

Maine Public Employees’ Retirement System

Retiree Group Life Insurance Program

Participating Local Districts (PLDs) Actuarial Valuation and GASB Statement No. 74 Report as of June 30, 2021

**Presented by Cheiron
October 2021**

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October 14, 2021

Board of Trustees
Maine Public Employees' Retirement System
PO Box 349
Augusta, Maine 04332-0349

Dear Members of the Board:

The purpose of this report is to provide accounting and financial reporting information under Governmental Accounting Standards Board (GASB) Statement No. 74 and present the estimated Postretirement Group Life Insurance obligations as of June 30, 2021, for the Maine Public Employees' Retirement System (MainePERS or System) based on a roll-forward valuation of the obligations as of June 30, 2020.

This report covers the participants of Participating Local Districts Plans (PLDs).

This report includes:

- Determination of the discount rate,
- Calculation of the Total OPEB Liability (TOL) from the valuation date to the measurement date,
- Calculation of the Net OPEB Liability (NOL) at the discount rate as well as discount rates one percentage higher and lower than the discount rate, and
- Changes in the Net OPEB Liability.

We have determined the costs and liabilities for the substantive plan using actuarial assumptions and methods that we consider reasonable. The information shown in this report is primarily for financial disclosure purposes since the biennial full valuations are used to actually adjust funding strategies, and the contributions for the participants of the PLDs are based on premiums set by the premium studies.

The current premium rates reflect rate changes adopted by the Board of Trustees based on a premium study conducted in 2020. The basic premiums remained at \$0.21 bi-weekly per \$1,000 of coverage for fiscal year (FY) 2021 for both active and retired PLD participants. Basic premiums will increase to \$0.22 for FY 2022, \$0.23 for FY 2024, and \$0.24 for FY 2026. For active participants, \$0.11 is allocated to fund active benefits in all years, while the difference is allocated to fund future retiree benefits. Any further increases would be determined by the next premium study in 2024.

In preparing our report, we relied on information (some oral and some written) supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

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Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

This report does not contain any adjustments for the potential impact of COVID-19. We note that benefit payments over the past fiscal year were close to the long-term assumptions for PLDs, so we did not observe a material short-term increase in mortality experience over the past year. The long-term net impact is not determinable at this time and will be reviewed as part of the next premium study.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for the Maine Public Employees' Retirement System for the purposes described herein and for the use by the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any such other users.

Sincerely,
Cheiron



John Colberg, FSA, MAAA, EA
Principal Consulting Actuary



Ryan Benitez, ASA, MAAA
Associate Actuary

**MAINE PUBLIC EMPLOYEES' RETIREMENT SYSTEM
 RETIREE GROUP LIFE INSURANCE FOR PARTICIPATING LOCAL DISTRICTS
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SECTION I – SUMMARY OF KEY RESULTS

The reporting date for the Maine Public Employees Retirement System Retiree Group Life Insurance Program presented in this report is June 30, 2021, Measurements as of the reporting date are based on the fair value of assets as of June 30, 2021 and the Total OPEB Liability as of the valuation date June 30, 2020, rolled forward to June 30, 2021. New demographic assumptions were adopted since the last valuation based on results of the pension plan's experience study conducted in the first half of 2021, and the discount rate was lowered to 6.50%. Therefore, the update procedures included the addition of service cost and interest cost offset by actual benefit payments as well as adding the impact of the assumption changes, as permitted under GASB No. 74.

Beginning of year measurements presented in this report are based on the actuarial valuation as of June 30, 2020 rolled forward to June 30, 2021. Because the beginning and ending values are based on the same actuarial valuation and there were no significant events, no liability gains, or losses due to experience are reported in either year shown in this report, but there is a change reflected due to the new assumptions. During full valuation years, liability gains and losses will be reported reflecting the liability gains and losses between actuarial valuation dates as well as any significant events during the update period.

Table I-1 below provides a summary of the key results during this reporting period ending on June 30, 2021.

Table I-1 Summary of Results		
	Measurement Date 06/30/2020	Measurement Date 06/30/2021
Total OPEB Liability	\$ 29,576,761	\$ 31,531,361
Plan Fiduciary Net Position	<u>16,384,579</u>	<u>21,207,382</u>
Net OPEB Liability	<u>\$ 13,192,182</u>	<u>\$ 10,323,979</u>

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SECTION II – DETERMINATION OF DISCOUNT RATE

MainePERS's funding policy is for PLD employees to pay \$0.21 biweekly per \$1,000 in coverage for all participants. Of the \$0.21 for actives, \$0.10 is allocated to the Retiree Fund for retiree benefits.

As recommended in Option 3 of the 2020 Premium Study, the following increases are assumed:

- FYE 2022: \$0.22 for retirees with \$0.11 of active premiums allocated to the Retiree Fund
- FYE 2024: \$0.23 for retirees with \$0.12 of active premiums allocated to the Retiree Fund
- FYE 2026: \$0.24 for retirees with \$0.13 of active premiums allocated to the Retiree Fund

The discount rate at June 30, 2020 is 6.75% and the discount rate at June 30, 2021 is 6.50%, which is the assumed long-term expected rate of return on plan investments. The fiduciary net position was projected to be available to make all projected future benefit payments for current plan members. As such, the long-term expected rate of return on the Program's investments was applied to all periods of projected benefit payments in determining the Total OPEB Liability. The projection of cash flows used to determine the discount rate assumed that the employer contributions will be made according to the funding policy described in the above paragraph.

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SECTION III – PROJECTION OF TOTAL OPEB LIABILITY

The TOL at the beginning of the current measurement year is measured as of the valuation date June 30, 2020. The TOL at the end of the measurement year, June 30, 2021, is measured as of the valuation date June 30, 2020 and projected to June 30, 2021. This is a roll-forward valuation and full valuations are completed at least every two years. The discount rate and demographic assumptions were updated for projecting the TOL. The table below shows the calculated TOL at discount rates equal to the rate used for disclosure purposes and plus and minus one percent from the rate used for disclosure purposes. The TOL has been determined using the entry age actuarial cost method as described in paragraph 54 of GASB Statement 74.

Table III-1 projects the Total OPEB Liability from the valuation date to the end of the fiscal year for the assumed discount rate as well as for plus and minus one percent of this discount rate.

Table III-1 Projection of Total OPEB Liability			
Discount Rate	5.50%	6.50%	7.50%
Total OPEB Liability, 6/30/2020			
Actives	\$ 11,562,402	\$ 9,353,942	\$ 7,663,345
Deferred Vested	0	0	0
Retirees	<u>22,589,590</u>	<u>20,222,819</u>	<u>18,236,053</u>
Total	\$ 34,151,992	\$ 29,576,761	\$ 25,899,398
Service Cost, Beginning of Year			
Service Cost at Valuation Date	\$ 446,403	\$ 309,875	\$ 215,000
Service Cost Rate	0.15%	0.11%	0.07%
Expected Payroll During Year	291,745,500	291,745,500	291,745,500
Service Cost	\$ 446,403	\$ 309,875	\$ 215,000
Benefit Payments	\$ (1,223,890)	\$ (1,223,890)	\$ (1,223,890)
Interest	\$ 1,936,884	\$ 1,962,386	\$ 1,963,409
Change in Benefits	0	0	0
Change in Assumptions	1,221,429	906,229	665,267
Other Significant Events	<u>0</u>	<u>0</u>	<u>0</u>
Total OPEB Liability, 6/30/2021	\$ 36,532,818	\$ 31,531,361	\$ 27,519,184

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SECTION IV – NOTE DISCLOSURES

Table IV-1 below shows the changes in TOL, the plan fiduciary net position (i.e., fair value of plan assets), and the Net OPEB Liability during the measurement year. There were no significant changes in benefits during the year. As previously noted, we updated the demographic assumptions and discount rate. There is a change in assumptions recorded but no difference between expected and actual experience, i.e., experience adjustments, are included in this report since the same participant data was used as in the full valuation.

Table IV-1 Change in Net OPEB Liability - PLD			
	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances at 06/30/2020	\$ 29,576,761	\$ 16,384,579	\$ 13,192,182
Changes for the year:			
Service cost	309,875		309,875
Interest	1,962,386		1,962,386
Changes of benefits	0		0
Changes of assumptions	906,229		906,229
Differences between expected and actual experience	0		0
Contributions - employer		1,186,563	(1,186,563)
Contributions - member		0	0
Net investment income		4,987,761	(4,987,761)
Benefit payments	(1,223,890)	(1,223,890)	0
Administrative expense	<u>0</u>	<u>(127,631)</u>	<u>127,631</u>
Net changes	1,954,600	4,822,803	(2,868,203)
Balances at 6/30/2021	\$ 31,531,361	\$ 21,207,382	\$ 10,323,979

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SECTION IV – NOTE DISCLOSURES

Changes in the discount rate would affect the measurement of the TOL. Lower discount rates produce a higher TOL and higher discount rates produce a lower TOL. Because the discount rate does not affect the measurement of assets, the percentage change in the NOL can be very significant for a relatively small change in the discount rate. Table IV-2 shows the sensitivity of the TOL and NOL to the discount rate.

Table IV-2			
Sensitivity of Net OPEB Liability to Changes in Discount Rate			
	1% Decrease 5.50%	Discount Rate 6.50%	1% Increase 7.50%
Total OPEB Liability	\$ 36,532,818	\$ 31,531,361	\$ 27,519,184
Plan Fiduciary Net Position	<u>21,207,382</u>	<u>21,207,382</u>	<u>21,207,382</u>
Collective Net OPEB Liability	<u>\$ 15,325,436</u>	<u>\$ 10,323,979</u>	<u>\$ 6,311,802</u>
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	58.1%	67.3%	77.1%

A one percent decrease in the discount rate increases the TOL by approximately 15.9% and increases the NOL by approximately 48.4%. A one percent increase in the discount rate decreases the TOL by approximately 12.7% and decreases the NOL by approximately 38.9%.

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SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

Table V-1 Schedule of Changes in Net OPEB Liability and Related Ratios	
	FY 2021
<u>Total OPEB Liability</u>	
Service cost (BOY)	\$ 309,875
Interest (includes interest on service cost)	1,962,386
Changes of benefit terms	0
Differences between expected and actual experience	0
Changes of assumptions	906,229
Benefit payments	(1,223,890)
Net change in total OPEB liability	1,954,600
Total OPEB liability - beginning	29,576,761
Total OPEB liability - ending	\$ 31,531,361
<u>Plan fiduciary net position</u>	
Contributions - employer	\$ 1,186,563
Contributions - member	0
Net investment income	4,987,761
Benefit payments	(1,223,890)
Administrative expense	(127,631)
Net change in plan fiduciary net position	\$ 4,822,803
Plan fiduciary net position - beginning	16,384,579
Plan fiduciary net position - ending	\$ 21,207,382
Net OPEB liability - ending	\$ 10,323,979
Plan fiduciary net position as a percentage of the total OPEB liability	67.26%
Covered employee payroll	\$ 299,768,501
Net OPEB liability as a percentage of covered employee payroll	3.44%

Notes to Schedule of Changes in Net OPEB Liability and Related Ratios

None

A ten-year schedule of changes in NOL and related ratios is to be included within the AFR for MainePERS. However, based on GASB guidance, this ten-year history can be built one year at a time following implementation. We have shown only the current year of this *Schedule of Changes in Net OPEB Liability and Related Ratios* above and believe that you can accumulate these individual years in the MainePERS AFR to build this schedule to show the full ten-year schedule over time. Notes to this schedule should be included for any factors significantly impacting the trends reported within the period shown in this schedule at that time. As of June 30, 2021, we have not included such a note in the *Notes to Schedule of Changes in Net OPEB Liability and Related Ratios* above. However, it is our expectation that the System staff will make the final determination regarding any notes needed for this schedule and we are available to provide any information they may need for this purpose.

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SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

If an Actuarially Determined Contribution is calculated, the following schedule is required. An Actuarially Determined Contribution is a contribution amount determined in accordance with Actuarial Standards of Practice.

Table V-2 Schedule of Employer Contributions During Fiscal Year 2021	
	PLD
Actuarially Determined Contribution	\$ 1,586,809
Contributions in Relation to the Actuarially Determined Contribution	<u>1,186,563</u>
Contribution Deficiency/(Excess)	\$ 400,246
Covered Payroll	\$ 299,768,501
Contributions as a Percentage of Covered Payroll	0.40%

Notes to Schedule

Valuation Date: June 30, 2016

Timing: The ADC is calculated in advance of the completion of the prior biennial valuation and thus rolled-forward from prior results. In this case, ADCs for 2020 and 2021 are based on the June 30, 2016 valuation rolled forward and adjusted for changes in assumptions.

Key Methods and Assumptions Used to Determine Contribution Rates for FY 2021

Actuarial Cost Method:	Entry Age Normal
Asset Valuation Method:	Market Value
Amortization Method:	Level percent closed with 15 years remaining for FY 2021
Discount Rate:	6.875%
Salary Inflation:	2.750%
Administrative Expense Load:	8.66%

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2021 can be found in the June 30, 2016 Actuarial Valuation report.

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SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

Table V-3 that follows is provided in this report at the request of MainePERS staff, showing the development of the average remaining service life for the Program. GASB 75 requires some items be recognized by employers into OPEB expense over a period “equal to the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and inactive employees) determined as of the beginning of the measurement period.” For the current measurement year ending on June 30, 2021, these values are thus developed based on the prior full biennial valuation data as of June 30, 2020. The development of this value is shown below, including reflection of the decision by MainePERS to round the resulting value to the nearest whole year.

Table V-3 Average Expected Remaining Service Life For Measurement Year Ending June 30, 2021			
Status	Total Expected Future Service	Count	Average Remaining Service Life
Actives	54,870	5,498	10
Inactives	<u>0</u>	<u>2,879</u>	<u>0</u>
Total Membership	54,870	8,377	7

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS, AND METHODS

Participant Data as of June 30, 2020

Table A-1 Active Member Data				
Group	Count	Average Age	Average Service	Average Salary
PLDs	5,498	49.2	10.8	\$ 53,064

Table A-2 Non-Active Member Data			
Group	Count	Average Age	Average Benefit¹
PLDs	2,879	72.6	\$ 17,976

¹Ultimate benefit (40% of initial base benefit)

Note that all assumptions are based on the MainePERS Pension assumptions, which were updated after the experience study performed last year. All assumptions specific to this valuation are detailed in the following section.

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Where assumptions were changed in 2021, the revised assumption in effect for this June 30, 2021 valuation are shown in a grey.

A. Actuarial Assumptions

1. Annual Rate of Investment Return

PLDs	6.50% <i>(previously 6.75%)</i>
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Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment in Life Benefits

N/A. Unlike pension benefits, Life Benefits do not increase with the Cost of Living.

3. Annual Rate of Individual Salary Increase (% at Selected Years of Service)

Years of Service	Prior	Revised
0	9.0%	11.48%
1	4.8	8.66
2	3.6	4.81
3	3.1	4.29
4	2.75	4.03
5	2.75	3.78
10	2.75	3.26
15	2.75	3.26
20	2.75	3.01
25	2.75	2.75
30	2.75	2.75

The above rates include a 2.75% across-the-board increase at each year of service.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS, AND METHODS

4. Sample Rates of Termination (% at Selected Years of Service)

Service	Prior Assumption		Revised Assumption	
	Regular	Special	Regular	Special
0	25.0%	25.0%	28.0%	17.90%
1	20.0	12.5	21.0	14.4
2	15.0	10.0	15.0	10.5
3	12.0	7.5	12.0	9.5
4	10.0	5.0	10.0	7.8
5	9.0	4.0	9.0	7.9
10	6.0	2.5	5.0	4.5
15	4.0	2.5	3.5	2.9
20	2.5	2.5	3.5	2.7
25	2.5	2.5	3.0	0.0

5. Sample Rates of Mortality for Healthy Annuitant Lives at Selected Ages (number of deaths per 10,000 members)

Age	Prior Assumption		Revised Assumption	
	Showing values in 2021		Showing values in 2021	
	Male	Female	Male	Female
50	40	31	31	25
55	56	42	47	35
60	76	61	72	48
65	108	93	104	70
70	167	149	160	113
75	273	245	271	202
80	459	413	489	373
85	801	734	899	706
90	1,434	1,333	1,560	1,317
95	2,297	2,226	2,432	2,148

Prior rates are based on 104% and 120% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC_2015 model, with 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.

Revised rates are based on 112.1% and 118.5% of the 2010 Public Plan General Benefits-Weighted Healthy Retiree Mortality Table, respectively, for males and females. Proposed rates are projected generationally using the RPEC_2020 model, with an ultimate rate of 1.00% for ages 80 and under, grading down to 0.05% at age 95, and further grading down to 0.00% at age 115, with convergence to the ultimate rates in 2027. All other parameters used in the RPEC_2020 model are those included in the published MP-2020 scale.

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6. Sample Rates of Mortality for Active Lives at Selected Ages (number of deaths per 10,000 members)

Age	Prior Assumption (showing values in 2021)		Revised Assumption (showing values in 2021)	
	Male	Female	Male	Female
20	4	2	3	1
25	4	2	3	1
30	4	2	4	2
35	5	3	6	3
40	6	5	7	4
45	9	7	8	5
50	16	12	12	7
55	27	19	18	11
60	46	28	28	17
65	81	43	40	25

Prior rates are based on 104% and 120% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC_2015 model, with 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.

Revised rates are based on 83.5% and 88.6% of the 2010 Public Plan General Benefits-Weighted Employee Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model as described in the healthy annuitant mortality.

7. Sample Rates of Mortality for Disabled Annuitant Lives at Selected Ages (number of deaths per 10,000 members)

Age	Prior Assumption (showing values in 2021)		Revised Assumption (showing values in 2021)	
	Male	Female	Male	Female
25	80	23	36	21
30	77	29	53	37
35	90	41	72	57
40	108	56	89	76
45	168	88	112	99
50	206	116	161	144
55	238	146	220	185
60	270	173	280	213
65	323	211	331	223
70	418	286	390	264

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Prior rates are based on 108% and 105% of the RP-2014 Total Dataset Disabled Annuitant Mortality Table, respectively, for males and females, projected from the 2006 base rates using the RPEC_2015 model, with 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.

Revised rates are based on 107.3% and 103.2% of the 2010 Public Plan Non-Safety Benefits-Weighted Disabled Retiree Mortality Table, respectively, for males and females. These rates are generationally projected using the same version of the RPEC_2020 model described in the healthy annuitant mortality.

8. Sample Rates of Retirement at Selected Ages (number retiring per 1,000 members)

Regular Plans

	Regular Plans			
	Current Assumption		Proposed Assumption	
	NRA 60	NRA 65	NRA 60	NRA 65
45	50	50	N/A	N/A
50	50	50	N/A	N/A
55	50	50	N/A	N/A
60	200	50	120	60
65	250	200	250	200
70	1,000	1,000	1,000	250
75	1,000	1,000	1,000	1,000

In the case of PLD employees, NRA 60 refers to those who were hired prior to July 1, 2014, and NRA 65 refers to those who were hired on or after July 1, 2014.

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Special Plans

Special Plans		
Years of Service	Current Assumption	Proposed Assumption
20	400	350
21	300	300
22	300	280
23	300	250
24	300	200
25	400	350
26	300	250
27	300	230
28	300	250
29	300	400
30	400	250
31-33	300	250
34	300	330
35+	1,000	1,000

Note that all retirement rates are only applied once the member is eligible to retire, so those in 25-year plans are not assumed to retire at 20 years of service. For Special Plan retirements with less than 20 years of service, we assume 250 retirements per 1,000 members.

9. Sample Rates of Disability at Selected Ages (number becoming disabled per 10,000 members)*

Age	Current Assumption	Proposed Assumption	
		Regular	Special
25	1.8	0.9	2.3
30	2.4	1.2	3.0
35	3.0	1.8	4.5
40	4.2	4.2	10.5
45	9.0	8.7	21.8
50	19.8	16.5	41.3
55	36.6	28.5	70.0
60	65.0	30.0	70.0

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS, AND METHODS

10. Premium Expense Assumption

To reflect administrative expenses associated with the distribution of benefits, the following loads, determined in the 2020 Premium Study, have been added to the liabilities, normal cost, and benefit payments.

PLDs: 9.36%

11. Technical and Miscellaneous Assumptions

Decrement Timing: Middle of the valuation year

Pay Increase Timing: Salary provided is treated as the rate of pay as of the valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Conversion Charges: Applies to the cost of active group life insurance, not retiree group life insurance.

Form of Benefit Payment: Lump Sum.

Participation Percent for Future Retirees: 100% of those currently enrolled.

Retirement for Participants who are not members of MainePERS: Age 62

12. Rationale for Assumptions

The prior assumptions were adopted by the Board of Trustees at their July 14, 2016 meeting. The demographic assumptions adopted are based on an experience study covering the period from June 30, 2012 through June 30, 2015 and the economic assumptions are based on this experience study along with the advice of the MainePERS investment consultants.

The revised demographic assumptions were adopted by the Board of Trustees at their March 11, 2021 meeting. The revised discount rate was adopted by the Board of Trustees at their August 12, 2021 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2015 through June 30, 2020, and the economic assumptions are based on this experience study along with advice of the MainePERS investment consultants.

13. Changes since Last Valuation

Assumptions for salary increase, termination, mortality, disability, and retirement were changed based on results of the most recent experience study. The discount rate was also lowered to 6.50%.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS, AND METHODS

14. Rationale for Change in Actuarial Assumptions

The revised demographic assumptions were adopted by the Board of Trustees at their May 13, 2021 meeting. The revised discount rate was adopted by the Board of Trustees at their August 12, 2021 meeting. The demographic assumptions adopted are based on an experience study covering the period from July 1, 2015 through June 30, 2020, and the economic assumptions are based on this experience study along with advice of the MainePERS investment consultants.

15. Disclosure of Models used

Proval: Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs, and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

Mortality Improvement Model: Cheiron utilized the RPEC_2014_v2020 Model Implementation Tool for the purposes of developing the customized version of MP-2020 used in this report. This tool is updated and published annually by the Society of Actuaries and their Retirement Plans Experience Committee and allows actuaries to develop customized versions of mortality improvement scales based on the parameters and data underlying the published MP-2020 scale but allowing practitioners to vary parameters from those used in the published MP-2020 scale.

We have reviewed this model and believe it is appropriate to our intended use in developing a customized mortality improvement scale for the Programs. Further, we are aware of no material inconsistencies that would limit our ability to use this model for its intended purpose.

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APPENDIX A – PARTICIPANT DATA, ASSUMPTIONS, AND METHODS

B. Actuarial Methods

1. Funding Method

The individual entry age normal method is used to determine liabilities. Under this funding method, a normal cost rate is calculated for each member. This rate is determined by taking the value, as of age at entry into the Plan, of the member's projected future benefits, and dividing it by the value, also as of the member's entry age of his expected future salary. The normal cost for each member is the product of their annual salary at the valuation date and their normal cost rate. The normal cost amount for the group is then the sum of the normal costs for all members.

The Actuarial Liability is defined as the present value of future benefits, as of the valuation date, for all current members less the present value of future normal costs for all current members. For funding purposes, the Unfunded Actuarial Liability is then equal to the Actuarial Liability, less the actuarial value of the System's assets.

The discount rate used reflects the long-term funding policy to fully fund the benefits on an actuarial basis by FY 2036 for PLDs.

2. Asset Valuation Method

Figures were reported by MainePERS without audit or change.

3. Changes since Last Valuation

None

4. Rationale for Change

N/A

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APPENDIX B – SUMMARY OF KEY PLAN PROVISIONS

Membership

Service Retirement: A retiree must have participated in the group life insurance program for at least ten years and possess coverage just prior to retirement.

Disability Retirement: An employee must have participated in the group life insurance program immediately prior to disablement.

Basic Insurance

Average final compensation is calculated for retirement purposes.

Amount of Insurance for a Retiree

Service Retirement: The Basic Insurance will be reduced by 15% per year until the amount equal to the greater of (a) 40% of the initial Basic Insurance, or (b) \$2,500.

Disability Retirement: The amount of basic life insurance in force prior to retirement will be continued until normal retirement age. At normal retirement age, the amount of insurance will be reduced as for service retirement.

Retiree Contribution

PLD Employees: PLD must pay \$0.21 biweekly per \$1,000 of base benefit, based on the coverage amounts declining from 100% to 40%. Biweekly rates increase to \$0.22 in FYE 2022, \$0.23 in FYE 2024, and \$0.24 in FYE 2026.

Normal Retirement Age

The specified age, the years of service requirement, or any age and years of service combination at which a participant may become eligible for unreduced service retirement benefits.

Discontinued Coverages at Retirement

- Supplemental Life
- Accidental Death and Dismemberment
- Dependent Life

(Discontinued coverage may be ported to another group term product or converted to an individual policy.)

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APPENDIX C – GLOSSARY OF TERMS

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Entry Age Actuarial Cost Method

The actuarial cost method is required for GASB 74 and 75 calculations. Under this method, the actuarial present value of the projected benefits of each individual, included in an actuarial valuation, is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total OPEB Liability.

4. Measurement Date

The date as of which the Total OPEB Liability and Plan Fiduciary Net Position are measured. The Total OPEB Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.

5. Net OPEB Liability

The liability of employers and non-employer contributing entities for employees for benefits provided through a defined benefit OPEB plan. It is calculated as the Total OPEB Liability less the Plan Fiduciary Net Position.

6. Plan Fiduciary Net Position

The fair or market value of assets.

7. Reporting Date

The last day of the Plan or employer's fiscal year.

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APPENDIX C – GLOSSARY OF TERMS

8. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 74 and 75. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

9. Total OPEB Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 74 and 75. The Total OPEB Liability is the actuarial liability calculated under the entry age actuarial cost method.