Classic Values, Innovative Advice

Maine Public Employees Retirement System

Consolidated Plan for Participating Local Districts

Actuarial Valuation Report as of June 30, 2018

Produced by Cheiron

October 2018

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October 29, 2018

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, 2018 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 for the use of the MainePERS Board and its auditors in preparing financial reports in accordance with 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.

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 due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with 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, including the use of assumptions and methods for funding purposes that comply with the Actuarial Standards of Practice. Furthermore, as credentialed actuaries we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

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

Sincerely,
Cheiron

Gene Kalwarski, FSA, MAAA, EA
Principal Consulting Actuary

Fiona E. Liston, FSA, MAAA, EA
Principal Consulting Actuary

cc: Elizabeth Wiley, FSA

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, 2018. 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 financial condition of the Plan;

3) Develop informational contribution rates for the PLDs and members for Fiscal Year (FY) 2020 for the various Regular and Special Plans within the Plan based on actuarial principles and compare these to the previous corridor method; and

4) Provide specific information and documentation 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 key findings, disclosing important trends experienced by the Plan in recent years, and providing analysis relating to the Plan's future status.

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

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

Section IV develops the PLD and member contribution rates determined using actuarial techniques for FY 2020 along with the rates developed under the corridor methodology for each Regular and Special Plan for the prior year, FY 2019. **Note that these rates are provided for informational purposes only as it is anticipated that the FY 2020 rates for both the PLDs and members based on this June 30, 2018 valuation will be based on the risk-sharing contribution methodology recently adopted by the Board and not yet finalized. We have provided a description of this risk-sharing contribution methodology at the end of Section IV as it currently stands for informational purposes, but note that the details of this are subject to change prior to finalization and adoption by the Board. These risk-sharing rates will be provided under separate cover once the details of the methodology are finalized.**

Section V includes financial disclosure information.

Finally, at the end of this report we present appendices that contain a summary of the:

- 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 methods and assumptions used in the current valuation (Appendix D); and

- Terminology used in the Governmental Accounting Standards Board (GASB) disclosures provided as a glossary (Appendix E).

SECTION I – BOARD SUMMARY

General Comments

Most of the participating local districts (PLDs) in the State of Maine participate in this Consolidated Plan for PLDs (Plan). The Plan offers a number of 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. Both the member contributions and the PLD contributions are paid as 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, 2018 valuation setting the Fiscal Year (FY) 2020 contribution rates will be the first valuation used to develop member and PLD contribution rates 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.

Note that while the risk-sharing contribution methodology has been adopted by the Board effective for the FY 2020 contributions, the details of this methodology are not yet finalized, so these rates are not provided in this valuation report. These FY 2020 rates, based on this June 30, 2018 valuation report, will be provided under separate cover once the methodology is finalized. We have provided actuarially determined rates and the rates that were developed under the previous contribution corridor methodology for FY 2019 in this report for informational purposes only. In addition, we have provided a description of the preliminary details of the risk-sharing contribution methodology at the end of Section IV, but this is subject to change based on the finalized details adopted by the Board and so is also for informational purposes only.

In addition to the plan-specific rates, some PLDs are also making additional contributions to reduce their Individual Unpooled Unfunded Actuarial Liability (IUUAL) due to entering the Plan with liabilities exceeding assets.

Experience from July 1, 2017 through June 30, 2018 (FY 2018)

As of this June 30, 2018 valuation, the AVA funded ratio for the Plan is 89.5%, which is an increase from the prior year's 86.5% AVA funded ratio. This increase in the funded ratio during this year was primarily attributable to the changes in plan benefits and a gain in investment returns offset by the decrease in the assumed annual rate of investment return.

While this year's AVA funded ratio is less than 90%, the Board of Trustees has changed the funding method for this Plan to use a risk-sharing contribution methodology, so this will be used to determine the rates instead of the corridor methodology that has been used in recent years. Under this prior corridor methodology, the aggregate PLD contribution rate grew over recent years from three percent of payroll in 2010 to 10.3% of payroll for fiscal year (FY) 2019. While the contribution methodology changed this year to the risk-sharing contribution methodology, the aggregate PLD contribution for FY 2020 would have remained at 10.3% if the contributions for FY 2020 were still being determined under the corridor methodology. The change in contribution methodology also impacted the member contributions. Prior to the FY 2020 rates, the member contributions were set for each Regular and Special Plan within the Plan whereas beginning with the FY 2020 rates they are set through the risk-sharing contribution methodology. The aggregate member rate for FY 2019 under the prior set rates was 8.2%. Under the new risk-sharing contribution methodology, this aggregate member rate for FY 2020 is likely to change, but the value has not yet been determined since the details of the risk-sharing contribution methodology have not yet been finalized.

As of June 30, 2018, the Plan had an unfunded actuarial liability (UAL) based on the actuarial value of assets (AVA) of $0.325 billion. This represents a decrease of $0.082 billion from the $0.407 billion UAL measured as of June 30, 2017. 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 FY2018 as well as their combined effect on the UAL.

Table I-1
(Amounts in Billions)

	Liabilities	Assets*	UAL
Value as of June 30, 2017	$ 3.017	$ 2.610	$ 0.407
Expected Change	0.132	0.130	0.002
Impact of Assumption Changes	0.046	0.000	0.046
Impact of Plan Changes	(0.106)	0.000	(0.106)
Recognized Investment Gain	0.000	0.025	(0.025)
Recognized Liability Gain	0.001	0.000	0.001
Value as of June 30, 2018	$ 3.090	$ 2.765	$ 0.325

*Demonstration uses the 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 trends, provides projections of the Plan's future status, and summarizes the principal results of the valuation, comparing key results between this year's valuation and last year's for member counts, assets and liabilities, and contributions 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 of 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. As such, following the historical review, we present projections of the probable condition of the Plan in the future under various market return scenarios.

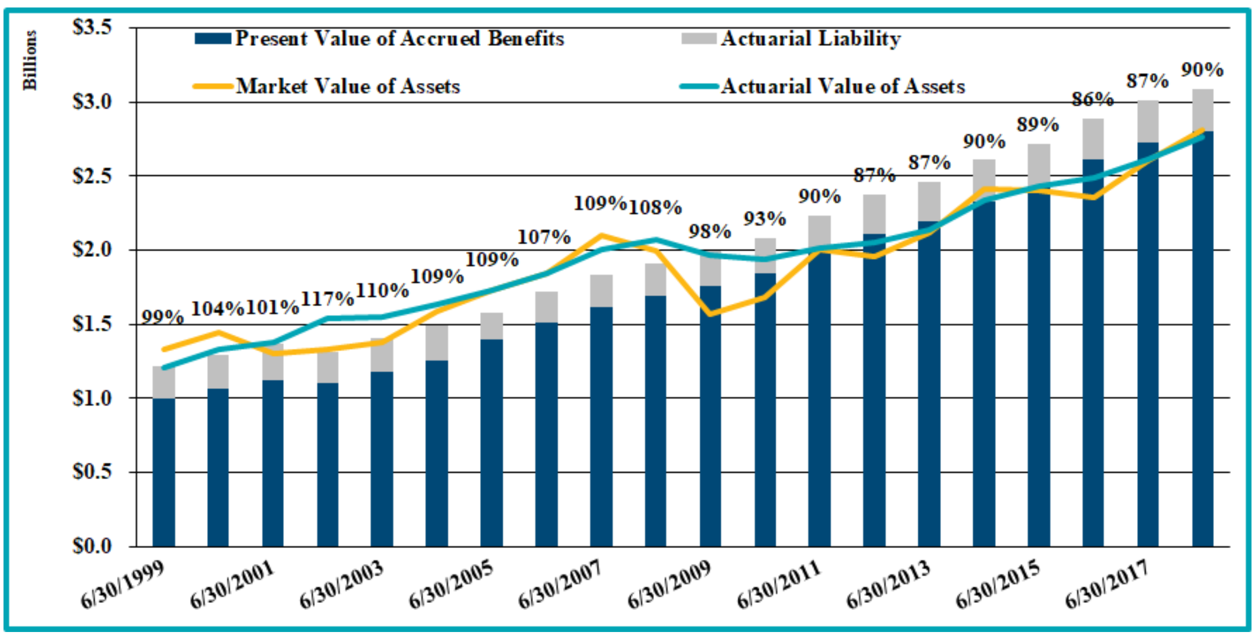
SECTION I – BOARD SUMMARY

Assets and Liabilities

The following graph illustrates the progress of assets against liabilities for the Plan since June 30, 1999 as well as the Plan's funded ratio 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). 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 as of each valuation date are shown as the percentages in the graph labels.

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 IUUALs. After that, the funded ratio was relatively stable around 108-110% 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. This graph does not show the ratio of the market value of assets (MVA) to AL, but it 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, with the MVA funded ratio reaching 91% with this valuation.



SECTION I – BOARD SUMMARY

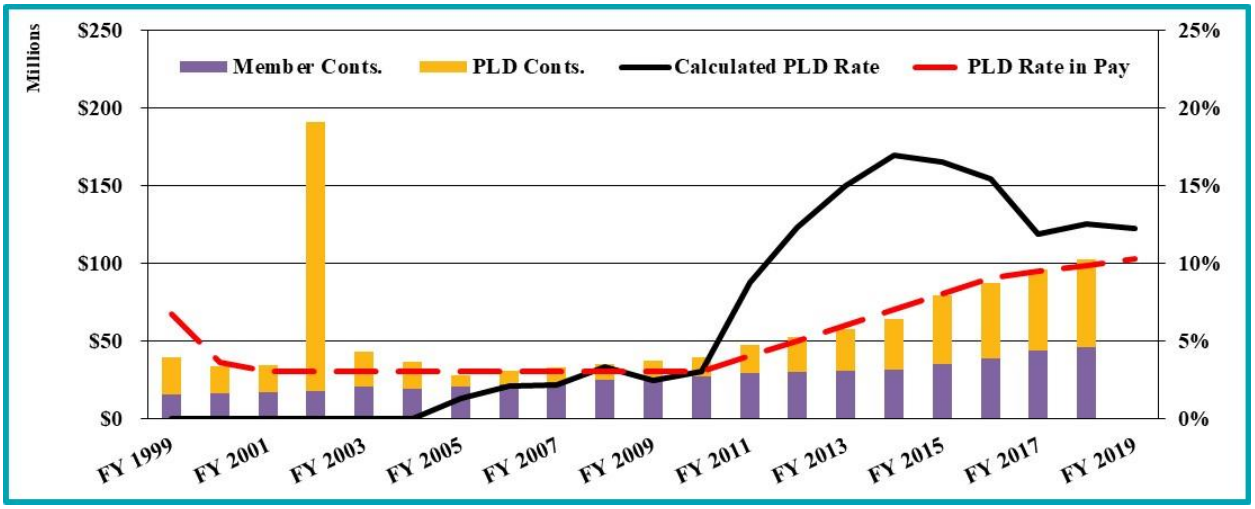
Contributions

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 in future years will be the Aggregate Actuarially Determined PLD Rate. As the details of the risk-sharing contribution methodology are not yet finalized, this value for FY 2020 is not yet available and so this trend graph only goes through FY 2019. Similarly, the red dotted line shows the aggregate corridor contribution rate actually in effect for each year through FY 2019 and then will show the Aggregate Final PLD Rate beginning with FY 2020. As the FY 2020 rates under the cost-sharing contribution methodology are not available yet, we have again ended this trend graph with the FY 2019 rate. Both the red and black lines are read using the right-hand axis.

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 have been working to close the gap between these two rates. Since there is a lag between the calculation of these contribution rates and the year in which they apply, we typically show two additional years of each of these contribution rates, but since the FY 2020 methodologies are not yet finalized, we only provide one additional year of each for this year as described above. Through FY 2019, the member contribution rates were fixed values 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 will be determined under the risk-sharing funding methodology adopted by the Board as described in the General Comments section of this Board Summary.

The majority of the PLD contributions 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. 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.

SECTION I – BOARD SUMMARY



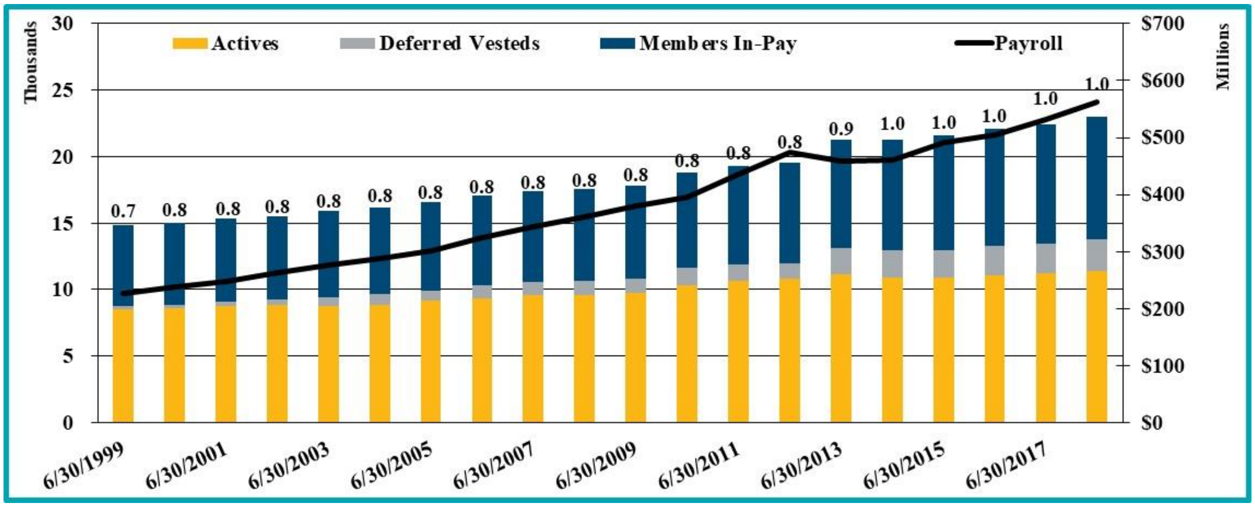
Participant Trends

The stacked bars in the graph that follows show the number of active members, terminated vested members, and members in pay status covered by the Plan as of June 30 of each year indicated and is read using the left-hand axis of the graph. There has been an approximately 1.6% per year growth in the number of active members and an approximately 2.2% per year growth in the number of in-pay members of the Plan over the twenty-year time period shown. The terminated vested group has shown the most growth in this period, averaging 12.7% per year.

The labels above each bar show the "support ratio", which is the ratio of inactive members (members in pay status plus terminated vested members) to active members. This ratio has been gradually increasing since 1999. While this ratio has been reasonably stable for the Plan since 1999, this ratio may start increasing more rapidly as more and more "baby boomers" retire. While an increasing ratio would be a concern in a plan with no prefunding, in the Plan's case, it just indicates there may be increased difficulty in recovering from an investment loss since assets are lost on all covered liabilities, but contributions only come in on the basis of payroll. In addition, as this ratio grows, the cash flows of a plan tend to become more negative. The more negative a plan's cash flows, the more sensitive, in terms of contribution volatility, the plan is to volatile investment markets. The valuation process takes this trend into account. The projections in the next section of this Board Summary show that the assets are expected to be sufficient to meet this growing cash flow disparity.

The black line in the graph indicates the total active member covered payroll in the Plan and is read using the right-hand axis of the graph. The use of a revised data collection process lead to a reduction in the covered payroll as of June 30, 2014 compared to the previous valuation. Since that adjustment, the payroll has grown with each valuation, including the current valuation's covered payroll increasing over that of the June 30, 2017 valuation.

SECTION I – BOARD SUMMARY



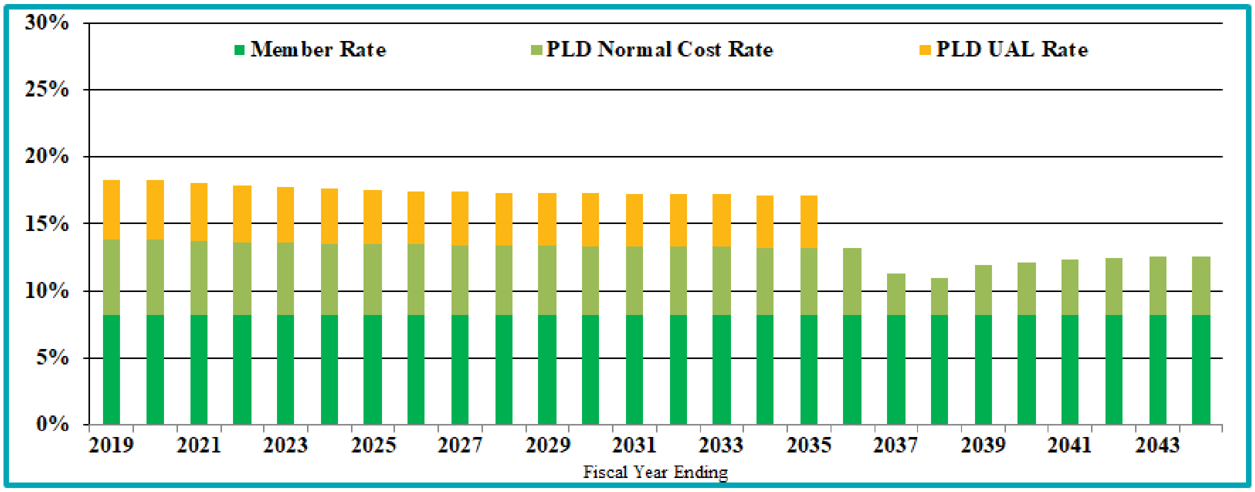
Projections

Our analysis of the projected financial trends for the Plan is an important part of this valuation. In this section, we present sensitivity analysis of future valuation results in terms of benefit security, the previously referenced AVA funded ratio (AVA over AL), and the expected actuarially determined PLD contribution rate. We first 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 rate of return being achieved each year. We then present the same projections based on continuing to achieve all assumptions exactly, **except** for having investment earnings one percent above and then one percent below the assumed 6.75% return. The primary purpose of presenting these projections is to demonstrate how sensitive future valuation results are to deviations from our investment return expectations.

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. We have also assumed that the current member rates are continued for all future years. If the actual contributions received are different from these, the results will vary. We have made these assumptions as the methodology that will be used to determine the contributions for the years beginning with FY 2020 is not yet finalized. **The actual projection under the proposed methodology is expected to include several adjustments to the actuarially determined amounts in determining the actual rates to be contributed.**

SECTION I – BOARD SUMMARY

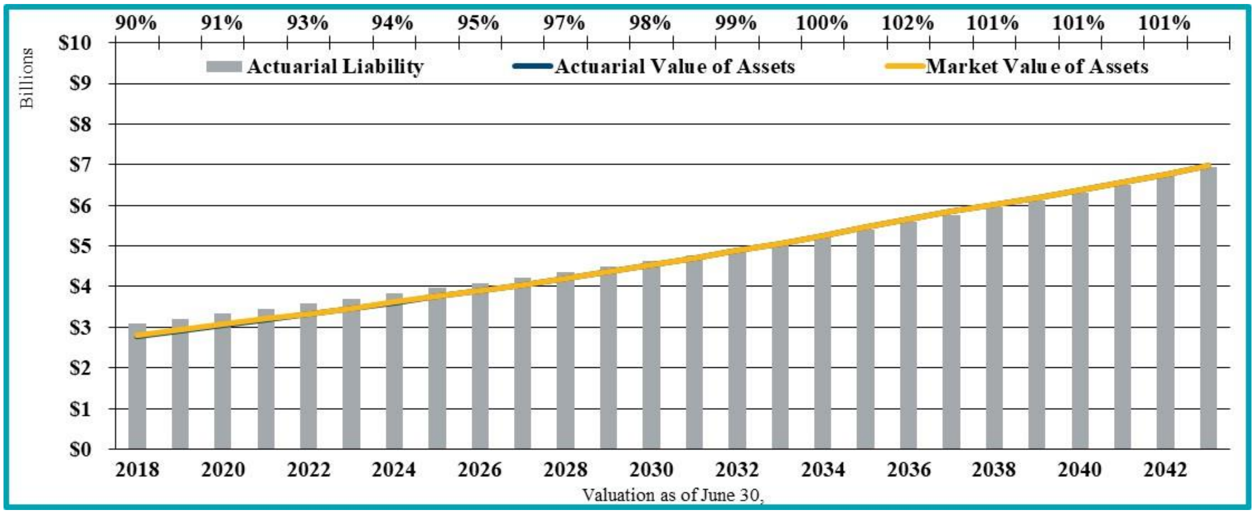
Baseline Projections



The graph above shows the expected progress of the Plan's aggregate actuarially determined PLD contribution rates over the next 25 years assuming that the Plan's assets earn 6.75% on their *market value*. The green bars represent the total PLD normal cost rate, with the darker green being the portion paid by members and the lighter green the portion paid by PLDs, while the yellow bars represent the rate necessary to amortize the unfunded actuarial liability under the Plan's funding policy. **Note that these rates shown are the actuarially determined rates assuming that the actuarially determined rates in the prior years have been paid and maintaining the FY19 fixed member contribution rate. Once the risk-sharing contribution methodology is finalized, we can develop the appropriate cost sharing provisions.**

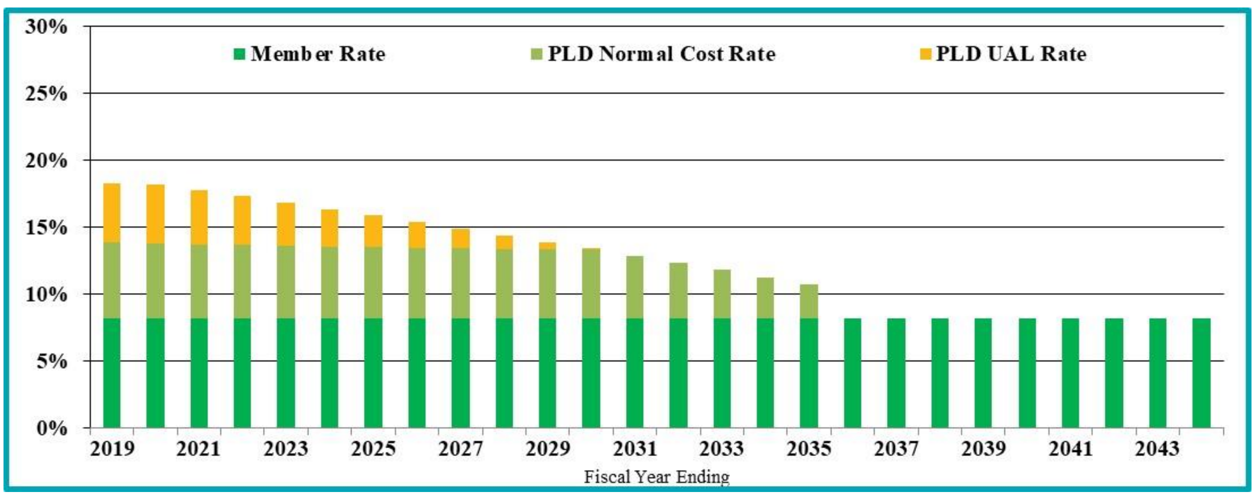
This graph shows that the total normal cost of the group is expected to decline slightly over time as more members in the Plan are under the Age 65 provisions. There is then a slight further decline once the UAL is fully paid off, reflecting that contributions are made a year following the period for which they are determined. Once the small surplus expected from slight overpayment due to this timing has been recognized, we expect the PLD contribution to stabilize at the employer portion of the normal cost.

SECTION I – BOARD SUMMARY



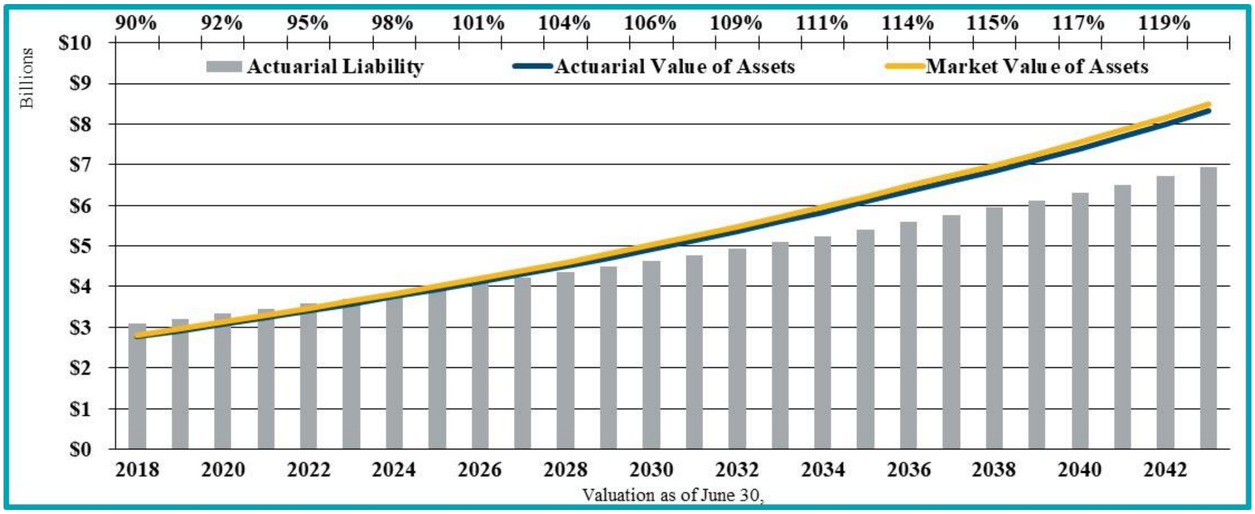
The graph above shows the projected AVA funded ratio (AVA divided by AL) over the next 25 years in this baseline scenario. It shows that the Plan's funded ratio is projected to improve from the starting level of 89% as of FY 2018 to 101% funding in FY 2043. The amounts shown are as of June 30 of the year identified in the horizontal axis.

<u>Projections with Asset Returns of 7.75%</u>



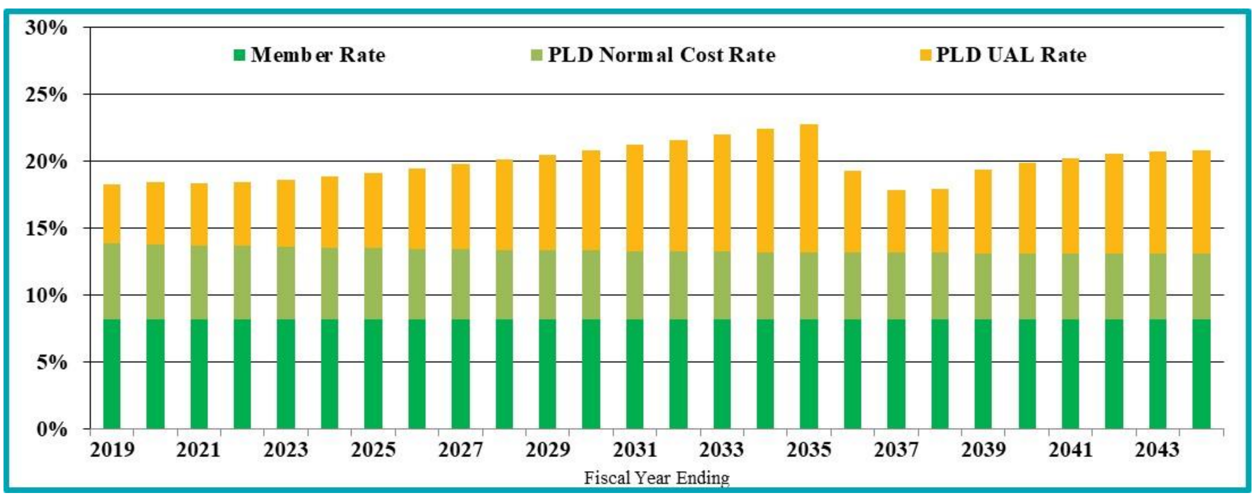
The future funding status of this Plan will be significantly driven by investment earnings as relatively minor changes in the market returns can have significant effects on the Plan's funded ratio. The graph above shows that with a 7.75% annual return in each year while exactly meeting all other assumptions, the actuarially determined PLD contribution rate produced by the valuation process would decrease to zero as the amortization of the surplus would be greater than the PLD normal cost rate. It is expected that the risk-sharing methodology will include floors on both the member and PLD rates that are not reflected here.

SECTION I – BOARD SUMMARY



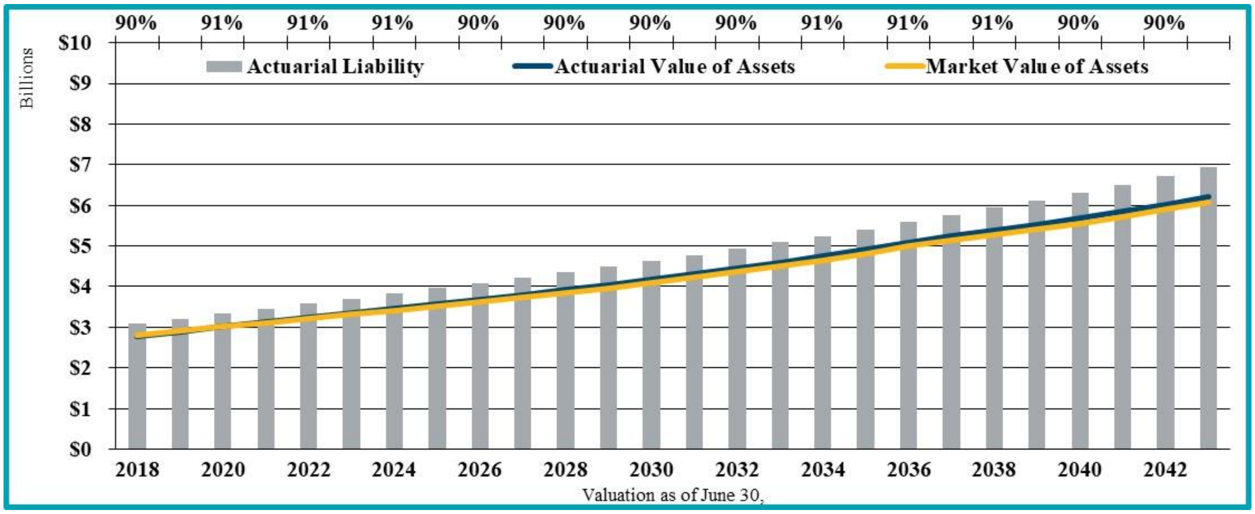
Assuming the same 7.75% return on investments scenario, the above graph shows that the Plan's AVA funded ratio would steadily increase from 89% to 120% by the end of the period shown, as compared to 101% at the end of the baseline scenario.

<u>Projections with Asset Returns of 5.75%</u>



Just as returns in excess of the rate of return assumption will lead to declining contributions and an improved funded ratio, the opposite will occur if actual investment earnings are below the assumed rate. The graph above shows the contribution projection under a 5.75% annual return scenario, continuing to meet all other assumptions exactly. The actuarially determined PLD contribution rate climbs, reflecting losses from the 5.75% returns not meeting assumptions. When the original UAL balance is paid off and it is just the new emerging losses that remain the PLD contribution drops, but then it will again begin to grow as more layers of losses emerge. **As a reminder, the actual risk-sharing contribution methodology is expected to modify the**

actuarially determined contributions, including caps on both the member and PLD rates that are not reflected here.



The above graph shows that the Plan's AVA funded ratio in this 5.75% rate of return scenario would stay at approximately 90% over the period shown as long as investment returns remained consistently one percentage under expectation.

Principal Results Summary

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

SECTION I – BOARD SUMMARY

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

Valuation as of:	**June 30, 2017**	**June 30, 2018**	**% Change**
Member Counts			
Active Members	11,195	11,416	2.0%
Retired Members	6,436	6,672	3.7%
Beneficiaries of Retired Members	1,995	2,019	1.2%
Survivors of Deceased Members	178	172	(3.4%)
Disabled Members	397	393	(1.0%)
Terminated Vested Members	2,234	2,319	3.8%
Inactives Due Refunds	7,274	7,779	6.9%
Total Membership	29,709	30,770	3.6%
Annual Payroll of Active Members	$ 531,168,594	$ 562,952,637	6.0%
Annual Payments to Benefit Recipients	$ 141,460,984	$ 149,732,113	5.8%
Assets and Liabilities			
Actuarial Liability (AL)	$ 3,016,660,721	$ 3,089,857,220	2.4%
Actuarial Value of Assets (AVA)	2,609,806,231	2,764,807,391	5.9%
Unfunded Actuarial Liability (UAL)	$ 406,854,490	$ 325,049,829	(20.1%)
Individual Portion (IUUAL)	NA	NA	
Pooled Portion (PUAL)	$ 406,854,490	$ 325,049,829	(20.1%)
AVA Funded Ratio (AVA/AL)	86.5%	89.5%	
MVA Funded Ratio (MVA/AL)	86.4%	91.1%	
Accrued Benefit Liability (PVAB)	$ 2,724,952,286	$ 2,800,029,632	2.8%
Market Value of Assets (MVA)	2,607,223,644	2,816,179,855	8.0%
Unfunded PVAB	$ 117,728,642	$ (16,150,223)	(113.7%)
Accrued Benefit Funded Ratio	95.7%	100.6%	
PLD Contribution Rate	**FY 2019**	**FY 2020**	
Pooled PLD Normal Cost Rate	6.2%	5.7%	
Pooled UAL Rate	6.0%	4.7%	
Total Calculated Pooled PLD Rate*	12.2%	10.4%	
Aggregate Corridor PLD Rate**	10.3%	N/A	

* This is an actuarially determined amount that is anticipated to be a component of the risk-sharing contribution methodology beginning in FY 2020, tentatively referred to as the Aggregate Actuarially Determined PLD Rate.

**Corridor methodology no longer applicable for FY 2020. Actual FY 2020 rates for both PLDs and members will be set based on the risk-sharing contribution methodology.

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, 2017	June 30, 2018	% Change
Member Counts			
Active Members	8,549	8,603	0.6%
Retired Members	4,985	5,173	3.8%
Beneficiaries of Retired Members	1,362	1,380	1.3%
Survivors of Deceased Members	151	147	(2.6%)
Disabled Members	304	301	(1.0%)
Terminated Vested Members	1,953	2,010	2.9%
Inactives Due Refunds	6,291	6,254	(0.6%)
Total Membership	23,595	23,868	1.2%
Annual Payroll of Active Members	$ 368,272,346	$ 386,924,150	5.1%
Annual Payments to Benefit Recipients	$ 86,453,873	$ 91,425,368	5.8%
Assets and Liabilities			
Actuarial Liability (AL)	$ 1,810,757,945	$ 1,848,188,454	2.1%
Actuarial Value of Assets (AVA)	1,542,303,360	1,637,652,793	6.2%
Unfunded Actuarial Liability (UAL)	$ 268,454,585	$ 210,535,661	(21.6%)
Individual Portion (IUUAL)	NA	NA	
Pooled Portion (PUAL)	$ 268,454,585	$ 210,535,661	(21.6%)
AVA Funded Ratio (AVA/AL)	85.2%	88.6%	
MVA Funded Ratio (MVA/AL)	85.1%	90.3%	
Accrued Benefit Liability (PVAB)	$ 1,642,966,113	$ 1,686,123,622	2.6%
Market Value of Assets (MVA)	1,540,777,142	1,668,081,769	8.3%
Unfunded PVAB	$ 102,188,971	$ 18,041,853	(82.3%)
Accrued Benefit Funded Ratio	93.8%	98.9%	
PLD Contribution Rate	**FY 2019**	**FY 2020**	
PLD Normal Cost Rate	5.7%	5.1%	
UAL Rate	5.4%	4.5%	
Total Calculated PLD Rate*	11.1%	9.6%	
Aggregate Corridor PLD Rate**	9.8%	N/A	

* This is an actuarially determined amount that is anticipated to be a component of the risk-sharing contribution methodology beginning in FY 2020, tentatively referred to as the Aggregate Actuarially Determined PLD Rate.

** Corridor methodology no longer applicable for FY 2020. Actual FY 2020 rates for both PLDs and members will be set based on the risk-sharing contribution methodology.

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, 2017	June 30, 2018	% Change
Member Counts			
Active Members	2,646	2,813	6.3%
Retired Members	1,451	1,499	3.3%
Beneficiaries of Retired Members	633	639	0.9%
Survivors of Deceased Members	27	25	(7.4%)
Disabled Members	93	92	(1.1%)
Terminated Vested Members	281	309	10.0%
Inactives Due Refunds	983	1,525	55.1%
Total Membership	6,114	6,902	12.9%
Annual Payroll of Active Members	$ 162,896,248	$ 176,028,487	8.1%
Annual Payments to Benefit Recipients	$ 55,007,111	$ 58,306,745	6.0%
Assets and Liabilities			
Actuarial Liability (AL)	$ 1,205,902,776	$ 1,241,668,766	3.0%
Actuarial Value of Assets (AVA)	1,067,502,871	1,127,154,598	5.6%
Unfunded Actuarial Liability (UAL)	$ 138,399,905	$ 114,514,168	(17.3%)
Individual Portion (IUUAL)	NA	NA	
Pooled Portion (PUAL)	$ 138,399,905	$ 114,514,168	(17.3%)
AVA Funded Ratio (AVA/AL)	88.5%	90.8%	
MVA Funded Ratio (MVA/AL)	88.4%	92.5%	
Accrued Benefit Liability (PVAB)	$ 1,081,986,173	$ 1,113,906,010	3.0%
Market Value of Assets (MVA)	1,066,446,502	1,148,098,086	7.7%
Unfunded PVAB	$ 15,539,671	$ (34,192,076)	(320.0%)
Accrued Benefit Funded Ratio	98.6%	103.1%	
PLD Contribution Rate	**FY 2019**	**FY 2020**	
PLD Normal Cost Rate	7.4%	7.1%	
UAL Rate	6.3%	5.4%	
Total Calculated PLD Rate*	13.7%	12.5%	
Aggregate Corridor PLD Rate**	11.4%	N/A	

* This is an actuarially determined amount that is anticipated to be a component of the risk-sharing contribution methodology beginning in FY 2020, tentatively referred to as the Aggregate Actuarially Determined PLD Rate.

**Corridor methodology no longer applicable for FY 2020. Actual FY 2020 rates for both PLDs and members will be set based on the risk-sharing contribution methodology.

SECTION II – ASSETS

Pension plan assets play a key role in the financial operation of plans and in 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 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, 2017 and June 30, 2018;
- Statement of the changes in total MainePERS DB market values during the year;
- Development of the total MainePERS DB actuarial value of assets;
- Allocation of 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 meets its obligations.

Current actuarial methods employed in this Plan use an allocated portion of the actuarial value of assets developed for the total MainePERS DB assets. The actuarial methodology used for the total 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, all as of the valuation date. 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, 6.875% for this valuation.

Table II-1 that follows develops the change in the market value of assets for the total MainePERS DB assets during FY 2018.

SECTION II – ASSETS

Table II-1
Changes in Market Value of Total MainePERS Defined Benefit (DB) Assets

Market Value of Total MainePERS DB Assets – June 30, 2017		**$ 13,614,858,621**
Additions		
Contributions:		
PLD Contributions	$ 398,374,880	
Member Contributions	189,721,447	
Transfers	(391,976)	
Total Contributions	$ 587,704,351	
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	$1,449,141,598	
Interest on Bank Balances	961,757	
Total Investment Income	$1,450,103,355	
Investment Activity Expenses:		
Management Fees	$ (95,999,972)	
Investment Related Expense	(5,279,709)	
Banking Fees	(35,774)	
Total Investment Activity Expenses	$ (101,315,455)	
Net Income from Investing Activities	$1,348,787,900	
Total Additions		$ 1,936,492,251
Deductions		
Retirement Benefits	$ (892,014,792)	
Disability Benefits	(31,271,605)	
Survivor Benefits	(23,477,031)	
Refunds	(22,588,511)	
Administrative Expenses	(12,593,673)	
Total Deductions		$ (981,945,612)
Total		
Net Increase (Decrease)		$ 954,546,639
Market Value of Total MainePERS DB Assets – June 30, 2018		**$ 14,569,405,260**

SECTION II – ASSETS

Table II-2 below develops the actuarial value of assets for the total MainePERS DB assets as of June 30, 2018 using the adopted actuarial valuation methodology.

Table II-2
Development of Actuarial Value of Total MainePERS Defined Benefit (DB) Assets as of June 30, 2018

1.	Actuarial Value of Total MainePERS DB Assets at June 30, 2017	$ 13,628,344,828
2.	Amount in (1) with Interest to June 30, 2018	14,565,293,535
3.	Employer and Member Contributions for FY 2018	587,704,351
4.	Interest on Contributions in (3), Assuming Received Uniformly throughout FY 2018	19,866,556
5.	Total Disbursements without Administrative Expenses for FY 2018	(969,351,939)
6.	Interest on Disbursements in (5), Assuming Payments made Uniformly throughout FY 2018	(32,767,640)
7.	Expected Value of Total MainePERS DB Assets at June 30, 2018 = (2) + (3) + (4) + (5) + (6)	$ 14,170,744,863
8.	Actual Market Value of Total MainePERS DB Assets at June 30, 2018	14,569,405,260
9.	Excess of (8) Over (7)	398,660,397
10.	Actuarial Value of Total MainePERS DB Assets at June 30, 2018 = (7) + [33⅓% of (9)]	$ 14,303,631,662

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, 6.875% for this valuation. The previous table, Table II-2, illustrates the calculation of the actuarial value of assets for the total MainePERS DB assets as of June 30, 2018.

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 adopted actuarial smoothing methodology applied to the market value of the total MainePERS DB assets. This produces an asset ratio (total MainePERS actuarial value of assets divided by total MainePERS market value of assets) that is then 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, 2018 valuation as shown in Table II-2 above is 0.981758 ($14,303,631,662 ÷ $14,569,405,260). 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 II-3
Allocation of Actuarial Value of Total MainePERS DB Assets
as of June 30, 2018

Program	Market Value	Actuarial Value
Teachers	$ 7,749,686,754	$ 7,608,317,761
State (Regular & Special)	3,882,492,929	3,811,668,891
Judicial	71,233,840	69,934,400
Legislative	12,755,821	12,523,131
Participating Local Districts (Consolidated & Non-Consolidated)	2,853,235,916	2,801,187,479
Total	$ 14,569,405,260	$ 14,303,631,662

Investment Performance

The market value of assets for the total MainePERS DB assets returned a positive 9.95% during FY 2018. This is greater than the assumed return of 6.875% for FY 2018. The equivalent market value returns in FY 2017 and FY 2016 were positive 12.72% and positive 0.32%, respectively.

On an actuarial value of assets basis, the return for FY 2018 for the Consolidated PLD Plan portion of the total MainePERS DB assets was a positive 7.86%. This return is lower than the return on a market value, but it is higher than the 6.875% assumption for FY 2018. Therefore, this return gave rise to an investment gain on the Plan's assets this year.

Cash Flow Projections

Table II-4
Projection of Plan's Benefit Payments and Contributions

FY Ending June 30,	Expected Benefit Payments	Total Expected Contributions
2019	$ 163,326,000	$ 100,832,000
2020	172,179,000	105,950,000
2021	180,176,000	110,020,000
2022	188,437,000	111,748,000
2023	196,737,000	113,654,000
2024	205,507,000	115,838,000
2025	214,908,000	118,259,000
2026	223,736,000	120,876,000
2027	232,624,000	123,664,000
2028	240,978,000	126,609,000

In Table II-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 II-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 continue at the current static rates. In addition, with the exception of FY 2019, where we assume the corridor rates developed by the June 30, 2017 actuarial valuation will be paid, these cash flows, again along with all other liability calculations within this report, are based on the assumption that the PLD contributions made to the Plan will be the remainder of the total actuarially determined rates reflecting the static member contribution rates. In addition to these additional assumptions regarding the contributions that the Plan will receive, these cash

SECTION II – ASSETS

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.

Note that we expect the contribution rates that will actually be paid beginning with FY 2020 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. Next year, when the details of the risk-sharing contribution methodology will be known at the time the actuarial valuation is performed, we will base our calculations on the assumption that the risk-sharing rates will be paid, 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.

SECTION III – LIABILITIES

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

- Disclosure of the Plan's liabilities as of June 30, 2017 and June 30, 2018; 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 III-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.

Note that since the methodology that will develop the member contribution rates for FY 2020 and beyond has not yet been finalized and adopted, we have assumed that the current static member contribution rates will be continued for all future years in determining the liabilities throughout this report.

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

The PVB is compared to the current market value of assets, the expected future value of member contributions, and the expected future value of total PLD contributions assuming the corridor rate remains constant. The difference between the PVB and these anticipated resources indicates

SECTION III – LIABILITIES

either an expected shortfall or an expected surplus representing either additional funding or excess funding required on the payroll of new hires to pay for benefits of existing members. This surplus or shortfall indicates the size of the Plan's stored gains or losses that remain outside of the valuation process.

As noted previously, we have assumed that the member contributions will remain at the static rates in effect for FY 2019 for all future dates in developing the liabilities as of June 30, 2018.

Table III-1
Disclosure of Liabilities

	June 30, 2017	June 30, 2018
Present Value of Benefits (PVB)		
Active Member Benefits	$ 1,757,848,620	$ 1,756,432,450
Retired, Disabled, Survivor, and Beneficiary Benefits	1,600,303,115	1,678,397,141
Terminated (Vested & Nonvested) Benefits	120,755,171	140,168,941
Total PVB	**$ 3,478,906,906**	**$ 3,574,998,532**
Market Value of Assets (MVA)	$ 2,607,223,644	$ 2,816,179,855
Future Member Contributions*	290,557,205	315,587,796
Future PLD Contributions*	358,383,530	395,682,092
Projected (Surplus)/Shortfall	222,742,527	47,548,789
Total Resources	**$ 3,478,906,906**	**$ 3,574,998,532**
Actuarial Liability (AL)		
Present Value of Benefits (PVB)	$ 3,478,906,906	$ 3,574,998,532
Present Value of Future Normal Costs (PVFNC)		
PLD Portion	171,688,980	169,553,516
Member Portion	290,557,205	315,587,796
Actuarial Liability (AL = PVB – PVFNC)	**$ 3,016,660,721**	**$ 3,089,857,220**
Actuarial Value of Assets (AVA)	2,609,806,231	2,764,807,391
Net (Surplus)/Unfunded (AL – AVA)	**$ 406,854,490**	**$ 325,049,829**
Present Value of Accrued Benefits		
Present Value of Benefits (PVB)	$ 3,478,906,906	$ 3,574,998,532
Present Value of Future Benefit Accruals (PVFBA)	753,954,620	774,968,900
Accrued Liability (PVAB = PVB – PVFBA)	**$ 2,724,952,286**	**$ 2,800,029,632**
Market Value of Assets (MVA)	2,607,223,644	2,816,179,855
Net (Surplus)/Unfunded (PVAB – MVA)	**$ 117,728,642**	**$ (16,150,223)**

* Future contributions as developed under the funding methodology are assumed to be at the values developed in the 2017 valuation for FY 2019 and at the actuarially determined rates developed by the valuations beginning with this 2018 valuation for FY 2020.

SECTION III – 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
- 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
- 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 III-2 below, we present key changes in the Plan's liability measures since the last valuation.

Table III-2

	Present Value of Future Benefits	Actuarial Liability	Present Value of Accrued Benefits
Liability Measurement – June 30, 2017	$ 3,478,906,906	$ 3,016,660,721	$ 2,724,952,286
Liability Measurement – June 30, 2018	3,574,998,532	3,089,857,220	2,800,029,632
Liability Measurement Increase/ (Decrease) Due to:	$ 96,091,626	$ 73,196,499	$ 75,077,346
Plan Amendment	$ (128,846,439)	$ (106,123,366)	$ (89,702,195)
Assumption Change	65,322,130	46,439,540	41,144,988
Actuarial (Gain)/Loss	N/C	$ 1,285,304	N/C
Benefits Accumulated and Other Sources	$ 159,615,935	$ 131,595,021	$ 123,634,553

N/C = Not calculated

SECTION IV – CONTRIBUTIONS

The Board of Trustees recently adopted a change in the methodology used to set the contribution rates for both the PLDs and the members in the Plan. This new methodology is anticipated to be effective for the FY 2020 rates, which will be based on this June 30, 2018 Actuarial Valuation. However, the finalized details of this methodology are not yet available, so the FY 2020 rates that will be paid by the PLDs and members will be provided by separate cover. In the absence of this information, we have provided the actuarially determined contribution rates that we anticipate will serve as the basis that the risk-sharing contribution methodology modifies to develop the risk-sharing contribution rates. These actuarially determined contribution rates are for informational purposes only.

We have provided a general description of the risk-sharing contribution methodology that we anticipate will be adopted by the Board for determining the FY 2020 rates at the end of this section. However, as previously noted, this methodology has not yet been adopted and is subject to change.

In this section, we present detailed information on PLD and member contribution rates as developed in this June 30, 2018 valuation for the Plan, including:

- Development of actuarially determined contribution rates for the Plan as a whole, including normal cost and unfunded actuarial liability (UAL) amortization rates;

- Allocation of the actuarially determined contribution rates to each Regular and Special Plan in order to develop contribution rates for each Regular and Special Plan in the Plan; and

- The FY 2019 corridor rates that were developed in the June 30, 2017 valuation under the previous corridor contribution methodology for comparative purposes.

Again, it is anticipated that the FY 2020 PLD contribution rates that will be paid will be set on the new risk-sharing contribution methodology recently adopted by the Board of Trustees. The contribution rates assumed in this June 30, 2018 Actuarial Valuation Report are that the member contribution rates are the static member rates that are in effect for FY 2018 and that the PLD contribution rates are equal to the actuarially developed contributions that are expected to be the basis that is modified to develop the risk-sharing contribution rates reduced by the static member rates assumed for each Plan. However, it is important to be aware that these rates are provided solely for informational purposes only as the actual rates that will be effective for FY 2020 are anticipated to be the risk-sharing contribution rates, which take these actuarially determined rates and apply a number of modifications to determine the rates that will be paid. See the end of this Section IV for a preliminary discussion of the risk-sharing contribution methodology.

In addition to the applicable PLD contribution rates to pay normal cost and as UAL amortization payments, individual PLDs with Initial Unpooled Unfunded Actuarial Liability (IUUAL) balances also make additional contributions to repay these balances.

Finally, while the rates developed in this report are for informational purposes only, note that we will provide the FY 2020 PLD and member contribution rates based on this June 30, 2018 actuarial valuation under separate cover once the risk-sharing contribution methodology is finalized and adopted by the Board.

Description of Rate Components

The rate components described here are the actuarially determined contribution 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 beginning with FY 2020 will be determined. These actuarially determined contribution rates consist of a normal cost rate and an unfunded actuarial liability (UAL) amortization rate. The rates that the risk-sharing contribution methodology is expected to produce for actual payment of contributions by PLDs and members are expected to be equal to these actuarially determined contribution rates, but reflecting a number of modifications. The risk-sharing contribution methodology has not yet been finalized and adopted by the Board, but a general description of the methodology and the modifications anticipated to be included is provided as the last part of this Section IV.

This section develops a separate actuarially determined rate for each of the Regular and Special Plans within the Plan for informational purposes.

Normal Cost Rate

For each of the Regular and Special Plans in the Plan, an individual entry age normal cost rate is determined for each active member. The normal cost for each active member is determined by the following steps. First, an individual normal cost rate is determined by taking the value of each active member's projected future benefit as of entry age into the Plan. Second, that value is divided by the value, also at entry age, of the individual member's expected total future salary. Finally, that total normal cost rate for each individual member is reduced by the member contribution rate applicable to the member to produce the employer normal cost contribution rate. These individual normal cost rates are then multiplied by each member's salary as of the current valuation date to get total normal cost dollars for the individual member as of the valuation date for that Plan. These individual total normal cost dollars are then added together for all members of a Plan and then divided by the total payroll for the active members in that Plan as of the valuation date the normal cost rate for that Plan. This process results in a separate normal cost rates for each of the Regular and Special Plans in the Plan. The same process can be used for all members in the Plan to develop a normal cost rate for the entire Plan as a whole.

Unfunded Actuarial Liability Amortization Rate

The unfunded actuarial liability under the entry age normal funding method utilized by the Plan equals the present value, at the time of the valuation, of the future benefit payments less the present value of future employer normal cost contributions, future member contributions, future IUUAL payments, and current assets. For the Consolidated Plan, the total unfunded actuarial

SECTION IV – CONTRIBUTIONS

liability (UAL) is determined by subtracting the actuarial value of assets (AVA) from the actuarial liability (AL). The necessary amortization payment is then determined based on the Plan's funding policy and this payment amount is converted to a rate based on the total payroll of the active members of the Plan. This UAL amortization rate that is developed for the Plan as a whole is then allocated proportionally to each Regular and Special Plan within the Consolidated Plan on the basis of the total normal cost rate for each Plan relative to the normal cost rate for the Plan as a whole.

IUUAL Payments

In addition to the normal cost and UAL amortization payment rates required of the PLDs in the Plan, those individual PLDs that enter the Consolidated Plan with liabilities in excess of their the assets they enter most make payments on their Individual Unpooled Unfunded Actuarial Liability (IUUAL), equal to the amount by which their liabilities exceed their assets on entry, 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.

PLD Contribution Rate Summary

In Table IV-2, we present, for the Plan as a whole as well as each individual Plan, the actuarially determined PLD contribution rates developed in this valuation for informational purposes based on the methodology described above. In addition, we also show the corridor contribution rates that were developed by the June 30, 2017 actuarial valuation for FY 2019 for comparative purposes. The corridor contribution methodology was the methodology used to develop the rates to be paid by the PLDs in each Plan prior to the adoption of the risk-sharing contribution methodology. This methodology also begins with the actuarially determined contribution rates, but only adjusts the rate from the previous year if the funded ratio lies outside of a certain corridor and limits the amount of change in a given PLD contribution rate that can occur between two years. Brief, additional information on this methodology is included in the "Corridor Contribution Rate" item below.

As previously conveyed, the actual rates that will be in effect for FY 2020 will be based on this June 30, 2018 actuarial valuation, but are not included in this report and will be provided under separate cover as the methodology that is to be used is not yet finalized and adopted by the Board.

Corridor Contribution Rate

Under the Plan's corridor funding methodology that was in effect in recent years and used to develop the contribution rates to be paid by the PLDs, as long as the Consolidated Plan's AVA funded ratio (the ratio of actuarial value of assets to actuarial liability) remained within a corridor of 90% to 130%, the total actuarially determined contribution, described as the total pooled PLD contribution rate for each plan under the corridor methodology was fixed at the rate applicable to the prior year. If the AVA funded ratio fell outside of the corridor, the total pooled PLD contribution rate was adjusted to reflect 10% of the difference between the actuarially calculated contribution rate and the current corridor contribution rate for the Plan. Note that reductions of the aggregate corridor contribution rate were limited to never be less than 75% of the pooled PLD normal cost rate for the Plan (which equals the total pooled normal cost rate reduced by the member contribution rate). Once the aggregate corridor contribution rate was developed, it was allocated across each of the Regular and Special Plans on the basis of their relative total normal cost rates. This methodology was last applicable for developing the FY 2019 contribution rates.

Contribution Calculations

Table IV-1 below presents and compares the total pooled PLD contribution rate, as well as its two components, for all plans in the Plan as developed in this valuation and the prior one. It also shows the aggregate corridor contribution rate as of FY 2019. Note there is no aggregate contribution rate shown for FY 2020 as this methodology is no longer applicable.

Table IV-1
Total Pooled PLD Rate and Aggregate Corridor Rate

Valuation Date	**June 30, 2017**	**June 30, 2018**
Pooled PLD NC Rate	6.2%	5.7%
Pooled UAL Amortization Rate	6.0%	4.7%
Total Pooled PLD Rate (Actuarially Determined Contribution Rate)	12.2%	10.4%
Aggregate Corridor Contribution Rate	10.3%	N/A

The remainder of this section details the calculation of the above rates and then develops the calculated rates for each specific Regular and Special Plan within the Plan, including their components and shows these rates compared to the corridor rates developed for FY 2019 by the immediately preceding valuation.

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Table IV-2 shows the actuarially determined total NC Rate, the UAL amortization rate, the member contribution rate (which is assumed to remain constant at the current static levels for this purpose), a total actuarially determined contribution rate, and the FY 2019 PLD Corridor rate all for each Regular and Special Plan in the Plan. Note that the total actuarially determined contribution rate equals the Plan UAL amortization payment contribution rate plus the Plan total NC Rate (which equals the PLD NC rate plus the member rate). This total actuarially determined contribution rate is anticipated to be divided between the members and the PLDs including some additional adjustments under the risk-sharing contribution methodology once finalized.

Table IV-2
Total Employer Contribution Rates by Plan

Valuation Date June 30, 2018	Plan Total NC Rate	FY19 Plan Member Contribution Rate	Plan PLD NC Rate (Total NC Rate - Member Rate)	Plan UAL Amortization Contribution Rate	PLD Actuarially Determined Contribution Rate	FY19 PLD Corridor Contribution Rate
Plans With COLA						
Regular Employees Plan AC	13.3%	8.0%	5.3%	4.5%	9.8%	10.0%
Regular Employees Plan BC	7.7%	4.5%	3.2%	2.6%	5.8%	6.3%
Special Plan 1C	19.3%	8.0%	11.3%	6.6%	17.9%	16.3%
Special Plan 2C	14.4%	8.0%	6.4%	4.9%	11.3%	10.5%
Special Plan 3C	17.3%	9.5%	7.8%	5.9%	13.7%	12.7%
Special Plan 4C	14.1%	9.0%	5.1%	4.8%	9.9%	8.7%
Plans With No COLA						
Regular Employees Plan AN	11.0%	8.0%	3.0%	3.8%	6.8%	7.3%
Special Plan 1N	16.1%	8.0%	8.1%	5.5%	13.6%	10.9%
Special Plan 2N	10.6%	8.0%	2.6%	3.6%	6.2%	5.7%
Special Plan 3N	13.6%	9.5%	4.1%	4.6%	8.7%	7.8%
Special Plan 4N	10.1%	9.0%	1.1%	3.5%	4.6%	4.1%

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Table IV-3 below provides the development of the 4.7% UAL amortization payment rate as of June 30, 2018 that was shown in Table IV-1 for the Consolidated Plan as a whole. In Table IV-4, the resulting total actuarially determined PLD contribution rate is then allocated to each of the Plans on the basis of their relative Plan total normal cost rates as developed in Table IV-2. These Plan UAL amortization rates are also shown in Table IV-2.

Table IV-3
Derivation of Total UAL Amortization Payment Rate

1. Actuarial Liability (AL)	$ 3,089,857,220
2. Actuarial Value of Assets (AVA)	2,764,807,391
3. Unfunded Actuarial Liability (UAL)	$ 325,049,829
4. Remaining Balances of Prior Amortization Bases	
a. Original UAL Amount	$ 277,172,141
b. 2016 (Gain)/Loss Base	114,869,242
c. 2017 (Gain)/Loss Base	9,917,971
d. 2018 (Gain)/Loss Base	(76,909,525)
e. Sum of the Bases	$ 325,049,829
5. UAL Amortizations	
a. Original UAL Amount 17 Years	$ 22,594,385
b. 2016 (Gain)/Loss Base 18 Years	8,995,125
c. 2017 (Gain)/Loss Base 19 Years	748,290
d. 2018 (Gain)/Loss Base 20 Years	(5,605,621)
e. Sum of Amortization Payments	$ 26,732,179
6. Covered Payroll	$ 562,952,637
7. UAL Amortization Rate	
a. Original UAL Amount 17 Years	4.0%
b. 2016 (Gain)/Loss Base 18 Years	1.6%
c. 2017 (Gain)/Loss Base 19 Years	0.1%
d. 2018 (Gain)/Loss Base 20 Years	(1.0%)
e. Sum of UAL Amortization Rates	**4.7%**

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Table IV-4 below shows the development of the UAL amortization payment rate, the total PLD actuarially determined rate, the static member rates in effect for FY 2019 and assumed to remain in effect for all future dates for the purposes of the liability calculations in this valuation report, and the corridor rate developed in the June 30, 2017 actuarial valuation for FY 2019 for each specific Plan within the Consolidated Plan.

Table IV-4
Allocation of Total UAL Amortization Payment Rate within the Consolidated PLD (Regular & Special Plans)

	Total Plan	Regular AN	Special 1N	Special 2N	Special 3N	Special 4N
1. Plan Total NC Rate	13.9%	11.0%	16.1%	10.6%	13.6%	10.1%
2. Plan UAL Amortization Rates*	4.7%	3.8%	5.5%	3.6%	4.6%	3.5%
3. Total PLD Calculated Cost (1. + 2.)	18.6%	14.8%	21.6%	14.2%	18.2%	13.6%
4. FY19 Member Contribution Rate	8.2%	8.0%	8.0%	8.0%	9.5%	9.0%
5. Initial PLD Calculated Rate (3. – 4.)	10.4%	6.8%	13.6%	6.2%	8.7%	4.6%
6. FY19 PLD Corridor Rates	10.3%	7.3%	10.9%	5.7%	7.8%	4.1%

* UAL amortization Rates = (total Amort/Total Plan NC) x Individual NC

Table IV-4 (cont.)
Allocation of Total UAL Amortization Payment Rate within Consolidated PLD (Regular & Special Plans)

	Regular AC	Regular BC	Special 1C	Special 2C	Special 3C	Special 4C
1. Plan Total NC Rate	13.3%	7.7%	19.3%	14.4%	17.3%	14.1%
2. Plan UAL Amortization Rates*	4.5%	2.6%	6.6%	4.9%	5.9%	4.8%
3. Total Plan Calculated Cost (1. + 2.)	17.8%	10.3%	25.9%	19.3%	23.2%	18.9%
4. FY19 Member Contribution Rate	8.0%	4.5%	8.0%	8.0%	9.5%	9.0%
5. Initial PLD Calculated Rate (3. – 4.)	9.8%	5.8%	17.9%	11.3%	13.7%	9.9%
6. FY19 PLD Corridor Rates	10.0%	6.3%	16.3%	10.5%	12.7%	8.7%

* UAL amortization Rates = (total Amort/Total Plan NC) x Individual NC

Preliminary Risk-Sharing Contribution Methodology

As mentioned previously, the actual FY 2020 rates are expected to be developed based on the results of this June 30, 2018 valuation, reflecting new risk-sharing contribution methodology as adopted by the Board. The details of the application of this methodology are not yet finalized and adopted by the Board, but the general principles of the approach have been established, so we have provided a preliminary description of this new methodology here in order to communicate how this methodology is expected to operate. 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 methodology is finalized and adopted by the Board.

Note that while this section provides a summary of the principles being developed as part of the risk-sharing contribution methodology that is being adopted by the Board, the methodology is not yet finalized and any or all details of the methodology as outlined here may change prior to finalization and adoption.

Most of the participating local districts (PLDs) in the State of Maine participate in this Consolidated Plan for PLDs (Plan). The Plan offers a number of 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 based on this methodology and applicable to payroll. This June 30, 2018 valuation setting the Fiscal Year 2020 contribution rates is the first valuation that will be used to develop member and PLD contribution rates based on this risk-sharing methodology. 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.

Under the Plan's risk-sharing contribution methodology, PLD and member rates will be developed for each Regular and Special Plan within the Plan. First, a normal cost rate will be developed for each Plan and then combined to develop an aggregate normal cost rate for the Plan as a whole. These rates represent the cost of providing the next year's benefits. Then an aggregate unfunded actuarial liability (UAL) amortization payment rate will be developed for the Plan as a whole based on amortization of the aggregated UAL. This aggregate UAL amortization payment will then be allocated to each Regular and Special Plan in proportion to the individual Plan normal cost rates relative to the aggregate normal cost rate. The normal cost rate and the UAL amortization payment rate for each individual Regular and Special Plan will then be combined to get an Actuarially Determined Plan Total Rate (ADPTR).

Following development of the ADPTR, this total rate will then be divided into the Actuarially Determined Plan PLD Rate (ADPPR), which will be paid by the PLDs, and the Actuarially Determined Plan Member Rate (ADPMR), which will be paid by members. The percentage of the ADPTR that will be allocated to the PLDs will be adopted by the Board. The member rate for each Plan will then simply be the ADPTR for that Plan minus the ADPPR.

SECTION IV – CONTRIBUTIONS

Once the ADPPR and ADPMR for each Plan are determined based on the division of the ADPTR, they will then be subjected to the contribution cap and phase-in components of the Plan's risk-sharing contribution methodology to develop the Final Plan PLD Rate (FPPR) and the Final Plan Member Rate (FPMR). It is anticipated that the Board will adopt caps in aggregate for both the PLD contributions and the member contribution, tentatively called the Aggregate PLD Rate Cap and the Aggregate Member Rate Cap. First, a Plan PLD Rate Cap (PPRC) and a Plan Member Rate Cap (PMRC) are developed for each Regular and Special Plan. This ratio is then multiplied by the Aggregate PLD Rate Cap of 12.5% to get the PPRC and by the Aggregate Member Rate Cap of 9.0% to get the PMRC. Plan-specific cap rates will then be developed from the aggregate caps. The details for developing these Plan-specific cap rates are still under consideration, but the ratio of the each individual Plan's normal cost to the aggregate normal cost rate for the entire Plan will likely be the basis for the Plan-specific cap rates. The individual actuarially determined rates (ADPPR and ADPMR) will then be adjusted as necessary for these Plan-specific cap rates to develop the Capped Plan PLD Rate (CPPR) and the Capped Plan Member Rate (CPMR) for each Regular and Special Plan. These CPPR and CPMR rates are then expected to be further adjusted using a phase-in methodology designed to moderate the changes in rates paid by both PLDs and members relative to the prior year adjusted by a phase-in. The adopted contribution methodology also includes a phase-in where only 10% of the change in the contribution rate from the previous year is reflected. The specifics of this phase-in component of the methodology remain to be determined, but the capped rates adjusted for the phase-in are preliminarily identified as the Final Plan PLD Rate (FPPR) and the Final Plan Member Rate (FPMR).

The FPPR values described in the previous paragraphs are the rates that will be paid by the PLDs for each Regular and Special Plan under the risk-sharing contribution methodology, but it is possible that the adopted methodology will entail one additional step to determine the rates that will actually be paid by members. This additional step would be to take the FPMR and develop separate rates to be paid by members based on whether they are in the Age 60 (members who joined the Plan prior to July 1, 2014) or the Age 65 Plan (members who joined the Plan on or after July 1, 2014). This possible element of the risk-sharing contribution methodology would take the FPMR and for each individual Plan develop distinct Age 60 Plan and Age 65 Plan member contribution rates. The Board will adopt a percentage differential, if any, by which the Age 60 Plan member contributions would exceed the Age 65 Plan members for each Plan. This differential, combined with the salary amounts for each Plan divided into Age 60 and Age 65 would be used to develop rates such that the expected contributions based on the Age 60 and Age 65 member contribution rates is equivalent to what would be paid if the FPMR were paid by all members, whether in the Age 60 Plan or the Age 65 Plan. The resulting distinct member rates for Age 60 versus Age 65are tentatively referred to as the Age 60 Final Plan Member Rate (Age 60 FPMR) and the Age 65 Final Plan Member Rate (Age 65 FPMR). The Board will determine if this element is going to be included as part of the risk-sharing contribution methodology at all when they finalize and adopt the risk-sharing contribution methodology. If they do adopt this element of the methodology, they will also specify which of the individual Plans it will apply to

SECTION IV – CONTRIBUTIONS

as well as what the desired contribution differential between the Age 60 and the Age 65 rate will be.

In conclusion, we note once more that these risk-sharing contribution methodologies are not yet finalized and the information regarding the methodology provided in this section is intended only to provide users a basic understanding of the nature of the approach that will be used by the Plan going forward in developing contribution rates. Actual contribution rates based on the methodology will be based on the actual provisions as adopted by the Board.

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

A summary of the terminology used in GASB Statement No. 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 V-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 public employees retirement systems (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 V-6: Analysis of Financial Experience
- Table V-7: Solvency Test

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

SECTION V – FINANCIAL DISCLOSURE INFORMATION

the actuarial assumptions. Liabilities as of June 30, 2018 are discounted at the assumed valuation interest rate of 6.75% per annum in all of these disclosures.

Table V-1 below includes the relevant amounts as of June 30, 2017 and June 30, 2018 as well as a reconciliation between the two dates under FASB ASC Topic 960. During the year, the only assumption changes were a decrease in the investment return from 6.875% to 6.75% and a decrease in the COLA assumption from 2.20% to 1.91%. The COLA assumption change was to reflect changes in the plan provisions though, so the impact of this is included within the plan changes item, which is consistent with GASB's guidance on how this should be reflected. As such, the assumption change amounts represent the investment return reduction only.

Table V-1
Accrued Benefits Information

	June 30, 2017	June 30, 2018
FASB ASC Topic 960 Basis		
1. Present Value of Benefits Accrued to Date (PVAB)		
a. Members Currently Receiving Payments	$1,600,303,115	$1,678,397,141
b. Terminated Vested Members	120,755,171	140,168,941
c. Active Members	1,003,894,000	981,463,550
d. Total PVAB	$2,724,952,286	$2,800,029,632
2. Assets at Market Value (MVA)	2,607,223,644	2,816,179,855
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	$ 117,728,642	$ (16,150,223)
4. Ratio of MVA to PVAB (2)/(1)(d)	95.7%	100.6%
Change in Present Value of Benefits Accrued to Date during FY 2017		
Increase/(Decrease) during Year Attributable to:		
Passage of Time	$ 185,028,061	
Benefits Paid	(152,087,885)	
Assumption Changes	41,144,988	
Plan Changes	(89,702,195)	
Benefits Accrued, Other Gains/Losses	90,694,377	
Net Increase/(Decrease)	$ 75,077,346	

Table V-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, 2018 as well as related ratios calculated under the provisions of GASB Statement No. 67 for the Plan.

As of the June 30, 2018 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 Program'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 member contributions will be made at the current contribution rates and the PLD contributions will be made according to the current corridor funding methodology.

Table V-2
Schedule of Changes in Net Pension Liability and Related Ratios
FY 2018

Total Pension Liability (TPL)	
Service Cost	$ 76,190,510
Interest (Includes Interest on Service Cost)	207,492,396
Changes of Benefit Terms	(106,123,366)
Differences Between Actual and Expected Experience	1,285,304
Changes of Assumptions	46,439,540
Benefit Payments, Including Refunds of Member Contributions	(152,087,885)
Net Change in TPL	**73,196,499**
Beginning of Year (BOY) TPL	**3,016,660,721**
End of Year (EOY) TPL	**$ 3,089,857,220**
Plan Fiduciary Net Position (FNP)	
PLD (Employer) Contributions	$ 56,092,662
Member Contributions	48,050,203
Transfers	(386,621)
Net Investment Income	259,699,518
Benefit Payments, Including Refunds of Member Contributions	(152,087,885)
Administrative Expenses	(2,411,666)
Net Change in FNP	$ 208,956,211
BOY FNP	**2,607,223,644**
EOY FNP	**$ 2,816,179,855**
EOY Net Pension Liability (NPL)	**$ 273,677,365**
FNP as a Percentage of TPL	91.1%
Covered Payroll (Payroll)*	$ 561,126,768
NPL as a Percentage of Payroll	48.8%

*For FY 2018

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

The annual rate of investment return was reduced from 6.875% to 6.75%. The impact of this change is included in the TPL reconciliation as changes of assumptions.

SECTION V – FINANCIAL DISCLOSURE INFORMATION

There were changes in benefit terms during the year that decreased the TPL by $106 million. See Appendix C for a description of these changes. The change in the COLA assumption is included in this amount as the assumption change is resultant to the benefit provision changes.

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 these 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, 2018, we have 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 V-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 V-3
Sensitivity of Net Pension Liability to Changes in Discount Rate
FY 2018

	1% Decrease 5.75%	Discount Rate 6.75%	1% Increase 7.75%
Total Pension Liability (TPL)	$3,461,201,076	$ 3,089,857,220	$ 2,742,752,611
Plan Fiduciary Net Position (FNP)	2,816,179,855	2,816,179,855	2,816,179,855
Net Pension Liability (NPL)	$ 645,021,221	$ 273,677,365	$ (73,427,244)
FNP as a Percentage of TPL	81.4%	91.1%	102.7%

A one percent decrease in the discount rate increases the TPL by approximately 12% and increases the NPL by approximately 136%. A one percent increase in the discount rate decreases the TPL by approximately 11% and decreases the NPL by approximately 127%.

Table V-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

SECTION V – FINANCIAL DISCLOSURE INFORMATION

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.

The Consolidated Plan's corridor rates, which are the basis on which the FY 2018 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 2018 on that corridor 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. We believe such a note may be needed to indicate the change in assumptions in the 2016 valuation that is the basis of the FY 2018 ADC, but 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 additional information that they may need for this purpose.

Table V-4
Schedule of Employer Contributions
FY 2018

Actuarially Determined Contribution (ADC)	$ 55,551,550
Contributions in Relation to the ADC	55,551,550
Contribution Deficiency/(Excess)	$ 0
Covered Payroll (Payroll)	$ 561,126,768
Contributions as a Percentage of Payroll	9.90%

Notes to Schedule of Employer Contributions

Valuation Date: June 30, 2016

Timing: June 30, 2018 ADC rates based on the corridor methodology calculated based on the 2016 actuarial valuation.

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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 % of pay amortization over closed 20 year periods. When the funded ratio is less than 90%, the contribution rate is adjusted from its prior year level by 10% of the difference to reach the calculated rate.
Discount Rate:	6.875%
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 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, 2018 can be found in the June 30, 2016 Actuarial Valuation Report.

Other Information

None.

SECTION V – FINANCIAL DISCLOSURE INFORMATION

Table V-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 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, 2018, these values are thus developed as of June 30, 2017. The development of this value is shown below, including reflection of the decision by MainePERS to round the resulting value to the nearest whole year.

Table V-5
Average Expected Remaining Service Lives
For Measurement Year Ending June 30, 2018

Status	Total Expected Future Service	Count	Average Remaining Service Lives
Actives	100,844	11,195	9
In-Pay Members	0	9,006	0
Terminated Vested Members	0	2,234	0
Inactives Due Refunds	0	7,274	0
Total Membership	100,844	29,709	3

SECTION V – FINANCIAL DISCLOSURE INFORMATION

Table V-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 V-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, 2013	Gain (or Loss) For Fiscal Year Ended June 30, 2014	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
Investment Income	$ (26,747,451)	$110,262,333	$ (15,798,973)	$ (63,941,136)	$ (76,616)	$ 25,142,719
Combined Liability Experience	(20,284,597)	(19,939,857)	54,634,906	9,142,757	2,160,603	(1,285,304)
Gain (or Loss) during Year from Financial Experience	$ (47,032,048)	$ 90,322,476	$ 38,835,933	$ (54,798,379)	$ 2,083,987	$ 23,857,415
Non-Recurring Items	52,024,637	0	(37,593,598)	(50,884,219)	0	59,683,826
Composite Gain (or Loss) During Year	**$ 4,992,589**	**$ 90,322,476**	**$ 1,242,335**	**$ (105,682,598)**	**$ 2,083,987**	**$ 83,541,241**

SECTION V – FINANCIAL DISCLOSURE INFORMATION

Table V-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 solvency test 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 note that you may wish to note the change to a 6.75% annual rate of investment return, but it is our expectation that the System's staff will make the final determination regarding any notes needed for this schedule.

Table V-7
Solvency Test
Aggregate Actuarial Liabilities For

Valuation Date June 30,	(1) Active Member Contributions	(2) Retirees Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets*	Portion of Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
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
2010	347,801,024	1,083,097,662	654,598,374	2,011,019,138	100	100	89
2009	319,531,110	1,039,566,071	641,162,528	2,046,361,132	100	100	107

* Reported assets are measured at actuarial value. Results would be different if 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.

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	
Androscoggin County	0067	A[1]	1[1]	2[1]	Yes	7/1/1994	
Androscoggin Valley Council of Government	0231	A			Yes	7/1/1996	
Anson-Madison Sanitary District	0365	A			Yes	7/1/2017	
Aroostook County	0106	A			Yes	7/1/1994	
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[2]	Yes	7/1/1994	
Augusta Housing Authority	0351	A			Yes	4/1/2014	
Augusta, City of	0023	A	2	3[3]	Yes	7/1/1994	
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	
Bangor Water District	0059	B[4]			Yes	7/1/1996	
Bangor, City of[5]	0020	A	2		Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
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		Yes	7/1/1996	
Berwick Sewer District	0207	A			Yes	7/1/1994	
Berwick, Town of	0108	A	1[6]		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[7]		FO	7/1/2010	7/1/2010
Boothbay Harbor, Town of	0146	A	2		Yes	7/1/1996	
Boothbay Harbor Sewer District	0363	A			Yes	1/1/2017	
Boothbay Region Water District	0298	A	2		Yes	1/1/2002	
Bowdoinham Water District	0319	A			Yes	1/1/2009	
Brewer Housing Authority	0248	A			Yes	7/1/1994	
Brewer, City of	0063	A[8]	3[8]		Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Brownville, Town of	0177	A			No	7/1/2010	
Brunswick Fire And Police	0292	A	1[9]	3[9]	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[10]		No	7/1/1995	
Calais, City of	0036	A			FO	7/1/1996	7/1/1996
Camden, Town of	0008	A	2[11]		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	
Carrabasett Valley, Town of	0277	A			FO	7/1/1994	7/1/1994
Chesterville, Town of	0295	A[12]			Yes	7/1/1999	
China, Town of	0235	A			FO	7/1/1996	7/1/2008
Coastal Counties Workforce Incorporated	0301	A[13]			Yes	7/1/2003	
Community School Dist. #912	0252	A			Yes	7/1/1996	
Corinna, Town of	0217	A			Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Cornville Regional Charter School	0345	A			Yes	7/1/2013	
Cumberland County	0005	A	2[14]		Yes	7/1/1996	
Cumberland, Town of	0216	A	2	3[15]	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			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	
Eliot, Town of	0180	A	1[16]		Yes	7/1/1994	
Ellsworth, City of	0013	A	4		Yes	7/1/1995	
Erskine Academy	0249	A			No	7/1/1994	
Fairfield, Town of	0260	A	3		Yes	7/1/1995	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Falmouth Memorial Library	0058	A			Yes	7/1/1996	
Falmouth, Town of	0087	A	2[17]		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	
Franklin County	0102	A	3[18]		Yes	7/1/2006	
Freeport, Town of	0142	A	2[13]		Yes	7/1/2003	
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 & Police	0334	A	3		Yes	7/1/2009	
Gorham, Town of	0133	A			Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Gould Academy	0205	A			No	7/1/1996	
Grand Isle, Town of	0312	B			Yes	7/1/2008	
Greater Augusta Utility District[19]	0311	A			Yes	1/1/2008	
Greenville, Town of	0112	A	2[20]		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[21]		FO	7/1/1996	7/1/2009
Hancock County	0056	A	4[22]		Yes	7/1/1994	
Hancock, Town of	0353	A			Yes	7/1/2014	
Harpswell, Town of	0270	A			Yes	7/1/1994	
Harrison, Town of	0280	B[23]			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		Yes	7/1/2011	
Houlton Water District	0026	A			Yes	7/1/1995	
Houlton, Town of	0010	A	4[11]		Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Jackman Utility District	0294	A			Yes	7/1/1996	
Jay, Town of	0045	A	2[24]		Yes	7/1/1994	
Kennebec County	0047	A	2[25]		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[26]		Yes	7/1/1996	
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[27]		Yes	7/1/1995	
Knox County Sheriffs	0359	A	3		No	1/1/2016	
Lebanon, Town of	0181	A			Yes	7/1/1996	
Levant, Town of	0339	A			Yes	7/1/2011	
Lewiston-Auburn Water Pollution Control Authority	0163	A			FO	7/1/1996	7/1/1996

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
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	
Limestone, Town of	0245	A			Yes	7/1/2006	
Lincoln Academy	0134	A			Yes	7/1/1994	
Lincoln County	0095	A			Yes	7/1/2004	
Lincoln Sanitary District	0219	A			Yes	7/1/1994	
Lincoln & Sagadahoc Multicounty Jail Authority	0304	A	2		Yes	7/1/2004	
Lincoln Water District	0092	A			Yes	7/1/1994	
Lincoln County Sheriffs	0302	A	2[13]		Yes	7/1/2003	
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	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Lubec Water and Electric 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 Municipal Bond Bank	0093	A			Yes	7/1/1995	
Maine School Management Association	0239	A			Yes	7/1/1994	
Maine Secondary School Principals Association	0105	A			Yes	7/1/1994	
Maine Turnpike Authority	0049	A			Yes	7/1/1994	
Maine Veterans Home	0271	A			Yes	7/1/1994	
Maine Public Employees Retirement System	0290	A			Yes	7/1/1994	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Maine School of Science & Mathematics	0352	A			Yes	7/1/2014	
Maine State Housing Authority	0169	A			Yes	7/1/2005	
Maine Virtual Academy	0357	A			Yes	7/1/2015	
Mapleton, Castle Hill And 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	
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	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Mount Desert, Town of	0016	A	3[28]		Yes	7/1/1996	
Mount Desert Water District	0300	A[13]			Yes	7/1/2003	
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, Town of	0254	A	1		No	7/1/1996	
North Berwick Water District	0308	A			Yes	7/1/2006	
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			FO	7/1/1996	7/1/2000
Ogunquit, Town of	0303	A	1		Yes	7/1/2004	
Old Orchard Beach, Town of	0140	A	2	3/1[29]	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[30]	3[30]	No	7/1/1995	
Orland, Town of	0166	A			No	7/1/1996	
Orono, Town of	0061	A	2[31]		FO	7/1/1996	7/1/2002

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
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[13]	2		Yes	7/1/1994	
Oxford, Town of	0200	A			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[32]		Yes	7/1/1994	
Penquis Cap Inc	0237	A			No	7/1/1995	
Phippsburg, Town of	0202	A	3[33]		Yes	7/1/1996	
Piscataquis County	0121	A			Yes	7/1/1994	
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	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
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 #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
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			No	7/1/2009	
Regional School Unit #26	0330	A			Yes	7/1/2009	
Regional School Unit #34	0331	A			No	7/1/2009	
Regional School Unit #39	0332	A			Yes	7/1/2009	
Regional School Unit #56	0366	A			Yes	7/1/2017	
Regional School Unit #67	0126	A			Yes	7/1/2016	

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 #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	
Rockport, Town of	0161	A			No	7/1/1996	
Rumford Fire And Police	0060	A	2[34]	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[35]		FO	7/1/1996	7/1/2006
Saco, City of	0192	A	2	3[36]	No	7/1/1995	
Sagadahoc County	0096	A	2	3[37]	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			Yes	7/1/1996	7/1/2009
Sanford, City of	0083	A	1/3[38]	2[38]	FO	7/1/1995	7/1/2002

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Scarborough, Town of	0147	A	3[39]	1[39]	Yes	7/1/1996	
School Administrative District No. 09 Farmington	0119	A			Yes	7/1/1995	
School Administrative District No. 13 Bingham	0223	A			Yes	7/1/1996	
School Administrative District No. 29 Houlton	0168	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	
School Administrative District No. 49 Fairfield	0189	A			No	7/1/1995	
School Administrative District No. 51 Cumberland Center	0198	A			No	7/1/1996	
School Administrative District No. 53 Pittsfield	0129	A			No	7/1/1996	
School Administrative District No. 54 Skowhegan	0115	A			Yes	7/1/1996	
School Administrative District No. 60 North Berwick	0187	A			No	7/1/1994	
School Administrative District No. 67 Lincoln	0126	A			Yes	7/1/1996	

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
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	
South Portland Housing Authority	0206	A			Yes	7/1/1996	
Somerset County	0101	A			Yes	7/1/2005	
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 Berwick Sewer District	0299	A[13]			Yes	7/1/2003	
South Portland, City of	0009	A	3[40]		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[41]			Yes	7/1/2005	
Topsham, Town of	0081	A	2	3	Yes	7/1/1996	
Trenton, Town of	0341	A			Yes	7/1/2011	
Tri-Community Recycle/Sanitary Landfill	0267	A			Yes	7/1/1996	

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			Yes	7/1/1995	
Vassalboro, Town of	0153	A			Yes	7/1/1996	
Veazie Fire & Police	0305	A	3[42]		Yes	7/1/2004	
Waldo County	0046	A	2[43]		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 & Sewer District	0335	A			No	7/1/2009	
Washburn, Town of	0230	A			No	7/1/1994	
Washington County	0040	A	2[44]		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 Ogunquit Community School District #918	0266	A			FO	7/1/1995	7/1/1995

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
Wells Fire And Police	0349	A	2		Yes	7/1/2013	
Wells, Town of[45]	0107	A			No	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		FO	1/1/2009	1/1/2009
Windham, Town of	0309	A	4	3[46]	Yes	7/1/2006	
Winslow, Town of	0362	A	2[47]		Yes	1/1/2017	
Winter Harbor Utility District	0250	A			Yes	7/1/1994	
Winterport Water & Sewer Districts	0306	A[41]			Yes	7/1/2005	
Winthrop Utilities District	0337	A			Yes	1/1/2011	
Winthrop, Town of	0179	A	2[48]		FO	7/1/1994	7/1/2003
Wiscasset, Town of	0417	A			No	1/1/2012	
Yarmouth Water District	0278	A			Yes	7/1/1994	
Yarmouth, Town of	0116	A	1[49]		Yes	7/1/1996	
York County	0037	A	2[50]	1[50]	Yes	7/1/1996	
York Sewer District	0139	A			FO	7/1/1994	7/1/2006

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

PLD Name	PLD #	Regular Plan	Special Plan	Special Plan	COLA	Entry Date	FO COLA Date
York Water District	0039	A			Yes	7/1/1996	
York, Town of	0028	A	2[51]	3[51]	Yes	7/1/1994	

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 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.

[3] Plan 3 is applicable for future service only rendered by the City's Firefighters hired after December 31, 1989, effective January 1, 2015.

[4] 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.

[5] Rejoined July 1, 2018, adopting Plan 2 for future service only rendered by the City's Firefighters and Police Officers.

[6] 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.

[7] 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.

[8] 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.

[9] 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.

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

[10] Plan 4 applicable for future service only rendered by the Town's Firefighters and Police Officers from July 1, 2001.

[11] Plan 2 applicable for future service only rendered by the Town's Police Officers from January 1, 2017.

[12] Applicable for future service only from July 1, 2000.

[13] Applicable for future service only from July 1, 2003.

[14] Plan 2 applicable for future service only rendered by the County's Police Officers from July 1, 2008.

[15] Plan 3 is applicable for future service only rendered by the Town's Law Enforcement Officers, effective January 1, 2015.

[16] Plan 1 applicable for future service only of Police Officers, effective July 1, 2006.

[17] 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.

[18] Plan 3 applicable for future service only for Police Officers from January 1, 2014.

[19] Greater Augusta Utility District (P0311) was formed by the merger of the Augusta Water District (former P0034) and the Augusta Sanitary District (former P0064).

[20] Plan 2 applicable for future service only for the Town's Police Officers from July 1, 2016.

[21] Plan 3 applicable for future service only for the Town's Firefighters and Police Officers, effective July 1, 2009.

[22] Plan 4 applicable for future service only rendered by the County's Law Enforcement Officers from January 1, 2018.

[23] 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.

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

[24] Plan 2 applicable for future service only for the Town's Police Officers, effective January 1, 2012.

[25] 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.

[26] Plan 2 applicable to all service for Police Officers and for future service only of Firefighters rendered from July 1, 2008.

[27] Plan 1 applicable for future service only of Police Officers, effective July 1, 2007.

[28] Plan 3 applicable to all service for Police Officers and Firefighters, effective July 1, 2017.

[29] Plan 3 for future service only after January 1, 2009 for Police Officers hired on or after October 12, 1992. Plan 1 for future service only after January 1, 2009 for Police Officers hired prior to October 1, 1992.

[30] Plan 3 applicable for future service only for Firefighters and Police Officers effective January 1, 2014.

[31] 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.

[32] Plan 2 applicable for future service only rendered by the County's Law Enforcement Officers from July 1, 2017.

[33] Plan 3 applicable for future service only rendered by the Town's Police Officers from July 1, 2007.

[34] 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 prior to January 1, 2014.

[35] Plan 3 is applicable for future service only rendered by the Town’s Police Officers, effective July 1, 2017.

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

[36] Plan 3 is applicable for future service only rendered by the City's Police Officers, effective July 1, 2015. Service for the City's Police Officers prior to July 1, 2015 under Plan 2. Plan 3 is applicable for future service only rendered by the City's Firefighters, effective July 1, 2016.

[37] 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.

[38] 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.

[39] 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.

[40] 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.

[41] Applicable for future service only from July 1, 2005.

[42] Plan 3 applicable for future service only rendered by the Town's Firefighters from July 1, 2005.

[43] Plan 2 applicable for all service for the County's Correctional Officers as of July 1, 2017.

APPENDIX A – PARTICIPATING LOCAL DISTRICT PLAN ELECTIONS

[44] Plan 2 applicable for future service only rendered by the County's Law Enforcement Officers from January 1, 2018.

[45] Town rejoined as of January 1, 2018 with all eligible employees, excluding Fire and Police that are in PLD 349, under Plan AN. One employee remains under Plan AC from the Town's prior participation.

[46] Plan 3 applicable for future service only rendered by the Town's Law Enforcement Officers from January 1, 2018.

[47] 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.

[48] Plan 2 adopted for all service rendered by the Town's Police Officers effective January 1, 2017, including past service for those Officers who were members of the Town's plan on January 1, 2017.

[49] Applicable for future service rendered by Police Officers after January 1, 2010.

[50] 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.

[51] 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.

APPENDIX B – MEMBERSHIP INFORMATION

Active Member Data as of June 30, 2018	
Regular Plan Members	
Count	8,603
Average Current Age	47.6
Average Benefit Service	8.8
Average Vesting Service	9.1
Average Valuation Pay	$ 44,975
Special Plan Members	
Count	2,813
Average Current Age	40.6
Average Benefit Service	10.4
Average Vesting Service	10.9
Average Valuation Pay	$ 62,577
All Plan Members	
Count	11,416
Average Current Age	45.8
Average Benefit Service	9.2
Average Vesting Service	9.5
Average Valuation Pay	$ 49,313

Participating Local Districts of the Maine Public Employees Retirement System
Inactive Member Data as of June 30, 2018
Regular Plans

	Count	Average Age	Total Annual Benefit	Average Annual Benefit
Retired	5,173	73.0	$ 73,161,100	$ 14,143
Retired - Concurrent Beneficiary	373	71.5	1,335,920	3,582
Disability - Section 1122	28	75.7	336,426	12,015
Disability – Sections 3 and 3A	273	66.0	5,617,072	20,575
Beneficiary of Above	1,007	74.1	10,052,090	9,982
Pre-Retirement Death Beneficiary	147	69.8	922,761	6,277
Terminated Vested	2,010	53.8	9,770,058	4,861
Inactive Due Refund	6,254	NA	NA	NA

APPENDIX B – MEMBERSHIP INFORMATION

Participating Local Districts of the Maine Public Employees Retirement System
Inactive Member Data as of June 30, 2018
Special Plans

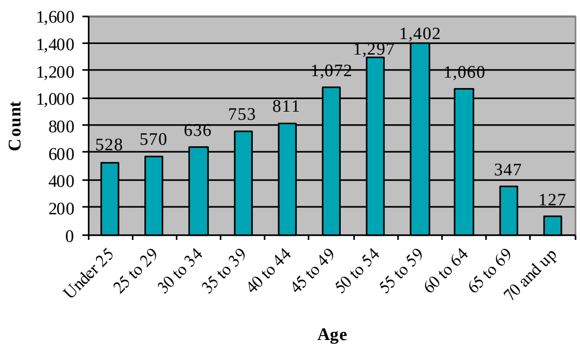
	Count	Average Age	Total Annual Benefit	Average Annual Benefit
Retired	1,499	67.7	$ 48,519,851	$ 32,368
Retired - Concurrent Beneficiary	362	66.7	2,294,867	6,339
Disability - Section 1122	20	72.9	406,019	20,301
Disability – Sections 3 and 3A	72	61.0	2,151,923	29,888
Beneficiary of Above	277	72.6	4,758,696	17,179
Pre-Retirement Death Beneficiary	25	63.2	175,390	7,016
Terminated Vested	309	48.3	3,744,087	12,117
Inactive Due Refund	1,525	NA	NA	NA

As of June 30, 2018

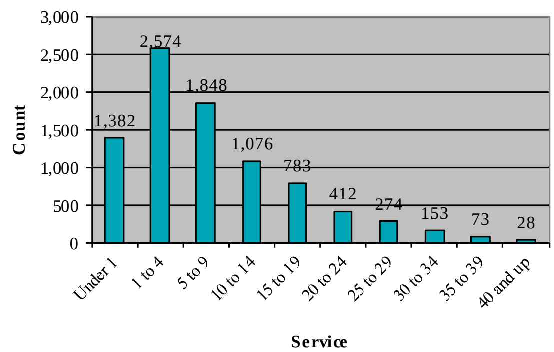
Regular Plan Participants

	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	Totals
Under 25	336	190	2	0	0	0	0	0	0	0	528
25 to 29	174	313	78	5	0	0	0	0	0	0	570
30 to 34	147	300	153	36	0	0	0	0	0	0	636
35 to 39	132	293	197	102	29	0	0	0	0	0	753
40 to 44	126	281	207	98	85	14	0	0	0	0	811
45 to 49	139	322	268	166	107	51	18	1	0	0	1,072
50 to 54	125	337	288	208	150	104	55	27	3	0	1,297
55 to 59	109	274	332	229	177	94	95	59	31	2	1,402
60 to 64	59	187	223	167	157	104	74	46	23	20	1,060
65 to 69	23	57	75	51	58	28	24	16	13	2	347
70 and up	12	20	25	14	20	17	8	4	3	4	127
Total	1,382	2,574	1,848	1,076	783	412	274	153	73	28	8,603

Age Distribution



Service Distribution



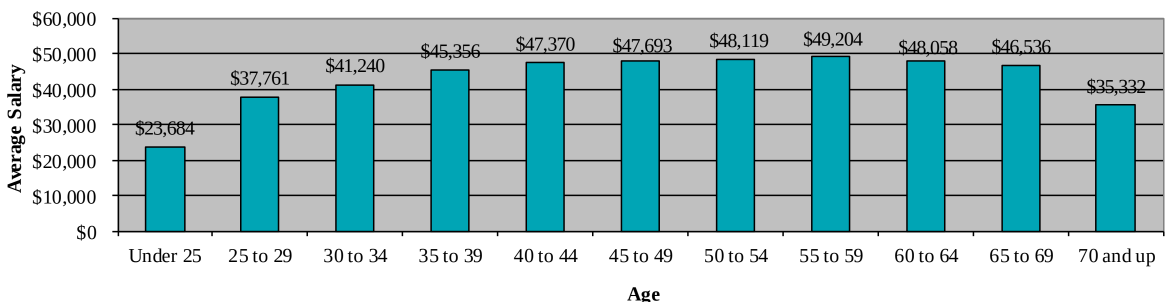
APPENDIX B – MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2018

Regular Plan Participants

	verage Salary										
	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	Average
Under 25	$ 18,142	$ 33,475	$ 24,495	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 23,684
25 to 29	29,896	39,462	47,526	52,621	0	0	0	0	0	0	37,761
30 to 34	30,145	41,707	49,818	46,193	0	0	0	0	0	0	41,240
35 to 39	32,453	43,766	51,807	53,031	49,332	0	0	0	0	0	45,356
40 to 44	37,070	42,652	54,080	50,657	56,786	55,389	0	0	0	0	47,370
45 to 49	35,529	42,345	50,966	52,908	57,054	57,375	57,992	36,631	0	0	47,693
50 to 54	32,247	43,973	48,829	50,923	50,389	59,828	58,439	66,207	41,002	0	48,119
55 to 59	34,850	41,857	51,711	51,577	50,163	51,538	57,795	60,898	57,402	75,384	49,204
60 to 64	30,023	41,479	46,504	50,476	47,268	52,977	55,630	63,029	60,401	63,877	48,058
65 to 69	26,409	30,065	48,646	52,168	53,331	52,348	53,432	47,805	60,817	60,577	46,536
70 and up	14,870	22,721	30,800	44,352	38,207	48,336	36,679	53,600	56,218	50,268	35,332
Average	$ 28,950	$ 41,135	$ 50,031	$ 51,298	$ 51,185	$ 54,770	$ 56,354	$ 60,757	$ 58,232	$ 62,519	$ 44,975

Average Salary Distribution



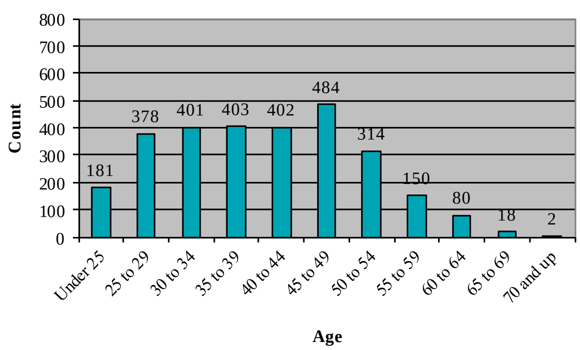
APPENDIX B – MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2018

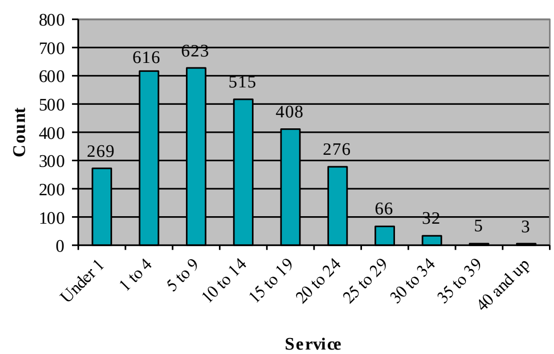
Special Plan Participants

	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	Totals
Under 25	85	96	0	0	0	0	0	0	0	0	181
25 to 29	61	229	87	1	0	0	0	0	0	0	378
30 to 34	54	109	168	68	2	0	0	0	0	0	401
35 to 39	31	67	129	137	38	1	0	0	0	0	403
40 to 44	17	51	87	91	118	37	1	0	0	0	402
45 to 49	15	30	74	101	125	123	15	1	0	0	484
50 to 54	2	22	42	58	84	71	23	12	0	0	314
55 to 59	2	6	20	41	25	28	13	13	2	0	150
60 to 64	1	4	15	16	14	12	10	3	3	2	80
65 to 69	1	2	1	2	2	4	4	2	0	0	18
70 and up	0	0	0	0	0	0	0	1	0	1	2
Total	269	616	623	515	408	276	66	32	5	3	2,813

Age Distribution



Service Distribution



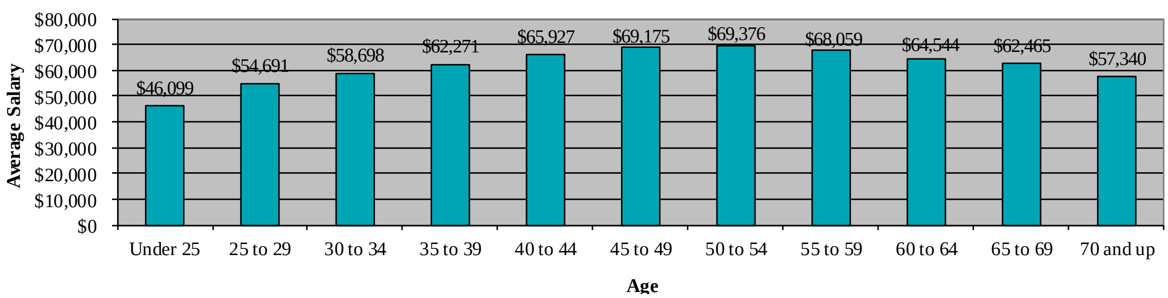
APPENDIX B – MEMBERSHIP INFORMATION

Distribution of Active Members
As of June 30, 2018

Special Plan Participants

	Average Salary 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	Average
Under 25	$ 40,711	$ 50,869	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 46,099
25 to 29	46,182	54,217	61,705	71,822	0	0	0	0	0	0	54,691
30 to 34	44,059	54,570	61,962	68,675	65,422	0	0	0	0	0	58,698
35 to 39	50,895	54,327	62,047	65,824	72,235	110,493	0	0	0	0	62,271
40 to 44	51,445	54,332	64,131	67,655	71,169	72,439	42,968	0	0	0	65,927
45 to 49	44,169	55,557	63,953	67,315	70,689	76,552	86,910	64,387	0	0	69,175
50 to 54	32,105	53,138	64,243	68,350	71,496	72,845	77,967	76,464	0	0	69,376
55 to 59	45,431	49,509	60,539	70,455	66,107	68,392	69,588	78,830	112,240	0	68,059
60 to 64	30,909	51,839	59,181	66,050	64,120	65,780	64,854	65,736	78,477	106,249	64,544
65 to 69	68,890	35,905	98,030	66,602	81,712	50,623	73,920	45,424	0	0	62,465
70 and up	0	0	0	0	0	0	0	30,190	0	84,489	57,340
Average	$ 44,708	$ 53,685	$ 62,582	$ 67,491	$ 70,660	$ 73,498	$ 75,587	$ 72,656	$ 91,983	$ 98,996	$ 62,577

Average Salary Distribution

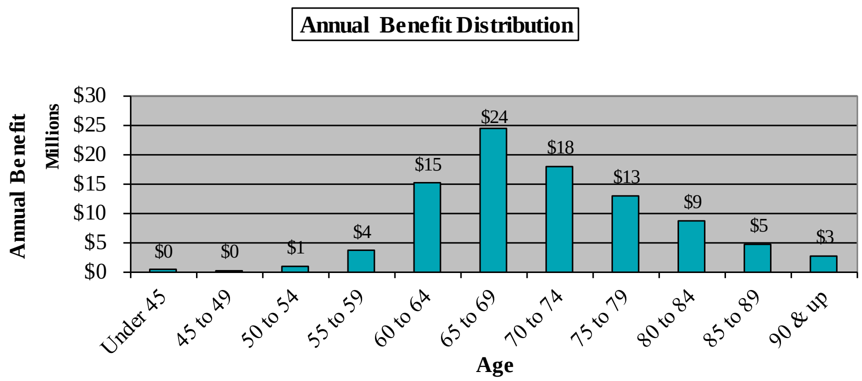


APPENDIX B – MEMBERSHIP INFORMATION

Distribution of Retirees, Disabled Members, Beneficiaries, and Survivors
As of June 30, 2018

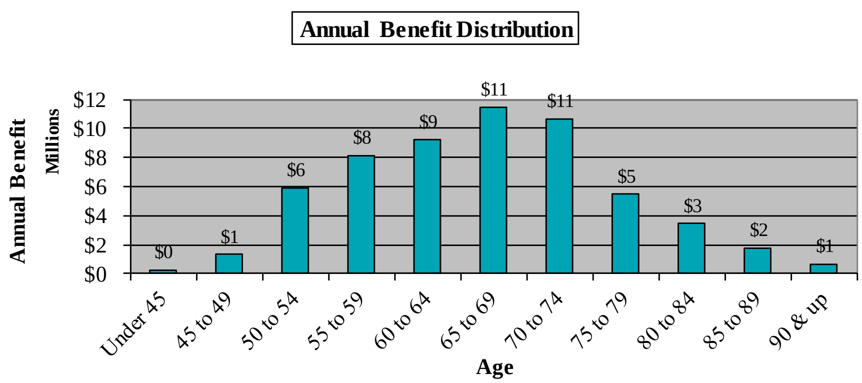
Regular Plan Participants

Age	Count	Annual Benefit
Under 45	55	$ 273,880
45 to 49	27	238,811
50 to 54	80	958,187
55 to 59	207	3,533,144
60 to 64	980	15,014,310
65 to 69	1,656	24,454,770
70 to 74	1,350	17,928,479
75 to 79	1,058	12,911,003
80 to 84	754	8,668,991
85 to 89	502	4,694,296
90 & up	332	2,749,497
Total	7,001	$ 91,425,368



Special Plan Participants

Age	Count	Annual Benefit
Under 45	17	$ 282,383
45 to 49	55	1,310,228
50 to 54	195	5,916,478
55 to 59	282	8,155,005
60 to 64	307	9,208,376
65 to 69	430	11,434,494
70 to 74	418	10,641,372
75 to 79	241	5,477,968
80 to 84	176	3,430,941
85 to 89	93	1,774,673
90 & up	41	674,826
Total	2,255	$ 58,306,745



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, 2017	**11,195**	**6,436**	**1,995**	**178**	**397**	**2,234**
New hires	1,421					
Rehires	124					(49)
New PLDs	72					
Movement between plans	1					
New retirees	(327)	470				(133)
New disabled retirees	(9)				14	(4)
New beneficiaries due to retirements			43			
New deferred vested members	(304)					338
Non-vested terminations	(536)					
Refunds	(210)					(45)
Deaths, no future benefits	(3)	(174)	(85)	(10)	(7)	(4)
Deaths with a survivor or beneficiary	(7)	(60)	68	5	(10)	(2)
Benefits expired				(3)		
Benefits restarted				2		
Records combined / split						(14)
Data correction	(1)	-	(2)	-	(1)	(2)
As of June 30, 2018	**11,416**	**6,672**	**2,019**	**172**	**393**	**2,319**

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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

1. Member Contributions

Members are required to contribute a percentage of earnable compensation, which varies by Plan as follows:

Regular AC & AN	8.0%
Regular BC	4.5%
Special 1C & 1N	8.0%
Special 2C & 2N	8.0%
Special 3C & 3N	9.5% for first 25 years, 8.0% after
Special 4C & 4N	9.0% for first 25 years, 8.0% after

Member contributions earn 2.4% annual interest.

As of May 10, 2018, contribution rates for both PLDs and members will be determined annually based on the risk-sharing contribution methodology adopted by the Board of Trustees. The rates for FY 2020 will be the first set by this methodology. The details are not yet finalized though, so the existing rates described above are assumed to continue for all periods in the future for the sake of this valuation.

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

4. Service Retirement Benefits

Regular Plan AC

Normal Retirement Age:

Plan members prior to July 1, 2014: 60

APPENDIX C – SUMMARY OF PLAN PROVISIONS

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.

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.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

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.

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.

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.

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. Pre-Retirement Accidental Death Benefits

Eligibility: Death while active or disabled resulting from 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.

- 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 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."

6. Pre-Retirement Ordinary Death Benefits

Eligibility: Death while active, inactive eligible to retire, or disabled.

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

7. Disability Retirement Benefits Other Than No Age Benefits (See Item 8)

Eligibility: Disabled as defined in the MainePERS statutes prior to 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 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 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.

8. 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 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.

9. Termination Benefit

Eligibility: Termination of service other than by retirement or death with at least 5 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 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.

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.*

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

The following plan changes were adopted by the MainePERS Board of Trustees on May 10, 2018:

- COLA changes
- Contribution changes (not yet reflected in this actuarial valuation but anticipated to be the basis of the FY 2020 rates adopted for both members and PLDs)
- Early retirement factor changes
- Unused Sick and/or Vacation time conversion

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.

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 time of termination.

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

	(Showing values in 2018)	
Age	Male	Female
50	41	32
55	58	43
60	78	62
65	111	95
70	172	153
75	280	251
80	471	424
85	822	753
90	1,453	1,351
95	2,301	2,230

Rates are based on 104% and 120% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to start of the Healthy Annuitant Mortality Table, both projected from the 2006 base rates using the RPEC_2015 model, with an ultimate rate of 0.85% for ages 20-85 grading down to an ultimate rate of 0.00% for ages 111-120, and convergence to the ultimate rate in the year 2020.

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 2018)	
Age	**Male**	**Female**
20	4	2
25	4	2
30	4	3
35	5	3
40	6	5
45	9	8
50	17	13
55	28	20
60	47	29
65	83	44

* 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 2018)	
Age	**Male**	**Female**
25	82	24
30	79	30
35	92	42
40	111	58
45	173	90
50	211	119
55	244	150
60	277	178
65	332	216
70	429	294

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 the 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.

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 valuation date. Annual increases are applied as of the beginning of each subsequent valuation.

Member Contribution Interest Rate: 2.4%

COLA Timing: September 1

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 advice of the MainePERS investment consultants.

APPENDIX D – ACTUARIAL ASSUMPTIONS AND METHODS

13. Changes since Last Valuation:

The annual rate of investment return was lowered from 6.875% to 6.75%. Due to the plan changes, the COLA assumption was lowered from 2.20% to 1.91%.

14. Rationale for Change in Actuarial Assumptions:

The Board continuously reviews the investment return assumption and adopted a reduced rate of 6.75% effective with the 2018 valuation, at the advice of its investment consultant.

B. Actuarial Methods

1. Funding Method

This section reflects the methodology that was in effect through the June 30, 2017 valuation to determine the FY 2019 contribution rates. While we anticipate that the method will be altered for developing the FY 2020 contribution rates, the new risk-sharing contribution methodology has not yet been finalized. We will provide an update of this appendix as part of the communication that will be provided under separate cover for the FY 2020 contribution rates.

The entry age normal actuarial funding method is used to determine costs. Under this funding method, the total PLD contribution rate consists of two elements: the PLD normal cost rate and the Pooled Unfunded Actuarial Liability (PUAL) rate. 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.

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. Finally, the rate is reduced by the member contribution rate to produce the employer normal contribution rate. 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 and then divided by the total payroll at the valuation for the plan to get the normal cost rate for that plan. This process results in specific normal cost rates for each of the Regular and Special Plans in the Consolidated Plan.

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, a PUAL Rate is calculated for the Consolidated Plan in the Aggregate based on the PUAL being amortized over a 20-year period commencing with the June 30, 2015 valuation date and any layers of PUAL 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 a rate that is then allocated to each plan within the Consolidated Plan on the basis of total normal cost plus member contributions for each such plan. That is, those plans that constitute a larger portion of the overall liability will pay a larger portion of the pooled UAL payment when this rate is positive and receive a larger UAL credit when this rate is negative.

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

As noted in item 1 of this section, we anticipate that there will be changes in the methodology utilized to develop contributions based on this valuation, but will be providing this information under separate cover once the details of the new risk-sharing contribution methodology are finalized.

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.

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.

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