	1,016.99	1,016.99	-	100.00%	27.78	1,016.99	100.00%
6/30/2043	1,049.94	1,049.94	-	100.00%	28.61	1,049.94	100.00%
6/30/2044	1,084.79	1,084.79	-	100.00%	29.47	1,084.79	100.00%

* For the year ending on the actuarial valuation date.

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Funding Projections as of June 30, 2021

Teachers

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Accrued Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 14.66	\$ 7.72	\$ (6.94)	190.00%		\$ 17.01	220.49%
6/30/2022	15.75	7.45	(8.30)	211.43%	\$ -	17.21	231.03%
6/30/2023	16.72	7.16	(9.57)	233.73%	-	17.41	243.25%
6/30/2024	17.60	6.83	(10.76)	257.51%	-	17.60	257.51%
6/30/2025	17.81	6.50	(11.30)	273.74%	-	17.81	273.74%
6/30/2026	18.03	6.16	(11.87)	292.51%	-	18.03	292.51%
6/30/2027	18.28	5.82	(12.46)	314.07%	-	18.28	314.07%
6/30/2028	18.55	5.46	(13.08)	339.45%	-	18.55	339.45%
6/30/2029	18.85	5.11	(13.74)	368.86%	-	18.85	368.86%
6/30/2030	19.17	4.75	(14.42)	403.83%	-	19.17	403.83%
6/30/2031	19.52	4.38	(15.14)	445.71%	-	19.52	445.71%
6/30/2032	19.92	4.01	(15.90)	496.12%	-	19.92	496.12%
6/30/2033	20.35	3.65	(16.70)	557.08%	-	20.35	557.08%
6/30/2034	20.83	3.30	(17.53)	631.20%	-	20.83	631.20%
6/30/2035	21.37	2.96	(18.41)	721.95%	-	21.37	721.95%
6/30/2036	21.96	2.63	(19.33)	833.88%	-	21.96	833.88%
6/30/2037	22.62	2.32	(20.29)	972.95%	-	22.62	972.95%
6/30/2038	23.34	2.04	(21.31)	1147.10%	-	23.34	1,147.10%
6/30/2039	24.14	1.77	(22.37)	1366.94%	-	24.14	1,366.94%
6/30/2040	25.01	1.52	(23.49)	1646.29%	-	25.01	1,646.29%
6/30/2041	25.97	1.30	(24.67)	2002.23%	-	25.97	2,002.23%
6/30/2042	27.00	1.10	(25.90)	2455.08%	-	27.00	2,455.08%
6/30/2043	28.13	0.93	(27.20)	3027.19%	-	28.13	3,027.19%
6/30/2044	29.34	0.78	(28.56)	3740.52%	-	29.34	3,740.52%

* For the year ending on the actuarial valuation date.

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Funding Projections as of June 30, 2021

State Police

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Accrued Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 74.50	\$ 85.20	\$ 10.70	87.44%		\$ 86.45	101.47%
6/30/2022	85.51	89.37	3.86	95.68%	\$ 6.84	92.93	103.98%
6/30/2023	94.48	92.70	(1.78)	101.92%	6.26	97.94	105.65%
6/30/2024	102.03	95.90	(6.13)	106.39%	5.55	102.03	106.39%
6/30/2025	105.88	98.89	(6.99)	107.07%	5.62	105.88	107.07%
6/30/2026	108.72	101.70	(7.02)	106.90%	4.92	108.72	106.90%
6/30/2027	111.65	104.60	(7.05)	106.74%	5.08	111.65	106.74%
6/30/2028	115.01	107.93	(7.08)	106.56%	5.24	115.01	106.56%
6/30/2029	118.73	111.61	(7.11)	106.37%	5.40	118.73	106.37%
6/30/2030	122.75	115.60	(7.14)	106.18%	5.57	122.75	106.18%
6/30/2031	127.20	120.02	(7.17)	105.98%	5.75	127.20	105.98%
6/30/2032	132.52	125.31	(7.21)	105.75%	5.93	132.52	105.75%
6/30/2033	138.69	131.45	(7.24)	105.51%	6.12	138.69	105.51%
6/30/2034	145.59	138.32	(7.27)	105.26%	6.31	145.59	105.26%
6/30/2035	153.17	145.87	(7.30)	105.01%	6.51	153.17	105.01%
6/30/2036	161.85	154.52	(7.33)	104.75%	6.71	161.85	104.75%
6/30/2037	171.21	163.84	(7.36)	104.50%	6.92	171.21	104.50%
6/30/2038	181.24	173.85	(7.40)	104.25%	7.14	181.24	104.25%
6/30/2039	191.74	184.31	(7.43)	104.03%	7.36	191.74	104.03%
6/30/2040	202.35	194.89	(7.46)	103.83%	7.59	202.35	103.83%
6/30/2041	213.13	205.63	(7.49)	103.64%	7.82	213.13	103.64%
6/30/2042	223.95	216.42	(7.53)	103.48%	8.07	223.95	103.48%
6/30/2043	234.84	227.28	(7.56)	103.33%	8.32	234.84	103.33%
6/30/2044	245.67	238.07	(7.59)	103.19%	8.58	245.67	103.19%

* For the year ending on the actuarial valuation date.

A projection is not a prediction. These projections assume that all actuarial assumptions used in the valuation are met exactly in every future year including the assumption that all groups have open, stable active populations (where applicable) and that the employer makes all required contributions on a timely basis. In any given future year, actual experience will almost certainly differ from assumed, possibly significantly, causing future valuation results to differ from these projections. These projections should not be relied on for any purposes other than to illustrate the functioning of the valuation model over time under the current assumptions and methods. If projections are required for a different purpose, please contact GRS.



Funding Projections as of June 30, 2021

Board of Education

Actuarial Valuation Date	Actuarial Value of Assets (in Millions \$) (a)	Actuarial Liability (AAL) (in Millions \$) (b)	Unfunded AAL (UAAL) (in Millions \$) (b-a)	Actuarial Funded Ratio (a / b)	Actuarially Determined Contribution (ADC)* (in Millions \$)	Market Value of Assets (in Millions \$) (d)	Funded Ratio at Market Value (d / b)
6/30/2021	\$ 54.63	\$ 74.80	\$ 20.17	73.04%		\$ 63.40	84.76%
6/30/2022	64.60	78.57	13.97	82.22%	\$ 4.88	70.04	89.15%
6/30/2023	71.90	82.31	10.40	87.36%	2.63	74.44	90.44%
6/30/2024	79.40	86.05	6.65	92.27%	3.18	79.40	92.27%
6/30/2025	84.33	89.84	5.51	93.87%	3.10	84.33	93.87%
6/30/2026	89.22	93.67	4.45	95.25%	3.01	89.22	95.25%
6/30/2027	94.09	97.56	3.47	96.44%	2.93	94.09	96.44%
6/30/2028	98.93	101.53	2.60	97.44%	2.84	98.93	97.44%
6/30/2029	103.76	105.59	1.82	98.27%	2.75	103.76	98.27%
6/30/2030	108.60	109.76	1.17	98.94%	2.65	108.60	98.94%
6/30/2031	113.44	114.08	0.63	99.44%	2.56	113.44	99.44%
6/30/2032	118.30	118.54	0.24	99.80%	2.46	118.30	99.80%
6/30/2033	123.20	123.19	(0.01)	100.01%	2.36	123.20	100.01%
6/30/2034	128.16	128.07	(0.09)	100.07%	2.25	128.16	100.07%
6/30/2035	133.18	133.17	(0.00)	100.00%	2.14	133.18	100.00%
6/30/2036	138.52	138.52	(0.00)	100.00%	2.30	138.52	100.00%
6/30/2037	144.10	144.10	(0.00)	100.00%	2.37	144.10	100.00%
6/30/2038	149.96	149.96	(0.00)	100.00%	2.44	149.96	100.00%
6/30/2039	156.12	156.11	(0.00)	100.00%	2.51	156.12	100.00%
6/30/2040	162.56	162.56	(0.00)	100.00%	2.59	162.56	100.00%
6/30/2041	169.31	169.30	(0.00)	100.00%	2.66	169.31	100.00%
6/30/2042	176.42	176.42	(0.00)	100.00%	2.74	176.42	100.00%
6/30/2043	183.94	183.93	(0.00)	100.00%	2.83	183.94	100.00%
6/30/2044	191.83	191.83	(0.00)	100.00%	2.91	191.83	100.00%

* For the year ending on the actuarial valuation date.

A projection is not a prediction. These projections assume that all actuarial assumptions used in the valuation are met exactly in every future year including the assumption that all groups have open, stable active populations (where applicable) and that the employer makes all required contributions on a timely basis. In any given future year, actual experience will almost certainly differ from assumed, possibly significantly, causing future valuation results to differ from these projections. These projections should not be relied on for any purposes other than to illustrate the functioning of the valuation model over time under the current assumptions and methods. If projections are required for a different purpose, please contact GRS.



SECTION C

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Rate Development

Rhode Island has self-insured health plans administered by Blue Cross Blue Shield of Rhode Island (BCBSRI) which are offered to Medicare and Non-Medicare retirees. In addition, a fully-insured Medicare Advantage HMO is also available to Board of Education Medicare eligible retirees. Non-Medicare retirees have both medical and drug benefits. Post-65 retirees receive only medical coverage through the State's health plan (with the exception of retirees who can remain on their active plan, who have both medical and drug coverage after age 65).

For the fully-insured Medicare Advantage HMO, initial premium rates were developed based on the rates as of January 1, 2021. These rates were used without adjustment since they reflect the demographics of the group.

For the self-insured Blue Cross Blue Shield Plan 65, the initial premiums are calculated based on Rhode Island's own experience. Historical claim experience for the period from July 2018 to June 2021 was projected to the valuation period (i.e., July 1, 2021 to June 30, 2022) on an incurred claim basis and adjusted for trend, claim fluctuation and loaded for administrative expenses. A per member weighted average cost based on the projected experience was developed to be used as the initial premiums in the valuation. The starting per capita costs are the same for each group since experience is fairly uniform across each group.

To develop Medicare initial premium rates used for current retirees, we blended the BCBSRI Plan 65 rates and Medicare Advantage HMO rates based on the current plan elections.

For the self-insured Anchor and Value plans, the initial premiums are calculated based on the experience for Non-Medicare retirees. We developed one rate for all Non-Medicare retirees. Historical claim experience for the period from July 2018 to June 2021 was projected to the valuation period (i.e., July 1, 2021 to June 30, 2022) on an incurred claim basis and adjusted for trend, claim fluctuation and loaded for administrative expenses. A per member weighted average cost based on the projected experience was developed to be used as the initial premiums in the valuation.

For future retirees, we developed rates based on the assumed election percentages found in the Miscellaneous Technical Assumptions section of this report.

Age graded and sex distinct premiums are utilized in this valuation. The premium developed by the preceding process is appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/gender specific premiums more accurately reflect the health care costs and utilization at that age.

Retiree Premium Rate Development

The following are monthly illustrative premiums for self-insured medical and prescription drug benefits:

Illustrative Rates Effective:	January 1, 2021		January 1, 2022	
	Single	Family	Single	Family
Non-Medicare Eligible				
Anchor Plan	\$ 1,115.09	\$ 3,102.55	\$ 1,170.69	\$ 3,257.23
Anchor Plus Plan	\$ 1,193.18	\$ 3,318.80	\$ 1,252.67	\$ 3,485.32
"Value" Plan/Active Plan	\$ 679.07	\$ 1,903.76	\$ 712.93	\$ 1,998.68
Illustrative Rates Effective January 1, 2021				
Medicare Eligible				
Plan 65	\$ 211.00			
BlueCHiP Preferred HMO	\$ 270.00			

The following are monthly one-person premiums for self-insured medical and prescription drug benefits at select ages:

Pre-65 Participants		
Age	Male	Female
45	\$ 624.88	\$ 862.41
50	813.66	1,002.35
55	1,070.69	1,169.03
60	1,382.85	1,361.63

The following are monthly one-person premiums for self-insured and fully-insured medical and prescription drug benefits at select ages:

BlueCHiP Preferred HMO Medicare-Eligible			BCBSRI Plan 65 Medicare-Eligible		
Age	Male	Female	Age	Male	Female
65	\$241.77	\$228.04	65	\$229.14	\$216.12
70	263.38	254.86	70	249.62	241.54
75	282.87	276.02	75	268.09	261.60

These rates are used in determining the actuarial cost of the plan. The rates that are charged to the retirees are set separately by the State.



Retiree Premium Rate Development

Health Care Trend Assumption

The health care cost trend rate is the rate of change in per capita health care claims over time as a result of factors such as medical inflation, utilization of health care services, plan design, and technological improvements. It is a crucial economic assumption that is required for measuring retiree health care benefit obligations.

Retiree health care valuations use a health care cost trend assumption (trend vector) that changes over the years. The trend vector used in this valuation begins with a near-term trend assumption and declines over a time to an ultimate trend rate. The near-term rates reflect the increases in the current cost of health care goods and services. The process of trending down to a lower ultimate trend relies on the theory that premiums will moderate over the long term, otherwise the healthcare sector would eventually consume the entire GDP. It is on this basis that we project premium rate increases will continue to exceed wage inflation for the next ten years, but by less each year until leveling off at an ultimate rate, assumed to be 3.50% in this valuation.

Health care trend rates used in the valuation were as shown below:

Year	Medical and Prescription Drug Trend Rate Increases from Prior Year	
	Not Medicare Eligible	Medicare Eligible / HRA
2022	7.50 %	6.25 %
2023	7.25	6.00
2024	6.75	5.75
2025	6.50	5.50
2026	6.00	5.25
2027	5.75	5.00
2028	5.25	4.75
2029	5.00	4.50
2030	4.50	4.25
2031	4.25	4.00
2032	3.75	3.75
2033	3.50	3.50
2034	3.50	3.50
2035 & Later	3.50	3.50

Dental and Vision rates were assumed to increase by 3.50% each year. The rates for Medicare Part B premiums are based on actual increases through 2022, and increase by 5.0% per year until 2028 when they follow the same rates as the Medicare Eligible trend shown above.

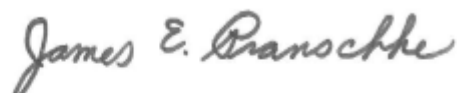
Aging factors are based on a recent study of health costs by the SOA titled "Health Care Costs – From Birth to Death."



Retiree Premium Rate Development

While experience is often the best starting point for future costs, GRS does not rely on a group's experience in setting the near-term trend assumptions since trends vary significantly from year to year and are not credible for most groups. Therefore, professional judgment, trends from GRS' book of business and industry benchmarks (e.g., trend reports from various Pharmacy Benefit Management (PBM) organizations and national healthcare benefit consulting firms) are used to establish the trend assumptions.

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown on the previous page.



James E. Pranschke, FSA, FCA, MAAA

SECTION D

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

This is a brief summary of the Rhode Island State Employees' and Electing Teachers OPEB provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate Plan Sponsor Statute and/or employee contract will prevail.

Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan

Plan Participants

Members of the Employees' Retirement System of Rhode Island (ERSRI), including State Employees, Legislators, and Certified Public School Teachers, with the exception of municipal employees are eligible to receive some form of State sponsored retiree health care benefits, provided the member began receiving a pension upon termination of State employment and meets the benefit eligibility requirements set forth below. In addition, State Judges and Legislators may purchase the active employee health care benefits at the early retiree rate or the Medicare supplemental plans for their lifetime. State Police Officers receive the active health care benefits at the same co-share they were paying as of their retirement date up to age 65.

The State provides two types of health care benefits. The Tier I subsidy provides that the State will pay the portion of the cost of post-retirement health care for the retiree and any dependents above the active group rate. The retiree pays a portion of the active monthly rate, and the State pays the difference between the active group rate and the early retiree rate. This subsidy is not based upon years of service and ends at age 65. In addition to the Tier I benefits, the state pays a portion of the cost of post-retirement health care above the Tier I costs for the retiree based upon the age and service of the retiree, which is referred to as the Tier II benefits.

Benefits Prior to 2008-H7204 Article 4

Benefit Eligibility – Service Retirement

Members of ERSRI are eligible to receive a portion of their post-retirement health insurance costs paid by the State if they retire with 10 or more years of contributing service. Eligibility conditions for retirement are:

State Police:	Members hired before 7/1/07 are eligible for retirement after completion of 20 years of service. (The Superintendent of State Police may retire on or after age 60 if he has credit for 10 years of service.) Members hired after 7/1/07 are eligible to retire after 25 years of service.
Employee Retirement System:	Age 60 with 10 years of service or any age with 28 years of service for those employees with ten or more years of contributing service prior to 7/1/05 and eligible to retire as of 9/30/09. If vested (10 years of contributing service as of 7/1/05), but ineligible to retire as of 9/30/09, must be age 62. For those employees with less than 10 years of service prior to 7/1/05, the employee must be age 59 with at least 29 years of service, age 65 with ten years of service, or age 62 with 29 years of service depending on vesting schedule and hire date.

Additional eligibility conditions apply to the following groups:

RN members:	Age 50 with 25 years of service if eligible to retire as of 9/30/09 Age 55 with 25 years of service if eligible on or after 10/1/09
Correctional Officers:	Age 50 with 20 years of service if eligible to retire as of 9/30/09 Age 55 with 25 years of service if eligible on or after 10/1/09
Legislators:	Age 55 with 8 years of service or any age with 20 years of service



Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Benefits Prior to 2008-H7204 Article 4

Benefit Amount – Service Retirement

The State will pay for a portion of the post-retirement health care as follows:

Judiciary Member:	May purchase active employee package for life. Member and spouse pay entire active premium for the plan.
Legislators:	May purchase active employee package for life. Member and spouse pay entire active premium for the plan. Note: Former legislators who retire as state employees are entitled to continue with the active medical plan, dental, and vision riders and they receive the state subsidy on their individual medical insurance (active plan or other retiree plan) for life.
State Police:	Member, Spouse, and Dependents are eligible for active package. State pays entire cost for member, spouse, and dependents up to age 65. At age 65, active coverage ceases if member has worked 40 quarters while participating in Medicare. If member is not Medicare eligible, the State pays for member and spousal coverage for active package. Member may purchase Post-65 coverage through the state if member is Medicare eligible. There is no state subsidy if the member is Medicare-eligible.
Teachers:	State pays for the portion of the cost of post-retirement health care for the retiree and any dependents above the active group rate, which is referred to as the Tier 1 Benefits . All Tier 1 benefits end at age 65 provided that the teacher is Medicare Eligible. Teachers under age 65 – The teacher and spouse may purchase early retiree package (individual or family) at the rate the active employees pay. Teachers 65 or older and Medicare-eligible – The teacher and spouse may only purchase a Post-65 benefit plan. The teacher and spouse pay the full cost. Teachers 65 or older and NOT Medicare eligible – The teacher and spouse may continue to purchase the early retiree package for the same rates as under 65.
All Other Members Retiring prior to 7/1/89:	State pays for the portion of the cost of post-retirement health care for the retiree and any dependents above the active group rate (Tier 1 Benefits). All Tier 1 benefits end at age 65. In addition, from January 1, 1986 to July 1, 1989, there were several early retirement incentive windows that granted additional health care benefits to those that retired within these periods.



Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Benefits Prior to 2008-H7204 Article 4

Benefit Amount – Service Retirement - Continued

**All Other Members
Retiring after 7/1/89:**

In addition to the Tier 1 benefits, the State pays a portion of the cost of post-retirement health care above the Tier 1 costs for the retiree based on the age and service of the retiree (see chart below). This additional benefit is referred to as the Tier 2 Benefit. Spouses are not eligible for the Tier 2 benefit. All Tier 1 benefits end at age 65, however, Tier 2 benefits continue for retirees only at age 65.

Note:

Although Article 7 Chapter 117 of the Public Laws of 2005 amended the retirement system statute to institute a minimum retirement age for all non-vested employees, these changes were not reflected in RIGL Section 36-12-4, which relates to post employment health benefits. Because this is a potential liability, the chart below has not been modified.

Retiree Age Below Age 60	
Service	Amount of Cost Paid by State
Under 28	0%
28-34	90%
35+	100%

Retiree Age from Age 60 to Age 65	
Service	Amount of Cost Paid by State
0 – 10	0%
10 – 15	50%
16 – 22	70%
23 – 27	80%
28+	100%

Retiree Age Greater than Age 65	
Service	Amount of Cost Paid by State
10 – 15	50%
16 – 19	70%
20 – 27	90%
28+	100%

Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Benefits Prior to 2008-H7204 Article 4

Deferred Retirement

Members who terminate active employment with the State may be entitled to deferred coverage for post-retirement health care benefits if they have 10 years of service at the time of their termination and they leave their pension contributions on deposit with ERSRI.

The benefit commencement is coincident with the normal retirement eligibility conditions described above. The amount of the benefit is based on age and service as described above.

Effective June 30, 2008, deferred coverage is not available for current and future members who terminate active employment but are not eligible to retire immediately. Employee must immediately retire for eligibility for retiree health care through the State.

Disabled Retirement

All members (other than Teachers and State Police) who retire with a disability benefit are eligible to purchase the individual or family active package (at full active cost) prior to age 60. Upon reaching age 60 (with 10 years of contributing service), they may continue with the active package, and will also get the Tier 2 benefit (subsidy based on age and years of service).

Teachers who retire on a disability pension are not entitled to the active package, dental coverage, or vision coverage. Teachers qualify only for the Early Retiree Plan and are not eligible for Tier 2 benefits.

State Police troopers continue to pay the same percent co-share they paid while employed toward the Active package (health, dental, and vision) until becoming eligible for Medicare. If a trooper never becomes eligible for Medicare then the trooper continues with the Active package at the same subsidy level. Upon being eligible for Medicare, they revert to a Post-65 health plan through the retirement system and pay the entire cost.

Survivors Benefits

All Members except State Police: Survivors of retirees or active members who die in service are entitled to post-retirement health care benefits if and only if they are entitled to survivor pension benefits from ERSRI. The amount paid by the State is the amount above the group rate for an active member. Pre-65 beneficiaries receive a Tier 1 benefit, while Post-65 beneficiaries pay the entire premium.

State Police: Survivors of retirees or active members continue active coverage. State continues to pay same subsidy for active health care benefits until survivor becomes Medicare eligible. Upon eligibility for Medicare, survivor may purchase Post-65 health care coverage through the State.



Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Benefits Prior to 2008-H7204 Article 4

Medicare – Eligible

- Disabled:** Members may continue with the active package, but the State pays only a certain percentage of the MediGap amount based on years of service and vesting.
- Non-Disabled:** Tier 1 benefits are not paid by the State. For retired members, other than Teachers and State Police, State pays a percentage of a Post-65 health plan depending on member service. Dependents pay 100% of health care benefits.
- State Police:** If the retiree and/or spouse are Medicare eligible, they pay the entire amount of the Post-65 plan. There is no state subsidy for retirees that are Medicare eligible.
- If the retiree is not Medicare eligible, the retiree pays the same percent co-share for the active plan benefit as they paid while employed. (Note: The majority of State Police are Medicare eligible).

This is a brief summary of the Rhode Island State Employees' and Electing Teachers OPEB provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate Plan Sponsor Ordinance and/or employee contract will prevail.

Summary of Plan Provisions as of June 30, 2021 Retiree Health Care Benefits Plan (Continued)

State Employees (2008-H7204 Article 4)

Early Retirees

- The State offers a self-insured health plan administered by United Healthcare to early retirees (under age 65) and their spouses with both medical and drug benefits.
- For all employees retiring after Sept. 30, 2008, the Tier 1 subsidy ends. All costs and cost sharing is based on the actual cost of the plan, not the lower active employee rate. The State will also offer an alternate plan with reduced benefits at the same rate paid by active employees.
- Employees retiring after Sept. 30, 2008 are required to have at least 20 years of service and be age 59 to be eligible for a State subsidy. All eligible would pay a 20% cost share on the actual cost of the plan.

Creditable Service	Age	State-Paid	Retiree-Paid
<20 years	any	0%	100%
20+	<59	0%	100%
20+	59+	80%	20%

- Those retiring with less than 20 years of service have to pay the full price of the plan chosen. Those retiring before age 59 with at least 20 years of service receive the 80% subsidy at age 59.
- As of May 1, 2008, Article 4 amends the Tier 2 subsidy table to read “age at retirement” to clarify that the State subsidy for those with 28 to 35 years of service does not increase from 90% to 100% when the retiree turns 60. This applies to all current retirees and those retiring before October 1, 2008.
- At age 65, State retirees must purchase Medicare Part B (deducted from their Social Security checks) and enroll in a Medicare Supplemental plan with Medicare Exchange.
- There is no post-65 Tier 1 subsidy. Retiree share is based on actual plan cost.

Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Teachers (2008-H7204 Article 4)

- Most retired teachers receive health benefits from their municipality.
- For those that do not, the State offers its self-insured health plan administered by United Healthcare to early retirees and their spouses with both medical and drug benefits. Post-65 retirees may enroll in a Medicare Supplemental plan in the Medicare Exchanged.
- For all teachers retiring after Sept. 30, 2008, Tier 1 subsidy ends. All costs will be based on the actual cost of the plan not the lower active employee rate. There is no other cost sharing by the State. The State will also offer an alternate plan with reduced benefits at the same rate paid by active employees.
- There is no post-65 Tier 1 subsidy. Retiree share is based on actual plan cost.

Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Continued)

Disabled (2008-H7204 Article 4)

- All State employee members who retire with a disability benefit may purchase the active employee plan at the active rate until age 59. From ages 59 to 65, they are only eligible to purchase the early retiree plan at its actual cost or a Medicare Supplemental plan, both with State cost-sharing if they meet eligibility requirements.
- Current disability retirees not 65 as of September 30, 2008 and future retirees must transition to a State sponsored Medicare supplement plan at age 65 if eligible to do so.
- All cost sharing language for disability retirees now appears separately from the statutes for regular retirees. This includes provisions to “grandfather” certain current retirees into former cost sharing terms.
- Those who retired prior to September 30, 2008 and are at least 60 as of that date are subject to the former cost sharing provisions, which are restated in a new section of law, until they reach age 65. The cost sharing and the plan to which it applies depends on age as follows:

- From ages 60 to 65, the retiree may get the active plan at the active rate, and State cost sharing on that rate is as follows.

<i>Years of Service</i>	<i>State's Share</i>	<i>Employee's Share</i>
10-15	50%	50%
16-22	70%	30%
23-27	80%	20%
28+	100%	0%

- Upon turning age 65 on or after October 1, 2008, State retirees must purchase Medicare Part B (deducted from their Social Security checks) and enroll in a Medicare Supplemental plan with Medicare Exchange.
- Those at least age 65 as of Sept. 30, 2008 are “grandfathered” into the former terms. This means they may keep the active plan at the active rate, but the State cost sharing is based on the cost of the Medicare plan. The employee pays a share of that plan’s cost, shown in the table below, and any excess cost if she/he remains on the active employee plan.

<i>Years of Service</i>	<i>State's Share</i>	<i>Employee's Share</i>
10-15	50%	50%
16-19	70%	30%
20-27	90%	10%
28+	100%	0%

- Future retirees and those who have not turned 60 as of September 30, 2008 would be subject to cost sharing and plans more in line with other Article 4 changes. The percentages apply to the early retiree plan at its actual cost for those age 59-65 and the Medicare Supplemental plans after that.

<i>Years of Service</i>	<i>State's Share</i>	<i>Employee's Share</i>
0-10	0%	100%
10-20	50%	50%
20+	80%	20%

Summary of Plan Provisions as of June 30, 2021

Retiree Health Care Benefits Plan (Concluded)

State Police (2008-H7204 Article 4)

- *No governing statutes – provided through collective bargaining agreement eff. May 2006 through April 2009.*
- Article 4 has no impact other than to require that the benefits be funded on an actuarial basis rather than pay-as-you-go.

Judges (2008-H7204 Article 4)

- *No governing statutes – provided as a matter of past practice.*
- Article 4 has no impact on this population. The retired employees' payments for this coverage and the state's expenses will be handled through the OPEB trust fund.

Legislators (2008-H7204 Article 4)

- Article 4 has no impact on this population. The retired employees' payments for this coverage and the state's expenses will be handled through the OPEB trust fund.

2011 Legislative Changes

- Retired Judges and Legislators are required to enroll in Medicare Part A and Part B upon eligibility and may only purchase Medicare supplemental plans at that time.
- State Police Officers must pay a portion of the Early Retiree rate based on the same active co-share they were paying at retirement.

2013 Legislative Changes

- Effective December 31, 2013, all currently Medicare eligible Judges and Legislators are required to enroll in Medicare.
- Medicare-eligible State retirees are required to participate in the Medicare Exchange effective October 1, 2014. The State will establish health reimbursement accounts (HRA) for eligible retirees and make contributions to the HRA on a monthly basis, which the retiree can then use to purchase insurance in the Exchange. The maximum State contribution will vary by age and is based on the lowest-cost Medicare supplemental plan that is filed with the State. The State will pay to each retiree a percent share of the maximum contribution based on the existing cost share schedules.
- Changes to the Active and Early Retiree plans have been made effective July 1, 2014 and January 1, 2015.

This is a brief summary of the Rhode Island State Employees' and Electing Teachers OPEB provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate Plan Sponsor Statute and/or employee contract will prevail.

Summary of Plan Provisions as of June 30, 2021 Alternate Retirement Plan Employees Board of Education

For the fiscal year beginning July 1, 2008, the pre-65 retiree health care coverage will be eliminated. In addition, the post-65 retiree health insurance contributions will increase in accordance with the following schedule.

Post-65 Retiree Health Insurance Premium Contributions	
1/1/2008	0.50% of base salary
7/1/2008	0.75% of base salary
7/1/2009	0.90% of base salary

Non-union, non-classified employees who currently participate in the retiree health insurance program will be offered a one-time option to either remain in or withdraw from the retiree health insurance option prior to June 30, 2008.

AAUP members are no longer eligible to participate in the retiree health care program.

Summary of Plan Provisions as of June 30, 2021

Alternate Retirement Plan Employees

Board of Education

Summary

The Board of Education (BOE) has established health care insurance coverage for employees participating in the BOE Alternate Retirement Plan (ARP) upon retirement. All current and future covered employees will be subject to a mandatory payroll deduction of 0.90% of salary. Contributions of members who are not vested are not refunded upon termination. This began upon ratification of the plan by the individual unions.

Eligibility

This health benefit applies to all employees who either currently participate in or will be eligible to participate in the BOE ARP as defined in RIGL 16-17.1-1 and 2, with the exception of URI AAUP members. This includes employees with a primary retirement plan funded through TIAA-CREF, MetLife, or AIG/VALIC.

Benefit Eligibility

Members become eligible for retiree medical benefits at age 65 or older with 10 or more years of service, per the chart on the following page.

Benefit Amount

The BOE pays a portion of the cost of post-retirement health care above the Tier I costs for the retiree based upon the age and service of the retiree. This is a lifetime benefit.

Summary of Plan Provisions as of June 30, 2021

Alternate Retirement Plan Employees

Board of Education

Benefit Amount

Eligible employees retiring *on or after July 1, 2008*, from active service with the BOE shall receive a cost sharing formula as follows:

Post-65 Medicare Supplemental Coverage

Years of Service	Employer's Share	Employee's Share
10-15	50%	50%
16-19	70%	30%
20-27	90%	10%
28+	100%	0%

Eligible employees retiring *before July 1, 2008*, from active service with the BOE shall receive a Tier 1 benefit and a cost sharing formula applicable to the active rate and post-65 rate as follows:

Pre-65 Medicare Coverage

Years of Service	Age	Employer's Share	Employee's Share
10-15	60	50%	50%
16-22	60	70%	30%
23-27	60	80%	20%
28+	Any	90%	10%
28+	60	100%	0%
35+	Any	100%	0%

Post-65 Medicare Supplemental Coverage

Years of Service	Employer's Share	Employee's Share
10-15	50%	50%
16-19	70%	30%
20-27	90%	10%
28+	100%	0%



Summary of Plan Provisions as of June 30, 2021

Alternate Retirement Plan Employees

Board of Education

Deferred Retirement

Members who retire from active employment with the State may be entitled to deferred coverage for post-retirement health care benefits if they have 10 years of service at the time of their retirement.

The benefit commencement is coincident with the normal retirement eligibility conditions described on the previous page. The amount of the benefit is based on age and service as described on the previous page.

Disabled Retirement

All members who retire with a disability benefit are eligible to purchase the individual or family active package (at full active cost) prior to age 65. Upon reaching age 65 (with 10 years of service), they may continue with the active package, with a subsidy based on age and years of service. Retirees must enroll in Medicare when eligible.

Survivors Benefits

Survivors of retirees are entitled to post-retirement health care benefits.

Medicare – Eligible Retirees

Disabled: Members may continue with the active package.

Non-Disabled: The BOE pays a percentage of supplemental Medicare costs depending on member service. Dependents pay 100% of health care benefits.

This is a brief summary of the State of Rhode Island Board of Education Other Postemployment Benefits provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate Plan Sponsor Ordinance and/or employee contract will prevail.

Summary of Key Medical and Prescription Drug Benefits for Pre-65 Retirees

Pre-65 Retirees Option #1: Anchor Plan

Benefit	In-Network	Out-of-Network
Individual Deductible	\$1,000 Individual \$2,000 Family	\$2,000 Individual \$4,000 Family
Out-of-Pocket Maximum	\$2,000 Individual \$4,000 Family	\$6,000 per person/year \$12,000 per family/year
Preventive Services	No charge	30% coinsurance
Doctor's Charges (Office) Specialist Primary	\$25 copay \$15 copay	30% coinsurance 30% coinsurance
Emergency Care	\$150 copay/visit	\$150 copay/visit
Hospital Services	10% coinsurance	30% coinsurance
Diagnostic X-Ray and Laboratory	No Charge	30% coinsurance
Emergency Medical Transportation	No charge	No charge
Imaging (CT/PET scans, MRIs)	10% coinsurance	30% coinsurance
Outpatient surgery	10% coinsurance	30% coinsurance
Urgent Care Services	\$50 copay	30% coinsurance
Prescription Drugs: Deductible Out-of-Pocket Maximum Retail (4 tier) Mail Order (3 tier)	None Combined \$10/\$35/\$60/\$100 copay \$20/\$70/\$120 copay	None None \$10/\$35/\$60/Not Covered Not Covered

Summary of Key Medical and Prescription Drug Benefits for Pre-65 Retirees

Pre-65 Retirees Option #2: Anchor Plus Plan

Benefit	In-Network	Out-of-Network
Individual Deductible	\$500 Individual \$1,000 Family	\$1,000 Individual \$2,000 Family
Out-of-Pocket Maximum	\$1,000 Individual \$2,000 Family	\$5,000 per person/year \$10,000 per family/year
Preventive Services	No charge	30% coinsurance
Doctor's Charges (Office) Specialist Primary	\$25 copay \$15 copay	30% coinsurance 30% coinsurance
Emergency Care	\$125 copay/visit	\$125 copay/visit
Hospital Services	10% coinsurance	30% coinsurance
Diagnostic X-Ray and Laboratory	No Charge	30% coinsurance
Emergency Medical Transportation	No charge	No charge
Imaging (CT/PET scans, MRIs)	10% coinsurance	30% coinsurance
Outpatient surgery	10% coinsurance	30% coinsurance
Urgent Care Services	\$50 copay	30% coinsurance
Prescription Drugs: Deductible Out-of-Pocket Maximum Retail (4 tier) Mail Order (3 tier)	None Combined \$10/\$35/\$60/\$100 copay \$20/\$70/\$120 copay	None None \$10/\$35/\$60/Not Covered Not Covered

Summary of Key Medical and Prescription Drug Benefits for Pre-65 Retirees

Pre-65 Retirees Option #3: Value Plan

Benefit	In-Network	Out-of-Network
Individual Deductible	\$2,000 Individual \$4,000 Family	\$5,000 Individual \$10,000 Family
Out-of-Pocket Maximum	\$4,000 individual \$8,000 family	\$10,000 individual \$20,000 family
Preventive Services	No charge	50% coinsurance
Doctor's Charges (Office) Primary or Specialist	30% coinsurance	50% coinsurance
Emergency Care	30% coinsurance	10% coinsurance
Hospital Services	30% coinsurance	50% coinsurance
Diagnostic X-Ray and Laboratory	30% coinsurance	50% coinsurance
Emergency Medical Transportation	30% coinsurance	10% coinsurance
Imaging (CT/PET scans, MRIs)	30% coinsurance	50% coinsurance
Outpatient surgery	30% coinsurance	50% coinsurance
Urgent Care Services	30% coinsurance	50% coinsurance
Prescription Drugs:		
Deductible	Combined	Combined
Out-of-Pocket Maximum	Combined	Combined
Retail (4 tier)	\$10/\$35/\$60/\$100 copay after deductible	30% coinsurance
Mail Order (3 tier)	\$20/\$70/\$120 copay after deductible	Not Covered

Summary of Key Medical and Prescription Drug Benefits for Post-65 Retirees Option 1

Post-65 Retirees Option #1: Plan 65 Medicare Supplement

Benefit	Coverage
Individual Deductible	No Annual Deductible
Out-of-Pocket Maximum	None
Physician Services	Covered in Full
Inpatient Hospital	Covered in Full
Skilled Nursing Facility	Days 1-20: Covered in Full Days 21-100: \$176 per day
Prescription Drugs	No Coverage
Emergency Room Care	Covered in Full
Vision Services	Routine vision not covered
Hearing Services	Routine hearing not covered
Dental	Not covered

Summary of Key Medical and Prescription Drug Benefits for Post-65 Retirees Option 2

Post-65 Retirees Option #2: BlueCHiP Preferred (HMO)

Benefit	Coverage
Individual Deductible	No Annual Deductible
Out-of-Pocket Maximum	\$3,000
Physician Services	\$0 PCMH / \$10 non-PCMH/ \$30 Specialist
Inpatient Hospital	\$250 per admission
Skilled Nursing Facility	\$0 per day for days 1 -29 \$50 per day for days 30-100
Emergency Care/Urgent Care	\$65 Copay (waived if admitted)
Prescription Drugs: Part D Plan No initial Rx Deductible Retail: 30-day Supply: Generic Formulary Drugs Tier 1 Name-Brand Formulary Drugs Tier 2 Non-Formulary Drugs Tier 3 Specialty Tier 4 Mail Order: Limited to a 90-day Supply: Tier 1	 \$6 Copay \$20 Copay \$50 Copay 25% Copay \$0 Copay

Active Judges Members as of June 30, 2021 by Attained Age and Years of Service

Nearest Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
20-24								
25-29								
30-34								
35-39	1		1					2
40-44	1							1
45-49			1		1			2
50-54	3	2	1	1	1	1		9
55-59	3	1	2	3	1		1	11
60-64	1	2	2		2		3	10
65 & Over			2	2	7	3	13	27
Totals	9	5	9	6	12	4	17	62

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 61.7 years
Service: 20.2 years
Annual Pay: \$192,455

Active Legislature Members as of June 30, 2021 by Attained Age and Years of Service

Nearest Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
20-24	1							1
25-29	1							1
30-34	8	2						10
35-39	8	1	1					10
40-44	6	1	1					8
45-49	2		1					3
50-54	7	4	3	1				15
55-59	9	9	1			1	1	21
60-64	3	3	4	1		3	1	15
65 & Over	7	5	8	1	4	3	1	29
Totals	52	25	19	3	4	7	3	113

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 54.2 years
Service: 8.6 years
Annual Pay: \$16,787

Active State Employee Members as of June 30, 2021 by Attained Age and Years of Service

Nearest Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
15-19								
20-24	84	4						88
25-29	474	105	3					582
30-34	485	358	70	9				922
35-39	353	322	216	121	1			1,013
40-44	257	243	201	230	83	1		1,015
45-49	219	193	166	235	254	34	2	1,103
50-54	215	224	185	237	299	155	230	1,545
55-59	198	252	237	236	247	163	603	1,936
60-64	119	185	190	225	252	149	490	1,610
65 & Over	36	111	141	154	188	81	236	947
Totals	2,440	1,997	1,409	1,447	1,324	583	1,561	10,761

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 49.7 years
Service: 14.8 years
Annual Pay: \$69,733

Active Teachers Members as of June 30, 2021 by Attained Age and Years of Service

Active Teachers were excluded from the valuation. The State no longer provides the Tier 1 subsidy to future retirees. Certain school districts did not participate in Medicare prior to 1986. Teachers hired in those districts prior to that date may generate a post-65 implicit subsidy for the State, however, many of those Teachers may get Medicare coverage from working 40 quarters in another covered position or through a covered spouse.

Active State Police Members as of June 30, 2021 by Attained Age and Years of Service

Nearest Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
20-24	1							1
25-29	24	13						37
30-34	9	34	12					55
35-39	3	14	28	4				49
40-44	2	1	13	11	2			29
45-49	1			11	14	2		28
50-54		1	1	7	23	10	1	43
55-59		1	2	2	14	7	4	30
60-64	1	1	1	1	5	6	5	20
Totals	41	65	57	37	59	25	10	294

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 42.3 years
Service: 14.2 years
Annual Pay: \$97,022

Active Board of Education Members as of June 30, 2021 by Attained Age and Years of Service

Nearest Age	Years of Service to Valuation Date							Total No.
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
20-24	6							6
25-29	46	6						52
30-34	68	45	7					120
35-39	80	61	28	3				172
40-44	62	68	47	35	5			217
45-49	49	44	41	36	26			196
50-54	56	47	51	30	32	19		235
55-59	40	53	52	46	50	22	20	283
60-64	21	41	25	49	47	22	40	245
65 & Over	10	17	23	36	35	32	120	273
Totals	438	382	274	235	195	95	180	1,799

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 51.5 years
Service: 13.6 years
Annual Pay: \$75,228

Retired and Deferred Members as of June 30, 2021 by Attained Age

Retired Members*

Attained Age	Number of Retirees and Beneficiaries						Total
	Judges	Legislature	State Employees	Teachers	State Police	BOE	
Under 50	0	2	1	1	2	0	6
50-54	0	3	2	0	31	0	36
55-59	0	6	61	2	59	1	129
60-64	4	2	782	7	52	5	852
65 & Over	22	5	6,729	56	20	961	7,793
Totals	26	18	7,575	66	164	967	8,816

* Includes both retirees and beneficiaries participating in the retiree health care plan.

Deferred Members

Terminated employees are not included in the valuation.

SECTION E

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Method

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) were amortized by a level (principal and interest combined) percent of payroll contribution for State Employees, State Police and Board of Education, and by a level dollar amount for Teachers. The asset surplus for Judges and Legislators was amortized by a level percent of payroll. The UAAL were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment reflects payments expected to be made between the valuation date and the fiscal year for which the contributions in this report have been calculated.

By statute, the UAAL is being amortized over the remainder of a closed 30-year period (or shorter) from June 30, 2006. The UAAL amortization payment is the amount required to fully amortize the UAAL over a 15-year period as a level percent of payroll for all groups except Teachers in the fiscal year beginning two years after the valuation date. The Teachers amortization period is determined based on the statutory contribution. Amortizations reflect the projected funded status at the beginning of the applicable fiscal year.

For those groups with a projected asset surplus (assets exceeding liability), a 30-year level percent of payroll amortization is used.

For purposes of determining projected annual contributions as a percent of payroll, the size of the active group is assumed to remain level at the number of actives as of the actuarial valuation date.

Actuarial Assumptions

Actuarial Assumptions are established by the Board after consulting with the actuary as authorized under RIGL 36-12.1-17 and 18. The rationale for the investment return assumption is contained in the OPEB Valuation Assumption Review issued August 28, 2017 and adopted by the Board September 15, 2017. Demographic assumptions are based on the 2020 Experience Study of the Employees' Retirement System of Rhode Island, dated May 6, 2020, and adopted by the Board for the June 30, 2020 actuarial valuation. All assumptions are based on future expectations, not market measures.

Rates of Investment. 5.00% per year, compounded annually, net of investment expenses.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which future contributions will be based.

Salary Increase Assumptions for an Individual Member

Service at Beginning of Year	State Employees, BOE, Legislators			State Police		
	Merit & Longevity	Base (Economic)	Increase Next Year	Merit & Longevity	Base (Economic)	Increase Next Year
1	1.00 %	3.25 %	4.25 %	4.75 %	3.00 %	7.75 %
2	2.00	3.25	5.25	4.75	3.00	7.75
3	3.00	3.25	6.25	8.75	3.00	11.75
4	2.75	3.25	6.00	5.75	3.00	8.75
5	2.75	3.25	6.00	4.00	3.00	7.00
6	2.50	3.25	5.75	2.00	3.00	5.00
7	1.25	3.25	4.50	2.00	3.00	5.00
8	1.00	3.25	4.25	1.75	3.00	4.75
9	1.00	3.25	4.25	1.75	3.00	4.75
10	1.00	3.25	4.25	1.50	3.00	4.50
11	1.00	3.25	4.25	1.50	3.00	4.50
12	2.00	3.25	5.25	1.50	3.00	4.50
13	1.25	3.25	4.50	1.50	3.00	4.50
14	1.00	3.25	4.25	1.50	3.00	4.50
15	1.00	3.25	4.25	1.25	3.00	4.25
16	1.00	3.25	4.25	1.25	3.00	4.25
17	0.50	3.25	3.75	1.25	3.00	4.25
18	0.50	3.25	3.75	1.25	3.00	4.25
19	0.50	3.25	3.75	1.25	3.00	4.25
20	0.50	3.25	3.75	1.00	3.00	4.00
21	0.50	3.25	3.75	1.00	3.00	4.00
22	0.25	3.25	3.50	1.00	3.00	4.00
23	0.25	3.25	3.50	1.00	3.00	4.00
24	0.25	3.25	3.50	1.00	3.00	4.00
25 or more	0.00	3.25	3.25	0.75	3.00	3.75

Judges were assumed to have 2.75% salary increases. The number of active members is assumed to remain constant in the future.

The payroll growth rate for amortizing the Unfunded Actuarial Accrued Liabilities was assumed to be 3.00%, except for Judges, which is 2.75%.



Actuarial Assumptions (Continued)

Post-Retirement Mortality Rates. The mortality tables used to project the post-termination mortality experience of healthy plan members are described below.

State Employees, State Police, Legislators, and Board of Education:

Males: PUB-10 Median Table for General Healthy Retiree Males, loaded by 115%, projected with Scale Ultimate MP16.

Females: PUB-10 Median Table for Healthy General Retiree Females, loaded by 111%, projected with Scale Ultimate MP16.

Teachers:

Males: PUB-10 Median Table for Healthy Teacher Retiree Males, loaded by 108%, projected with Scale Ultimate MP16.

Females: PUB-10 Median Table for Healthy Teacher Retiree Females, loaded by 115%, projected with Scale Ultimate MP16.

Judges: Sex distinct PUB-10 Above Median Income Tables for Healthy Retirees, projected with Scale Ultimate MP16.

Sample rates for healthy members prior to the MP-2016 projection are shown below:

Sample Attained Ages	State Employees, State Police, Legislators, and Board of Education		Teachers		Judges	
	Healthy Males	Healthy Females	Healthy Males	Healthy Females	Healthy Males	Healthy Females
25	0.03 %	0.01 %	0.02 %	0.01 %	0.02 %	0.01 %
30	0.04	0.02	0.02	0.02	0.03	0.01
35	0.05	0.03	0.03	0.02	0.04	0.02
40	0.08	0.04	0.05	0.04	0.06	0.03
45	0.13	0.07	0.07	0.06	0.10	0.06
50	0.34	0.25	0.12	0.09	0.27	0.21
55	0.50	0.32	0.24	0.22	0.39	0.28
60	0.71	0.43	0.39	0.33	0.55	0.37
65	1.05	0.68	0.64	0.51	0.82	0.60
70	1.75	1.18	1.16	0.89	1.38	1.03
75	3.07	2.09	2.19	1.68	2.44	1.83
80	5.49	3.73	4.15	3.24	4.39	3.26

The assumption for future mortality improvements is fully generational mortality improvements using MP-2016 ultimate rates with a base year of 2010.

Actuarial Assumptions (Continued)

Disabled Post Termination Mortality Rates. The mortality tables used to project the post-termination mortality experience of disabled plan members are as follows:

State Police: Sex distinct PUB-10 Tables for Safety Disabled Retirees, projected with Scale Ultimate MP16.

All other groups: Sex distinct PUB-10 Tables for General Disabled Retirees, projected with Scale Ultimate MP16.

Sample rates for Disabled Members prior to the MP-2016 projection are shown below:

Sample Attained Ages	State Police		All others	
	Disabled Males	Disabled Females	Disabled Males	Disabled Females
25	0.11 %	0.07 %	0.28 %	0.16 %
30	0.12	0.09	0.35	0.26
35	0.14	0.12	0.46	0.40
40	0.17	0.16	0.65	0.63
45	0.24	0.22	1.01	0.99
50	0.35	0.30	1.61	1.48
55	0.48	0.46	2.11	1.74
60	0.74	0.70	2.50	1.96
65	1.19	1.06	3.04	2.26
70	1.91	1.61	3.90	2.86
75	3.24	2.44	5.19	4.00
80	5.60	3.96	7.35	6.01

Pre-Retirement Mortality Rates. The mortality tables used to project the pre-termination mortality experience of plan members are as follows:

State Employees (excluding Correctional Officers), Legislators, and Board of Education: Sex distinct PUB-10 Tables for General Employees, projected with Scale Ultimate MP16.

State Police and Correctional Officers: Sex distinct PUB-10 Tables for Safety Employees, projected with Scale Ultimate MP16.

Judges: Sex distinct PUB-10 Above Median Income Tables for General Employees, projected with Scale Ultimate MP16.

Actuarial Assumptions (Continued)

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. Sample rates of separation from active employment are shown below:

Service	State Employees, Legislators, and Board of Education	Correctional Officers
1	16.80 %	10.00 %
2	10.62	7.00
3	8.48	5.74
4	7.23	4.96
5	6.34	4.50
6	5.65	4.18
7	5.09	3.93
8	4.61	3.72
9	4.20	3.55
10	3.83	3.40
11	3.51	3.27
12	3.21	3.15
13	2.95	3.04
14	2.70	2.94
15	2.47	2.85
16	2.26	2.77
17	2.06	2.69
18	1.87	2.62
19	1.69	2.55
20	1.53	2.49
21	1.37	2.43
22	1.22	2.37
23	1.07	2.31
24	0.94	2.26
25 +	0.80	2.21

State Police employees were assumed not to separate from employment for causes other than retirement, death, or disability.

Judicial employees were assumed not to separate from employment for causes other than retirement or death.

Actuarial Assumptions (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year, were as follows:

State Employee rates of retirement are based on pension eligibility.

State Employee Pension Eligibility:

- I. Employees eligible to retire on or before June 30, 2012
 - a. Grandfathered Schedule A members—age 60 with 10 years of service, or at any age with 28 years of service.
 - b. Non-grandfathered Schedule A members—eligible at an individually determined age. This age is the result of interpolating between the retirement age under the rules applicable to grandfathered employees in (a) above and a minimum age of 62.
 - c. Schedule B members—age 65 with 10 years of service. Age 59 with 29 years of service by September 30, 2009. Age 62 if they have credit for 29 years of service with the minimum age of 62 adjusted downward similarly to (b) above.
- II. Employees first eligible to retire after June 30, 2012
 - a. After July 1, 2012, members are eligible to retire upon the attainment of the member's SSNRA and 5 years of service.
 - b. For members with 5 or more years of contributory service as of June 30, 2012, the retirement age will be adjusted downward in proportion to the amount of service the member has earned as of June 30, 2012. The adjusted retirement age is the result of interpolating between the retirement age as determined in (i)(b) or (i)(c) above and their SSNRA.

Nurses Pension Eligibility:

- Nurses who have reached age 50 with 25 years of service by September 30, 2009 are eligible to retire at age 50 with 25 years of service.
- Members who have not reached age 50 with 25 years of service by September 30, 2009 are able to retire when they reach age 55 with 25 years of service.
- For members in service as of October 1, 2009 who were not eligible to retire as of September 30, 2009 but who are eligible to retire on or prior to June 30, 2012, the minimum retirement age of 55 will be adjusted downward in proportion to the amount of service the member has earned as of September 30, 2009.

For State Employees (except Correctional Officers) and Board of Education: a flat 20% per year retirement probability for members eligible for unreduced retirement. A 25% retirement probability at first eligibility will be applied if the member has reached age 65 or with at least 25 years of service.

Actuarial Assumptions (Continued)

Retirement rates were also set for all Schedule B (state employee, male and female) members eligible for ERSRI reduced retirement and Board of Education, whether state employees or teachers, whether males or females, as follows:

Years from Normal Retirement Age	Retirement Rate
5	1 %
4	1
3	1
2	2
1	3

Actuarial Assumptions (Continued)

Correctional Officer rates of retirement are based on pension eligibility.

Correctional Officer Pension Eligibility:

- Correctional officers who have reached age 50 with 20 years of service as of September 30, 2009 are eligible to retire at age 50 with 20 years of service.
- Members who have not reached age 50 with 20 years of service by September 30, 2009 are eligible at age 55 with 25 years of service.
- For members in service as of October 1, 2009 who were not eligible to retire as of September 30, 2009 but who are eligible to retire on or prior to June 30, 2012, the minimum retirement age of 55 will be adjusted downward in proportion to the amount of service the member has earned as of September 30, 2009.
- After July 1, 2012, members are eligible to retire upon the attainment of the member's SSNRA and 5 years of service.

A set of unisex rates, indexed by service, as shown below.

Correctional Officers			
Service	Ret. Rate	Service	Ret. Rate
25	10.00%	36	20.00%
26-29	5.00%	37	20.00%
30	6.00%	38	20.00%
31	7.00%	39	20.00%
32	8.00%	40	100.00%
33	9.00%		
34	10.00%		
35	25.00%		

Actuarial Assumptions (Continued)

State Police rates of retirement are based on the age at first pension eligibility.

State Police Pension Eligibility:

- Employees eligible to retire on or before June 30, 2012:

Members hired before July 1, 2007 are eligible for retirement at any age after completion of 20 years of service. Members hired on or after July 1, 2007 are eligible for retirement at any age after completion of 25 years of service.

- Employees first eligible to retire after June 30, 2012:

Any member of the state police may retire at any time subsequent to the date the member's retirement allowance equals or exceeds 50% of average compensation.

State police are assumed to retire in accordance with the probabilities as shown below. Any member of the State police, other than the superintendent of State police may retire at any time subsequent to the date the member's retirement allowance equals or exceeds 50% of average compensation, provided that a member may retire at or after the date of the attainment of a 50% benefit multiplier. 100% are assumed to retire upon the first to occur of (i) the date the member's pension retirement allowance equals 65%; or (ii) the age 70 if still active.

State Police			
Hired before July 1, 2007		Hired on/after July 1, 2007	
Service	Ret. Rate	Service	Ret. Rate
20	5.00%	20	
21	8.00%	21	
22	11.00%	22	
23	14.00%	23	
24	17.00%	24	
25	45.00%	25	35.00%
26	45.00%	26	25.00%
27	45.00%	27	20.00%
28	45.00%	28	30.00%
29	45.00%	29	40.00%
30+	45.00%	30+	40.00%

Judges are assumed to retire when eligible for an unreduced retirement benefit (age 65 with 20 years of service, or age 70 with 15 years of service). 33% of Judges are assumed to retire at age 65 with 10 years of service, or any age with 20 years of service. Judges who have not reached eligibility for an unreduced retirement benefit by age 75 are assumed to terminate at age 75.

Actuarial Assumptions (Concluded)

Rates of disability among active members are used to estimate the incidence of member disability in future years.

Sample Ages	Percent Becoming Disabled within Next Year					
	State Employees, Legislature, and Board of Education				State Police	
	Male		Female		Male & Female	
	Ordinary	Accidental	Ordinary	Accidental	Ordinary	Accidental
20	0.030 %	0.006 %	0.024 %	0.005 %	0.03 %	0.09 %
25	0.045	0.009	0.036	0.007	0.04	0.13
30	0.055	0.011	0.044	0.009	0.06	0.17
35	0.075	0.015	0.060	0.012	0.07	0.22
40	0.110	0.022	0.088	0.018	0.11	0.33
45	0.180	0.036	0.144	0.029	0.18	0.54
50	0.305	0.061	0.244	0.049	0.30	0.91
55	0.505	0.101	0.404	0.081	0.30	0.91
60	0.705	0.141	0.564	0.113	0.30	0.91
65	1.155	0.231	0.924	0.185	0.30	0.91

If a State Employee member is age 55 with 20 years of service and not eligible to retire, another 1% is added to the ordinary disability rates above. If the member is above age 60, an additional 1% is added.

Judges are not assumed to become disabled.

Miscellaneous and Technical Assumptions

Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Deferred Vested Members:	It is our understanding that the Deferred Vested Benefits have been eliminated for all groups except Board of Education. No terminated employees from the Board of Education were indicated to have coverage and, therefore, were excluded from the valuation.
Dental and Vision:	With the exception of State Police retirees, Dental and Vision Benefits were assumed to be fully paid by the retiree.
Census Data:	We received data from the State, United Health Care, and Blue Cross Blue Shield of Rhode Island (via the State). The data was merged and adjusted for duplicates. Average characteristics of the group as a whole are used to fill in unknown data.
Marriage Assumption:	<p>85% of members, except for Judges, are assumed to be married for purposes of death-in-service benefits; 100% of Judges are assumed to be married. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.</p> <p>No surviving spouse is assumed to re-marry and there will be no children's benefit.</p>
Election Percentage:	<p>It was assumed that 90% of State employees, 80% of Judges and Board of Education, 60% of Legislators and 100% of State Police active members will elect to receive retiree health care benefits through the State upon retirement.</p> <p>Of those assumed to elect coverage, 85% of Police employees, 62.5% of Judges and Legislators, and 25% of State employees and Board of Education were assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse 50% of the time upon death of Judges retirees, if eligible, and 100% of the time for all other retirees, if eligible.</p> <p>For active employees who have opted out of the State's active health care plan, it was assumed they would elect retiree health.</p>

Miscellaneous and Technical Assumptions (Concluded)

Medicare Coverage:	Assumed to be available for all covered employees on attainment of age 65. Retirees were assumed to elect to participate in Medicare. Current Teacher retirees over the age of 65 participating in the Anchor plans were assumed not to coordinate with Medicare.
Health Windows Revenue:	The State pays the cost of retiree health benefits of those who retired under an early retirement incentive program. The cost of retiree health benefits for these individuals is charged as an annual operating cost to the department or agency from which they were employed immediately prior to retirement. The ADEC for State Employees is reduced by the actual amount paid in the prior year to avoid double charging the State.
Covered Children:	A 20% load was applied to State Police liabilities for children's coverage.

SECTION F

SUPPLEMENTARY INFORMATION

GASB Statements No. 74 and No. 75 are the accounting standards which replaced GASB Statements No. 43 and No. 45. GASB Statement No. 74 was first effective for fiscal year 2017 and GASB Statement No. 75 was first effective for fiscal year 2018. A separate GASB Statements No. 74 and No. 75 report has been issued outside of this report. This section contains historical GASB Statements No. 43 and No. 45 reporting information for prior fiscal years and illustrative information for fiscal year 2017 and after.

Supplementary Information

Name of Plan	Rhode Island State Employees' and Electing Teachers OPEB
Type of Plan	Agent Multiple-Employer Plan
Valuation Date	June 30, 2021
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Dollar - Teachers Level Percent of Pay – All Others
Remaining Amortization Periods	Determined by Statutory Contribution – Teachers 30 Years Open – Judges and Legislators 15 Years Closed - All Other
Asset Valuation Method	Actuarial Value – 4-Year Smoothing
Actuarial Assumptions:	
Discount Rate	5.00% Per Year, net of investment expenses
Projected Salary Increases	2.75%-11.75%
Valuation Health Care Cost Trend Rate	
Pre-Medicare/HRA	7.50% in 2022, grading to 3.5% in 2033
Medicare Eligible	6.25% in 2022, grading to 3.5% in 2033

Supplementary Information

Schedule of Funding Progress (Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
Judges						
6/30/2013	\$ 2,151	\$ 1,054	\$ (1,097)	204.1%	\$ 13,447	(8.2)%
6/30/2015	2,826	756	(2,070)	373.8%	10,281	(20.1)%
6/30/2017	3,551	1,322	(2,229)	268.6%	10,746	(20.7)%
6/30/2018 ^a	3,924	1,237	(2,687)	317.2%	10,746	(25.0)%
6/30/2019	4,210	337	(3,873)	1249.3%	11,297	(34.3)%
6/30/2020	4,591	281	(4,310)	1633.8%	11,297	(38.2)%
6/30/2021	5,148	252	(4,896)	2042.9%	11,932	(41.0)%
Legislators						
6/30/2013	\$ 2,202	\$ 1,549	\$ (653)	142.2%	\$ 1,695	(38.5)%
6/30/2015	2,469	1,317	(1,152)	187.5%	1,742	(66.1)%
6/30/2017	2,787	1,525	(1,262)	182.8%	1,719	(73.4)%
6/30/2018 ^a	2,902	1,200	(1,702)	241.8%	1,719	(99.0)%
6/30/2019	3,092	1,194	(1,898)	259.0%	1,814	(104.6)%
6/30/2020	3,371	1,024	(2,347)	329.2%	1,814	(129.4)%
6/30/2021	3,673	938	(2,735)	391.6%	1,897	(144.2)%
State Employees						
6/30/2013	\$ 39,527	\$ 637,059	\$ 597,532	6.2%	\$ 671,762	88.9%
6/30/2015	92,125	622,826	530,701	14.8%	682,965	77.7%
6/30/2017	143,704	669,200	525,496	21.5%	708,887	74.1%
6/30/2018 ^a	172,930	612,107	439,177	28.3%	708,887	62.0%
6/30/2019	208,666	610,529	401,863	34.2%	745,039	53.9%
6/30/2020	254,644	571,860	317,216	44.5%	745,039	42.6%
6/30/2021	306,413	595,281	288,868	51.5%	750,392	38.5%
Teachers						
6/30/2013	\$ 3,230	\$ 12,569	\$ 9,339	25.7%	N/A	N/A
6/30/2015	6,648	13,050	6,402	50.9%	N/A	N/A
6/30/2017	9,382	12,832	3,450	73.1%	N/A	N/A
6/30/2018 ^a	11,250	11,619	369	96.8%	N/A	N/A
6/30/2019	13,106	10,328	(2,778)	126.9%	N/A	N/A
6/30/2020	13,767	8,190	(5,577)	168.1%	N/A	N/A
6/30/2021	14,661	7,716	(6,945)	190.0%	N/A	N/A
State Police						
6/30/2013	\$ 9,587	\$ 70,385	\$ 60,798	13.6%	\$ 17,748	342.6%
6/30/2015	22,920	78,857	55,937	29.1%	18,119	308.7%
6/30/2017	36,020	82,423	46,403	43.7%	21,334	217.5%
6/30/2018 ^a	44,011	76,219	32,208	57.7%	21,334	151.0%
6/30/2019	53,508	79,885	26,377	67.0%	23,943	110.2%
6/30/2020	63,360	82,585	19,225	76.7%	23,943	80.3%
6/30/2021	74,498	85,196	10,698	87.4%	28,525	37.5%
Board of Education						
6/30/2013	\$ 7,486	\$ 55,706	\$ 48,220	13.4%	\$ 113,375	42.5%
6/30/2015	14,608	69,106	54,498	21.1%	113,947	47.8%
6/30/2017	23,743	77,201	53,458	30.8%	124,967	42.8%
6/30/2018 ^a	30,297	69,851	39,554	43.4%	124,967	31.7%
6/30/2019	37,478	78,879	41,401	47.5%	130,569	31.7%
6/30/2020	45,802	65,845	20,043	69.6%	130,569	15.4%
6/30/2021	54,633	74,799	20,166	73.0%	135,335	14.9%

^a Updated results after removal of liabilities associated with the ACA "Cadillac tax."



Supplementary Information

Schedule of Employer Contributions (Dollars in Thousands)

Valuation Date	Fiscal Year Ending	Annual Required Contribution	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
Judges					
6/30/2007	6/30/2011 ^b	9.86%	\$ 1,013	97.32%	\$ 2,839
6/30/2009	6/30/2012	7.19%	810	96.53%	2,867
6/30/2009	6/30/2013	7.19%	802	97.01%	2,891
6/30/2011	6/30/2014	0.12%	13	100.00%	-
6/30/2011	6/30/2015	0.12%	13	100.00%	-
6/30/2013	6/30/2016	0.00%	-	100.00%	-
6/30/2013	6/30/2017	0.00%	-	100.00%	-
6/30/2015	6/30/2018	0.00%	-	100.00%	-
6/30/2015	6/30/2019	0.00%	-	-	-
6/30/2017	6/30/2020	0.00%	-	-	-
6/30/2018	6/30/2021 ^c	0.00%	-	-	-
6/30/2019	6/30/2022	0.00%	-	-	-
6/30/2020	6/30/2023	0.00%	-	-	-
6/30/2021	6/30/2024	0.00%	-	-	-
Legislators					
6/30/2007	6/30/2011 ^b	95.49%	\$ 1,541	98.62%	\$ 2,116
6/30/2009	6/30/2012	46.35%	799	97.34%	-
6/30/2009	6/30/2013	46.35%	-	N/A	-
6/30/2011	6/30/2014	0.00%	-	N/A	-
6/30/2011	6/30/2015	0.00%	-	N/A	-
6/30/2013	6/30/2016	1.53%	27	100.00%	-
6/30/2013	6/30/2017	1.53%	27	100.00%	-
6/30/2015	6/30/2018	0.81%	14	100.00%	-
6/30/2015	6/30/2019	0.81%	-	-	-
6/30/2017	6/30/2020	0.00%	-	-	-
6/30/2018	6/30/2021 ^c	0.00%	-	-	-
6/30/2019	6/30/2022	0.00%	-	-	-
6/30/2020	6/30/2023	0.00%	-	-	-
6/30/2021	6/30/2024	0.00%	-	-	-
State Employees					
6/30/2007	6/30/2011 ^b	6.74%	\$ 41,120	100.00%	\$ -
6/30/2009	6/30/2012	6.86%	44,235	100.00%	-
6/30/2009	6/30/2013	6.86%	45,800	100.00%	-
6/30/2011	6/30/2014	7.80%	49,072	100.00%	-
6/30/2011	6/30/2015	7.80%	47,769	100.00%	-
6/30/2013	6/30/2016	6.07%	40,709	100.00%	-
6/30/2013	6/30/2017	6.07%	42,732	100.00%	-
6/30/2015	6/30/2018	6.05%	42,265	100.00%	-
6/30/2015	6/30/2019	6.05%	-	-	-
6/30/2017	6/30/2020	6.71%	-	-	-
6/30/2018	6/30/2021 ^c	5.55%	-	-	-
6/30/2019	6/30/2022	5.33%	-	-	-
6/30/2020	6/30/2023	4.52%	-	-	-
6/30/2021	6/30/2024	4.55%	-	-	-

^b Based on a discount rate of 5.00%.

^c Updated results after removal of liabilities associated with the ACA "Cadillac tax."



Supplementary Information

Schedule of Employer Contributions (Dollars in Thousands)

Valuation Date	Fiscal Year Ending	Annual Required Contribution	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
Teachers					
6/30/2007	6/30/2011 ^b	\$ 1,338	\$ 2,333	100.00%	\$ -
6/30/2009	6/30/2012	2,601	2,321	100.00%	-
6/30/2009	6/30/2013	2,601	2,321	100.00%	-
6/30/2011	6/30/2014	1,370	2,799	100.00%	-
6/30/2011	6/30/2015	1,370	2,799	100.00%	-
6/30/2013	6/30/2016	2,321	2,321	100.00%	-
6/30/2013	6/30/2017	2,321	2,321	100.00%	-
6/30/2015	6/30/2018	2,321	2,321	100.00%	-
6/30/2015	6/30/2019	2,321			
6/30/2017	6/30/2020	-			
6/30/2018	6/30/2021 ^c	-			
6/30/2019	6/30/2022	-			
6/30/2020	6/30/2023	-			
6/30/2021	6/30/2024	-			
State Police					
6/30/2007	6/30/2011 ^b	25.67%	\$ 4,295	98.13%	\$ 8,302
6/30/2009	6/30/2012	33.18%	5,920	98.66%	8,381
6/30/2009	6/30/2013	33.18%	6,287	98.91%	8,450
6/30/2011	6/30/2014	39.00%	7,874	99.56%	8,485
6/30/2011	6/30/2015	39.00%	8,170	99.57%	8,520
6/30/2013	6/30/2016	33.39%	6,806	99.57%	8,503
6/30/2013	6/30/2017	33.39%	7,685	99.58%	8,486
6/30/2015	6/30/2018	34.89%	7,919	100.00%	-
6/30/2015	6/30/2019	34.89%			
6/30/2017	6/30/2020	29.65%			
6/30/2018	6/30/2021 ^c	23.31%			
6/30/2019	6/30/2022	23.27%			
6/30/2020	6/30/2023	20.67%			
6/30/2021	6/30/2024	17.81%			
Board of Education					
6/30/2007	6/30/2011 ^b	3.61%	\$ 2,869	100.00%	\$ -
6/30/2009	6/30/2012	3.61%	2,884	100.00%	-
6/30/2009	6/30/2013	3.61%	3,106	100.00%	-
6/30/2011	6/30/2014	2.65%	3,095	100.00%	-
6/30/2011	6/30/2015	2.65%	3,011	100.00%	-
6/30/2013	6/30/2016	3.11%	3,558	100.00%	-
6/30/2013	6/30/2017	3.11%	3,932	100.00%	-
6/30/2015	6/30/2018	4.36%	5,490	100.00%	-
6/30/2015	6/30/2019	4.36%			
6/30/2017	6/30/2020	4.08%			
6/30/2018	6/30/2021 ^c	2.93%			
6/30/2019	6/30/2022	3.50%			
6/30/2020	6/30/2023	1.83%			
6/30/2021	6/30/2024	2.15%			

^b Based on a discount rate of 5.00%.

^c Updated results after removal of liabilities associated with the ACA "Cadillac tax."



APPENDIX A

REPORTED ASSET INFORMATION

Reported Asset Information as of June 30, 2021

Statement of Fiduciary Net Position

	State Employees'	Teachers	Judges	State Police	Legislators	Board of Education	Memorandum Total
Assets							
Cash and cash equivalents	\$ 3,113,401	\$ 635,972	\$ 656,542	\$ 774,749	\$ 226,024	\$ 538,183	\$ 5,944,871
Advance held by claims processing agent	2,000	0	0	0	0	0	2,000
Receivables							
Due from other funds							0
Contributions receivable	1,567,154	14,021	3,602	255,563	10,203	211,164	2,061,707
Total receivables	1,567,154	14,021	3,602	255,563	10,203	211,164	2,061,707
Investments at fair value - equity in pooled trust							
	358,091,670	16,448,980	5,324,086	85,646,363	4,047,195	62,860,475	532,418,769
Total assets	362,774,225	17,098,973	5,984,230	86,676,675	4,283,422	63,609,822	540,427,347
Liabilities							
Accounts payable	121,497	1,953	6,595	34,515	7,614	108,306	280,480
Incurred but not reported claims	636,000	81,000	3,000	178,000	13,000	94,000	1,005,000
Due to other funds	51,872	2,383	771	12,406	586	9,106	77,124
Other	6,387,720	0	0	0	0	0	6,387,720
Total liabilities	7,197,089	85,336	10,366	224,921	21,200	211,412	7,750,324
Net position held in trust for other post-employment benefits							
	\$ 355,577,136	\$ 17,013,637	\$ 5,973,864	\$ 86,451,754	\$ 4,262,222	\$ 63,398,410	\$ 532,677,023



Reported Asset Information as of June 30, 2021

Statement of Changes in Fiduciary Net Position

	State Employees'	Teachers	Judges	State Police	Legislators	Board of Education	Memorandum Total
Additions							
Contributions							
Member contributions	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,763,111	\$ 1,763,111
Employer contributions	41,024,947	0	0	6,178,412	0	3,944,538	51,147,897
Total contributions	41,024,947	0	0	6,178,412	0	5,707,649	52,911,008
Other income	1,165,170	108,281	24,487	223,350	54,203	40,352	1,615,843
Investment income							
Net appreciation in							
fair value of investments	69,777,115	3,347,152	1,071,319	16,991,434	847,025	12,329,695	104,363,740
Interest and dividends	687,022	36,239	11,331	167,823	8,744	119,503	1,030,662
	70,464,137	3,383,391	1,082,650	17,159,257	855,769	12,449,198	105,394,402
Less investment expense	(158,917)	(7,400)	(2,389)	(38,213)	(1,847)	(27,954)	(236,720)
Net investment income	70,305,220	3,375,991	1,080,261	17,121,044	853,922	12,421,244	105,157,682
Total additions	112,495,337	3,484,272	1,104,748	23,522,806	908,125	18,169,245	159,684,533
Deductions							
Benefits	23,771,476	898,605	(56,664)	3,388,477	163,515	2,819,135	30,984,544
Administrative expense	51,872	2,383	771	12,406	586	9,106	77,124
Total deductions	23,823,348	900,988	(55,893)	3,400,883	164,101	2,828,241	31,061,668
Net increase (decrease)	88,671,989	2,583,284	1,160,641	20,121,923	744,024	15,341,004	128,622,865
Net position held in trust for other post-employment benefits							
Net position - beginning	266,905,147	14,431,352	4,813,224	66,409,832	3,518,199	48,006,406	404,084,160
Adjustment		(999)	(1)	(80,001)	(1)	51,000	(30,002)
Net position - ending	\$ 355,577,136	\$ 17,013,637	\$ 5,973,864	\$ 86,451,754	\$ 4,262,222	\$ 63,398,410	\$ 532,677,023



APPENDIX B

GLOSSARY

Glossary

Accrued Service - The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability - The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions - Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method - A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value - The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarially Determined Employer Contribution (ADEC) - The ADEC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ADEC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Amortization - Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Governmental Accounting Standards Board (GASB) - GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Implicit Rate Subsidy – It is a common practice for employers to allow retirees to continue in the employers group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.



Glossary (Concluded)

Medical Trend Rate (Health Care Inflation) - The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Postemployment Employee Benefits (OPEB) - OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account - An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability - The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets - The value of current plan assets recognized for valuation purposes.