

Maine Public Employees Retirement System

Consolidated Plan for Participating Local Districts

Actuarial Valuation Report as of June 30, 2020

**Produced by Cheiron
October 2020**

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Letter of Transmittal	i
Foreword.....	ii
Section I Board Summary	1
Section II Risk Assessment and Disclosure	10
Section III Assets	19
Section IV Liabilities	25
Section V Contributions.....	28
Section VI Financial Disclosure Information	34
<u>Appendices</u>	
Appendix A Participating Local District Plan Elections	43
Appendix B Membership Information	70
Appendix C Summary of Plan Provisions.....	77
Appendix D Actuarial Assumptions and Methods	87
Appendix E Glossary of GASB Terms	94

October 15, 2020

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

Dear Members of the Board:

We are pleased to submit the June 30, 2020 Actuarial Valuation Report for the Consolidated Plan for Participating Local Districts (Plan) of the Maine Public Employees Retirement System (MainePERS or System).

This report is intended solely for the MainePERS Board and its auditors in preparing financial reports according to applicable law and accounting requirements. This report contains information on assets, liabilities, and contributions of the Plan, as well as the required accounting statement disclosures under the Governmental Accounting Standards Board (GASB) Statement No. 67.

We prepared this report according to generally recognized and accepted actuarial principles and practices that are consistent with 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. This includes the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice.

As credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion 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.

In preparing our report, we relied on information, both oral and written, supplied by the System's staff. This information includes, but is not limited to, Plan provisions, member 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.

The results of this report rely on future Plan experience conforming to the underlying assumptions and methods outlined in this report. Future experience may differ significantly from the current experience because of differences from the anticipated assumptions; changes in assumptions or methods; and changes in Plan provisions or applicable law.

This report does not contain any adjustments for potential impact of COVID-19 on either economic or demographic assumptions. We anticipate that the virus may have implications in both the short and long term, but the net impact of these is not determinable at this time.

Sincerely,
Cheiron



Gene Kalwarski, FSA, EA
Principal Consulting Actuary



Fiona E. Liston, FSA, EA
Principal Consulting Actuary



Elizabeth Wiley, FSA, EA
Consulting Actuary

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

FOREWORD

Cheiron has completed the Actuarial Valuation Report for the Consolidated Plan for Participating Local Districts (Plan) of the Maine Public Employees Retirement System (MainePERS or System) as of June 30, 2020. The purpose of this report is to:

- 1) Measure and disclose, as of the valuation date, the financial condition of the Plan;
- 2) Indicate trends, both historical and prospective, in the condition of the Plan;
- 3) Assess and disclose actuarial risks of the Plan;
- 4) Report on the contribution rates developed in this valuation for informational purposes for the Participating Local Districts (PLDs) and members for Fiscal Year (FY) 2022 in aggregate (Note: the actual contributions to be paid by PLDs and members specific to each Regular and Special Plan within the Plan for FY 2022 will be developed consistent with the ratemaking process of the MainePERS Board of Trustees and provided under separate cover); and
- 5) Provide specific information required for MainePERS's financial disclosures.

An actuarial valuation establishes and analyzes assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of investment performance as well as an analysis of actuarial liability gains and losses.

Section I presents a summary containing our key findings, disclosing important Plan trends in recent years, and providing analysis relating to the future status of the Plan.

Section II assesses and discloses various actuarial risk measures of the Plan.

Section III contains details on various asset measures, together with pertinent performance measurements.

Section IV shows similar information on liability measures for various purposes, including analysis of key changes in the measures.

Section V develops informational PLD and member contribution rates for the Plan in aggregate for FY 2022. (The actual rates paid specifically for each Regular and Special Plan within the Plan are developed consistent with the risk-sharing process of the MainePERS Board of Trustees and provided under separate cover.)

Section VI includes financial disclosure information.

Finally, we present appendices containing the following summaries:

- Plan elections that have been made by the participating local districts (PLDs) (Appendix A);
- Plan membership information at the valuation date (Appendix B);
- Major benefit provisions of the Plan and the various Regular and Special Plans included in the Plan (Appendix C);
- Actuarial assumptions and methods used in the current valuation (Appendix D); and
- Terminology used in the Governmental Accounting Standards Board (GASB) disclosures (Appendix E).

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

General Comments

Most of the local districts in the State of Maine participate in this Consolidated Plan for Participating Local Districts (Plan). The Plan offers a number of Plan options from which each Participating Local District (PLD) can choose, with each option having its own specific contribution rates to be paid by both the member and the PLD associated with it. Both the member contributions and the PLD contributions are paid as distinct rates that are set by the risk-sharing contribution methodology adopted by the MainePERS Board of Trustees and are applicable to payroll. This June 30, 2020 valuation setting the Fiscal Year (FY) 2022 contribution rates will be the third valuation used as the basis from which member and PLD contribution rates are developed based on this methodology. Prior to the 2018 valuation, the member rates were static and set by the Board, while the PLD rates were established using the previous corridor funding method.

The results of this June 30, 2020 valuation will be used to develop the specific rates for each PLD and members of each Regular and Special Plan within the Plan for FY 2022. These will be provided under separate cover based on the risk-sharing framework. This report develops the Actuarially Determined Plan Total Rate and the Plan-Specific Normal Cost Rates that are the basis of this process to develop the specific rates. The results of this June 30, 2020 valuation will also be used for accounting disclosures.

Experience from July 1, 2019 through June 30, 2020 (FY 2020)

The Actuarially Determined Plan Total Rate produced by the June 30, 2019 valuation reflecting all Plans within the Consolidated Plan for Participating Local Districts was 18.8%. The equivalent rate produced in this June 30, 2020 valuation is 18.8%.

Note that this Total Rate differs from that tracked for the other MainePERS Programs as it reflects contributions from both members and the employers, the PLDs in the case of this Plan. In the other Programs, the employer-only portion of the contribution is reported in the equivalent experience sections. The reason for this difference is in this Plan, the contributions from members change with experience similar to the contributions from employers so it makes sense to track the progress of the total contribution.

As of June 30, 2020 valuation, the Plan has an unfunded actuarial liability (UAL) based on the actuarial value of assets (AVA) of \$346.0 million. This represents an increase of \$5.8 million from the \$340.2 million AVA UAL measured as of June 30, 2019. The specific factors contributing to this change are presented in Table I-1 that follows. This table has separate columns showing the components of the changes in liabilities and investments during FY 2020 as well as their combined effect on the UAL.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

Table I-1 (Amounts in Billions)			
	Liabilities	Assets*	UAL
Value as of June 30, 2019	\$ 3.259	\$ 2.919	\$ 0.340
Expected Change	0.128	0.143	(0.015)
Impact of Plan Changes	0.030	0.027	0.003
Impact of Assumption Changes	0.000	0.000	0.000
Recognized Investment Loss	0.000	(0.025)	0.025
Recognized Liability Gain	(0.007)	0.000	(0.007)
Value as of June 30, 2020	\$ 3.410	\$ 3.064	\$ 0.346

*This table uses actuarial value of assets. Results would be different if the market value was used.

The remainder of this Board Summary section summarizes the Plan's historical trends, provides baseline projections of the Plan's future status, and summarizes the principal results of the valuation. These principal results compare key results between this year's and last year's valuations for member counts, assets and liabilities, and total contribution rates.

Trends

It is important to take a step back from the latest results and view them in the context of the Plan's history. On the next few pages, we present a series of graphs that display key historical trends relating to the Plan's condition. In addition to considering the past, examining future possible trajectories of the Plan is also vital to understanding the current results. Baseline projections are provided in this Board Summary and the potential variability of these results is explored further in the risk section of this report.

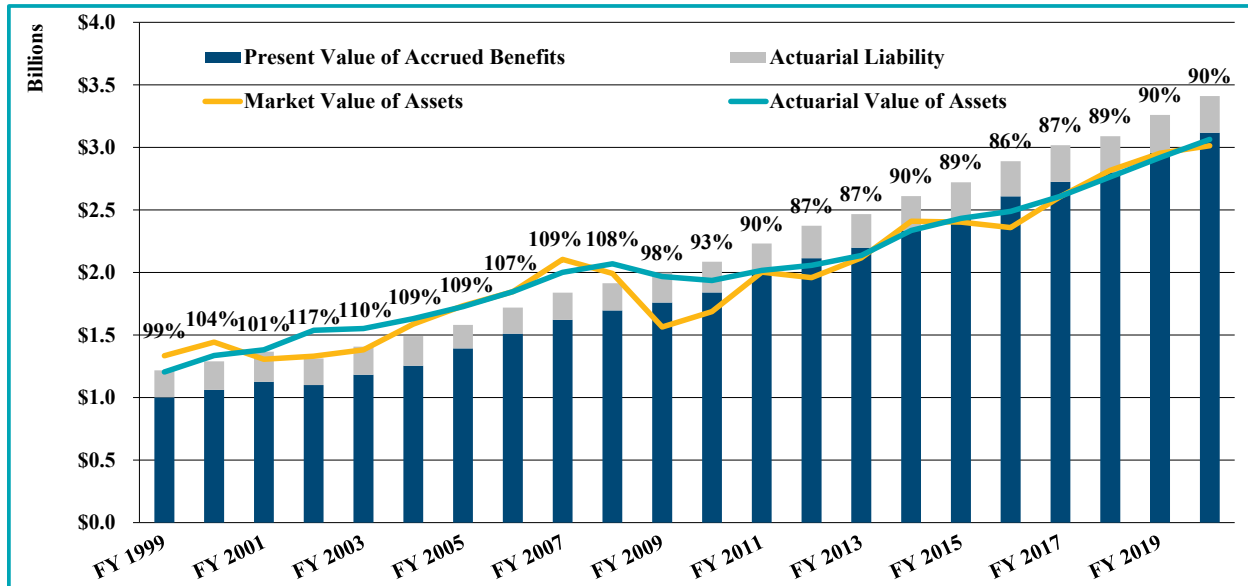
Assets and Liabilities

The following graph illustrates the progress of assets and liabilities for the Plan as well as the Plan's funded ratio since June 30, 1999 on an actuarial value of assets (AVA) basis.

Liability measures are shown as bars as of June 30 of the indicated years. The actuarial liability (AL), the liability measure used for the Plan's funding purposes, is represented by the top of the grey bars. The blue bars represent the present value of accrued benefits (PVAB). These liability measures are discussed further in Section IV. Measures of the assets are shown as lines. The AVA is shown with a teal line while the market value of assets (MVA) is shown as a yellow line. The AVA divided by the AL is the AVA funded ratio that is often used in evaluating the Plan's financial status. These values of this metric as of each valuation date are shown as the percentages in the graph labels.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY



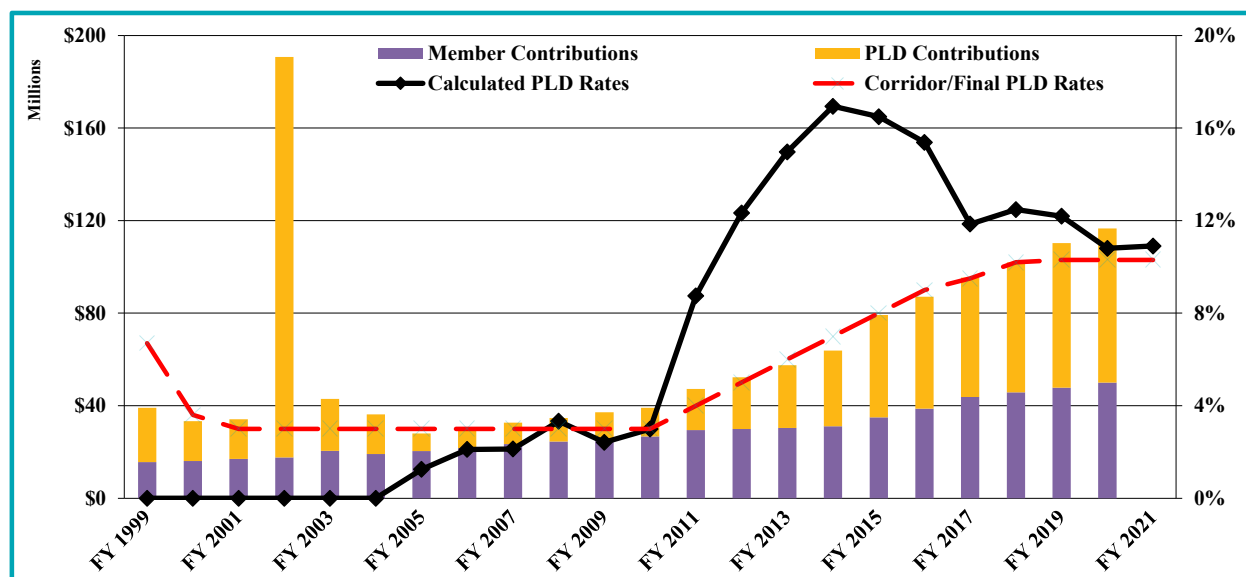
This graph shows that the Plan had its highest AVA funded ratio (117%) over the period shown at June 30, 2002, which was just after several PLDs paid off their Initial Unpooled Unfunded Actuarial Liabilities (IUUALs). After that, the funded ratio was relatively stable around 107-110% until the financial market events of 2008-2009 resulted in the ratio dropping below 100%. Following that drop, the ratio stabilized beginning June 30, 2011 and has stayed in the range of 87-90% since that time. This graph does not show the ratio of the market value of assets (MVA) to AL, but this was actually as low as 78% as of the June 30, 2009 valuation. However, the market recovery combined with the increasing contribution rates for both PLDs and members has resulted in improvements in this measure as well, with the MVA funded ratio reaching 91% with the prior valuation. With the market drop in the first part of 2020, the MVA funded ratio has decreased to 88% for the current valuation.

Contributions

The next graph shows the history of contributions to the Plan, both as dollar amounts and as percentages of payroll. The bars in this graph show the contributions made by both the PLDs and the members in dollar terms for each fiscal year (FY) as indicated by the horizontal axis since 1999. These bars are read using the left-hand axis. Through FY 2019, the black line shows the actuarially calculated total pooled PLD contribution rate as a percentage of payroll for the FY indicated. Beginning with FY 2020, the amount shown by the black line is the Aggregate Actuarially Determined PLD Rate. Similarly, the red dotted line in this graph shows the aggregate corridor contribution rate actually in effect for each year through FY 2019 and then shows the Aggregate Final PLD Rate, which reflects all adjustments to the Actuarially Determined PLD rate from the risk-sharing framework, beginning with FY 2020. For both of these rates, which are read using the right-hand axis, we are showing the rates through FY 2021, since the Aggregate Final PLD rate, which corresponds with the rates that will actually be paid, for FY 2022 that will be produced by this valuation is not yet available. Note that both the red and black line represent the rates that apply to the PLDs and does not include the member rate.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY



The significant increase in the total calculated rate from FY 2010 to FY 2014 was due primarily to investment losses sustained in the 2008-09 market events. The increases in the aggregate corridor rate during this period combined with benefit changes made progress to close the gap between these two rates through FY 2019, the last year that the method used to determine the actual contributions paid by the PLDs was the corridor method. Beginning with FY 2020, the calculated rate is determined with the risk-sharing framework and remains slightly above the actual final PLD rates being paid. It is anticipated as the risk-sharing framework is fully phased in, the rates being actually paid, shown with the red line, will converge with the calculated rates given by the black line.

The majority of the actual PLD contribution dollars shown are based on the rates determined by the funding methodology in effect for the period, but in addition, some PLDs pay an additional IUUAL contribution to amortize liability specific to their members as well as contributions related to purchases of service by members. Note that the large dollar amount contributed in FY 2002 by the PLDs in the graph on the following page was due to several PLDs paying off their IUUAL amounts as IUUAL contributions are included in the PLD contributions shown in the yellow bars.

Through FY 2019, the member contribution rates were fixed values, ranging from 4.5% to 9.5%, as set by statute and the Board, specific to the Regular or Special Plan in which each member participates. Beginning with FY 2020, the member contribution rates are determined under the risk-sharing funding methodology adopted by the Board as described in the General Comments section of this Board Summary. The Final PLD Member Rate in effect for FY 2021 is 8.1% with the Age 60 Final Plan Member Rate at 8.3% and the Age 65 Final Plan Member Rate at 7.3%. See the description of these items in Section V for additional information. The specific rates by Plan range from a low of 3.85% for the Age 65 Final Plan Member Rate under Plan BC to a high of 9.5% for all members in Plan 3C.

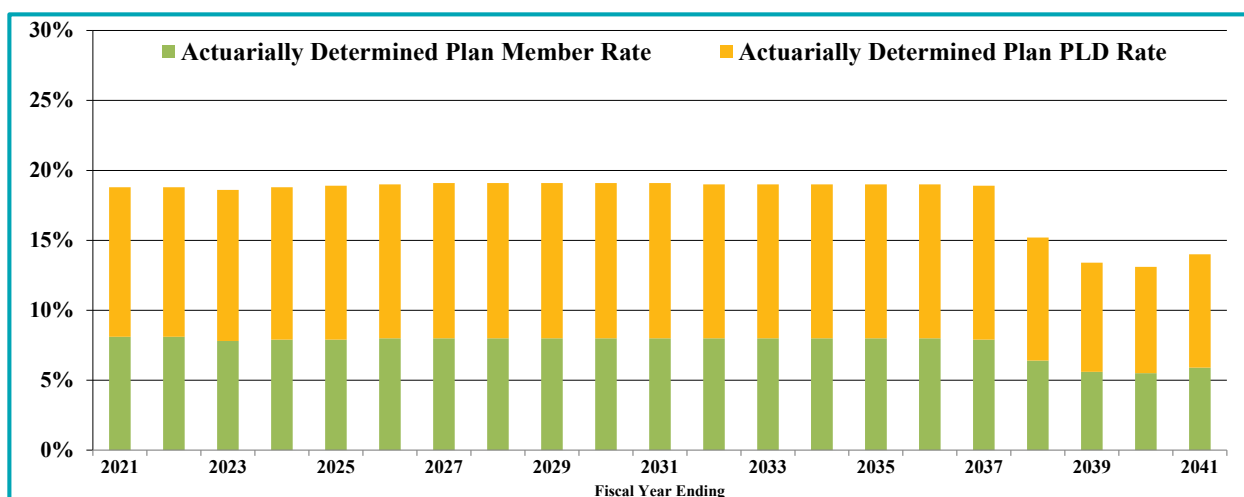
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

Baseline Projections

Our analysis of the projected financial trends for the Plan is an important part of this valuation. In this section, we project future valuation results focusing on the previously referenced AVA funded ratio (AVA over AL) and the expected PLD contributions. We here present a baseline projection of these metrics based on all actuarial assumptions being exactly met during the projection period, including the assumed 6.75% investment return being achieved each year. In the risk section of the report, we demonstrate how sensitive future valuation results are to deviations in actual returns from the assumed investment returns by presenting similar results with investment returns deviating from those assumed.

Note that in these projections, we have assumed that the PLD contributions received by the Plan are the actuarially determined amount developed as of the valuation date one year prior to the beginning of each fiscal year rather than the Plan-specific rates developed under the risk-sharing framework. If the actual contributions received are different from these, the results will vary.

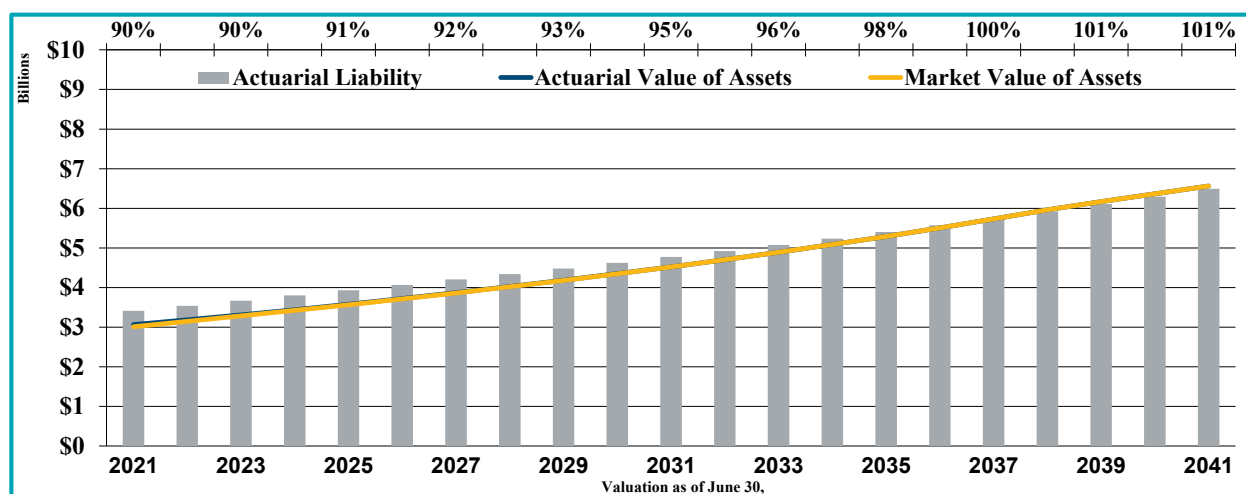


The graph above shows the expected progress of the Plan's aggregate actuarially determined Plan rates over the next 20 years assuming that the Plan's assets earn 6.75% on their *market value*. In addition, these projected contribution rates also reflect any prior years' actual investment gains or losses that have not been fully recognized in this valuation. The green bars represent the Actuarially Determined Plan Member Rate, while the yellow bars represent the Actuarially Determined Plan PLD Rate. The combined bars thus represent the Actuarial Determined Plan Total Rates. Note that these rates represent the rates expected to be calculated for the Plan as a whole, as opposed to the rates developed under the risk-sharing framework for every specific Plan within the Plan.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

There are relatively minor decreases and increases through FY 2037 as additional layers are paid off and reflecting the timing difference between when contributions are determined and when they are assumed to be paid. There is a large drop for FY 2038 as the large 2015 UAL layer is assumed to be paid off. In this baseline projection, based on all assumptions being met each and every year, the contribution rates would be expected to stabilize at the Plan's normal cost level of approximately 14%. However, in reality, there will be gains and losses each and every year versus expectations, resulting in new amortization layers (negative or positive) occurring every year. This concept is explored further in the risk section of this report.



The graph above shows the projected AVA funded ratio (AVA divided by AL) over the next 20 years in this baseline scenario. It shows that the Plan's funded ratio is projected to improve from the starting level of 90% as of FY 2020 to 101% funding in FY 2041. The amounts shown are as of June 30 of the year identified in the horizontal axis. The Plan's funding exceeds 100% due to the lag in the development of contributions and when they are paid. Note that if the ratios used market value of assets (MVA), the funded ratios would be different.

Principal Results Summary

The last section of this Board Summary presents a summary of the principal results of the valuation, comparing key results between this year's and last year's valuations for member counts, assets and liabilities, and contribution rates. These summary results are shown for the total Consolidated Plan as well as the division into the Regular Plans subgroup and the Special Plans subgroup.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

**Table I-2
Summary of Principal Results
PLD Consolidated Retirement Plan
Total**

Valuation as of:	June 30, 2019	June 30, 2020	% Change
<u>Member Counts</u>			
Active Members	11,731	11,838	0.9%
Retired Members	6,966	7,222	3.7%
Beneficiaries of Retired Members	2,018	2,086	3.4%
Survivors of Deceased Members	171	162	(5.3%)
Disabled Members	379	390	2.9%
Terminated Vested Members	2,350	2,402	2.2%
Inactives Due Refunds	<u>8,273</u>	<u>8,766</u>	6.0%
Total Membership	31,888	32,866	3.1%
Annual Payroll of Active Members	\$ 595,083,006	\$ 623,587,639	4.8%
Annual Payments to Benefit Recipients	\$ 159,816,939	\$ 169,508,194	6.1%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 3,258,819,605	\$ 3,409,741,367	4.6%
Actuarial Value of Assets (AVA)	<u>2,918,585,814</u>	<u>3,063,710,040</u>	5.0%
Unfunded Actuarial Liability (UAL)	\$ 340,233,791	\$ 346,031,327	1.7%
Individual Portion (IUUAL)	<u>NA</u>	<u>NA</u>	
Pooled Portion (PUAL)	\$ 340,233,791	\$ 346,031,327	1.7%
AVA Funded Ratio (AVA/AL)	89.6%	89.9%	
MVA Funded Ratio (MVA/AL)	90.6%	88.3%	
Accrued Benefit Liability (PVAB)	\$ 2,956,328,782	\$ 3,118,058,186	5.5%
Market Value of Assets (MVA)	<u>2,953,156,096</u>	<u>3,012,428,367</u>	2.0%
Unfunded PVAB	\$ 3,172,686	\$ 105,629,819	3,229.3%
Accrued Benefit Funded Ratio	99.9%	96.6%	
<u>Plan Total Contribution Rates*</u>	<u>FY 2021</u>	<u>FY 2022</u>	
Actuarially Determined Plan Normal Cost Rate	13.9%	13.9%	
Actuarially Determined Plan UAL Amortization Rate	<u>4.9%</u>	<u>4.9%</u>	
Actuarially Determined Plan Total Rate	18.8%	18.8%	

* These are actuarially determined amounts from which the individual Plan member and PLD rates are determined based on the risk-sharing framework. As such, these values are informational rates developed based on the entire Plan rather than applied to any specific Plan.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

**Table I-3
Summary of Principal Results
PLD Consolidated Retirement Plan
Regular Plans: AC, AN & BC**

Valuation as of:	June 30, 2019	June 30, 2020	% Change
<u>Member Counts</u>			
Active Members	8,646	8,600	(0.5%)
Retired Members	5,440	5,648	3.8%
Beneficiaries of Retired Members	1,372	1,409	2.7%
Survivors of Deceased Members	145	136	(6.2%)
Disabled Members	287	291	1.4%
Terminated Vested Members	2,060	2,074	0.7%
Inactives Due Refunds	<u>8,135</u>	<u>8,606</u>	5.8%
Total Membership	26,085	26,764	2.6%
Annual Payroll of Active Members	\$ 397,265,440	\$ 410,610,143	3.4%
Annual Payments to Benefit Recipients	\$ 98,276,355	\$ 104,555,480	6.4%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 1,926,943,698	\$ 2,000,211,143	3.8%
Actuarial Value of Assets (AVA)	<u>1,702,396,977</u>	<u>1,788,373,698</u>	5.1%
Unfunded Actuarial Liability (UAL)	\$ 224,546,721	\$ 211,837,445	(5.7%)
Individual Portion (IUUAL)	<u>NA</u>	<u>NA</u>	
Pooled Portion (PUAL)	\$ 224,546,721	\$ 211,837,445	(5.7%)
AVA Funded Ratio (AVA/AL)	88.3%	89.4%	
MVA Funded Ratio (MVA/AL)	89.4%	87.9%	
Accrued Benefit Liability (PVAB)	\$ 1,766,972,966	\$ 1,854,233,546	4.9%
Market Value of Assets (MVA)	<u>1,722,561,655</u>	<u>1,758,439,144</u>	2.1%
Unfunded PVAB	\$ 44,411,311	\$ 95,794,402	115.7%
Accrued Benefit Funded Ratio	97.5%	94.8%	
<u>Regular Plan Total Contribution Rates*</u>			
	<u>FY 2021</u>	<u>FY 2022</u>	
Actuarially Determined Regular Plans	13.0%	13.0%	
Normal Cost Rate			
Actuarially Determined Regular Plans	<u>4.4%</u>	<u>4.5%</u>	
UAL Amortization Rate			
Actuarially Determined Regular Plans	17.4%	17.5%	
Total Rate			

* These are actuarially determined amounts that are solely for informational purposes. They are developed based on all of the Regular Plans in the Plan rather than applied to any specific Plan.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION I – BOARD SUMMARY

**Table I-4
Summary of Principal Results
PLD Consolidated Retirement Plan
Special Plans: 1C-4C & 1N-4N**

Valuation as of:	June 30, 2019	June 30, 2020	% Change
<u>Member Counts</u>			
Active Members	3,085	3,238	5.0%
Retired Members	1,526	1,574	3.1%
Beneficiaries of Retired Members	646	677	4.8%
Survivors of Deceased Members	26	26	0.0%
Disabled Members	92	99	7.6%
Terminated Vested Members	290	328	13.1%
Inactives Due Refunds	138	160	15.9%
Total Membership	5,803	6,102	5.2%
Annual Payroll of Active Members	\$ 197,817,566	\$ 212,977,496	7.7%
Annual Payments to Benefit Recipients	\$ 61,540,584	\$ 64,952,714	5.5%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 1,331,875,907	\$ 1,409,530,224	5.8%
Actuarial Value of Assets (AVA)	1,216,188,837	1,275,336,342	4.9%
Unfunded Actuarial Liability (UAL)	\$ 115,687,070	\$ 134,193,882	16.0%
Individual Portion (IUUAL)	NA	NA	
Pooled Portion (PUAL)	\$ 115,687,070	\$ 134,193,882	16.0%
AVA Funded Ratio (AVA/AL)	91.3%	90.5%	
MVA Funded Ratio (MVA/AL)	92.4%	89.0%	
Accrued Benefit Liability (PVAB)	\$ 1,189,355,816	\$ 1,263,824,640	6.3%
Market Value of Assets (MVA)	1,230,594,441	1,253,989,223	1.9%
Unfunded PVAB	\$ (41,238,625)	\$ 9,835,417	(123.9%)
Accrued Benefit Funded Ratio	103.5%	99.2%	
<u>Special Plan Total Contribution Rates*</u>			
	<u>FY 2021</u>	<u>FY 2022</u>	
Actuarially Determined Special Plans	15.7%	15.8%	
Normal Cost Rate			
Actuarially Determined Special Plans	5.1%	5.6%	
UAL Amortization Rate			
Actuarially Determined Special Plans	20.8%	21.4%	
Total Rate			

* These are actuarially determined amounts that are solely for informational purposes. They are developed based on all of the Regular Plans in the Plan rather than applied to any specific Plan.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Introduction

The Plan's actuarial valuation results are dependent on assumptions about future economic and demographic experience. Based on actuarial standards of practice, the assumptions represent a reasonable estimate for future experience. However, actual future experience will never conform exactly to the assumptions and may differ significantly from the assumptions. This deviation is the risk that pension plan sponsors undertake in relying on a pension plan's actuarial valuation results.

This section of this report is intended to identify the primary drivers of these risks, provide background information and assessments about these identified risks, and communicate the significance of these risks to this Plan.

Identification of Risks

For this Plan, the three primary valuation results that can significantly differ from those expected are the assets, the liabilities, and the annually determined contributions. While there are several factors that could lead to these results being different, we believe the primary risks for this Plan are:

- Investment risk,
- Longevity and other demographic risks,
- Plan change risk, and
- Assumption change risk.

Other risks that we have not identified may also turn out to be important.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Investment Risk is the potential for investment returns to deviate from what is expected. When actual investment returns are lower than the investment assumption used in the actuarial valuation, the unfunded liability will increase and will require higher contributions than otherwise anticipated. But, when actual returns exceed the assumption, the resulting unfunded liability measurements and actuarially determined contributions will be lower than anticipated. As seen in the historical section that follows, this has been a driver of deviations in the actual measurements for this Plan from those expected by the valuations.

Longevity and Other Demographic Risk is the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time as the actual experience deviates from expected. In addition, the extensive number of assumptions related to longevity and other demographic experience often result in offsetting factors contributing to the Plan's overall liability experience. As such, these risks are often dwarfed by other risks, particularly those due to the investment returns. The historical section following shows that this is true for this Plan in individual years, with the magnitude of the gains and losses from investment experience often significantly larger than the gains and losses from liability experience. However, during the past ten years, the offsetting effects of the investment gains and losses have been such that the cumulative effect of this longevity and other demographic risk as seen in the liability gains and losses has been greater than the investment gains and losses.

Plan Change Risk is the potential for the provisions of the Plan to be changed such that the funding or benefits are changed materially. In addition to the actual payments to and from the Plan being changed, future valuation measurements can also be impacted, with Plan changes leading to deviations between actual future measurements and those expected by prior valuation. The historical review section will show that plan change risk has been a relatively significant driver of deviations in the actual measurements for this Program from those expected by the valuations over the ten-year period shown.

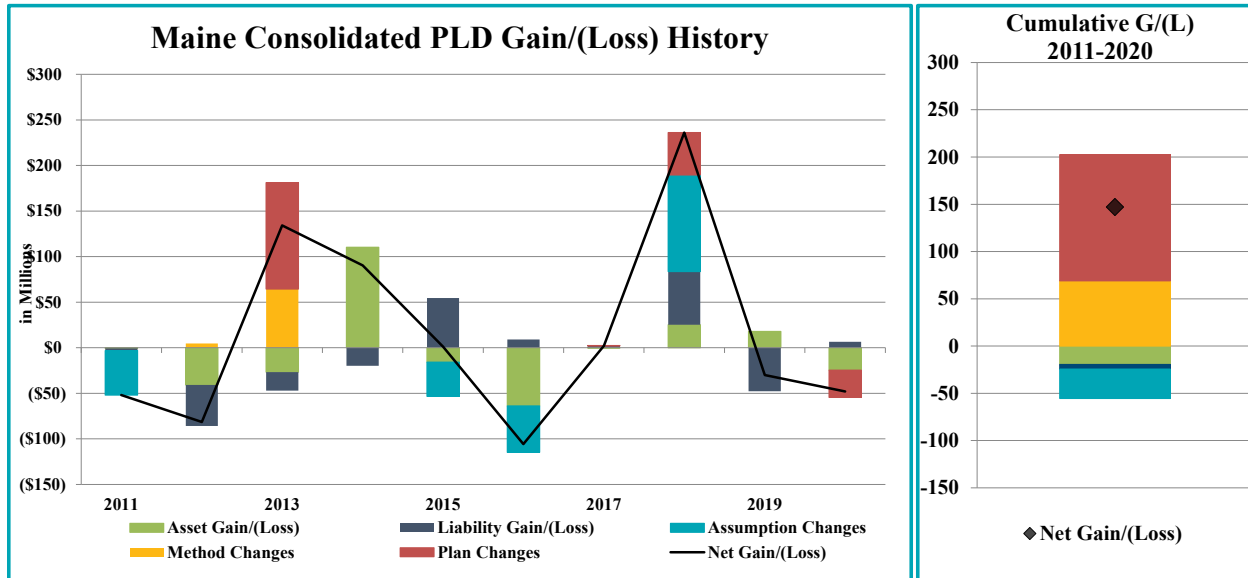
Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates over time may result in a change in the assumed rates of return used in the valuation. A healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. Assumption change risk is an extension of the risks previously identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in the environment resulting in the current assumption no longer being reasonable. The historical review section will show that assumption change risk has been a relatively significant risk for this Plan. In addition to changes in individual assumptions, changes to the methods used in valuing the Plan can have a significant impact on the valuation results as can be seen based on the method change items in the Plan's historical experience.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Historical Experience Deviations

In understanding the impact of some of these risks, it is useful to look at past experience deviations. These deviations are commonly referred to as actuarial gains and losses. The following graph shows the gains/(losses) at each valuation date between the actual and expected experience broken down by cause.



As described previously and is evident in this graph, Plan changes and assumption and method changes have been the most significant risks for the Plan over this ten-year period. The next two most significant causes of experience deviations are asset gains/(losses) and liability gains and losses. In addition, we note again that while the cumulative effect of the asset and liability gains and losses have been largely offsetting for the last ten years, both have been significant in individual years, which we expect to remain true for future years.

Plan Maturity Measures

As pension plans become more mature, the primary risks of adverse investments, demographic deviations, plan changes, and assumption changes become of more significant concern as the resulting impacts on the Plan's condition are more pronounced. As a result, it has become increasingly important to examine measures that indicate a pension plan's maturity level. With shrinking workforces, aging Baby Boomers, and retirees living longer, plans pay out more in benefits than they receive in contributions – leading to negative cash flows, excluding investment income, making it harder for a plan to recover from losses since contributions are generally made only on the basis of the active payroll.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

One of the main reasons risks are more amplified with a mature plan is that when plans with negative cash flows suffer investment losses, they need to liquidate enough assets to pay for benefits in excess of contributions. That means these plans will need to earn higher returns to rebuild their assets to the previous levels. Plans with negative cash flows exceeding five percent of assets are especially vulnerable to asset losses.

The balance of this section discloses and examines three maturity measures: the asset leverage ratio, the support ratio, and the net cash flow ratio.

Asset Leverage Ratio

One of the more important plan maturity measures is the asset leverage ratio – the market value of assets divided by the plan’s payroll, which represents the percentage of payroll that would need to be contributed to make up a given change in the plan’s assets. As a plan matures, its assets increase and a greater proportion of the assets are paid out in benefit payments to members. The greater the plan’s assets are relative to payroll, the more vulnerable the plan is to investment volatility in terms of the resulting contribution requirement changes.

As an example, here are two plans that both experience a 10% investment loss equaling \$500 million on their existing assets of five billion dollars. Plan A’s asset leverage ratio is 10 and Plan B’s ratio is five – this means that Plan A has to spread, or amortize, that loss over a payroll that is half as large as Plan B’s. As seen in the chart below, this results in the percentage of payroll that Plan A would have to have contributed to make up the loss being double what would be required for Plan B.

	(\$ in millions)	
	Plan A	Plan B
Plan Assets	\$ 5,000	\$ 5,000
Payroll	\$ 500	\$ 1,000
Asset Leverage Ratio	10.0	5.0
10% Loss	\$ 500	\$ 500
10% Loss as % of Payroll	100%	50%

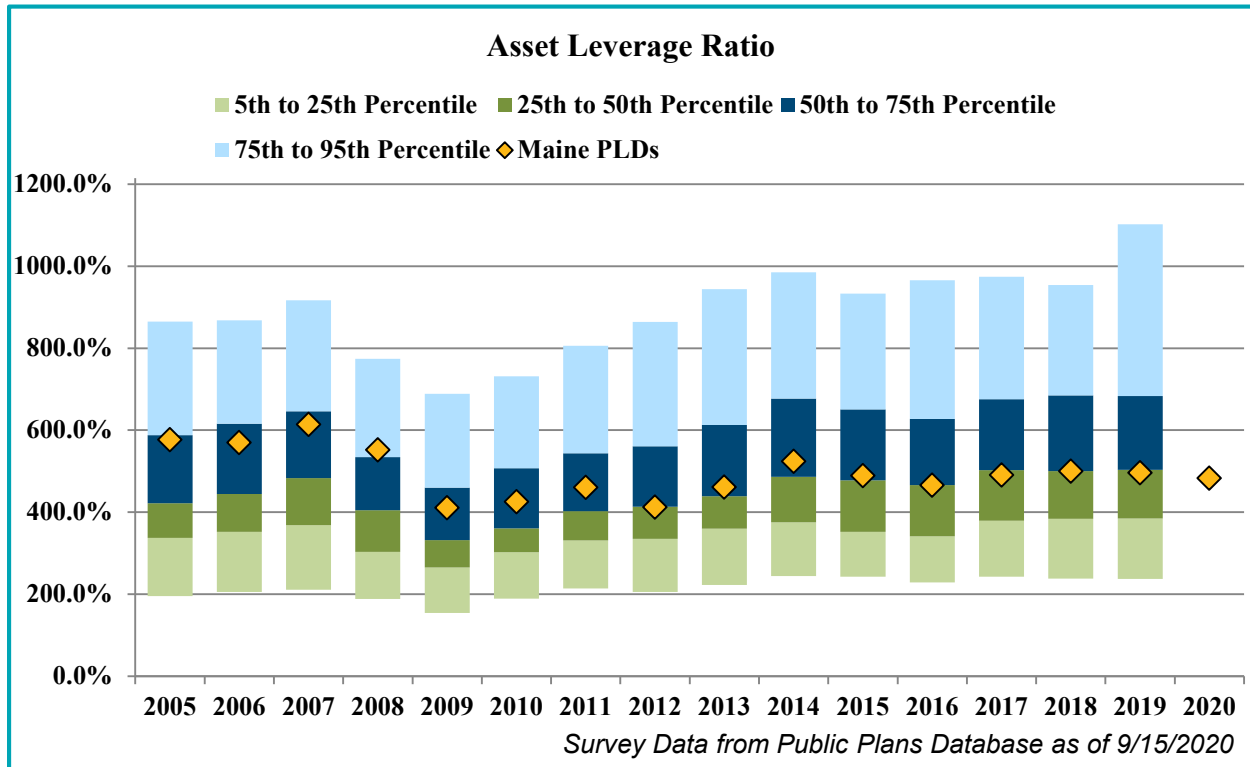
The Boston College’s Center for Retirement Research, NASRA, and the Center for State and Local Government Excellence maintain the Public Plan Database that contains the majority of state plans as well as many large municipal plans, covering over 95% of the membership in public plans as well as over 95% of the assets held by public pension plans.

The chart that follows shows the asset leverage ratios for all plans in this database since 2001. The colored bars represent the central 90% of the asset leverage ratios for the plans. The Maine Consolidated Plan for Participating Local Districts is represented by the gold diamonds. This chart shows that the Plan’s asset leverage ratio has varied over this period, but has declined comparing the most recent years to the beginning of the period, although it has remained steady at just under five times salary over the past six years.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Note that all of the charts showing the Plan versus this universe of plans in this section show one more year for the Plan than the universe as the 2020 numbers are not yet available for the database.



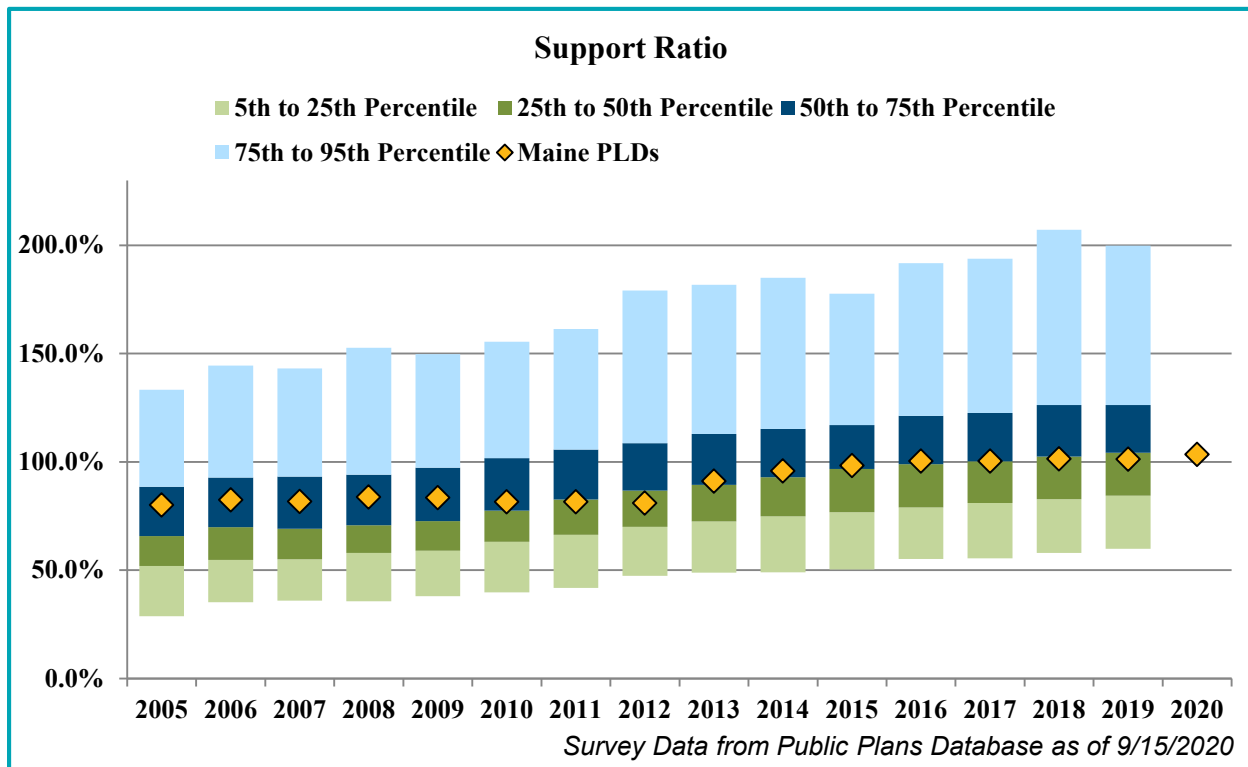
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Support Ratios

A commonly used measure of plan maturity is the support ratio – the ratio of retired and inactive members or those receiving benefits or entitled to a deferred benefit to the number of active members or those currently accruing benefits in the plan. The greater this ratio, the more mature a plan is considered to be with the proportion of the plan's liability represented by actives generally declining.

The graph shows the support ratio over time for the Plan compared to the Public Plan database.



The gold diamonds in this graph shows that the Plan's support ratio for each year has generally stayed relatively steady over time with a gradual increase. However, relative to the universe of public plans, the Plan's support ratio has dropped from around the 65th percentile in 2005 to just under the 50th percentile in 2019. This indicates that while the Plan is maturing, it is maturing more slowly than the universe of plans based on this metric.

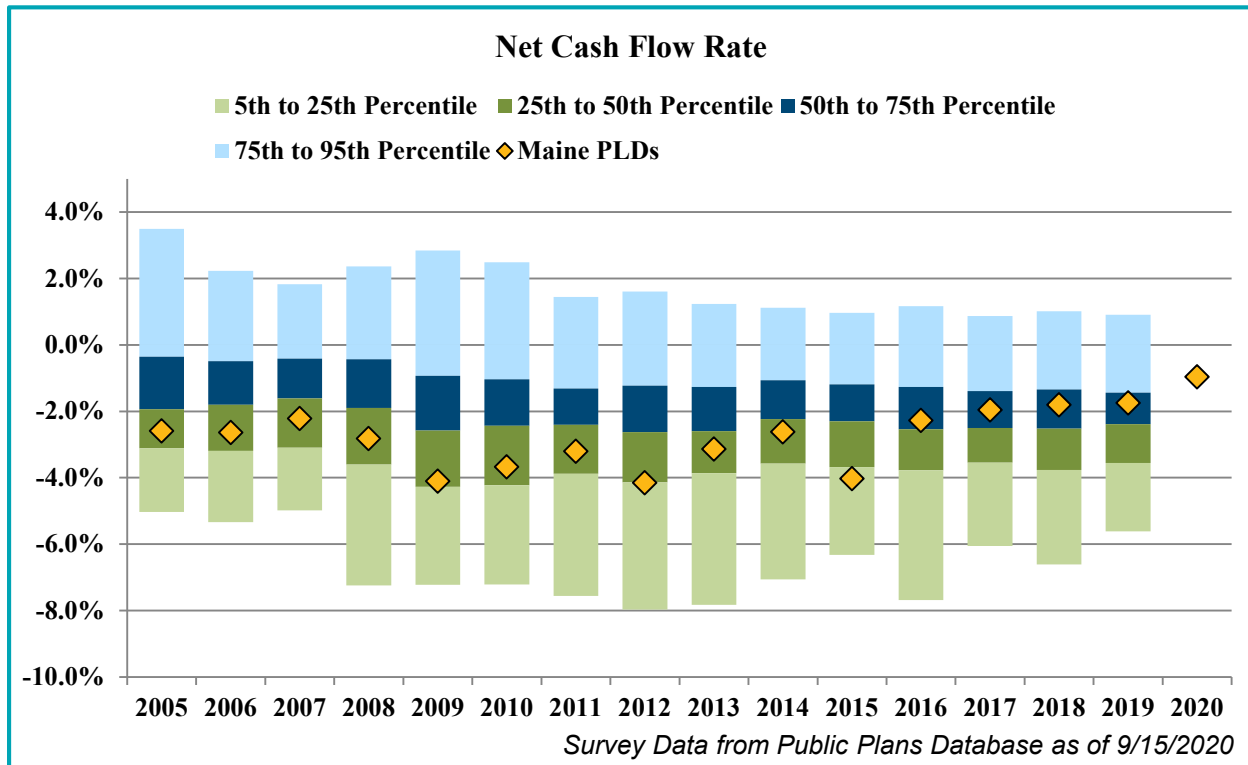
Net Cash Flow Ratio

Another measure of plan maturity is the ratio of the net cash flow out for a plan – contributions less benefits and expenses – divided by the market value of plan assets. When this ratio is significantly negative, a plan is very vulnerable to market declines. This vulnerability increases as this ratio becomes more negative.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

This chart shows that the Plan's net cash flow ratio in 2005 was about -2.4% and in 2020 is less negative at approximately -1.0%. Note however that 2020 was an unusual year for contributions to the Plan with a number of PLDs entering the Consolidated Plan, resulting in a less negative cash flow for the year than the approximately 1.7% for 2019. For most of the period, the Plan's net cash flow has been more negative than the median plan in the public plan database, but in recent years, the Plan's negative cash flows have been limited relative to the median plan in the universe. This measure thus again provides some indication that this Plan is maturing at a pace slower than the typical public plan.



Assessing Future Risk

Assessing the future risk that the expected measurements produced by the actuarial valuations will deviate from the actual values over time is complex and can never be exactly known. However, to try to assist the Board in its utilization of this report, we have attempted to develop some basic assessments of this risk in the remainder of this section.

Pages 5-6 have additional detail on the baseline projection. It is important to note that baseline projections, while valid, **are not going to occur** as experience never conforms exactly to assumptions every year. As discussed in the plan maturity section, as plans become more mature, it typically becomes more difficult for them to recover from market declines even when the average investment return over a long period is equal to the expected return. As a demonstration of this, the following projection is shown, which is based on assuming varying returns in the future. We

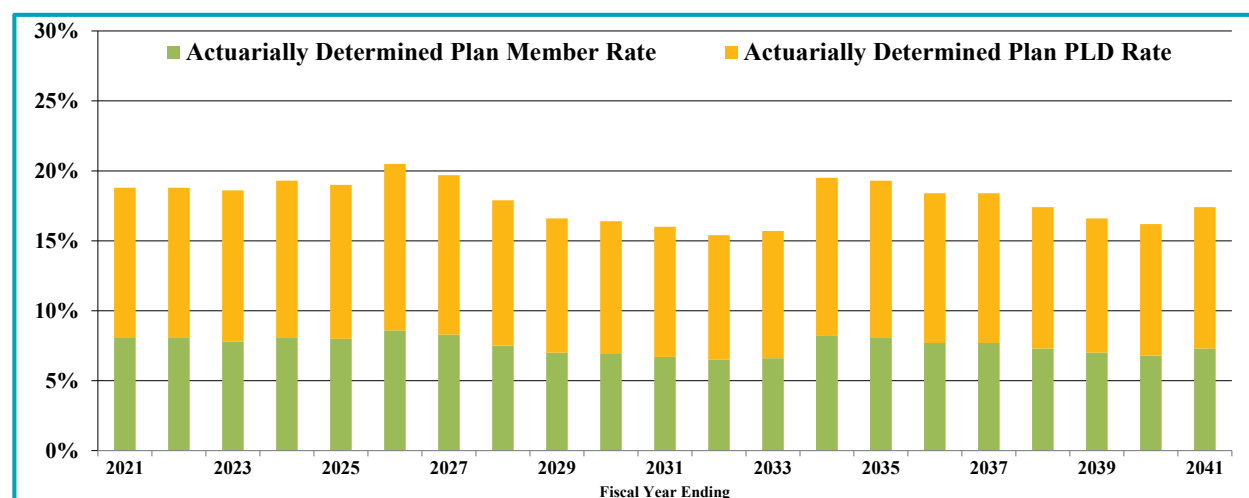
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

based this varying return scenario on assuming the returns for the next 20 years would equal what a portfolio invested 75% in the SP-500 index and 25% in the Lehman Brothers bond index would have earned for the 20 year period July 1, 1959 through June 30, 1979. This period produced an average return of 6.94% for this hypothetical portfolio. The rates assumed for this scenario are shown below.

FY	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Return	2.2%	14.3%	-7.7%	24.7%	16.9%	5.5%	2.2%	7.9%	10.3%	0.3%
FY	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Return	-18.8%	36.1%	11.1%	1.3%	-12.7%	15.8%	13.2%	3.5%	0.3%	12.2%

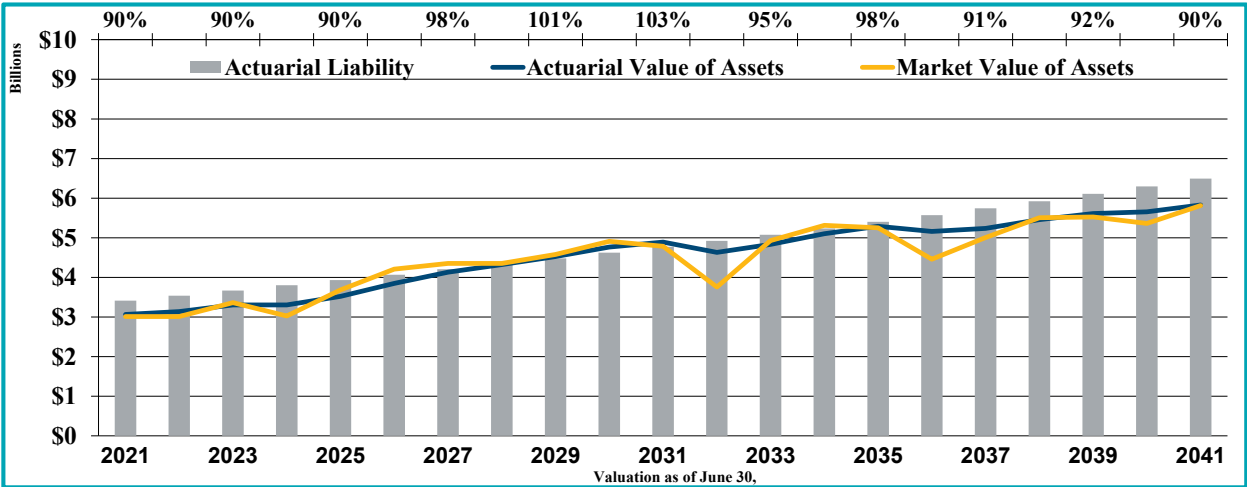
With varying annual earnings, one can see the volatility in the contributions in the first chart. Note that this chart reflects an illustrative scenario and is not intended to reflect future expectations as the volatility of the contributions will vary with the volatility of the returns. While the combined employer/member cap is projected to be reached during the period shown, the projections do not show any reduction in COLA benefits during this scenario.



The funded ratio of the Plan is also more volatile with varied returns as seen in the following graph based on this illustrative varying returns scenario. Note also that timing of contribution development and payment as well as the combination of the amortization layers results in the Plan being funded over 100% at times, similar to what is seen in the baseline projection.

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020

SECTION II – RISK ASSESSMENT AND DISCLOSURE



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Pension plan assets play a key role in the financial operation of plans and the decisions Trustees make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, PLD and member contribution rates, and the ultimate security of members' benefits.

The assets for all Defined Benefit (DB) Programs administered by MainePERS are invested together. These Programs are the State Employee and Teacher Retirement Program, the Judicial Retirement Program, the Legislative Retirement Program, and the Participating Local District Retirement Program, including both the Consolidated Plan that is the subject of this valuation and the several Nonconsolidated PLDs. The assets of all of these Programs are entirely commingled for investment purposes, so the actuarial value of assets (AVA) for each of these Programs is developed by first developing it for the entire asset pool and then subsequently allocating that total AVA to each of the specific Programs.

In this section, we present detailed information on the Plan's assets including:

- Disclosure of total MainePERS DB assets at June 30, 2019 and June 30, 2020;
- Statement of changes in total MainePERS DB market values during the year;
- Development of the total MainePERS DB actuarial value of assets;
- Allocation of the total actuarial value to MainePERS DB Programs;
- Assessment of the total MainePERS DB investment performance; and
- Projection of expected cash flows for the Plan for the next ten years.

Disclosure

The market value of assets (MVA) represents a “snap-shot” or “cash-out” value, which provides the principal basis for measuring financial performance from one year to the next. However, market values can fluctuate widely with corresponding swings in the marketplace, resulting in volatility in the resulting contributions if the unadjusted market value is used in the valuation process that develops the contributions. Therefore, a smoothed actuarial value is developed for use in this process and for evaluating the Plan's ongoing ability to meet its obligations. The actuarial value of the Program's assets is developed by allocating the actuarial value of the total MainePERS DB assets to each Program. This section discloses the market and actuarial values of the MainePERS DB assets both in total and for each Program.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Table III-1 that follows develops the change in the market value of assets for the total MainePERS DB assets during FY 2020.

Table III-1		
Changes in Market Value of Total MainePERS Defined Benefit (DB) Assets		
Market Value of Total MainePERS DB Assets – June 30, 2019		\$ 15,112,665,834
<u>Additions</u>		
Contributions:		
Employer Contributions	\$ 467,581,406	
Member Contributions	206,329,988	
Transfers	<u>(208,355)</u>	
Total Contributions	\$ 673,703,039	
Investment Income:		
Net Appreciation (Depreciation) in		
Fair Value of Investments	\$ 574,273,640	
Interest on Bank Balances	<u>1,162,578</u>	
Total Investment Income	\$ 575,436,218	
Investment Activity Expenses:		
Management Fees	\$ (124,480,394)	
Investment Related Expense	(5,342,903)	
Banking Fees	<u>(33,493)</u>	
Total Investment Activity Expenses	\$ (129,856,790)	
Net Income from Investing Activities	\$ 445,579,428	
Total Additions		\$ 1,119,282,467
<u>Deductions</u>		
Retirement Benefits	\$ (983,672,428)	
Disability Benefits	(29,972,239)	
Survivor Benefits	(24,621,431)	
Refunds	(26,788,940)	
Administrative Expenses	<u>(14,244,292)</u>	
Total Deductions		\$ (1,079,299,330)
<u>Total</u>		
Net Increase (Decrease)		\$ 39,983,137
Market Value of Total MainePERS DB Assets – June 30, 2020		\$ 15,152,648,971

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Table III-2 below develops the actuarial value of assets for the total MainePERS DB assets as of June 30, 2020 using the adopted actuarial valuation methodology.

Table III-2 Development of Actuarial Value of Total MainePERS Defined Benefit (DB) Assets as of June 30, 2020		
1.	Actuarial Value of Total MainePERS DB Assets at June 30, 2019	\$ 14,935,753,708
2.	Amount in (1) with Interest to June 30, 2020	15,943,917,083
3.	Employer and Member Contributions for FY 2020	673,703,039
4.	Interest on Contributions in (3), Assuming Received Uniformly throughout FY 2020	22,366,212
5.	Total Disbursements without Administrative Expenses for FY 2020	(1,065,055,038)
6.	Interest on Disbursements in (5), Assuming Payments made Uniformly throughout FY 2020	<u>(35,358,673)</u>
7.	Expected Value of Total MainePERS DB Assets at June 30, 2020 = (2) + (3) + (4) + (5) + (6)	\$ 15,539,572,623
8.	Actual Market Value of Total MainePERS DB Assets at June 30, 2020	15,152,648,971
9.	Excess of (8) Over (7)	<u>(386,923,652)</u>
10.	Actuarial Value of Total MainePERS DB Assets at June 30, 2020 = (7) + [33⅓% of (9)]	\$ 15,410,598,072

Actuarial Value of Total MainePERS DB Assets

As discussed in the disclosure portion of this section, the actuarial value of assets for the Plan represents a “smoothed” value developed by the actuary to reduce, or eliminate, volatility in contribution rates that could develop from short-term fluctuations in the market value of assets. Current actuarial methods employed in this Plan use an allocated portion of the total actuarial value of assets based on the actuarial valuation process applied to the total MainePERS DB assets. This methodology for the total MainePERS DB assets sets the actuarial value of assets equal to the expected value of the actuarial value of assets plus one-third of the difference between the actual market value of assets and the expected actuarial value of assets. The expected value of the actuarial value of assets takes the prior year’s actuarial value of assets and adjusts it for contributions, benefit payments, and expected interest earnings at the investment return assumption that was in effect for the previous year, 6.75% for this valuation. The previous table, Table III-2, illustrates the calculation of the actuarial value of assets for the total MainePERS DB assets as of June 30, 2020.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Allocation of Actuarial Value of Assets to the Plan

The assets for all of the defined benefit (DB) Programs administered by MainePERS are commingled for investment purposes, with the actuarial value of assets for the total assets allocated to the individual Programs on the basis of the market value of assets for each Program. An asset ratio (total MainePERS actuarial value of assets divided by total MainePERS market value of assets) is applied to the market value of assets attributable to each of the Programs to determine their actuarial value of assets as of the valuation date. The asset ratio derived in this June 30, 2020 valuation as shown in Table III-2 above is 1.017023 ($\$15,410,598,072 \div \$15,152,648,971$). The allocation of actuarial value of the total MainePERS DB assets to each of the MainePERS DB Programs based on this asset ratio is shown in the following chart.

Table III-3 Allocation of Actuarial Value of Total MainePERS DB Assets as of June 30, 2020		
Program	Market Value	Actuarial Value
Teachers	\$ 8,004,335,042	\$ 8,140,595,773
State (Regular & Special)	4,040,581,237	4,109,365,533
Judicial	73,514,720	74,766,188
Legislative	13,450,104	13,679,070
Participating Local Districts (Consolidated & Non-Consolidated)	<u>3,020,767,868</u>	<u>3,072,191,508</u>
Total	\$ 15,152,648,971	\$ 15,410,598,072

Investment Performance

The market value of assets for the total MainePERS DB assets returned a positive 2.89% during FY 2020. This is lower than the assumed return of 6.75% for FY 2020. The equivalent market value returns for the total MainePERS DB assets for FY 2019 and FY 2018 were positive 6.62% and positive 9.95%, respectively.

On an actuarial value of assets basis, the return for FY 2020 was a positive 5.88% for the total MainePERS DB assets. This return is greater than the return on a market value basis, but it is lower than the 6.75% assumption for FY 2020. Therefore, this return gave rise to an investment loss on the total MainePERS DBs assets this year.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Cash Flow Projections

Table III-4 Projection of Consolidated Plan Benefit Payments and Contributions		
FY Ending June 30,	Expected Benefit Payments	Total Expected Contributions
2021	\$ 185,505,000	\$ 118,835,000
2022	195,459,000	122,103,000
2023	204,849,000	125,461,000
2024	214,248,000	130,283,000
2025	223,845,000	134,571,000
2026	233,392,000	138,271,000
2027	243,180,000	142,073,000
2028	252,564,000	145,981,000
2029	261,884,000	149,995,000
2030	270,472,000	154,120,000

In Table III-4 above, we provide a projection of expected cash flows in and out of the Plan for the next ten years for informational purposes. The Board may share these projections with its investment advisor for consideration of the growing gap shown between the cash expected to come into the Plan through PLD and member contributions and the cash expected to be paid out of the Plan to provide benefit payments.

The expected benefit payments in Table III-4 were developed using the data currently included in this valuation and on the assumption that the actuarial assumptions disclosed in Appendix D will be exactly met. Actual benefit payments will vary if members retire sooner or later than assumed, if salary increases and actual future post-retirement COLAs differ from those assumed, or if other assumptions differ from the actual experience seen. These benefit projections exclude any assumption about new Plan participants, whose experience will eventually lead to increased benefit payments. However, we do not feel this exclusion will materially impact the projections for the time period shown.

For the purposes of this table of cash flows, as well as for all other liability calculations within this report, we have assumed that the member contribution rates for each Regular and Special Plan within the Plan will be developed and paid at the actuarially determined rates. In addition, these cash flows, with the exception of the FY 2020 rates where we have assumed the rates adopted through the risk-sharing framework will be paid, again along with all other liability calculations within this report, are based on the assumption that the contributions made to the Plan will be the actuarially determined rates. In addition to these additional assumptions regarding the contributions that the Plan will receive, these cash flows are also developed based on the assumption that all valuation assumptions are exactly met, including an assumed 2.75% per year increase in covered payroll.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION III – ASSETS

Note that we expect the contribution rates that will actually be paid for FY 2022 will be those developed under the risk-sharing contribution methodology, which are modified versions of the actuarially determined rates rather than the actuarially determined rates themselves. We will continue to reflect the known adopted rates as they are developed, but at this time the unmodified actuarially determined contribution rates that are the basis of the risk-sharing contribution rates are the most reasonable to assume will be paid.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

In this section, we present detailed information on Plan liabilities including:

- Disclosure of the Plan’s liabilities as of June 30, 2019 and June 30, 2020; and
- Statement of changes in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used.

- **Present Value of Future Benefits (PVB):** Used for analyzing the overall financial obligations of the Plan, this represents the amount of money needed today to fully fund all future benefits of the Plan, assuming active members continue to earn salary increases and accrue benefits under their current Plan provisions and assuming all actuarial assumptions are exactly met, including the 6.75% per year investment return.
- **Actuarial Liability (AL):** Used for funding calculations and GASB disclosures, this liability is calculated taking PVB above and subtracting the value of accruals that are assigned to future years on a person-by-person basis. This offset is equal to the present value of future member contributions and future PLD normal cost contributions under an acceptable actuarial funding method. For this Plan and the other MainePERS Defined Benefit Programs, this method is referred to as the entry age normal (EAN) funding method, which is the only acceptable actuarial funding method for GASB disclosures.
- **Present Value of Accrued Benefits (PVAB):** Used for communicating the liabilities for benefits accrued as of the valuation date.

Table IV-1 on the following page discloses each of these liabilities for the current and prior years’ valuations. With respect to the actuarial liability and the present value of accrued benefits, a subtraction of the appropriate value of the Plan’s assets yields, for each respective type, a net surplus or an unfunded liability. For the PVB measure, it is compared to the market value of assets plus the expected future value of contributions to the Plan. The future member and PLD contributions are calculated as the expected rates for each year times the expected future payroll as of that date. The difference between the PVB and these anticipated resources indicates either an expected shortfall or an expected surplus representing either additional funding required or excess funding and indicates the size of the Program’s stored gains or losses that remain outside of the valuation process currently.

Note that since the methodology to allocate the actuarially determined contributions between the PLDs and members are still being phased in, we have assumed that the static member contribution rates that were in effect through the end of FY 2019 will be continued for all future years in determining the liabilities throughout this report. We anticipate that we will update the valuation methodology to reflect the expected contributions by specific Plan within the Plan in developing

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

liabilities related to refunds of contributions once the risk-sharing framework is largely phased-in. In aggregate, we expect that the total liabilities for the Plan will not be materially impacted by this assumption.

We note that none of the liabilities presented in this report is an appropriate measure of a settlement liability.

The liability measures are compared to appropriate measures of assets, along with the expected future value of member and PLD contributions where appropriate. The difference between the liability measure and the anticipated resources indicates either an expected shortfall or an expected surplus related to that liability measure. The surplus or shortfall on the present value of benefits (PVB) item indicates the size of the Plan's stored gains or losses that remain outside of the valuation process.

**Table IV-1
Disclosure of Liabilities**

	June 30, 2019	June 30, 2020
Present Value of Benefits (PVB)		
Active Member Benefits	\$ 1,849,281,798	\$ 1,947,102,882
Retired, Disabled, Survivor, and Beneficiary Benefits	1,790,898,244	1,890,540,773
Terminated (Vested & Nonvested) Benefits	<u>136,785,016</u>	<u>146,318,038</u>
Total PVB	\$ 3,776,965,058	\$ 3,983,961,693
 Market Value of Assets (MVA)	 \$ 2,953,156,096	 \$ 3,012,428,367
Future Member and PLD Contributions*	823,808,962	971,533,326
Projected (Surplus)/Shortfall	<u>0</u>	<u>0</u>
Total Resources	\$ 3,776,965,058	\$ 3,983,961,693
 Actuarial Liability (AL)		
Present Value of Benefits (PVB)	\$ 3,776,965,058	\$ 3,983,961,693
Present Value of Future Normal Costs (PVFNC)	<u>518,145,453</u>	<u>574,220,326</u>
Actuarial Liability (AL = PVB – PVFNC)	\$ 3,258,819,605	\$ 3,409,741,367
Actuarial Value of Assets (AVA)	<u>2,918,585,814</u>	<u>3,063,710,040</u>
Net (Surplus)/Unfunded (AL – AVA)	\$ 340,233,791	\$ 346,031,327
 Present Value of Accrued Benefits		
Present Value of Benefits (PVB)	\$ 3,776,965,058	\$ 3,983,961,693
Present Value of Future Benefit Accruals (PVFBA)	<u>820,636,276</u>	<u>865,903,507</u>
Accrued Liability (PVAB = PVB – PVFBA)	\$ 2,956,328,782	\$ 3,118,058,186
Market Value of Assets (MVA)	<u>2,953,156,096</u>	<u>3,012,428,367</u>
Net (Surplus)/Unfunded (PVAB – MVA)	\$ 3,172,686	\$ 105,629,819

* Future contributions assumed at the actuarially determined rates.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION IV – LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior table is expected to change at each subsequent valuation. The components of these changes, depending upon which liability is analyzed, can include:

- New Plan members since the last valuation
- Benefits accrued since the last valuation
- Plan amendments changing benefits since the last valuation
- Passage of time, which adds interest to the prior liability
- Benefits paid to members since the last valuation
- Members retiring, terminating, or dying at rates different than expected since the last valuation
- Salaries changing at rates different than expected since the last valuation
- A change in actuarial assumptions since the last valuation
- A change in the actuarial funding method since the last valuation

Unfunded liability measurements will change because of all of the above, as well as due to changes in the Plan's asset measurements resulting from:

- PLD or member contributions being different than expected (including actual contributions developed under the risk-sharing framework deviating in aggregate from the actuarially determined contributions)
- Investment earnings being different than expected
- A change in the method used to measure Plan assets in developing the unfunded liability measure since the last valuation

In each valuation, we report on those elements of change in the Plan's liability measures that are of particular significance, potentially affecting the long-term financial outlook of the Plan. In Table IV-2 below, we present key changes in the Plan's liability measures since the last valuation.

	Table IV-2		
	Present Value of Future Benefits	Actuarial Liability	Present Value of Accrued Benefits
Liability Measurement – June 30, 2019	\$ 3,776,965,058	\$ 3,258,819,605	\$ 2,956,328,782
Liability Measurement – June 30, 2020	<u>3,983,961,693</u>	<u>3,409,741,367</u>	<u>3,118,058,186</u>
Liability Measurement Increase/ (Decrease) Due to:	\$ 206,996,635	\$ 150,921,762	\$ 161,729,404
Plan Amendment	\$ 30,063,193	\$ 29,759,516	\$ 29,089,812
Assumption Change	0	0	0
Actuarial (Gain)/Loss	N/C	\$ (6,552,650)	N/C
Benefits Accumulated and Other Sources	\$ 176,933,442	\$ 127,714,896	\$ 132,639,592

N/C = Not calculated

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

In this section, we present detailed information on PLD and member contribution rates as developed in this June 30, 2020 valuation for the Plan, including:

- Development of Actuarially Determined Plan Total Rate for the Plan as a whole, including Actuarially Determined Plan Normal Cost Rate and Actuarially Determined Plan UAL Amortization Rate;
- Summary of the Plan-Specific Normal Cost Rates by each Regular and Special Plan; and
- Description of risk-sharing framework and how resulting contribution rates are developed.

Note that the actual rates that will be paid in FY 2022 based on this June 30, 2020 valuation are specific to each individual Regular and Special Plan in the Plan and include a PLD rate for each Plan as well as a single member rate for each Special Plan and two member rates for each Regular Plan, where the Regular Plan member rates vary based on the applicable normal retirement age per each member of the Plan. These actual rates are developed in the risk-sharing framework process and are not contained within this report, but a general outline of this process is included as the last element of this section of this report for informational purposes.

In addition, any PLDs that have Initial Unpooled Unfunded Actuarial Liability (IUUAL) balances also make additional contributions to repay these balances in addition to their PLD contribution rates.

Description of Rate Components

The rate components described here are the Actuarially Determined Plan Rates, based on the aggregation of all of the Regular and Special Plans in the Plan, and the Plan-Specific Normal Cost Rates that are anticipated to be the basis from which the risk-sharing contribution rates that will actually be paid by the PLDs and members in FY 2021 will be determined.

Actuarially Determined Plan Total Rate

The Actuarially Determined Plan Total Rate is developed based on the entirety of the Consolidated Plan and consists of two elements: the Actuarially Determined Plan Normal Cost Rate and the Actuarially Determined Plan UAL Amortization Rate.

For each of the Regular and Special Plans in the Consolidated Plan, an individual entry age normal cost rate is determined for each active member. The normal cost is determined by the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into a Plan, of each active member's projected future benefits. Second, this value is then divided by the value, also at entry age, of the member's expected future salary. These rates are then multiplied by each member's salary as of the valuation date to get the total normal cost dollars as of the valuation date for that Plan. These individual amounts for each Regular and Special Plan are then added to get the total normal cost dollars for the Plan and then divided by the total payroll for the Plan to get the Actuarially Determined Plan Normal Cost Rate.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

The pooled UAL under the entry age normal funding method equals the present value, at the time of valuation, of the future benefit payments less the present value of future contributions plus current assets. Under the Consolidated Plan, the Actuarially Determined Plan UAL Amortization Rate is calculated for the Consolidated Plan in total based on the pooled UAL being amortized over a 20-year period commencing with the June 30, 2015 valuation date and any layers of pooled UAL arising after that date amortized over individual 20-year periods. This amortization uses a level percentage of pay method with payroll assumed to increase at 2.75% per year. The amortization payment thus derived for the valuation year is then divided by the total payroll to develop the Actuarially Determined Plan UAL Amortization Rate.

As a reminder, these rates are not paid by any PLD or member and instead determine the level of the contributions in aggregate that needs to be paid into the Plan. The risk-sharing framework allocates this cost level, with some adjustments, based on the relative rates of the Plan-Specific Normal Cost Rates and determines the rates that are paid by every PLD and member in the Consolidated Plan based on each member's specific Plan.

Plan-Specific Normal Cost Rates

Following the procedure outlined above to develop the total normal cost dollars for each specific Regular and Special Plan, these Plan-Specific totals are then divided by the total payroll for each specific Plan to get the Plan-Specific Normal Cost Rate for that Plan. This procedure is followed for each Regular and Special Plan in the Consolidated Plan.

IUUAL Payments

PLDs that either enter the Consolidated Plan with liabilities in excess of their assets or make Plan changes resulting in individual liability amounts have additional contributions required. They make payments on their Individual Unpooled Unfunded Actuarial Liability (IUUAL) until their IUUAL is fully paid off. IUUAL payments are made as specific dollar amounts on a schedule rather than as a rate applied to payroll. The System now treats future IUUAL payments as receivable contributions that are already included in the asset values provided and so are not separately identified in the Section I summary tables.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Contribution Calculations

Table V-1 below presents and compares the Actuarially Determined Plan Total Rate for the Plan in aggregate, as well as its two components, as developed in this valuation and the prior one.

Table V-1 Actuarially Determined Plan Total Rates		
Valuation Date	June 30, 2019	June 30, 2020
Actuarially Determined Plan Normal Cost Rate	13.9%	13.9%
Actuarially Determined Plan UAL Amortization Rate	<u>4.9%</u>	<u>4.9%</u>
Actuarially Determined Plan Total Rate	18.8%	18.8%

The remainder of this section details the calculation of the above rates, including developing the Actuarially Determined Plan UAL Amortization Rate from its components and developing the Plan-Specific Normal Cost Rates for each Regular and Special Plan in the Consolidated Plan as well as the Actuarially Determined Plan Normal Cost Rate for the Plan in aggregate.

Table V-2 shows the development of the Plan-Specific Normal Cost Rates for each Regular and Special Plan as well as the Actuarially Determined Plan Normal Cost Rate.

Table V-2 Development of Plan-Specific Normal Cost Rates and Actuarially Determined Plan Normal Cost Rate					
Specific Plan	Plan-Specific				
	Initial Normal Cost Dollars	Valuation Salary	Normal Cost Rate	Total Salary	Total Normal Cost Dollars
Regular AC	44,310,042	336,281,682	13.2%	376,305,286	49,672,298
Regular AN	3,060,524	28,872,818	10.6%	31,993,174	3,391,276
Regular BC	160,261	2,059,819	7.8%	2,311,683	180,311
Special 1C	3,106,327	16,122,528	19.3%	17,319,719	3,342,706
Special 2C	13,867,646	94,442,173	14.7%	102,462,089	15,061,927
Special 3C	12,260,012	71,791,552	17.1%	77,199,353	13,201,089
Special 4C	507,060	3,748,076	13.5%	4,006,503	540,878
Special 1N	107,744	687,234	15.7%	742,685	116,602
Special 2N	270,544	2,294,552	11.8%	2,480,256	292,670
Special 3N	1,005,818	7,302,385	13.8%	7,793,386	1,075,487
Special 4N	91,758	920,611	10.0%	973,505	97,351
Total for Plan in Aggregate				623,587,639	86,972,595
Actuarially Determined Plan Normal Cost Rate					13.9%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Table V-3 below provides the development of the 4.9% UAL Amortization Rate as of June 30, 2020 that was shown in Table V-1 for the Consolidated Plan in aggregate.

Table V-3 Derivation of Actuarially Determined Plan UAL Amortization Rate	
1. Actuarial Liability (AL)	\$ 3,409,741,367
2. Actuarial Value of Assets (AVA)	<u>3,063,710,040</u>
3. Unfunded Actuarial Liability (UAL)	\$ 346,031,327
4. Remaining Balances of Prior Amortization Bases	
a. Original UAL Amount	\$ 267,090,099
b. 2016 (Gain)/Loss Base	111,486,515
c. 2017 (Gain)/Loss Base	9,687,099
d. 2018 (Gain)/Loss Base	(75,544,375)
e. 2019 (Gain)/Loss Base	20,708,577
f. 2020 (Gain)/Loss Base	<u>12,603,412</u>
g. Sum of the Bases	\$ 346,031,327
5. UAL Amortizations	
a. Original UAL Amount 15 Years	\$ 23,711,386
b. 2016 (Gain)/Loss Base 16 Years	9,440,008
c. 2017 (Gain)/Loss Base 17 Years	785,313
d. 2018 (Gain)/Loss Base 18 Years	(5,883,063)
e. 2019 (Gain)/Loss Base 19 Years	1,553,800
f. 2020 (Gain)/Loss Base 20 Years	<u>913,544</u>
g. Sum of Amortization Payments	\$ 30,520,988
6. Covered Payroll	\$ 623,587,639
7. UAL Amortization Rate	
a. Original UAL Amount 15 Years	3.9%
b. 2016 (Gain)/Loss Base 16 Years	1.5%
c. 2017 (Gain)/Loss Base 17 Years	0.1%
d. 2018 (Gain)/Loss Base 18 Years	(0.9%)
e. 2019 (Gain)/Loss Base 19 Years	0.2%
f. 2020 (Gain)/Loss Base 20 Years	<u>0.1%</u>
g. Sum of UAL Amortization Rates	4.9%

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

The Actuarially Determined Plan Normal Cost Rate developed in Table V-2 is combined with the Actuarially Determined Plan UAL Amortization Rate developed in Table V-3 to determine the Actuarially Determined Plan Total Rate. This Actuarially Determined Plan Total Rate, along with the Plan-Specific Normal Cost Rates, will be used in the risk-sharing framework to develop the risk-sharing contribution rates that will actually be paid by the PLDs and members in FY 2022. Since they are developed in that process outside of the actuarial valuations, these actual rates are not included in this report, but for informational purposes, this section is concluded with a general outline of this methodology.

Risk-Sharing Contribution Methodology

As mentioned previously, the actual FY 2022 rates will be developed based on the results of this June 30, 2020 valuation, reflecting application of the risk-sharing contribution methodology. Details of the application of this methodology will be determined by the Board, but we have provided a general description of this methodology to communicate how it operates. This basic information is thus useful for informational purposes as it can be provided in advance of the full rates that will be developed and provided under separate cover, but can only be done after the specifics of the methodology for this year are finalized and adopted by the Board.

Note that while this section provides a summary of the principles of the risk-sharing contribution methodology adopted by the Board, the specific details of the methodology to be used in developing the FY 2022 rates from the results of this June 30, 2020 actuarial valuation have not yet been finalized and thus any or all details of the methodology as outlined here may change prior to finalization and adoption.

Most of the local districts in the State of Maine participate in this Consolidated Plan for PLDs. The Plan offers a number of specific Plan options from which each PLD can choose, with each option having its own specific contributions associated with it to be paid by both the member and the PLD. Under the risk-sharing contribution methodology, both the member contributions and the PLD contributions will be paid as rates that are set annually based on the actuarial valuation process. The June 30, 2018 valuation setting the Fiscal Year 2020 contribution rates was the first valuation used to develop member and PLD contribution rates based on this risk-sharing methodology as prior to the 2018 valuation, the member rates were static and set by the Board while the PLD rates were established using the corridor funding methodology. This June 30, 2020 valuation will be used as the basis to determine the Fiscal Year 2022 contribution rates for members and PLDs that will be paid.

Under the Plan's risk-sharing contribution methodology, PLD and member rates are developed for each Regular and Special Plan within the Plan. First, Plan-Specific Normal Cost Rates are developed for each Plan and then combined to develop the Actuarially Determined Plan Normal Cost Rate, which is the aggregate normal cost rate for the Plan as a whole. These rates represent the cost of providing the next year's benefits. The Actuarially Determined Plan UAL Amortization Rate is also developed based on the amortization of the aggregated UAL. The Actuarially Determined Plan Total Rate is then determined as the sum of the Actuarially Determined Plan

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION V – CONTRIBUTIONS

Normal Cost Rate and the Actuarially Determined Plan UAL Amortization Rate. This Actuarially Determined Plan Total Rate is then allocated to each Regular and Special Plan relative to the Plan-Specific Normal Cost Rates. The resulting rate for each individual Regular and Special Plan is then allocated between the rate to be paid by the PLD and the rate to be paid by the members. In the case of the three Regular Plans, the process further develops distinct member rates based on whether a member is covered by the provisions with an age 60 normal retirement age or an age 65 normal retirement age.

The implementation of the risk-sharing framework to develop the contribution rates to be paid based on each valuation includes further refinements based on details adopted by the Board for the year in implementation, which include maximum rates and phasing-in of change in rates from prior years. The Board considers factors specific to the Plan in aggregate as well as the resulting rates in determining the refinements of the implementation for the year.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

This section contains financial disclosure information regarding the Plan developed under a number of accounting standards and guidance.

First, for informational purposes, we show the Plan's funded status under the Financial Accounting Standards Board (FASB) ASC Topic 960, which discloses how the market value of assets would compare to accrued liabilities if contributions were to stop and accrued benefit claims had to be satisfied as of the valuation date. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if all provisions of the Consolidated Plan were to terminate. We have prepared the following exhibit in this section based on FASB ASC Topic 960:

- Table VI-1: Accrued Benefits information

The Governmental Accounting Standards Board (GASB) Statements Nos. 67 and 68 establish standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in financial statements, notes to financial statements, and supplementary information. We have prepared the following exhibits reflecting provisions of GASB Statement Nos. 67 and 68:

- Table VI-2: Schedule of Changes in Net Pension Liability and Related Ratios
- Table VI-3: Sensitivity of Net Pension Liability to Changes in Discount Rate
- Table VI-4: Schedule of Employer Contributions
- Table VI-5: Average Expected Remaining Service Lives

A summary of the terminology used in GASB Statement Nos. 67 and 68 is provided in Appendix E of this report. Note that while much of the information provided in this report under GASB No. 67 is also utilized in GASB No. 68, Table VI-5 included in this section is only applicable to GASB No. 68.

Finally, we have also developed disclosure information in this section based on additional guidance relating to Comprehensive Annual Financial Reports (CAFRs) of PERS provided by the Government Finance Officers Association (GFOA) in their publication, *Governmental Accounting, Auditing, and Financial Reporting* (GAAFR). We have prepared the following exhibits reflecting guidance in the GAAFR:

- Table VI-6: Analysis of Financial Experience
- Table VI-7: Schedule of Funded Liabilities by Type

The present value of accrued benefits, the total pension liability (GASB 67/68), and the actuarial liability (GAAFR) disclosures in this section are all determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities as of June 30, 2020 are discounted at the assumed valuation interest rate of 6.75% per annum in all of these disclosures.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Table VI-1 below includes the relevant amounts as of June 30, 2019 and June 30, 2020 as well as a reconciliation between the two dates under FASB ASC Topic 960.

Table VI-1 Accrued Benefits Information		
	June 30, 2019	June 30, 2020
FASB ASC Topic 960 Basis		
1. Present Value of Benefits Accrued to Date (PVAB)		
a. Members Currently Receiving Payments	\$ 1,790,898,244	\$ 1,890,540,773
b. Terminated Vested Members	136,785,016	146,318,038
c. Active Members	<u>1,028,645,522</u>	<u>1,081,199,375</u>
d. Total PVAB	\$ 2,956,328,782	\$ 3,118,058,186
2. Assets at Market Value (MVA)	<u>2,953,156,096</u>	<u>3,012,428,367</u>
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$ 3,172,686	\$ 105,629,819
4. Ratio of MVA to PVAB (2)/(1)(d)	99.9%	96.6%
Change in Present Value of Benefits Accrued to Date during FY 2020		
Increase/(Decrease) during Year Attributable to:		
Passage of Time	\$ 193,750,610	
Benefits Paid	(174,752,167)	
Assumption Changes	0	
Plan Changes	29,089,812	
Benefits Accrued, Other Gains/Losses	<u>113,641,149</u>	
Net Increase/(Decrease)	\$ 161,729,404	

Table VI-2 that follows shows the changes in the total pension liability (TPL), the Plan's fiduciary net position (FNP) (i.e., fair value of the Plan's net assets), and the net pension liability (NPL) during the measurement year ending June 30, 2020, as well as related ratios calculated under the provisions of GASB Statement No. 67 for the Plan.

As of the June 30, 2020 valuation, the fiduciary net position for this Plan 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 Plan's investments was applied to all periods of projected benefit payments in determining the total pension liability under GASB Nos. 67 and 68. The projection of cash flows used to determine the discount rate assumed that the member and PLD contribution rates will be at the actuarially determined rates in aggregate.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Table VI-2 Schedule of Changes in Net Pension Liability and Related Ratios FY 2020	
<u>Total Pension Liability (TPL)</u>	
Service Cost (SC)	\$ 82,715,056
Interest (Includes Interest on SC)	219,752,007
Changes of Benefit Terms	29,759,516
Differences Between Actual and Expected Experience	(6,552,650)
Changes of Assumptions	0
Benefit Payments, Including Refunds of Member Contributions	<u>(174,752,167)</u>
Net Change in TPL	150,921,762
Beginning of Year (BOY) TPL	<u>3,258,819,605</u>
End of Year (EOY) TPL	<u>\$3,409,741,367</u>
<u>Plan Fiduciary Net Position (FNP)</u>	
PLD (Employer) Contributions	\$ 66,717,733
Member Contributions	54,090,045
Transfers	27,683,461
Net Investment Income	88,330,927
Benefit Payments, Including Refunds of Member Contributions	(174,752,167)
Administrative Expenses	<u>(2,797,728)</u>
Net Change in FNP	\$ 59,272,271
BOY FNP	<u>2,953,156,096</u>
EOY FNP	<u>\$3,012,428,367</u>
EOY Net Pension Liability (NPL)	<u>\$ 397,313,000</u>
FNP as a Percentage of TPL	88.3%
Covered Payroll (Payroll)*	\$ 641,523,784
NPL as a Percentage of Payroll	61.9%

*For FY 2020

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

None.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

A ten-year schedule of changes in NPL and related ratios is to be included within the CAFR for PERS. 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 Pension Liability and Related Ratios* above and believe that you can accumulate the individual years in the MainePERS CAFR 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, 2020, we have not included such a note in the *Notes to Schedule of Changes in Net Pension Liability and Related Ratios* above. However, it is our expectation that the System's staff will make the final determination regarding any notes needed for this schedule and are available to provide any information they may need for this purpose.

Table VI-3 below illustrates the sensitivity of the net pension liability (NPL) to the discount rate. Changes in the discount rate affect the measurement of the total pension liability (TPL) for the Plan. Lower discount rates produce a higher TPL, and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the Net Pension Liability (NPL) can be very significant for relatively small changes in the discount rate.

**Table VI-3
Sensitivity of Net Pension Liability to Changes in Discount Rate
FY 2020**

	1% Decrease 5.75%	Discount Rate 6.75%	1% Increase 7.75%
Total Pension Liability (TPL)	\$3,847,419,920	\$ 3,409,741,367	\$ 3,051,469,366
Plan Fiduciary Net Position (FNP)	<u>3,012,428,367</u>	<u>3,012,428,367</u>	<u>3,012,428,367</u>
Net Pension Liability (NPL)	<u>\$ 834,991,553</u>	<u>\$ 397,313,000</u>	<u>\$ 39,040,999</u>
FNP as a Percentage of TPL	78.3%	88.3%	98.7%

A one percent decrease in the discount rate increases the TPL by approximately 13% and increases the NPL by approximately 110%. A one percent increase in the discount rate decreases the TPL by approximately 11% and decreases the NPL by approximately 90%.

Table VI-4 that follows provides information relating to the employer contributions for the Plan. Under GASB Statement No. 67, if an actuarially determined contribution (ADC) or a contractually or statutorily required contribution (CRC) is developed for a single employer or cost-sharing plan, the following schedule is required. For purposes of this schedule, an ADC is a contribution amount determined in accordance with Actuarial Standards of Practice and a CRC is based on statutory or contractual requirements. Both should exclude any amounts to finance specific liabilities of individual employers of the Plan. If an ADC is available, the schedule of employer contributions should be developed on that basis. If there is no ADC, but there is a CRC, the schedule should be developed on that basis. Only if neither an ADC nor a CRC is developed can this schedule be omitted from the PERS's CAFR.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

The Consolidated Plan's risk-sharing contribution rates, which are the basis on which the FY 2020 contribution rates were determined, meet the definition of an ADC, so for this Plan, an additional year should be added to the schedule reflecting FY 2020 on that risk-sharing rate basis. Based on GASB guidance, a full ten years of information should be shown in this schedule if it is available, but 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 Employer Contributions* below and believe that you can accumulate these in the MainePERS CAFR to build this schedule to show the full ten-year schedule over time.

Only the current year of the *Notes to Schedule of Employer Contributions* below needs to be included in the notes to this schedule. However, any factors that significantly affect trends in the Schedule of Employer Contributions at any point in the ten-year period should also be included in the notes to this schedule. It is our expectation that the System's staff will make the determination regarding any notes needed for this schedule for the FY 2020 ADC and are available to provide any additional information that they may need for this purpose.

Table VI-4 Schedule of Employer Contributions FY 2020	
Actuarially Determined Contribution (ADC)	\$ 66,717,733
Contributions in Relation to the ADC	<u>66,717,733</u>
Contribution Deficiency/(Excess)	<u>\$ 0</u>
Covered Payroll (Payroll)	\$ 641,523,784
Contributions as a Percentage of Payroll	10.40%

Notes to Schedule of Employer Contributions

Valuation Date: June 30, 2018

Timing: June 30, 2020 rates based on the risk-sharing methodology calculated based on the 2018 actuarial valuation.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Key Methods and Assumptions Used to Determine Contribution Rates

Actuarial Cost Method:	Entry age normal
Asset Valuation Method:	Three-year smoothed market
Amortization Method:	Calculated rate uses level percentage of pay amortization over a 20-year period commencing with the June 30, 2015 valuation date and any layers of pooled UAL arising after that date amortized over individual 20-year periods.
Discount Rate:	6.75%
Amortization Growth Rate:	2.75%
Price Inflation:	2.75%
Salary Increases:	2.75% plus merit component based on employee's years of service
Mortality:	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 the start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using MP_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.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2020 can be found in the June 30, 2018 Actuarial Valuation Report.

Other Information

None.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Table VI-5 that follows is provided in this report at the request of MainePERS staff, showing the development of the average remaining service life for the Plan. GASB No. 68 requires some items be recognized by employers into pension expense over a period “equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.” For the current measurement year ending on June 30, 2020, these values are thus developed as of June 30, 2019. 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 VI-5 Average Expected Remaining Service Lives For Measurement Year Ending June 30, 2020			
Status	Total Expected Future Service	Count	Average Remaining Service Lives
Active Members	108,903	11,731	9
In-Pay Members	0	9,534	0
Terminated Vested Members	0	2,350	0
Inactives Due Refunds	<u>0</u>	<u>8,273</u>	<u>0</u>
Total Membership	108,903	31,888	3

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Table VI-6 below is a gain/loss analysis of the changes in the actuarial liability over the past six years, reflecting variances between actual experience and assumed experience for different kinds of risk as specified in the GFOA GAAFR.

Table VI-6 Analysis of Financial Experience Gain and Loss in Actuarial Liability During Fiscal Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience						
Type of Activity	Gain (or Loss) For Fiscal Year Ended June 30, 2015	Gain (or Loss) For Fiscal Year Ended June 30, 2016	Gain (or Loss) For Fiscal Year Ended June 30, 2017	Gain (or Loss) For Fiscal Year Ended June 30, 2018	Gain (or Loss) For Fiscal Year Ended June 30, 2019	Gain (or Loss) For Fiscal Year Ended June 30, 2020
Investment Income	\$ (15,798,973)	\$ (63,941,136)	\$ (76,616)	\$ 25,142,719	\$ 17,765,627	\$(24,747,551)
Combined Liability Experience	<u>54,634,906</u>	<u>9,142,757</u>	<u>2,160,603</u>	<u>(1,285,304)</u>	<u>(47,684,163)</u>	<u>6,552,650</u>
Gain (or Loss) during Year from Financial Experience	\$ 38,835,933	\$ (54,798,379)	\$ 2,083,987	\$ 23,857,415	\$ (29,918,536)	\$ (18,194,901)
Non-Recurring Items	<u>(37,593,598)</u>	<u>(50,884,219)</u>	<u>0</u>	<u>59,683,826</u>	<u>0</u>	<u>(2,936,139)</u>
Composite Gain (or Loss) During Year	\$ 1,242,335	\$(105,682,598)	\$ 2,083,987	\$ 83,541,241	\$ (29,918,536)	\$(21,131,040)

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

SECTION VI – FINANCIAL DISCLOSURE INFORMATION

Table VI-7 below compares the Plan's assets as of each valuation date shown to the Plan's actuarial liability divided into three separate groups: liabilities for contributions on deposit for current active members, liabilities for future benefits for inactive members, and employer-financed liabilities for current active members. This Schedule of Funded Liabilities by Type is used to assess funding progress based on what percentage of the liabilities for each of these groups the Plan's assets are sufficient to cover. Per GFOA guidance, this schedule is to include this assessment for the ten most recent years and notes to this schedule should be provided to explain any factors that affect the comparability of the data. We do not believe such a note is needed for the measurement year ending June 30, 2020, but it is our expectation that the System's staff will make the final determination regarding any notes needed for this schedule.

**Table VI-7
Schedule of Funded Liabilities by Type**

Aggregate Actuarial Liabilities for:					Portion of Actuarial Liabilities Covered by Reported Assets		
Valuation Date	(1) Active Member Contributions	(2) Retirees Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets*	(1)	(2)	(3)
June 30,							
2020	\$ 556,727,111	\$ 2,036,858,811	\$ 816,155,445	\$3,063,710,040	100%	100%	58%
2019	521,610,261	1,927,683,260	809,526,084	2,918,585,814	100	100	58
2018	494,411,535	1,818,566,082	776,879,603	2,764,807,391	100	100	58
2017	472,362,260	1,721,058,286	823,240,175	2,609,806,231	100	100	51
2016	452,446,198	1,654,981,662	782,312,774	2,489,157,281	100	100	49
2015	438,925,747	1,543,532,803	738,477,459	2,433,186,149	100	100	61
2014	423,097,001	1,462,031,828	724,529,016	2,379,733,634	100	100	68
2013	412,347,408	1,378,065,748	675,521,588	2,179,961,872	100	100	58
2012	398,895,449	1,262,186,227	707,745,483	2,103,481,277	100	100	63
2011	379,478,840	1,175,482,545	676,024,931	2,084,982,632	100	100	78

* Reported assets are measured at actuarial value. Results would be different if the market value of assets were used. Despite the name of this exhibit, the liabilities presented in this schedule are not an appropriate measurement of the settlement liability of the Plan.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Acton, Town of	0361	A	2		No	7/1/2016	
Alfred, Town of	0369	A			Yes	1/1/2019	
Androscoggin County	0067	A ¹	1 ¹	2 ¹	Yes	7/1/1994	
Androscoggin Valley Council of Governments	0231	A			Yes	7/1/1996	
Anson-Madison Sanitary District	0365	A			Yes	7/1/2017	
Aroostook County	0106	A	3 ²		Yes	7/1/1994	
Aroostook Waste Solutions	0267	A			Yes	7/1/1996	
Auburn Housing Authority	0145	A			Yes	7/1/1994	
Auburn Lewiston Airport	0256	A			Yes	7/1/1996	
Auburn Public Library	0043	A			FO	7/1/1996	7/1/2001
Auburn Water and Sewer District	0052	A			Yes	7/1/1994	
Auburn, City of	0027	A	2	3 ³	Yes	7/1/1994	
Augusta, City of	0023	A	2	3 ⁴	Yes	7/1/1994	
Augusta Housing Authority	0351	A			Yes	4/1/2014	
Baileyville, Town of	0069	A	3		Yes	7/1/1996	
Bangor Housing Authority	0288	A			Yes	7/1/1994	
Bangor Public Library	0022	A			Yes	7/1/1996	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Bangor Water District	0059	B ⁵			Yes	7/1/1996	
Bangor, City of ⁶	0020	A	2		Yes	7/1/1996	
Bar Harbor, Town of	0015	A	4		Yes	7/1/1995	
Bath Water District	0019	A			Yes	7/1/1994	
Bath, City of	0073	A	2	3	Yes	7/1/1996	
Baxter Academy of Technology And Sciences	0348	A			Yes	7/1/2013	
Belfast Water District	0132	A			Yes	7/1/1995	
Belfast, City of	0035	A	2	3 ⁷	Yes	7/1/1996	
Berwick Sewer District	0207	A			Yes	7/1/1994	
Berwick, Town of	0108	A	1 ⁸		FO	7/1/1996	7/1/2008
Bethel, Town of	0246	A			Yes	7/1/1996	
Biddeford Housing Authority	0310	A			Yes	7/1/2007	
Biddeford, City of	0158	A	3 ⁹		FO	7/1/2010	7/1/2010
Boothbay Harbor Sewer District	0363	A			Yes	1/1/2017	
Boothbay Harbor, Town of	0146	A	2		Yes	7/1/1996	
Boothbay Region Water District	0298	A	2		Yes	1/1/2002	
Bowdoinham Water District	0319	A			Yes	1/1/2009	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Brewer Housing Authority	0248	A			Yes	7/1/1994	
Brewer, City of	0063	A ¹⁰	3 ¹⁰		Yes	7/1/1996	
Bridgton, Town of	0176	A	3 ¹¹		Yes	1/1/2020	1/1/2020
Brownville, Town of	0177	A			No	7/1/2010	
Brunswick Fire & Police	0292	A	1 ¹²	3 ¹²	FO	7/1/1997	7/1/1997
Brunswick Public Library Association	0273	A			FO	7/1/1995	7/1/1995
Brunswick Sewer District	0072	A			Yes	7/1/1996	
Brunswick, Town of	0042	A			FO	7/1/1995	7/1/2000
Buckfield, Town of	0344	A			No	1/1/2013	
Bucksport, Town of	0130	A	4 ¹³		No	7/1/1995	
Buxton, City of	0370	A	2 ¹⁴		Yes	9/1/2020	
Calais, City of	0036	A			FO	7/1/1996	7/1/1996
Camden, Town of	0008	A	2 ¹⁵		Yes	7/1/1994	
Cape Elizabeth Police	0317	A	2		Yes	7/1/2008	
Caribou Fire & Police	0208	A	1	2	No	7/1/1996	
Carrabassett Valley, Town of	0277	A			FO	7/1/1994	7/1/1994
Chesterville, Town of	0295	A ¹⁶			Yes	7/1/1999	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
China, Town of	0235	A			FO	7/1/1996	7/1/2008
Coastal Counties Workforce	0301	A ¹⁷			Yes	7/1/2003	
Community School Dist. #912	0252	A			Yes	7/1/1996	
Corinna, Town of	0217	A			Yes	7/1/1996	
Cornville Regional Charter School	0345	A			Yes	7/1/2013	
Cumberland County	0005	A	2 ¹⁸		Yes	7/1/1996	
Cumberland, Town of	0216	A	2	3 ¹⁹	Yes	7/1/1995	
Damariscotta, Town of	0191	A			Yes	7/1/2011	
Danforth, Town of	0367	A			Yes	7/1/2017	
Dayton, Town of	0355	A	2 ²⁰		Yes	7/1/2014	
Dexter, Town of	0097	A			Yes	7/1/1996	
Dover-Foxcroft Water District	0137	A			Yes	7/1/1994	
Dover-Foxcroft, Town of	0167	A			No	7/1/1995	
Durham, Town of	0234	A			No	7/1/1996	
Eagle Lake Water & Sewer District	0274	A			Yes	7/1/1996	
East Millinocket, Town of	0054	A	2		Yes	7/1/1996	
Easton, Town of	0240	A			Yes	7/1/1994	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Eastport, City of	0007	A			Yes	7/1/2020	
Ecology Learning Center	0025	A			Yes	7/1/2020	
Eliot, Town of	0180	A	1 ²¹		Yes	7/1/1994	
Ellsworth, City of	0013	A	4		Yes	7/1/1995	
Enfield, Town of	0001	A			Yes	1/1/2020	
Erskine Academy	0249	A			No	7/1/1994	
Fairfield, Town of	0260	A	3		Yes	7/1/1995	
Falmouth Memorial Library	0058	A			Yes	7/1/1996	
Falmouth, Town of	0087	A	2 ²²	3 ²²	Yes	7/1/1996	
Farmington Village Corporation	0118	A			No	7/1/1994	
Farmington, Town of	0100	A	1		Yes	7/1/1995	
Fort Fairfield Housing Authority	0275	A			FO	7/1/2002	7/1/1994
Fort Fairfield Utilities District	0131	A			Yes	7/1/1996	
Fort Fairfield, Town of	0017	A			Yes	7/1/2000	
Fort Kent, Town of	0091	A	2 ²³		No	7/1/2019	
Franklin County	0102	A	3 ²⁴		Yes	7/1/2006	
Freeport, Town of	0142	A	2 ¹⁷		Yes	7/1/2003	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Frenchville, Town of	0098	A			No	7/1/1996	
Fryeburg, Town of	0149	A			No	1/1/2011	
Gardiner Water District	0221	A			No	7/1/1994	
Gardiner, City of	0024	A	3		FO	7/1/1996	7/1/2009
Glenburn, Town of	0174	A			Yes	7/1/1994	
Good Will Home Association	0347	A			Yes	7/1/2013	
Gorham Fire and Police	0334	A	3 ²⁵		Yes	7/1/2009	
Gorham, Town of	0133	A			Yes	7/1/1996	
Gould Academy	0205	A			No	7/1/1996	
Grand Isle, Town of	0312	B			Yes	7/1/2008	
Greater Augusta Utility District ²⁶	0311	A			Yes	1/1/2008	
Greenville, Town of	0112	A	2 ²⁷		Yes	7/1/1996	
Hallowell, City of	0160	A			Yes	7/1/1996	
Hampden Water District	0183	A			Yes	7/1/1996	
Hampden, Town of	0151	A	3 ²⁸		FO	7/1/1996	7/1/2009
Hancock County	0056	A	4 ²⁹	2 ²⁹	Yes	7/1/1994	
Hancock, Town of	0353	A			Yes	7/1/2014	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Harpswell, Town of	0270	A			Yes	7/1/1994	
Harrison, Town of	0280	B ³⁰			Yes	7/1/1994	
Hartland, Town of	0360	A			Yes	1/1/2016	
Hermon, Town of	0150	A			No	7/1/1996	
Hodgdon, Town of	0215	A			FO	7/1/1996	7/1/2007
Holden, Town of	0338	A	4	3 ³¹	Yes	7/1/2011	
Houlton Water Company	0026	A			Yes	7/1/1995	
Houlton, Town of	0010	A	4 ¹³		Yes	7/1/1996	
Jackman Utility District	0294	A			Yes	7/1/1996	
Jay, Town of	0045	A	2 ³²		Yes	7/1/1994	
Kennebec County	0047	A	2 ³³		Yes	7/1/1995	
Kennebec Sanitary Treatment District	0220	A			FO	7/1/1995	7/1/1995
Kennebec Water District	0031	A			Yes	7/1/1996	
Kennebunk Light & Power District	0062	A			Yes	7/1/1994	
Kennebunk Sewer District	0201	A			FO	7/1/1994	7/1/2000
Kennebunk, Kennebunkport & Wells Water District	0255	A			FO	7/1/1996	7/1/1999
Kennebunk, Town of	0084	A	2 ³⁴		Yes	7/1/1996	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Kennebunkport, Town of	0188	A	1		FO	7/1/1996	7/1/2006
Kittery Water District	0012	A			Yes	7/1/1994	
Kittery, Town of	0014	A	1 ³⁵		Yes	7/1/1995	
Knox County Sheriffs	0359	A	3 ³⁶		No	1/1/2016	
Lebanon, Town of	0181	A			Yes	7/1/1996	
Levant, Town of	0339	A			Yes	7/1/2011	
Lewiston Housing Authority	0154	A			Yes	7/1/1994	
Lewiston, City of	0048	A	1	2	Yes	7/1/1996	
Lewiston/Auburn 9-1-1	0291	A			Yes	7/1/1994	
Lewiston-Auburn Water Pollution Control Authority	0163	A			FO	7/1/1996	7/1/1996
Limestone, Town of	0245	A			Yes	7/1/2006	
Lincoln & Sagadahoc Multi-County Jail Authority	0304	A	2		Yes	7/1/2004	
Lincoln Academy	0134	A			Yes	7/1/1994	
Lincoln County	0095	A			Yes	7/1/2004	
Lincoln County Sheriff's Office	0302	A	2 ¹⁷		Yes	7/1/2003	
Lincoln Sanitary District	0219	A			Yes	7/1/1994	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Lincoln Water District	0092	A			Yes	7/1/1994	
Lincoln, Town of	0076	A	3		No	7/1/1996	
Linneus, Town of	0214	A			No	7/1/1996	
Lisbon Water Department	0243	A			FO	7/1/1996	7/1/2007
Lisbon, Town of	0103	A	2		Yes	7/1/1996	
Livermore Falls Water District	0032	A			Yes	7/1/1994	
Livermore Falls, Town of	0109	A			No	7/1/1996	
Lovell, Town of	0276	A			Yes	7/1/1996	
Lubec Water District	0088	A			Yes	7/1/1996	
Lubec, Town of	0228	A			No	7/1/1996	
M.A.D.S.E.C.	0297	A			Yes	7/1/1999	
Madawaska Water District	0236	A			Yes	7/1/1994	
Madawaska, Town of	0082	A			Yes	7/1/1996	
Maine Academy of Natural Sciences	0346	A			Yes	7/1/2013	
Maine County Commissioners Association	0225	A			No	7/1/1996	
Maine Maritime Academy	0038	A	2		Yes	7/1/1996	
Maine Municipal Association	0055	A			Yes	7/1/2009	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Maine Municipal Bond Bank	0093	A			Yes	7/1/1995	
Maine Principals' Association	0105	A			Yes	7/1/1994	
Maine Public Employees Retirement System	0290	A			Yes	7/1/1994	
Maine School Management Association	0239	A			Yes	7/1/1994	
Maine School of Science and Mathematics	0352	A			Yes	7/1/2014	
Maine State Housing Authority	0169	A			Yes	7/1/2005	
Maine Turnpike Authority	0049	A			Yes	7/1/1994	
Maine Veterans' Home	0271	A			Yes	7/1/1994	
Maine Virtual Academy	0357	A			Yes	7/1/2015	
Mapleton, Castle Hill, & Chapman, Town of	0265	A			Yes	7/1/1996	
Mars Hill Utility District	0283	A			Yes	7/1/1994	
Mars Hill, Town of	0227	A			Yes	7/1/1996	
Mechanic Falls Sanitary District	0282	A			FO	7/1/1994	7/1/2002
Mechanic Falls, Town of	0114	A			Yes	7/1/1994	
Medway, Town of	0194	A			Yes	7/1/1996	
Midcoast Council of Governments	0343	A			Yes	7/1/2012	
Milford, Town of	0186	A			No	7/1/1996	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Millinocket, Town of	0003	A	3	4	Yes	7/1/1996	
Milo Water District	0238	A			No	7/1/1996	
Monmouth, Town of	0316	A	3		Yes	7/1/2008	
Monson, Town of	0184	A			No	7/1/1996	
Mount Desert Island Regional School District	0120	A			Yes	7/1/1996	
Mount Desert Water District	0300	A ¹⁷			Yes	7/1/2003	
Mount Desert, Town of	0016	A	3 ³⁷		Yes	7/1/1996	
New Gloucester, Town of	0210	A			FO	7/1/1995	7/1/2007
Newport Water District	0313	A			Yes	7/1/2008	
Newport, Town of	0314	A	2		Yes	7/1/2008	
North Berwick Water District	0308	A			Yes	7/1/2006	
North Berwick, Town of	0254	A	3 ³⁸	1 ³⁸	No	7/1/1996	
Northern Oxford Regional Solid Waste Board	0354	A			Yes	7/1/2014	
Norway Water District	0136	A			FO	7/1/1995	7/1/2000
Norway, Town of	0125	A	2 ³⁹		FO	7/1/1996	7/1/2000
Ogunquit, Town of	0303	A	1		Yes	7/1/2004	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Old Orchard Beach, Town of	0140	A	2	3/1 ⁴⁰	Yes	7/1/2003	
Old Town Housing Authority	0262	A			FO	7/1/1994	7/1/1994
Old Town Water District	0079	A			No	7/1/1994	
Old Town, City of	0111	A	2 ⁴¹	3 ⁴¹	No	7/1/1995	
Orland, Town of	0166	A			No	7/1/1996	
Orono, Town of	0061	A	2 ⁴²		FO	7/1/1996	7/1/2002
Orrington, Town of	0209	A	3		No	7/1/1995	
Otis, Town of	0364	A			Yes	7/1/2017	
Otisfield, Town of	0193	A			FO	7/1/1996	7/1/1996
Oxford County	0057	A ¹⁷	2		Yes	7/1/1994	
Oxford, Town of	0200	A	1 ⁴³		No	7/1/1996	
Paris Utility District	0159	A			Yes	7/1/1995	
Paris, Town of	0127	A			Yes	7/1/1996	
Penobscot County	0011	A	2 ⁴⁴		Yes	7/1/1994	
Penquis	0237	A			No	7/1/1995	
Phippsburg, Town of	0202	A	3 ⁴⁵		Yes	7/1/1996	
Piscataquis County	0121	A			Yes	7/1/1994	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Pittsfield, Town of	0110	A			No	7/1/1996	
Pleasant Point Passamaquoddy Reservation Housing Authority	0165	A			Yes	7/1/1996	
Poland, Town of	0336	A	1		No	7/1/2010	
Portland Housing Authority	0185	A			Yes	7/1/1994	
Portland Public Library	0041	A			Yes	7/1/1995	
Portland, City of	0002	A	1	2	Yes	7/1/1995	
Presque Isle, City of	0004	A	3 ⁴⁶		Yes	1/1/2020	
Princeton, Town of	0258	A			No	7/1/1996	
Regional School Unit #01	0315	A	2		Yes	7/1/2008	
Regional School Unit #02	0323	A			FO	7/1/2009	7/1/2009
Regional School Unit #04	0324	A			Yes	7/1/2009	
Regional School Unit #05	0325	A			Yes	7/1/2009	
Regional School Unit #09	0119	A			Yes	7/1/1995	
Regional School Unit #10	0326	A			Yes	7/1/2009	
Regional School Unit #16	0327	A			Yes	7/1/2009	
Regional School Unit #20	0328	A			Yes	7/1/2009	
Regional School Unit #21	0322	A			FO	7/1/2009	7/1/2009

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Regional School Unit #23	0329	A			Yes	7/1/2009	
Regional School Unit #24	0320	A			Yes	7/1/2009	
Regional School Unit #25	0321	A ⁴⁷			No	7/1/2009	
Regional School Unit #26	0330	A			Yes	7/1/2009	
Regional School Unit #29	0168	A			Yes	7/1/1996	
Regional School Unit #34	0331	A			No	7/1/2009	
Regional School Unit #49	0189	A			No	7/1/1995	
Regional School Unit #51	0198	A			No	7/1/1996	
Regional School Unit #54	0115	A			Yes	7/1/1996	
Regional School Unit #56	0366	A			Yes	7/1/2017	
Regional School Unit #60	0187	A			No	7/1/1994	
Regional School Unit #67	0126	A			Yes	7/1/2016	
Regional School Unit #71	0358	A			Yes	7/1/2015	
Regional School Unit #73	0340	A			Yes	7/1/2011	
Richmond Utilities District	0242	A			No	7/1/1994	
Richmond, Town of	0213	A			Yes	7/1/2007	
Rockland, City of	0018	A	3		Yes	7/1/1995	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Rockport, Town of	0161	A			No	7/1/1996	
Rumford Fire & Police	0060	A	2 ⁴⁸	4	Yes	7/1/1995	
Rumford Mexico Sewerage District	0247	A			Yes	7/1/1996	
Rumford Water District	0065	A			Yes	7/1/1995	
Rumford, Town of	0090	A			Yes	7/1/1995	
Sabattus, Town of	0175	A	3 ⁴⁹		FO	7/1/1996	7/1/2006
Saco, City of	0192	A	2 ⁵⁰	3 ⁵⁰	No ⁵⁰	7/1/1995	Varied ⁵⁰
Sagadahoc County	0096	A	2 ⁵¹	3 ⁵¹	Yes	7/1/2002	
Sanford Housing Authority	0152	A			Yes	7/1/1996	
Sanford Sewerage District	0089	A			FO	7/1/1994	1/1/2009
Sanford Water District	0170	A			FO	7/1/1996	7/1/2009
Sanford, City of	0083	A	1/3 ⁵²	2 ⁵²	FO	7/1/1995	7/1/2002
Scarborough, Town of	0147	A	3 ⁵³	1 ⁵³	Yes	7/1/1996	
School Administrative District No. 13 Bingham	0223	A			Yes	7/1/1996	
School Administrative District No. 31 Howland	0050	A			FO	7/1/1994	7/1/1994
School Administrative District No. 41 Milo	0143	A			Yes	7/1/1996	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
School Administrative District No. 53 Pittsfield	0129	A			No	7/1/1996	
Searsport Water District	0124	A			No	7/1/1996	
Searsport, Town of	0117	A			No	7/1/1996	
Skowhegan, Town of	0080	A	3		Yes	7/1/1996	
Somerset County	0101	A	3 ⁵⁴	2 ⁵⁴	Yes	7/1/2005	
South Berwick Sewer District	0299	A ¹⁷			Yes	7/1/2003	
South Berwick Water District	0171	A	2		Yes	7/1/1996	
South Berwick, Town of	0141	A	1		FO	7/1/1996	7/1/1996
South Portland Housing Authority	0206	A			Yes	7/1/1996	
South Portland, City of	0009	A	3 ⁵⁵		Yes	7/1/1995	
Southwest Harbor, Town of	0368	A	2				
St. Agatha, Town of	0030	A			Yes	7/1/1996	
Thomaston, Town of	0164	A	2		Yes	1/1/2010	1/1/2010
Thompson Free Library	0318	A			Yes	1/1/2009	
Topsham Sewer District	0307	A ⁵⁶			Yes	7/1/2005	
Topsham, Town of	0081	A	2	3	Yes	7/1/1996	
Trenton, Town of	0341	A			Yes	7/1/2011	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Union, Town of	0342	A			No	7/1/2012	
United Technologies Center, Region 4, S Penobscot	0269	A			FO	7/1/1996	7/1/2009
Van Buren Housing Authority	0229	A			Yes	7/1/1994	
Van Buren, Town of	0182	A	3 ⁵⁷		Yes	7/1/1995	
Vassalboro, Town of	0153	A			Yes	7/1/1996	
Veazie Fire & Police	0305	A	3 ⁵⁸		Yes	7/1/2004	
Waldo County	0046	A	2 ⁵⁹	3 ⁵⁹	Yes	7/1/1994	
Waldo County Technical Center	0224	A			No	7/1/1996	
Waldoboro, Town of	0195	A	3		Yes	7/1/1995	
Washburn Water and Sewer District	0335	A			No	7/1/2009	
Washburn, Town of	0230	A			No	7/1/1994	
Washington County	0040	A	2 ⁶⁰		Yes	7/1/1996	
Waterboro, Town of	0356	A			No	1/1/2015	
Waterville Fire & Police	0066	A	3		No	7/1/1996	
Waterville Sewerage District	0222	A			Yes	7/1/1994	
Wells Fire and Police	0349	A	2		Yes	7/1/2013	
Wells Ogunquit Community School District #918	0266	A			FO	7/1/1995	7/1/1995

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Wells, Town of ⁶¹	0107	A	2 ⁶¹		No ⁶¹	1/1/2018	
West Bath, Town of	0333	A			Yes	7/1/2009	
Westbrook Fire & Police	0070	A	1	3	Yes	7/1/2006	
Westbrook, City of	0122	A			Yes	7/1/2006	
Wilton, Town of	0086	A	2	3 ⁶²	FO	1/1/2009	1/1/2009
Windham, Town of	0309	A	4	3 ⁶³	Yes	7/1/2006	
Winslow Police	0362	A	2 ⁶⁴		Yes	1/1/2017	
Winter Harbor Utility District	0250	A			Yes	7/1/1994	
Winterport Water & Sewer Districts	0306	A ⁵⁶			Yes	7/1/2005	
Winthrop Utilities District	0337	A			Yes	1/1/2011	
Winthrop, Town of	0179	A	2 ⁶⁵		FO	7/1/1994	7/1/2003
Wiscasset, Town of	0417	A	2 ³⁹		No	1/1/2012	
Yarmouth Water District	0278	A			Yes	7/1/1994	
Yarmouth, Town of	0116	A	1 ⁶⁶		Yes	7/1/1996	
York County	0037	A	2 ⁶⁷	1 ⁶⁷	Yes	7/1/1996	
York Sewer District	0139	A			FO	7/1/1994	7/1/2006
York Water District	0039	A			Yes	7/1/1996	

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
York, Town of	0028	A	2 ⁶⁸	3 ⁶⁸	Yes	7/1/1994	

Notes to Appendix A:

FO = Future Service COLA only, that is, the benefits attributable to service rendered after the Future Service COLA date.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

Footnote Text

- ¹ Employees hired prior to July 1, 1997 who are members of the Plan are covered under Plan 1. Corrections Officers and Law Enforcement Officers hired on or after July 1, 1997 are covered under Plan 2. All other employees hired on or after July 1, 1997 will be covered under Regular Plan A.
- ² Plan 3 applicable for future service only for law enforcement officers from January 1, 2020
- ³ Plan 3 applicable for future service only from January 1, 2014 for Firefighters hired after July 1, 1989 and from January 1, 2015 for Law Enforcement Officers hired after December 31, 1989.
- ⁴ Plan 3 is applicable for future service only rendered by the City's Firefighters hired after December 31, 1989, effective January 1, 2015 and for the City's Police Officers for future service only from January 1, 2020.
- ⁵ Plan B applicable to all new hires on or after July 1, 1996. All members in the PLD at July 1, 1996 elected to remain in the 1/50 Plan under Regular Plan A.
- ⁶ Rejoined July 1, 2018, adopting Plan 2 for future service only rendered by the City's Firefighters and Police Officers.
- ⁷ Plan 3 is applicable for future service only rendered by the City's Police Officers from July 1, 2020.
- ⁸ Plan 1 applicable for future service only for Police Officers from July 1, 2008 and for future service only for Firefighters from July 1, 2010.
- ⁹ Applicable for future service only rendered by Law Enforcement Officers from July 1, 2003. Applicable for future service only rendered by Firefighters from July 1, 2007.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ¹⁰ Brewer Water District (P0068) ceased to exist as a separate entity on January 15, 2003 and became part of the City of Brewer (P0063). All Brewer Water District Regular Plan AN members became members of the Regular Plan AC for future service only as of that date.
Plan 3 applicable for future service only rendered by City's Law Enforcement Officers from January 1, 2018.
- ¹¹ Rejoined effective January 1, 2020 with only full-time Police Officers covered under Plan 3 on an ongoing basis. Police Officers employed on January 1, 2020 can purchase prior service under Plan 3 with COLA.
- ¹² Plan 1 applicable to Police Officers for future service only after January 1, 2010 and Plan 3 applicable to Firefighters for future service only after January 1, 2010. Some grandparented Police Officers and Firefighters receive all service in Plan 1.
- ¹³ Plan 4 applicable for future service only rendered by the Town's Firefighters and Police Officers from July 1, 2001.
- ¹⁴ Plan 2 applicable for all full-time Police Officers, Firefighters, Emergency Services Employees, and Dispatchers effective September 1, 2020.
- ¹⁵ Plan 2 applicable for future service only rendered by the Town's Police Officers from January 1, 2017 and for future service only rendered by the Town's Firefighters and EMS employees from July 1, 2020.
- ¹⁶ Applicable for future service only from July 1, 2000.
- ¹⁷ Applicable for future service only from July 1, 2003.
- ¹⁸ Plan 2 applicable for future service only rendered by the County's Police Officers from July 1, 2008. Plan 2 applicable for future service only rendered by the County's Corrections employees from January 1, 2019.
- ¹⁹ Plan 3 is applicable for future service only rendered by the Town's Law Enforcement Officers, effective January 1, 2015.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ²⁰ Plan 2 applicable for future service only rendered by the Town's Firefighters and EMS employees from August 1, 2020.
- ²¹ Plan 1 applicable for future service only of Police Officers, effective July 1, 2006.
- ²² Plan 2 applicable for future service only of Police Officers, effective July 1, 2006. Plan 3 applicable for future service only of Police Officers, effective January 1, 2016. Plan 3 applicable for future service only of Firefighters and EMS effective July 1, 2019.
- ²³ Plan 2 applicable for future service only for all employees who are not seasonal/temporary or part-time, effective July 1, 2019. Covered employees permitted to purchase prior service by paying the full cost.
- ²⁴ Plan 3 applicable for future service only for Police Officers from January 1, 2014. Plan 2 applicable for future service only for Corrections employees from January 1, 2019.
- ²⁵ Rejoined effective July 1, 2020 with only full-time Police Officers covered on an ongoing basis. Other employees who were participating when the PLD withdrew on August 31, 2012 also covered.
- ²⁶ Greater Augusta Utility District (P0311) was formed by the merger of the Augusta Water District (former P0034) and the Augusta Sanitary District (former P0064).
- ²⁷ Plan 2 applicable for future service only for the Town's Police Officers from July 1, 2016.
- ²⁸ Plan 3 applicable for future service only for the Town's Firefighters and Police Officers, effective July 1, 2009.
- ²⁹ Plan 4 applicable for future service only rendered by the County's Law Enforcement Officers from January 1, 2018 through June 30, 2020. Plan 2 is applicable for future service only rendered by the County's Law Enforcement Officers from July 1, 2020.
- ³⁰ Applicable to all new hires on or after July 1, 1994. All members in the PLD at July 1, 1994 elected to remain in the 1/50 Plan under Regular Plan A.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ³¹ Plan 3 is applicable for future service only rendered by the Town's Police Officers and Firefighters from July 1, 2020.
- ³² Plan 2 applicable for future service only for the Town's Police Officers, effective January 1, 2012.
- ³³ Plan 2 applicable for all service for the County's Police Officers and for future service only of Corrections Officers rendered from January 1, 2018.
- ³⁴ Plan 2 applicable to all service for Police Officers and for future service only of Firefighters rendered from July 1, 2008.
- ³⁵ Plan 1 applicable for future service only of Police Officers, effective July 1, 2007.
- ³⁶ Coverage under Plan 3 for full-time Corrections Employees working 35 or more hours per week for future service only added effective July 1, 2019, with Corrections Employees permitted to purchase prior service by paying the full cost.
- ³⁷ Plan 3 applicable to all service for Police Officers and Firefighters, effective July 1, 2017.
- ³⁸ Plan 3 is applicable to all police officers employed on or hired after July 1, 2020. All police officers in the PLD on July 1, 2020 elected to move their prior service from Plan 1 to Plan 3.
- ³⁹ Plan 2 is applicable for future service only rendered by the Town's Police Officers from July 1, 2020.
- ⁴⁰ Plan 3 for future service only after January 1, 2010 for Police Officers hired on or after October 12, 1992. Plan 1 for future service only after January 1, 2010 for Police Officers hired prior to October 1, 1992.
- ⁴¹ Plan 3 applicable for future service only for Firefighters and Police Officers effective January 1, 2014.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- 42 Plan 2 applicable to future service only rendered by the Town's Firefighters and Police Officers from July 1, 2005. Prior service was credited under Plan 4.
- 43 Plan 1 is applicable for future service only rendered by the Town's Police Officers from July 1, 2020.
- 44 Plan 2 applicable for future service only rendered by the County's Law Enforcement Officers from July 1, 2017.
- 45 Plan 3 applicable for future service only rendered by the Town's Police Officers from July 1, 2007.
- 46 Rejoined under Consolidated Plan effective January 1, 2020 for employees who work at least 20 hours per week, excluding City Council members. Police Officers and Firefighters are covered under Plan 3 from January 1, 2020. Police Officers and Firefighters who were MainePERS members on December 31, 2019 are eligible to retire with 25 years of combined pre and post Consolidated Special Plan service with age-reduction from age 55 applied to Pre-Consolidated Plan benefit. General Government employees who were MainePERS members on December 31, 2019 retain a Normal Retirement Age of 60 and are considered to have had 20 years of Consolidated Plan service as of 7/1/2019, so "old" age-reduction factors apply to retirement before age 60. Employees hired on/after date of District's previous withdrawal effective June 30, 1996 can purchase past service under Plan A or 3, whichever applies.
- 47 Coverage for employees who were members with either P0130a or P0166a immediately prior to being employed by RSU #25 was effective July 1, 2009. Coverage expanded to include Director of Technology and Central Office Bookkeeper positions effective July 1, 2019, with members in these positions permitted to purchase prior service by paying the full cost. Coverage was further expanded to include the position of Human Resources Director effective July 1, 2020, with the member in this position permitted to purchase prior service by paying the full cost.
- 48 Plan 2 applicable for future service only for Firefighters from January 1, 2014. As of July 1, 2017, Plan 2 also applicable for service rendered by Firefighters prior to January 1, 2014. Plan 2 applicable for future service only for Police Officers from January 1, 2020.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ⁴⁹ Plan 3 is applicable for future service only rendered by the Town's Police Officers, effective July 1, 2017.
- ⁵⁰ POLICE: Plan 3 without COLA (3N) is applicable to the City's Police Officers for service from July 1, 2015 through June 30, 2019. Service for the City's Police Officers prior to July 1, 2015 remains under Plan 2 without COLA (2N). Plan 3 with COLA (3C) for future service only is applicable to the City's Police Officers from July 1, 2019. FIRE: Plan 3 without COLA (3N) is to the City's Firefighters for service from July 1, 2016 through June 30, 2020. Service for the City's Firefighters prior to July 1, 2016 remains under Plan 2 without COLA (2N). Plan 3 with COLA (3C) for future service only is applicable to the City's Firefighter from July 1, 2020.
- ⁵¹ Plan 3 applicable for future service only rendered by Law Enforcement Officers from July 1, 2002. Service for Law Enforcement Officers prior to July 1, 2002 under Plan 2.
- ⁵² Plan 1 is applicable for future service only rendered by Firefighters from July 1, 2002 and Police Officers from July 1, 2004. Plan 2 is applicable for Police Officers hired on or after July 1, 2014 and for Firefighters hired after December 31, 2014. Existing Firefighters as of December 31, 2014 elected either to remain under Plan 1 or move to Plan 3 for service rendered after December 31, 2014. Existing Police as of July 1, 2014 remained under Plan 1 for future service January 1, 2015. Beginning January 1, 2017, Plan 3 is applicable for future service only rendered by the City's Firefighters. Plan 3 also applicable for future service only rendered by the City's Police Officers beginning January 1, 2017 except all officers under Plan 1 at that time elected either to remain under Plan 1 or move to Plan 3. All Police Officers under Plan 2 were required to move to Plan 3 for future service applicable January 1, 2017.
- ⁵³ Plan 3 is applicable for future service only rendered by the Town's Firefighters from July 1, 2014. Firefighters who were covered under Plan 1, for future service rendered after July 1, 2008, could make an irrevocable election to remain in Plan 1. Firefighters hired after June 30, 2014 in Plan 3. Plan 1 is applicable to the Town's Police Officers for future service rendered effective July 1, 2009. Plan 3 is applicable to the Town's Law Enforcement Officers for future service rendered effective July 1, 2018.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ⁵⁴ Plan 3 applicable for future service only for Law Enforcement Officers from January 1, 2019. Plan 2 is applicable for future service for the County's Communications Bargaining Unit employees (dispatchers) from July 1, 2020.
- ⁵⁵ Plan 3 applicable for future service only of Police Officers, effective July 1, 2009, and for future service only of Firefighters, effective July 1, 2010. Prior service credited under Special Plan 2. Police hired on or after July 1, 2014 covered by Plan 2.
- ⁵⁶ Applicable for future service only from July 1, 2005.
- ⁵⁷ Plan 3 is applicable for future service only rendered by the Town's Police Officers from January 1, 2020.
- ⁵⁸ Plan 3 applicable for future service only rendered by the Town's Firefighters from July 1, 2005.
- ⁵⁹ Plan 2 is applicable for all service for the County's Correctional Officers as of July 1, 2017. Plan 3 is applicable for future service only rendered by the County's Law Enforcement Officers from January 1, 2020. Service before January 1, 2020 remains under Plan 2 for the County's Law Enforcement Officers.
- ⁶⁰ Plan 2 applicable for future service only rendered by the County's Law Enforcement Officers from January 1, 2018.
- ⁶¹ Town rejoined as of January 1, 2018 with all eligible employees, excluding Fire and Police that are in PLD 349, under Plan AN with one employee remaining under Plan AC from the Town's prior participation. Effective July 1, 2020, future service only rendered by the Town's Police Dispatchers is under Plan 2 with COLA (2C).
- ⁶² Plan 3 is applicable for future service only rendered by the Town's Police Officers from July 1, 2020.
- ⁶³ Plan 3 applicable for future service only rendered by the Town's Law Enforcement Officers from January 1, 2018.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

- ⁶⁴ Plan 2 applicable for future service only rendered by the Town's Police Officers from January 1, 2017 and for future service only rendered by the Town's Firefighters from July 1, 2018.
- ⁶⁵ Plan 2 adopted for all service rendered by the Town's Police Officers effective January 1, 2017, including post service for those Officers who were members of the Town's plan on January 1, 2017.
- ⁶⁶ Applicable for future service rendered by Police Officers after January 1, 2010.
- ⁶⁷ Plan 1 applicable for all future service rendered by the Town's Firefighters/EMS and Police Officers from July 1, 2010. Previous service credited under Plan 2. Police Officers hired on or after July 1, 2014 covered by Plan 2.
- ⁶⁸ Plan 2 applicable for future service only from July 1, 2005. Plan 3 applicable for future service only rendered by the Town's Law Enforcement Officers from January 1, 2018.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX B – MEMBERSHIP INFORMATION

Active Member Data as of June 30, 2020	
Regular Plan Members	
Count	8,600
Average Current Age	47.6
Average Benefit Service	8.6
Average Vesting Service	8.8
Average Valuation Pay	\$ 47,745
Special Plan Members	
Count	3,238
Average Current Age	40.2
Average Benefit Service	10.3
Average Vesting Service	10.9
Average Valuation Pay	\$ 65,774
All Plan Members	
Count	11,838
Average Current Age	45.6
Average Benefit Service	9.0
Average Vesting Service	9.4
Average Valuation Pay	\$ 52,677

Participating Local Districts of the Maine Public Employees Retirement System Inactive Member Data as of June 30, 2020				
Regular Plans				
	Count	Average Age	Total Annual Benefit	Average Annual Benefit
Retired	5,648	73.1	\$ 85,200,889	\$ 15,085
Retired - Concurrent Beneficiary	375	71.7	1,368,879	3,650
Disability - Section 1122	25	76.7	329,481	13,179
Disability – Sections 3 and 3A	266	66.5	5,806,349	21,828
Beneficiary of Above	1,034	74.0	10,975,685	10,615
Pre-Retirement Death Beneficiary	136	73.1	874,197	6,428
Terminated Vested	2,074	53.3	10,834,824	5,224
Inactive Due Refund	8,606	NA	NA	NA

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX B – MEMBERSHIP INFORMATION

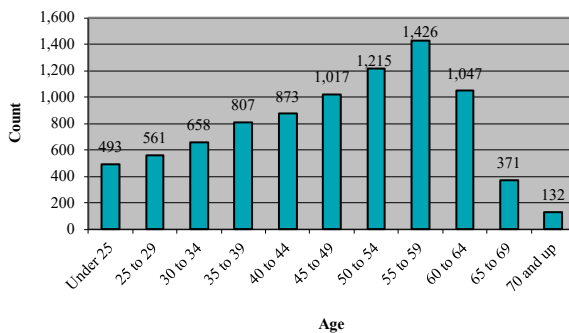
**Participating Local Districts of the Maine Public Employees Retirement System
Inactive Member Data as of June 30, 2020
Special Plans**

	Count	Average Age	Total Annual Benefit	Average Annual Benefit
Retired	1,574	68.2	\$ 53,758,432	\$ 34,154
Retired - Concurrent Beneficiary	380	67.4	2,551,018	6,713
Disability - Section 1122	18	74.3	402,225	22,346
Disability – Sections 3 and 3A	81	61.2	2,535,794	31,306
Beneficiary of Above	297	73.2	5,520,045	18,586
Pre-Retirement Death Beneficiary	26	65.3	185,199	7,123
Terminated Vested	328	47.2	3,091,843	9,426
Inactive Due Refund	160	NA	NA	NA

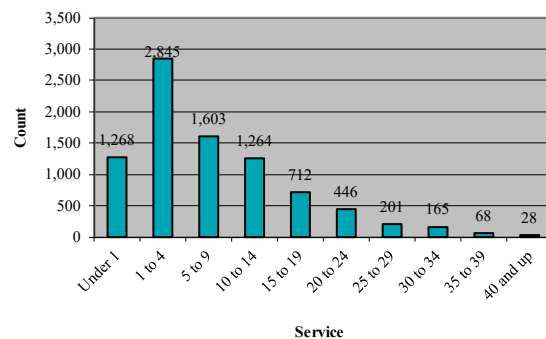
**Distribution of Active Members
As of June 30, 2020**

	Regular Plan Participants										Totals
	Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	283	208	2	0	0	0	0	0	0	0	493
25 to 29	147	331	80	3	0	0	0	0	0	0	561
30 to 34	140	325	149	44	0	0	0	0	0	0	658
35 to 39	104	367	192	114	27	3	0	0	0	0	807
40 to 44	136	325	201	133	61	15	2	0	0	0	873
45 to 49	127	362	195	159	111	50	11	2	0	0	1,017
50 to 54	107	334	249	233	127	100	42	21	2	0	1,215
55 to 59	125	326	273	268	164	128	60	60	22	0	1,426
60 to 64	56	177	177	212	161	100	50	67	32	15	1,047
65 to 69	29	69	56	80	44	38	24	13	10	8	371
70 and up	14	21	29	18	17	12	12	2	2	5	132
Total	1,268	2,845	1,603	1,264	712	446	201	165	68	28	8,600

Age Distribution



Service Distribution



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

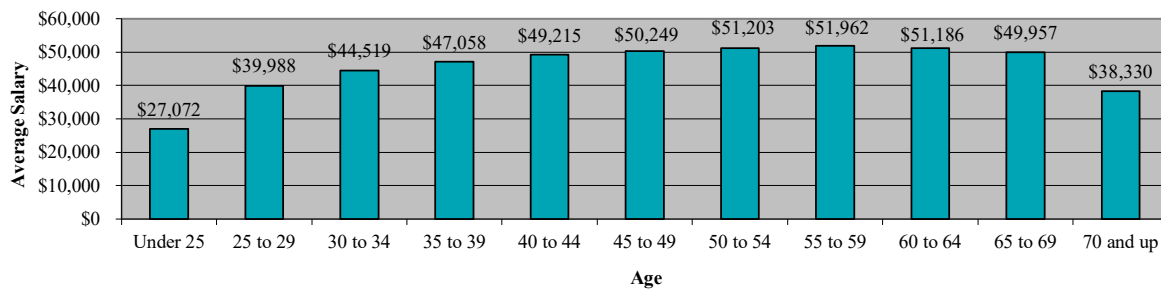
APPENDIX B – MEMBERSHIP INFORMATION

**Distribution of Active Members
As of June 30, 2020**

Regular Plan Participants

	Average Salary											Average
	Years of Service											
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	\$ 20,724	\$ 35,453	\$ 53,607	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 27,072	
25 to 29	32,234	40,632	51,039	54,253	0	0	0	0	0	0	39,988	
30 to 34	35,886	43,315	51,333	57,805	0	0	0	0	0	0	44,519	
35 to 39	35,012	43,932	52,923	56,056	54,924	58,870	0	0	0	0	47,058	
40 to 44	34,567	45,085	53,675	61,272	58,953	58,884	96,800	0	0	0	49,215	
45 to 49	38,104	43,889	53,850	58,658	59,437	61,259	69,540	61,575	0	0	50,249	
50 to 54	35,544	43,304	51,218	57,693	56,998	61,690	68,184	64,609	60,010	0	51,203	
55 to 59	38,841	44,744	50,594	58,072	54,578	56,947	60,091	66,126	66,698	0	51,962	
60 to 64	34,747	38,841	50,618	57,969	52,195	51,220	56,018	63,283	63,259	62,103	51,186	
65 to 69	21,133	39,292	48,921	60,454	53,182	52,265	64,665	50,801	62,220	59,201	49,957	
70 and up	18,813	23,046	32,622	50,590	45,919	57,159	41,353	41,001	61,947	57,375	38,330	
Average	\$ 31,774	\$ 42,420	\$ 51,466	\$ 58,239	\$ 55,323	\$ 56,895	\$ 61,079	\$ 63,212	\$ 64,085	\$ 60,430	\$ 47,745	

Average Salary Distribution



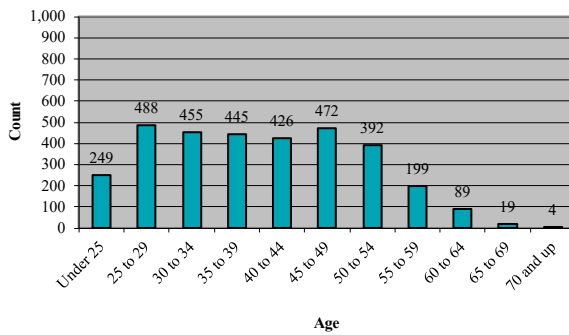
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX B – MEMBERSHIP INFORMATION

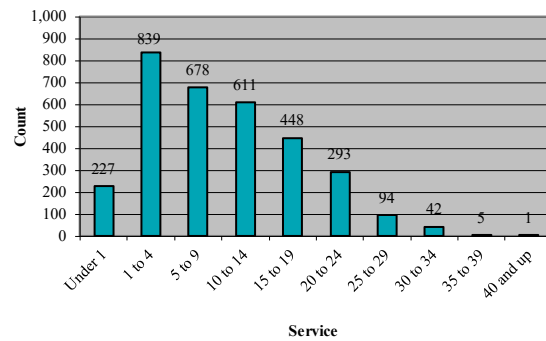
**Distribution of Active Members
As of June 30, 2020**

	Special Plan Participants										Totals
	Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	86	161	2	0	0	0	0	0	0	0	249
25 to 29	43	320	124	1	0	0	0	0	0	0	488
30 to 34	39	157	198	61	0	0	0	0	0	0	455
35 to 39	14	83	139	162	47	0	0	0	0	0	445
40 to 44	13	44	85	128	119	37	0	0	0	0	426
45 to 49	19	27	59	99	127	117	24	0	0	0	472
50 to 54	7	28	40	87	93	86	40	11	0	0	392
55 to 59	4	10	15	50	43	34	18	24	1	0	199
60 to 64	2	6	12	19	17	18	9	2	3	1	89
65 to 69	0	3	4	4	2	1	2	2	1	0	19
70 and up	0	0	0	0	0	0	1	3	0	0	4
Total	227	839	678	611	448	293	94	42	5	1	3,238

Age Distribution



Service Distribution



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

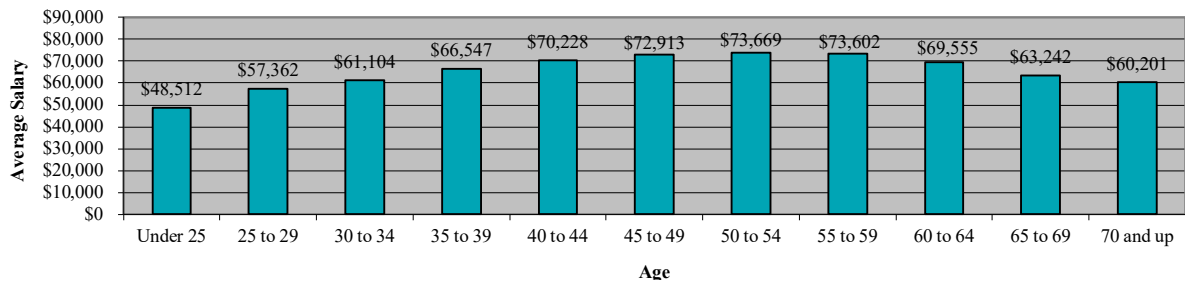
APPENDIX B – MEMBERSHIP INFORMATION

**Distribution of Active Members
As of June 30, 2020**

Special Plan Participants

	Average Salary Years of Service											Average
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	\$ 40,345	\$ 52,790	\$ 55,360	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 48,512	
25 to 29	44,124	57,103	62,656	52,880	0	0	0	0	0	0	57,362	
30 to 34	41,460	57,104	64,727	72,198	0	0	0	0	0	0	61,104	
35 to 39	46,822	58,797	64,554	70,897	77,004	0	0	0	0	0	66,547	
40 to 44	44,915	58,236	64,333	70,811	77,997	79,922	0	0	0	0	70,228	
45 to 49	42,339	59,095	67,164	72,773	75,551	78,985	83,815	0	0	0	72,913	
50 to 54	54,989	58,998	66,200	70,660	76,506	76,424	85,640	84,790	0	0	73,669	
55 to 59	51,927	55,859	70,227	72,368	73,513	77,590	78,641	81,258	43,839	0	73,602	
60 to 64	23,529	64,853	62,547	74,152	76,143	68,005	65,629	72,832	93,126	60,558	69,555	
65 to 69	0	52,036	62,974	73,040	76,951	25,443	64,167	62,527	68,702	0	63,242	
70 and up	0	0	0	0	0	0	112,929	42,625	0	0	60,201	
Average	\$ 42,588	\$ 56,652	\$ 64,607	\$ 71,485	\$ 76,385	\$ 77,332	\$ 81,751	\$ 78,130	\$ 78,384	\$ 60,558	\$ 65,774	

Average Salary Distribution



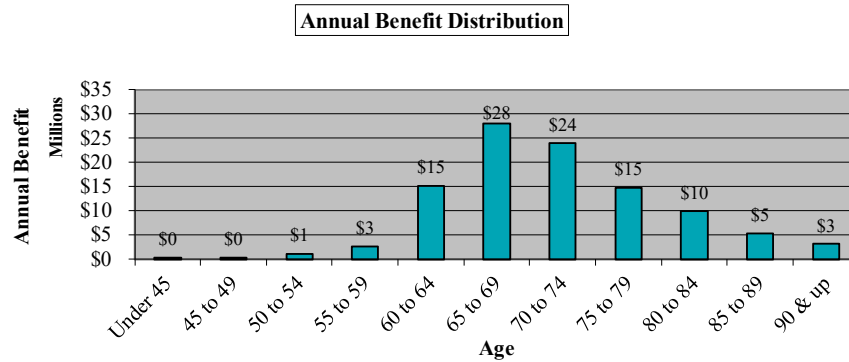
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX B – MEMBERSHIP INFORMATION

**Distribution of Retirees, Disabled
Members, Beneficiaries, and Survivors
As of June 30, 2020**

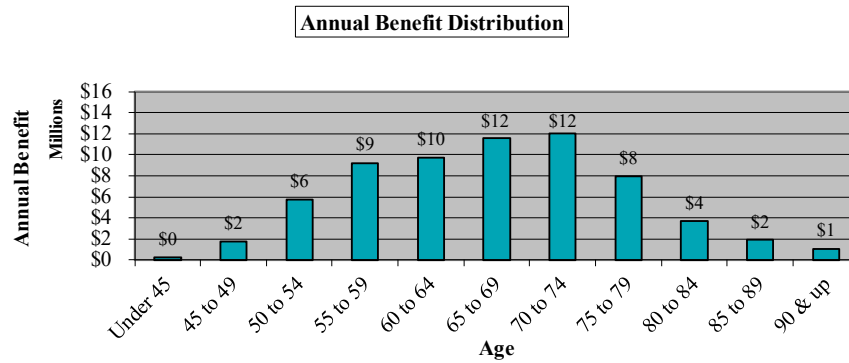
Regular Plan Participants

Age	Count	Annual Benefit
Under 45	48	\$ 299,282
45 to 49	35	305,303
50 to 54	75	1,080,552
55 to 59	167	2,621,153
60 to 64	911	15,151,083
65 to 69	1,812	27,977,407
70 to 74	1,646	23,895,970
75 to 79	1,144	14,802,666
80 to 84	806	9,906,934
85 to 89	493	5,381,150
90 & up	347	3,133,980
Total	7,484	\$ 104,555,480



Special Plan Participants

Age	Count	Annual Benefit
Under 45	16	\$ 270,259
45 to 49	58	1,707,096
50 to 54	186	5,764,136
55 to 59	305	9,227,742
60 to 64	315	9,743,620
65 to 69	390	11,629,598
70 to 74	464	12,022,476
75 to 79	320	7,956,815
80 to 84	169	3,671,738
85 to 89	94	1,885,703
90 & up	59	1,073,531
Total	2,376	\$ 64,952,714



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX B – MEMBERSHIP INFORMATION

	Active Members	Retired Members	Beneficiaries of Retired Members	Survivors of Deceased Members	Disabled Members ¹	Terminated Vested Members ²
As of June 30, 2019	11,731	6,966	2,018	171	379	2,350
New hires	1,344					
Rehires	137					(45)
New PLDs	96					
Movement between plans	8	71	33			(3)
New retirees	(259)	436				(172)
New disabled retirees	(8)				18	(8)
New beneficiaries due to retirements			44			
New deferred vested members	(317)					368
Non-vested terminations	(707)					
Refunds	(178)					(66)
Deaths, no future benefits	(5)	(183)	(71)	(6)	(9)	(14)
Deaths with a survivor or beneficiary	(4)	(62)	63	1	(4)	(4)
Benefits expired				(4)		
Benefits restarted				-		
Records combined / split						
Data correction	-	(6)	(1)	-	6	(4)
As of June 30, 2020	11,838	7,222	2,086	162	390	2,402

1. Former disabled retirees who have changed to service retirement as mandated by the Plan are still included as disabled members.

2. Deferred vested members includes those indicated to us in the data who have terminated and are eligible for a future annuity.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

1. Member Contributions

Beginning with FY 2020, the contribution rates for members are determined annually based on the risk-sharing framework adopted by the Board of Trustees. The rates for members of Regular Plans (AC, AN, and BC) also vary based on whether the member joined the Plan prior to July 1, 2014 and thus has a normal retirement age of 60 or joined on or after this date and has a normal retirement age of 65. See the Annual PLD Contribution Rate reports for further details.

Member contributions earn annual interest at the rate adopted by the Board of Trustees each February.

2. Average Final Compensation

For purposes of determining benefits payable, average final compensation is the average annual rate of earnable compensation for the three years of creditable service (not necessarily consecutive) that produce the highest such average.

3. Creditable Service

Creditable service includes service while a member, certain service prior to the establishment of the Plan, purchased service credit of which there are several types, and service while receiving disability benefits under the Plan.

Effective August 1, 2019, the ability to use accrued, unused vacation and sick leave towards retirement benefits are available only to those who have 20 or more years of creditable service under the Plan at retirement.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

4. Service Retirement Benefits

Regular Plan AC

Normal Retirement Age:

Plan members prior to July 1, 2014: 60

New members to the Plan on or after July 1, 2014: 65

Eligibility for Members in Active Service and Inactive Members: 25 years of creditable service.

Eligibility Alternative for Members in Active Service: At least one year of creditable service immediately before retirement and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement and not in Active Service on or after October 1, 1999: At least ten years of creditable service and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement but in Active Service on or after October 1, 1999: At least five years of creditable service and at least normal retirement age.

Benefit: 1/50 of average final compensation multiplied by years of membership service under Consolidated Plan AC reduced by:

Plan members prior to July 1, 2014:

approximately 2¼% for each year
that a member is younger than age
60 at retirement.

New members to the Plan on or after July 1, 2014:

6% for each year that a member is
younger than age 65 at retirement.

Beginning July 1, 2019, the age reduction factors are a set of approximately actuarially equivalent rates rather than the above rates for members with less than 20 years of creditable service under the PLD Consolidated Plan on July 1, 2019. The above 2¼% and 6% rates remain in effect for those members with 20 or more years of creditable service under the PLD Consolidated Plan on July 1, 2019.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Regular Plan AN

This benefit plan is the same as Regular Benefit Plan AC, except that there is no provision for cost-of-living adjustments.

Regular Plan BC

Normal Retirement Age:

Plan members prior to July 1, 2014: 60

New members to the Plan on or after July 1, 2014: 65

Eligibility for Members in Active Service and Inactive Members: 25 years of creditable service.

Eligibility Alternative for Members in Active Service: At least one year of creditable service immediately before retirement and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement and not in Active Service on or after October 1, 1999: At least 10 years of creditable service and at least normal retirement age.

Eligibility for Members not in Active Service at Retirement but in Active Service on or after October 1, 1999: At least five years of creditable service and at least normal retirement age.

Benefit: 1/100 of average final compensation multiplied by years of membership service under Consolidated Plan BC reduced by:

Plan members prior to July 1, 2014:	approximately 2¼% for each year that a member is younger than age 60 at retirement.
-------------------------------------	---

New members to the Plan on or after July 1, 2014:	6% for each year that a member is younger than age 65 at retirement.
---	--

Beginning July 1, 2019, the age reduction factors are a set of approximately actuarially equivalent rates rather than the above rates for members with less than 20 years of creditable service under the PLD Consolidated Plan on July 1, 2019. The above 2¼% and 6% rates remain in effect for those members with 20 or more years of creditable service under the PLD Consolidated Plan on July 1, 2019.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Regular Plan Notes

1. Under certain circumstances, Regular Plan service can count, on a pro-rata basis specific to the applicable Special Plan, toward meeting Special Plan benefit eligibility requirements.
2. The actual benefit for service earned prior to coverage under the Consolidated Plan may be based on a variable percentage of average final compensation multiplied by years of service under any previous plan(s) (the percentage depends on the previous plan(s)).

Special Plan 1C

Eligibility: 20 years of creditable service in named positions.

Benefit: One-half of average final compensation plus 2% for each year of service in excess of 20 years of service.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

Special Plan 1N

This benefit plan is identical to Special Benefit Plan 1C, except that there is no provision for cost-of-living adjustments.

Special Plan 2C

Eligibility: 25 years of creditable service in named positions.

Benefit: One-half average final compensation plus 2% for each year of service in excess of 25 years of service.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

Special Plan 2N

This benefit plan is identical to Special Benefit Plan 2C, except that there is no provision for cost-of-living adjustments.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Special Plan 3C

Eligibility: 25 years of creditable service in named positions.

Benefit: Two-thirds of average final compensation plus 2% for each year of service in excess of 25 years of service.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

Special Plan 3N

This benefit is identical to Regular Benefit Plan 3C, except that there is no provision for cost-of-living adjustments.

Special Plan 4C

Eligibility: Age 55 with 25 years of creditable service in named positions.

Benefit: 1/50 of average final compensation multiplied by years of membership service under Consolidated Plan 4C reduced by:

Plan members prior to July 1, 2014:	approximately 2¼% for each year that a member is younger than age 55 at retirement.
-------------------------------------	---

New members to the Plan on or after July 1, 2014:	6% for each year that a member is younger than age 55 at retirement.
---	--

Beginning July 1, 2019, the age reduction factors are a set of approximately actuarially equivalent rates rather than the above rates for members with less than 20 years of creditable service under the PLD Consolidated Plan on July 1, 2019. The above 2¼% and 6% rates remain in effect for those members with 20 or more years of creditable service under the PLD Consolidated Plan on July 1, 2019.

Form of Payment: Life annuity (“full benefit”), unless an optional method of payment is selected.

Cost-of-Living Adjustment: See item 11.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Special Plan 4N

This benefit plan is identical to Special Benefit Plan 4C, except that there is no provision for cost-of-living adjustments.

Special Plan Notes

1. If a Special Plan member fails to meet the Special Plan eligibility criteria, their service retirement benefit is that provided by the applicable underlying Regular Plan; Special Plan service credits are used toward Regular Plan eligibility requirements.
2. Service in all Special Plans counts, on a percentage basis, toward meeting the benefit eligibility requirements of any Special Plan.
3. The actual benefit for service earned prior to coverage under the Consolidated Plan may be based on a variable percentage of average final compensation multiplied by years of service under any previous Plan(s) (the percentage depends on the previous Plan(s)).

5. Disability Retirement Benefits Other Than No Age Benefits (See Item 6)

Eligibility: Disabled as defined in the MainePERS statutes prior to applicable normal retirement age, employed prior to October 16, 1992, and did not elect No Age Disability Benefits, and either disabled in the line-of-duty or disabled with at least five years of creditable service.

Benefit: 66⅔% of average final compensation, reduced by employment earnings over the specified statutory limit, and to the extent that the benefit in combination with Workers' Compensation and Social Security, exceeds 80% of average final compensation.

Form of Payment: Payment begins upon the termination of service and ceases on cessation of disability or after five years unless the member is unable to engage in any substantially gainful activity, in which case payments cease on the earlier of ten years following normal retirement age or the date that the service retirement benefit equals or exceeds the disability benefit.

Conversion to Service Retirement: During the period of disability, service is credited and average final compensation is increased at the same rate as any cost-of-living adjustments for which the member is eligible (see item 11). On the date when service benefits reach a level of 66⅔% of average final compensation or ten years after the normal retirement date if earlier, the disability converts to a service retirement benefit based on service and average final compensation at that time.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

6. No-Age Disability Benefits

Eligibility: Disabled as defined in the MainePERS statutes, employed on or after October 16, 1992 or employed prior to October 16, 1992 and elected the provisions of No-Age Disability, and either disabled in the line-of-duty or disabled with at least five years of creditable service.

Benefit: 59% of average final compensation, reduced by employment earnings over the specified statutory limit, and to the extent that the benefit, in combination with Workers' Compensation and Social Security, exceeds 80% of average final compensation.

Form of Payment: Payment begins upon the termination of service and ceases on cessation of disability or after five years, unless the member is unable to engage in any substantially gainful activity, in which case payments cease on the date the service retirement benefit equals or exceeds the disability benefit.

Conversion to Service Retirement: During the period of disability, service is credited and average final compensation is increased at the same rate as any cost-of-living adjustments for which the member is eligible (see item 11). On the date when service benefits reach a level of 59% of average final compensation, the disability benefit converts to a service retirement benefit based on service and average final compensation at that date.

7. Pre-Retirement Ordinary Death Benefits

Eligibility: Death while active, inactive eligible to retire, or disabled not resulting from an injury received in the line-of-duty.

Benefit: Designated beneficiary, spouse, children, or parents entitled to benefit calculated as if deceased member had retired under Option 2 (see item 12); however, the beneficiary may elect survivor benefits payable to a surviving spouse, dependent children, parent, or other designated beneficiaries in monthly amounts varying by the status of beneficiary and number of eligible survivors. Otherwise accumulated contributions with interest are payable to the designated beneficiary, spouse, children, older parents, or estate.

8. Pre-Retirement Accidental Death Benefits

Eligibility: Death while active or disabled resulting from an injury received in the line of duty.

Benefit:

- If the member leaves no dependent children, two-thirds of the member's average final compensation to the surviving spouse until death.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

- If the member is survived by a spouse who has the care of dependent children of the member, the surviving spouse shall receive an annual sum equal to the member's average final compensation while having the care of dependent children. When there are no longer any dependent children, the surviving spouse shall receive two-thirds of the member's average final compensation until death.
- If the member is survived by a spouse who does not have the care of the member's dependent children, the surviving spouse and dependent children shall share equally an annual sum equal to the member's average final compensation. When there are no longer any dependent children, the surviving spouse shall receive two-thirds of the member's average final compensation until death.
- If the member leaves no spouse, the dependent children shall share an annual amount equal to the member's average final compensation. Benefits will cease when the last dependent child no longer meets the definition of "dependent child."

9. Termination Benefit

Eligibility: Termination of service other than by retirement or death with at least five years of creditable service.

Benefit: The member's choice of a refund of the accumulated contributions with interest or a retirement benefit using creditable service and average final compensation as of the date of termination, deferred to normal retirement age.

10. Refund of Contributions

Eligibility: Termination of service other than by retirement or death with less than 5 years of creditable service.

Benefit: Refund of member's accumulated contributions with interest.

11. Cost-of-Living Adjustments (COLA)

All service and disability retirement and survivor benefits payable to (or in relation to) benefit recipients who were employed by a PLD that elected a Plan that provides for a COLA are adjusted each year that there is a percentage change in the Consumer Price Index, based on the Index. If the percentage change is negative, then no adjustment is made in that year. In subsequent years, the adjustment that would have been made will be adjusted downward to the extent necessary to recoup the full actuarial value of not having made the previous year's negative adjustment. This process of adjustment may occur over a multi-year period if needed to recoup the full value of negative changes in the Index.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Cost-of-living adjustments are effective September 1 and are applied to all benefits that have been in payment for 6 months for retirees who retire prior to September 1, 2015, 12 months for retirees who retired on or after September 1, 2015, and 24 months for those who retire on or after September 1, 2019.

The maximum annual increase is 2.5%, applicable to COLAs issued in September 2018 and later (prior to this, 3% for the 2014 through 2017 COLAs and 4% prior to the 2014 COLA).

Possible downward adjustments to future COLAs may occur if severe market losses result in contribution rates under the risk-sharing contribution methodology that exceed the contribution caps for PLD and member rates under this methodology. In this eventuality, a reduced COLA may be paid to retirees.

12.Methods of Payment of Service Retirement Benefits

At retirement, a member who retires with a benefit must choose from the following methods of payment:

Full Benefit: Unadjusted benefit paid for the life of the member-only.

Option 1: Cash refund equal to the remaining member contribution balance, if any, at the date of death (where the member contribution balance has been reduced each month by the portion of the monthly benefit deemed to be provided by member contributions).

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: Joint and survivor annuity at any percentage other than those available under Option 2 and Option 3.

Option 5: Designated percentage of the benefit (not less than 51%) payable to the member, with the remaining percentage (the two to equal 100%) payable to a beneficiary (may only be a sole beneficiary) while both are alive. At the death of either, the higher of the two percentages is paid to the survivor for the survivor's life, and the lower-percentage benefit ceases to be paid.

Option 6: 100% joint and survivor annuity (Option 2) with pop-up*.

Option 7: 50% joint and survivor annuity (Option 3) with pop-up.*

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Option 8: Option 4 with pop-up*.

* The “pop-up” feature attached to a given Option means that in the case of a beneficiary predeceasing the member, the member’s benefit will be revised prospectively to the amount that the benefit would have been had the member selected Full Benefit payment upon retirement.

13. Plan Changes since Prior Valuation

Three formerly withdrawn Participating Local Districts (PLDs) elected to re-enter the Consolidated Plan this year. The liability increase identified as a plan change represents the liability being transferred back into this Plan and is mostly offset by assets transferred in as well. The difference between the asset and liability transfer will be paid for by one of the PLDs as an IUUAL amount.

Appendix C is intended to be a brief summary of provisions. In the event of a dispute, applicable statutes and administrative policy supersede this report description.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Annual Rate of Investment Return

PLDs	6.75%
------	-------

Rate is net of both administrative and investment expense.

2. Cost-of-Living Adjustment (COLA) Assumed Rate

PLDs	1.91%
------	-------

3. Sample Rates of Individual Salary Increases (% at Selected Years of Service)

Years of Service	Disability Rate
0	9.00%
1	4.80
2	3.60
3	3.10
4	2.75
5	2.75
10	2.75
15	2.75
20	2.75
25	2.75
30	2.75

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

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

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

Service	Regular	Special
0	25.0%	25.0%
1	20.0	12.5
2	15.0	10.0
3	12.0	7.5
4	10.0	5.0
5	9.0	4.0
10	6.0	2.5
15	4.0	2.5
20	2.5	2.5

Non-vested members are assumed to take a refund of contributions with interest. Once vested, the member is assumed to elect the greater of the deferred vested benefit or a refund of member contributions with interest-based on present value at the time of termination.

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

Age	(Showing values in 2020)	
	Male	Female
50	40	31
55	57	42
60	77	61
65	109	94
70	169	150
75	275	247
80	463	417
85	808	741
90	1,440	1,339
95	2,298	2,227

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 the 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.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

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

(Showing values in 2020)		
Age	Male	Female
20	4	2
25	4	2
30	4	2
35	5	3
40	6	5
45	9	7
50	17	12
55	28	19
60	46	29
65	82	43

* For Regular Plans, 5% of deaths assumed to arise out of and in the course of employment, while for Special Plans, 20% of deaths are assumed to arise out of and in the course of employment.

Rates are based on 104% and 120% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Total Employee 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.

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

(Showing values in 2020)		
Age	Male	Female
25	80	23
30	77	30
35	91	41
40	109	57
45	170	89
50	208	117
55	240	147
60	273	175
65	326	212
70	422	289

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

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.

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

Regular Plans

Regular Plans		
Age	Tier 1	Tier 2
45	50	50
50	50	50
55	50	50
60	200	50
65	250	200
70	1,000	1,000

In the case of PLD employees, Tier 1 refers to those who were hired prior to July 1, 2014, and Tier 2 refers to those who were hired on or after July 1, 2014.

Special Plans

Service	Special Plans
20	400
21-24	300
25	400
26-29	300
30	400
31-34	300
35+	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.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

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

Age	Revised Assumption
25	1.8
30	2.4
35	3.0
40	4.2
45	9.0
50	19.8
55	36.6
60	65.0

* 10% assumed to receive Workers Compensation benefits offsetting disability benefit.

10. Family Composition Assumptions

80% of active members are assumed to be married and have two children born when the member is 24 and 28; children are assumed dependent until age 18; female spouse is assumed to be three years younger than male spouse; member is assumed to have no dependent parents; unmarried members are assumed to have beneficiaries entitled to benefits worth 80% as much as those of married members' beneficiaries.

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.

Member Contribution Interest Rate: 5% assumed for all future years

COLA Timing: September 1

Member Contribution Rates: For purposes of developing liability amounts, the member contribution rates in effect for FY 2020 are assumed to continue for all periods in the future.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

12. Rationale for Assumptions:

The 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.

13. Changes since Last Valuation:

None.

14. Rationale for Change in Actuarial Assumptions:

N/A.

B. Actuarial Methods

1. Funding Method

The entry age normal actuarial funding method is used to determine costs and the actuarially determined contributions needed to fund the Plan. The actuarially determined contributions are then used to develop the specific rates for both members and PLDs for each specific Regular and Special Plan within the Plan. Under this funding method, the Actuarially Determined Plan Total Rate consists of two elements: the Actuarially Determined Plan Normal Cost Rate and the Actuarially Determined Plan UAL Amortization Rate.

For each of the Regular and Special Plans in the Consolidated Plan, an individual entry age normal cost rate is determined for each active member. The normal cost is determined by the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into a Plan, of each active member's projected future benefits. Second, this value is then divided by the value, also at entry age, of the member's expected future salary. These rates are then multiplied by each member's salary as of the valuation date to get the total normal cost dollars as of the valuation date for that Plan. These individual amounts for each Regular and Special Plan are then added to get the total normal cost dollars for the Plan and then divided by the total payroll for the Plan to get the Actuarially Determined Plan Normal Cost Rate.

The unfunded actuarial liability under the entry age normal funding method equals the present value, at the time of valuation, of the future benefit payments less the present value of future normal costs, future member contributions, future IUUAL payments, and current assets. Under the Consolidated Plan, the Actuarially Determined Plan UAL Amortization Rate is calculated for the Consolidated Plan in total based on the pooled UAL being amortized over a 20-year period commencing with the June 30, 2015 valuation date and

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

any layers of pooled UAL arising after that date amortized over individual 20-year periods. This amortization uses a level percentage of pay method with payroll assumed to increase at 2.75% per year. The amortization payment thus derived for the valuation year is then divided by the total payroll to develop the Actuarially Determined Plan UAL Amortization Rate.

The risk-sharing framework adopted by the Board of Trustees is then used to develop individual PLD and member rates for each Regular and Special Plan within the Plan based on the Actuarially Determined Plan Total Rate. The allocation to each specific Plan from the Total Rate is based on the normal cost rate for each specific Plan relative to the Plan in total. For the three Regular Plans, member rates are developed separately for members under the provisions with an age 60 normal retirement age and members under the provisions with an age 65 normal retirement age.

In addition to the development of rates for each Plan, the actual contribution for a given PLD will include an Individual Unpooled Unfunded Actuarial Liability (IUUAL) payment as well, unless the PLD came into the Plan without an IUUAL or has paid off its IUUAL. The Initial Unpooled Unfunded Actuarial Liability (IUUAL) was calculated at entry into the Consolidated Plan for each PLD that entered with liabilities in excess of their assets and is paid off through payment of a specific dollar amount until paid off.

2. Asset Valuation Method

For purposes of determining PLD contribution to the Plan and the Plan's funding status, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process.

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumption. This expected value is compared to the market value and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

3. Changes since Last Valuation

None.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX E – GLOSSARY OF GASB 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. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 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 Pension Liability.

6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension 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.

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM
CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS
ACTUARIAL VALUATION AS OF JUNE 30, 2020**

APPENDIX E – GLOSSARY OF GASB TERMS

7. Net Pension Liability

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

8. Plan Fiduciary Net Position

The fair or market value of assets.

9. Reporting Date

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

10. 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 67 and 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

11. Total Pension 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 67 and 68. The Total Pension Liability is the actuarial liability calculated under the entry age actuarial cost method.



Classic Values, Innovative Advice