

Rhode Island State Employees' and Electing Teachers OPEB

Actuarial Valuation Report
June 30, 2018



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January 23, 2019

Mr. Thomas Mullaney
State Budget Officer
Department of Administration Building
One Capitol Hill
Providence, Rhode Island 02908

Re: Rhode Island State Employees' and Electing Teachers OPEB Actuarial Valuation as of June 30, 2018

Dear Mr. Mullaney:

The results of the June 30, 2018 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, 2021. 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 September 14, 2018 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 D of this report. This report excludes 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.

Mr. Thomas Mullaney

January 23, 2019

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The findings in this report are based on data and other information through June 30, 2018. 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. 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 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.

David T. Kausch, Jeffrey T. Tebeau, and Abra D. Hill 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.

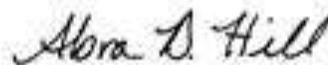
Respectfully submitted,



David T. Kausch, FSA, EA, FCA, MAAA, PhD



Jeffrey T. Tebeau, FSA, EA, MAAA



Abra D. Hill, ASA, MAAA

DTK/JTT/ADH:sc

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EXECUTIVE SUMMARY

Executive Summary

Introduction

This is the June 30, 2018 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, 2018 valuation will be applicable for the year July 1, 2020 through June 30, 2021. This report restates the ADEC developed in the June 30, 2017 valuation for the fiscal year ending June 30, 2021.

The June 30, 2018 valuation is the first valuation performed in an even year and will begin the cycle of annual valuations (rather than biennial). However, census data will continue to be collected on a biennial basis and, therefore, liabilities were calculated as of the census data date (June 30, 2017) and rolled forward to the valuation date. Premium, claims, and asset information will be updated each valuation.

Plan Experience

Overall plan experience for the Plan was favorable resulting in an actuarial gain. Results varied among the groups with gains for Judges, State Employees and the Board of Education with losses for Teachers, Legislators and State Police.

Health care experience varied for the pre-65 plans depending on the group, but overall was unfavorable. Post-65 experience on the Medicare Advantage HMO and Plan 65 was favorable. The HRA amount for State retirees increased less than expected, resulting in gains for the State Employees. The gains and losses are attributable to asset, premiums and claims experience. No demographic gains and losses are reflected since this valuation uses the same census data and demographic assumptions as the June 30, 2017 valuation.

The health care inflation trend assumption was assumed to be 8.25% in 2019 grading down to 3.5% by 2031.

Additional information on gains and losses is 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, 18 years remaining as of June 30, 2018). 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-year open.

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, 2018	June 30, 2018	June 30, 2018	June 30, 2018	June 30, 2018	June 30, 2018
ADEC for Fiscal Year Ending	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021	June 30, 2021
Actuarially Determined Employer Contributions (ADEC)						
Annual Amount (Total for all groups)	\$ -	\$ -	\$ 47,313	\$ -	\$ 6,452	\$ 4,543
Percentage of Projected Covered Payroll	0.00%	0.00%	5.93%	N/A	26.87%	3.23%
Employer Contribution*	0.00%	0.00%	5.87%	-	26.87%	3.23%
Membership (as of June 30, 2017)						
Number of						
Active Members	61	111	11,169	-	233	1,859
Retirees and Beneficiaries	47	18	6,730	146	173	801
Inactive, Nonretired Members	-	-	-	-	-	-
Total	108	129	17,899	146	406	2,660
Covered Payroll	\$ 10,746	\$ 1,719	\$ 708,887	N/A	\$ 21,334	\$ 124,967
Assets						
Actuarial Value	\$ 3,924	\$ 2,902	\$ 172,930	\$ 11,250	\$ 44,011	\$ 30,297
Actuarial Information						
Employer Normal Cost	0.14%	2.98%	2.20%	N/A	16.99%	1.31%
Actuarial Accrued Liability (AAL)	\$ 1,299	\$ 1,545	\$ 637,846	\$ 11,890	\$ 82,957	\$ 72,201
Unfunded Actuarial Accrued Liability (UAAL)	(2,625)	(1,357)	464,916	640	38,946	41,904
Funded Ratio	302%	188%	27%	95%	53%	42%
UAAL as % of Covered Payroll	(24.4)%	(78.9)%	65.6%	N/A	182.6%	33.5%
Equivalent Single Amortization Period	30 years	30 years	18 years	N/A	18 years	18 years

* For the 2021 fiscal year, the employer contribution for State Employees is the ADEC net of a credit for the health windows contributions. The contribution amount for Teachers is \$0 based on the presumption that the State will contribute \$2.3 million per year in fiscal year 2019 as determined by the prior valuation.

Executive Summary

Contribution Rates

The total Actuarially Determined Employer Contribution (ADEC) for the fiscal year beginning July 1, 2020 was determined to be \$58,307,891. The contribution rates as a percent of payroll changed from 6.71% in the prior fiscal year to 5.93% for State Employees, 29.65% to 26.87% for State Police, remained at 0.00% for Judges, 0.00% to 0.00% for Legislators, and 4.08% to 3.23% for the Board of Education. Contributions as a dollar amount are \$0 for Teachers.

For additional details, please see Sections A and C 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 C of this report.

There were changes to the health insurance plans offered to pre-65 retirees. Effective January 1, 2019, the Early Retiree Plan was replaced by two different plans: the Anchor Plan and the Anchor Plus Plan. The Value Plan was also replaced by the Retiree Value Plan. The estimated effect of these changes is a decrease in liabilities for Pre-65 coverage of approximately 7%. The Excise Tax load on pre-65 liabilities was changed from 11.0% to 9.5% as result of reflecting the premium rates for the new plans.

An analysis of the impact of the health care plan changes and Excise Tax load on the unfunded actuarial accrued liability appears in the gain/loss development on page A-4.

Actuarial Assumptions

There were no changes in actuarial assumptions.

Actuarial Methods

There were no changes in actuarial methods.

Data

The State supplied data for retired and active members as of June 30, 2017. 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, 2020

Contributions for	Development of the Actuarially Determined Employer Contributions for the July 1, 2020 - June 30, 2021 Fiscal Year					
	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
Total Normal Cost	\$ 16,934	\$ 57,660	\$ 17,552,881	\$ 0	\$ 4,079,525	\$ 3,108,404
Active Member Contribution	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,265,866</u>
Employer Normal Cost	\$ 16,934	\$ 57,660	\$ 17,552,881	\$ 0	\$ 4,079,525	\$ 1,842,538
<i>Percentage of Projected Payroll</i>	0.14%	2.98%	2.20%	N/A	16.99%	1.31%
Amortization of Unfunded Actuarial Accrued Liabilities	(16,934)	(57,660)	29,760,112	0	2,372,320	2,700,515
<i>Percentage of Projected Payroll</i>	(0.14)%	(2.98)%	3.73%	N/A	9.88%	1.92%
Amortization Period	30 Years	30 Years	18 Years	N/A	18 Years	18 Years
	Level Percent	Level Percent	Level Percent	Level Dollar	Level Percent	Level Percent
Actuarially Determined Employer Contribution (ADEC)	\$ 0	\$ 0	\$ 47,312,993	\$ 0	\$ 6,451,845	\$ 4,543,053
<i>Percentage of Projected Payroll</i>	0.00%	0.00%	5.93%	N/A	26.87%	3.23%
Total Projected Health Windows Revenue			474,874			
<i>Percentage of Projected Payroll</i>			0.06%			
Net Employer Contribution*			46,838,119			
<i>Percentage of Projected Payroll</i>			5.87%			
Projected Payroll for the Fiscal Year Beginning July 1, 2020	\$12,095,154	\$1,934,911	\$797,858,232	N/A	\$24,011,332	\$140,651,802

* For the 2021 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 years ending June 30, 2021. 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, 2021, the amortization factors used are 22.4628 for the 30-year level percent of pay amortization (Judges and Legislators) and 14.9930 for the 18-year level percent of pay amortization (State Employees, State Police, and Board of Education).

Valuation Results

Determination of Unfunded Actuarial Accrued Liability as of June 30, 2018

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
A. Present Value of Future Benefits						
1. Retirees and Beneficiaries	\$ 1,189,768	\$ 1,063,730	\$274,151,809	\$11,889,913	\$ 43,299,135	\$ 26,719,246
2. Vested Terminated Members	0	0	0	0	0	0
3. Active Members	<u>167,178</u>	<u>879,091</u>	<u>517,601,423</u>	<u>0</u>	<u>83,583,821</u>	<u>70,657,739</u>
Total Present Value of Future Benefits	\$ 1,356,946	\$ 1,942,820	\$791,753,232	\$11,889,913	\$126,882,956	\$97,376,985
B. Present Value of Future Total Normal Costs	57,605	397,634	153,907,465	0	43,926,259	25,175,585
C. Actuarial Accrued Liability (A.-B.)	\$ 1,299,341	\$ 1,545,186	\$ 637,845,767	\$ 11,889,913	\$ 82,956,697	\$ 72,201,401
D. Actuarial Value of Assets	3,923,545	2,901,722	172,929,577	11,250,316	44,011,244	30,296,530
E. Unfunded Actuarial Accrued Liability (C.-D.)	\$ (2,624,204)	\$ (1,356,536)	\$464,916,190	\$ 639,597	\$ 38,945,453	\$ 41,904,871
F. Funded Ratio (D./C.)	302%	188%	27%	95%	53%	42%

The Funded Ratios on the basis of the market value of assets are 317%, 197%, 28%, 99%, 56% and 44% for the groups in the order shown above.

Development of Actuarial Value of Assets

Year Ended June 30:	2016	2017	2018	2019	2020	2021
A. Actuarial Value Beginning of Year						
A1. Preliminary Actuarial Value Beginning of Year	\$ 141,596,429	\$ 177,156,873	\$ 219,187,070			
A2. Adjustment	-	-	-			
A3. Final Actuarial Value Beginning of Year	141,596,429	177,156,873	219,187,070			
B. Market Value End of Year	180,126,735	228,418,053	278,170,257			
C. Market Value Beginning of Year						
C1. Preliminary Market Value Beginning of Year	147,386,738	180,126,735	228,418,053			
C2. Adjustment	-	-	-			
C3. Final Market Value Beginning of Year	147,386,738	180,126,735	228,418,053			
D. Non-Investment Net Cash Flow	24,717,731	26,822,223	28,993,547			
E. Investment Income						
E1. Market Total: B - C3 - D	8,022,266	21,469,095	20,758,657			
E2. Amount for Immediate Recognition (5%)	7,697,765	9,528,399	11,684,192			
E3. Amount for Phased-In Recognition: E1-E2	324,501	11,940,696	9,074,465			
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.25 x E3	81,125	2,985,174	2,268,616			
F2. First Prior Year	113,209	81,125	2,985,174	\$ 2,268,616		
F3. Second Prior Year	2,500,068	113,209	81,125	2,985,174	\$ 2,268,616	
F4. Fourth Prior Year	450,546	2,500,067	\$113,210	81,126	2,985,174	\$2,268,617
F5. Total Recognized Investment Gain	3,144,948	5,679,575	5,448,125	5,334,916	5,253,790	2,268,617
G. Preliminary Actuarial Value End of Year: A3 + D + E2 + F5	177,156,873	219,187,070	265,312,934			
H. 80% of Market Value End of Year: 80% x B	144,101,388	182,734,442	222,536,206			
I. 120% of Market Value End of Year: 120% x B	216,152,082	274,101,664	333,804,308			
J. Additional Recognized G/L due to Corridor	-	-	-			
K. Final Actuarial Value after 20% Corridor	177,156,873	219,187,070	265,312,934			
L. Difference between Market & Actuarial Value: B-K	2,969,862	9,230,983	12,857,323			
M. Recognized Rate of Return	7.04%	7.98%	7.33%			
N. Market Rate of Return	5.02%	11.09%	8.55%			
O. Ratio of Actuarial Value to Market Value: K / B	98%	96%	95%			

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, 2018

	Judges	Legislature	State Employees	Teachers	State Police	Board of Education
(1) UAAL* at prior valuation date	\$ (2,228,830)	\$ (1,261,913)	\$ 525,495,865	\$ 3,450,591	\$ 46,403,088	\$ 53,457,272
(2) Employer normal cost from last valuation	15,496	53,830	17,596,695	-	3,920,121	2,020,846
(3) Employer contributions	-	14,283	42,265,174	2,321,057	7,919,243	5,490,009
(4) Interest accrual: $[(1)+1/2 [(2)-(3))] \times .05$	(111,054)	(62,107)	25,658,081	114,503	2,220,176	2,586,135
(5) Expected UAAL end of year: (1)+(2)-(3)+(4)	\$ (2,324,388)	\$ (1,284,473)	\$ 526,485,467	\$ 1,244,037	\$ 44,624,142	\$ 52,574,244
(6) Impact of Plan Changes	(40,535)	(243,565)	(17,303,372)	(2,032,245)	(4,650,819)	(1,707,106)
(7) Impact of change in Excise Tax load	(9,797)	(54,649)	(4,071,864)	(42,816)	(1,061,903)	(377,348)
(8) Expected UAAL after changes: Sum (5) through (7)	\$ (2,374,720)	\$ (1,582,687)	\$ 505,110,231	\$ (831,023)	\$ 38,911,421	\$ 50,489,790
(9) Actual UAAL at end of year	\$ (2,624,204)	\$ (1,356,536)	\$ 464,916,190	\$ 639,597	\$ 38,945,453	\$ 41,904,871
(10) Gain/(loss) as of the valuation date (9)-(8)	249,485	(226,151)	40,194,041	(1,470,620)	(34,032)	8,584,919
(11) Gain/(loss) as percent of actuarial accrued liabilities at prior valuation date	18.9 %	(14.8)%	6.0 %	(11.5)%	(0.0)%	11.1 %

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

Comments

Comment A: Legislation 2008-H7204 requires a 30-year amortization period beginning June 30, 2006 with 18 years remaining as of June 30, 2018. 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, 1 year for Teachers and 18 years for the other groups. The Judges and Legislators plans are currently over 100% funded. We recommend amortizing 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 amortization period for Teachers 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. Based on the previously adopted contributions for fiscal years 2018 and 2019, the Teachers plan is expected to reach full funding by June 30, 2019, if all assumptions are met. Therefore, we have shown the anticipated fiscal year 2021 contribution as \$0 in this report. Contributions received after this date may provide a provision against adverse deviation.

Comment B: There have been some material changes since the prior valuation. 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, 2017 valuation. All percentages shown are percents 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%	6.71%	\$ -	29.65%	4.08%
Impact of plan experience	0.00%	0.00%	(0.06)%	N/A	(0.66)%	(0.02)%
Impact of premium rate setting	0.00%	1.64%	(0.40)%	N/A	0.94%	(0.55)%
Impact of Pre-65 plan changes	0.00%	(1.50)%	(0.26)%	N/A	(2.51)%	(0.23)%
Impact of change to Excise Tax load	0.00%	(0.14)%	(0.06)%	N/A	(0.55)%	(0.05)%
ADEC determined by this valuation	0.00%	0.00%	5.93%	\$ -	26.87%	3.23%

Overall, the plan has had favorable experience since the last valuation. However, experience varied between groups. The plan recognized gains for all groups due to favorable investment experience. The rate of return on the actuarial value of assets was 7.3% for 2018 (market value return was 8.55%) compared to the assumed rate of 5.0%.

The largest driver of overall gains was attributable to favorable Post-65 health care cost experience. The Post-65 per capita health care costs saw a decrease since the last valuation (they were assumed to increase by 9%). This experience mainly affected the Board of Education. The HRA amount for State retirees increased less than expected (3.4% actual vs. 9% assumed), which was the largest sources of gains for the State Employees. The Pre-65 per capita health care costs increased slightly more than expected, resulting in losses for each of the groups, but affected Legislators and State Police more significantly. However, the losses were offset by changes to the underlying health care plans for 2019.

Comments

There were changes to the health insurance plans offered to pre-65 retirees. Effective January 1, 2019, the Pre-65 Early Retiree and Value Plans were replaced by the Retiree Anchor Plan, Retiree Anchor Plus Plan, and Retiree Value Plan. The new plans provide similar coverage as the old plans, with slightly higher deductibles, coinsurance, out-of-pocket maximums, and prescription drug copays. The estimated effect of these changes is a decrease in Pre-65 liabilities of approximately 7%. As a result of the Pre-65 plan changes, the excise tax load was decreased from 11.0% to 9.5% after reflecting the premiums rates for the new plans.

Comment C: The health care trend assumption is 8.25% the first year trending down to 3.5% over 13 years. The short-term trend of 8.25% 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 18.5% of Gross Domestic Product (GDP) in 2020 to 24% of GDP in 2040 assuming 3.0% annual GDP growth.

Comment D: After the completion of the June 30, 2017 valuation, the retiree data for the Board of Education (BOE) was revised. In our letter to the State dated June 8, 2018, we analyzed the revised data and its effect on the BOE liabilities. The liabilities based on the revised data were approximately 0.4% lower, which was not material enough to warrant a restatement of the GASB Nos. 74 and 75 liabilities. However, the revised data was included in this valuation in order to reflect the most accurate census data.

Comment E: 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 F: The State received contributions in the amount of \$474,874 in fiscal year 2018 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).

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 18 years (June 30, 2038) for State Employees, State Police, and Board of Education, and less than 1 year (June 30, 2019) for Teachers.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio (Judges and Legislature 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.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Rhode Island has self-insured health plans administered by United Healthcare (UHC) which are offered to Medicare and Non-Medicare retirees. In addition, a fully-insured Medicare Advantage HMO is also available to Medicare 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, 2019. These rates were used without adjustment since they reflect the demographics of the group.

For the self-insured United Healthcare Plan 65 plan, the initial premiums are calculated based on Rhode Island's own experience. Historical claim experience for the period from July 2015 to June 2018 was projected to the valuation period (i.e., July 1, 2018 to June 30, 2019) 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 United Healthcare Plan 65 rates and Medicare Advantage HMO rates based on the current plan elections.

For the self-insured Early Retiree 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 2015 to June 2018 was projected to the valuation period (i.e., July 1, 2018 to June 30, 2019) 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 assumptions section.

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, 2018			Illustrative Rates Effective January 1, 2019		
	Single	Family		Single	Family
Non-Medicare Eligible			Non-Medicare Eligible		
United Anchor Plan	N/A	N/A	United Anchor Plan	\$ 1,049.80	\$ 2,920.89
United Anchor Plus Plan	N/A	N/A	United Anchor Plus Plan	\$ 1,123.31	\$ 3,125.42
United "Early Retiree" Plan	\$ 1,117.84	\$ 3,110.20	United "Early Retiree" Plan	N/A	N/A
United "Value" Plan/Active Plan	\$ 702.61	\$ 1,969.75	United "Value" Plan/Active Plan	\$ 639.31	\$ 1,792.29
Medicare Eligible			Medicare Eligible		
United Plan 65	\$ 195.27	\$ -	United Plan 65	\$ 190.50	\$ -
United Medicare Complete/ Secure			United Medicare Complete/ Secure		
Horizons HMO	\$ 268.37	\$ -	Horizons HMO	\$ 260.32	\$ -

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	\$588.12	\$811.68
50	765.80	943.39
55	1,007.71	1,100.27
60	1,301.51	1,281.54

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

Medicare Advantage HMO Medicare-Eligible			United Healthcare Plan 65 Medicare-Eligible		
Age	Male	Female	Age	Male	Female
65	\$223.95	\$211.23	65	\$181.98	\$171.64
70	243.96	236.07	70	198.24	191.83
75	262.02	255.67	75	212.92	207.76

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.

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

James E. Pranschke, FSA, MAAA

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

This is a brief summary of the Rhode Island State Employees' and Electing Teachers OPEB provisions in effect as of June 30, 2018. 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, 2018

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, 2018

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, 2018

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, 2018

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, 2018

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 effect as of June 30, 2018. 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, 2018

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 Amended Effective June 30, 2008

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 Amended Effective June 30, 2008

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 Amended Effective June 30, 2008

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 effect as of June 30, 2018. 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, 2018

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, 2018

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, 2018

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:

<u>Post-65 Medicare Supplemental Coverage</u>		
<u>Years of Service</u>	<u>Employer's Share</u>	<u>Employee's Share</u>
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:

<u>Pre-65 Medicare Coverage</u>			
<u>Years of Service</u>	<u>Age</u>	<u>Employer's Share</u>	<u>Employee's Share</u>
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%

<u>Post-65 Medicare Supplemental Coverage</u>		
<u>Years of Service</u>	<u>Employer's Share</u>	<u>Employee's Share</u>
10-15	50%	50%
16-19	70%	30%
20-27	90%	10%
28+	100%	0%

Summary of Plan Provisions as of June 30, 2018

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: United Health Care 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/\$100 copay Not Covered

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

Pre-65 Retirees Option #2: United Health Care 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/\$100 copay Not Covered

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

Pre-65 Retirees Option #3: United Health Care 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 Out-of-Pocket Maximum Retail (4 tier) Mail Order (3 tier)	Combined Combined \$10/\$35/\$60/\$100 copay after deductible \$20/\$70/\$120 copay after deductible	Combined Combined 50% coinsurance Not Covered

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

Post-65 Retirees Option #1: United Health Care Plan 65 (Medicare Primary Plan)

Benefit	Coverage
Individual Deductible	No Annual Deductible
Out-of-Pocket Maximum	None
Preventive Services	Medicare Standard
Doctor's Charges (Office)	Covered in Full
Hospital Services	Days 1-60: Covered in Full Days 61-90 Covered in Full 60 lifetime reserve days Covered in Full 365 additional days: 10% co-pay after lifetime reserve days exhausted
Skilled Nursing Facility	Days 1-20: Covered in Full Days 21-100: Covered in Full Days 101 + Retiree pays 100%
Home Health Care	Covered in Full
Diagnostic X-Ray and Laboratory	Covered in Full
Ambulance (emergency only) Durable Medical Equipment	Covered in Full
Prescription Drugs	No Coverage
Blood	First 3 Pints Covered in Full
Emergency Room Care	Covered in Full
Eye Examinations	No Coverage
Non-Routine Vision Care	Covered in Full
Hospice Care	Limited co-pay for outpatient drugs and respite care

Chiropractic services – Co-pay is \$0 for “manual manipulation of the spine for a subluxation” only. The plan does not cover routine care.

Active Judges Members as of June 30, 2017 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								
40-44				1				1
45-49	1			1				2
50-54	1	4	2	1				8
55-59	2	2	1	1	1		1	8
60-64		2	3	5	4	2	2	18
65 & Over	1	3	4	5	2	2	7	24
Totals	5	11	10	14	7	4	10	61

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

Age: 62.7 years
Service: 17.3 years
Annual Pay: \$176,170

Active Legislature Members as of June 30, 2017 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	5	1						6
30-34	4							4
35-39	4	2		1				7
40-44	1	3						4
45-49	8	4	2					14
50-54	12	1	2	1	2		1	19
55-59	8	7			1	2		18
60-64	9	2	4	4	4			23
65 & Over	4	5	3		3		1	16
Totals	55	25	11	6	10	2	2	111

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

Age: 53.3 years
Service: 8.3 years
Annual Pay: \$15,488

Active State Employee Members as of June 30, 2017 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	1							1
20-24	97	1						98
25-29	455	67						522
30-34	455	295	100					850
35-39	325	241	268	67	2			903
40-44	246	188	218	254	28	1		935
45-49	266	223	257	325	172	159	3	1,405
50-54	307	268	252	267	162	450	178	1,884
55-59	260	268	271	312	173	375	448	2,107
60-64	148	196	250	287	163	253	317	1,614
65 & Over	52	99	138	167	81	142	171	850
Totals	2,612	1,846	1,754	1,679	781	1,380	1,117	11,169

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

Age: 50.0 years
Service: 14.8 years
Annual Pay: \$63,469

Active Teachers Members as of June 30, 2017 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, 2017 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	5							5
25-29	36	10						46
30-34	16	29	2					47
35-39	5	16	10					31
40-44		2	11	7	3			23
45-49			9	9	25	1		44
50-54			1	3	21	2		27
55-59				2	6	1		9
60-64						1		1
65 & Over								
Totals	62	57	33	21	55	5		233

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

Age: 38.6 years
Service: 11.5 years
Annual Pay: \$91,561

Active Board of Education Members as of June 30, 2017 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	10							10
25-29	62	5						67
30-34	94	34	3					131
35-39	89	50	33	1				173
40-44	74	41	54	27				196
45-49	59	49	42	38	15			203
50-54	73	52	51	50	22	10	2	260
55-59	51	35	52	41	24	26	20	249
60-64	23	23	52	47	31	36	60	272
65 & Over	12	17	38	27	22	38	144	298
Totals	547	306	325	231	114	110	226	1,859

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

Age: 51.4 years
Service: 13.8 years
Annual Pay: \$67,223

Retired and Deferred Members as of June 30, 2017 by Attained Age

Retired Members*

Attained Age	Number of Retirees and Beneficiaries						Total
	Judges	Legislature	State Employees	Teachers	State Police	BOE	
Under 50	0	3	4	1	14	0	22
50-54	0	3	14	1	48	1	67
55-59	1	2	242	4	46	0	295
60-64	3	2	1,112	59	45	7	1,228
65 & Over	43	8	5,358	81	20	793	6,303
Totals	47	18	6,730	146	173	801	7,915

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

Deferred Members

Terminated employees are not included in the valuation.

SECTION D

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 an 18-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.

Actuarial Accrued Liabilities were calculated as of June 30, 2017 (census date) and rolled-forward to the June 30, 2018 valuation date by applying one year of normal cost, projected benefit payments and interest. Normal cost and benefit payments were assumed to occur in the middle of the fiscal year for purposes of calculating the interest on the liabilities.

Actuarial Assumptions

Actuarial Assumptions are established by the Board after consulting with the actuary. The rationale for these assumptions is contained in the OPEB Valuation Assumption Review issued August 28, 2017 and adopted by the Board September 15, 2017. 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 %	3.00 %	4.00 %	11.00 %	3.00 %	14.00 %
2	2.00	3.00	5.00	10.00	3.00	13.00
3	3.00	3.00	6.00	8.00	3.00	11.00
4	2.75	3.00	5.75	5.00	3.00	8.00
5	2.75	3.00	5.75	3.50	3.00	6.50
6	2.50	3.00	5.50	4.00	3.00	7.00
7	1.25	3.00	4.25	1.50	3.00	4.50
8	1.00	3.00	4.00	1.50	3.00	4.50
9	1.00	3.00	4.00	1.00	3.00	4.00
10	1.00	3.00	4.00	1.00	3.00	4.00
11	1.00	3.00	4.00	1.00	3.00	4.00
12	2.00	3.00	5.00	1.00	3.00	4.00
13	1.25	3.00	4.25	1.00	3.00	4.00
14	1.00	3.00	4.00	1.00	3.00	4.00
15	1.00	3.00	4.00	1.00	3.00	4.00
16	1.00	3.00	4.00	1.00	3.00	4.00
17	0.50	3.00	3.50	1.00	3.00	4.00
18	0.50	3.00	3.50	1.00	3.00	4.00
19	0.50	3.00	3.50	1.00	3.00	4.00
20	0.50	3.00	3.50	1.00	3.00	4.00
21	0.50	3.00	3.50	1.00	3.00	4.00
22	0.25	3.00	3.25	1.00	3.00	4.00
23	0.25	3.00	3.25	1.00	3.00	4.00
24	0.25	3.00	3.25	1.00	3.00	4.00
25 or more	0.00	3.00	3.00	1.00	3.00	4.00

Judges were assumed to have 3.00% 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%.

Actuarial Assumptions (Continued)

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

Healthy Male Teachers, Judges, Legislators, and Board of Education: RP-2014 Combined Healthy for males with White Collar adjustment, projected with the MP-2016 ultimate rates.

Healthy Female Teachers, Judges, Legislators, and Board of Education: RP-2014 Combined Healthy for females with White Collar adjustment, projected with the MP-2016 ultimate rates.

Healthy Male State Employees and Police: RP-2014 Combined Healthy for males with Blue Collar adjustment, projected with the MP-2016 ultimate rates.

Healthy Female State Employees and Police: RP- Combined Healthy for females, projected with the MP 2016 ultimate rates.

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

Sample Attained Ages	State Employees and State Police		Teachers, Legislators, Judges, and Board of Education		Ultimate	Ultimate
	Healthy Males	Healthy Females	Healthy Males	Healthy Females	Scale MP 2016 Males	Scale MP 2016 Females
25	0.07 %	0.03 %	0.04 %	0.03 %	1.00 %	1.00 %
30	0.10	0.06	0.06	0.05	1.00	1.00
35	0.13	0.10	0.08	0.08	1.00	1.00
40	0.19	0.15	0.12	0.11	1.00	1.00
45	0.28	0.21	0.19	0.16	1.00	1.00
50	0.41	0.28	0.28	0.21	1.00	1.00
55	0.60	0.36	0.39	0.27	1.00	1.00
60	0.85	0.52	0.52	0.39	1.00	1.00
65	1.26	0.80	0.76	0.65	1.00	1.00
70	1.97	1.29	1.24	1.06	1.00	1.00
75	3.15	2.09	2.13	1.76	1.00	1.00
80	5.19	3.48	3.73	3.04	1.00	1.00

The assumption for future mortality improvements is fully generational mortality improvements using MP-2016 ultimate rates with a base year of 2014.

Actuarial Assumptions (Continued)

Disabled Males: RP-2014 Disabled Retiree Table for males, projected with the MP-2016 ultimate rates.

Disabled Females: RP-2014 Disabled Retiree Table for females, projected with the MP-2016 ultimate rates.

Sample rates for Disabled Members are shown below:

Sample Attained Ages	Disabled Males	Disabled Females
25	0.20 %	0.09 %
30	0.49	0.23
35	0.86	0.42
40	1.27	0.66
45	1.68	0.92
50	2.04	1.19
55	2.34	1.45
60	2.66	1.70
65	3.17	2.09
70	4.03	2.82
75	5.43	4.10
80	7.66	6.10

Pre-Retirement Mortality Rates. The mortality tables used to project the pre-termination mortality experience of plan members are the RP-2014 Employee tables for males and females as the base table, and then to apply a 75% multiplier for Teachers, Judges, Legislators, and Board of Education and a 100% multiplier for State Employees and State Police.

Pre-Retirement Mortality rates are static tables and do not reflect any future mortality improvements.

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 at Beginning of Year	State Employees, Legislature and Board of Education	
	Male	Female
0	16.00 %	16.00 %
1	10.12	10.12
2	8.08	8.08
3	6.88	6.88
4	6.04	6.04
5	5.38	5.38
6	4.84	4.84
7	4.39	4.39
8	4.00	4.00
9	3.65	3.65
10	3.34	3.34
11	3.06	3.06
12	2.81	2.81
13	2.57	2.57
14	2.35	2.35
15	2.15	2.15
16	1.96	1.96
17	1.78	1.78
18	1.61	1.61
19	1.45	1.45
20	1.30	1.30
21	1.16	1.16
22	1.02	1.02
23	0.89	0.89
24	0.77	0.77
25 or more	0.00	0.00

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 35% 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	2 %
4	2
3	2
2	3
1	4

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. All members still active are assumed to retire at age 65 with 10 years of service. Because of the enactment of Article 7 in 2009 and the RIRSA in 2011, the retirement assumption was modified for members whose retirement ages were delayed. Members who would have been assumed to retire prior to the rules in effect before the enactment of the provision changes are assumed to retire when first eligible for an unreduced benefit. This demand is recognized by adding a 5% probability for every year the member has been deferred.

Corrections			
Service	Ret. Rate	Service	Ret. Rate
20-24	2.00%	34	10.00%
25-27	3.00%	35	30.00%
28	4.00%	36	25.00%
29	5.00%	37	25.00%
30	6.00%	38	25.00%
31	7.00%	39	25.00%
32	8.00%	40	100.00%
33	9.00%		

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			
Hired before July 1, 2007		Hired on/after July 1, 2007	
Service	Ret. Rate	Service	Ret. Rate
20	12.00%	20	
21	10.00%	21	
22	10.00%	22	
23	10.00%	23	
24	12.00%	24	
25	14.00%	25	50.00%
26	16.00%	26	16.00%
27	18.00%	27	18.00%
28	20.00%	28	20.00%
29	20.00%	29	20.00%
30+	35.00%	30+	35.00%

100% of State Police members are assumed to retire at age 60 and completion of 20 years of service (25 years of service for members hired after July 1, 2007) if still active.

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 (Continued)

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

Percent Becoming Disabled within Next Year						
State Employees, Legislature, and Board of Education						
Sample Ages	Male		Female		State Police Male & Female	
	Ordinary	Accidental	Ordinary	Accidental	Ordinary	Accidental
20	0.021 %	0.009 %	0.024 %	0.007 %	0.02 %	0.12 %
25	0.032	0.014	0.036	0.011	0.03	0.17
30	0.039	0.017	0.044	0.013	0.03	0.22
35	0.053	0.023	0.060	0.018	0.04	0.29
40	0.077	0.033	0.088	0.026	0.07	0.44
45	0.126	0.054	0.144	0.043	0.11	0.72
50	0.214	0.092	0.244	0.073	0.18	1.21
55	0.354	0.152	0.404	0.121	0.18	1.21
60	0.494	0.212	0.564	0.169	0.18	1.21
65	0.809	0.347	0.924	0.277	0.18	1.21

Judges are not assumed to become disabled.

Actuarial Assumptions (Concluded)

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

Medical and Prescription Drug Trend Rate Increases from Prior Year	
Year	Intermediate
2019	8.25 %
2020	7.75
2021	7.25
2022	6.75
2023	6.25
2024	5.75
2025	5.25
2026	4.75
2027	4.50
2028	4.25
2029	4.00
2030	3.75
2031 & Later	3.50

Dental and Vision rates were assumed to increase by 3.50% each year.

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

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 terminations 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 Visions Benefits were assumed to be fully paid by the retiree.
Census Data:	We used census data that was used in the June 30, 2017 valuation except for the Board of Education retirees, which was based on revised data listings. Liabilities were calculated as of June 30, 2017 and rolled-forward to the valuation date.
Marriage Assumption:	<p>85% members are assumed to be married for purposes of death-in-service benefits. 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 Early Retiree plan were assumed not to coordinate with Medicare. Retirees enrolled in the Early Retiree Plan in 2018 were assumed to enroll in the Anchor Plus Plan in 2019 and retirees enrolled in the Value Plan in 2018 were assumed to enroll in the Retiree Value Plan in 2019.
Excise Tax:	An adjustment of 9.5% is applied to pre-65 liabilities to reflect potential future excise taxes under the Patient Protection and Affordable Care Act.
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 E

SUPPLEMENTARY INFORMATION

This information is as reported in the Plan's CAFR. We did not independently calculate these items.

This information is presented in draft form for review by the Plan and/or State auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan and/or State financial statements.

Supplementary Information

Name of Plan	Rhode Island State Employees' and Electing Teachers OPEB
Type of Plan	Agent Multiple-Employer Plan
Valuation Date	June 30, 2018
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 18 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	3.0%-14.0%
Valuation Health Care Cost Trend Rate	
Intermediate	8.25% in 2019, grading to 3.5% in 2031

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						
6/30/2007	\$ -	\$ 14,024	\$ 14,024	0.0%	\$ 9,888	141.8%
6/30/2009	-	8,665	8,665	0.0%	9,395	92.2%
6/30/2011	841	2,610	1,769	32.2%	10,813	16.4%
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	3,924	1,299	(2,625)	302.1%	10,746	(24.4)%
Legislators						
6/30/2007	\$ -	\$ 29,764	\$ 29,764	0.0%	\$ 1,592	1869.6%
6/30/2009	-	11,752	11,752	0.0%	1,612	729.0%
6/30/2011	1,442	1,443	1	99.9%	1,615	0.1%
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	2,902	1,545	(1,357)	187.8%	1,719	(78.9)%
State Employees						
6/30/2007	\$ -	\$ 679,538	\$ 679,538	0.0%	\$ 626,145	108.5%
6/30/2009	-	673,640	673,640	0.0%	574,569	117.2%
6/30/2011	11,545	786,293	774,748	1.5%	600,273	129.1%
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	172,930	637,846	464,916	27.1%	708,887	65.6%
Teacher						
6/30/2007	\$ -	\$ 10,243	\$ 10,243	0.0%	N/A	N/A
6/30/2009	-	13,529	13,529	0.0%	N/A	N/A
6/30/2011	2,040	11,512	9,472	17.7%	N/A	N/A
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	11,250	11,890	640	94.6%	N/A	N/A
State Police						
6/30/2007	\$ -	\$ 54,620	\$ 54,620	0.0%	\$ 15,977	341.9%
6/30/2009	-	67,079	67,079	0.0%	16,725	401.1%
6/30/2011	1,488	81,759	80,271	1.8%	17,384	461.8%
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	44,011	82,957	38,946	53.1%	21,334	182.6%
Board of Education						
6/30/2007	\$ -	\$ 57,881	\$ 57,881	0.0%	\$ 110,092	52.6%
6/30/2009	-	58,476	58,476	0.0%	106,665	54.8%
6/30/2011	3,189	53,751	50,562	5.9%	125,340	40.3%
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	30,297	72,201	41,904	42.0%	124,967	33.5%

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	6/30/2010 ^a	11.64%	\$ 1,131	15.33%	\$ 2,811
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	0.00%			
Legislators					
6/30/2007	6/30/2010 ^a	116.91%	\$ 1,861	7.72%	\$ 2,095
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	0.00%			
State Employees					
6/30/2007	6/30/2010 ^a	7.91%	\$ 45,852	73.07%	\$ -
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	5.93%			

^a Based on a discount rate of 3.566%.

^b Based on a discount rate of 5.00%.

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	6/30/2010 ^a	\$ 2,345	\$ 2,345	100.00%	\$ -
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	-			-
State Police					
6/30/2007	6/30/2010 ^a	29.83%	\$ 4,640	48.88%	\$ 8,222
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	26.87%			-
Board of Education					
6/30/2007	6/30/2010 ^a	4.15%	\$ 1,665	53.20%	\$ -
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	3.23%			-

^a Based on a discount rate of 3.566%.

^b Based on a discount rate of 5.00%.

APPENDIX A

OPEB Specific Assumptions

In any long-term actuarial valuation (such as for pensions and OPEB), certain demographic, economic and behavioral assumptions must be made concerning the population, investment discount rates, and the benefits provided. These actuarial assumptions form the basis for the actuarial model which is used to project the future population, benefits to be provided, and contributions to be collected. The investment return rate assumption is used to discount the future benefits to a present value on the valuation date. While assumptions such as future rates of retirement and mortality are similar for both OPEB and pension plans, there are some additional assumptions required when projecting benefits for a health care plan.

The cost of providing medical services has been increasing more rapidly than prices in general for many years. During the period from 1957 to 2011 general inflation averaged 4.0%, while health expenditures increased by an average of about 10% per year. If this trend is projected to continue for years to come, it implies that years from now virtually all our expenditures will be for health care. The seemingly more reasonable alternative is that in the not too distant future medical expense inflation will stabilize at a level at or near general inflation. It is on this basis that we project that retiree health care costs will continue to exceed general inflation in the near term, but by less each year until leveling off at an ultimate rate that is similar to general price increases.

Health care trend rates used in this valuation lie within a range of reasonable assumptions, and are described on page D-11 of this report. The health care trend rate assumption has a major effect on the calculation of plan liabilities.

APPENDIX B

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.