



State of Maine State Retiree Healthcare Plan  
**Actuarial Valuation Report**

June 30, 2019

Prepared by Deloitte Consulting LLP

September 2020

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# Actuarial Valuation Opinion

This report presents the results of the actuarial valuation of the "Other" Post-Employment Benefits ("OPEB") provided under the State of Maine Retiree Healthcare Plan for State Employees ("State Employees"), Maine Educational Center for the Deaf and Hard of Hearing ("Baxter School"), and Northern New England Passenger Rail Authority ("NNEPRA") as of June 30, 2019. Throughout this report, the Baxter School and NNEPRA will be referred to collectively as the "Ancillary Groups". In our opinion, this report is complete and accurate and represents fairly the actuarial position of the Plan for the purposes stated herein.

The actuarial valuation has been prepared based on participant data, financial information, and plan descriptions as of June 30, 2019. The actuary has analyzed the data and other information provided for reasonableness but has not independently audited the data. Estimates were made where data was missing or unavailable. The actuary has no reason to believe the data and other information is not accurate and knows of no further information that is essential to the preparation of the actuarial valuation.

In our opinion, all costs, liabilities, rates of interest, and other factors underlying these actuarial computations have been determined on the basis of actuarial assumptions and methods, which are each reasonable (or consistent with authoritative guidance) for the purposes described herein taking into account the experience of the Plans and future expectations.

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

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this report.

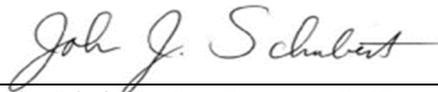
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# Background and Comments

## Governmental Accounting Requirements and Report Purpose

The Governmental Accounting Standards Board released the Statement of Governmental Accounting Standards Nos. 74 and 75 in June 2015. GASB No. 74 establishes financial reporting requirements for OPEB plans that have assets accumulated in a trust or equivalent arrangement for the purpose of funding OPEB plans. GASB No. 75 requires employers and non-employer contributing entities to accrue the cost of post-employment benefits other than pensions (“OPEB”) while eligible employees are providing services to the employer. The State of Maine first adopted GASB No. 74 for the June 30, 2017 Reporting Date and GASB No. 75 for the June 30, 2018 Reporting Date (using a Measurement Date of June 30, 2017).

The purpose of this actuarial valuation report is to provide information that will serve as the basis for the State of Maine’s trust and employer financial reporting. The information provided herein will be used for the Reporting Dates for fiscal years ending June 30, 2020 and June 30, 2021 (for GASB No. 75 the State of Maine has elected to use a measurement date as of the end of the prior fiscal year). GASB Nos. 74 and 75 disclosures will be provided under separate cover.

## Overview of Plan

The State of Maine provides a Retiree Healthcare Plan for State and Ancillary Groups. To be eligible for reimbursement from the State, a retiree must be receiving a retirement benefit from the Maine Public Employees Retirement System (“MainePERS”). For employees retiring after January 1, 2012 (July 1, 2012 for Baxter School) the reimbursement from the State shall begin when the retiree reaches normal retirement age with at least one year of service under MainePERS; normal retirement age defined as:

**Tier 1** - Be at least 60 years of age with at least 10 years of service on 7/1/1993

**Tier 2** - Be at least 62 years of age with less than 10 years of service on 7/1/1993 or hired on/after 7/1/1993 but had 5 years of service on 7/1/2011

**Tier 3** - Be at least 65 years of age with less than 5 years of service on 7/1/2011 or hired on/after 7/1/2011

Normal retirement eligibility occurs upon attainment of 25 years of service, if earlier.

Additional eligibility provisions for MainePERS special plans are discussed in Section 10 – Summary of Substantiative Plan Provisions of this report.

## Background and Comments (Cont.)

### State of Maine Contributions

The State of Maine contributes the following towards retiree premiums.

Hire Date ≤ 7/1/91	7/1/91 < Hire Date < 7/1/11		Hire Date ≥ 7/1/11	
	Years in Medical	% Retiree Premium	Years in Medical	% Retiree Premium
100% of Retiree Premium	< 5	0%	< 10	0%
	5	50%	10-14	50%
	6	60%	15-19	75%
	7	70%	≥ 20	100%
	8	80%		
	9	90%		
	≥ 10	100%		

- Percent of the retiree-only medical premium above based on:
  - Single rate for single and employee + child(ren) coverage
  - 50% of 2-party rate for 2-party and family coverage
- No State cash subsidy until retiree reaches normal retirement age for non-special plan service retirements ≥ 1/1/12 (7/1/12 for Baxter School and teachers in unorganized territories)
- Disability retirement benefits are 100% vested and cash subsidy begins at disability retirement

Retirees pay the remaining portion of the retiree-only premium and/or the full additional premium for spouse and family coverage. There is no benefit for surviving spouses.

As of July 1, 2018, retirees who were currently over the age of 65 and not eligible for Medicare were given the option to remain on State's self-insured plan or to move to a fully-insured Medicare Advantage plan. It is our understanding the same level of benefits continue to be provided for these individuals in the Medicare Advantage plan and this change was implemented to more cost-effectively deliver post-65 benefits. All future retirees will not be given the option to stay on the State's self-insured plan and will be covered by a fully-insured Medicare Advantage plan.

- For those who elected the Medicare Advantage Plan, the State of Maine is also reimbursing the Medicare Part B premium and any applicable penalty. Only those who were given the option to move to this plan will have these amounts covered by the State.

The substantive plan of benefits is described in Section 10 – Summary of Substantiative Plan Provisions of this report.

### Implicit Rate Subsidy

GASB Nos. 74 and 75 require that employers/non-employer contributing entities recognize the Implicit Rate Subsidy that exists in many postretirement medical plans provided by governmental employers. The Implicit Rate Subsidy refers to the concept that retirees under the age of 65 (i.e., not eligible for Medicare) generate higher claims on average than active participants.

## Background and Comments (Cont.)

When a medical plan is self-insured through a third-party administrator or fully insured, a premium is usually determined by analyzing the claims of the entire population in that plan and adjusting for administrative costs. The resulting premium is called a blended premium because it blends the claims of active and retired participants. Since individuals generally have more and higher claims as they get older, the blended premium paid for retirees is lower than their expected claims. Another way of considering this is that if the retirees were removed from the plan, the premium for the active group would be lower; therefore, the retirees' premiums are being subsidized by the active group. Since the employer generally pays a large portion or all of the premiums for the active group, this subsidy creates a liability for the employer. The difference between the expected claims for the retiree group and the blended premium is called the Implicit Rate Subsidy.

Valuations for both State employees and Ancillary Groups include the implicit rate subsidy for retirees, spouses, and surviving spouses to age 65, other than the following:

- As of July 1, 2018, retirees who were currently over the age of 65 and not eligible for Medicare were given the option to remain on State's self-insured plan or to move to a fully-insured Medicare Advantage plan. For those remaining on the State's self-insured plan the implicit subsidy is valued for life.

## Health Care Reform

The Patient Protection and Affordable Care Act ("PPACA") was signed into law on March 23, 2010. The primary objective of the act is to increase the number of Americans with health insurance coverage. There are several provisions within PPACA with potentially significant short- and long-term cost implications for employers. The applicable provisions of PPACA were considered in this valuation. On December 18, 2015, the Consolidated Appropriations Act, 2016 became law. This legislation delayed the effective date of the high cost plan excise tax from 2018 to 2020 and made it tax deductible. On January 22, 2018, the Federal Register Printing Savings Act further delayed the effective date from 2020 to 2022. We estimate the impact of the excise tax to be de minimis for this measurement and therefore the excise tax was not valued. Further, the tax was repealed on December 20, 2019 and there will no longer be any liability associated with this tax in future measurements.

The provisions of PPACA considered are as follows:

- Prohibiting lifetime and annual limits on the dollar value of coverage for "essential health benefits"
- Increasing the dependent child age limit to age 26
- Elimination of cost sharing for in-network preventive services
- Reflecting manufacturer discounts available to certain Medicare beneficiaries receiving applicable covered Part D drugs (mostly brand) while in the coverage gap
- Transitional Reinsurance Fee
- Out-of-pocket limit includes both medical and Rx expenses

## Actuarial Methods and Assumptions

The actuarial methods and assumptions are described in Section 8 – Summary of Actuarial Methods & Assumptions of this report.

The majority of the State and Ancillary Group Employees covered under this plan are participants in the MainePERS State and Teacher Retirement Program. For this reason, several demographic assumptions are selected to be consistent with the most recently available active lives actuarial valuation of that plan.

## Background and Comments (Cont.)

For the State Employees Plan, benefits are funded in the State Employees Trust Fund. The Trust is projected to have sufficient assets to meet projected benefit payments in all future years. As prescribed by GASB Nos. 74 and 75, the discount rate will be based on the expected long-term rate of future investment return on the assets that are expected to be used to finance the payment of benefits. State of Maine has elected to use a discount rate of 6.75%. Since the State of Maine has funded its liability with investments held in a separate trust, those assets should be used as the basis for the selection of the discount rate.

To recommend a discount rate for the State of Maine, we used a “building block” method, as outlined in the Actuarial Standards of Practice (“ASOP”) for “Selection of Economic Assumptions for Measuring Pension Obligations” (No. 27). Under the “building block” method, the expected future investment of a portfolio is estimated using the following information and estimates:

1. The expected long-term inflation level;
2. The broad asset classes making up the portfolio and their proportion of total assets; and
3. For each asset class, the expected long-term real return (excess above inflation) of that asset class.

The expected future return of each asset class is then the sum of (1) and (3) above, and the expected future portfolio return is the weighted average of the asset class returns, where the weights are the proportions in (2) above.

Since the Ancillary Groups’ postretirement medical plans are not being funded by assets in a separate trust, GASB No. 75 requires that the discount rate be based on the index rate as of the measurement date of a 20-year tax-exempt general obligation municipal bond index with an average rating of AA/Aa or higher. The State of Maine elected to determine the discount rate using the Bond Buyer 20-Bond General Obligation Index. The discount rate was 3.50% as of the measurement date, June 30, 2019, (3.58% as of June 30, 2017).

Claim costs for those covered by the State of Maine self-insured plan were developed with consideration of the 2019 premium rates developed by the State of Maine and by applying appropriate age factors to average annual costs per member.

Premium costs for those covered by a Group Medicare Advantage Plan are based on the applicable fully-insured premiums, as adjusted by applying age factors.

For the June 30, 2019 valuation, the valuation was based on the same plan provisions and actuarial methods and assumptions as the previous valuation with the exception of the following:

- The discount rate assumption was updated to 3.50% for the Ancillary Groups.
- Healthcare cost trend rates were updated based on industry observations and the current SOA-Getzen model.

The effect of these changes on the Actuarial Accrued Liability is summarized in Section 3 – Actuarial Experience of the report. The actuarial methods and assumptions are described in more detail later in this report.

# Valuation Results

## Section 1 – Summary of Actuarial Valuation Results

Presented below are the current and prior actuarial valuation results. All information is provided as of the valuation date shown. Dollar amounts are in thousands.

### *State Employees*

	Valuation Date	
	June 30, 2019	June 30, 2017
1. Actuarial Accrued Liability	\$1,154,160	\$1,175,459
2. Actuarial Value of Assets	264,818	222,738
3. Unfunded Actuarial Accrued Liability (UAAL) (1) - (2)	\$889,342	\$952,721
4. Funded ratio (2 / 1)	22.94%	18.95%
5. UAAL as a percentage of covered payroll (3 / 8b)	141.98%	163.44%
6. Normal Cost	\$17,777	\$16,917
7. Discount Rate	6.75%	6.75%
8. Actuarially Determined Contribution	\$56,241	\$71,179
9. Census Data Used		
a. Count of Covered Participants		
Actives	11,886	12,076
Terminated Vested - Eligible for Participation	134	182
Retirees	8,848	8,568
Total	20,868	20,826
b. Covered Payroll	\$626,384	\$582,934
10. Expected Benefit Payments	\$68,290	\$70,994

## Section 1 – Summary of Actuarial Valuation Results (Cont.)

Presented below are the current and prior actuarial valuation results. All information is provided as of the valuation date shown. Dollar amounts are in thousands.

### *Baxter School*

	Valuation Date	
	June 30, 2019	June 30, 2017
1. Actuarial Accrued Liability	\$5,912	\$5,952
2. Actuarial Value of Assets	-	-
3. Unfunded Actuarial Accrued Liability (UAAL) (1) - (2)	\$5,912	\$5,952
4. Funded ratio (2 / 1)	0.00%	0.00%
5. UAAL as a percentage of covered payroll (3 / 8b)	172.11%	171.68%
6. Normal Cost	\$218	\$181
7. Discount Rate	3.50%	3.58%
8. Census Data Used		
a. Count of Covered Participants		
Actives	81	77
Terminated Vested - Eligible for Participation	3	0
Retirees	38	33
Total	122	110
b. Covered Payroll	\$3,435	\$3,467
9. Expected Benefit Payments	\$291	\$280

## Section 1 – Summary of Actuarial Valuation Results (Cont.)

Presented below are the current and prior actuarial valuation results. All information is provided as of the valuation date shown. Dollar amounts are in thousands.

NNEPRA	Valuation Date	
	June 30, 2019	June 30, 2017
1. Actuarial Accrued Liability	\$480	\$393
2. Actuarial Value of Assets	-	-
3. Unfunded Actuarial Accrued Liability (UAAL) (1) - (2)	\$480	\$393
4. Funded ratio (2 / 1)	0.00%	0.00%
5. UAAL as a percentage of covered payroll (3 / 8b)	70.59%	84.52%
6. Normal Cost	\$29	\$22
7. Discount Rate	3.50%	3.58%
8. Census Data Used		
a. Count of Covered Participants		
Actives	11	7
Terminated Vested - Eligible for Participation	0	0
Retirees	1	2
Total	12	9
b. Covered Payroll	\$680	\$465
9. Expected Benefit Payments	\$4	\$7

## Section 2 – Actuarial Value of Assets

This section provides a summary of the development of the actuarial value of assets. All information is provided as of the measurement date. This section is not applicable to the Baxter School or NNEPRA. Dollar amounts are in thousands.

### State Employees

	June 30, 2019	June 30, 2018
1. Market value of assets (MVA) at beginning of year	\$256,860	\$233,596
a. Contributions	92,829	80,612
b. Benefit Payments	(90,829)	(78,612)
c. Administrative Expenses	(3)	(6)
d. Expected Investment Earnings	17,338	15,768
2. Expected MVA at end of year: (1a)+(1b)+(1c)+(1d)	\$276,195	\$251,358
3. Actual MVA at end of year	\$277,703	\$256,860
4. Actuarial value of assets (AVA) at beginning of year	\$243,185	\$222,738
a. Contributions	92,829	80,612
b. Benefit Payments	(90,829)	(78,612)
c. Administrative Expenses	(3)	(6)
d. Expected Investment Earnings	16,415	15,035
5. Expected AVA at end of year: (4a)+(4b)+(4c)+(4d)	\$261,597	\$239,766
6. MVA - Expected AVA: (3) - (5)	\$16,107	\$17,095
7. 1/5 of (MVA - Expected AVA)	\$3,221	\$3,419
8. Preliminary AVA: (5) + (7)	\$264,818	\$243,185
9. Minimum AVA (80% of MVA)	\$222,163	\$205,488
10. Maximum AVA (120% of MVA)	\$333,244	\$308,232
11. AVA at the end of the year	\$264,818	\$243,185

*Amounts may be off by \$1,000 due to rounding*

## Section 3 – Actuarial Experience

Actuarial gains and losses arise from experience different from that assumed, changes in actuarial assumptions and methods, and changes in plan provisions. The following summarizes the changes in the Actuarial Accrued Liability due to these sources from June 30, 2017 to June 30, 2019. Dollar amounts are in thousands.

### *State Employees*

1. Actuarial Accrued Liability as of June 30, 2017		\$1,175,459
2. Normal Cost for year ending June 30, 2018		16,917
3. Actual Benefit Payments for the year ending June 30, 2018		(78,612)
4. Interest at 6.75% on (1), (2) and (3)		77,876
5. Expected Actuarial Accrued Liability as of June 30, 2018 (1) + (2) + (3) + (4)		\$1,191,640
6. Normal Cost for year ending June 30, 2019		17,425
7. Actual Benefit Payments for the year ending June 30, 2019		(90,829)
8. Interest at 6.75% on (5), (6) and (7)		78,596
9. Expected Actuarial Accrued Liability as of June 30, 2019 (5) + (6) + (7) + (8)		\$1,196,832
10. (Gain)/Loss		
i. Demographic Experience <sup>1</sup>	(43,189)	
ii. Change in Trend Rates	517	
iii. Total (Gain)/Loss		(42,672)
11. Actual Actuarial Accrued Liability as of June 30, 2019 (9) + (10)(iii)		\$1,154,160

<sup>1</sup> Includes Claims and Premiums experience

### Section 3 – Actuarial Experience (Cont.)

Actuarial gains and losses arise from experience different from that assumed, changes in actuarial assumptions and methods, and changes in plan provisions. The following summarizes the changes in the Actuarial Accrued Liability due to these sources from June 30, 2017 to June 30, 2019. Dollar amounts are in thousands.

#### *Baxter School*

1. Actuarial Accrued Liability as of June 30, 2017		\$5,952
2. Normal Cost for year ending June 30, 2018		181
3. Actual Benefit Payments for the year ending June 30, 2018		(176)
4. Interest at 3.58% on (1), (2) and (3)		216
5. Expected Actuarial Accrued Liability as of June 30, 2018 (1) + (2) + (3) + (4)		\$6,173
6. Normal Cost for year ending June 30, 2019		186
7. Actual Benefit Payments for the year ending June 30, 2019		(118)
8. Interest at 3.58% on (5), (6) and (7)		226
9. Expected Actuarial Accrued Liability as of June 30, 2019 (5) + (6) + (7) + (8)		\$6,467
10. (Gain)/Loss		
i. Demographic Experience <sup>1</sup>	(629)	
ii. Change in Trend Rates	8	
iii. Change in Discount Rate	66	
iv. Total (Gain)/Loss	(555)	(555)
11. Actual Actuarial Accrued Liability as of June 30, 2019 (9) + (10)(iii)		\$5,912

<sup>1</sup> Includes Claims and Premiums experience

## Section 3 – Actuarial Experience (Cont.)

Actuarial gains and losses arise from experience different from that assumed, changes in actuarial assumptions and methods, and changes in plan provisions. The following summarizes the changes in the Actuarial Accrued Liability due to these sources from June 30, 2017 to June 30, 2019. Dollar amounts are in thousands.

### NNEPRA

1. Actuarial Accrued Liability as of June 30, 2017		\$393
2. Normal Cost for year ending June 30, 2018		22
3. Actual Benefit Payments for the year ending June 30, 2018		(7)
4. Interest at 3.58% on (1), (2) and (3)		15
5. Expected Actuarial Accrued Liability as of June 30, 2018 (1) + (2) + (3) + (4)		\$423
6. Normal Cost for year ending June 30, 2019		22
7. Actual Benefit Payments for the year ending June 30, 2019		(7)
8. Interest at 3.58% on (5), (6) and (7)		16
9. Expected Actuarial Accrued Liability as of June 30, 2019 (5) + (6) + (7) + (8)		\$454
10. (Gain)/Loss		
i. Demographic Experience <sup>1</sup>	16	
ii. Change in Trend Rates	2	
iii. Change in Discount Rate	8	
iv. Total (Gain)/Loss		26
11. Actual Actuarial Accrued Liability as of June 30, 2019 (9) + (10)(iii)		\$480

<sup>1</sup> Includes Claims and Premiums experience

## Section 4 – Development of Unfunded Actuarial Accrued Liability

Presented below is the development of the Unfunded Actuarial Accrued Liability as of June 30, 2019, which is the Actuarial Accrued Liability minus the Actuarial Value of Assets. The Actuarial Accrued Liability is the portion of the Present Value of Future Benefits accrued to date. The Present Value of Future Normal Costs represents the portion of the Present Value of Future Benefits expected to accrue in the future, based on the current population. Dollar amounts are in thousands.

### *State Employees*

	<b>Explicit Subsidy</b>	<b>Implicit Subsidy</b>	<b>Total</b>
1. Present Value of Future Benefits			
Actives	\$506,769	\$78,624	\$585,393
Terminated Vested	4,839	944	5,783
Retirees and beneficiaries	570,736	123,688	694,424
Total	<u>\$1,082,344</u>	<u>\$203,256</u>	<u>\$1,285,600</u>
2. Present Value of Future Normal Costs	\$113,537	\$17,903	\$131,440
3. Actuarial Accrued Liability			
Actives	\$393,232	\$60,721	\$453,953
Terminated Vested	4,839	944	5,783
Retirees and beneficiaries	570,736	123,688	694,424
Total	<u>\$968,807</u>	<u>\$185,353</u>	<u>\$1,154,160</u>
4. Actuarial Value of Assets			\$264,818
5. Unfunded Actuarial Accrued Liability (3) - (4)			\$889,342

## Section 4 – Development of Unfunded Actuarial Accrued Liability (Cont.)

Presented below is the development of the Unfunded Actuarial Accrued Liability as of June 30, 2019, which is the Actuarial Accrued Liability minus the Actuarial Value of Assets. The Actuarial Accrued Liability is the portion of the Present Value of Future Benefits accrued to date. The Present Value of Future Normal Costs represents the portion of the Present Value of Future Benefits expected to accrue in the future, based on the current population. Dollar amounts are in thousands.

### *Baxter School*

	<b>Explicit Subsidy</b>	<b>Implicit Subsidy</b>	<b>Total</b>
1. Present Value of Future Benefits			
Actives	\$4,331	\$456	\$4,787
Terminated Vested	131	35	166
Retirees and beneficiaries	3,019	261	3,280
Total	<u>\$7,481</u>	<u>\$752</u>	<u>\$8,233</u>
2. Present Value of Future Normal Costs	\$2,072	\$249	\$2,321
3. Actuarial Accrued Liability			
Actives	\$2,259	\$207	\$2,466
Terminated Vested	131	35	166
Retirees and beneficiaries	3,019	261	3,280
Total	<u>\$5,409</u>	<u>\$503</u>	<u>\$5,912</u>
4. Actuarial Value of Assets			-
5. Unfunded Actuarial Accrued Liability (3) - (4)			\$5,912

## Section 4 – Development of Unfunded Actuarial Accrued Liability (Cont.)

Presented below is the development of the Unfunded Actuarial Accrued Liability as of June 30, 2019, which is the Actuarial Accrued Liability minus the Actuarial Value of Assets. The Actuarial Accrued Liability is the portion of the Present Value of Future Benefits accrued to date. The Present Value of Future Normal Costs represents the portion of the Present Value of Future Benefits expected to accrue in the future, based on the current population. Dollar amounts are in thousands.

### NNEPRA

	<b>Explicit Subsidy</b>	<b>Implicit Subsidy</b>	<b>Total</b>
1. Present Value of Future Benefits			
Actives	\$700	\$64	\$764
Retirees and beneficiaries	71	-	71
Total	<u>\$771</u>	<u>\$64</u>	<u>\$835</u>
2. Present Value of Future Normal Costs	\$325	\$30	\$355
3. Actuarial Accrued Liability			
Actives	\$375	\$34	\$409
Retirees and beneficiaries	71	-	71
Total	<u>\$446</u>	<u>\$34</u>	<u>\$480</u>
4. Actuarial Value of Assets			-
5. Unfunded Actuarial Accrued Liability (3) - (4)			\$480

## Section 5 – Schedule of Amortization Balances for Actuarially Determined Contributions

### State Employees

	Original Bases			Remaining Bases June 30, 2019		2019/20 End of Year Amortization Payment
	Date	Years	Amount <sup>1</sup>	Years	Balance	
<b>Initial UAAL</b>	6/30/2008	29	1,144,000	18	1,006,357	79,508
<b>Experience Losses (Gains)</b>	6/30/2010	10	99,000	1	6,069	6,479
	6/30/2011	10	(34,000)	2	(6,319)	(3,433)
	6/30/2012	10	(199,000)	3	(59,641)	(21,986)
	6/30/2013	10	(146,000)	4	(60,760)	(17,095)
	6/30/2014	10	56,000	5	29,218	6,692
	6/30/2015	10	(25,000)	6	(15,682)	(3,045)
	6/30/2016	10	(33,000)	7	(77,646)	(13,148)
	6/30/2017	10	7,139	8	5,667	854
	6/30/2018	10	4,459	9	3,946	538
	6/30/2019	10	(58,859)	10	(58,859)	(7,341)
<b>Assumption Changes</b>	6/30/2010	27	35,000	18	28,490	2,251
	6/30/2011	26	266,000	18	234,357	18,515
	6/30/2012	25	(32,000)	18	(27,571)	(2,178)
	6/30/2014	23	(16,000)	18	(14,705)	(1,162)
	6/30/2016	21	33,000	18	30,329	2,396
	6/30/2017	20	(13,044)	18	(12,191)	(963)
	6/30/2019	18	517	18	517	41
<b>Plan Change</b>	6/30/2011	26	(139,000)	18	(122,233)	(9,657)
<b>Unfunded AAL</b>					<b>\$889,342</b>	<b>\$37,264</b>

<sup>1</sup> All bases for years ending 6/30/2016 and earlier were determined by the prior plan actuary.

## Section 6 – Determination of Actuarially Determined Contributions

GASB 75 requires the disclosure of the Actuarially Determined Contribution (“ADC”). The following is a brief explanation of the components of the ADC:

- **Normal Cost:** The portion of the total present value of benefits attributed to employee service during the current fiscal year.
- **Amortization Payments:** Total amortization payments detailed in Section 5 – Schedule of Amortization Balances of Actuarially Determined Contributions.
  - Unfunded liability as of 6/30/2007 amortized over 30 years (fully recognized by 6/30/2037)
  - Experience losses (gains) amortized over 10 years
  - Assumptions changes and plan changes amortized over period to 6/30/2037 (18-year fixed period from 6/30/2019)
  - Actual contributions greater than or less than ADC are allocated to each existing amortization base

Presented below is an illustration of the ADC for the fiscal year ending June 30, 2020. Dollar amounts are in thousands.

### *State Employees*

1. Normal Cost (with interest)	\$ 18,977
2. Sum of Amortizations from Section 6 (with interest)	<u>37,264</u>
3. Actuarially Determined Contribution: (1) + (2)	\$ 56,241
4. Expected Pay-as-you-go Cost for Fiscal Year Ending June 30, 2020	\$ 91,560

## Section 7 – 10-Year Projection of Employer Benefit Payments

Presented below are the projected employer benefit payments for the next ten years based on the current plan design. These projected benefit payments are based on actuarial assumptions shown in Section 8 - Summary of Actuarial Methods & Assumptions. If actual experience differs from that expected by the actuarial assumptions, the actual employer benefit payments will vary from those presented below. Dollar amounts are in thousands.

### State Employees

Year Ending	Explicit Subsidy	Implicit Subsidy	Total Benefit Payments
6/30/2020	\$50,871	\$17,419	\$68,290
6/30/2021	51,918	16,702	68,620
6/30/2022	53,693	16,631	70,324
6/30/2023	55,933	16,203	72,136
6/30/2024	58,408	15,917	74,325
6/30/2025	60,865	15,925	76,790
6/30/2026	63,545	15,761	79,306
6/30/2027	66,237	15,634	81,871
6/30/2028	68,695	15,542	84,237
6/30/2029	71,258	15,205	86,463

### Baxter School

Year Ending	Explicit Subsidy	Implicit Subsidy	Total Benefit Payments
6/30/2020	\$205	\$85	\$290
6/30/2021	195	64	259
6/30/2022	203	46	249
6/30/2023	206	50	256
6/30/2024	221	51	272
6/30/2025	222	27	249
6/30/2026	235	30	265
6/30/2027	244	36	280
6/30/2028	256	37	293
6/30/2029	260	36	296

### NNEPRA

Year Ending	Explicit Subsidy	Implicit Subsidy	Total Benefit Payments
6/30/2020	\$4	\$0	\$4
6/30/2021	4	-	4
6/30/2022	4	-	4
6/30/2023	5	-	5
6/30/2024	5	1	6
6/30/2025	5	1	6
6/30/2026	6	1	7
6/30/2027	14	5	19
6/30/2028	16	7	23
6/30/2029	18	9	27

# Basis for the Valuation

## Section 8 – Summary of Actuarial Methods & Assumptions

### Actuarial Cost Method

The Actuarial Cost Method used in this valuation to determine the Actuarial Accrued Liability was the Entry Age Normal Percent of Pay method.

This method is one of the family of projected benefit cost methods. An estimate of the projected benefit payable at retirement is initially required to determine costs and liabilities under this method.

The Normal Cost is the annual allocation required for each participant from entry date to assumed retirement date so that the accumulated allocation at retirement is equal to the liability for the projected benefit. The projected benefits are based on estimates of future years of service and projected health benefit costs. The normal cost is developed as a level percentage of pay.

The Present Value of Future Benefits is equal to the value of the projected benefit payable at retirement discounted back to the participant’s current age. Discounts include such items as interest and mortality. The Present Value of Future Normal Costs is equal to the discounted value of the normal costs allocated from the member’s current age to retirement age.

The difference between the Present Value of Future Benefits and the Present Value of Future Normal Costs represents the Actuarial Accrued Liability at the participant’s current age.

The Actuarial Accrued Liability for participants currently receiving benefits and terminated vested participants is calculated as the Present Value of Future Benefits expected to be paid. No Normal Cost is payable for these participants.

This actuarial cost method is required by GASB No. 75.

### Actuarial Value of Assets

Investment gains and losses spread over a 5-year period, with the resulting Actuarial Value of Assets limited to be not less than 80% nor more than 120% of market value.

### Investment Policy

<b>Asset Class</b>	<b><u>Target Allocation</u></b>	<b><u>June 30, 2019 Actual Allocation</u></b>
International Equity	25.00%	24.40%
US Fixed Income	25.00%	25.85%
US Equity	45.00%	44.71%
Real Estate	5.00%	5.04%
Cash	0.00%	0.00%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

### Funding Policy

For State employees:

- Initial prefunding contribution of \$100 million for 2007/08
- Phase into funding at least the full Actuarially Determined Contribution (“ADC”) funding over 10-year period beginning with 2009/10:

Fiscal Year	Funding Policy Contribution
2007/08	PayGo + \$100 million
2008/09	PayGo
2009/10	PayGo + 10% x (ADC – PayGo)
2010/11	PayGo + 20% x (ADC – PayGo)
2011/12	PayGo + 30% x (ADC – PayGo)
2012/13	PayGo + 40% x (ADC – PayGo)
2013/14	PayGo + 50% x (ADC – PayGo)
2014/15	PayGo + 60% x (ADC – PayGo)
2015/16	PayGo + 70% x (ADC – PayGo)
2016/17	PayGo + 80% x (ADC – PayGo)
2017/18	PayGo + 90% x (ADC – PayGo)
2018/19+	100% of ADC

The State is currently funding the Ancillary plans on a pay-as-you-go basis. This valuation assumes the State will continue this policy.

### Amortization Method and Periods

Amortization Method: Level percent of payroll

Amortization periods for determining the ADC for the State:

- Unfunded liability as of 6/30/2007 amortized over 30 years (fully recognized by 6/30/2037)
- Experience losses (gains) amortized over 10 years
- Assumptions changes and plan changes amortized over period to 6/30/2037 (18-year fixed period from 6/30/2019)
- Actual contributions greater than or less than ADC are allocated to each existing amortization base

### Financial and Census Data

The State of Maine provided the participant data, financial information and plan descriptions used in this valuation. The actuary has checked the data for reasonableness, but has not independently audited the data. The actuary has no reason to believe the data is not complete and accurate, and knows of no further information that is essential to the preparation of the actuarial valuation.

## **Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)**

### **Census Date**

June 30, 2019

### **Measurement Date**

June 30, 2019

### **Method Changes Since Prior Valuation**

None.

## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

<b>Discount Rate</b>	<p><u>State</u> 6.75%, representing the expected long-term rate of return on the assets expected to be used to pay plan benefits.</p> <p><u>Ancillary</u> 3.50%</p>																																																																		
<b>Healthy Mortality</b>	<p>Rates are based on the RP-2014 Mortality Tables and MP-2015 Mortality Improvement Scale with the following adjustments:</p> <ul style="list-style-type: none"> <li>• Adjustment of 104% for males and 120% for females applied to the RP-2014 Mortality Tables 2006 bases rates</li> <li>• MP-2015 Mortality Improvement Scale adjusted to use an ultimate rate of 0.85% for ages 20-85 grading down to an ultimate rate of 0.00% for ages 111-120, and convergence to the ultimate rate in the year 2020.</li> </ul>																																																																		
<b>Disabled Mortality</b>	<p>Rates are based on the RP-2014 Total Dataset Disabled Annuitant Mortality Tables and MP-2015 Mortality Improvement Scale with the following adjustments:</p> <ul style="list-style-type: none"> <li>• Adjustment of 108% for males and 105% for females applied to the RP-2014 Mortality Tables 2006 bases rates</li> <li>• MP-2015 Mortality Improvement Scale adjusted to use an ultimate rate of 0.85% for ages 20-85 grading down to an ultimate rate of 0.00% for ages 111-120, and convergence to the ultimate rate in the year 2020.</li> </ul>																																																																		
<b>Termination</b>	<p>Sample Rates of Termination at Selected Years of Service:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>Service</u></th> <th><u>State</u></th> <th><u>Age</u></th> <th><u>Judicial</u></th> <th><u>Service</u></th> <th><u>Legislative</u></th> </tr> </thead> <tbody> <tr> <td>0</td> <td>33.50%</td> <td>25</td> <td>7.0%</td> <td>0</td> <td>0.0%</td> </tr> <tr> <td>1</td> <td>22.00%</td> <td>30</td> <td>6.0%</td> <td>2</td> <td>30.0%</td> </tr> <tr> <td>2</td> <td>16.50%</td> <td>35</td> <td>5.0%</td> <td>4</td> <td>25.0%</td> </tr> <tr> <td>3</td> <td>13.25%</td> <td>40</td> <td>4.0%</td> <td>6</td> <td>10.0%</td> </tr> <tr> <td>4</td> <td>12.15%</td> <td>45</td> <td>3.0%</td> <td>8</td> <td>50.0%</td> </tr> <tr> <td>5</td> <td>10.50%</td> <td>50</td> <td>2.0%</td> <td>10</td> <td>25.0%</td> </tr> <tr> <td>10</td> <td>5.95%</td> <td>55</td> <td>1.0%</td> <td>16+</td> <td>50.0%</td> </tr> <tr> <td>15</td> <td>4.25%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20</td> <td>4.00%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>25+</td> <td>4.00%</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	<u>Service</u>	<u>State</u>	<u>Age</u>	<u>Judicial</u>	<u>Service</u>	<u>Legislative</u>	0	33.50%	25	7.0%	0	0.0%	1	22.00%	30	6.0%	2	30.0%	2	16.50%	35	5.0%	4	25.0%	3	13.25%	40	4.0%	6	10.0%	4	12.15%	45	3.0%	8	50.0%	5	10.50%	50	2.0%	10	25.0%	10	5.95%	55	1.0%	16+	50.0%	15	4.25%					20	4.00%					25+	4.00%				
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## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

<b>Retirement</b>	<p>Retirement at Selected Ages (see Section 10 for Tier eligibility):</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Age</u></th> <th style="text-align: left;"><u>Tier 1</u></th> <th style="text-align: left;"><u>Tier 2</u></th> <th style="text-align: left;"><u>Tier 3</u></th> </tr> </thead> <tbody> <tr><td>50</td><td>2.9%</td><td>n/a</td><td>n/a</td></tr> <tr><td>55</td><td>4.0%</td><td>4.0%</td><td>4.0%</td></tr> <tr><td>56</td><td>4.0%</td><td>4.0%</td><td>4.0%</td></tr> <tr><td>57</td><td>4.0%</td><td>4.0%</td><td>4.0%</td></tr> <tr><td>58</td><td>7.5%</td><td>4.0%</td><td>4.0%</td></tr> <tr><td>59</td><td>15.0%</td><td>4.0%</td><td>4.0%</td></tr> <tr><td>60</td><td>25.0%</td><td>7.5%</td><td>4.0%</td></tr> <tr><td>61</td><td>20.0%</td><td>17.5%</td><td>4.0%</td></tr> <tr><td>62</td><td>20.0%</td><td>25.0%</td><td>4.0%</td></tr> <tr><td>63</td><td>20.0%</td><td>15.0%</td><td>7.5%</td></tr> <tr><td>64</td><td>25.0%</td><td>20.0%</td><td>22.5%</td></tr> <tr><td>65</td><td>35.0%</td><td>25.0%</td><td>30.0%</td></tr> <tr><td>70</td><td>20.0%</td><td>20.0%</td><td>30.0%</td></tr> <tr><td>75</td><td>100%</td><td>100%</td><td>100%</td></tr> </tbody> </table> <p><u>Legislative</u></p> <ul style="list-style-type: none"> <li>• Tier 1: 25.0% starting at age 60</li> <li>• Tier 2: 25.0% starting at age 62</li> <li>• Tier 3: 25.0% starting at age 65</li> <li>• 100% at age 70</li> </ul> <p><u>Judicial</u></p> <ul style="list-style-type: none"> <li>• Tier 1: age 60</li> <li>• Tier 2: 50.0% starting at age 62</li> <li>• Tier 3: 50.0% starting at age 65</li> <li>• 100% at age 75 for Tiers 2 and 3</li> </ul> <p><u>State 1998 Special Plan</u></p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Age</u></th> <th colspan="2" style="text-align: center;"><u>Service</u></th> </tr> <tr> <th></th> <th style="text-align: left;"><u>&lt;25</u></th> <th style="text-align: left;"><u>&gt;=25</u></th> </tr> </thead> <tbody> <tr><td>55</td><td>20.0%</td><td>25.0%</td></tr> <tr><td>57</td><td>10.0%</td><td>25.0%</td></tr> <tr><td>60</td><td>20.0%</td><td>30.0%</td></tr> <tr><td>62</td><td>15.0%</td><td>30.0%</td></tr> <tr><td>65</td><td>23.4%</td><td>30.0%</td></tr> <tr><td>67</td><td>36.8%</td><td>50.0%</td></tr> <tr><td>70</td><td>100.0%</td><td>100.0%</td></tr> </tbody> </table> <p><u>25 and Out Plan</u></p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Service</u></th> <th style="text-align: left;"><u>Rate</u></th> </tr> </thead> <tbody> <tr><td>25</td><td>25.0%</td></tr> <tr><td>30</td><td>50.0%</td></tr> <tr><td>35</td><td>100.0%</td></tr> </tbody> </table> <p><u>All Other Special Plans</u></p> <p>50% per year once eligibility for unreduced benefits is reached.</p>	<u>Age</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3</u>	50	2.9%	n/a	n/a	55	4.0%	4.0%	4.0%	56	4.0%	4.0%	4.0%	57	4.0%	4.0%	4.0%	58	7.5%	4.0%	4.0%	59	15.0%	4.0%	4.0%	60	25.0%	7.5%	4.0%	61	20.0%	17.5%	4.0%	62	20.0%	25.0%	4.0%	63	20.0%	15.0%	7.5%	64	25.0%	20.0%	22.5%	65	35.0%	25.0%	30.0%	70	20.0%	20.0%	30.0%	75	100%	100%	100%	<u>Age</u>	<u>Service</u>			<u>&lt;25</u>	<u>&gt;=25</u>	55	20.0%	25.0%	57	10.0%	25.0%	60	20.0%	30.0%	62	15.0%	30.0%	65	23.4%	30.0%	67	36.8%	50.0%	70	100.0%	100.0%	<u>Service</u>	<u>Rate</u>	25	25.0%	30	50.0%	35	100.0%
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## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

<b>Disability</b>	<p>Disability at Selected Ages:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Age</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>State</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Special Plans</u></th> </tr> </thead> <tbody> <tr><td>25</td><td>0.050%</td><td>0.054%</td></tr> <tr><td>30</td><td>0.061%</td><td>0.065%</td></tr> <tr><td>35</td><td>0.093%</td><td>0.099%</td></tr> <tr><td>40</td><td>0.148%</td><td>0.158%</td></tr> <tr><td>45</td><td>0.228%</td><td>0.244%</td></tr> <tr><td>50</td><td>0.340%</td><td>0.364%</td></tr> <tr><td>55</td><td>0.399%</td><td>0.426%</td></tr> <tr><td>60</td><td>0.434%</td><td>0.464%</td></tr> </tbody> </table> <p>Legislative and Judicial: no disability assumed.</p>	<u>Age</u>	<u>State</u>	<u>Special Plans</u>	25	0.050%	0.054%	30	0.061%	0.065%	35	0.093%	0.099%	40	0.148%	0.158%	45	0.228%	0.244%	50	0.340%	0.364%	55	0.399%	0.426%	60	0.434%	0.464%																																																													
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<b>Healthcare Cost Increases</b>	<p>Medical trend rates were developed using a combination of trend surveys and the SOA-Getzen trend rate model. Initial trend rates start at 6.20% in 2020 based on survey data and client market expectations. The SOA-Getzen model was then used to determine the trend rates beginning in year 2024 and thereafter based on reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy.</p> <table style="margin-left: 40px; border-collapse: collapse; width: 100%;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Plan Year*</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Rate</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Plan Year*</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>Rate</u></th> </tr> </thead> <tbody> <tr><td>2020</td><td>6.20%**</td><td>2060</td><td>5.12%</td></tr> <tr><td>2021</td><td>6.00%</td><td>2061</td><td>5.11%</td></tr> <tr><td>2022</td><td>5.90%</td><td>2062</td><td>5.09%</td></tr> <tr><td>2023</td><td>5.80%</td><td>2063</td><td>5.08%</td></tr> <tr><td>2024</td><td>5.76%</td><td>2064</td><td>5.06%</td></tr> <tr><td>2025</td><td>5.71%</td><td>2065</td><td>5.05%</td></tr> <tr><td>2026</td><td>5.67%</td><td>2066</td><td>4.96%</td></tr> <tr><td>2027</td><td>5.63%</td><td>2067</td><td>4.88%</td></tr> <tr><td>2028</td><td>5.59%</td><td>2068</td><td>4.80%</td></tr> <tr><td>2029 - 2048</td><td>5.54%</td><td>2069</td><td>4.72%</td></tr> <tr><td>2049</td><td>5.47%</td><td>2070</td><td>4.65%</td></tr> <tr><td>2050</td><td>5.39%</td><td>2071</td><td>4.57%</td></tr> <tr><td>2051</td><td>5.34%</td><td>2072</td><td>4.50%</td></tr> <tr><td>2052</td><td>5.31%</td><td>2073</td><td>4.43%</td></tr> <tr><td>2053</td><td>5.27%</td><td>2074</td><td>4.36%</td></tr> <tr><td>2054</td><td>5.25%</td><td>2075+</td><td>4.29%</td></tr> <tr><td>2055</td><td>5.22%</td><td></td><td></td></tr> <tr><td>2056</td><td>5.20%</td><td></td><td></td></tr> <tr><td>2057</td><td>5.18%</td><td></td><td></td></tr> <tr><td>2058</td><td>5.16%</td><td></td><td></td></tr> <tr><td>2059</td><td>5.14%</td><td></td><td></td></tr> </tbody> </table> <p style="margin-left: 40px; margin-top: 10px;">*Year ending June 30 **Adjusted to reflect known premium increases from July 1, 2019 to July 1, 2020.</p>	<u>Plan Year*</u>	<u>Rate</u>	<u>Plan Year*</u>	<u>Rate</u>	2020	6.20%**	2060	5.12%	2021	6.00%	2061	5.11%	2022	5.90%	2062	5.09%	2023	5.80%	2063	5.08%	2024	5.76%	2064	5.06%	2025	5.71%	2065	5.05%	2026	5.67%	2066	4.96%	2027	5.63%	2067	4.88%	2028	5.59%	2068	4.80%	2029 - 2048	5.54%	2069	4.72%	2049	5.47%	2070	4.65%	2050	5.39%	2071	4.57%	2051	5.34%	2072	4.50%	2052	5.31%	2073	4.43%	2053	5.27%	2074	4.36%	2054	5.25%	2075+	4.29%	2055	5.22%			2056	5.20%			2057	5.18%			2058	5.16%			2059	5.14%		
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## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

<b>Statutory Limit to Premium Increases</b>	<p>Per Public Law Chapter 368 SH-1: “The total premium increase for fiscal years ending after June 30, 2015 is limited to no more than any percentage increase in the Consumer Price Index as defined in section 17001, subsection 9 plus 3%.” It is our understanding the State actively manages premium increases within this cap, so healthcare cost increases noted above are limited to no more than inflation plus 3% in any year.</p> <p>For the current valuation the healthcare cost increases are limited to 5.75% in any year.</p>																					
<b>Annual Claims Costs: Non-Medicare Eligible</b>	<p>Based on the 2020 premium rates for actives and non-Medicare-eligible retirees developed by the State of Maine (adjusted back to the 2019 valuation date) and by applying appropriate age factors to average annual costs per member.</p> <p>Sample Costs at Selected Ages:</p> <table style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;"><b>Age</b></th> <th style="text-align: left;"><b>Males</b></th> <th style="text-align: left;"><b>Females</b></th> </tr> </thead> <tbody> <tr><td>50</td><td>\$8,989</td><td>\$11,868</td></tr> <tr><td>55</td><td>11,829</td><td>13,841</td></tr> <tr><td>60</td><td>15,278</td><td>16,121</td></tr> <tr><td>65</td><td>19,531</td><td>19,251</td></tr> <tr><td>70</td><td>23,641</td><td>22,938</td></tr> <tr><td>80</td><td>32,698</td><td>30,965</td></tr> </tbody> </table>	<b>Age</b>	<b>Males</b>	<b>Females</b>	50	\$8,989	\$11,868	55	11,829	13,841	60	15,278	16,121	65	19,531	19,251	70	23,641	22,938	80	32,698	30,965
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<b>Annual Claims Costs: Medicare Advantage Plan</b>	<p>Costs for Medicare-eligible retirees are projected by applying age-grading factors to the current year Medicare Advantage premium.</p> <p>Medicare Advantage Premium for those eligible for Medicare Part A: \$3,424  Medicare Advantage Premium for those not eligible for Medicare Part A: \$8,826</p> <p>Sample Age Graded Rates at Selected Ages:</p> <table style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;"><b>Age</b></th> <th style="text-align: left;"><b>Rate</b></th> </tr> </thead> <tbody> <tr><td>&lt;65</td><td>0.8512</td></tr> <tr><td>70</td><td>0.9388</td></tr> <tr><td>75</td><td>1.0123</td></tr> <tr><td>80</td><td>1.0663</td></tr> <tr><td>85</td><td>1.0897</td></tr> <tr><td>90</td><td>1.0848</td></tr> <tr><td>95</td><td>1.0555</td></tr> </tbody> </table>	<b>Age</b>	<b>Rate</b>	<65	0.8512	70	0.9388	75	1.0123	80	1.0663	85	1.0897	90	1.0848	95	1.0555					
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<b>Salary Increases</b>	<p>Sample Rates:</p> <table style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;"><b>Service</b></th> <th style="text-align: left;"><b>Rate</b></th> </tr> </thead> <tbody> <tr><td>0</td><td>8.75%</td></tr> <tr><td>5</td><td>5.00%</td></tr> <tr><td>10</td><td>3.75%</td></tr> <tr><td>15</td><td>3.20%</td></tr> <tr><td>20</td><td>2.95%</td></tr> <tr><td>25+</td><td>2.75%</td></tr> </tbody> </table> <p>2.75% for Legislative and Judicial</p>	<b>Service</b>	<b>Rate</b>	0	8.75%	5	5.00%	10	3.75%	15	3.20%	20	2.95%	25+	2.75%							
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<b>Inflation Rate</b>	2.75% annually																					

## Section 8 – Summary of Actuarial Methods & Assumptions (Cont.)

Aggregate Payroll Increases	3.00% annually
Coverage Election	<p>95% of active participants currently with coverage continue coverage at retirement; 20% cover a spouse at retirement</p> <p>20% of active participants who have currently waived coverage elect coverage at retirement.</p> <p>Same assumptions apply to vested terminated participants who have maintained eligibility for coverage at retirement.</p>

## Section 9 – Rationale for Assumptions

<p><b>Discount Rate</b></p>	<p>State employees – Selected by the State of Maine based on the expected long-term rate of return on the assets expected to be used to pay plan benefits. The selected rate was supported by analyzing the target asset allocation and benchmark return expectations by asset class:</p> <table border="1" data-bbox="613 426 1435 672"> <thead> <tr> <th><u>Asset Class</u></th> <th><u>Target Allocation</u></th> <th><u>Return Expectation*</u></th> </tr> </thead> <tbody> <tr> <td>US Equity</td> <td>45%</td> <td>8.93%</td> </tr> <tr> <td>International Equity</td> <td>25%</td> <td>9.30%</td> </tr> <tr> <td>Real Estate</td> <td>5%</td> <td>7.94%</td> </tr> <tr> <td>Traditional Credit</td> <td>16%</td> <td>4.46%</td> </tr> <tr> <td>US Government Securities</td> <td>9%</td> <td>3.07%</td> </tr> <tr> <td>Total</td> <td>100%</td> <td>7.73%</td> </tr> </tbody> </table> <p>Ancillary Groups - Since the State funds the retiree health benefits on a pay-as-you-go basis for the Ancillary Groups, GASB No. 75 prescribes that the discount rate be based on the index rate of a 20-year tax-exempt general obligation municipal bond index with an average rating of AA/Aa or higher as of the measurement date. The State elected to determine the discount rate using the Bond Buyer 20-Bond General Obligation Index.</p> <p><i>*Horizon Actuarial Services, LLC publishes an annual survey of forward looking expectations by asset class from a number of investment advisors. These return expectations were pulled from the 2019 edition, which reflected the expectations of 34 investment advisors.</i></p> <p><a href="http://www.horizonactuarial.com/blog/2019-survey-of-capital-market-assumptions">http://www.horizonactuarial.com/blog/2019-survey-of-capital-market-assumptions</a></p>	<u>Asset Class</u>	<u>Target Allocation</u>	<u>Return Expectation*</u>	US Equity	45%	8.93%	International Equity	25%	9.30%	Real Estate	5%	7.94%	Traditional Credit	16%	4.46%	US Government Securities	9%	3.07%	Total	100%	7.73%
<u>Asset Class</u>	<u>Target Allocation</u>	<u>Return Expectation*</u>																				
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Total	100%	7.73%																				
<p><b>Inflation</b></p>	<p>Inflation is consistent with the assumption used in the June 30, 2019 MainePERS actuarial valuation.</p>																					
<p><b>Mortality, Withdrawal, Retirement, and Salary Scale</b></p>	<p>The assumptions used in the actuarial valuation are the same assumptions as the June 30, 2019 actuarial valuation for the MainePERS State and Teacher Retirement Program.</p>																					
<p><b>Coverage Election</b></p>	<p>Based on recent experience of the plan.</p>																					
<p><b>Annual Medical Trend</b></p>	<p>Rationale described in Section 8 – Summary of Actuarial Methods &amp; Assumptions.</p>																					
<p><b>Health Care Reform</b></p>	<p>Rationale described in the Background and Comments section.</p>																					

## Section 10 – Summary of Substantive Plan Provisions

<b>Eligibility</b>	<p>Retire with a retirement benefit from the Maine Public Employees Retirement System (MainePERS). For State Employees retiring after July 1, 2012 the reimbursement from the State shall begin when the retiree reaches normal retirement age with at least one year of service under MainePERS; normal retirement age defined as:</p> <p><b><u>Tier 1</u></b> - Be at least 60 years of age; with at least 10 years of service on 7/1/1993</p> <p><b><u>Tier 2</u></b> - Be at least 62 years of age; with less than 10 years of service on 7/1/1993 or hired on/after 7/1/1993 but had 5 years of service on 7/1/2011</p> <p><b><u>Tier 3</u></b> - Be at least 65 years of age; with less than 5 years of service on 7/1/2011 or hired on/after 7/1/2011</p> <p>Special Plans:</p> <p><b><u>1998 Special Plan</u></b> – 55&amp;10 or 25 years</p> <p><b><u>25 &amp; Out Plan</u></b> – 25 years</p> <p><b><u>State Police, Marine Resources Officers, and Inland Fisheries Wildlife Officers Plans</u></b> – 20 years</p> <p><b><u>State Prison Plan</u></b> – 50 &amp; 20</p> <p><b><u>Forest Rangers Plan</u></b> – 50 &amp; 25</p> <p>MainePERS disability retirement</p>
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## Section 10 – Summary of Substantive Plan Provisions

<b>Benefit</b>	<p>The State of Maine provides access to postretirement medical benefits for eligible participants. While covered by the State’s self-insured plan, premiums for retirees are equal to the active member premium rates. In addition to access, the State provides an explicit subsidy to cover some of the premium cost based on the tables below.</p> <p>Once covered by a Medicare Advantage Plan, the State continues to provide the same explicit subsidy to retirees.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><b>Hire Date ≤ 7/1/91</b></th> <th colspan="2" style="text-align: center;"><b>7/1/91 &lt; Hire Date &lt; 7/1/11</b></th> <th colspan="2" style="text-align: center;"><b>Hire Date ≥ 7/1/11</b></th> </tr> <tr> <th style="text-align: center;">100% of Retiree Premium</th> <th style="text-align: center;">Years in Medical</th> <th style="text-align: center;">% Retiree Premium</th> <th style="text-align: center;">Years in Medical</th> <th style="text-align: center;">% Retiree Premium</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">&lt; 5</td> <td style="text-align: center;">0%</td> <td style="text-align: center;">&lt; 10</td> <td style="text-align: center;">0%</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td style="text-align: center;">50%</td> <td style="text-align: center;">10-14</td> <td style="text-align: center;">50%</td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td style="text-align: center;">60%</td> <td style="text-align: center;">15-19</td> <td style="text-align: center;">75%</td> </tr> <tr> <td></td> <td style="text-align: center;">7</td> <td style="text-align: center;">70%</td> <td style="text-align: center;">≥ 20</td> <td style="text-align: center;">100%</td> </tr> <tr> <td></td> <td style="text-align: center;">8</td> <td style="text-align: center;">80%</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">9</td> <td style="text-align: center;">90%</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">≥ 10</td> <td style="text-align: center;">100%</td> <td></td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• Cash subsidy of the retiree premium above is based on:             <ul style="list-style-type: none"> <li>○ Single rate for single and employee + child(ren) coverage</li> <li>○ 50% of 2-party rate for 2-party and family coverage</li> </ul> </li> <li>• No State cash subsidy until retiree reaches normal retirement age for non-special plan service retirements ≥ 1/1/12 (7/1/12 for Baxter School and Teachers in unorganized territories)</li> </ul> <p>Disability retirement benefits are 100% vested and cash subsidy begins at disability retirement</p>	<b>Hire Date ≤ 7/1/91</b>	<b>7/1/91 &lt; Hire Date &lt; 7/1/11</b>		<b>Hire Date ≥ 7/1/11</b>		100% of Retiree Premium	Years in Medical	% Retiree Premium	Years in Medical	% Retiree Premium		< 5	0%	< 10	0%		5	50%	10-14	50%		6	60%	15-19	75%		7	70%	≥ 20	100%		8	80%				9	90%				≥ 10	100%		
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<b>Surviving Spouse Benefit</b>	None																																													
<b>Dependent Benefits</b>	<p>No cash subsidy for spouse or dependents</p> <p>Retiree must pay full cost to cover spouse and/or dependents</p>																																													
<b>Dental, Vision, Life</b>	None																																													

## Section 11 – Monthly Premiums

### Monthly Premiums

*Retirees Monthly Premiums Effective 7/1/2019*

<b>State of Maine Self-Insured Plan: HMO Choice</b>	<b>Premiums</b>
Single	\$923.50
2-Adult	1,931.56
Family	2,298.30
Adult w/ Child(ren)	1,519.24

<b>Medicare Advantage</b>	<b>Premiums</b>
Retirees Eligible for Medicare Part A	\$285.34
Retirees not Eligible for Medicare Part A	735.51

## Section 12 – Summary of Participant Demographic Information

The table below presents a summary of the basic participant information as of June 30, 2019 for the active and inactive participants covered under the terms of the Plan. The participant data used in the valuation was provided by the State of Maine.

	State	Baxter	NNEPRA
Active participants			
a. Count	11,886	81	11
b. Average age	47.57	43.10	43.33
c. Average past service	13.25	8.35	6.90
Terminated vested participants			
a. Count	134	3	0
b. Average age	53.85	59.71	N/A
Retirees			
a. Count	8,848	38	1
b. Average age	72.14	72.14	71.76

The following table displays the distribution of Inactive participants by Age.

Age Group	State - Terminated Vested	State - Retirees	Baxter School - Terminated Vested	Baxter School - Retirees	NNEPRA - Retirees
<45	17	10	0	0	0
45-49	10	21	0	0	0
50-54	29	71	0	1	0
55-59	51	287	2	1	0
60-64	25	1,207	1	7	0
65+	2	7,252	0	29	1
<b>Total</b>	<b>134</b>	<b>8,848</b>	<b>3</b>	<b>38</b>	<b>1</b>

## Section 12 – Summary of Participant Demographic Information (Cont.)

The following table displays the distribution of Active participants by Age and Service.

### State Employees

Service Group											
Age Group	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	All Years
0 - 24	188	295	13								<b>496</b>
25 - 29	120	539	193	8							<b>860</b>
30 - 34	101	450	346	106	8						<b>1,011</b>
35 - 39	70	354	283	229	137	13					<b>1,086</b>
40 - 44	95	288	232	233	278	128	9				<b>1,263</b>
45 - 49	64	296	247	185	254	261	104	45			<b>1,456</b>
50 - 54	53	289	227	197	277	216	159	258	24		<b>1,700</b>
55 - 59	62	260	264	200	261	215	143	350	194	37	<b>1,986</b>
60 - 64	36	150	189	180	229	132	99	152	97	114	<b>1,378</b>
65 - 69	14	47	89	63	71	36	28	47	16	69	<b>480</b>
70+	4	27	18	23	35	12	9	10	6	26	<b>170</b>
<b>Total</b>	<b>807</b>	<b>2,995</b>	<b>2,101</b>	<b>1,424</b>	<b>1,550</b>	<b>1,013</b>	<b>551</b>	<b>862</b>	<b>337</b>	<b>246</b>	<b>11,886</b>

### Baxter School

Service Group											
Age Group	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	All Years
0 - 24	4	3									<b>7</b>
25 - 29	1	11	1								<b>13</b>
30 - 34	1	3	6	1							<b>11</b>
35 - 39	1	4	1		1						<b>7</b>
40 - 44		3	3	1							<b>7</b>
45 - 49		2		2	1						<b>5</b>
50 - 54		5	1			3		1			<b>10</b>
55 - 59	1	1	1					1			<b>4</b>
60 - 64		3	2	1	1	2	1	1	1	1	<b>13</b>
65 - 69		2	1	1							<b>4</b>
70+											
<b>Total</b>	<b>8</b>	<b>37</b>	<b>16</b>	<b>6</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>81</b>

## Section 12 – Summary of Participant Demographic Information (Cont.)

The following table displays the distribution of Active participants by Age and Service.

*NNEPRA*

Age Group	Service Group										All Years
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 - 24											
25 - 29											
30 - 34	1	1									2
35 - 39		1		1							2
40 - 44	2		1								3
45 - 49		1									1
50 - 54			1	1							2
55 - 59					1						1
60 - 64											
65 - 69											
70+											
<b>Total</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>						<b>11</b>

## Glossary

Brief explanations of terms used in this report and the accompanying GASB 74 and 75 results:

### **Annual OPEB Expense**

The amount recognized by an employer in each accounting period for contributions to a defined benefit OPEB plan on the modified accrual basis of accounting.

### **Collective deferred outflows of resources and deferred inflows of resources related to OPEB**

Deferred outflows of resources and deferred inflows of resources related to OPEB arising from certain changes in the collective net OPEB liability or collective total OPEB liability.

### **Covered Payroll**

Annual compensation paid (or expected to be paid) to active employees covered by an OPEB plan, in aggregate.

### **Net OPEB liability (NOL)**

The liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is administered through a trust that meets the criteria of the GASB No. 75 Statements.

### **Normal Cost or Service Cost**

The portion of the Total Present Value of Future Benefits attributed to employee service during the current fiscal year by the actuarial cost method. These terms are used interchangeably.

### **Other Postemployment Benefits (OPEB)**

Retiree health care benefits and post-employment benefits provided separately from a pension plan (excluding termination offers and benefits).

### **Plan Fiduciary Net Position (FNP)**

Set equal to the market value of assets as of the measurement date.

### **Present Value of Future Benefits (PVFB)**

The value, as of the valuation date, of the projected benefits payable to all members for their accrued service and their expected future service, discounted to reflect the time value (present value) of money and adjusted for the probabilities of retirement, withdrawal, death and disability.

### **Total OPEB liability (TOL)**

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service in conformity with the GASB No. 75 Statements. The total OPEB liability is the liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is not administered through a trust that meets the criteria of the GASB No. 75 Statements.