



# MainePERS

PUBLIC EMPLOYEES RETIREMENT SYSTEM



## Comprehensive Annual Financial Report For the Fiscal Year Ended June 30, 2019

# 2019

MainePERS is a component unit of the State of Maine.



# Maine Public Employees Retirement System

A Component Unit of the State of Maine

P.O. Box 349, Augusta, Maine 04332-0349

## Comprehensive Annual Financial Report

For the fiscal year ended  
June 30, 2019

This report has been produced as required by 5 M.R.S.A. §17102 (10), which states that the Maine Public Employees Retirement System must publish an annual report showing “the fiscal transactions of the retirement system for the fiscal year and the assets and liabilities of the retirement system at the end of the fiscal year; and the actuary’s report on the actuarial valuation of the financial condition of the retirement system for the fiscal year.”

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This report was prepared by the Financial, Administrative and Investment staff of the Maine Public Employees Retirement System. Costs for producing this report were paid from the operating budget of the Maine Public Employees Retirement System.

This CAFR is printed and also made available online.



Public Pension Coordinating Council

**Recognition Award for Funding  
2019**

Presented to

***Maine Public Employees Retirement System***

In recognition of meeting professional standards for  
plan funding as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

*Alan H. Winkle*

Alan H. Winkle  
Program Administrator

# MainePERS Comprehensive Annual Financial Report

For the fiscal year ended June 30, 2019

## TABLE OF CONTENTS

	PAGE
<b>INTRODUCTORY SECTION</b>	
Letter of Transmittal.....	6
Board of Trustees, Management Staff, and Principal Professional Consultants .....	12
Organization Chart by Function.....	13
2019 Legislative Update .....	14
<b>FINANCIAL SECTION</b>	
Independent Auditor's Report .....	18
Management's Discussion and Analysis.....	20
Basic Financial Statements	
Statement of Fiduciary Net Position .....	26
Statement of Changes in Fiduciary Net Position .....	28
Notes to Financial Statements.....	30
Required Supplementary Information	
Schedule of Changes in the Plan's Net Pension Liability and Related Ratios	
State Employee and Teacher Plan.....	52
Judicial Plan.....	53
Legislative Plan.....	54
PLD Consolidated Plan.....	55
Schedule of Employer Contributions	
State Employee and Teacher Plan.....	56
Judicial Plan.....	57
Legislative Plan.....	58
PLD Consolidated Plan.....	59
Schedule of Investment Returns .....	60
Schedule of Changes in the Plan's Net OPEB Liability and Related Ratios	
State Employee and Teacher Plan.....	61
PLD Consolidated Plan.....	62
Schedule of Employer Contributions	
State Employee and Teacher Plan.....	63
PLD Consolidated Plan.....	64
Schedule of Investment Returns .....	65
Notes to Historical Pension and OPEB Information .....	66
Additional Supplementary Information	
Schedule of Investment Expenses .....	69
Schedule of Administrative Expenses .....	74
Schedule of Professional Fees.....	75
<b>INVESTMENT SECTION</b>	
Investment Consultant's Report.....	78
Investment Activity .....	79
Investment Portfolio.....	79
Performance: Actual Returns vs. Benchmark Returns .....	84
Largest Holdings.....	86
Investment Expenses .....	87
Brokerage Commissions .....	88
Group Life Insurance Program Investment Activity .....	91

*Continued on next page*

# TABLE OF CONTENTS *(concluded)*

	PAGE
<b>ACTUARIAL SECTION</b>	
Actuary's Certification .....	94
Demographic Information	
Schedule of Active Member Valuation Data .....	96
Schedule of Benefit Recipients Valuation Data .....	97
Schedule of Retirees and Beneficiaries Added to and Removed from the Rolls.....	98
Accounting Information	
Schedule of Changes in Net Pension Liability.....	99
Sensitivity of Net Pension Liability to Changes in Discount Rate .....	100
Analysis of Financial Experience.....	101
Solvency Test .....	102
Schedule of Changes in Net OPEB Liability.....	103
Summary of Program and Plan Provisions, Actuarial Assumptions and Methods	
State Employee and Teacher Program.....	104
Consolidated Plan for Participating Local Districts .....	115
Judicial Retirement Program .....	126
Legislative Retirement Program .....	135
Retiree Group Life Insurance .....	145
<b>STATISTICAL SECTION</b>	
Changes in Fiduciary Net Position (Last Ten Fiscal Years)	
Defined Benefit Plans .....	149
Group Life Insurance Plan.....	154
Defined Contribution Plans.....	156
Retiree Health Investment Trust Fund.....	157
Benefit and Refund Deductions from Fiduciary Net Position by Type (Last Ten Fiscal Years)	
Defined Benefit Plans .....	158
Group Life Insurance Plan.....	161
Defined Benefit Plans Average Benefit Payments, Last Ten Fiscal Years.....	162
Defined Benefit Plans Retired Members by Type of Benefit and Option.....	166
Employee Contribution Rates, Last Ten Fiscal Years .....	168
Employer Contribution Rates, Last Ten Fiscal Years .....	169
Principal Participating Employers, Current Year and Nine Years Ago .....	170
Participating Employers, Detailed Listing .....	171

# INTRODUCTORY SECTION



*Maple*

**BOARD OF TRUSTEES**

Brian H. Noyes, Chair  
Richard Metivier, Vice Chair  
Shirrin L. Blaisdell  
Philip A. Brookhouse  
Mark A. Brunton  
John S. Beliveau  
Henry Beck, *State Treasurer Ex-Officio*  
Kenneth L. Williams

## LETTER OF TRANSMITTAL

December 20, 2019

In accordance with the requirements of 5 M.R.S.A. §17102, I am pleased to present the Comprehensive Annual Financial Report (“CAFR” or “Annual Report”) of the Maine Public Employees Retirement System (“MainePERS” or the “System”) for the fiscal year ended June 30, 2019. This CAFR, taken as a whole, provides information on all aspects of the System. It is written to conform to Governmental Accounting Standards Board (GASB) requirements. Management of the System takes full responsibility for the accuracy, completeness and fairness of the representations made in this report.

Berry, Dunn, McNeil & Parker, LLC, has issued an unmodified opinion on the MainePERS’ financial statements for the year ended June 30, 2019. The independent auditor’s report is located at the front of the financial section.

Management’s discussion and analysis (MD&A) immediately follows the independent auditor’s report and provides a narrative introduction, overview and analysis of the basic financial statements. MD&A complements this letter of transmittal and should be read in conjunction with it.

### FUNDING OF SYSTEM PROGRAMS

The System administers seven retirement programs, often referred to as “plans.” In addition, the System operates a Group Life Insurance Program (GLI) providing life insurance coverage for both active employees and for retirees, and a program of defined contribution retirement plans under sections 401(a), 403(b) and 457(b) of the Internal Revenue Code, collectively referred to as MaineSTART. The System also manages the Retiree Health Insurance Post Employment Investment Trust on behalf of the State of Maine. The Trust is an irrevocable trust established for the purpose of accumulating assets to provide funding for the State’s liability for retiree health benefits. Assets for the purpose of providing funding for the liability for retiree health and other post-employment benefits (OPEB) for the System’s employees are held in the MainePERS OPEB Trust, also administered by the System.

The System’s defined benefit retirement programs are the dominant element in its financial activities and position. The four major programs are the State Employee and Teacher Retirement Program, the Judicial Retirement Program, the Legislative Retirement Program and the Participating Local District (PLD) Consolidated Retirement Plan. In addition, the System continues to administer ten closed single-employer plans on behalf of participating local districts who at the time of consolidation, opted not to join the PLD Consolidated Plan. These plans are collectively referred to as the PLD Agent Plan.

The System also administers two pay-as-you-go retirement programs, one for judges who retired prior to the establishment of the Judicial Retirement Program in 1984 and the other for former governors and their surviving spouses. The programs are funded each biennium by a direct appropriation from the Legislature and, in the case of the active governor, by employee contributions required by statute.

The basic defined benefit retirement plan funding equation provides that, over the long term, contributions plus investment earnings must be equal to benefit obligations. While investment market performance affects plan funding levels and funding requirements, it does not affect benefit obligations.

The return on invested contributions has historically supplied a significant amount of the benefit funding resources of defined benefit plans. In periods when the investment markets provide lower returns than expected, the resulting funding shortfall has historically been supplemented by a combination of increased employer contributions and investment market returns in other periods that exceeded expectations. For this reason, the performance of the investment markets is a significant factor affecting the financial activities or position of the System, and the effects of market performance flow through to contributions made by participating employers. The recent two-decade low-interest environment has increased the sensitivity of the trust fund to market fluctuations as more of the trust fund income is earned from equities.

As with all actuarially-funded defined benefit plans, the System uses actuarial methods and procedures that integrate short-term market behavior with the long-term time horizon of the plan. One of these methods is “smoothing” of investment results which moderates the volatility of employer contribution requirements.

The interplay of liabilities (i.e., the obligation to pay benefits) and assets (i.e., contributions and investment earnings on contributions) can be observed in changes in the programs’ actuarial funded ratios over time. The funded ratio of the State Employee and Teacher Retirement Program had improved steadily from 1990 through 2008. Substantial investment losses in fiscal years 2008 and 2009 reduced the funding ratio. Fiscal years 2010 and 2011 experienced strong investment returns, and in combination with changes to plan provisions, the funding ratio again improved. Subsequent market gains and losses resulted in a funding ratio of 82.2 percent as of the end of fiscal year 2015. Low investment returns in fiscal years 2014 and 2015 reduced the funding ratio to 80.4 percent as of June 30, 2016, and subsequent gains increased it to 80.9 percent as of June 30, 2017 as investment returns increased. As of June 30, 2019, the funding ratio was 81.8 percent, up slightly from 81.4 percent as of June 30, 2018.

The funded ratio of the Judicial Retirement Program has in recent years remained close to 100 percent. The funded ratio as of June 30, 2013 was 97.5 percent. In fiscal year 2014, the funded ratio of the plan increased to 101.6 percent and as of June 30, 2015 the funded ratio was 96.9 percent. The funded ratio of this plan increased again as of June 30, 2016 to 100.9 percent; as of June 30, 2017, the funded ratio rose to 102.7 percent. As of June 30, 2019, the funding ratio was 105 percent, up from 102.4 percent at June 30, 2018.

The funded ratio of the Legislative Retirement Program has been above 100 percent for many years, and continues this year due primarily to member turnover in the Plan created by term limits. As of June 30, 2019, the funded ratio was 144.4 percent, compared to 146.3 percent at June 30, 2018 and 145.9 percent at June 30, 2017.

The funded ratio of the Participating Local District Consolidated Retirement Plan was 89.6 percent as of June 30, 2019. This compares to 89.5 percent as of June 30, 2018 and 86.5 percent as of June 30, 2017. Information concerning the funded status of the non-consolidated participating local district plans administered by the System is available by contacting the System.

Information regarding overall funding progress appears in the MD&A beginning on page 20. More information on the funding levels of all of the System’s retirement programs can be obtained from the System.

The System’s defined contribution plans, collectively called MaineSTART, provide an important supplement for our defined benefit participants and a valuable alternative for other participants. MaineSTART offers a family of funds from Vanguard designed to be low cost and easy for participants to manage. The investment strategy for these assets is determined by each participant.

The Group Life Insurance Program is funded by premiums paid by its participants and the employers of those participants, and by investment returns on the Group Life Insurance Program assets. The investment strategy for these assets is a similar strategy to the strategy employed for the defined benefit programs’ assets.

The Retiree Health Insurance Post Employment Investment Trust is funded through direct appropriations from the State of Maine.

## INVESTMENTS

The basis of the investment policy is the mix of investment types in which assets are invested and the allocation of assets among asset classes. The System’s Board of Trustees (Board) is responsible for establishing the policy that is the framework for investment of the programs’ assets. The Board employs in-house investment professionals and outside investment consultants to advise it on investment matters, including policy.

The defined benefit program had a return of 7.08% while the group life insurance program had a return of 6.6% for fiscal year 2019. Total value of the defined benefit portfolio increased to \$15.1 billion at June 30, 2019 from \$14.5 billion at June 30, 2018. This increase in the total value of the portfolio is due to earnings that exceeded the negative cash flow experienced by the mature defined benefit programs.

The current target asset allocation was last modified in September 2017 to increase investments in alternative strategies such as private equity, private credit, infrastructure, real estate, natural resources and risk diversifiers.

The Board’s choice of asset classes reflects its assessment of expected investment returns and the nature, level and management of risk. The defined benefit programs’ assets perform two functions; they collateralize the benefits owed to participants, and they provide investment earnings. All benefit payments must eventually be funded from a combination of contributions and investment earnings.

## HIGHLIGHTS OF THE PAST YEAR

The remaining plan changes for the PLD Consolidated Plan that had been under development since 2016 have been fully implemented this year. The risk-sharing changes were designed to protect the core benefit for members and at the same time, develop a contribution rate methodology that shares risk between both the employer and the member. This effort required extensive communication and outreach to stakeholders, gathering input and explaining all the options and the costs associated with each.

In the fall of 2017, MainePERS sold its main office building and adjacent land and became in-place tenants while a new building was being constructed. The new headquarters, located a quarter mile away, provides modern and efficient office space for staff and is equipped in such a way as to provide flexibility in operations in the future. We moved into the new building in January 2019.

## ACKNOWLEDGEMENTS

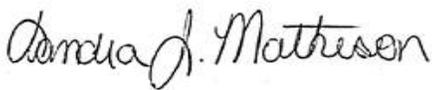
We are pleased to acknowledge that for the fifteenth consecutive year, the System was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association (“GFOA”). In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized Comprehensive Annual Financial Report (“CAFR”), with contents that meet or exceed program standards. We are pleased to share that we are recognized for handling and accounting for retirement funds in a manner that conforms to generally accepted accounting practices and all applicable legal requirements. We fully expect to be in compliance with all of the Certificate of Achievement program requirements into the future. This 2019 CAFR will also be submitted to the GFOA.

The System, through its management staff, is responsible for establishing and maintaining an internal control structure that is designed to provide reasonable assurance that assets are protected from theft, fraud, or misuse and that financial recordkeeping is transparent, complete and accurate. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management. Management believes that the existing internal controls accomplish these objectives. Management is also responsible for the completeness, accuracy and fair presentation of financial information and for all disclosures. This responsibility notably encompasses the System’s financial statements themselves, including the amounts therein that, necessarily, are based on estimates and judgments.

The preparation of this report has been a collaborative effort of Executive Management, the Accounting and Finance Department, the Investment Department and the Communications Department. The System takes responsibility for all of the information contained in the report and confidently presents it as a basis for the many decisions of the Board of Trustees, staff, and others who will rely on it.

I am joined in transmitting this Comprehensive Annual Financial Report to all of our constituencies by the System’s Director of Finance.

Respectfully submitted,



Sandra J. Matheson  
Executive Director



Sherry Tripp Vandrell  
Director of Finance

## Appendix A to Letter of Transmittal

### OVERVIEW OF THE SYSTEM

The Maine Public Employees Retirement System (MainePERS) is an independent public agency of the State of Maine that traces its history to 1942. By the authority granted to it by the Maine Legislature, the System administers seven defined benefit retirement programs that cover State employees, the State's public school teachers, judges, legislators, and employees of the 307 municipalities and other public entities, called "participating local districts" (PLDs) that have chosen to provide retirement plans to their employees through MainePERS. The System is also responsible for the payment of retirement and survivors' benefits to former governors and their surviving spouses and to former judges who retired prior to the establishment of the Judicial Retirement Program in 1984 and their surviving spouses. In addition, the System administers a Group Life Insurance Program that provides or makes available life insurance benefits for active and retired State employees and teachers, judges, and legislators as well as employees of those PLDs who have chosen to offer the Group Life Insurance Program. The System also administers defined contribution plans for eligible employers who choose to participate in the plans.

### Board of Trustees

Responsibility for the operation of the Maine Public Employees Retirement System rests with the System's Board of Trustees, which is comprised of eight members. State law specifies the Board's composition. With the exception of the State Treasurer, each trustee is subject to the legislative confirmation process. Three trustees are System members, one of whom is proposed and elected by the Maine Education Association, one of whom is proposed and elected by the Maine State Employees Association, and one of whom is a PLD member appointed by the governing body of the Maine Municipal Association. Four other trustees are appointed by the Governor. Of these, one must be selected by the Governor from a list of nominees submitted by the Maine Retired Teachers Association and one must be a MainePERS retiree selected from a list of nominees submitted by State and/or PLD retirees. The remaining two appointees are direct gubernatorial appointments, both of whom must be qualified through training or experience in investments, accounting, banking, insurance or as actuaries. All appointed trustees are required to have "a working knowledge of retirement policy and legal issues and a general knowledge and understanding of banking, finance, and investment practices." The eighth trustee is the State Treasurer, who serves ex-officio. All trustee terms are three years, except for the two-year term of the State Treasurer. The Board annually elects its chair and vice chair from among its members.

The MainePERS Trustees serve as Trustees of the State and Teacher, Judicial and Legislative Retirement Programs as well as for the PLD Consolidated Program, the Group Life Insurance Programs, the Defined Contribution Plans, and the Retiree Health Insurance Post-Employment Benefits Investment Trust.

The Board contracts for the services of an actuary to prepare annual valuations of the assets and liabilities of each of the retirement programs administered by the System. The actuary also provides information and recommendations as to sound and appropriate actuarial assumptions, which are utilized, together with valuation information, to determine the programs' funding requirements. The System's actuary in fiscal years 2018 and 2019 was Cheiron, Inc.

The Board's management of MainePERS investments is embodied in its investment policy. The policy states the Board's underlying investment objectives, sets out the investment strategies intended to realize the objectives, and establishes guidelines and criteria for implementation of the strategies. The Board has engaged Cambridge Associates to advise it on the investment policy and the administration of the investment program.

The Board is the final administrative decision maker in matters involving the rights, credits, and benefits of members. It has established an administrative appeals process for the making of such decisions; in this process relevant factual information and legal requirements are identified and analyzed by independent Hearing Officers who serve under contract. In decisions on disability retirement appeals, statutorily established medical boards and individual medical advisors provide recommendations as to the medical aspects of disability. The Board's final administrative decisions are appealable to the Maine Superior Court.

### Administration

The Office of the Executive Director has administrative responsibility for all aspects of the System and its operations. The Executive Director oversees all actuarial work and investments, and has administrative responsibility for the internal audit function. Actuarial work is carried out with the assistance of an actuary; investment operations are carried out with the assistance of the System's Chief Investment Officer and staff, one or more investment consultants, investment managers and other appropriate advisors. In addition, the Office performs the executive functions of the System and has day-to-day responsibility for legal and legislative matters, appeals, federal, state, and local governmental relations, planning, organizational development, accounting and financial reporting, and numerous special projects.

## Appendix A to Letter of Transmittal

The Department of Service Programs administers the service and disability retirement programs, MaineSTART defined contribution plans, employer programs, survivor benefit and group life insurance programs. The Department is the System's primary contact for members, participating employers, and benefit recipients.

The Department of Administration is responsible for most administrative and support functions, including information technology supports, communications, facilities, and human resources.

The System's primary responsibility is the administration of defined benefit and defined contribution retirement plans. Retirement and related benefits provided by MainePERS include:

- service retirement benefits, that provide retirement income to qualified members;
- disability retirement benefits, that provide income to a member who becomes disabled under Maine law while the member is in service and before the member retires; and
- death benefits that are paid to a member's designated beneficiaries.

Administration of these programs includes financial administration, investments, recordkeeping of members' work and compensation data, and provision of retirement-related services to members, employers, and retirees.

The System also administers the MaineSTART defined contribution retirement plans that are established under sections 401(a), 403(b), and 457(b) of the Internal Revenue Code. These plans are presently available to employees of those employers in the PLD Consolidated Plan that have adopted one or more of the plans.

The System itself and all of its programs are established by and operate within the scope of Maine statutes. The operation of the System's defined benefit retirement plans is also governed by provisions of the Maine Constitution, not all of which apply to all of the plans.

### Membership and Contributions

State employees and teachers are covered under the Maine Public Employees Retirement System's State Employee and Teacher Retirement Program. State employees are required by law to become members of MainePERS when hired. There is an exception to this rule for elected and appointed officials, for whom membership is optional. Public school teachers, other than substitute teachers, for whom membership is also optional, must also become members of MainePERS when hired. PLD employees become members of MainePERS when they are hired if their employer participates as a PLD in MainePERS at that time and if they meet the membership eligibility requirements in effect when they are hired. For some PLD employees, membership is optional. These employees include those employed by their PLD before the PLD joined MainePERS, those whose employers provide Social Security or a qualified replacement plan under federal law, elected and appointed officials, and chief administrative officers.

The Legislative Retirement Program, also administered by MainePERS, was established to provide a retirement program for those serving in the Maine Legislature. Except as provided otherwise by statute, membership in the Maine Legislative Retirement Program is mandatory for legislators entering service on or after December 3, 1986.

The Judicial Retirement Program was established to provide a retirement program for Maine's judges. Membership in the Judicial Retirement Program is a condition of employment for all judges serving on or after December 1, 1984.

All members of the System contribute a percentage of their compensation to the System; employers may opt to contribute all or a portion of that percentage on behalf of their employees. Each employer also contributes to the System an amount for the normal costs of the programs that is a percentage of total wages paid to members who are employees of that employer.

Prior to July 1, 2013 the State paid employer normal cost contributions and unfunded actuarial liability contributions on behalf of all State employee and teacher members. As of July 1, 2013, teacher employers began paying the employer normal cost contributions on behalf of those teacher members they employed while the state continued to pay toward the unfunded actuarial liability associated with teacher members. The employer contribution percentages are actuarially determined by plan and vary from year to year.

Employer normal cost contributions, along with current member contributions, support benefits currently being earned by active members. The State's unfunded actuarial accrued liability (UAAL) contribution is a payment on the amortized debt that represents the liability for benefits in excess of the amount supported by assets of the System. The Maine Constitution requires that the UAAL established as of June 30, 1996 be fully funded in not more than 31 years from July 1, 1997. The amortization period at the end of FY 2019 is 9 years, requiring full payment of the UAAL by the end of FY 2028.

## Appendix A to Letter of Transmittal

The System also administers pay-as-you-go retirement programs for former judges who retired prior to the establishment of the Judicial Retirement Program in 1984 and their surviving spouses and former governors and their surviving spouses. The programs are funded each biennium by a direct appropriation from the Legislature and, in the case of the active governor, by employee contributions required by statute.

The Group Life Insurance Program is provided or made available to all eligible State employees, public school teachers, and employees of those PLDs who elect to offer this coverage to their employees, as well as to members of the Legislative and Judicial Retirement Programs. Basic coverage for the employee is equal to the employee's annual base compensation rounded up to the next \$1,000; supplemental coverage for the employee and coverage for dependents are also available.

Further details regarding program and plan provisions can be found elsewhere in this report and in the actuarial valuation for each program.

### Financial Reporting

Total operating expenses for staff and all other costs of operations are allocated among each of the Programs administered by the System. The System's administrative budget is approved annually by the Board of Trustees, and is reported to the Legislature.

The System's financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis, in accordance with the standards and requirements of the Governmental Accounting Standards Board (GASB). The financial statements are presented in accordance with GASB Statement No. 34, Basic Financial Statements - Management's Discussion and Analysis for State and Local Governments, GASB Statement No. 67, Financial Reporting for Pension Plans, and, with respect to the Group Life Insurance Program, GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Financial information presented throughout this Report is consistent with the financial statements. The financial statements are prepared on the accrual basis of accounting.

The System has an Internal Audit program, staffed by one internal auditor and two payroll compliance auditors. This program focuses on a plan of internal controls and efficiencies in all of the departments at the System as well as payroll reporting accuracy of the employers who participate in one or more plans administered by the System. The internal auditor presents audit reports to both management and the Finance and Audit Committee of the Board of Trustees.

The independent auditor, Berry Dunn, has conducted an audit of the financial statements in accordance with, as stated in its audit report, generally accepted auditing standards and including those tests and procedures Berry Dunn deemed necessary to express its opinion in its audit report.

The auditors have unrestricted access to the Board and the Board's Finance and Audit Committee to discuss the audit and their findings with respect to the integrity of the System's financial reporting and adequacy of the System's internal controls.

The System reports five defined benefit pension plans including two multiple-employer cost sharing plans (the State Employee and Teacher Plan and the PLD Consolidated Plan), two single employer plans (the Judicial and Legislative Plans) and an agent multiple employer plan which is an aggregation of single employer plans of those PLDs that elected not to join the consolidated cost sharing plan. Separate actuarial valuations are performed for each of the retirement programs that the System administers; contributions, inflows, and benefits payments are separately tracked and recorded, and separate trust fund balances are attributed to each such program. The System also reports the Group Life Insurance Program for active employees and two multiple-employer cost sharing Other Post-Employment Benefit (OPEB) plans providing life insurance coverage in retirement for state employees and teachers as well as for employees of those PLDs that participate in the life insurance program. In addition, the System reports the MaineSTART Defined Contribution plans as well as the Retiree Health Insurance Trust Fund. The System's financial statements, notes thereto and required supplementary information are prepared accordingly.

**BOARD OF TRUSTEES, MANAGEMENT STAFF,  
and PRINCIPAL PROFESSIONAL CONSULTANTS**  
**June 30, 2019**

**BOARD OF TRUSTEES**

Brian H. Noyes, <i>Chair</i>	Appointed by the Governor
Richard Metivier, <i>Vice Chair</i>	Appointed by the Maine Municipal Association
Henry Beck, State Treasurer	<i>Ex-Officio</i> Member
John S. Beliveau	Appointed by the Governor
Shirrin L. Blaisdell	Appointed by the Governor from a List of Retired State and PLD Employees Nominated by Retirees
Philip A. Brookhouse	Appointed by the Governor from a List of Nominees Submitted by the Maine Education Association – Retired
Mark A. Brunton	Maine State Employees Association
Kenneth L. Williams	Elected by the Maine Education Association

**SENIOR ADMINISTRATIVE STAFF**

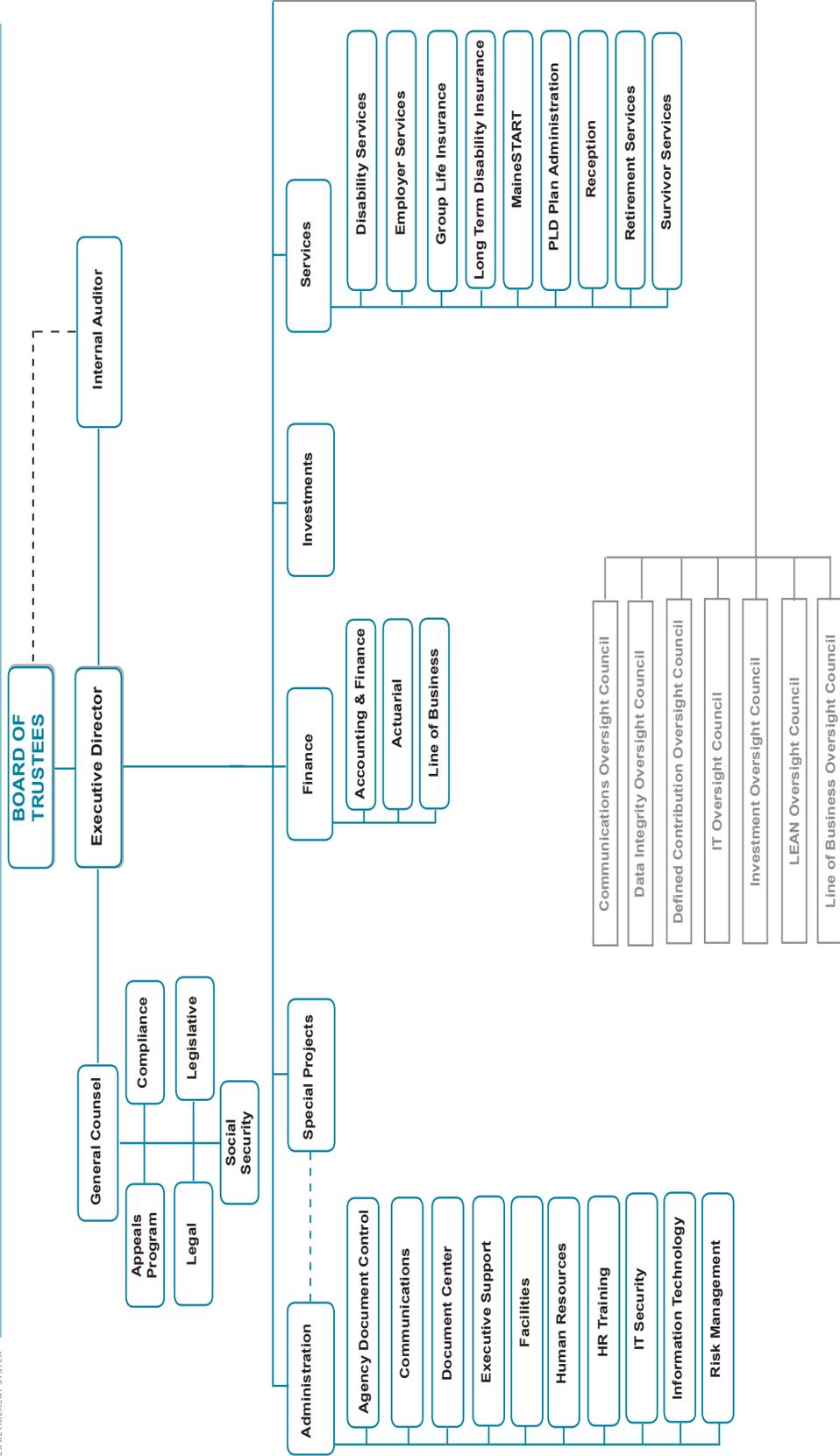
Sandra J. Matheson	Executive Director
Michael J. Colleran	General Counsel
James A. Bennett Ph.D., CFA, CAIA	Deputy Chief Investment Officer
Rebecca A. Grant	Deputy Executive Director
James Dusch	Deputy Executive Director
Sherry Tripp Vandrell, CMA, CGFM	Director of Finance
Valerie E. Scott	Associate Deputy Director

**PRINCIPAL PROFESSIONAL CONSULTANTS**

Actuary:	Cheiron, Inc.
Investment Consultant:	Cambridge Associates
Auditors:	BerryDunn
Internal Auditor:	Randal L. Lloyd

See page 81 for a list of professional investment management firms. Information regarding commissions paid can be found on page 88.

**Organizational Chart by Function**



## 2019 Legislative Update

### LEGISLATION ENACTED DURING THE 129<sup>th</sup> FIRST REGULAR SESSION

#### **An Act to Prohibit Consideration of Naloxone in Life Insurance Underwriting**

PL 2019, c. 203 [L.D. 1047]  
Effective Date: September 19, 2019

This law prohibits a denial or limitation of coverage or an increase in insurance premiums under a life insurance policy based on the fact that an individual has been issued a prescription for or has purchased naloxone hydrochloride.

#### **An Act to Enact the Maine Death with Dignity Act**

PL 2019, c. 271 [L.D. 1313]  
Effective Date: September 19, 2019

There is one aspect of this enacted law that is relevant to MainePERS. As it relates to life insurance, the law prohibits the availability or cost of the coverage from being based on a request for medication to end the individual's life. It also prohibits the denial of benefits to the beneficiary of an individual who acts in accordance with this law.

#### **An Act Making Unified Appropriations and Allocations for the Expenditures of State Government, General Fund and Other Funds, and Changing Certain Provisions of the Law Necessary to the Proper Operations of State Government for the Fiscal Years Ending June 30, 2019, June 30, 2020 and June 30, 2021**

PL 2019, c. 343 [L.D. 1001]  
Effective Date: July 17, 2019

This law is the State budget for fiscal years 2020 and 2021. It includes funding for the State Employee/Teacher, Legislative and Judicial Retirement Programs and the Group Life Insurance Program, and appropriations for the pay-as-you-go benefit plans for retired Governors and certain retired Judges.

#### **An Act to Create Fairness for Dispatchers in the Maine Public Employees Retirement System**

PL 2019, c. 364 [L.D. 1395]  
Effective Date: September 19, 2019

This law permits participating local district employers to elect to cover its dispatchers, as defined in the bill, by a special plan. Dispatchers are not eligible for coverage in a special plan that permits retirement with less than 25 years of service.

#### **An Act to Exclude Collectively Bargained Salary and Job Promotion Increases from the Earnable Compensation Limitation for Retirement Purposes**

PL 2019, c. 395 [L.D. 1620]  
Effective Date: September 19, 2019

This law excludes collectively bargained salary and wage increases and job promotions from the 5%/10% cap on earnable compensation to be included in benefit calculations.

*continued on next page*

## 2019 Legislative Update

*(concluded)*

### **An Act to Remove Certain Restrictions Imposed on Retired State Employees Who Return to Work**

PL 2019, c. 436 [L.D. 1220]  
Effective Date: September 19, 2019

This law removes the compensation and time limit restrictions for retired state employees and teachers who return to work. Those who return to work as a classroom-based employee or school administrator may do so under one-year contracts, and there is no limit to the number of contracts that the individual may have. The law also clarifies the employment benefits to which the returning individual is entitled, and specifies the contributions that must be made to MainePERS toward the unfunded actuarial liability (UAL) and to the state group health plan.

### **An Act to Improve Recruitment and Retention in State Law Enforcement by Offering Retirement Service Credit**

PL 2019, c. 459 [L.D. 1400]  
Effective Date: September 19, 2019

This law permits the purchase of up to 4 years of service as a law enforcement officer earned with a federal, state, county or local law enforcement agency before becoming a MainePERS member. The member must have at least 15 years of creditable service to be eligible to purchase the service, and the cost is the full actuarial equivalent of the benefit based on the additional service that is purchased. The member must provide certification that the service to be purchased has not and will not be used to obtain other retirement benefits.

### **An Act to Amend the Laws Governing the Collective Bargaining Rights of Employees of School Management and Leadership Centers**

PL 2019, c. 460 [L.D. 1412]  
Effective Date: September 19, 2019

This law amends the definition of teacher to include employees of school management and leadership centers who otherwise meet the definition. The law also makes clear that the school management and leadership center is responsible for the payment of normal costs for its employees who are in the teacher plan.

### **An Act to Modify Retirement Plans for Fire Investigators and Sergeants**

PL 2019, c. 482 [L.D. 1480]  
Effective Date: September 19, 2019

This bill removes state fire marshal investigators, state fire marshal senior investigators and state fire marshal sergeants from the 1998 Special Plan and places them in a new special plan that provides for retirement after 20 years of service, regardless of age. The effective date of the new plan is July 1, 2020.

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# FINANCIAL SECTION



*Aspen*





## INDEPENDENT AUDITOR'S REPORT

Board of Trustees of  
Maine Public Employees Retirement System

### **Report on the Financial Statements**

We have audited the accompanying statement of fiduciary net position of Maine Public Employees Retirement System (the System), a component unit of the State of Maine, as of June 30, 2019 and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System as of June 30, 2019, and the changes in its fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.

Board of Trustees of  
Maine Public Employees Retirement System

**Other Matters**

*Required Supplementary Information*

U.S. generally accepted accounting principles require that Management's Discussion and Analysis and the required supplementary information as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Additional Supplementary Information*

Our audits were conducted for the purpose of forming an opinion on the financial statements. The accompanying additional supplementary information as listed in the table of contents is presented for the purpose of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the additional supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections as listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

**Report on Summarized Comparative Information**

We have previously audited the System's June 30, 2018 basic financial statements and we expressed an unmodified opinion on those statements in our report dated October 31, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018 is consistent, in all material respects, with the audited financial statements from which it has been derived.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated October 15, 2019 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

*Berry Dunn McNeil & Parker, LLC*

Manchester, New Hampshire  
October 15, 2019

## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) June 30, 2019 Financial Report

### Introduction

This Management's Discussion and Analysis (MD&A) is prepared by the management staff of the Maine Public Employees Retirement System (MainePERS or the System) for the purpose of providing an overview of the System's financial statements.

### Financial Reporting Structure

The System's financial statements are prepared on an accrual basis of accounting in accordance with Governmental Accounting Standards Board (GASB) pronouncements. The accrual basis of accounting requires the recognition and recording of financial transactions and other related events when they occur and not just in conjunction with the inflows and outflows of cash and other resources.

The funds managed by the System are held in trust and consistent with state and federal law can only be used for the payment of pension and related benefits to its members or, in the case of the Retiree Health Insurance Trust Fund, for the payment of retiree health insurance premiums for eligible retirees of the State of Maine. The System's Board of Trustees (the Board), as fiduciary, establishes the System's investment policies and oversees their overall implementation.

The System reports five defined benefit retirement plans consisting of the State Employee and Teacher Plan, a multiple-employer cost sharing plan with a special funding situation; the Judicial Plan, a single employer plan; the Legislative Plan, a single employer plan; the PLD Consolidated Plan, a multiple-employer cost sharing plan; and the PLD Agent Plan, an agent multiple-employer plan. The System also reports a Group Life Insurance Plan covering active state employees (including judges and legislators), teachers, and participating employees of the PLD Plan as well as two multiple-employer cost sharing OPEB plans providing life insurance coverage in retirement for retired state employees and teachers and eligible retirees of the PLD Plans. In addition, the System reports certain defined contribution plans, the MainePERS OPEB Trust, and the Retiree Health Insurance Trust Fund.

### Basic Financial Statements

The Statement of Fiduciary Net Position reports the balance of Fiduciary Net Position restricted for future benefits as of the fiscal year end, with summarized values reported as of the previous fiscal year end. The Statement of Changes in Fiduciary Net Position reports the net change in Fiduciary Net Position for the fiscal year, with summarized values reported for the previous fiscal year. The System reports each as separate funds and in separate columns in the financial statements. Condensed versions of both statements are included in the following section.

The Schedules of Changes in the Plan's Net Pension Liability and Related Ratios (Required Supplementary Information) present the total pension liability and information indicating the source of changes in the liability for each defined benefit retirement plan administered by the System. In addition, they show summary information regarding each Plan's net position for the years presented. They also present each Plan's net pension liability as a percentage of the covered payroll.

The Schedules of Employer Contributions (Required Supplementary Information) present the actuarially determined contributions for each defined benefit plan and compare them to actual employer contributions for the period presented. They also provide the actual contributions as a percentage of covered payroll for each year.

The Schedule of Investment Returns (Required Supplementary Information) presents the annual money-weighted rate of return, net of investment expenses, for all of the defined benefit plans for each year presented.

The Schedules of Changes in the Plan's Net OPEB Liability and Related Ratios for the Group Life Insurance Plans (Required Supplementary Information) present the total OPEB liability and information indicating the source of changes in the liability for each OPEB plan administered by the System. In addition, they show summary information regarding each Plan's net position for the years presented. They also present each Plan's net OPEB liability as a percentage of the covered payroll.

The Schedules of Employer Contributions for the Group Life Insurance Plans (Required Supplementary Information) present the actuarially determined contributions for each OPEB plan and compare them to actual employer contributions for the periods presented. They also provide the actual contributions as a percentage of covered payroll for each year.

The Schedule of Investment Returns (Required Supplementary Information) presents the annual money-weighted rate of return, net of investment expenses, for all of the OPEB plans for each year presented.

**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**  
**June 30, 2019 Financial Report**  
 (continued)

**Financial Highlights and Analysis**

The following are the Condensed Comparative Statements of Fiduciary Net Position and Condensed Comparative Statements of Changes in Fiduciary Net Position for the System for the fiscal years ended June 30, 2019, 2018, and 2017:

**Condensed Comparative Statements of Fiduciary Net Position**

(Dollar Values Expressed in Millions)

	June 30, 2019	June 30, 2018	June 30, 2017
Cash and Receivables	\$ 106.9	\$ 68.8	\$ 76.6
Investments at Fair Value	15,526.9	14,952.4	13,950.8
Collateral on Loaned Securities	200.0	208.0	19.5
Other Assets	19.3	6.0	7.5
<b>Total Assets</b>	<b>\$ 15,853.1</b>	<b>\$ 15,235.2</b>	<b>\$ 14,054.4</b>
Investment Purchases	\$ -	\$ -	\$ -
Securities Lending Payable	-	-	-
Investment Management Fees Payable	\$ 19.9	\$ 16.3	\$ 15.2
Obligations Under Securities Lending Activities	200.0	208.0	19.5
Other Liabilities	57.5	14.1	14.8
<b>Total Liabilities</b>	<b>\$ 277.4</b>	<b>\$ 238.4</b>	<b>\$ 49.5</b>
<b>Fiduciary Net Position - Restricted for Benefits</b>	<b>\$ 15,575.7</b>	<b>\$ 14,996.8</b>	<b>\$ 14,004.9</b>

**Condensed Comparative Statements of Changes in Fiduciary Net Position**

(Dollar Values Expressed in Millions)

	June 30, 2019	June 30, 2018	June 30, 2017
<b>ADDITIONS:</b>			
Member Contributions	\$ 209.8	\$ 196.8	\$ 194.1
Employer Contributions	291.1	278.0	274.2
Non-Employer Contributing Entities Contributions	136.5	132.9	119.7
Total Investment Income	996.1	1,383.8	1,613.3
Transfers from Other Plans	0.5	0.4	0.3
<b>Total Additions</b>	<b>\$ 1,634.0</b>	<b>\$ 1,991.9</b>	<b>\$ 2,201.6</b>
<b>DEDUCTIONS:</b>			
Benefits Paid	\$ 1,009.4	\$ 959.3	\$ 921.5
Other	45.7	40.7	39.6
<b>Total Deductions</b>	<b>\$ 1,055.1</b>	<b>\$ 1,000.0</b>	<b>\$ 961.1</b>
<b>Net Increase</b>	<b>\$ 578.9</b>	<b>\$ 991.9</b>	<b>\$ 1,240.5</b>
<b>Fiduciary Net Position - Restricted for Benefits, Beginning of Year</b>	<b>\$ 14,996.8</b>	<b>\$ 14,004.9</b>	<b>\$ 12,764.4</b>
<b>Fiduciary Net Position - Restricted for Benefits, End of Year</b>	<b>\$ 15,575.7</b>	<b>\$ 14,996.8</b>	<b>\$ 14,004.9</b>

Fiduciary Net Position

The Fiduciary Net Position of the System increased in fiscal year 2019 by \$578.9 million (3.9%) from the prior year Fiduciary Net Position. While lower than in 2018, investment returns were strong and contributed to the increase. Investment income was \$996.1 million in fiscal year 2019 compared to \$1,383.8 million in fiscal year 2018.

## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

### June 30, 2019 Financial Report

(continued)

Comparatively, the Fiduciary Net Position of the System increased in fiscal year 2018 by \$991.9 million (7.1%) from the prior year Fiduciary Net Position. While lower than in 2017, investment returns were strong and contributed to the increase. Investment income was \$1,383.8 million in fiscal year 2018 compared to \$1,613.3 million in fiscal year 2017.

#### Assets

Investments at Fair Value increased by \$574.5 million (3.8%) in fiscal year 2019. This increase in Investments at Fair Value combined with a decrease in collateral on loaned securities of \$8.0 million and an increase in cash and receivables of \$38.1 million contributed to an increase in total assets of \$617.9 million during the fiscal year. The System records the collateral on loaned securities due to its securities lending activity as an asset and corresponding liability. The decrease of \$8 million in collateral on loaned securities arose due to a more conservative approach to securities lending. Non-cash collateral is not recorded in total assets on the System's financial statements.

Comparatively, Investments at Fair Value increased by \$1,001.6 million (7.2%) in fiscal year 2018. This increase in Investments at Fair Value combined with an increase of \$188.5 million in collateral on loaned securities and a decrease in cash and receivables of \$7.8 million contributed to an increase in total assets of \$1,180.8 million during the fiscal year. The System records the collateral on loaned securities due to its securities lending activity as an asset and corresponding liability. The increase of \$188.5 million in collateral on loaned securities arose due to increased market values and higher utilization rates for the domestic equity account.

There were \$32.1 million in pending sales at June 30, 2019. There were \$2.5 million in pending sales at June 30, 2018 and there were no outstanding trades at June 30, 2017.

#### Liabilities

The System's custodian records an investment purchase or sale between the time it enters into a trade and the time that trade is settled. On June 30, 2019, total loans outstanding in the securities lending program were \$200 million. On June 30, 2018 and 2017, the total loans outstanding in the securities lending program were \$208 million and \$19.5 million, respectively.

#### Additions to Fiduciary Net Position

Additions to Fiduciary Net Position during fiscal year 2019 totaled \$1,634 million compared to additions of \$1,991.9 million to Fiduciary Net Position in fiscal year 2018. While contributions from all sources increased by \$29.7 million, investment income, net of fees and other deductions, decreased by \$387.7 million. The decrease in investment income relative to fiscal year 2018 is due to lower interest rates.

Additions to Fiduciary Net Position during fiscal year 2018 totaled \$1,991.9 million compared to additions of \$2,201.6 million to Fiduciary Net Position in fiscal year 2017. This was largely due to the fact that investment income, net of fees and other deductions, decreased by \$229.5 million. The decrease in investment income relative to fiscal year 2017 is primarily attributable to public equity and alternative market returns.

The State's contributions on behalf of State employees totaled \$160.8 million, \$156.5 million, and \$163.0 million for fiscal years 2019, 2018, and 2017, respectively. The State's contributions on behalf of teachers totaled \$133 million, \$129.4 million, and \$116.4 million, for fiscal years 2019, 2018, and 2017, respectively. The State's contribution on behalf of judges totaled \$1.2 million, \$1.2 million, and \$1.1 million for fiscal years 2019, 2018, and 2017, respectively. Based on the funding methodology used and considering the funded status of the Legislative Plan, no employer contribution was required in fiscal years 2019, 2018 or 2017.

The balance of employer contributions reported is from local school district employers and Participating Local District (PLD) employers. Local school district employers pay the normal cost contribution on behalf of public school teachers. The normal cost rate as a percentage of earnable compensation for fiscal year 2019 and 2018 was 3.97%; for fiscal year 2017 the normal cost rate was 3.36%. The range of employer contributions in the PLD Consolidated Plan as a percent of earnable compensation in fiscal year 2019 was 4.1% to 16.3%; for fiscal year 2018 the range was 3.9% to 15.7%; and for fiscal year 2017 the range was 4.6% to 14.2%. Historically, the PLD Consolidated Plan's funded status and established funding approach resulted in employers of the PLD Consolidated Plan paying less than what the true normal cost would otherwise require. The employer rates have been incrementally increased over the past several years to reach a contribution rate closer to true normal cost.

Member and employer data, contribution and benefit data for the 10 non-consolidated PLDs are specific to each PLD and are obtainable from the System.

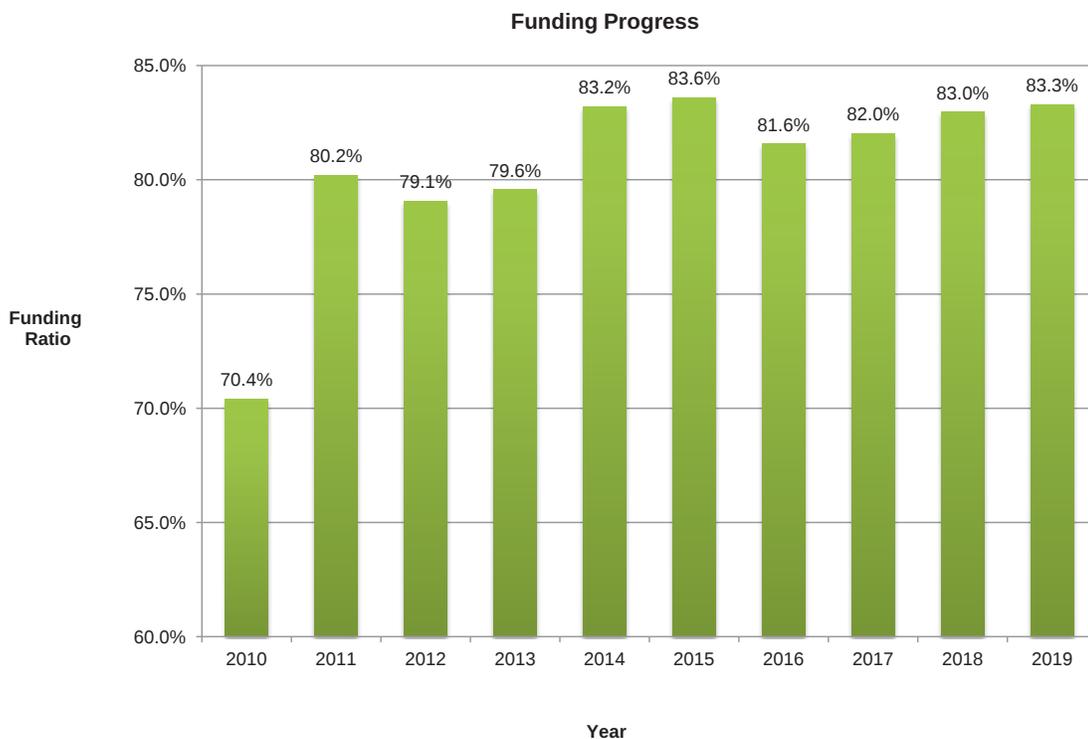
**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**  
**June 30, 2019 Financial Report**  
*(continued)*

Deductions from Fiduciary Net Position

Total deductions from Fiduciary Net Position restricted for benefits during fiscal year 2019 increased by \$55.1 million (5.5%). The fiscal year 2019 increase was due in part to an increase in the number of recipients receiving benefits, as well as the increased cost of benefits paid and refunds and withdrawals of contributions. Benefit payments in fiscal year 2019 exceeded contributions by \$372 million. Contributions totaled \$637.4 million, and benefit payments totaled \$1,009.4 million.

Comparatively, total deductions from Fiduciary Net Position restricted for benefits during fiscal year 2018 increased by \$38.9 million (4%). The fiscal year 2018 increase was due in part to an increase in the number of recipients receiving benefits, as well as the increased cost of benefits paid and refunds and withdrawals of contributions. Benefit payments in fiscal year 2018 exceeded contributions by \$351.6 million. Contributions totaled \$607.7 million, and benefit payments totaled \$959.3 million.

**System Funding Status – Aggregate**

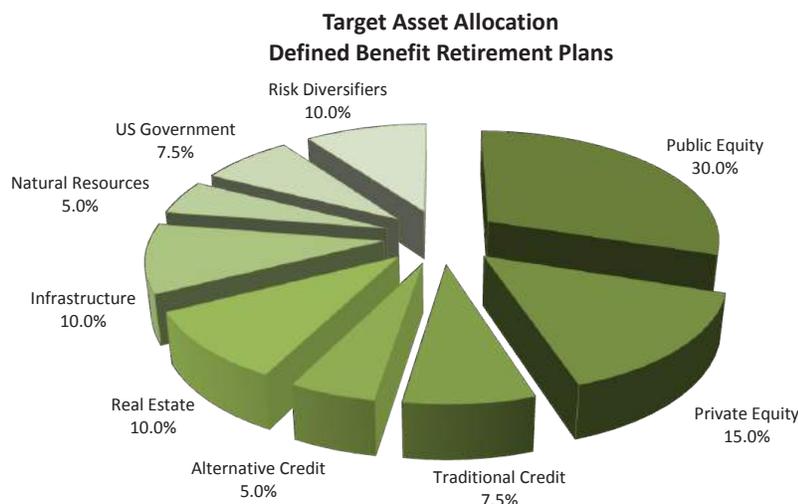


At June 30, 2019, the State Employee and Teacher, Judicial, Legislative and PLD defined benefit plans were actuarially funded at 83.3%, a slight increase from the actuarial funding level of 83% at June 30, 2018. As illustrated in the chart, the actuarial funded ratio of the System was 70.4% at June 30, 2010. This was followed by a significant increase in 2011 to 80.2%. Significant improvement in investment returns in 2011, combined with a decrease in the overall unfunded liabilities of the plan resulting from changes in plan benefit structure and changes in assumptions adopted following the completion of an experience study in 2011, pushed the funding level up for this year. Modest investment returns, combined with increased deductions from the plan for benefits, contributed to the decrease in 2012. The increase in the funded ratio for 2013 and 2014 is attributable in part to strong investment returns during those years, in addition to changes in plan provisions and increased contribution rates. Lower investment returns combined with increased contribution rates in 2015 contributed to keeping the funding ratio level. The decrease in funding level in 2016 is attributable, in large part, to low investment returns due to the low return environment, combined with an increase in the overall liabilities of the plans resulting from changes in assumptions adopted following the completion of an experience study in 2016. The modest increases in 2017, 2018 and 2019 are attributable, in large part, to investment returns during those years.

**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**  
**June 30, 2019 Financial Report**  
*(continued)*

**Investments**

The assets of all the defined benefit retirement plans that the System administers are commingled for investment purposes.



The System's investment portfolio for the defined benefit retirement plans is invested across nine asset classes: public equity, private equity, traditional credit, alternative credit, real estate, infrastructure, natural resources, US Government, and risk diversifiers. Publicly traded derivative securities are used in some portfolios to emulate one or more of the asset classes. The investment policy established by the Board in 2012 and as amended in December 2017 assigned strategic target allocations for these asset classes, as shown in the above chart.

Investments of the Group Life Insurance Plans and the Retiree Health Insurance Trust are invested separately from the assets of the defined benefit retirement plans. The target allocations for these assets are public equity (70%), real estate (5%), traditional credit (15%), and US Government (10%).

All of the assets invested by the System are in portfolios managed by professional investment management firms. These managers act as fiduciaries and invest the assets assigned to them in accordance with the Board's investment policy and their separate contractual arrangements. At June 30, 2019, total fair value of assets in these portfolios (together with the amounts otherwise managed) was \$15.5 billion. The total fair value of assets as of June 30, 2018 and June 30, 2017, respectively, was \$15.0 billion and \$14.0 billion. The investment return, net of all fees, for the year ended June 30, 2019 was 7.1%. The investment return for the years ended June 30, 2018 and June 30, 2017, respectively, was 10.3% and 12.5%. Investment returns in fiscal year 2019 were lower than in fiscal year 2018, due primarily to Public Equity and Alternative market returns. Over the five, ten and thirty year periods ended June 30, 2019, the average annual investment return for the total fund was 6.4%, 9.3%, and 8.1%, respectively.

**System Membership – Aggregate**

The following membership counts for all of the defined benefit plans are derived from actuarial valuation data:

	<u>2019</u>	<u>2018</u>	<u>% Change</u>
Current active participants:			
Vested and nonvested	51,859	51,522	0.7%
Terminated participants			
Vested	10,680	10,414	2.6%
Inactives Due Refunds	47,029	46,963	0.1%
Retirees and beneficiaries receiving benefits	46,448	45,287	2.6%
<b>Total Membership</b>	<b><u>156,016</u></b>	<b><u>154,186</u></b>	<b><u>1.2%</u></b>

**MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)**  
**June 30, 2019 Financial Report**  
*(concluded)*

The number of active State employees at June 30, 2019 in the State Employee and Teacher plan was 12,435, a decrease of 12 from June 30, 2018. The number of active Teachers at June 30, 2019 was 27,441, an increase of 45 from June 30, 2018. Membership for judges was 61, a decrease of 1 from the previous year. Membership for Legislators was 179, a decrease of 6 from June 30, 2018. Total active membership in the PLD Consolidated Plan and the 10 non-consolidated plans at June 30, 2019 was 11,743, an increase of 311 from June 30, 2018.

**Group Life Insurance Plan**

The Group Life Insurance Plans provide life insurance coverage for eligible members of the defined benefit plans administered by the System. Eligible members include State, teacher and those PLD employees whose employers have elected to participate in the program, and whose positions are eligible for coverage. Eligible employees who elect coverage receive life insurance coverage while actively employed and may carry coverage into retirement. The following summarized data, stated in millions, is derived from actuarial valuation data for the Group Life Insurance Plan with respect to benefits in retirement:

	<u>2019</u>	<u>2018</u>	<u>% Change</u>
Total OPEB Liability	\$242.1	\$232.3	4.2%
Plan Net Position	116.9	110.1	6.2%
<b>Net OPEB Liability</b>	<b><u><u>\$125.2</u></u></b>	<b><u><u>\$122.2</u></u></b>	<b><u><u>2.5%</u></u></b>

**Defined Contribution Plans**

The Section 401(a), Section 457 and Section 403(b) Plans administered by the Board are defined contribution plans. These plans are provided as supplemental plans to the basic retirement benefits of employees of PLDs that elect to participate in the Defined Contribution Plans. Contributions may be made to the Plans subject to plan and Internal Revenue Code limitations. Investments in the Defined Contribution Plans are individually directed and controlled by plan participants.

**Retiree Health Insurance Trust Fund**

The Maine State Legislature established the Retiree Health Insurance Post Employment Investment Trust (the Fund) as an irrevocable trust for the sole purpose of holding and investing funds appropriated or otherwise provided to the Fund for the purpose of accumulating assets to provide funding to the State's unfunded liability obligations for retiree health benefits. The Trustees of the System were named Trustees of the Investment Trust Fund. At June 30, 2019, the Fiduciary Net Position Held in Trust for the Fund was \$277,703,141.

**Requests for Information**

Questions concerning this Management's Discussion and Analysis, other parts of the System's financial statements or the System's financial activities should be directed to Maine Public Employees Retirement System, Sherry Tripp Vandrell, Director of Finance, at PO Box 349, Augusta, Maine 04332 or at (207) 512-3100 or toll-free at (800) 451-9800.

**STATEMENT OF FIDUCIARY NET POSITION**  
**June 30, 2019**  
**With Summarized Information as of June 30, 2018**

	<u>State Employee and Teacher Plan</u>	<u>Judicial Plan</u>	<u>Legislative Plan</u>	<u>PLD Consolidated Plan</u>	<u>PLD Agent Plan</u>
<b>Assets:</b>					
Cash and cash equivalents (note 3)	\$ 31,329,444	\$ 334,894	\$ 60,099	\$ 5,296,414	\$ 164,972
Investments at fair value (note 3):					
Common equity and fixed income securities	1,831,346,278	11,204,754	2,015,842	449,355,848	5,639,285
Common/collective trusts	4,769,067,415	29,178,658	5,249,519	1,170,181,936	14,685,442
Partnerships	<u>5,397,341,945</u>	<u>33,022,639</u>	<u>5,941,088</u>	<u>1,324,341,112</u>	<u>16,620,095</u>
<b>Total investments</b>	<b>11,997,755,638</b>	<b>73,406,051</b>	<b>13,206,449</b>	<b>2,943,878,896</b>	<b>36,944,822</b>
<b>Receivables:</b>					
Contributions and premiums (notes 6 and 7)	23,397,046	–	95	8,131,710	3,528
Accrued interest and dividends	1,901,321	11,633	2,093	466,525	5,855
Due from brokers for securities sold	<u>25,524,773</u>	<u>156,169</u>	<u>28,096</u>	<u>6,262,991</u>	<u>78,599</u>
<b>Total receivables</b>	<b>50,823,140</b>	<b>167,802</b>	<b>30,284</b>	<b>14,861,226</b>	<b>87,982</b>
Collateral on loaned securities (note 5)	159,273,821	974,487	175,320	39,080,880	490,454
Capital assets, net of accumulated depreciation	<u>15,404,325</u>	<u>94,249</u>	<u>16,956</u>	<u>3,779,746</u>	<u>47,435</u>
<b>Total assets</b>	<b>12,254,586,368</b>	<b>74,977,483</b>	<b>13,489,108</b>	<b>3,006,897,162</b>	<b>37,735,665</b>
<b>Liabilities:</b>					
Accounts payable	5,124,779	31,355	5,641	1,257,463	15,781
Due to brokers for securities purchased	25,996,301	159,054	28,615	6,378,690	80,051
Other liabilities	12,839,448	78,556	14,133	3,150,404	39,537
Accrued investment management fees	15,786,944	96,590	17,377	3,873,629	48,613
Obligations under securities lending activities (note 5)	<u>159,273,821</u>	<u>974,487</u>	<u>175,320</u>	<u>39,080,880</u>	<u>490,454</u>
<b>Total liabilities</b>	<b><u>219,021,293</u></b>	<b><u>1,340,042</u></b>	<b><u>241,086</u></b>	<b><u>53,741,066</u></b>	<b><u>674,436</u></b>
<b>Fiduciary net position – restricted for benefits</b>	<b><u>\$12,035,565,075</u></b>	<b><u>\$ 73,637,441</u></b>	<b><u>\$ 13,248,022</u></b>	<b><u>\$ 2,953,156,096</u></b>	<b><u>\$ 37,061,229</u></b>

The accompanying notes are an integral part of these financial statements.

**STATEMENT OF FIDUCIARY NET POSITION**  
**June 30, 2019**  
**With Summarized Information as of June 30, 2018**

<u>Group Life Insurance Plan Active</u>	<u>Group Life Insurance Plan Retired SET</u>	<u>Group Life Insurance Plan Retired PLD</u>	<u>Defined Contribution Plans</u>	<u>MainePERS OPEB Trust</u>	<u>Retiree Health Insurance Trust Fund</u>	<u>2019 Total</u>	<u>2018 Summarized</u>
\$ 292,183	\$ 855,339	\$ 200,942	\$ 42,999	\$ -	\$ -	\$ 38,577,286	\$ 32,417,604
-	-	-	-	-	-	2,299,562,007	2,256,043,596
13,662,036	100,832,191	16,293,971	41,423,064	13,724,529	275,727,733	6,450,026,494	6,964,047,804
-	-	-	-	-	-	6,777,266,879	5,732,356,082
<u>13,662,036</u>	<u>100,832,191</u>	<u>16,293,971</u>	<u>41,423,064</u>	<u>13,724,529</u>	<u>275,727,733</u>	<u>15,526,855,380</u>	<u>14,952,447,482</u>
218,216	-	148,426	196	-	2,000,000	33,899,217	31,317,459
-	-	-	-	-	-	2,387,427	2,423,168
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>32,050,628</u>	<u>2,533,863</u>
218,216	-	148,426	196	-	2,000,000	68,337,272	36,274,490
-	-	-	-	-	-	199,994,962	208,030,192
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>19,342,711</u>	<u>5,992,776</u>
14,172,435	101,687,530	16,643,339	41,466,259	13,724,529	277,727,733	15,853,107,611	15,235,162,544
658	4,857	785	-	-	-	6,441,319	6,820,468
-	-	-	-	-	-	32,642,711	-
537,937	1,058,587	382,212	41,571	345,933	3,000	18,491,318	7,179,970
990	7,304	1,180	-	1,045	21,592	19,855,264	16,339,463
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>199,994,962</u>	<u>208,030,192</u>
<u>539,585</u>	<u>1,070,748</u>	<u>384,177</u>	<u>41,571</u>	<u>346,978</u>	<u>24,592</u>	<u>277,425,574</u>	<u>238,370,093</u>
<u>\$ 13,632,850</u>	<u>\$ 100,616,782</u>	<u>\$ 16,259,162</u>	<u>\$ 41,424,688</u>	<u>\$ 13,377,551</u>	<u>\$ 277,703,141</u>	<u>\$ 15,575,682,037</u>	<u>\$ 14,996,792,451</u>

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**  
**Year Ended June 30, 2019**  
**With Summarized Information for the Year Ended June 30, 2018**

	<u>State Employee and Teacher Plan</u>	<u>Judicial Plan</u>	<u>Legislative Plan</u>	<u>PLD Consolidated Plan</u>	<u>PLD Agent Plan</u>
<b>Additions:</b>					
Investment income:					
From investing activities:					
Net appreciation in the fair value of plan investments	\$ 781,927,782	\$ 4,789,465	\$ 859,297	\$ 191,674,464	\$ 2,422,454
Interest	2,761,167	16,904	3,035	676,178	8,560
Dividends	76,038,313	465,226	83,699	18,657,455	234,146
Less: investment expenses	<u>(93,284,345)</u>	<u>(571,598)</u>	<u>(102,324)</u>	<u>(22,766,892)</u>	<u>(292,438)</u>
Net income from investing activities	767,442,917	4,699,997	843,707	188,241,205	2,372,722
From securities lending activities:					
Securities lending income	908,304	5,557	1,000	222,870	2,797
Borrower rebates refunded	772,107	4,724	850	189,451	2,378
Management fees	<u>(136,198)</u>	<u>(833)</u>	<u>(150)</u>	<u>(33,419)</u>	<u>(419)</u>
Net income from securities lending activities	<u>1,544,213</u>	<u>9,448</u>	<u>1,700</u>	<u>378,902</u>	<u>4,756</u>
Total investment income	768,987,130	4,709,445	845,407	188,620,107	2,377,478
Contributions and premiums (notes 6 and 7):					
Members	146,019,051	620,075	220,611	54,927,202	68,708
Employers	218,530,934	1,212,666	-	61,487,037	638,946
Non-employer contributing entities	132,980,832	-	-	-	-
Transfers from other plans	<u>-</u>	<u>-</u>	<u>45,285</u>	<u>268,552</u>	<u>-</u>
Total contributions and premiums	<u>497,530,817</u>	<u>1,832,741</u>	<u>265,896</u>	<u>116,682,791</u>	<u>707,654</u>
Total additions	1,266,517,947	6,542,186	1,111,303	305,302,898	3,085,132
<b>Deductions:</b>					
Benefits paid	832,934,948	4,021,982	482,660	158,671,037	2,842,649
Refunds and withdrawals	18,718,610	45,524	124,180	6,728,643	201,763
Transfers to other plans	311,233	2,604	-	220,000	-
Claims processing expenses (note 7)	-	-	-	-	-
Administrative expenses	<u>11,180,852</u>	<u>68,475</u>	<u>12,262</u>	<u>2,706,977</u>	<u>35,552</u>
Total deductions	<u>863,145,643</u>	<u>4,138,585</u>	<u>619,102</u>	<u>168,326,657</u>	<u>3,079,964</u>
Net increase in fiduciary net position	403,372,304	2,403,601	492,201	136,976,241	5,168
Fiduciary net position – restricted for benefits, beginning of year	<u>11,632,192,771</u>	<u>71,233,840</u>	<u>12,755,821</u>	<u>2,816,179,855</u>	<u>37,056,061</u>
Fiduciary net position – restricted for benefits, end of year	<u>\$12,035,565,075</u>	<u>\$ 73,637,441</u>	<u>\$ 13,248,022</u>	<u>\$ 2,953,156,096</u>	<u>\$ 37,061,229</u>

The accompanying notes are an integral part of these financial statements.

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**  
**Year Ended June 30, 2019**  
**With Summarized Information for the Year Ended June 30, 2018**

Group Life Insurance Plan Active	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Trust Fund	2019 Total	2018 Summarized
\$ 876,601	\$ 6,474,757	\$ 1,047,052	\$ 2,537,145	\$ 904,321	\$ 18,927,825	\$ 1,012,441,163	\$ 1,409,236,665
1,139	9,241	1,513	-	-	-	3,477,737	2,783,318
-	-	-	-	-	-	95,478,839	71,952,160
<u>(8,071)</u>	<u>(65,885)</u>	<u>(10,781)</u>	<u>(48,460)</u>	<u>(9,191)</u>	<u>(82,002)</u>	<u>(117,241,987)</u>	<u>(101,487,088)</u>
869,669	6,418,113	1,037,784	2,488,685	895,130	18,845,823	994,155,752	1,382,485,055
-	-	-	-	-	-	1,140,528	932,657
-	-	-	-	-	-	969,510	555,244
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(171,019)</u>	<u>(139,857)</u>
-	-	-	-	-	-	1,939,019	1,348,044
869,669	6,418,113	1,037,784	2,488,685	895,130	18,845,823	996,094,771	1,383,833,099
4,245,342	-	-	3,712,509	-	-	209,813,498	196,843,180
1,231,777	4,209,464	1,100,509	634,731	5,964	2,000,000	291,052,028	278,002,540
-	3,546,978	-	-	-	-	136,527,810	132,880,735
<u>-</u>	<u>-</u>	<u>-</u>	<u>220,000</u>	<u>-</u>	<u>-</u>	<u>533,837</u>	<u>386,621</u>
<u>5,477,119</u>	<u>7,756,442</u>	<u>1,100,509</u>	<u>4,567,240</u>	<u>5,964</u>	<u>2,000,000</u>	<u>637,927,173</u>	<u>608,113,076</u>
6,346,788	14,174,555	2,138,293	7,055,925	901,094	20,845,823	1,634,021,944	1,991,946,175
2,226,000	6,406,178	1,461,880	-	312,865	-	1,009,360,199	959,346,269
-	-	-	3,292,801	-	-	29,111,521	25,362,589
-	-	-	-	-	-	533,837	386,621
69,347	711,904	119,660	79,377	-	-	980,288	986,280
<u>73,556</u>	<u>726,320</u>	<u>119,519</u>	<u>220,000</u>	<u>-</u>	<u>3,000</u>	<u>15,146,513</u>	<u>13,963,613</u>
<u>2,368,903</u>	<u>7,844,402</u>	<u>1,701,059</u>	<u>3,592,178</u>	<u>312,865</u>	<u>3,000</u>	<u>1,055,132,358</u>	<u>1,000,045,372</u>
3,977,885	6,330,153	437,234	3,463,747	588,229	20,842,823	578,889,586	991,900,803
<u>9,654,965</u>	<u>94,286,629</u>	<u>15,821,928</u>	<u>37,960,941</u>	<u>12,789,322</u>	<u>256,860,318</u>	<u>14,996,792,451</u>	<u>14,004,891,648</u>
<u>\$ 13,632,850</u>	<u>\$100,616,782</u>	<u>\$ 16,259,162</u>	<u>\$ 41,424,688</u>	<u>\$ 13,377,551</u>	<u>\$ 277,703,141</u>	<u>\$ 15,575,682,037</u>	<u>\$ 14,996,792,451</u>

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018

#### **1. Overview of the Maine Public Employees Retirement System Benefit Plans**

##### Background

The Maine Public Employees Retirement System (the System or MainePERS), which is a component unit of the State of Maine, is the administrator of a public employee retirement system established and administered under the Laws of the State of Maine. The System was formerly named the Maine State Retirement System. The System provides pension, disability, and death benefits to its members, which include employees of the State, public school teachers (as defined by Maine law) and employees of 317 local municipalities and other public entities (participating local districts, or PLDs) in Maine, each of which contracts for participation in the System under provisions of the relevant statutes.

Individual PLDs are permitted by law to withdraw from participation in the System. Withdrawal precludes the PLD's nonmember employees, if any, and its employees hired subsequent to withdrawal from membership in the System. Depending on the circumstances and requirements of the PLD's participation under the System, a withdrawn PLD may have continuing funding obligations after withdrawal with respect to its employees who are active members at the time of withdrawal and who continue to be members thereafter, to its terminated vested employee members, and to its former employee members who are retired at the time of withdrawal.

##### Board of Trustees

The Board is comprised of eight members. State law specifies the composition of the Board, whose members are confirmed by the Legislature. Three trustees are System members, one of whom is proposed and elected by the Maine Education Association, one of whom is proposed and elected by the Maine State Employees Association, and one of whom is an active or retired PLD member appointed by the governing body of the Maine Municipal Association. Four other trustees are appointed by the Governor. Of these, one must be selected by the Governor from a list of nominees submitted by the Maine Retired Teachers Association and one must be a MainePERS retiree selected from a list of nominees submitted by State and/or PLD retirees. The remaining two appointees are direct gubernatorial appointments, both of whom must be qualified through training or experience in investments, accounting, banking or insurance or as actuaries. All appointed trustees are required to have "a working knowledge of retirement policy and legal issues and a general knowledge and understanding of banking, finance, and investment practices." The eighth trustee is the State Treasurer, who serves ex-officio. All trustee terms are three years, except for the two-year term of the State Treasurer. The Board annually elects its chair and vice chair from among its members.

##### Defined Benefit Plans

Pension funds managed by the System are constitutionally restricted and held in trust for the payment of pension and related benefits. The Board, in its fiduciary capacity, establishes the System's investment policies and oversees their overall implementation. The System administers five defined benefit pension plans consisting of the State Employee and Teacher Plan which includes the Governors' Plan, the Judicial Plan, the Legislative Plan, the PLD Consolidated Plan, and the PLD Agent Plan. The System maintains separate reserves and accounts and performs separate annual actuarial valuations for each pension plan. Additional information regarding each plan can be found in Note 6 of this report.

##### Group Life Insurance Plans

The Group Life Insurance Plans (the Plans) were established by the State Legislature to provide group life insurance benefits, during active service as well as in retirement, to State employees, Teachers, members of the Judiciary and the Legislature, as well as Elected and Appointed Officers of the State, that are eligible for membership in the System. Group Life Insurance benefits are also provided to the employees of PLDs that elect to participate in the Plans. Generally, benefit plan provisions can only be amended through statutory change. Employees are eligible for coverage under the Plans, subject to their membership in one or more of the aforementioned eligible employment classes and any other conditions of eligibility that the Board may prescribe by rule or decision.

Group Life Insurance funds managed by the System are held in trust for the payment of benefits to participants and/or their beneficiaries. The Board, in its fiduciary capacity, establishes the System's investment policies and oversees their overall implementation. The System maintains separate reserves and accounts for both active and retiree coverage and biennial actuarial valuations are performed for each plan within the program. In those years where a full actuarial valuation is not completed, a roll-forward of plan liabilities from the previous valuation to the current fiscal year end with expected benefit payments and accruals is conducted. The liabilities for fiscal year ended June 30, 2019 were calculated as part of a roll-forward actuarial valuation.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Defined Contribution Plans

The Section 401(a), Section 457 and Section 403(b) Plans, administered by the System’s Board of Trustees with funds held in trust, are defined contribution plans. These plans are available as supplemental plans to the basic retirement benefits of employees of PLDs that elect to participate in the Defined Contribution Plans. Contributions may be made to the Plans by plan participants subject to plan and Internal Revenue Code limitations. At June 30, 2019, participation in the defined contribution plans was as follows:

	<u>401(a) Plan</u>	<u>457 Plan</u>	<u>403(b) Plan</u>
Employers	7	61	1
Participants	78	700	413

Investments in the Defined Contribution Plans are individually directed and controlled by plan participants. Benefits for deferred compensation, employer contributions, and earnings on the accounts are not recognized by Plan participants for income tax purposes until actually paid to the participant or beneficiary.

MainePERS OPEB Trust

The MainePERS OPEB Trust is an irrevocable trust established for the purpose of accumulating assets to provide funding for retiree health benefits and life insurance in retirement for qualified individuals who retire from MainePERS. The Trustees of the System were named Trustees of the MainePERS OPEB Trust. Contributions are made to the Trust on an annual basis in the amount equal to the actuarially determined contribution amount.

Retiree Health Insurance Trust Fund

The Maine State Legislature established the Retiree Health Insurance Post Employment Investment Trust (Investment Trust Fund) as an irrevocable trust formed solely to hold and invest funds appropriated or otherwise provided to the Investment Trust Fund for the purpose of accumulating assets to provide funding to the State’s unfunded liability obligations for retiree health benefits. The Trustees of the System were named Trustees of the Investment Trust Fund.

**2. Summary of Significant Accounting Policies**

Basis of Accounting

The System’s financial statements are prepared using the accrual basis of accounting.

Comparative Summarized Information

The financial statements include certain prior-year summarized comparative information in total but not by fund. Such information does not include sufficient detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the System’s financial statements for the year ended June 30, 2018, from which the summarized information was derived.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (US GAAP) requires management to make significant estimates and assumptions. These estimates affect the reported amounts of fiduciary net position at the date of the financial statements, the actuarial information included in the required supplementary information as of the actuarial information date, the changes in fiduciary net position during the reporting period and, when applicable, the disclosure of contingent assets and liabilities at the date of the financial statements, as reported in the notes to the financial statements. Actual results could differ from those estimates.

Revenue Recognition

Pension contributions and group life insurance premiums, as well as contributions to the Retiree Health Insurance Trust, are recognized as additions in the period when they become due pursuant to formal commitments or statutory or contractual requirements. Contributions to Defined Contribution Plans are recognized in the period they are contributed.

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

Investment income includes net appreciation or depreciation in the fair value of investments, interest and dividend income, foreign currency transaction gains and losses, and securities lending income, less investment expenses, which include investment management and custodial fees and all other significant investment related costs. Dividends include income returns from partnerships. Investment income is recognized when earned and investment expenses are recorded when incurred.

#### Benefits Paid and Refunds and Withdrawals

Pension and group life insurance benefits and contributions and premium refunds and withdrawals to the System's members and beneficiaries are recognized as deductions when due and payable in accordance with the terms of the statutes. In addition, an estimate is made for group life insurance death benefits incurred before year end but not reported to the System until after year end. These are reflected as other liabilities. Distributions from Defined Contribution Plans and the Retiree Health Insurance Trust are recognized in the period the disbursement is made.

#### Investments

Investments are reported at fair value. Debt and equity securities that are traded on recognized exchanges are valued at the last sales price and the current exchange rates on the reporting date. Other regularly traded securities, including derivatives, are valued by the System's custodians through a variety of external sources. Investments that do not have an established market are reported at estimated fair value. The fair value of shares in common/collective trusts is based on unit values reported by the funds. The fair value of other investments, including private market partnerships, is based on third-party appraisals and valuations provided by the sponsor of the partnerships. Management reviews and approves all such appraisals and valuations prepared by other parties. Investment purchases and sales are recorded as of their trade date. Proceeds related to securities sold not yet purchased are carried as a liability and are adjusted to the fair value of the securities.

Assets of the defined benefit pension plans are pooled for investment purposes and are allocated to each plan based on each plan's fiduciary net position, as are investment expenses and administrative expenses. Assets of the Group Life Insurance Plans are pooled for investment purposes and are allocated to each plan based on each plan's fiduciary net position, as are investment expenses and administrative expenses. Other assets managed by the System are invested separately from the assets of the defined benefit pension plans and the Group Life Insurance Plans.

#### Due to/from Brokers

Amounts due to/from brokers for securities purchased or sold consist of trades not yet settled.

#### Cash and Cash Equivalents

The System considers all highly liquid debt instruments that have a maturity of 90 days or less when purchased to be cash equivalents.

#### Capital Assets

All capital assets with a unit cost of \$5,000 or greater are capitalized and reported in the accompanying financial statements. Purchased capital assets are valued at cost where historical records exist. Where necessary, for real estate, estimates of original cost are derived from historical real estate appraisals, historical real estate tax valuation records, and relevant accounting information derived from the records.

Capital asset costs include the purchase price or construction cost, plus those costs necessary to place the asset in its intended location and condition for use.

Depreciation is calculated using the straight-line method with estimated useful lives of 3 to 40 years.

#### Administrative Expenses

The cost of administering each of the plans managed by the System is financed primarily by investment income.

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

#### Risks and Uncertainties

The System makes investments in accordance with the Board's investment policy in a combination of equities, fixed income securities, infrastructure, private equity, real estate, derivative financial instruments, other investment securities and mutual funds and common/collective trusts holding such investments. The investment policy specifically prohibits investment managers from using derivative financial instruments to introduce leverage without specific prior approval by the Board. Investment securities and securities underlying certain investments are exposed to various risks, such as interest rate risk, market risk, custodial credit risk and credit risk. Investments in the Defined Contribution Plans are individually directed and controlled by plan participants. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, changes in the values of investment securities are likely to occur in the near term and it is at least possible that such changes could materially affect the amounts reported in the statements of fiduciary net position and changes in fiduciary net position.

#### Defined Benefit Contributions

Contributions to the Defined Benefit Plans from employers and non-employer contributing entities are established by an actuarial valuation on the basis of actuarial assumptions related to economic indicators (e.g., interest rates, inflation rates), and member and retiree compensation and demographics. By law, the assumptions are adopted by the Board based on recommendation of the System's actuary. The System is also required by Maine law to perform an actuarial experience study whenever the Board, on recommendation of its actuary, determines such a study to be necessary for actuarial soundness or prudent administration.

#### New Accounting Pronouncement

The System adopted Governmental Accounting Standards Board (GASB) Statement No. 83, *Certain Asset Retirement Obligations* for the year ended June 30, 2019. This statement establishes standards for governments to recognize and report liabilities associated with the retirement of certain tangible capital assets. Adopting this statement had no material impact on the System's financial reporting.

### **3. Cash and Cash Equivalents and Investments**

The Board is responsible for identifying the System's investment objective and establishing an investment policy to meet that objective. The Board relies on staff and consultants with appropriate expertise to establish investment policy, monitor compliance with that policy, and determine whether the investment objective has been met. The Board established the strategic asset allocation as part of its overall investment policy. The policy identifies the following investment classes and targets for all defined benefit pension plan assets: public equity (30%), private equity (15%), traditional credit (7.5%), alternative credit (5%), real estate (10%), infrastructure (10%), natural resources (5%), US Government (7.5%), and risk diversifiers (10%). For the group life insurance plan assets, the policy identifies four investment classes and targets: public equity (70%), real estate (5%), traditional credit (15%), and US Government (10%).

Custodial credit risk is the risk that in the event of a financial institution failure, the System's deposits may not be returned to it. The System has no formal policy for custodial credit risk. Cash and cash-like securities are held at two institutions: Bangor Savings Bank and JP Morgan. Cash balances at Bangor Savings Bank are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000. Bangor Savings Bank mitigates custodial credit risk through use of securities repurchase arrangements.

Cash equivalents at JP Morgan are invested in the JP Morgan Prime Money Market Fund. The JP Morgan Prime Money Market fund is composed of short term debt securities held in a collective fund for the benefit of the System and other investors. All securities purchased in the JP Morgan Prime Money Market must either be payable on demand or have a maturity not exceeding eighteen months from the time of purchase.

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

The System's cash equivalents and investments are not exposed to custodial credit risk (a) because the underlying investments are registered in the name of the System and held by the System's custodian or (b) because their existence is not evidenced by securities that exist in physical or book entry form.

These amounts are disclosed in the financial statements at June 30 as follows:

	<u>2019</u>	<u>2018</u>
Cash and Cash Equivalents	\$ 38,577,286	\$ 32,417,604
Investments	<u>15,526,855,380</u>	<u>14,952,447,482</u>
Total Fair Value	<u>\$ 15,565,432,666</u>	<u>\$ 14,984,865,086</u>

Credit risk is the risk an issuer or other counterparty to an investment will not fulfill its obligations to the System. The System has no formal policy on credit risk. The following table summarizes the System's aggregate fixed income portfolio credit ratings at June 30:

<u>Quality Rating</u>	<u>2019</u>	<u>2018</u>
AAA	\$ 1,715,664,001	\$ 2,035,877,181
AA	85,449,969	116,319,937
A	270,631,239	310,557,536
BBB	<u>308,476,768</u>	<u>320,018,966</u>
Total Credit Risk Debt	<u>\$ 2,380,221,977</u> <sup>(1)</sup>	<u>\$ 2,782,773,620</u> <sup>(2)</sup>

<sup>(1)</sup> Includes direct investments in debt securities held by the System as well as debt securities underlying investments in common/collective trusts. In 2019, all amounts are from common/collective trusts.

<sup>(2)</sup> Includes direct investments in debt securities held by the System as well as debt securities underlying investments in common/collective trusts. In 2018, all amounts are from common/collective trusts.

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of investment in a single issue. The System's investment policy places no limit on the amount the System may invest in any one issuer.

There were no individual investments that constitute 5% or more of fiduciary net position for the defined benefit pension plans administered by the System as of June 30, 2019.

There were no individual investments that constitute 5% or more of fiduciary net position for the other post-employment benefit plans administered by the System as of June 30, 2019.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The System has no formal investment policy related to managing interest rate risk. All of the System's fixed income portfolios are managed in accordance with contractual guidelines. Contractual guidelines generally specify a range of effective duration for the portfolio. Duration is widely used in the management of fixed income portfolios as a measure of a debt investment's exposure to fair value changes arising from changing interest rates. The System's interest rate risk is closely aligned with the Barclays Capital Aggregate Index. The following table details the System's interest rate risk for its debt investments at June 30, 2019, using the segmented time distribution method. Maturities are based on the weighted average maturities of underlying investments in the common/collective trusts.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Investment Type Common/ Collective	Maturities as of June 30, 2019				
	Fair Value	Less than 1 Year	1 to 6 Years	6 to 10 Years	10+ Years
Trusts	\$ 2,380,221,977	\$ 124,747,434	\$ 1,710,546,524	\$ 357,818,770	\$ 187,109,250
<b>Total</b>	<b>\$ 2,380,221,977</b>	<b>\$ 124,747,434</b>	<b>\$ 1,710,546,524</b>	<b>\$ 357,818,770</b>	<b>\$ 187,109,250</b>

Investment Type Common/ Collective	Maturities as of June 30, 2018				
	Fair Value	Less than 1 Year	1 to 6 Years	6 to 10 Years	10+ Years
Trusts	\$ 2,782,773,620	\$ 202,057,193	\$ 1,762,427,930	\$ 590,852,409	\$ 227,436,088
<b>Total</b>	<b>\$ 2,782,773,620</b>	<b>\$ 202,057,193</b>	<b>\$ 1,762,427,930</b>	<b>\$ 590,852,409</b>	<b>\$ 227,436,088</b>

Foreign currency risk is the risk that changes in exchange rates will adversely impact the recorded fair value of an investment. The System does not have a formal investment policy limiting the amount of foreign currency exposure of its investments. The System's currency exposures reside primarily in the System's international equity investments. The System may hedge a portfolio's foreign currency exposure with currency forward contracts depending on their views of the currency relative to the dollar. All of the System's portfolios are managed in accordance with contractual guidelines. The System has nearly eliminated all direct exposure to foreign currency by using index funds which means the System owns units of U.S. dollar denominated commingled funds rather than conducting transactions directly in foreign currency. The System is still indirectly exposed to all the foreign currencies within the index.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

The System's direct and indirect exposure to foreign currency risk in U.S. dollars as of June 30, 2019 is highlighted in the following table:

<u>Currency</u>	<u>Total</u>
Argentine Peso	\$ 1,551,264
Australian Dollar	96,644,912
Bermudian Dollar	2,276,096
Brazilian Real	41,765,582
British Pound Sterling	270,106,176
Canadian Dollar	141,125,443
Chilean Peso	5,117,888
Chinese Yuan Renminbi	154,937,666
Colombian Peso	2,364,974
Czech Koruna	937,905
Danish Krone	23,051,572
Egyptian Pound	863,080
Euro	974,464,652
Hong Kong Dollar	68,642,788
Hungarian Forint	1,591,889
India Rupee	49,330,300
Indonesian Rupiah	11,669,822
Japanese Yen	325,618,070
Korean Won	67,494,756
Macao Pataca	1,646,293
Malaysian Ringgit	11,704,824
Mexican Peso	14,158,585
New Israeli Sheqel	8,060,922
New Zealand Dollar	3,464,206
Norwegian Krone	9,204,542
Pakistani Rupee	210,702
Papua New Guinea Kina	668,604
Peruvian Sol	355,812
Phillippine Peso	6,147,697
Polish Zloty	6,093,186
Qatar Riyal	5,109,084
Russian Ruble	21,857,223
Saudi Arabian Riyal	7,713,294
Singapore Dollar	18,479,983
South African Rand	31,912,822
Swedish Krona	34,207,283
Swiss Franc	130,246,256
Thai Baht	16,458,118
Thaiwan Dollar	58,929,465
Turkish Lira	2,715,762
United Arab Emirates Dirham	3,854,376
<b>Total</b>	<b>\$ 2,632,753,874</b>

The System has entered into contracts to invest in partnerships with a focus on private equity, infrastructure, and real estate investment strategies. As of June 30, 2019, the value of these investments is approximately \$6.8 billion and the remaining funding commitment is approximately \$3.5 billion.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

For the year ended June 30, 2019, the annual money-weighted rate of return on all defined benefit plan investments, net of investment expenses, was 7.3%. For the year ended June 30, 2019, the annual money-weighted rate of return on all other post-employment benefit (OPEB) plan investments, net of investment expense, was 6.6%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested, based on monthly calculations.

The System categorizes its fair value measurements within the fair value hierarchy established by US GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are other significant observable inputs. Level 3 inputs are unobservable inputs. The System has the following recurring fair value measurements at June 30:

	June 30, 2019	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Investments by fair value level				
Common Equity and Fixed Income Securities	\$ 2,299,562,007	\$ 2,299,562,007	\$ -	\$ -
Common/Collective Trusts	6,450,026,494	-	6,450,026,494	-
Collateral from loaned securities	199,994,962	-	199,994,962	-
<b>Total investments by fair value level</b>	<b>8,949,583,463</b>	<b>\$ 2,299,562,007</b>	<b>\$ 6,650,021,456</b>	<b>\$ -</b>
Investments measured at net asset value (NAV)				
Alternative Credit	499,396,810			
Infrastructure	1,787,351,032			
Natural Resources	729,602,146			
Private Equity	2,342,849,414			
Real Estate <sup>(1)</sup>	1,418,067,477			
<b>Total investments measured at NAV</b>	<b>6,777,266,879</b>			
<b>Total investments measured at fair value</b>	<b>\$ 15,726,850,342</b>			

<sup>(1)</sup> Includes common/collective trust funds containing real estate.

	June 30, 2018	Fair Value Measurements Using		
		Level 1	Level 2	Level 3
Investments by fair value level				
Common Equity and Fixed Income Securities	\$ 2,256,043,596	\$ 2,256,043,596	\$ -	\$ -
Common/Collective Trusts	6,964,047,804	-	6,964,047,804	-
Collateral from loaned securities	208,030,192	-	208,030,192	-
<b>Total investments by fair value level</b>	<b>9,428,121,592</b>	<b>\$ 2,256,043,596</b>	<b>\$ 7,172,077,996</b>	<b>\$ -</b>
Investments measured at NAV				
Alternative Credit	278,210,721			
Infrastructure	1,564,947,292			
Natural Resources	607,863,422			
Private Equity	1,978,985,874			
Real Estate <sup>(1)</sup>	1,302,348,773			
<b>Total investments measured at NAV</b>	<b>5,732,356,082</b>			
<b>Total investments measured at fair value</b>	<b>\$ 15,160,477,674</b>			

<sup>(1)</sup> Includes common/collective trust funds containing real estate.

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

#### Common Equity and Fixed Income Securities

Common equity and fixed income securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. The mutual funds classified in Level 1 of the fair value hierarchy are valued based on their holdings of common equity and fixed income securities which are valued using prices quoted in active markets for those securities.

#### Common/Collective Trusts

Units of collective investment funds, including short-term investment funds, are valued based on quoted prices for similar assets, exchange rates, interest rates, credit risks and default rates. A unit value is determined for each fund on the valuation date. Valuation of each fund is determined each day the Fund is open for contributions and redemptions and, for financial reporting purposes, on the report date should the reporting period end on a date the Fund is not open. Unit values are determined by dividing each Fund's investments at fair value by the number of units outstanding on the valuation date.

#### Investments Measured at NAV

Alternative investments are generally reported at the NAV obtained from statements provided by the investment managers and assessed by the System as reasonable.

NAVs determined by investment managers generally consider variables including operating results, projected cash flows, recent sales prices and other pertinent information, and may reflect discounts for the illiquid nature of certain investments held. Due to the inherent uncertainties in valuation, the estimated fair values in NAV calculations may differ significantly from values that would have been used had a ready market existed.

The fair value and unfunded commitments for investments measured at NAV per share (or its equivalent) are presented in the following tables:

<u>June 30, 2019</u>		
Investments Measured at NAV	<u>Fair Value</u>	<u>Unfunded Commitments</u>
Alternative Credit <sup>(1)</sup>	\$ 499,396,810	\$ 240,925,967
Infrastructure funds <sup>(2)</sup>	1,787,351,032	1,179,047,612
Natural Resources <sup>(3)</sup>	729,602,146	278,317,653
Private Equity <sup>(4)</sup>	2,342,849,414	1,378,782,275
Real estate funds <sup>(5)</sup>	1,418,067,477	398,423,649
Total investments measured at NAV	<u>\$ 6,777,266,879</u>	<u>\$ 3,475,497,156</u>

<u>June 30, 2018</u>		
Investments Measured at NAV	<u>Fair Value</u>	<u>Unfunded Commitments</u>
Alternative Credit <sup>(1)</sup>	\$ 278,210,721	\$ 252,161,727
Infrastructure funds <sup>(2)</sup>	1,564,947,292	946,994,873
Natural Resources <sup>(3)</sup>	607,863,422	239,087,927
Private Equity <sup>(4)</sup>	1,978,985,874	1,268,429,828
Real estate funds <sup>(5)</sup>	1,302,348,773	324,025,018
Total investments measured at NAV	<u>\$ 5,732,356,082</u>	<u>\$ 3,030,699,373</u>

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

- (1) Alternative Credit funds are funds that invest primarily in debt instruments issued by non-investment grade and unrated entities. Alternative credit investments are expected to pay or accrue periodic interest and to return principal at maturity. The fair values in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. Alternative Credit funds are typically structured as partnerships with fixed lifetimes. A typical structure is a 7-year fund life, where the fund can call capital for investments for 3 years, and then will return capital as loans mature throughout the life of the fund. These funds typically have no provisions for redemptions, though the System's interests could be sold on a secondary market.
- (2) Infrastructure funds are funds that invest primarily in infrastructure assets such as roads, ports, pipelines, and airports, primarily in the US and Europe. The fair values in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These funds are generally not available for redemption, and distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 10 or more years.
- (3) Natural Resource funds are funds that invest primarily in assets and businesses related to natural resources such as farming, timber, and mining. The fair values in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These funds are generally not available for redemption, and distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 10 or more years.
- (4) Private Equity funds are funds that invest primarily in debt and equity securities of private businesses. The fair values in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. These funds are generally not available for redemption, and distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 10 or more years.
- (5) Real Estate funds are funds that invest primarily in commercial real estate and real estate debt. The fair values in this type have been determined using the NAV per share (or its equivalent) of the System's ownership interest in partners' capital. The majority of these investments (85% of dollar value) are available for redemption, subject to the timing of asset disposition. The remaining funds are generally not available for redemption, and distributions are received as underlying investments within the funds are liquidated, which on average can occur over a span of 10 or more years.

#### **4. Derivative Securities**

Derivative financial instruments are financial contracts whose value depends on the value of one or more underlying assets, reference rates or financial indices. They include futures, forwards, options, and swap contracts. In addition, some traditional securities can have derivative-like characteristics, e.g., asset-backed securities, including collateralized mortgage obligations, which are sensitive to changes in interest rates and to prepayments.

The System may be a party, both directly and indirectly, to various derivative financial investments that are used in the normal course of investing to enhance expected returns on investments, to manage the risk of exposure to changes in value of investments due to fluctuations in market conditions, and to gain passive exposure to markets. In addition to normal market risks these investments may involve, to varying degrees, elements of interest rate risk, credit risk, leverage risk, counterparty risk, and custodial credit risk.

Leverage risk may be created with derivatives. Financial leverage generally involves borrowing and then reinvesting the proceeds with the hope of earning a higher rate of return than the borrowing costs. With derivative instruments economic leverage may be effectively created without any explicit borrowing. Leveraged investments may be more volatile than if an investment had not been leveraged. Leveraging tends to exaggerate the effect of any increase or decrease in the value of an underlying investment. In a leveraged transaction an amount more than the initial investment may be lost. The System's investment policy requires specific approval from the Board of any investment strategy that involves the use of direct financial leverage.

Counterparty risk is the risk that the counterparty to a derivative transaction is unwilling or unable to deliver on their obligations to the System.

The System manages leverage risk and counterparty risk on a manager by manager basis by establishing guidelines with each manager. The manager is customarily allowed to invest within these predetermined guidelines.

The System's managers may also invest in swaps. Interest rate swaps are used to adjust interest rate and yield curve exposures and substitute for physical securities. Long swap positions increase exposure to long term rates; short positions decrease exposure. Credit default swaps are used to manage credit exposure. Purchased credit default swaps decrease credit exposure, while written credit default swaps increase exposure. Total return swaps are a means to gain exposure to an index.

## NOTES TO FINANCIAL STATEMENTS

June 30, 2019 and 2018 *continued*

The System may also hold investments in futures and options, which are used to manage various risks within the portfolio. A financial futures contract is an agreement between two parties to buy or sell units of a particular index or a certain amount of a security at a set price on a future date. The System may purchase and sell financial futures contracts to hedge against the effect of changes in the values of securities it owns or expects to purchase.

In addition to the derivative financial instruments directly held, the System may have indirect exposure to risk through its ownership interests in commingled investment funds, which use, hold or write derivative financial instruments. There also may be indirect exposure in the securities lending programs in which the System participates, in which some collateral pools may include derivatives (note 5). Where derivatives are held in those funds/pools, risks and risk management are as described above.

The System did not have any direct derivative investments as of June 30, 2019 or 2018 or during the years then ended.

### 5. Securities Lending

The System has entered into agreements with its master custodian to lend to broker-dealers and other entities any type of security held in the System's portfolio and held with the master custodian. Securities are loaned against collateral that may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned against collateral generally valued at 102% of the market value of the securities plus any accrued interest. Non-U.S. securities are loaned against collateral valued at 105% of the market value of the securities plus any accrued interest.

Noncash collateral cannot be pledged or sold unless the borrower defaults. As a result, those securities are excluded from both assets and liabilities.

All securities loans can be terminated on demand by either the lender or the borrower. The average term of the System's loans was approximately 1 day as of June 30, 2019 and 2018.

Cash collateral is invested in a short-term investment account which had an interest sensitivity of 14 and 22 days as of June 30, 2019 and 2018, respectively. Cash collateral may also be invested separately in "term loans," in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower.

During fiscal years 2019 and 2018, there were no violations of legal or contractual provisions, and no borrower or lending agent default losses identified to the System by the securities lending agent. Securities lending earnings are credited to the System on approximately the fifteenth day of the following month.

Custodial credit risk is the risk that in the event of the insolvency of a borrower, and the master custodian has failed to live up to its contractual responsibilities relating to the lending of those securities, the System's securities are not returned to it. The master custodian's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending. At June 30, 2019 and 2018, all of the collateral for securities lending is subject to custodial credit risk.

Because of the program's collateralization of loans, generally at 102% (or more), plus accrued interest for fixed income securities, the System believes that there is no material credit risk.

Some of the System's assets are held in common/collective trusts and are subject to similar agreements arranged by those trusts. The income from those arrangements and the associated collateral are not included in the securities lending amounts reported.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Aggregate securities on loan by asset class are as follows:

	<u>2019</u>	<u>2018</u>
Domestic equity securities on loan	\$ <u>278,985,661</u>	\$ <u>271,974,045</u>
Aggregate securities lending collateral:		
Short-term investment collateral pool	\$ 199,994,962	\$ 208,030,192
Noncash collateral	<u>85,729,831</u>	<u>70,114,884</u>
Total collateral	\$ <u>285,724,793</u>	\$ <u>278,145,076</u>
Collateral ratio	<u>102.4%</u>	<u>102.3%</u>

**6. Defined Benefit Plans**

State Employee and Teacher Plan

The State Employee and Teacher Plan administered by MainePERS is a multiple-employer cost sharing plan with a special funding situation. As of June 30, 2019, there were 239 employers, including the State of Maine, participating in the plan. The State of Maine is also a non-employer contributing entity in that the State pays the unfunded actuarial liability on behalf of teachers, while school districts contribute the normal cost, calculated actuarially, for their teacher members.

Plan membership counts for the State Employee and Teacher Plan at June 30 are as follows:

	<u>2019</u>	<u>2018</u>
Current participants:		
Vested and non-vested	39,876	39,843
Terminated participants:		
Vested	8,188	7,965
Inactive due refunds	38,640	39,074
Retirees and beneficiaries receiving benefits	<u>36,471</u>	<u>35,601</u>
	<u>123,175</u>	<u>122,483</u>

Judicial Plan

The Judicial Plan administered by MainePERS is a single-employer plan offered by the State of Maine.

Plan membership counts for the Judicial Plan at June 30 are as follows:

	<u>2019</u>	<u>2018</u>
Current participants:		
Vested and non-vested	61	62
Terminated participants:		
Vested	3	3
Inactive due refunds	1	1
Retirees and beneficiaries receiving benefits	<u>76</u>	<u>75</u>
	<u>141</u>	<u>141</u>

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Legislative Plan

The Legislative Plan administered by MainePERS is a single-employer plan offered by the State of Maine.

Plan membership counts for the Legislative Plan at June 30 are as follows:

	<u>2019</u>	<u>2018</u>
Current participants:		
Vested and non-vested	179	185
Terminated participants:		
Vested	124	113
Inactive due refunds	111	107
Retirees and beneficiaries receiving benefits	<u>204</u>	<u>185</u>
	<u>618</u>	<u>590</u>

PLD Consolidated Plan

The PLD Consolidated Plan administered by MainePERS is a multiple-employer cost sharing plan. Eligible employers (districts) are defined in Maine statute. As of June 30, 2019, there were 307 employers participating in the plan.

Plan membership counts for the PLD Consolidated Plan at June 30 are as follows:

	<u>2019</u>	<u>2018</u>
Current participants:		
Vested and non-vested	11,731	11,416
Terminated participants:		
Vested	2,350	2,319
Inactive due refunds	8,273	7,779
Retirees and beneficiaries receiving benefits	<u>9,534</u>	<u>9,256</u>
	<u>31,888</u>	<u>30,770</u>

PLD Agent Plan

The PLD Agent Plan administered by MainePERS is an agent multiple-employer plan for financial reporting purposes. This plan is an aggregation of single employer plans that were open when the PLD Consolidated Plan began. Under the legislation that created the consolidated plan, single employers could either join the consolidated plan whereby the single employer plan would end, or they could opt to not join the plan and continue to maintain their single employer plan as a closed plan until there were no further liabilities for pension, at which time the single employer plan would be dissolved. As of June 30, 2019, there were 10 employers in the plan.

Plan membership counts for the PLD Agent Plan at June 30 are as follows:

	<u>2019</u>	<u>2018</u>
Current participants:		
Vested and non-vested	12	16
Terminated participants:		
Vested	15	14
Inactive due refunds	4	2
Retirees and beneficiaries receiving benefits	<u>163</u>	<u>170</u>
	<u>194</u>	<u>202</u>

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018 *continued***

Benefits

Benefit terms are established in Maine statute; in the case of the PLD Consolidated Plan, an advisory group, also established by Maine statute, reviews the terms of the plan and periodically makes recommendations to the Legislature to amend the terms. The System's retirement programs provide defined retirement benefits based on members' average final compensation and service credit earned as of retirement. Vesting (i.e., eligibility for benefits upon reaching qualification) occurs upon the earning of five years of service credit (effective October 1, 1999, the prior ten year requirement was reduced by legislative action to five years for State employees and teachers; separate legislation enacted the same reduced requirement for judges, legislators, and employees of PLDs). In some cases, vesting occurs on the earning of one year of service credit immediately preceding retirement at or after normal retirement age. Normal retirement age for State employees and teachers, judges and legislative members is age 60, 62 or 65. The normal retirement age is determined by whether a member had met certain creditable service requirements on specific dates, as established by statute. For PLD members, normal retirement age is 60 or 65. The monthly benefit of members who retire before normal retirement age by virtue of having at least 25 years of service credit is reduced by a statutorily prescribed factor for each year of age that a member is below her/his normal retirement age at retirement. The System also provides disability and death benefits which are established by statute for State employee and teacher members and by contract with other participating employers under applicable statutory provisions.

Upon termination of membership, members' accumulated employee contributions are refundable with interest, credited in accordance with statute. Withdrawal of accumulated contributions results in forfeiture of all benefits and membership rights. The annual rate of interest credited to members' accounts is set by the Board and is currently 2.69%.

Funding Policy

The Maine Constitution, Maine statutes and the System's funding policy provide for periodic employer contributions in addition to the normal cost contributions for the State Employee and Teacher Plan. These are actuarially determined amounts that, based on certain actuarial assumptions, are sufficient to fully fund, on an actuarial basis, the State Employee and Teacher Retirement Plan by the year 2028 (Unfunded Actuarial Accrued Liability (UAAL) payments). Level percentage of payroll employer contribution rates are determined using the entry age normal actuarial funding method. The System also uses the level percentage of payroll method to amortize the unfunded liability of the State Employee and Teacher Retirement Plan. For participating employers in the PLD Agent Plan, the level percentage of payroll method is also used.

Net Pension Liability – State Employee and Teacher Plan

The components of the net pension liability of the State of Maine and participating teacher employers, stated in millions of dollars as of June 30, 2019, were as follows:

Total pension liability	\$ 14,547.2
Plan fiduciary net position	<u>12,035.6</u>
Net pension liability	\$ <u>2,511.6</u>
Plan fiduciary net position as a percentage of the total pension liability	82.7%

Net Pension Liability – Judicial Plan

The components of the net pension asset of the State of Maine for the Judicial Plan, stated in millions of dollars as of June 30, 2019, were as follows:

Total pension liability	\$ 69.3
Plan fiduciary net position	<u>73.6</u>
Net pension asset	\$ <u>(4.3)</u>
Plan fiduciary net position as a percentage of the total pension liability	106.2%

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Net Pension Liability – Legislative Plan

The components of the net pension asset of the State of Maine for the Legislative Plan, stated in millions of dollars as of June 30, 2019, were as follows:

Total pension liability	\$ 9.0
Plan fiduciary net position	<u>13.2</u>
Net pension asset	\$ <u>(4.2)</u>
Plan fiduciary net position as a percentage of the total pension liability	146.1%

Net Pension Liability – PLD Consolidated Plan

The components of the net pension liability of the PLD Consolidated Plan participating employers, stated in millions of dollars as of June 30, 2019, were as follows:

Total pension liability	\$ 3,258.8
Plan fiduciary net position	<u>2,953.2</u>
Net pension liability	\$ <u>305.6</u>
Plan fiduciary net position as a percentage of the total pension liability	90.6%

Actuarial Methods and Assumptions

Actuarial valuations of ongoing plans involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Assumptions in an actuarial valuation typically include projections concerning future employment, mortality, and inflation. Actuarially determined contributions are subject to continual periodic revision as actual results are compared to past expectations and new estimates are made concerning the future. The Schedules of Changes in Net Pension Liabilities and Related Ratios, presented as Required Supplementary Information immediately following the Notes to Financial Statements, present multi-year trend information about whether the fiduciary net position of the plan is increasing or decreasing over time relative to the total pension liability of the plan.

Projections of benefits for financial reporting purposes are based on the provisions of the plans in effect at the time of each valuation and the historical pattern of sharing of costs between the employer and plan members. Actuarial methods and assumptions include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the funding methodologies.

The expected 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 assumed rate for each plan. One-third of the difference between this expected value of assets and the actual market value of assets is added to or subtracted from the expected value to provide the actuarial value of assets.

Costs are developed using the entry age normal cost method (based on a level percentage of covered payroll).

The initial unfunded actuarial pension liability of the State Employee and Teacher Program is amortized on a level percentage of payroll on a closed basis. The remaining amortization period as of June 30, 2019 was 9 years. All other gains, losses, and changes are amortized over twenty-year periods beginning on the date as of which they occur. The net pension liability of the Judicial and Legislative Plans is amortized on an open basis over a period of ten years. The net pension liability of the PLD Consolidated Plan is amortized on a level percentage of payroll using a method where a separate twenty-year closed period is established annually for the gain or loss for that year. The amortization period can have a significant impact on contribution rates developed through the annual valuation process.

The total pension liability was determined by an actuarial valuation as of June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement period. These same assumptions were used in the actuarial valuation as of June 30, 2018, unless otherwise noted.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan
Investment Rate of Return	6.75% Per annum, compounded annually			
Inflation Rate	2.75%			
Annual Salary Increases, including Inflation	State employees, 2.75% - 8.75%; Teachers, 2.75% - 14.50%	2.75%	2.75%	2.75% - 9.00%
Cost of Living Benefit Increases	2.20%			1.91% for June 30, 2018 and 2.20% for June 30, 2017
Mortality Rates	For active members and non-disabled retirees of the State employees and teachers, legislative, judicial, and PLD plans, the RP2014 Total Dataset Healthy Annuitant Mortality Table, for males and females, is used. For all recipients of disability benefits, the RP2014 Total Dataset Disabled Annuitant Mortality Table, for males and females, is used.			

The actuarial assumptions used in the June 30, 2019 and June 30, 2018 actuarial valuations were based on the results of an actuarial experience study for the period of June 30, 2012 to June 30, 2015.

The long-term expected rate of return on Defined Benefit Plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major class of assets. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2019 are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Public equities	6.0%
US Government	2.3
Private equity	7.6
Real assets	
Real estate	5.2
Infrastructure	5.3
Natural resources	5.0
Traditional Credit	3.0
Alternative Credit	4.2
Diversifiers	5.9

Discount Rate

The discount rate used to measure the total pension liability for each of the Defined Benefit Plans was 6.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer and non-employer entity contributions will be made at contractually required rates, actuarially determined. Based on these assumptions, the fiduciary net position for each of the Defined Benefit Plans was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate

The following table presents the net pension liability for the State Employee and Teacher Plan, Judicial Plan, Legislative Plan, and PLD Consolidated Plan calculated using the discount rate of 6.75%, as well as what the net pension liability would be if it were calculated using a discount rate of one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

	1% Decrease (5.75%)	Current Rate (6.75%)	1% Increase (7.75%)
Net Pension Liability/(Asset):			
State Employee and Teacher Plan	\$ 3,914,947,478	\$ 2,511,659,866	\$ 760,663,199
Judicial Plan	1,814,579	(4,320,901)	(9,663,416)
Legislative Plan	(3,260,322)	(4,181,258)	(4,978,021)
PLD Consolidated Plan	696,281,797	305,663,509	(59,722,517)

Sensitivity of the net pension liability to changes in the discount rate for individual single employer plans making up the PLD Agent Plan can be found in each Plan's annual actuarial report, available by contacting the System.

Contributions

Retirement benefits are funded by contributions from members and employers and by earnings from investments. Disability and death benefits are funded by employer normal cost contributions and by investment earnings. Member and employer normal cost contributions are each a percentage of applicable member compensation. Member contribution rates are defined by law or MainePERS' Board rule and depend on the terms of the plan under which a member is covered. Employers' contributions are determined by actuarial valuations.

Included in the Employer and Non-employer Contributing Entities Contributions reported in the statement of changes in fiduciary net position are contributions received from the State of Maine on behalf of state employees and teachers in the total amount of \$293.9 million and \$285.9 million, and for judges in the total amount of \$1.2 million and \$1.2 million, for the years ended June 30, 2019 and 2018, respectively. There were no contributions due from the State of Maine on behalf of legislators in 2019 or 2018.

Retirement contribution rates for all employee members are set by law. Employer normal cost retirement contribution rates as applied to State employee members' and teacher members' compensation are the actuarially determined rates. The UAAL rate as applied to State employee members' compensation is first established through the annual valuation process as an amount that will meet the required UAAL payment amount; it is then adjusted in the State's budget process to take into account differences in salary growth projections of the State Budget Office. This adjusted rate, expressed as a percentage of payroll, is the actual rate paid by the State as payment of the required UAAL payment amount for State employees. For teachers, the actuarially determined UAAL amount is paid in twelve equal monthly installments. PLD employer contribution rates are the actuarially determined rates. The rates in effect in 2019 and 2018 are as follows:

Contribution Rates<sup>(1)</sup> (effective July 1 through June 30 of each fiscal year)

	<u>2019</u>	<u>2018</u>
State:		
Employees <sup>(2)</sup>	7.65 – 8.65%	7.65 – 8.65%
Employer <sup>(2)</sup>	23.44 – 47.64%	23.48 – 47.73%
Teachers:		
Employees	7.65%	7.65%
Employer	3.97%	3.97%
Non-employer entity	11.08%	11.08%
Judges:		
Employees	7.65%	7.65%
Employer	14.94%	14.94%
Legislative:		
Employees	7.65%	7.65%
Employer	0.00%	0.00%
Participating local districts:		
Employees <sup>(2)</sup>	4.5 – 9.5%	4.5 – 9.5%
Employers <sup>(2)</sup>	4.1 – 16.3%	3.9 – 15.7%

<sup>(1)</sup> Employer Contribution Rates include normal cost and UAAL required payment, expressed as a percentage of payroll.

<sup>(2)</sup> Employer and Employee retirement contribution rates vary depending on specific terms of plan benefits for certain classes of employees or, in the case of PLDs, on benefit plan options selected by a particular PLD. The contributions of withdrawn entities that do not have active employees but continue to have other liabilities are set in dollar amounts, not as rates.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

**7. Group Life Insurance Program**

Plan Description

The Group Life Insurance Program administered by MainePERS is comprised of two multiple-employer cost-sharing defined benefit OPEB plans in addition to a multiple-employer cost-sharing plan providing life insurance benefits to active employees. Group Life Insurance Program coverage for active employees is available to eligible participants and includes basic insurance consisting of life insurance and accidental death and dismemberment insurance in the amount equal to the participant's annual base compensation rounded up to the next \$1,000. Additional supplemental insurance coverage is available to those participants who elect basic coverage. Participants may also elect to insure the life of a dependent not otherwise insured under the basic and supplemental insurance provisions of the program.

Group Life Insurance Plan for Retired State Employees and Teachers

The Group Life Insurance Plan for Retired State Employees and Teachers is a multiple-employer cost sharing plan with a special funding situation. As of June 30, 2019 there were 239 employers, including the State of Maine, participating in the plan. The State of Maine is also a non-employer contributing entity in that the State pays contributions for retired public school teachers in the plan.

Plan membership counts for the Group Life Insurance Plan for Retired State Employees and Teachers as of the valuation date are as follows:

	<u>2019</u>	<u>2018</u>
Retired State Employees	8,768	8,768
Retired Teachers	7,437	7,437
Active State Employees	11,362	11,362
Active Teachers	<u>14,592</u>	<u>14,592</u>
	<u>42,159</u>	<u>42,159</u>

Group Life Insurance Plan for Retired PLD Employees

The Group Life Insurance Plan for Retired PLD employees is a multiple-employer cost sharing plan. As of June 30, 2019 there were 149 employers participating in the plan.

Plan membership counts for the Group Life Insurance Plan for Retired PLD Employees as of the valuation date are as follows:

	<u>2019</u>	<u>2018</u>
Retired PLD Employees	2,850	2,850
Active PLD Employees	<u>5,495</u>	<u>5,495</u>
	<u>8,345</u>	<u>8,345</u>

Benefits

The Group Life Insurance Plans provide basic group life insurance benefits, during retirement, to retirees who participated in the group life insurance plan prior to retirement for a minimum of 10 years (the 10-year participation requirement does not apply to recipients of disability retirement benefits).

The level of coverage in retirement is initially set to an amount equal to the retiree's average final compensation. The initial amount of basic life is then subsequently reduced at the rate of 15% per year to the greater of 40% of the initial amount or \$2,500.

Funding Policy

Premium rates are those determined by the System's Board of Trustees to be actuarially sufficient to pay anticipated claims. For state employee, judicial and legislative employment classes, the premiums for retiree life insurance coverage are factored

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

into the premiums paid for basic coverage while participants are active members. Premiums for basic life insurance coverage for retired teachers are paid by the State of Maine as the total dollar amount of each year's annual required contribution. PLD employers with retired PLD employees are required to remit a premium of \$0.46 per \$1,000 of coverage per month during the post-employment retired period.

*Net OPEB Liability – Retired State Employee and Teacher Plan*

The components of the net OPEB liability of the State of Maine and participating teacher employers, stated in millions of dollars as of June 30, 2019, were as follows:

Total OPEB liability	\$ 204.4
Plan fiduciary net position	<u>100.6</u>
Net OPEB liability	\$ <u>103.8</u>
Plan fiduciary net position as a percentage of the total OPEB liability	49.2%

*Net OPEB Liability – PLD Plan*

The components of the net OPEB liability of the PLD Plan participating employers, stated in millions of dollars as of June 30, 2019, were as follows:

Total OPEB liability	\$ 37.7
Plan fiduciary net position	<u>16.3</u>
Net OPEB liability	\$ <u>21.4</u>
Plan fiduciary net position as a percentage of the total OPEB liability	43.2%

Actuarial valuations of ongoing plans involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Assumptions in an actuarial valuation typically include projections concerning future employment, mortality, and inflation. Actuarially determined contribution requirements are subject to continual periodic revision as actual results are compared to past expectations and new estimates are made concerning the future. The Schedule of Historical OPEB Information, presented as Required Supplementary Information immediately following the Notes to Financial Statements, will present multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

*Actuarial Methods and Assumptions*

Projections of benefits for financial reporting purposes are based on the provisions of the plan in effect at the time of each valuation and the historical pattern of sharing of premium costs between the employer and plan members. Actuarial methods and assumptions include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the funding methodologies.

Costs are developed using the individual entry age normal cost method based on a level percentage of payroll.

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2019 and 2018** *continued*

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 2019 are displayed in the table below. The valuation date is June 30, 2019. These same assumptions were used as of June 30, 2018 unless otherwise noted.

	State employees, including judges and legislators	Teachers	PLD employees
Investment Rate of Return	6.75% Per annum, compounded annually		
Inflation Rate	2.75%		
Annual Salary Increases, including Inflation	2.75% - 8.75%	2.75% - 14.50%	2.75% - 9.00%
Mortality Rates	For active members and non-disabled retirees of the State employees and teachers, legislative, judicial, and PLD plans, the RP2014 Total Dataset Healthy Annuitant Mortality Table, for males and females, is used. For all recipients of disability benefits, the RP2014 Total Dataset Disabled Annuitant Mortality Table, for males and females, is used.		
Participation Rate for Future Retirees	100% of those currently enrolled		
Conversion Charges	Apply to the cost of active group life insurance, not retiree group life insurance		
Form of Benefit Payment	Lump sum		

The unfunded actuarial accrued liability is being amortized as a level percentage of payroll over a 30-year period on a closed basis. As of June 30, 2019, there were 18 years remaining in the amortization schedule for state employees and teachers, and 11 years remaining for PLD employees.

The actuarial assumptions used in the June 30, 2019 and June 30, 2018 actuarial valuations were based on the results of an actuarial experience study conducted for the period of June 30, 2012 to June 30, 2015.

The long-term expected rate of return on OPEB Plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major class of assets. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of long-term real rates of return for each major asset class included in the target asset allocation as of June 30, 2019 are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
Public equity	6.0%
Real estate	5.2
Traditional credit	3.0
US Government securities	2.3

Discount Rate

The discount rate used to measure the total OPEB liability for the State Employee and Teacher Plan was 6.75%. The projection of cash flows used to determine the discount rate assumed that employer and non-employer entity contributions will be made at contractually required rates, actuarially determined. Based on these assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

The discount rate used to measure the total OPEB liability for the PLD Plan was 4.98% which is a blend of the assumed long-term expected rate of return of 6.75% and a municipal bond index rate of 3.5%, based on the Bond Buyer GO 20-Year Municipal Bond Index as of June 30, 2019. Projections of the Plan's fiduciary net position indicate that it is not expected to be sufficient to

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *continued*

make projected benefit payments for current members beyond 2050. Therefore, the portion of future projected benefit payments after 2050 are discounted at the municipal bond index rate. The projection of cash flows used to determine the discount rate assumed that employer and non-employer entity contributions will be made at contractually required rates, actuarially determined.

#### Sensitivity of the net OPEB liability to changes in the discount rate

The following table presents the net OPEB liability for the Retired State Employee and Teacher Plan calculated using the discount rate of 6.75%, as well as what the net OPEB liability would be if it were calculated using a discount rate of one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	1% Decrease (5.75%)	Current Rate (6.75%)	1% Increase (7.75%)
Net OPEB Liability	\$133,152,358	\$103,815,216	\$ 79,936,505

The following table presents the net OPEB liability for the PLD Plan calculated using the discount rate of 4.98%, as well as what the net OPEB liability would be if it were calculated using a discount rate of one percentage point lower (3.98%) or one percentage point higher (5.98%) than the current rate:

	1% Decrease (3.98%)	Current Rate (4.98%)	1% Increase (5.98%)
Net OPEB Liability	\$ 28,257,416	\$ 21,397,480	\$ 15,989,418

#### Premiums

The basic life benefits for participants are funded by the State, school districts, PLDs and individuals. Participants pay additional premiums for supplemental and dependent insurance based upon the coverage selected.

Maine statute requires the System's Board of Trustees to establish on a regular basis the premium rates for participants in the Group Life Insurance Plan. The premium rates are determined to be actuarially sufficient to pay anticipated claims and cover administrative costs. The State of Maine remits premiums at a single rate that supports basic coverage for active and retired state employees (including Legislative and Judicial employees). This rate is \$.76 per month for every \$1,000 of coverage. The State remits premiums for retired teachers at a rate of \$.33 per month for every \$1,000 of coverage. As per individual collective bargaining agreements between employers and employees, individual school districts or teachers themselves pay premiums at the rate of \$.11 per month for every \$1,000 of coverage while active, and employees of participating local districts or the district itself pay premiums of \$.46 per month for every \$1,000 in coverage for employees while active and retired. Employees' premiums are usually deducted from employees' compensation and remitted to the System.

Included in the Employer and Non-employer Contributions and Premiums in the statement of changes in fiduciary net position are group life insurance premiums received from the State of Maine on behalf of active and retired state employees, retired teachers, legislators, and judges in the total amount of \$9.0 and \$8.7 million, respectively, for the years ended June 30, 2019 and 2018.

#### Benefits

Upon service retirement, only basic life insurance in an amount equal to the retiree's average final compensation will continue at no cost to the participant as long as the retiree participated in the group life insurance plan prior to retirement for a minimum of 10 years.

If a participant becomes eligible for disability retirement, the amount of basic insurance in force at the time of such retirement will be continued until normal retirement age, after which the amount will be reduced at the same rate as for a service retiree. The 10-year participation requirement does not apply to recipients of disability retirement benefits.

Under the Accidental Death and Dismemberment provisions of the plan, no legal action can be brought to recover under any benefit after 3 years from the deadline for filing claims. The deadline for filing claims under the Accidental Death and Dismemberment provisions of the plan is 90 days after the date of the loss giving rise to the claim.

## NOTES TO FINANCIAL STATEMENTS

### June 30, 2019 and 2018 *concluded*

#### Claims Processing Expenses

All benefits are processed and paid by a third-party administrator (TPA). The fees incurred for services performed by the TPA totaled \$900,911 and \$876,860 for the years ended June 30, 2019 and 2018, respectively, and are listed as claims processing expenses in the basic financial statements.

#### **8. Statutory and Constitutional Requirements**

An amendment to the Maine constitution approved in November 1995 requires the State of Maine to fund the unfunded actuarial liability of the State Employee and Teacher Retirement Plan existing on June 30, 1996, over a period not to exceed 31 years beginning July 1, 1997, and not later than June 30, 2028. The amendment prohibits the creation of new unfunded liabilities in that Plan except those arising from experience losses, which under the 1995 amendment must be funded over a period of not more than ten years. An amendment approved in November 2017 extends the period from ten years to twenty years.

#### **9. The System's Employee Benefits**

##### Defined Benefit Plan

The System, as the employer of its staff, is a PLD in the PLD Consolidated Plan. As such, the System's employees are required by statute to contribute 8% of their annual covered salaries. The System is required to contribute at the contribution rate established by the Board under the actuarial valuation of the PLD Consolidated Plan. The contribution rate was 10% of annual covered payroll for 2019 and 9.6% of annual covered payroll for 2018.

The employer contributions on behalf of its employees, equal to the required contribution, were \$679,818 and \$642,178 for 2019 and 2018, respectively. The actuarial assumptions used in the PLD Consolidated Plan valuation are described in the actuarial assumptions and methods footnote to the required supplementary information.

The System's contributions to the PLD Consolidated Plan are treated as administrative costs of the Plan and are funded as a component of normal cost and included in the contribution rates paid by all employers in each of the plans administered by the System. Accordingly, the System does not reflect a portion of the collective net pension liability or related deferred inflows and outflows of resources related to pension obligations in the System's basic financial statements.

##### Group Life Insurance Plan

The System, as the employer of its staff, is a PLD in the Group Life Insurance Plan. The System pays the premiums for Basic only coverage for all active employees. Employees who elect additional coverage under the Supplemental and/or Dependent provisions have the additional required premiums withheld from their pay in order to fund such coverage.

The System was required to pay premiums for Basic coverage at the rate of \$0.46 per \$1,000 of coverage for the 2019 and 2018 fiscal years. The total premiums the System paid on behalf of its active employees, equal to the required contributions, were \$35,307 and \$35,194 for 2019 and 2018, respectively.

##### Other Post-Employment Benefits

The System provides OPEB to its retirees in the form of health insurance coverage and group life insurance coverage. The System's annual OPEB costs are actuarially determined based on the parameters of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.

The total contributions for retiree health insurance coverage, equal to the actuarially determined contributions, were \$0 for 2019 and 2018. The OPEB liability for this plan is immaterial and the Plan's assets exceed its actuarial liability at June 30, 2019 and 2018. The actuarial liability is calculated using assumptions similar to those used for the System's defined benefit plan.

The total contributions for retiree group life insurance coverage, equal to the actuarially determined contributions, were \$5,964 and \$5,943 for 2019 and 2018. The OPEB liability for this plan is immaterial.

#### **10. Risk Management**

The System carries insurance to cover its exposure to various risks of loss. There were no uninsured losses during the last three years.

## REQUIRED SUPPLEMENTAL SCHEDULES

### SCHEDULE OF HISTORICAL PENSION INFORMATION STATE EMPLOYEE AND TEACHER PLAN June 30, 2019 (UNAUDITED)

#### SCHEDULE OF CHANGES IN THE PLAN'S NET PENSION LIABILITY AND RELATED RATIOS

Last Ten Fiscal Years \*

	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>						
Service cost	\$ 224,775,112	\$ 215,826,380	\$ 213,047,075	\$ 203,297,053	\$ 191,528,649	\$ 186,376,754
Interest	934,009,648	914,535,911	886,834,221	882,785,134	861,682,508	842,229,062
Changes of benefit terms	-	-	-	-	9,778,106	-
Differences between expected and actual experience	208,719,412	34,151,279	95,207,531	81,506,700	(44,287,643)	(17,694,276)
Changes of assumptions	-	191,998,939	-	30,436,605	-	167,650,573
Benefit payments, including refunds of member contributions	<u>(851,469,104)</u>	<u>(810,211,176)</u>	<u>(780,157,263)</u>	<u>(744,357,598)</u>	<u>(722,573,349)</u>	<u>(689,053,212)</u>
Net change in total pension liability	516,035,068	546,301,333	414,931,564	453,667,894	296,128,271	489,508,901
Total pension liability, beginning	<u>14,031,187,845</u>	<u>13,484,886,512</u>	<u>13,069,954,948</u>	<u>12,616,287,054</u>	<u>12,320,158,783</u>	<u>11,830,649,882</u>
Total pension liability, ending (a)	<u>\$ 14,547,222,913</u>	<u>\$ 14,031,187,845</u>	<u>\$ 13,484,886,512</u>	<u>\$ 13,069,954,948</u>	<u>\$ 12,616,287,054</u>	<u>\$ 12,320,158,783</u>
<b>Plan fiduciary net position</b>						
Contributions – members	\$ 146,019,051	\$ 140,844,880	\$ 139,464,284	\$ 125,523,987	\$ 123,528,807	\$ 121,033,152
Contributions – employers	218,530,934	211,251,144	211,037,365	199,212,719	173,935,492	162,920,147
Contributions – non-employer contributing entities	132,980,832	129,421,735	116,080,164	112,477,836	147,283,716	142,303,104
Investment income	768,987,130	1,077,827,554	1,256,043,735	40,540,759	191,829,057	1,517,432,345
Benefits paid, including refunds and withdrawals	(851,653,558)	(810,381,770)	(780,325,980)	(744,523,744)	(722,724,258)	(689,191,030)
Administrative expenses	(11,180,852)	(10,076,242)	(9,216,027)	(8,649,031)	(9,386,695)	(8,246,740)
Other	<u>(311,233)</u>	<u>-</u>	<u>(124,178)</u>	<u>(6,342,010)</u>	<u>-</u>	<u>-</u>
Net change in fiduciary net position	403,372,304	738,887,301	932,959,363	(281,759,484)	(95,533,881)	1,246,250,978
Plan fiduciary net position, beginning	<u>11,632,192,771</u>	<u>10,893,305,470</u>	<u>9,960,346,107</u>	<u>10,242,105,591</u>	<u>10,337,639,472</u>	<u>9,091,388,494</u>
Plan fiduciary net position, ending (b)	<u>\$ 12,035,565,075</u>	<u>\$ 11,632,192,771</u>	<u>\$ 10,893,305,470</u>	<u>\$ 9,960,346,107</u>	<u>\$ 10,242,105,591</u>	<u>\$ 10,337,639,472</u>
Plan's net pension liability, ending (a)-(b)	<u>\$ 2,511,657,838</u>	<u>\$ 2,398,995,074</u>	<u>\$ 2,591,581,042</u>	<u>\$ 3,109,608,841</u>	<u>\$ 2,374,181,463</u>	<u>\$ 1,982,519,311</u>
Plan fiduciary net position as a percentage of the total pension liability	82.73%	82.90%	80.78%	76.21%	81.18%	83.91%
Covered payroll	\$ 1,924,006,618	\$ 1,808,274,919	\$ 1,860,294,435	\$ 1,816,435,084	\$ 1,699,160,889	\$ 1,676,857,294
Plan net pension liability as a percentage of covered payroll	130.54%	132.67%	139.31%	171.19%	139.73%	118.23%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**  
**SCHEDULE OF HISTORICAL PENSION INFORMATION**  
**JUDICIAL PLAN**  
 June 30, 2019 (UNAUDITED)

**SCHEDULE OF CHANGES IN THE PLAN'S NET PENSION LIABILITY AND RELATED RATIOS**  
*Last Ten Fiscal Years \**

	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>						
Service cost	\$ 1,596,832	\$ 1,487,383	\$ 1,465,977	\$ 1,396,704	\$ 1,605,751	\$ 1,530,119
Interest	4,582,454	4,442,404	4,358,175	4,154,433	3,863,455	3,773,959
Changes of benefit terms	-	-	-	2,016,584	27,931	-
Differences between expected and actual experience	(1,087,164)	468,895	(893,352)	(1,745,956)	2,237,833	(324,891)
Changes of assumptions	-	697,807	-	2,489,800	-	426,150
Benefit payments, including refunds of member contributions	(4,067,506)	(3,804,709)	(3,651,927)	(3,501,911)	(3,383,995)	(3,219,480)
Net change in total pension liability	1,024,616	3,291,780	1,278,873	4,809,654	4,350,975	2,185,857
Total pension liability, beginning	68,291,924	65,000,144	63,721,271	58,911,617	54,560,642	52,373,785
Total pension liability, ending (a)	\$ 69,316,540	\$ 68,291,924	\$ 65,000,144	\$ 63,721,271	\$ 58,911,617	\$ 54,560,642
<b>Plan fiduciary net position</b>						
Contributions – members	\$ 620,075	\$ 603,875	\$ 584,451	\$ 549,845	\$ 549,691	\$ 528,192
Contributions – employers	1,212,666	1,179,328	1,144,445	1,077,545	979,281	932,223
Investment income	4,709,445	6,606,904	7,799,507	129,372	1,055,346	8,416,042
Benefits paid, including refunds and withdrawals	(4,067,506)	(3,804,709)	(3,651,927)	(3,501,911)	(3,383,995)	(3,219,480)
Administrative expenses	(68,475)	(61,708)	(56,436)	(47,577)	(49,399)	(41,680)
Other	(2,604)	-	-	6,342,010	-	-
Net change in fiduciary net position	2,403,601	4,523,691	5,820,040	4,549,284	(849,076)	6,615,297
Plan fiduciary net position, beginning	71,233,840	66,710,149	60,890,109	56,340,825	57,189,901	50,574,604
Plan fiduciary net position, ending (b)	\$ 73,637,441	\$ 71,233,840	\$ 66,710,149	\$ 60,890,109	\$ 56,340,825	\$ 57,189,901
Plan's net pension liability (asset), ending (a)-(b)	\$ (4,320,901)	\$ (2,941,916)	\$ (1,710,005)	\$ 2,831,162	\$ 2,570,792	\$ (2,629,259)
Plan fiduciary net position as a percentage of the total pension liability	106.23%	104.31%	102.63%	95.56%	95.64%	104.82%
Covered payroll	\$ 8,116,908	\$ 7,893,762	\$ 7,639,818	\$ 7,188,426	\$ 7,185,501	\$ 6,742,444
Plan net pension liability (asset) as a percentage of covered payroll	(53.23)%	(37.27)%	(22.38)%	39.39%	35.78%	(39.00)%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

## REQUIRED SUPPLEMENTAL SCHEDULES

### SCHEDULE OF HISTORICAL PENSION INFORMATION LEGISLATIVE PLAN June 30, 2019 (UNAUDITED)

#### SCHEDULE OF CHANGES IN THE PLAN'S NET PENSION LIABILITY AND RELATED RATIOS Last Ten Fiscal Years \*

	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>						
Service cost	\$ 297,324	\$ 282,199	\$ 264,807	\$ 411,624	\$ 451,393	\$ 400,072
Interest	577,720	565,088	530,313	547,268	544,526	510,813
Changes of benefit terms and actual experience	-	-	-	-	4,418	-
Changes of assumptions	238,611	(90,816)	157,775	(245,867)	(508,125)	(46,483)
Benefit payments, including refunds of member contributions	(606,841)	(459,746)	(469,043)	(445,331)	(439,112)	(317,606)
Net change in total pension liability	506,814	396,640	483,852	121,165	53,100	632,579
Total pension liability, beginning	8,559,950	8,163,310	7,679,458	7,558,293	7,505,193	6,872,614
Total pension liability, ending (a)	<u>\$ 9,066,764</u>	<u>\$ 8,559,950</u>	<u>\$ 8,163,310</u>	<u>\$ 7,679,458</u>	<u>\$ 7,558,293</u>	<u>\$ 7,505,193</u>
<b>Plan fiduciary net position</b>						
Contributions – members	\$ 220,611	\$ 153,881	\$ 202,388	\$ 137,893	\$ 193,356	\$ 139,501
Contributions – employers	-	-	-	-	4,418	3,857
Investment income	845,407	1,176,463	1,366,222	47,890	206,454	1,622,206
Benefits paid, including refunds and withdrawals	(606,840)	(459,746)	(469,043)	(445,331)	(439,112)	(317,606)
Administrative expenses	(12,262)	(11,002)	(10,003)	(9,353)	(9,584)	(7,975)
Other	45,285	-	-	-	-	-
Net change in fiduciary net position	492,201	859,596	1,089,564	(268,901)	(44,468)	1,440,073
Plan fiduciary net position, beginning	12,755,821	11,896,225	10,806,661	11,075,562	11,120,030	9,679,957
Plan fiduciary net position, ending (b)	<u>\$ 13,248,022</u>	<u>\$ 12,755,821</u>	<u>\$ 11,896,225</u>	<u>\$ 10,806,661</u>	<u>\$ 11,075,562</u>	<u>\$ 11,120,030</u>
Plan's net pension asset, ending (a)-(b)	<u>\$ (4,181,258)</u>	<u>\$ (4,195,871)</u>	<u>\$ (3,732,915)</u>	<u>\$ (3,127,203)</u>	<u>\$ (3,517,269)</u>	<u>\$ (3,614,837)</u>
Plan fiduciary net position as a percentage of the total pension liability	146.12%	149.02%	145.73%	140.72%	146.54%	148.16%
Covered payroll	\$ 2,659,749	\$ 2,710,694	\$ 2,651,195	\$ 2,590,011	\$ 2,527,525	\$ 2,534,740
Plan net pension asset as a percentage of covered payroll	(157.20)%	(154.79)%	(140.80)%	(120.74)%	(139.16)%	(142.61)%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**  
**SCHEDULE OF HISTORICAL PENSION INFORMATION**  
**PLD CONSOLIDATED PLAN**  
**June 30, 2019 (UNAUDITED)**

SCHEDULE OF CHANGES IN THE PLAN'S NET PENSION LIABILITY AND RELATED RATIOS

Last Ten Fiscal Years \*

	2019	2018	2017	2016	2015	2014
<b>Total pension liability</b>						
Service cost	\$ 78,317,217	\$ 76,190,510	\$ 76,271,766	\$ 74,208,414	\$ 75,805,492	\$ 72,651,025
Interest	208,360,684	207,492,397	198,972,490	192,774,429	187,928,506	178,293,576
Changes in benefit terms	-	(106,123,366)	-	-	-	-
Differences between expected and actual experience	47,684,163	1,285,303	(2,160,603)	(9,142,757)	(54,634,906)	19,939,857
Changes of assumptions	-	46,439,540	-	50,884,219	37,593,598	-
Benefit payments, including refunds of member contributions	(165,399,679)	(152,087,885)	(146,163,566)	(139,919,680)	(135,414,526)	(127,161,357)
Net change in total pension liability	168,962,385	73,196,499	126,920,087	168,804,625	111,278,164	143,723,101
Total pension liability, beginning	3,089,857,220	3,016,660,721	2,889,740,634	2,720,936,009	2,609,657,845	2,465,934,744
Total pension liability, ending (a)	\$ 3,258,819,605	\$ 3,089,857,220	\$ 3,016,660,721	\$ 2,889,740,634	\$ 2,720,936,009	\$ 2,609,657,845
<b>Plan fiduciary net position</b>						
Contributions – members	\$ 54,927,202	\$ 48,050,202	\$ 46,080,851	\$ 40,861,405	\$ 37,202,921	\$ 33,210,510
Contributions – employers	61,487,037	56,092,662	51,387,011	47,624,182	43,366,730	32,706,160
Refunds of IUUAL account balances	-	-	-	-	(43,000,526)	-
Investment income	188,620,107	259,699,519	299,780,948	10,200,342	46,075,304	361,125,177
Benefits paid, including refunds and withdrawals	(165,399,680)	(152,087,885)	(146,163,566)	(139,919,680)	(135,414,526)	(127,161,358)
Administrative expenses	(2,706,977)	(2,411,666)	(2,209,324)	(2,028,294)	(2,117,266)	(1,779,304)
Other	48,552	(386,621)	(62,201)	(217,338)	-	-
Net change in fiduciary net position	136,976,241	208,956,211	248,813,719	(43,479,383)	(53,887,363)	298,101,185
Plan fiduciary net position, beginning	2,816,179,855	2,607,223,644	2,358,409,925	2,401,889,308	2,455,776,671	2,157,675,486
Plan fiduciary net position, ending (b)	\$ 2,953,156,096	\$ 2,816,179,855	\$ 2,607,223,644	\$ 2,358,409,925	\$ 2,401,889,308	\$ 2,455,776,671
Plan's net pension liability, ending (a)-(b)	\$ 305,663,509	\$ 273,677,365	\$ 409,437,077	\$ 531,330,709	\$ 319,046,699	\$ 153,881,174
Plan fiduciary net position as a percentage of the total pension liability	90.62%	91.14%	86.43%	81.61%	88.27%	94.10%
Covered payroll	\$ 593,884,355	\$ 561,126,768	\$ 542,572,528	\$ 521,870,235	\$ 497,616,846	\$ 460,029,637
Plan net pension liability as a percentage of covered payroll	51.47%	48.77%	75.46%	101.81%	64.11%	33.45%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**

**SCHEDULE OF HISTORICAL PENSION INFORMATION  
STATE EMPLOYEE AND TEACHER PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years*

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$350,583,375	\$340,376,744	\$312,736,906	\$301,891,511	\$302,028,725	\$304,328,386	\$263,553,204	\$252,019,252	\$327,087,524	\$317,030,874
Contributions in relation to the actuarially determined contribution	<u>350,583,375</u>	<u>340,376,744</u>	<u>312,736,906</u>	<u>301,891,511</u>	<u>302,028,725</u>	<u>304,328,386</u>	<u>263,553,204</u>	<u>252,019,252</u>	<u>332,956,361</u>	<u>328,246,031</u>
Contribution deficiency (excess)	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (5,868,837)	\$ (11,215,157)
Covered payroll	\$1,924,006,618	\$1,865,849,388	\$1,860,230,663	\$1,816,435,084	\$1,699,160,889	\$1,676,857,294	\$1,672,857,294	\$1,718,449,172	\$1,643,389,735	\$1,672,252,868
Contributions as a percentage of covered payroll	18.22%	18.24%	16.81%	16.62%	17.78%	18.15%	15.75%	14.67%	20.26%	19.63%

See notes to historical pension and OPEB information.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**  
**SCHEDULE OF HISTORICAL PENSION INFORMATION**  
**JUDICIAL PLAN**

June 30, 2019  
 (UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years*

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$ 1,212,666	\$ 1,179,328	\$ 1,144,445	\$ 1,077,545	\$ 951,351	\$ 932,223	\$ 841,397	\$ 810,721	\$ 987,261	\$ 961,083
Contributions in relation to the actuarially determined contribution	<u>1,212,666</u>	<u>1,179,328</u>	<u>1,144,445</u>	<u>1,077,545</u>	<u>951,351</u>	<u>932,223</u>	<u>841,397</u>	<u>810,721</u>	<u>987,261</u>	<u>961,083</u>
Contribution deficiency (excess)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Covered payroll	\$ 8,116,908	\$ 7,893,762	\$ 7,639,818	\$ 7,188,426	\$ 7,185,501	\$ 6,742,444	\$ 6,742,444	\$ 6,790,274	\$ 6,790,233	\$ 6,956,364
Contributions as a percentage of covered payroll	14.99%	14.94%	14.98%	14.99%	13.24%	13.83%	12.48%	11.94%	14.54%	13.82%

See notes to historical pension and OPEB information.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**

**SCHEDULE OF HISTORICAL PENSION INFORMATION  
LEGISLATIVE PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years*

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Actuarially determined contribution	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions in relation to the actuarially determined contribution	-	-	-	-	-	-	-	-	-	-
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 2,659,749	\$ 2,710,694	\$ 2,651,195	\$ 2,590,011	\$ 2,527,525	\$ 2,534,740	\$ 2,534,740	\$ 2,424,480	\$ 2,395,694	\$ 2,384,083
Contributions as a percentage of covered payroll	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

See notes to historical pension and OPEB information.

See accompanying independent auditor's report.

REQUIRED SUPPLEMENTAL SCHEDULES

SCHEDULE OF HISTORICAL PENSION INFORMATION  
PLD CONSOLIDATED PLAN

June 30, 2019  
(UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years*

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	\$ 61,170,089	\$ 55,551,550	\$ 51,387,011	\$ 46,968,321	\$ 40,302,580	\$ 35,263,952	\$ 29,704,314	\$ 25,056,574	\$ 19,995,608	\$ 15,384,689
Contributions in relation to the actuarially determined contribution	<u>61,170,089</u>	<u>55,551,550</u>	<u>51,387,011</u>	<u>46,968,321</u>	<u>40,302,580</u>	<u>35,263,952</u>	<u>29,704,314</u>	<u>25,372,687</u>	<u>19,995,608</u>	<u>15,384,689</u>
Contribution deficiency (excess)	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (316,113)	\$ —	\$ —
Covered payroll	\$593,884,355	\$561,126,768	\$542,572,528	\$521,870,235	\$497,616,846	\$460,029,637	\$458,424,764	\$474,828,262	\$435,012,940	\$395,747,663
Contributions as a percentage of covered payroll	10.30%	9.90%	9.47%	9.00%	8.10%	7.67%	6.48%	5.34%	4.60%	3.89%

See notes to historical pension and OPEB information.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES****SCHEDULE OF HISTORICAL PENSION INFORMATION  
ALL DEFINED BENEFIT PLANS**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF INVESTMENT RETURNS  
*Last Ten Fiscal Years \**

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expenses	7.08%	10.30%	12.49%	0.48%	1.98%	16.66%

See notes to historical pension and OPEB information.

\* Retroactive information is not required to be presented. This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTAL SCHEDULES**

**SCHEDULE OF HISTORICAL OPEB INFORMATION  
STATE EMPLOYEE AND TEACHER PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF CHANGES IN THE PLAN'S NET OPEB LIABILITY AND RELATED RATIOS  
*Last Ten Fiscal Years \**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>			
Service cost	\$ 2,131,845	\$ 2,122,079	\$ 2,065,283
Interest	13,155,332	12,531,082	12,014,739
Changes of benefit terms	-	-	-
Differences between expected and actual experience	-	1,957,220	-
Changes of assumptions	-	3,199,639	-
Benefit payments	<u>(7,118,082)</u>	<u>(7,269,810)</u>	<u>(6,003,967)</u>
Net change in total OPEB liability	8,169,095	12,540,210	8,076,055
Total OPEB liability, beginning	<u>196,262,903</u>	<u>183,722,693</u>	<u>175,646,638</u>
Total OPEB liability, ending (a)	<u>\$ 204,431,998</u>	<u>\$ 196,262,903</u>	<u>\$ 183,722,693</u>
<b>Plan fiduciary net position</b>			
Contributions – members	\$ -	\$ -	\$ -
Contributions – employers	7,756,442	7,638,453	6,921,228
Investment income	6,418,113	7,804,839	9,885,897
Benefits paid	(7,118,082)	(7,269,810)	(6,003,967)
Administrative expenses	(726,320)	(769,717)	(1,335,745)
Other	<u>\$ -</u>	<u>-</u>	<u>-</u>
Net change in fiduciary net position	6,330,153	7,403,765	9,467,413
Plan fiduciary net position, beginning	<u>94,286,629</u>	<u>86,882,864</u>	<u>77,415,451</u>
Plan fiduciary net position, ending (b)	<u>\$ 100,616,782</u>	<u>\$ 94,286,629</u>	<u>\$ 86,882,864</u>
Plan's net OPEB liability, ending (a)-(b)	<u>\$ 103,815,216</u>	<u>\$ 101,976,274</u>	<u>\$ 96,839,829</u>
Plan fiduciary net position as a percentage of the total OPEB liability	49.22%	48.04%	47.29%
Covered payroll	\$ 1,380,619,384	\$ 1,343,668,500	\$ 1,277,009,000
Plan net OPEB liability as a percentage of covered payroll	7.52%	7.59%	7.58%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTARY SCHEDULES**  
**SCHEDULE OF HISTORICAL OPEB INFORMATION**  
**PLD CONSOLIDATED PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF CHANGES IN THE PLAN'S NET OPEB LIABILITY AND RELATED RATIOS  
*Last Ten Fiscal Years \**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
<b>Total OPEB liability</b>			
Service cost	\$ 488,545	\$ 442,863	\$ 619,735
Interest	1,832,881	1,706,200	1,616,253
Changes of benefit terms	-	-	-
Differences between expected and actual experience	-	2,045,678	-
Changes of assumptions	893,851	1,554,074	(5,591,242)
Benefit payments	<u>(1,581,540)</u>	<u>(1,530,346)</u>	<u>(1,394,586)</u>
Net change in total OPEB liability	1,633,737	4,218,469	(4,749,840)
Total OPEB liability, beginning	<u>36,022,905</u>	<u>31,804,436</u>	<u>36,554,276</u>
Total OPEB liability, ending (a)	<u>\$ 37,656,642</u>	<u>\$ 36,022,905</u>	<u>\$ 31,804,436</u>
<b>Plan fiduciary net position</b>			
Contributions – members	\$ -	\$ -	\$ -
Contributions – employers	1,100,509	1,069,640	1,037,124
Investment income	1,037,784	1,333,324	1,738,914
Benefits paid	(1,581,540)	(1,530,346)	(1,394,586)
Administrative expenses	(119,519)	(133,624)	(238,856)
Other	<u>-</u>	<u>-</u>	<u>-</u>
Net change in fiduciary net position	437,234	738,994	1,142,596
Plan fiduciary net position, beginning	<u>15,821,928</u>	<u>15,082,934</u>	<u>13,940,338</u>
Plan fiduciary net position, ending (b)	<u>\$ 16,259,162</u>	<u>\$ 15,821,928</u>	<u>\$ 15,082,934</u>
Plan's net OPEB liability, ending (a)-(b)	\$ <u>\$ 21,397,480</u>	\$ <u>\$ 20,200,977</u>	\$ <u>\$ 16,721,502</u>
Plan fiduciary net position as a percentage of the total OPEB liability	43.18%	43.92%	47.42%
Covered payroll	\$ 283,884,893	\$ 276,287,000	\$ 260,552,680
Plan net OPEB liability as a percentage of covered payroll	7.54%	7.31%	6.42%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTARY SCHEDULES**  
**SCHEDULE OF HISTORICAL OPEB INFORMATION**  
**STATE EMPLOYEE AND TEACHER PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years\**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Actuarially determined contribution	\$ 9,040,284	\$ 8,805,704	\$ 8,239,903
Contributions in relation to the actuarially determined contribution	<u>7,756,442</u>	<u>7,638,453</u>	<u>6,921,228</u>
Contribution deficiency	\$ <u>1,283,842</u>	\$ <u>1,167,251</u>	\$ <u>1,318,675</u>
Covered payroll	\$ 1,380,619,384	\$ 1,343,668,500	\$ 1,277,009,000
Contributions as a percentage of covered payroll	0.56%	0.57%	0.54%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF HISTORICAL OPEB INFORMATION**  
**PLD PLAN**

June 30, 2019  
(UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS  
*Last Ten Fiscal Years*

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Actuarially determined contribution	\$ 1,287,098	\$ 1,252,650	\$ 1,146,324
Contributions in relation to the actuarially determined contribution	<u>1,100,509</u>	<u>1,069,640</u>	<u>1,037,124</u>
Contribution deficiency	<u>\$ 186,589</u>	<u>\$ 183,010</u>	<u>\$ 109,200</u>
Covered payroll	\$ 283,884,893	\$ 276,287,000	\$ 260,552,680
Contributions as a percentage of covered payroll	0.39%	0.39%	0.40%

See notes to historical pension and OPEB information.

\*This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF HISTORICAL OPEB INFORMATION**  
**ALL OPEB PLANS**

June 30, 2019  
 (UNAUDITED)

SCHEDULE OF INVESTMENT RETURNS  
*Last Ten Fiscal Years \**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expenses	6.6%	9.00%	12.88%

See notes to historical pension and OPEB information.

\* Retroactive information is not required to be presented. This information will be presented each year until 10 years of such information is available.

See accompanying independent auditor's report.

## NOTES TO HISTORICAL PENSION AND OPEB INFORMATION

June 30, 2019  
(UNAUDITED)

### 1. Basis of Presentation

The schedule of investment returns for pension plans applies to the State Employee and Teacher Plan, the Judicial Plan, the Legislative Plan, the PLD Consolidated Plan, and the PLD Agent Plans, as investments of these plans are commingled. Assets in the Group Life Insurance Plans, including assets to provide life insurance benefits to active employees, are commingled for investment purposes but separately from the pension plan assets.

### 2. Actuarial Methods and Assumptions – Defined Benefit Plans

The information in the historical pension information was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation date, June 30, 2019, is as follows:

#### Actuarial Cost Method

The Entry Age Normal actuarial funding method is used to determine costs. Under this funding method, the total employer contribution rate consists of two elements, the normal cost rate and the unfunded actuarial liability rate.

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

Experience gains and losses, i.e., decreases or increases in liabilities and/or in assets when actual experience differs from the actuarial assumptions, affect the unfunded actuarial accrued liability.

#### Asset Valuation Method

An actuarial value of assets is used for determining employer contributions. The use of an actuarial value of assets for this purpose helps mitigate volatility in contribution rates that might otherwise occur due to fluctuations in market conditions. The specific technique adopted in this valuation recognizes in a given year one-third of the investment return that is different from the actuarial assumption for investment return.

#### Amortization

The net pension liability of the State Employee and Teacher Retirement Program is amortized on a level percentage of payroll over the amortization period then in effect under statutory and constitutional requirements (Note 6 to the Financial Statements). The net pension liabilities of the Legislative Plan and the Judicial Plan are amortized on a level percentage of payroll over open ten year periods.

The net pension liability of the PLD Consolidated Plan is amortized on a level percentage of payroll using a method where a separate twenty-year closed period is established annually for the gain or loss for that year.

**NOTES TO HISTORICAL PENSION AND OPEB INFORMATION**  
**June 30, 2019**  
**(UNAUDITED)**

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30 for each year indicated are as follows:

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan
Investment Rate of Return	Per annum, compounded annually: 6.75% for June 30, 2019 and June 30, 2018; 6.875% for June 30, 2017 and June 30, 2016; 7.125% for June 30, 2015 and June 30, 2014			Per annum, compounded annually: 6.75% for June 30, 2019 and June 30, 2018; 6.875% for June 30, 2017 and June 30, 2016; 7.125% for June 30, 2015; 7.25% for June 30, 2014
Inflation Rate	2.75% for June 30, 2019, June 30, 2018, June 30, 2017, and June 30, 2016; 3.50% for June 30, 2015 and June 30, 2014			
Annual Salary Increases, including Inflation	For the periods ended June 30, 2019; June 30, 2018; June 30, 2017; and June 30, 2016:			
	State employees, 2.75% - 8.75%; Teachers, 2.75% - 14.50%	2.75%	2.75%	2.75% - 9.00%
	For the periods ended June 30, 2015 and June 30, 2014:			
	State employees, 3.50% - 10.50%; Teachers, 3.50% - 13.50%	3.50%	3.50%	3.50% - 9.50%
Cost of Living Benefit Increases	2.20% for June 30, 2019, June 30, 2018, June 30, 2017 and June 30, 2016; 2.55% for June 30, 2015 and June 30, 2014			1.91% for June 30, 2019 and June 30, 2018; 2.20% for June 30, 2017 and June 30, 2016; 2.55% for June 30, 2015 and 3.12% for June 30, 2014
Mortality Rates	For the periods ended June 30, 2019; June 30, 2018; June 30, 2017; and June 30, 2016:			
	For active members and non-disabled retirees of the State employees and teachers, legislative, judicial, and PLD plans, the RP2014 Total Dataset Healthy Annuitant Mortality Table, for males and females, is used. For all recipients of disability benefits, the RP2014 Total Dataset Disabled Annuitant Mortality Table, for males and females, is used.			
	For the periods ended June 30, 2015 and June 30, 2014:			
	For active members and non-disabled retirees of the State employees and teachers, legislative, judicial, and PLD plans, the RP2000 Tables projected forward to 2015 using Scale AA are used; the ages are set back two years for employees of the teacher plan. Mortality assumptions were also reviewed and updated in 2011 for the PLD Consolidated Plan, and in 2012 for the other Plans, based on actual demographic data of the Plans. For all recipients of disability benefits, the Revenue Ruling 96-7 Disabled Mortality Table for Males and Females is used.			

**3. Actuarial Methods and Assumptions – Group Life Insurance Plans**

The information in the historical Group Life Insurance Plan information was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation date, June 30, 2019, is as follows:

Actuarial Cost Method

The individual entry age normal method is used to determine liabilities. Under the individual entry age normal method, a normal cost rate is calculated for each employee. This rate is determined by taking the value, as of age at entry into the plan, of the member’s projected future benefits, and dividing it by the value, also as of the member’s entry age, of his expected future salary. The normal cost for each employee is the product of his pay and his normal cost rate. The normal cost for the group is the sum of the normal costs for all members.

The actuarial accrued liability is defined as the present value of future benefits less the present value of future normal cost contributions. The unfunded actuarial accrued liability is the total of the actuarial liability for all members less the actuarial value of the System’s assets.

Experience gains and losses, i.e., decreases or increases in liabilities and/or in assets when actual experience differs from the actuarial assumptions, affect the unfunded actuarial accrued liability.

**NOTES TO HISTORICAL PENSION AND OPEB INFORMATION**  
**June 30, 2019**  
**(UNAUDITED)**

Asset Valuation Method

Asset amounts are taken as reported to the actuaries by the System without audit or change, except that State of Maine assets are allocated to State, Legislators, and Judges based on total actuarial liability.

Amortization

The unfunded actuarial accrued liability is being amortized as a level percentage of payroll over a 30-year period on a closed basis. As of June 30, 2019, there were 18 years remaining in the amortization schedule for state employees and teachers, and 11 years remaining for PLD employees.

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30 for each year indicated are as follows:

	State employees, including judges and legislators	Teachers	PLD employees
Investment Rate of Return	Per annum, compounded annually: 6.75% for June 30, 2019 and June 30, 2018; 6.875% for June 30, 2017		
Inflation Rate	2.75% for June 30, 2019, June 30, 2018 and June 30, 2017		
Annual Salary Increases, including Inflation	For June 30, 2019, June 30, 2018 and June 30, 2017		
	2.75% - 8.75%	2.75% - 14.50%	2.75% - 9.00%
Mortality Rates	For June 30, 2019, June 30, 2018 and June 30, 2017		
	For active members and non-disabled retirees of the State employees, legislative, judicial, and PLD plans, the RP2014 Total Dataset Healthy Annuitant Mortality Table, for males and females, is used. For all recipients of disability benefits, the RP2014 Total Dataset Disabled Annuitant Mortality Table, for males and females, is used.		
Participation Rate for Future Retirees	100% of those currently enrolled		
Conversion Charges	Apply to the cost of active group life insurance, not retiree group life insurance		
Form of Benefit Payment	Lump sum		

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended June 30, 2019

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	PLD Agent Plan	Group Life Insurance Plan Actives	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Plan	Total
<b>Alternative Credit</b>												
Angelo Gordon Direct Lending III	\$ 204,897	\$ 1,256	\$ 225	\$ 50,007	\$ 642	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 257,027
Ares Capital Europe IV	173,502	1,063	190	42,345	544	-	-	-	-	-	-	217,644
Audax Senior Debt	1,397,381	8,562	1,533	341,044	4,381	-	-	-	-	-	-	1,752,901
Mesa West Core	641,226	3,929	703	156,497	2,010	-	-	-	-	-	-	804,365
Owl Rock	1,497,264	9,174	1,642	365,421	4,694	-	-	-	-	-	-	1,878,195
TCP Direct Lending VIII	648,612	3,976	712	158,349	2,034	-	-	-	-	-	-	813,883
<b>Infrastructure</b>												
Alinda Infrastructure	143,549	880	157	35,034	450	-	-	-	-	-	-	180,070
Arclight V	463,233	2,838	508	113,056	1,452	-	-	-	-	-	-	581,087
Arclight VI	1,273,162	7,801	1,397	310,727	3,991	-	-	-	-	-	-	1,597,078
Brookfield Infrastructure II	848,985	5,202	931	207,203	2,661	-	-	-	-	-	-	1,064,982
Brookfield Infrastructure III	1,004,450	6,155	1,102	245,145	3,149	-	-	-	-	-	-	1,260,001
Carlyle Infrastructure	28,832	177	32	7,037	90	-	-	-	-	-	-	36,168
Carlyle Power Partners II	558,028	3,419	612	136,192	1,749	-	-	-	-	-	-	700,000
Cube Infrastructure	230,609	1,413	253	56,282	723	-	-	-	-	-	-	289,280
Cube Infrastructure II	2,416,562	14,807	2,651	589,784	7,576	-	-	-	-	-	-	3,031,380
EQT III	835,748	5,121	917	203,972	2,620	-	-	-	-	-	-	1,048,378
EQT IV	772,994	4,737	848	188,656	2,423	-	-	-	-	-	-	969,688
GIP Gas Natural Co-Invest	176,778	1,083	194	43,144	554	-	-	-	-	-	-	270,323
Global Infrastructure I	215,497	1,320	236	52,594	676	-	-	-	-	-	-	221,753
Global Infrastructure II	757,741	4,643	831	184,934	2,375	-	-	-	-	-	-	950,524
Global Infrastructure III	1,943,132	11,907	2,131	474,239	6,092	-	-	-	-	-	-	2,437,501
Global Infrastructure IV	1,029,648	6,309	1,129	251,295	3,228	-	-	-	-	-	-	1,291,609
GIP Stetson Co-Invest	174,998	1,072	192	42,710	549	-	-	-	-	-	-	219,521
Global Energy & Power Infrastructure I	257,318	1,577	282	62,801	807	-	-	-	-	-	-	322,785
Global Energy & Power Infrastructure II	814,019	4,988	893	198,669	2,552	-	-	-	-	-	-	1,021,121
IFM Global Infrastructure	1,187,750	7,278	1,303	289,881	3,723	-	-	-	-	-	-	1,489,935
KKR Infrastructure	348,676	2,137	382	85,097	1,093	-	-	-	-	-	-	437,385
KKR Infrastructure II	1,297,358	7,950	1,423	316,632	4,067	-	-	-	-	-	-	1,627,430
KKR Infrastructure III	784,227	4,805	860	191,398	2,458	-	-	-	-	-	-	983,748
Meridiam Europe I	41,176	252	45	10,049	129	-	-	-	-	-	-	51,651
Meridiam Europe II	134,335	823	147	32,786	421	-	-	-	-	-	-	168,512
Meridiam Europe III	930,733	5,703	1,021	227,154	2,918	-	-	-	-	-	-	1,167,529
Meridiam NA II	402,802	2,468	442	98,307	1,263	-	-	-	-	-	-	505,282
Meridiam NA II Secondary	107,415	658	118	26,216	337	-	-	-	-	-	-	134,744
Meridiam NA III	478,309	2,931	525	116,736	1,499	-	-	-	-	-	-	600,000
Stonepeak II	1,079,017	6,612	1,184	263,344	3,383	-	-	-	-	-	-	1,353,540
Stonepeak III	1,744,923	10,692	1,914	425,864	5,470	-	-	-	-	-	-	2,188,863
<b>Natural Resources</b>												
Agriculture Cultural Management II	488,274	2,992	536	119,168	1,531	-	-	-	-	-	-	612,501
ACM Permanent Crops	460,425	2,821	505	112,371	1,443	-	-	-	-	-	-	577,565

## ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended June 30, 2019

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	PLD Agent Plan	Group Life Insurance Plan Active	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Plan	Total
<b>Natural Resources (concluded)</b>												
Amena III	\$ 531,956	\$ 3,260	\$ 584	\$ 129,829	\$ 1,668	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 667,297
Denham Mining	945,445	5,793	1,037	230,745	2,964	-	-	-	-	-	-	1,185,984
Homestead Farmland II	597,887	3,664	656	145,920	1,874	-	-	-	-	-	-	750,001
Homestead Farmland III	46,972	288	52	11,464	147	-	-	-	-	-	-	58,923
IFC US Farming	1,074,117	6,582	1,178	262,148	3,367	-	-	-	-	-	-	1,347,392
Orion II	657,675	4,030	721	160,512	2,062	-	-	-	-	-	-	825,000
Taurus Annex	171,880	1,053	189	41,949	539	-	-	-	-	-	-	215,610
Taurus Mining	498,239	3,053	547	121,600	1,562	-	-	-	-	-	-	625,001
Twin Creeks	172,436	1,057	189	42,085	541	-	-	-	-	-	-	216,308
<b>Domestic Equity</b>												
Blackrock Extended Equity	-	-	-	-	-	588	4,800	785	-	594	11,989	18,756
<b>International Equity</b>												
Blackrock ACWI EX_US	513,484	3,146	563	125,320	1,610	815	6,651	1,088	-	1,007	18,976	672,660
<b>Fixed Income</b>												
Blackrock Custom Fixed Income	205,353	1,258	225	55,118	644	-	-	-	-	-	-	257,598
Blackrock US Debt Index Fund B	-	-	-	-	-	-	-	-	-	-	-	-
<b>Private Equity</b>												
ABRY ASF II	95,007	582	104	23,187	298	1,509	12,321	2,016	-	1,853	39,353	57,052
ABRY ASF III	478,309	2,931	525	116,736	1,499	-	-	-	-	-	-	119,178
ABRY Heritage	159,436	977	175	38,912	500	-	-	-	-	-	-	600,000
ABRY SE IV	66,163	405	73	16,148	207	-	-	-	-	-	-	200,000
ABRY SE V	144,091	883	158	35,167	452	-	-	-	-	-	-	82,996
ABRY Partners VII	32,176	197	35	7,853	101	-	-	-	-	-	-	180,751
ABRY Partners VIII	269,222	1,650	295	65,706	844	-	-	-	-	-	-	337,717
Advent GPE VII	219,540	1,345	241	53,581	688	-	-	-	-	-	-	40,362
Advent GPE VIII	597,887	3,664	656	145,920	1,874	-	-	-	-	-	-	275,395
Advent LAPEF VI	318,873	1,954	350	77,824	1,000	-	-	-	-	-	-	750,001
Affinity Asia Pacific IV	620,475	3,802	681	151,433	1,945	-	-	-	-	-	-	400,001
Affinity Asia Pacific V	345,667	2,118	379	84,363	1,084	-	-	-	-	-	-	778,336
Berkshire VIII	155,275	951	170	37,896	487	-	-	-	-	-	-	433,611
Berkshire IX	797,182	4,885	874	194,560	2,499	-	-	-	-	-	-	1,000,000
Blackstone Capital Partners VI	110,943	680	122	27,077	348	-	-	-	-	-	-	139,170
Blackstone Capital Partners VII	645,718	3,957	708	157,593	2,024	-	-	-	-	-	-	810,000
Carlyle Asia Partners III	21,169	130	23	5,167	66	-	-	-	-	-	-	26,555
Carlyle Asia Partners IV	408,571	2,504	448	99,715	1,281	-	-	-	-	-	-	512,519
Carlyle Asia Partners V	565,052	3,462	620	137,906	1,771	-	-	-	-	-	-	708,811
Centerbridge III	358,732	2,198	393	87,552	1,125	-	-	-	-	-	-	450,000
Centerhouse IX	(7,972)	(49)	(9)	(1,946)	(25)	-	-	-	-	-	-	(10,001)
Charterhouse X	820,080	5,025	900	200,148	2,571	-	-	-	-	-	-	1,028,724
CVC Capital VI	729,500	4,470	800	178,041	2,287	-	-	-	-	-	-	915,098

**ADDITIONAL SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF INVESTMENT EXPENSES**  
 For the Year Ended June 30, 2019

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	PLD Agent Plan	Group Life Insurance Plan Active	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Plan	Total
Private Equity (Continued)	\$ 950,439	\$ 5,824	\$ 1,043	\$ 231,963	\$ 2,980	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,192,249
CVC Capital VII	138,556	849	152	33,816	484	-	-	-	-	-	-	173,807
Encap Energy VIII	276,087	1,692	303	67,382	866	-	-	-	-	-	-	346,330
Encap Energy IX	330,228	2,023	362	80,595	1,035	-	-	-	-	-	-	414,243
Encap Energy X	478,309	2,931	525	116,736	1,499	-	-	-	-	-	-	600,000
Encap Flatrock Midstream III	87,938	539	96	21,462	276	-	-	-	-	-	-	110,311
Encap Flatrock Midstream IV	263,070	1,612	289	64,205	825	-	-	-	-	-	-	330,001
GTCR X	274,430	1,682	301	66,977	860	-	-	-	-	-	-	344,250
GTCR XI	418,521	2,564	459	102,144	1,312	-	-	-	-	-	-	525,000
GTCR XII	603,458	3,698	662	147,279	1,892	-	-	-	-	-	-	756,989
Heliman & Friedman PE VII	54,503	334	60	13,302	171	-	-	-	-	-	-	68,370
Heliman & Friedman PE VIII	403,573	2,473	443	98,496	1,265	-	-	-	-	-	-	506,250
HIG Bayside III Europe	399,222	2,446	438	97,434	1,252	-	-	-	-	-	-	500,792
HIG Brazil	1,195,773	7,327	1,312	291,839	3,749	-	-	-	-	-	-	1,500,000
HIG Buyouts II	296,152	1,815	325	72,279	928	-	-	-	-	-	-	371,499
HIG Buyouts III	279,014	1,710	306	68,096	875	-	-	-	-	-	-	350,001
HIG Capital V	239,155	1,465	262	58,368	750	-	-	-	-	-	-	300,000
HIG Europe II	351,931	2,156	386	85,892	1,103	-	-	-	-	-	-	441,468
HIG Middle Market LBO II	637,746	3,908	700	155,648	1,999	-	-	-	-	-	-	800,001
Inflexion Buyout IV	213,809	1,310	235	52,182	670	-	-	-	-	-	-	268,206
Inflexion Capital I	234,097	1,434	257	57,133	734	-	-	-	-	-	-	293,655
Inflexion Supplemental IV	93,021	570	102	22,703	292	-	-	-	-	-	-	116,688
Kelso IX	382,695	2,345	420	93,400	1,200	-	-	-	-	-	-	480,060
KKR Americas XII	777,253	4,763	853	189,696	2,437	-	-	-	-	-	-	975,002
KKR North America XI	264,891	1,623	291	64,649	830	-	-	-	-	-	-	332,284
KKR Special Situations I	527,763	3,234	579	128,805	1,654	-	-	-	-	-	-	662,035
KKR Special Situations II	564,859	3,461	620	137,859	1,771	-	-	-	-	-	-	708,570
Oaktree PE	47,193	289	52	11,518	148	-	-	-	-	-	-	59,200
Onex ONCAP IV	338,801	2,076	372	82,687	1,062	-	-	-	-	-	-	424,998
Onex Partners III	28,224	173	31	6,888	88	-	-	-	-	-	-	35,404
Onex Partners IV	597,453	3,661	655	145,814	1,873	-	-	-	-	-	-	749,456
Onex Partners V	359,044	2,200	394	87,628	1,126	-	-	-	-	-	-	450,392
Paine & Partners IV	956,619	5,862	1,049	233,471	2,999	-	-	-	-	-	-	1,200,000
Rhone V	914,442	5,603	1,003	223,178	2,867	-	-	-	-	-	-	1,147,093
Riverside Capital Appreciation VI	530,264	3,249	582	129,416	1,662	-	-	-	-	-	-	665,173
Riverside Micro-Cap III	604,342	3,703	663	147,495	1,895	-	-	-	-	-	-	758,098
Riverside Micro-Cap IV	684,119	4,192	750	166,966	2,145	-	-	-	-	-	-	858,172
Riverside Micro-Cap V	549,362	3,366	603	134,077	1,722	-	-	-	-	-	-	689,130
Shoreview Capital III	362,374	2,220	397	88,441	1,136	-	-	-	-	-	-	454,568
Sovereign Capital	928,407	5,689	1,018	226,586	2,910	-	-	-	-	-	-	1,164,610
Summit Credit II	673,895	4,129	739	164,470	2,113	-	-	-	-	-	-	845,346
Summit GE VIII	234,965	1,440	258	57,345	737	-	-	-	-	-	-	294,745
Summit GE IX	743,190	4,554	815	181,382	2,330	-	-	-	-	-	-	932,271

## ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended June 30, 2019

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	PLD Agent Plan	Group Life Insurance Plan Active	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Plan	Total
<b>Private Equity (concluded)</b>												
Summit VC III	\$ 87,311	\$ 535	\$ 96	\$ 21,309	\$ 274	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109,525
Summit VC IV	364,344	2,233	400	88,922	1,142	-	-	-	-	-	-	457,041
TCV VIII	956,619	5,862	1,049	233,471	2,999	-	-	-	-	-	-	1,200,000
TCV IX	418,521	2,564	459	102,144	1,312	-	-	-	-	-	-	525,000
TCV X	151,819	930	167	37,053	476	-	-	-	-	-	-	190,445
Technology Impact Fund I	478,309	2,931	525	116,736	1,499	-	-	-	-	-	-	600,000
Technology Impact Growth Fund I	231,183	1,417	254	56,422	725	-	-	-	-	-	-	290,001
Thomas Bravo Special Opp II	110,073	674	121	26,864	345	-	-	-	-	-	-	138,077
Thomas Bravo XI	646,306	3,960	709	157,737	2,026	-	-	-	-	-	-	810,738
Thomas Bravo XII	652,741	4,000	716	159,307	2,046	-	-	-	-	-	-	818,810
Thomas Bravo XIII	270,514	1,658	297	66,021	848	-	-	-	-	-	-	339,338
Tillridge II	746,949	4,577	619	182,300	2,342	-	-	-	-	-	-	936,987
Water Street Healthcare III	311,594	1,909	342	76,047	977	-	-	-	-	-	-	390,869
Water Street Healthcare IV	526,140	3,224	577	128,409	1,649	-	-	-	-	-	-	659,999
Wayzata OPP III	87,547	536	96	21,367	274	-	-	-	-	-	-	109,820
Wynchurch IV	637,745	3,908	700	155,648	1,999	-	-	-	-	-	-	800,000
<b>Real Estate</b>												
Blackrock US RE Securities Fund B	-	-	-	-	-	507	4,135	677	-	654	11,684	17,657
Bairings Private Equity Asia II	1,078,789	6,610	1,183	263,288	3,382	-	-	-	-	-	-	1,353,252
Blackstone Property Partners	1,480,560	9,072	1,624	361,344	4,641	-	-	-	-	-	-	1,857,241
BREP VII	416,490	2,552	457	101,648	1,306	-	-	-	-	-	-	522,453
BREP VIII	597,887	3,664	656	145,920	1,874	-	-	-	-	-	-	750,001
H/2 Credit Partners	473,139	2,899	519	115,474	1,483	-	-	-	-	-	-	593,514
Harrison Street Real Estate	682,248	4,180	748	166,509	2,139	-	-	-	-	-	-	855,824
High Street V	249,956	1,532	274	61,004	784	-	-	-	-	-	-	313,550
Invesco US Income	1,241,238	7,606	1,362	302,935	3,891	-	-	-	-	-	-	1,557,032
IronPoint Data Centers	358,732	2,198	393	87,552	1,125	-	-	-	-	-	-	450,000
KKR REPA I	209,427	1,283	230	51,113	657	-	-	-	-	-	-	262,710
KKR REPA II	492,002	3,015	540	120,077	1,542	-	-	-	-	-	-	617,176
KKR REPE	510,750	3,130	560	124,653	1,601	-	-	-	-	-	-	640,694
PMIT	200,836	1,231	220	49,016	630	-	-	-	-	-	-	251,933
Principal Global Investors	137,708	844	151	33,609	432	-	-	-	-	-	-	172,744
Prudential Real Estate (PRSA)	145,544	892	160	35,521	456	-	-	-	-	-	-	182,573
Prudential Senior Housing V	227,389	1,393	249	55,496	713	-	-	-	-	-	-	285,240
Rubenstein III	358,732	2,198	393	87,552	1,125	-	-	-	-	-	-	450,000
Smart Markets	929,412	5,695	1,019	226,832	2,914	-	-	-	-	-	-	1,165,872
Walton Street Co-Invest	49,331	302	54	12,040	155	-	-	-	-	-	-	61,882
Walton Street Real Estate VII	388,858	2,383	427	94,904	1,219	-	-	-	-	-	-	487,791
Walton Street Real Estate VIII	373,512	2,289	410	91,159	1,171	-	-	-	-	-	-	468,541
Westbrook IX	66,565	408	73	16,246	209	-	-	-	-	-	-	83,501
Westbrook X	505,670	3,098	555	123,413	1,585	-	-	-	-	-	-	634,321

**ADDITIONAL SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF INVESTMENT EXPENSES**

For the Year Ended June 30, 2019

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	PLD Agent Plan	Group Life Insurance Plan Active	Group Life Insurance Plan Retired SET	Group Life Insurance Plan Retired PLD	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance Plan	Total
<b>Risk Diversifiers</b>												
AQR Liquid Enhanced Alternative Premia \$	1,224,721	7,504	1,343	298,904	3,839	-	-	-	-	-	-	1,536,311
Bridgewater Pure Alpha	3,305,008	20,251	3,625	806,617	10,361	-	-	-	-	-	-	4,145,862
Bridgewater Pure Alpha Markets	3,268,879	20,030	3,586	797,800	10,248	-	-	-	-	-	-	4,100,543
GMO	(231,184)	(1,417)	(254)	(56,422)	(725)	-	-	-	-	-	-	(290,002)
Windham Capital	1,786,408	10,946	1,960	435,989	5,600	-	-	-	-	-	-	2,240,903
Windham Risk Premia	855,754	5,244	939	208,855	2,683	-	-	-	-	-	-	1,073,475
Other Investment Expenses	-	-	-	-	-	-	-	-	48,460	-	-	48,460
In-house investment management	<u>4,572,757</u>	<u>28,018</u>	<u>5,011</u>	<u>1,116,016</u>	<u>14,332</u>	<u>4,652</u>	<u>37,978</u>	<u>6,215</u>	<u>-</u>	<u>5,083</u>	<u>-</u>	<u>5,790,062</u>
Total investment expenses	<u>\$ 93,284,345</u>	<u>\$ 571,598</u>	<u>\$ 102,324</u>	<u>\$ 22,766,892</u>	<u>\$ 292,438</u>	<u>\$ 8,071</u>	<u>\$ 65,885</u>	<u>\$ 10,781</u>	<u>\$ 48,460</u>	<u>\$ 9,191</u>	<u>\$ 82,002</u>	<u>\$ 117,241,987</u>

## ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF ADMINISTRATIVE EXPENSES

For the Year Ended June 30, 2019

		State Employee and Teacher Plan		Judicial Plan		Legislative Plan		PLD Consolidated Plan		PLD Agent Plan		Group Life Insurance Plan Active		Group Life Insurance Plan Retired SET		Group Life Insurance Plan Retired PLD		Defined Contribution Plan		Retiree Health Insurance Plan		Total
Personal services	\$	5,725,310		35,064		6,279		1,386,145		18,204		37,664		371,923		61,201		112,654		3,000		7,757,444
Professional fees		2,364,859		14,483		2,593		572,552		7,519		15,558		153,623		25,280		46,532		-		3,203,000
Computer services		727,575		4,456		798		176,152		2,314		4,787		47,264		7,778		14,316		-		985,440
Telephone, data, and internet services		100,143		613		110		24,245		318		659		6,505		1,070		1,970		-		135,633
Printing and postage		250,590		1,535		275		60,670		797		1,649		16,279		2,679		4,931		-		339,405
Office rent and building operations		220,339		1,349		242		53,346		701		1,450		14,313		2,355		4,335		-		298,430
Depreciation		1,235,831		7,569		1,355		299,205		3,930		8,130		80,281		13,211		24,317		-		1,673,829
Miscellaneous operating expenses		<u>556,205</u>		<u>3,406</u>		<u>610</u>		<u>134,662</u>		<u>1,789</u>		<u>3,659</u>		<u>36,132</u>		<u>5,945</u>		<u>10,945</u>		<u>-</u>		<u>753,332</u>
Total administrative expenses		<u>\$11,180,852</u>		<u>\$ 68,475</u>		<u>\$ 12,262</u>		<u>\$ 2,706,977</u>		<u>\$ 35,552</u>		<u>\$ 73,556</u>		<u>\$ 726,320</u>		<u>\$ 119,519</u>		<u>\$ 220,000</u>		<u>\$ 3,000</u>		<u>\$ 15,146,513</u>

**ADDITIONAL SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF PROFESSIONAL FEES**  
For the Year Ended June 30, 2019

Professional fees:		
Audit	\$	49,420
Actuarial services		260,630
IT service		1,769,642
Legal services		205,705
Medical consulting		479,926
Other services		<u>437,677</u>
 Total professional fees	 \$	 <u>3,203,000</u>

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# INVESTMENT SECTION



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CAMBRIDGE ASSOCIATES

125 High Street | Boston, MA 02110 | 617 457 7500 | [cambridgeassociates.com](http://cambridgeassociates.com)

December 17, 2019

Board of Trustees (the "Board")  
Maine Public Employees Retirement System  
139 Capitol St  
Augusta, ME 04332

RE: Maine Public Employees Retirement System ("MainePERS" or the "System")

To the Board:

Cambridge Associates, LLC has been retained by the Board of Trustees to advise on MainePERS' investment policy, perform quarterly reviews of performance and provide general investment advice.

It is our opinion that MainePERS' assets are managed under detailed and well-articulated policies, appropriate to the circumstances of the System. Per the MainePERS' Investment Policy Statement, the portfolio's investment objectives attempt to balance the System's twin goals of generating investment returns (to ensure growth of the trust funds) and minimizing investment risks (loss of capital and cash flow shortfalls). It is our understanding that all performance measurements and comparisons have been made using standard performance evaluation methods consistent with industry standards. It is also our opinion that the Board, Executive Director, and staff have taken appropriate measures for overseeing the management of the System's assets and ensuring that investments have conformed with the Systems' investment policy statement. Furthermore, based upon our interactions with the Board, we believe the Board is providing prudent oversight of MainePERS' investments.

Sincerely,

Brian McDonnell  
Global Head of the Pension Practice

## INVESTMENT ACTIVITY

The table below summarizes the defined benefit portfolio values and returns for the ten years ended June 30, 2019. Assets grew by \$6.6 billion from \$8.3 billion to \$14.9 billion over this period.

The rates of return displayed in the table are time-weighted rates of return. The table displays the net invested assets and returns of the investment portfolio, as reported by the MainePERS investment custodian as of June 30 of each year. These values and returns are based in part on lagged values due to the delayed reporting schedule for alternative asset classes. The "Closing Market Value" reported in the table therefore differs from the actual June 30 values as reported in the statement of fiduciary net position. Securities lending liabilities are netted against securities lending collateral. Certain assets, such as cash in the System's operating bank accounts are not considered part of the investment portfolio, and are therefore not included in the table or graph.

### SUMMARY OF INVESTMENT ACTIVITY

FY Ended June 30	Opening Market Value (\$ millions)	Closing Market Value (\$ millions)	Rate of Return
2019	\$ 14,344	\$ 14,886	7.3%
2018	\$ 13,385	\$ 14,344	10.3%
2017	\$ 12,283	\$ 13,385	12.5%
2016	\$ 12,610	\$ 12,283	0.6%
2015	\$ 12,732	\$ 12,610	2.0%
2014	\$ 11,264	\$ 12,732	16.7%
2013	\$ 10,470	\$ 11,264	11.1%
2012	\$ 10,739	\$ 10,470	0.6%
2011	\$ 8,934	\$ 10,739	22.4%
2010	\$ 8,291	\$ 8,934	11.1%
		Annualized 10-year period	9.3%
		Cumulative 10-year period	142.3%

## INVESTMENT PORTFOLIO

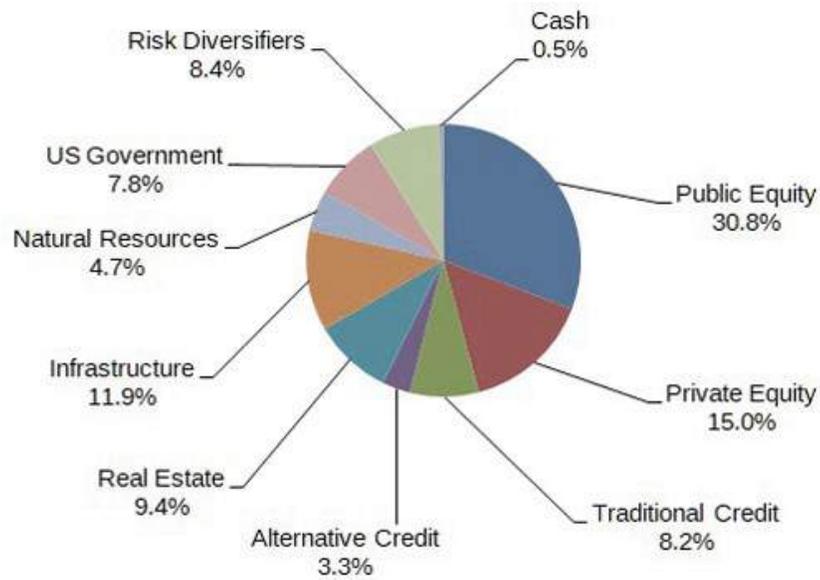
In this section, the investment strategy MainePERS has adopted to optimize the financial health of the plans is reviewed.

The System invests plan assets in a number of major asset classes. The pie charts on the following page display the actual and strategic target allocations at June 30, 2019.

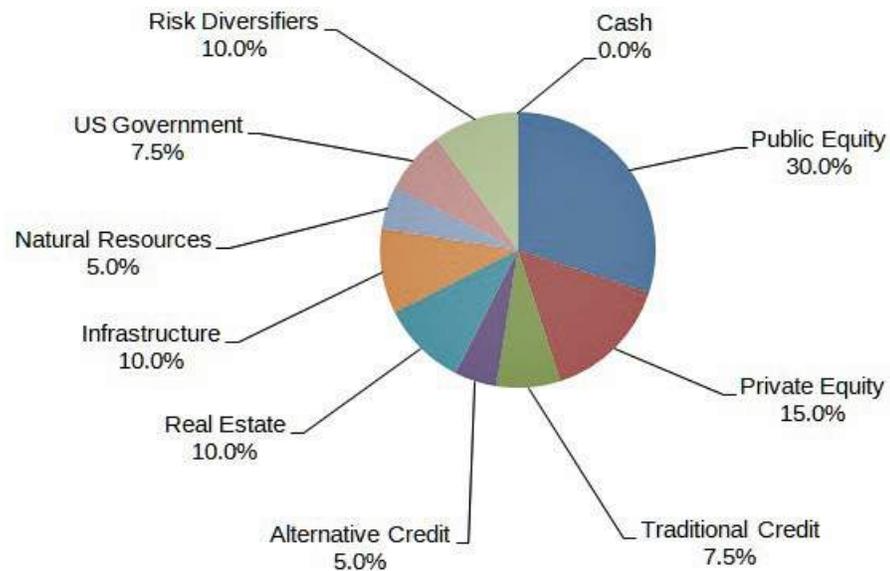
The Board of Trustees is of the view that a prudent investment strategy for these plan assets involves accepting some level of investment risk. Because most of its benefit payments are not due for several decades into the future, the System has concluded it is prudent to invest a substantial portion of its assets in equities and other return-seeking investments. The Board allocates 60% to 80% of assets to equities and equity-like securities and is of the view that this provides a prudent compromise between risk and return.

	<u>Public Equity</u>	<u>Private Equity</u>	<u>Traditional Credit</u>	<u>Alternative Credit</u>	<u>Real Estate</u>	<u>Infrastructure</u>	<u>Natural Resources</u>	<u>US Government</u>	<u>Risk Diversifiers</u>	<u>Cash</u>	<u>Total</u>
Actual Allocation	30.8%	15.0%	8.2%	3.3%	9.4%	11.9%	4.7%	7.8%	8.4%	0.5%	100.0%
Target Allocation	30.0%	15.0%	7.5%	5.0%	10.0%	10.0%	5.0%	7.5%	10.0%	0.0%	100.0%

**Actual Allocation at June 30, 2019**



**Strategic Target Allocation**



Essentially all of the assets of the System's plans are in portfolios managed by professional investment management firms. These managers act as fiduciaries and invest the assets allocated to them in accordance with the System's investment policies and the individual agreements between MainePERS and the investment managers.

Approximately 53% of assets were invested in passively managed index funds at June 30, 2019. The Board of Trustees views index funds as a cost-effective way of investing in most of the world's capital markets. However, the System does make use of actively managed portfolios where it has identified managers who are thought to be able to add value over an index fund, net of all costs.

The System uses a single firm to manage all of its passive investments. This enables the System to obtain attractive fees and also provides other cost savings on certain kinds of transactions. Since passively managed portfolios have a low risk of significantly underperforming their benchmarks, the Board, the investment staff, and the System's investment consultant find this concentration of assets to be appropriate.

The System typically conducts a thorough review of its strategic asset allocation every three years with the assistance of the System's actuary and its general investment consultant. This was last performed in fiscal year 2017.

### BENEFIT PLANS - INVESTMENT PORTFOLIO

	at 06/30/2019		at 06/30/2018	
	millions of dollars	% of assets	millions of dollars	% of assets
<b>Public Equity</b>				
BlackRock	\$ 4,579	30.8%	\$ 4,778	33.3%
<b>Total Public Equity</b>	<b>\$ 4,579</b>	<b>30.8%</b>	<b>\$ 4,778</b>	<b>33.3%</b>
<b>Traditional Credit</b>				
BlackRock	\$ 1,219	8.2%	\$ 1,308	9.1%
<b>Total Traditional Credit</b>	<b>\$ 1,219</b>	<b>8.2%</b>	<b>\$ 1,308</b>	<b>9.1%</b>
<b>US Government</b>				
BlackRock	\$ 1,161	7.8%	\$ 1,475	10.3%
<b>Total US Government</b>	<b>\$ 1,161</b>	<b>7.8%</b>	<b>\$ 1,475</b>	<b>10.3%</b>
<b>Private Equity</b>				
ABRY Advanced Securities Fund II	\$ 2	0.0%	\$ 3	0.0%
ABRY Advanced Securities Fund III	20	0.1%	19	0.1%
ABRY Senior Equity IV	7	0.0%	8	0.1%
ABRY Senior Equity V	3	0.0%	3	0.0%
ABRY Heritage	4	0.0%	2	0.0%
ABRY VII	4	0.0%	4	0.0%
ABRY VIII	18	0.1%	16	0.1%
Advent International GPE VII	25	0.2%	32	0.2%
Advent International GPE VIII	49	0.3%	26	0.2%
Advent LAPEF VI	13	0.1%	11	0.1%
Affinity Asia Pacific IV	48	0.3%	54	0.4%
Affinity Asia Pacific V	8	0.1%	-	0.0%
Berkshire VIII	10	0.1%	8	0.1%
Berkshire IX	22	0.1%	17	0.1%
Blackstone Cap VI	26	0.2%	30	0.2%
Blackstone Cap VII	34	0.2%	15	0.1%
Carlyle Asia Partners Fund III	2	0.0%	4	0.0%
Carlyle Asia Partners Fund IV	55	0.4%	77	0.5%
Carlyle Asia Partners Fund V	3	0.0%	-	0.0%
Centerbridge Capital Partners III	18	0.1%	16	0.1%
Charterhouse VIII	-	0.0%	-	0.0%
Charterhouse IX	1	0.0%	1	0.0%
Charterhouse X	32	0.2%	25	0.2%
CVC Capital Partner VI	69	0.5%	59	0.4%
CVC Capital Partner VII	9	0.1%	-	0.0%
EnCap Energy Capital Fund VIII	10	0.1%	9	0.1%
EnCap Energy Capital Fund IX	20	0.1%	22	0.2%
EnCap Energy Capital Fund X	34	0.2%	28	0.2%
EnCap Energy Capital Fund XI	6	0.0%	3	0.0%
EnCap Flatrock Midstream III	16	0.1%	8	0.1%
EnCap Flatrock Midstream IV	7	0.0%	1	0.0%
GTCR X	6	0.0%	9	0.1%
GTCR XI	29	0.2%	27	0.2%
GTCR XII	9	0.1%	1	0.0%
Hellman & Friedman VII	40	0.3%	39	0.3%
Hellman & Friedman VIII	47	0.3%	32	0.2%
HIG Bayside Loan Opportunity II	5	0.0%	10	0.1%
HIG Bayside Loan Opportunity III (Europe)	15	0.1%	22	0.2%
HIG Brazil & Latin America	24	0.2%	21	0.1%
HIG Buyouts II	29	0.2%	23	0.2%

**BENEFIT PLANS - INVESTMENT PORTFOLIO**  
(continued)

	at 06/30/2019		at 06/30/2018	
	<u>millions</u>	<u>% of</u>	<u>millions</u>	<u>% of</u>
	<u>of dollars</u>	<u>assets</u>	<u>of dollars</u>	<u>assets</u>
<b>Private Equity (continued)</b>				
HIG Buyouts III	\$ -	0.0%	\$ -	0.0%
HIG Capital Partners V	14	0.1%	10	0.1%
HIG Europe Capital II	12	0.1%	14	0.1%
HIG Middle Market LBO Fund II	35	0.2%	29	0.2%
Inflexion Buyout Fund IV	24	0.2%	24	0.2%
Inflexion Supplemental Fund IV	11	0.1%	8	0.1%
Inflexion Partnership Capital Fund I	14	0.1%	14	0.1%
Kelso Investment Associates VIII	1	0.0%	1	0.0%
Kelso Investment Associates IX	52	0.3%	55	0.4%
Kelso Investment Associates X	4	0.0%	-	0.0%
KKR Americas XII	25	0.2%	9	0.1%
KKR North America XI	59	0.4%	68	0.5%
KKR Special Situations	35	0.2%	51	0.4%
KKR Special Situations II	46	0.3%	33	0.2%
Oaktree Opportunity Fund VIII	1	0.0%	3	0.0%
ONCAP IV	6	0.0%	4	0.0%
Onex Partners III	4	0.0%	6	0.0%
Onex Partners IV	50	0.3%	44	0.3%
Onex Partners V	-	0.0%	-	0.0%
Paine Schwartz Partners IV	44	0.3%	43	0.3%
Rhone Partners V	36	0.2%	31	0.2%
Riverside Capital Appreciation VI	53	0.4%	51	0.4%
Riverside Micro Cap Fund III	64	0.4%	51	0.4%
Riverside Micro Cap Fund IV	59	0.4%	44	0.3%
Riverside Micro Cap Fund V	2	0.0%	-	0.0%
Shoreview Capital III	20	0.1%	17	0.1%
Sovereign Capital IV	21	0.1%	14	0.1%
Summit Credit Partners II	46	0.3%	36	0.3%
Summit GE VIII	17	0.1%	18	0.1%
Summit GE IX	47	0.3%	21	0.1%
Summit VC III	12	0.1%	13	0.1%
Summit VC IV	15	0.1%	18	0.1%
Technology Impact Fund	10	0.1%	10	0.1%
Technology Impact Growth Fund	20	0.1%	-	0.0%
TCV VIII	67	0.5%	70	0.5%
TCV IX	45	0.3%	20	0.1%
TCV X	2	0.0%	-	0.0%
Thoma Bravo XI	77	0.5%	62	0.4%
Thoma Bravo XII	69	0.5%	40	0.3%
Thoma Bravo XIII	15	0.1%	-	0.0%
Thoma Bravo Special Opportunities Fund II	22	0.1%	18	0.1%
Tillridge Global Agribusiness II	7	0.0%	5	0.0%
Water Street Healthcare III	20	0.1%	24	0.2%
Water Street Healthcare IV	9	0.1%	3	0.0%
Wayzata Opportunities III	6	0.0%	7	0.1%
Wynnchurch Capital	28	0.2%	20	0.1%
Co-Investments	233	1.6%	193	1.3%
<b>Total Private Equity</b>	<b>\$ 2,240</b>	<b>15.1%</b>	<b>\$ 1,887</b>	<b>13.2%</b>
<b>Real Estate</b>				
Barings Real Estate Asia II	\$ 5	0.0%	\$ -	0.0%
Blackstone Property Partners	360	2.4%	176	1.2%
Blackstone RE Partners VII	44	0.3%	60	0.4%
Blackstone RE Partners VIII	42	0.3%	30	0.2%
H/2 Credit Partners	54	0.4%	66	0.5%
Harrison Street Core Property Fund	114	0.8%	112	0.8%
High Street IV	-	0.0%	-	0.0%
High Street V	26	0.2%	17	0.1%
Invesco US Income	192	1.3%	180	1.3%
IPI Data Center Partners I	19	0.1%	9	0.1%
KKR REPA I	12	0.1%	21	0.1%
KKR REPA II	17	0.1%	4	0.0%
KKR REPE	35	0.2%	18	0.1%
Northbridge Strategic Fund II	30	0.2%	-	0.0%
Prima Advisors Mortgage Fund	90	0.6%	91	0.6%
Principal US Property Fund	-	0.0%	96	0.7%
Prudential PRISA Fund	-	0.0%	86	0.6%
Prudential Senior Housing V	46	0.3%	29	0.2%
Rubenstein Partners III	22	0.2%	13	0.1%
Smart Markets	192	1.3%	187	1.3%
Walton Street VII	20	0.1%	29	0.2%
Walton Street VIII	33	0.2%	22	0.2%
Westbrook IX	6	0.0%	8	0.1%
Westbrook X	28	0.2%	18	0.1%
Co-Investments	6	0.0%	8	0.1%
<b>Total Real Estate</b>	<b>\$ 1,394</b>	<b>9.4%</b>	<b>\$ 1,281</b>	<b>8.9%</b>

## BENEFIT PLANS - INVESTMENT PORTFOLIO

(continued)

	at 06/30/2019		at 06/30/2018	
	<u>millions</u> <u>of dollars</u>	<u>% of</u> <u>assets</u>	<u>millions</u> <u>of dollars</u>	<u>% of</u> <u>assets</u>
<b>Infrastructure</b>				
Alinda Infrastructure Fund II	\$ 23	0.2%	\$ 26	0.2%
ArcLight Energy Partners V	28	0.2%	51	0.4%
ArcLight Energy Partners VI	136	0.9%	119	0.8%
Brookfield Infrastructure Fund II	107	0.7%	107	0.7%
Brookfield Infrastructure Fund III	73	0.5%	39	0.3%
Carlyle Infrastructure Fund	0	0.0%	3	0.0%
Carlyle Power Partners II	23	0.2%	20	0.1%
Cube Infrastructure Fund	19	0.1%	51	0.4%
Cube Infrastructure Fund II	28	0.2%	-	0.0%
EQT Infrastructure Fund III	73	0.5%	33	0.2%
EQT Infrastructure Fund IV	2	0.0%	-	0.0%
Global Energy & Power Infrastructure Fund I	27	0.2%	24	0.2%
Global Energy & Power Infrastructure Fund II	78	0.5%	54	0.4%
Global Infrastructure Partners Fund	11	0.1%	40	0.3%
Global Infrastructure Partners Fund II	88	0.6%	81	0.6%
Global Infrastructure Partners Fund III	121	0.8%	77	0.5%
IFM Global Infrastructure	158	1.1%	145	1.0%
KKR Infrastructure	36	0.2%	61	0.4%
KKR Infrastructure II	163	1.1%	135	0.9%
KKR Infrastructure III	11	0.1%	-	0.0%
Meridiam Infrastructure Europe I (Secondary)	26	0.2%	21	0.1%
Meridiam Infrastructure Europe I Class B (Secondary)	24	0.2%	17	0.1%
Meridiam Infrastructure Europe II (Secondary)	30	0.2%	24	0.2%
Meridiam Infrastructure Europe II Class B (Secondary)	5	0.0%	3	0.0%
Meridiam Infrastructure Europe III	15	0.1%	20	0.1%
Meridiam Infrastructure North America II	75	0.5%	53	0.4%
Meridiam Infrastructure North America II (CIP)	6	0.0%	-	0.0%
Meridiam Infrastructure North America II (Secondary)	19	0.1%	14	0.1%
Meridiam Infrastructure North America III	-	0.0%	-	0.0%
Stonepeak Infrastructure II	114	0.8%	106	0.7%
Stonepeak Infrastructure III	57	0.4%	12	0.1%
Co-Investments	189	1.3%	151	1.1%
<b>Total Infrastructure</b>	<b>\$ 1,765</b>	<b>11.9%</b>	<b>\$ 1,485</b>	<b>10.4%</b>
<b>Alternative Credit</b>				
AG Direct Lending III	\$ 40	0.3%	\$ -	0.0%
ARES Capital Europe IV	40	0.3%	-	0.0%
Audax	102	0.7%	98	0.7%
Mesa West Core	101	0.7%	100	0.7%
Owl Rock	107	0.7%	37	0.3%
TCP Direct Lending VIII	90	0.6%	36	0.2%
Co-Investments	13	0.1%	5	0.0%
<b>Total Alternative Credit</b>	<b>\$ 493</b>	<b>3.3%</b>	<b>\$ 276</b>	<b>1.9%</b>
<b>Natural Resources</b>				
ACM Fund II	\$ 18	0.1%	\$ 18	0.1%
ACM Permanent Crops	40	0.3%	37	0.3%
AMERRA Agri Fund III	37	0.2%	33	0.2%
Denham Mining Fund	10	0.1%	-	0.0%
Homestead Farmland II	29	0.2%	20	0.1%
Orion Mine Finance II	27	0.2%	25	0.2%
Orion Mine Finance III	44	0.3%	-	0.0%
Taurus Mining Finance	28	0.2%	20	0.1%
Taurus Mining Finance Annex	10	0.1%	5	0.0%
Teays River	288	1.9%	279	1.9%
Twin Creeks Timber	96	0.6%	113	0.8%
US Farming Realty III	80	0.5%	59	0.4%
<b>Total Natural Resources</b>	<b>\$ 708</b>	<b>4.8%</b>	<b>\$ 607</b>	<b>4.2%</b>
<b>Risk Diversifiers</b>				
AQR Liquid Enhanced Alternative Premia	\$ 270	1.8%	\$ 284	2.0%
Bridgewater Pure Alpha	205	1.4%	200	1.4%
Bridgewater Pure Alpha Major Markets	198	1.3%	202	1.4%
FORT Global Contrarian Fund	109	0.7%	-	0.0%
Windham Capital	327	2.2%	331	2.3%
Windham Risk Premia	144	1.0%	144	1.0%
<b>Total Risk Diversifiers</b>	<b>\$ 1,252</b>	<b>8.4%</b>	<b>\$ 1,161</b>	<b>8.1%</b>
<b>Cash</b>				
Liquidity Account	75	0.5%	85	0.6%
<b>Total Cash</b>	<b>\$ 75</b>	<b>0.5%</b>	<b>\$ 85</b>	<b>0.6%</b>
<b>Total Assets</b>	<b>\$ 14,886</b>	<b>100%</b>	<b>\$ 14,344</b>	<b>100%</b>

## PERFORMANCE: ACTUAL RETURNS VS. BENCHMARK RETURNS

(All returns are time weighted)

Fiscal Year Ended June 30	TOTAL FUND			DOMESTIC EQUITY			FOREIGN EQUITY			FIXED INCOME			REAL ESTATE		
	Actual Return	Benchmark Return <sup>(2)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(3)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(4)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(5)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(6)</sup>	Excess Return <sup>(1)</sup>
2019	7.3%	7.5%	-0.2%	9.0%	9.0%	0.0%	1.5%	1.3%	0.2%	9.9%	5.2%	4.7%	8.2%	6.8%	1.4%
2018	10.3%	8.5%	1.8%	14.8%	14.8%	0.1%	7.7%	7.3%	0.4%	1.0%	-0.4%	1.4%	8.6%	7.1%	1.4%
2017	12.5%	11.4%	1.1%	18.5%	18.5%	0.0%	20.8%	20.5%	0.4%	0.6%	-0.3%	0.9%	9.8%	5.6%	4.1%
2016	0.6%	1.0%	-0.4%	1.8%	2.0%	-0.3%	-10.1%	-9.8%	-0.3%	3.6%	6.0%	-2.4%	10.2%	9.4%	0.8%
2015	2.0%	1.8%	0.3%	7.2%	7.2%	0.0%	-5.1%	-4.9%	-0.2%	-0.4%	1.9%	-2.3%	11.4%	8.8%	2.6%
2014	16.7%	15.6%	1.1%	24.8%	25.0%	-0.2%	22.0%	22.3%	-0.3%	3.8%	4.4%	-0.6%	10.7%	5.5%	5.1%
2013	11.1%	10.4%	0.8%	21.5%	21.5%	0.1%	13.9%	14.1%	-0.2%	-1.9%	-0.7%	-1.3%	10.2%	7.8%	2.4%
2012	0.6%	1.4%	-0.8%	3.8%	4.0%	-0.2%	-14.3%	-14.2%	-0.2%	8.8%	9.0%	-0.1%	11.1%	13.4%	-2.3%
2011	22.4%	21.5%	0.9%	32.6%	32.4%	0.2%	30.0%	30.3%	-0.3%	6.2%	3.9%	2.3%	22.5%	16.0%	6.5%
2010	11.1%	11.9%	-0.8%	18.3%	16.1%	2.2%	9.7%	10.9%	-1.2%	10.8%	9.5%	1.3%	-4.1%	-1.5%	-2.6%
3 years ending 2019	10.0%	9.1%	0.9%	14.1%	14.0%	0.0%	9.7%	9.4%	0.3%	3.7%	1.5%	2.3%	8.8%	6.5%	2.3%
5 years ending 2019	6.4%	6.0%	0.5%	10.1%	10.1%	0.0%	2.4%	2.4%	0.1%	2.9%	2.4%	0.4%	9.6%	7.6%	2.1%
10 years ending 2019	9.3%	8.9%	0.3%	14.9%	14.7%	0.2%	6.7%	6.9%	-0.2%	4.1%	3.8%	0.4%	9.7%	7.8%	1.9%

## INVESTMENT PERFORMANCE

The table above displays the rates of return on the System's investment portfolio over the last ten fiscal years, and for the three, five, and ten-year periods ended June 30, 2019.

Over the ten-year period, the annualized rate of return on the System's assets was 9.3%. MainePERS experienced ten years of positive returns and zero years of negative returns. These results are consistent with the long-term risk/return strategy that forms the basis of the System's policies. At 9.3%, the ten-year return has outperformed relative to the 6.75% investment return assumption utilized in the actuarial process.

The total return figures in the table above are calculated by the MainePERS custodian and are net of investment management fees and expenses (see Expenses, page 87). The table reports time weighted rates of return and all figures for periods greater than one year are annualized.

TABLE CONTINUED ON NEXT PAGE

**PERFORMANCE: ACTUAL RETURNS VS. BENCHMARK RETURNS**

(All returns are time weighted)

INFRASTRUCTURE			PRIVATE EQUITY			NATURAL RESOURCES			ALTERNATIVE CREDIT			RISK DIVERSIFIERS		
Actual Return	Benchmark Return <sup>(7)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(8)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(9)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(11)</sup>	Excess Return <sup>(1)</sup>	Actual Return	Benchmark Return <sup>(12)</sup>	Excess Return <sup>(1)</sup>
16.9%	10.2%	6.7%	11.2%	12.0%	-0.8%									
16.6%	12.6%	4.0%	22.7%	17.8%	4.9%									
14.7%	12.4%	2.2%	19.8%	21.5%	-1.8%									
6.8%	11.8%	-5.0%	6.6%	5.1%	1.5%									
5.4%	3.6%	1.8%	8.9%	10.3%	-1.4%	Data Not Meaningful <sup>10</sup>			Data Not Meaningful <sup>10</sup>			Data Not Meaningful <sup>10</sup>		
15.5%	14.7%	0.8%	9.8%	7.9%	2.0%									
16.0%	11.7%	4.3%	17.8%	17.0%	0.8%									
12.0%	10.1%	1.9%	13.7%	13.2%	0.5%									

Notes:

1. Excess Return is Actual Return minus Benchmark Return
2. Total Fund Benchmark: A combination of the the benchmarks for the five major asset classes using the target asset class weights.
3. Domestic Equity Benchmark: Russell 3000 Index
4. Foreign Equity Benchmark: Morgan Stanley Capital International All Country World Ex-U.S. Free, since Jan. 1, 1998
5. General Fixed Income Benchmark: Barclays Capital Aggregate Bond Index less Governments plus TIPS, since Oct 2008
6. Real Estate Benchmark: A combination of DJ Wilshire Real Estate Securities Index and National Council of Real Estate Investment Fiduciaries Property Index since July 1, 2005
7. Infrastructure Benchmark: CA Infrastructure Median
8. Private Equity Benchmark: Russell 3000 Index + 3%
9. Natural Resources Benchmark: CA Natural Resources Median
10. Natural Resources, Alternative Credit and Risk Diversifiers returns are not meaningful at this stage of the program.
11. Alternative Credit Benchmark: 50% Bank of America US High Yield II + 50% S&P/Loan Syndications & Trading Association US Leverage Loan Index
12. Risk Diversifiers Benchmark: 0.3 Beta Morgan Stanley Capital International All Country World Index

TABLE CONTINUED FROM PREVIOUS PAGE

**LARGEST HOLDINGS  
at June 30, 2019**

<b>Top 10 Direct Common Stock Holdings</b>	<b>Market Value</b>	<b>% of Assets</b>
Microsoft	\$ 85,026,421	0.57%
Apple	76,455,111	0.51%
Amazon	65,722,216	0.44%
Alphabet	54,773,960	0.37%
Facebook	38,704,992	0.26%
Berkshire Hathaway	34,992,282	0.24%
Johnson & Johnson	31,048,019	0.21%
JP Morgan Chase	30,259,564	0.20%
Exxon Mobil	27,201,581	0.18%
Visa	25,335,697	0.17%

Some of the System's index fund investments are made through commingled funds, with MainePERS owning units in the funds, and having beneficial, rather than direct ownership of the securities. The largest holdings list reports direct holdings held outside of the commingled funds. For a complete list of the System's holdings, please contact MainePERS.

**SECURITIES LENDING**

MainePERS earns additional income on its investment portfolio by lending its securities. The System pays its custodian for managing the securities lending program. Information regarding the results of the securities lending program for the current and prior fiscal years may be found in the Financial Section starting on page 18.

Several of the collective trusts through which the System holds interests in commingled funds also lend securities. Because these trusts are legal entities separate from MainePERS, their lending activities are not reflected in the securities lending results reported in the financial statements. The System shares in the income and the risks of the securities lending activity in the commingled funds, and the income is included in the total income and return figures in this Investment Section and the Financial Statements.

### INVESTMENT EXPENSES

The table below displays investment management expenses directly attributable to the investment program and paid directly by the System. Examples of directly attributable expenses include fees paid to investment managers and compensation and expenses of the System's own investment professionals, including time spent on investment matters by staff other than full-time investment professionals to the extent it can be separately identified. Other expenses not paid directly by the System include the expenses of securities lending programs conducted by managers of the commingled funds.

The increase of expenses in 2019 can be attributed to the continued funding of the Alternatives Programs.

<u>Detail for year ended 6/30/2019</u>	<u>Dollar Expense</u>
Passive Equity	\$ -
Domestic Equity	-
International Equity	644,123
Domestic Fixed Income	257,598
Alternative Credit	5,724,015
Private Equity	42,547,370
Real Estate	14,017,845
Infrastructure	28,201,838
Natural Resources	7,081,580
Risk Diversifier	12,807,092
Consultants	1,121,250
Other Investment Expenses	703,663
In House Expenses	3,911,223
DC Investment Expenses	48,460
Retiree Health Insurance Trust Expenses	82,002
Group Life Insurance Expenses	84,737
MainePERS OPEB	9,191
<b>Total Investment Expenses - All Plans</b>	<b>\$ 117,241,987</b>

<u>Total for FY ended June 30</u>	<u>\$ Millions</u>	<u>% of Total</u>
<u>Defined Benefit Plans</u>		<u>Assets</u>
2019	117.2	0.79%
2018	101.5	0.71%
2017	93.8	0.70%
2016	76.0	0.62%
2015	54.7	0.44%
2014	41.1	0.32%
2013	31.4	0.28%
2012	24.3	0.23%
2011	19.7	0.18%
2010	22.0	0.25%

**BROKERAGE COMMISSIONS**  
**Year Ended June 30, 2019**

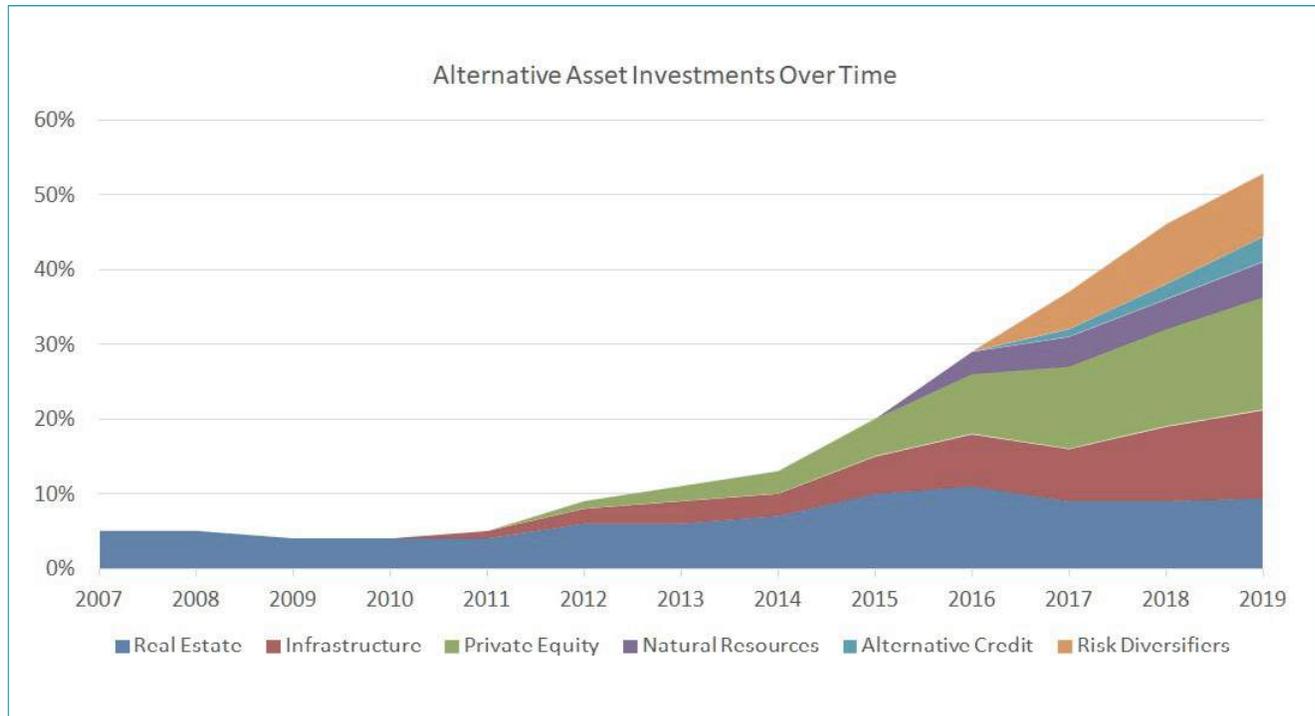
<b>Broker</b>	<b>Commissions</b>	<b>Amount Traded (Millions)</b>	<b>Cost of Trade (%)</b>	<b>Total Shares (Millions)</b>	<b>Commissions (Cents per Share)</b>
Merrill Lynch	\$ 9,234	\$ 336	0.003%	6.6	0.141
JP Morgan Chase	6,704	200	0.003%	0.1	12.189
Pershing	3,458	52	0.007%	0.7	0.500
Bank of Americas	2,823	31	0.009%	0.6	0.500
Citigroup	2,250	5	0.047%	0.1	2.923
Instinet Clearing Services	1,839	6	0.003%	0.9	0.203
Credit Suisse	612	4	0.002%	0.7	0.086
Loop Capital Markets	511	7	0.008%	0.1	0.500
Deutsche Bank	477	11	0.004%	0.2	0.210
Goldman Sachs	382	2	0.018%	0.1	0.277
Morgan Stanley	199	7	0.003%	0.1	0.250
UBS	173	16	0.001%	0.3	0.065
Wells Fargo	165	0	0.056%	0.0	0.700
Other	143	175	0.000%	4.6	0.003
<b>Total</b>	<b>\$ 28,970</b>	<b>\$ 942</b>	<b>0.003%</b>	<b>15.0</b>	<b>0.052</b>

Commissions reported above are those paid directly by MainePERS. The table does not include other transaction costs the System may incur, nor does it include brokerage commissions incurred indirectly through investments in commingled funds. Brokerage commissions and other transaction costs are excluded from the expense table on page 72. Those commissions and expenses are accounted for in the net income and total return figures reported elsewhere in this report.

Selection of brokers is at the discretion of the System's investment managers, subject to their fiduciary obligations. MainePERS does not have any directed brokerage programs, commission recapture programs, or similar arrangements. Some of the System's managers have soft dollar arrangements with brokers, in which the broker agrees to provide additional services to the manager beyond trade execution. In addition some of the System's managers employ placement agents to market their funds. MainePERS does not pay placement agent fees and requires managers that do use placement agents to disclose the identity of said parties and the method and amount of payment.

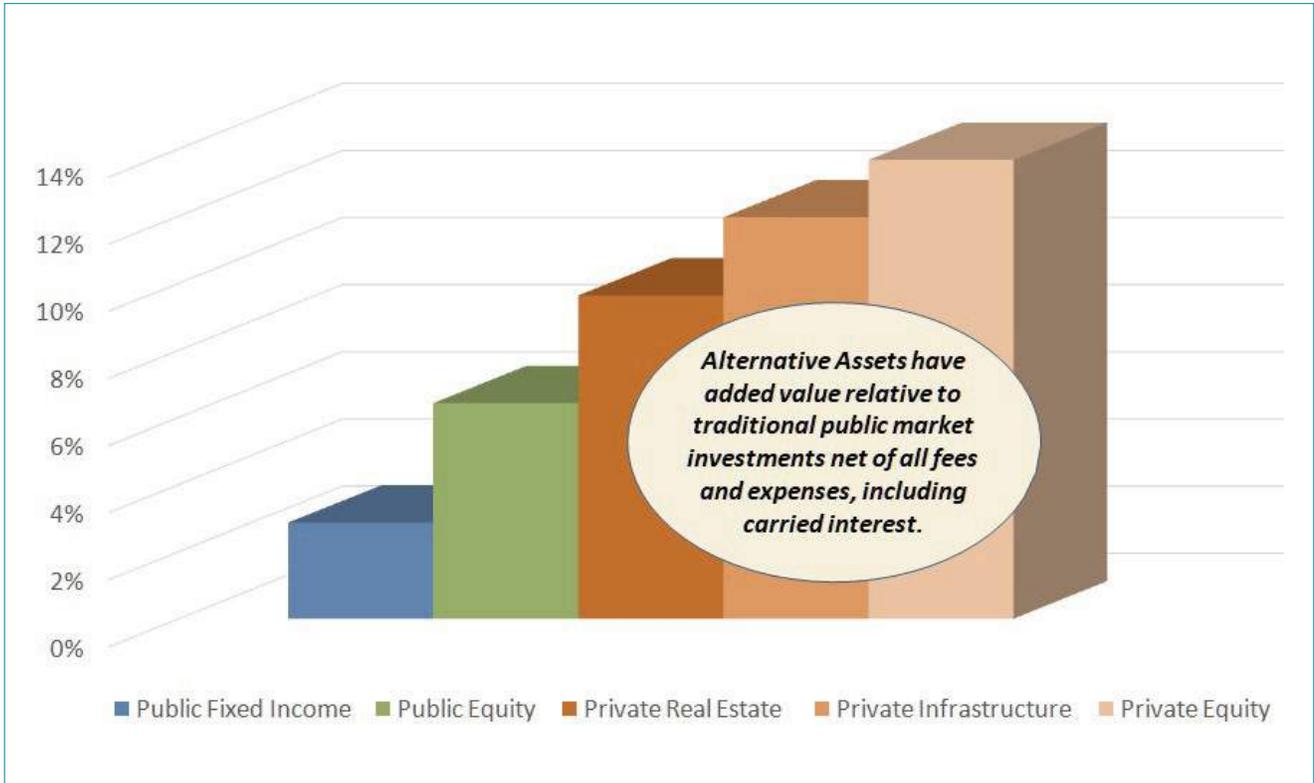
## A NOTE ON ALTERNATIVE ASSETS

The MainePERS Investment Team in 2008 recommended that the System increase its portfolio diversification by adding a number of alternative asset classes to its strategic asset allocation. Prior to this, essentially all of the volatility risk contained in the System's portfolio was due to its holdings of public equities. The expansion into alternative assets began with a strategic target allocation of 20% across Real Estate, Infrastructure, and Private Equity. In subsequent years the target overall allocation to alternative assets was increased to 55%, and Natural Resources, Alternative Credit, and Risk Diversifiers were added to the System's alternatives portfolio. The below chart shows the evolution of the System's Alternative Asset portfolio:



Each of these alternative asset classes plays a unique role in the overall portfolio. Private equity seeks to grow capital at a rate in excess of public equities by taking control positions in individual companies. Real Estate and Infrastructure provide the portfolio with stability, by generally investing in long-lived assets with predictable cash flows. Risk Diversifiers are investments specifically chosen for their ability to earn returns unrelated to public market returns. More in-depth descriptions of alternative asset classes can be found in the System's Investment Policy Statement available on the System's website. The decision to reduce portfolio risk by allocating capital across these asset classes was the result of a deliberative process involving the Trustees, Investment Team and consultants. This process weighed the risks of each asset class (return volatility, illiquidity, potential for extreme downside, adverse selection, etc.) against potential benefits (diversification, stability, higher returns, cash yields, etc.), and took into account interactions between asset classes. The goal of the process was to construct a portfolio that would best enable the System to make future benefit payments while keeping required contributions stable at a reasonable level.

The System's allocation to alternative assets is implemented largely via investments in private funds managed by specialized asset managers. Over the last decade the Investment Team has implemented the System's alternative asset allocation by carefully selecting investment managers in each asset class. This part of the process is crucial – academic research demonstrates the importance of manager selection, as the dispersion between good and poor managers is far wider in alternative assets than in traditional asset classes. The Investment Team has proceeded with the implementation of the System's target allocations in deliberate fashion, and has invested in over 150 individual funds managed by 70 or so managers. While it is likely that some of these investments may perform below expectations, we believe that the alternative asset portfolio is well-constructed and composed of top performers. While evaluating investment performance requires taking a long-term view, and this is especially true with alternative assets, we are pleased with the performance of the alternative asset portfolio to-date.



Finally, it is important to note that while in many cases expenses associated with alternative assets are higher than for traditional asset classes, all returns and asset values reported in this document are net of all fees and expenses. Many of the System's alternative investment partnership agreements provide for the manager to receive a share of profits, known as carried interest. Carried interest is generally only paid once the System has earned a sufficient return, generally in excess of the System's discount rate. Reported returns and asset values are net of carried interest.

### GROUP LIFE INSURANCE PROGRAM

The Group Life Insurance program is supported by premiums paid by its participants and by reserves. Substantially all the reserves are maintained in an investment portfolio, for which the summary results are displayed below. (Certain assets, such as the cash in the operating bank account, are not considered part of the investment portfolio.) Over this period, the increase in portfolio value is attributable to positive investment return and positive cash flow.

#### SUMMARY OF INVESTMENT ACTIVITY

<u>FY Ended June 30</u>	<u>Opening Market Value (\$ millions)</u>	<u>Closing Market Value (\$ millions)</u>	<u>Rate of Return</u>
2019	\$ 14,344	\$ 14,886	7.3%
2018	\$ 13,385	\$ 14,344	10.3%
2017	\$ 12,283	\$ 13,385	12.5%
2016	\$ 12,610	\$ 12,283	0.6%
2015	\$ 12,732	\$ 12,610	2.0%
2014	\$ 11,264	\$ 12,732	16.7%
2013	\$ 10,470	\$ 11,264	11.1%
2012	\$ 10,739	\$ 10,470	0.6%
2011	\$ 8,934	\$ 10,739	22.4%
2010	\$ 8,291	\$ 8,934	11.1%
		Annualized 10-year period	9.3%
		Cumulative 10-year period	142.3%

In fiscal year 2009, the Group Life Insurance assets were separated from the defined benefit plan assets while maintaining the same type of investment strategy. Up until this change, beginning in November 2005, the assets had been combined with those of the other plans in the general investment portfolio. Prior to November 2005, the assets had been invested in either a medium term, investment grade fixed income portfolio or similar commingled funds. While the assets were invested in a mutual fund, they were not available for the System's own securities lending program. Any securities lending undertaken by the mutual fund is not covered in this report, although any results are reflected in the total return or gain/loss figures.

Over the ten-year period ended June 30, 2019, the actual return on the portfolio was essentially equivalent to the return of the performance benchmark.

The fees paid by the portfolio are consistent with those detailed in the fees and expenses tables of the previous section. For the period of time the portfolio was invested in a mutual fund, fees were consistent with other holders of the institutional class of shares, as detailed in the fund's prospectus.

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# ACTUARIAL SECTION



*Birch*

October 29, 2019

Board of Trustees  
Maine Public Employees Retirement System  
P.O. Box 349  
Augusta, Maine 04332-0349

Dear Members of the Board:

At your request, we have conducted our annual actuarial valuation for each of the funded pension programs administered by the Maine Public Employees Retirement System (MainePERS) as of June 30, 2019. The purpose of this report is to present the annual actuarial valuation results for the various Programs. This report is for the use of the MainePERS Board of Trustees and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party. This valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

### **Funding Objective**

The funding objective for the Programs administered by MainePERS is to establish contribution rates that, over time, will remain level as a percentage of payroll while fully funding the Programs. In order to achieve this, we develop contribution rates that will provide for the current costs (i.e., normal cost expressed as a level percentage of payroll) plus a level percentage of payroll amortization of the unfunded liability over a specified period.

To our knowledge, the plan sponsors have consistently funded the full amounts required based on the actuarial valuations and specific statutory provisions.

### **Assumptions and Methods**

The actuarial assumptions and methods used in these valuations have been recommended by the actuary and adopted by the Board of Trustees based on the actuary's most recent review of each Program's experience.

We believe that all the costs, liabilities, rates of interest, and other factors for MainePERS have been determined on the basis of actuarial assumptions and methods that are individually reasonable (taking into account the experience of the Programs administered by MainePERS and reasonable expectations) and that, in the aggregate, offer our best estimate of anticipated experience affecting the Programs. Nevertheless, the emerging costs rely on future plan experience conforming to the underlying assumptions and methods as outlined in this report. To the extent that the actual experience of the Programs deviates from the underlying assumptions and methods, or there are any changes in plan provisions or applicable law, the results will vary accordingly.

The calculations in the following exhibits have been made on a basis consistent with our understanding of MainePERS's funding requirements and goals. The Group Life Insurance Program (GLI) numbers disclosed in the Financial Section were produced in accordance with our understanding of the requirements of Governmental Accounting Standards Board (GASB) Statement No. 74. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

### **Reliance on Others**

In preparing our report, we relied on information, some oral and some written, supplied by MainePERS. This information includes, but is not limited to, the plan provisions, membership data, and financial information. We performed a limited review of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23 and have found no material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable. Such a review was beyond the scope of our assignment.

### Determination of Discount Rate

We have not performed formal cash flow projections as described under Paragraph 41 of GASB Statement No. 67. However, Paragraph 43 allows for alternative methods to confirm the sufficiency of the fiduciary net position if the evaluations “can be made with sufficient reliability without a separate projection of cash flows into and out of the pension plan...” In our professional judgment, adherence to the actuarial funding policy described above and detailed further in the individual valuation reports will result in the pension programs having projected fiduciary net positions being greater than or equal to the benefit payments projected for each future period for each program within the System.

### Supporting Schedules

Cheiron is responsible for the following schedules included within the Financial and Actuarial Sections of the MainePERS Comprehensive Annual Financial Report:

- Schedule of Active Member Valuation Data
- Schedule of Benefit Recipients Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from the Rolls
- Schedule of Change in Net Pension Liability
- Sensitivity of Net Pension Liability to Changes in Discount Rate
- Analysis of Financial Experience
- Schedule of Funded Liabilities by Type
- Schedule of Changes in Net OPEB Liability

### Certification

We believe that the pension Programs administered by MainePERS are adequately and appropriately financed including contributions that are determined and funded on a level cost as a percentage of payroll basis using reasonable actuarial methods and assumptions.

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.

Sincerely,  
Cheiron



Gene Kalwarski, FSA, EA  
Principal Consulting Actuary



Fiona E. Liston, FSA, EA  
Principal Consulting Actuary



Elizabeth Wiley, FSA, EA  
Consulting Actuary



## SECTION I DEMOGRAPHIC INFORMATION

Schedule of Active Member Valuation Data				
Valuation Date June 30,	Number of Active Members	Annual Payroll of Active Members	Average Annual Pay	Percentage Increase in Average Pay
<b>State Employee and Teacher Retirement Program</b>				
2019	39,876	\$ 1,979,024,476	\$ 49,629	4.55%
2018	39,843	1,891,366,352	47,470	2.91%
2017	39,836	1,837,608,866	46,129	2.82%
2016	39,942	1,792,004,417	44,865	2.88%
2015	40,016	1,745,075,075	43,609	1.62%
2014	39,669	1,702,310,338	42,913	7.92%
2013	41,809	1,662,390,557	39,762	(8.93)%
2012	39,360	1,718,449,172	43,660	2.97%
2011	38,759	1,643,389,735	42,400	1.13%
2010	39,884	1,672,252,868	41,928	1.65%
<b>Consolidated Plan for Participating Local Districts</b>				
2019	11,731	\$ 595,083,006	\$ 50,727	2.87%
2018	11,416	562,952,637	49,313	3.93%
2017	11,195	531,168,594	47,447	3.37%
2016	11,019	505,798,133	45,902	1.63%
2015	10,870	490,974,092	45,168	6.51%
2014	10,848	460,029,637	42,407	2.79%
2013	11,112	458,424,764	41,255	(6.41)%
2012	10,772	474,828,262	44,080	7.55%
2011	10,614	435,012,940	40,985	6.99%
2010	10,331	395,747,663	38,307	(2.16)%
<b>Non-Consolidated Participating Local Districts</b>				
2019	12	\$ 720,245	\$ 60,020	4.15%
2018	16	922,083	57,630	2.09%
2017	19	1,072,561	56,451	5.54%
2016	21	1,123,218	53,487	1.85%
2015	23	1,207,796	52,513	3.86%
2014	24	1,213,514	50,563	(0.92)%
2013	28	1,428,984	51,035	0.97%
2012	28	1,415,305	50,547	0.38%
2011	31	1,561,053	50,357	23.11%
2010	43	1,758,909	40,905	(10.90)%
<b>Judicial Retirement Program</b>				
2019	61	\$ 7,989,945	\$ 130,983	0.02%
2018	62	8,119,342	130,957	6.17%
2017	63	7,770,523	123,342	6.44%
2016	62	7,184,400	115,877	(5.29)%
2015	56	6,851,612	122,350	9.76%
2014	60	6,688,159	111,469	(0.81)%
2013	60	6,742,444	112,374	(2.36)%
2012	59	6,790,274	115,089	0.00%
2011	59	6,790,233	115,089	(2.39)%
2010	59	6,956,364	117,904	0.03%
<b>Legislative Retirement Program*</b>				
2019	179	\$ 2,659,749	\$ 14,859	1.41%
2018	185	2,710,694	14,652	2.24%
2017	185	2,651,195	14,331	(2.06)%
2016	177	2,590,011	14,633	3.92%
2015	180	2,534,548	14,081	1.24%
2014	181	2,517,431	13,908	(0.14)%
2013	182	2,534,740	13,927	0.53%
2012	175	2,424,480	13,854	0.04%
2011	173	2,395,694	13,848	(1.25)%
2010	170	2,384,083	14,024	3.67%

\*Legislative salaries in even-numbered valuation years have been increased to approximate a full session amount.

## SECTION I DEMOGRAPHIC INFORMATION

(continued)

Schedule of Benefit Recipients Valuation Data				
Valuation Date June 30,	Total Number of Benefit Recipients at Year End	Annual Payments to Benefit Recipients	Average Annual Benefit	Percentage Increase in Average Benefit
<b>State Employee and Teacher Retirement Program</b>				
2019	36,471	\$ 831,655,042	\$ 22,803	2.49%
2018	35,601	792,094,655	22,249	1.89%
2017	34,870	761,472,435	21,837	2.51%
2016	34,181	728,131,830	21,302	2.41%
2015	33,260	691,848,265	20,801	2.30%
2014	32,391	658,595,271	20,333	0.87%
2013	31,624	637,482,081	20,158	0.03%
2012	30,485	614,303,923	20,151	2.33%
2011	28,900	569,141,838	19,693	1.69%
2010	28,248	547,042,219	19,366	1.46%
<b>Consolidated Plan for Participating Local Districts</b>				
2019	9,534	\$ 159,816,939	\$ 16,763	3.62%
2018	9,256	149,732,113	16,177	2.99%
2017	9,006	141,460,984	15,707	2.45%
2016	8,847	135,629,476	15,331	0.70%
2015	8,581	130,647,324	15,225	3.02%
2014	8,333	123,149,154	14,778	2.99%
2013	8,122	116,539,396	14,349	(2.11)%
2012	7,520	110,230,682	14,658	5.77%
2011	7,409	102,681,024	13,859	2.70%
2010	7,172	96,787,246	13,495	1.61%
<b>Non-Consolidated Participating Local Districts</b>				
2019	163	\$ 3,032,058	\$ 18,602	17.17%
2018	170	2,698,875	15,876	2.51%
2017	174	2,694,654	15,487	(0.14)%
2016	172	2,667,586	15,509	2.36%
2015	176	2,666,644	15,151	6.69%
2014	191	2,712,331	14,201	6.82%
2013	196	2,605,703	13,294	0.53%
2012	199	2,631,584	13,224	6.95%
2011	201	2,485,447	12,365	0.01%
2010	198	2,445,239	12,350	12.19%
<b>Judicial Retirement Program</b>				
2019	76	\$ 4,077,523	\$ 53,652	2.76%
2018	75	3,915,645	52,209	6.28%
2017	75	3,684,373	49,125	1.05%
2016	74	3,597,415	48,614	1.47%
2015	71	3,401,651	47,911	(1.25)%
2014	67	3,250,749	48,519	(3.23)%
2013	65	3,258,916	50,137	0.94%
2012	63	3,129,136	49,669	(0.64)%
2011	62	3,099,334	49,989	0.19%
2010	56	2,794,145	49,895	1.56%
<b>Legislative Retirement Program</b>				
2019	204	\$ 439,364	\$ 2,154	1.89%
2018	185	391,070	2,114	4.45%
2017	185	374,529	2,024	1.05%
2016	174	348,592	2,003	4.00%
2015	170	327,469	1,926	3.55%
2014	153	284,588	1,860	2.42%
2013	155	281,433	1,816	(3.25)%
2012	141	264,716	1,877	1.19%
2011	145	268,980	1,855	1.31%
2010	131	239,823	1,831	3.50%

## SECTION I DEMOGRAPHIC INFORMATION

(concluded)

### Schedule of Retirees and Beneficiaries Added to and Removed from the Rolls

Year Ended June 30,	<u>Added to Rolls</u>		<u>Removed from Rolls</u>		<u>On Rolls at Year End</u>	
	No.	Annual Allowance	No.	Annual Allowance	No.	Annual Allowance
<b>State Employee and Teacher Retirement Program</b>						
2019	1,868	\$ 58,337,066	998	\$ 18,776,679	36,471	\$ 831,655,042
2018	1,781	49,254,819	1,050	18,632,598	35,601	792,094,655
2017	1,641	49,809,275	952	16,468,670	34,870	761,472,435
2016	1,840	52,295,379	919	16,011,814	34,181	728,131,830
2015	1,834	49,547,474	965	16,294,480	33,260	691,848,265
2014	1,668	36,572,188	901	15,458,998	32,391	658,595,271
2013	1,995	37,073,840	856	13,895,682	31,624	637,482,081
2012	2,402	58,170,235	817	13,008,150	30,485	614,303,923
2011	1,515	35,608,087	863	13,508,468	28,900	569,141,838
2010	1,659	36,147,606	955	14,824,356	28,248	547,042,219
<b>Consolidated Plan for Participating Local Districts*</b>						
2019	585	\$ 14,105,844	307	\$ 4,021,018	9,534	\$ 159,816,939
2018	602	12,950,872	352	4,679,743	9,256	149,732,113
2017	521	10,098,997	362	4,267,489	9,006	141,460,984
2016	543	8,643,493	277	3,661,341	8,847	135,629,476
2015	620	11,937,098	372	4,438,928	8,581	130,647,324
2014	516	9,816,061	305	3,206,304	8,333	123,149,154
<b>Non-Consolidated Participating Local Districts*</b>						
2019	7	\$ 516,503	14	\$ 183,320	163	\$ 3,032,058
2018	4	72,079	8	67,858	170	2,698,875
2017	6	106,640	4	79,572	174	2,694,654
2016	2	64,941	6	63,999	172	2,667,586
2015	3	92,920	18	138,607	176	2,666,644
2014	6	162,335	11	55,706	191	2,712,331
<b>PLDs (Consolidated and Non-Consolidated Plans)*</b>						
2013	881	\$ 9,563,286	300	\$ 3,280,453	8,318	\$ 119,145,099
2012	425	10,710,058	316	3,014,263	7,719	112,862,266
2011	516	8,796,407	276	2,862,417	7,610	105,166,471
2010	422	6,462,161	287	2,834,379	7,370	99,232,481
<b>Judicial Retirement Program</b>						
2019	2	\$ 187,761	1	\$ 25,883	76	\$ 4,077,523
2018	5	460,761	5	229,489	75	3,915,645
2017	1	86,958	0	0	75	3,684,373
2016	7	426,643	4	230,879	74	3,597,415
2015	6	312,332	2	161,430	71	3,401,651
2014	6	254,034	4	262,201	67	3,250,749
2013	3	148,384	1	18,604	65	3,258,916
2012	3	142,235	2	112,433	63	3,129,136
2011	6	305,189	0	0	62	3,099,334
2010	3	190,353	0	0	56	2,794,145
<b>Legislative Retirement Program</b>						
2019	25	\$ 67,535	6	\$ 19,241	204	\$ 439,364
2018	8	30,692	8	14,151	185	391,070
2017	20	48,314	9	22,377	185	374,529
2016	12	38,391	8	17,268	174	348,592
2015	25	53,264	8	10,383	170	327,469
2014	5	10,934	7	7,779	153	284,588
2013	18	24,752	4	8,035	155	281,433
2012	2	9,025	6	13,289	141	264,716
2011	18	36,695	4	7,538	145	268,980
2010	5	15,259	4	5,396	131	239,823

\* This schedule was developed in aggregate for the Participating Local Districts prior to 2014. Beginning with 2014, it was developed split between the Consolidated Plan and the Non-Consolidated PLDs.

## SECTION II ACCOUNTING INFORMATION

Schedule of Change in Net Pension Liability as of June 30, 2019					
	State Employee & Teacher Retirement Program	Consolidated Plan for PLDs	Non- Consolidated PLDs	Judicial Retirement Program	Legislative Retirement Program
<b>Total Pension Liability</b>					
Service Cost	\$ 224,775,112	\$ 78,317,217	\$ 110,694	\$ 1,596,832	\$ 297,324
Interest	934,009,648	208,360,684	2,470,847	4,582,454	577,720
Change in benefit terms Difference between expected and actual experience	0	0	0	0	0
Change in assumptions	208,719,412	47,684,163	580,852	(1,087,164)	238,611
Benefit payments, including refunds	(851,469,104)	(165,399,679)	(3,044,412)	(4,067,506)	(606,841)
Net change in Total Pension Liability	\$ 516,035,068	\$ 168,962,385	\$ 117,981	\$ 1,024,616	\$ 506,814
Total Pension Liability – beginning of year	\$14,031,187,845	\$ 3,089,857,220	\$ 37,991,802	\$68,291,924	\$ 8,559,950
Total Pension Liability – end of year	\$ 14,547,222,913	\$ 3,258,819,605	\$ 38,109,783	\$69,316,540	\$ 9,066,764
<b>Plan Fiduciary Net Position</b>					
Contributions – Employer	\$ 351,343,730	\$ 61,487,037	\$ 638,946	\$ 1,212,666	\$ 0
Contributions – Member	146,019,051	54,927,202	68,708	620,075	220,611
Transfers	(316,588)	48,552	0	(2,604)	45,285
Net Investment Income	768,987,127	188,620,106	2,377,476	4,709,445	845,408
Benefit payments, including refunds	(851,469,104)	(165,399,679)	(3,044,412)	(4,067,506)	(606,841)
Administrative Expenses	(11,180,852)	(2,706,977)	(35,552)	(68,475)	(12,262)
Net Change in Plan Fiduciary Net Position	\$ 403,383,364	\$ 136,976,241	\$ 5,166	\$ 2,403,601	\$ 492,201
Plan Fiduciary Net Position – beginning of year	\$ 11,632,179,683	\$ 2,816,179,855	\$ 37,056,062	\$ 71,233,840	\$ 12,755,821
Plan Fiduciary Net Position – end of year	\$ 12,035,563,047	\$ 2,953,156,096	\$ 37,061,228	\$ 73,637,441	\$ 13,248,022
<b>Net Pension Liability/(Asset) – end of year</b>	\$ 2,511,659,866	\$ 305,663,509	\$ 1,048,555	\$ (4,320,901)	\$ (4,181,258)

**SECTION II**  
**ACCOUNTING INFORMATION**  
*(continued)*

<b>Sensitivity of Net Pension Liability to Changes in Discount Rate as of June 30, 2019</b>						
	<b>State Employee &amp; Teacher Retirement Program</b>	<b>Consolidated Plan for PLDs</b>	<b>Non- Consolidated PLDs</b>	<b>Judicial Retirement Program</b>	<b>Legislative Retirement Program</b>	
<b>Discount Rate</b>						
1% Decrease	5.75%	5.75%	5.75%	5.75%	5.75%	
Current Discount Rate	6.75%	6.75%	6.75%	6.75%	6.75%	
1% Increase	7.75%	7.75%	7.75%	7.75%	7.75%	
<b>Net Pension Liability</b>						
1% Decrease	\$ 3,914,947,478	\$ 696,281,797	\$ 4,849,159	\$ 1,814,579	\$ (3,260,322)	
Current Discount Rate	2,511,659,866	305,663,509	1,048,555	(4,320,901)	(4,181,258)	
1% Increase	760,663,199	(59,722,517)	(2,424,545)	(9,663,416)	(4,978,021)	

**SECTION II**  
**ACCOUNTING INFORMATION**  
*(continued)*

The table below is a gain/loss analysis of the changes in the actuarial liability, reflecting variances between actual experience and assumed experience for different kinds of risk as specified in the GFOA GAAFR.

Analysis of Financial Experience Gain and Loss in Accrued Liability During Year Resulting from Differences Between Assumed Experience and Actual Experience For Year Ended June 30, 2019						
Type of Activity	State Employee & Teacher Retirement Program	Consolidated Plan for PLDs	Non-Consolidated PLDs	Judicial Retirement Program	Legislative Retirement Program	
Investment Income	\$ 57,985,155	\$ 17,765,627	\$ 205,973	\$ 408,141	\$ 115,981	
Combined Liability Experience	<u>(208,719,412)</u>	<u>(47,684,163)</u>	<u>478,188</u>	<u>1,087,164</u>	<u>(238,611)</u>	
Gain (or Loss) During Year from Financial Experience	\$ (150,734,257)	\$ (29,918,536)	\$ 684,161	\$ 1,495,305	\$ (122,630)	
Non-Recurring Items	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Composite Gain (or Loss) During Year	\$ (150,734,257)	\$ (29,918,536)	\$ 691,461	\$ 1,495,305	\$ (122,630)	

## SECTION II ACCOUNTING INFORMATION

(continued)

Schedule of Funded Liabilities by Type 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)
<b>State Employee and Teacher Retirement Program</b>							
2019	\$ 2,499,498,544	\$ 9,460,680,994	\$ 2,587,043,375	\$ 11,894,672,150	100%	99%	0%
2018	2,453,797,249	9,030,789,541	2,546,601,055	11,419,986,651	100%	99%	0%
2017	2,402,112,525	8,727,549,999	2,355,223,988	10,904,082,221	100%	97%	0%
2016	2,359,818,665	8,399,121,582	2,311,014,701	10,512,524,178	100%	97%	0%
2015	2,339,138,044	7,831,348,903	2,445,800,107	10,375,552,498	100%	100%	8%
2014	2,315,075,905	7,572,038,284	2,433,044,594	10,017,512,006	100%	100%	5%
2013	2,290,505,939	7,181,259,077	2,358,884,866	9,177,749,627	100%	96%	0%
2012	2,271,164,594	6,656,860,191	2,625,281,496	8,880,730,120	100%	99%	0%
2011	2,229,984,967	6,453,384,730	2,598,295,489	8,736,885,121	100%	100%	2%
2010	2,117,903,830	6,856,828,427	3,642,411,748	8,313,459,810	100%	90%	0%
<b>Consolidated Plan for Participating Local Districts</b>							
2019	\$ 521,610,261	\$ 1,927,683,260	\$ 809,526,084	\$ 2,918,585,814	100%	100%	58%
2018	494,411,535	1,818,566,082	776,879,603	2,764,807,391	100%	100%	58%
2017	472,362,260	1,721,058,286	823,240,175	2,609,806,231	100%	100%	51%
2016	452,446,198	1,654,981,662	782,312,774	2,489,157,281	100%	100%	49%
2015	438,925,747	1,543,532,803	738,477,459	2,433,186,149	100%	100%	61%
2014	423,097,001	1,462,031,828	724,529,016	2,379,733,634	100%	100%	68%
2013	412,347,408	1,378,065,748	675,521,588	2,179,961,872	100%	100%	58%
2012	398,895,449	1,262,186,227	707,745,483	2,103,481,277	100%	100%	63%
2011	379,478,840	1,175,482,545	676,024,931	2,084,982,632	100%	100%	78%
2010	347,801,024	1,083,097,662	654,598,374	2,011,019,138	100%	100%	89%
<b>Non-Consolidated Participating Local Districts</b>							
2019	\$ 4,329,750	\$ 32,342,346	\$ 1,437,687	\$ 36,627,381	100%	100%	0%
2018	4,461,906	30,747,638	2,782,257	36,380,088	100%	100%	42%
2017	4,468,152	30,140,204	3,419,931	35,772,138	100%	100%	34%
2016	4,494,490	30,215,191	3,337,304	35,516,058	100%	100%	24%
2015	4,640,093	29,733,833	4,144,814	35,942,796	100%	100%	38%
2014	4,667,251	31,696,569	3,382,954	35,485,488	100%	97%	0%
2013	4,764,800	29,539,283	4,180,808	33,454,845	100%	97%	0%
2012	4,757,033	27,810,149	4,313,899	33,172,070	100%	100%	14%
2011	4,815,718	26,832,938	4,939,550	34,483,299	100%	100%	57%
2010	4,695,405	27,353,693	5,287,301	34,317,862	100%	100%	43%
<b>Judicial Retirement Program</b>							
2019	\$ 11,255,316	\$ 37,884,418	\$ 20,176,806	\$ 72,775,425	100%	100%	100%
2018	11,180,063	36,854,246	20,257,615	69,934,400	100%	100%	100%
2017	10,933,820	33,422,798	20,643,526	66,776,230	100%	100%	100%
2016	10,592,002	33,418,288	19,710,981	64,265,782	100%	100%	100%
2015	9,717,368	30,422,680	18,771,569	57,074,951	100%	100%	90%
2014	9,466,378	28,785,537	16,308,727	55,419,017	100%	100%	100%
2013	9,464,604	26,605,274	16,304,907	51,055,251	100%	100%	92%
2012	9,379,428	24,731,810	12,229,440	49,735,004	100%	100%	100%
2011	9,028,737	24,690,578	14,148,982	49,324,784	100%	100%	100%
2010	8,510,723	26,915,670	17,723,306	47,677,635	100%	100%	69%
<b>Legislative Retirement Program</b>							
2019	\$ 2,667,308	\$ 6,903,616	\$ (504,160)	\$ 13,092,938	100%	100%	100%
2018	2,591,378	6,277,075	(308,503)	12,523,131	100%	100%	100%
2017	2,516,620	6,172,223	(525,533)	11,908,009	100%	100%	100%
2016	2,505,647	5,795,917	(622,106)	11,405,769	100%	100%	100%
2015	2,444,638	5,581,571	(467,916)	11,219,880	100%	100%	100%
2014	2,464,847	5,073,388	(33,042)	10,775,701	100%	100%	100%
2013	2,363,217	4,965,686	(456,289)	9,771,955	100%	100%	100%
2012	2,321,819	3,895,976	25,844	9,322,419	100%	100%	100%
2011	2,228,233	4,002,993	(506,033)	9,040,180	100%	100%	100%
2010	2,099,683	3,680,940	292,741	8,634,635	100%	100%	100%

\* 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 value of the Program.

**SECTION II**  
**ACCOUNTING INFORMATION**  
*(concluded)*

The Maine Public Employees Retirement System covers Postretirement Group Life Insurance obligations for the participants of the State Employee and Teacher Retirement Program, the Judicial Retirement Program, and the Legislative Retirement Program, which we collectively call the State Sponsored Plans, and the Participating Local Districts Plans (PLDs).

**Schedule of Changes in Net OPEB Liability**  
**as of June 30, 2019**

	<b>State Sponsored Plans Retiree Group Life Insurance</b>	<b>PLD Retiree Group Life Insurance</b>
<b>Total OPEB Liability</b>		
Service cost (BOY)	\$ 2,131,845	\$ 488,545
Interest (includes interest on service cost)	13,155,333	1,832,881
Change in benefit terms	0	0
Difference between expected and actual experience	0	0
Change in assumptions	0	893,851
Benefit payments, including refunds	(7,118,082)	(1,581,540)
Net change in total OPEB liability	\$ 8,169,095	\$ 1,633,737
Total OPEB Liability - beginning of year	\$ 196,262,903	\$ 36,022,905
Total OPEB Liability - end of year	\$ 204,431,998	\$ 37,656,642
<b>Plan Fiduciary Net Position</b>		
Contributions - Employer	\$ 7,756,442	\$ \$1,100,509
Contributions - Member	0	0
Net Investment Income	6,418,113	1,037,784
Benefit payments, including refunds	(7,118,082)	(1,581,540)
Administrative Expense	(726,320)	(119,519)
Net Change in Plan Fiduciary Net Position	\$ 6,330,153	\$ 437,234
Plan Fiduciary Net Position - beginning of year	\$ 94,286,629	\$ 15,821,928
Plan Fiduciary Net Position - end of year	\$ 100,616,782	\$ 16,259,162
<b>Net OPEB Liability - end of year</b>	<b>\$ 103,815,216</b>	<b>\$ 21,397,480</b>

## STATE EMPLOYEE AND TEACHER PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

### State Employee and Teacher Program

#### 1. Membership

Membership is a condition of employment for state employees and teachers, and optional for elected and appointed officials.

Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

#### 2. Member Contributions

Except as otherwise described below, members are required to contribute 7.65% of earnable compensation. Member contributions earn annual interest at the rate adopted by the Board of Trustees each February.

##### Contribution Requirements for Special State Employee Groups

State police and inland fisheries and wildlife officers employed before September 1, 1984: required to contribute 8.65% of earnable compensation for 20 years of service and 7.65% thereafter.

Forest rangers employed before September 1, 1984: required to contribute 8.65% of earnable compensation until eligible for retirement and 7.65% thereafter.

1998 Special Plan employees, which includes state prison employees, airplane pilots, forest rangers, defense, veterans and emergency management firefighters employed at Bangor International Airport, corrections employees, Baxter State Park Authority rangers, fire marshals, investigators and inspectors, oil and hazardous materials emergency response workers, and capitol security officers: required to contribute 8.65% of earnable compensation for 25 years and 7.65% thereafter.

State police employed on or after September 16, 1984 and special agent investigators hired before June 21, 1982: required to contribute 8.65% of earnable compensation for 25 years and 7.65% thereafter.

Inland fisheries and wildlife officers and marine resources officers employed on or after September 1, 1984: required to contribute 8.65% of earnable compensation for 25 years and 7.65% thereafter.

#### 3. 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.

For compensation paid on or after July 1, 1993, increases in earnable compensation of greater than 5% per year or greater than 10% over the highest three years are not included in calculating average final compensation unless the employer pays the cost of including such compensation. Earnable compensation does not include sick and vacation pay for those members who had less than ten years of service at July 1, 1993. For members for whom sick and vacation pay is includable in earnable compensation, these payments are included in applying the caps described above.

#### 4. Creditable Service

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

#### 5. Service Retirement Benefits

##### ***A. Regular Plan (State Employees and Teachers)***

- i. Provisions for Members with at Least Ten Years of Creditable Service on July 1, 1993

Normal Retirement Age: 60

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.

## STATE EMPLOYEE AND TEACHER PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(continued)*

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 creditable service and up to 25 years of prior service, reduced by the following approximate percentages for each year retirement age is less than age 60.

Age	Reduction	Age	Reduction
45	29.3%	53	16.6%
46	28.0	54	14.6
47	26.6	55	12.5
48	25.2	56	10.3
49	23.6	57	7.9
50	22.0	58	5.4
51	20.3	59	2.8
52	18.5	60	0.0

Form of Payment: Life annuity.

ii. Provisions for Members with Less Than Ten Years of Creditable Service on July 1, 1993

Normal Retirement Age: 62

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 age 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 and up to 25 years of prior service, reduced by 6% for each year retirement age is less than age 62.

Form of Payment: Life annuity.

iii. Provisions for Members with Less Than Five Years of Creditable Service on July 1, 2011

Normal Retirement Age: 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 age 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.

## STATE EMPLOYEE AND TEACHER PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

Benefit: 1/50 of average final compensation multiplied by years of membership service and up to 25 years of prior service, reduced by 6% for each year retirement age is less than age 65.

Form of Payment: Life annuity.

### **B. Special Plans (State Employees)**

- i. State Police Employed Before September 16, 1984 and Inland Fisheries and Wildlife Officers Employed Before September 1, 1984

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. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of Payment: 50% joint and survivor annuity or life annuity.

- ii. Forest Rangers Employed Before September 1, 1984

Eligibility: Age 50 with 25 years of creditable service as a forest ranger.

Benefit: One-half of average final compensation plus 2% for each year of service earned after qualification for retirement. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

Form of Payment: Life annuity.

- iii. 1998 Special Plan

1998 Entrants: State prison employees, airline pilots, forest rangers and liquor inspectors, employed after August 31, 1984; defense, veterans, and emergency management firefighters employed on and after July 1, 1998.

2000 Entrants: Baxter State Park Authority rangers, correctional employees and state fire marshals employed on or after January 1, 2000.

2002 Entrants: Capitol Police and oil and hazardous materials emergency response workers.

Eligibility: Ten years of creditable service under the 1998 Special Plan in one or a combination of the covered capacities and the attainment of age 55 – OR – 25 years of creditable service in one or a combination of the covered capacities.

Benefit: For service prior to coverage in the 1998 Special Plan, 1/50 of average final compensation multiplied by years of service reduced for retirement before age 60, 62, or 65 (as determined by the applicable Regular Plan provisions described in 5.A.), except oil and hazardous materials emergency response workers, certain prison employee, and Capitol Police benefits are reduced for retirement before age 55.

-PLUS-

For service under the 1998 Special Plan, 1/50 of average final compensation multiplied by years of service reduced for retirement before age 55.

Form of Payment: Life annuity.

- iv. 25 & Out Plan

1998 Entrants: State police employed on or after September 16, 1984 and special agent investigators hired before June 21, 1982.

2002 Entrants: Inland fisheries and wildlife officers and marine resources officers employed on and after August 31, 1984.

## STATE EMPLOYEE AND TEACHER PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

Eligibility: 25 years of creditable service in named positions.

Benefit: 1/50 of average final compensation multiplied by years of service.

Form of Payment: Life annuity.

Members in Special Plans who fail to qualify for Special Plan benefits can receive Regular Plan benefits when and as eligible and qualified.

v. Minimum Service Retirement Benefit

\$100 per month

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

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

Benefit: 66 $\frac{2}{3}$ % 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 on termination of service and ceases on cessation of disability or after two 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 on 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 (not subject to a cap) (see item 12). On the date when service benefits reach a level of 66 $\frac{2}{3}$ % 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.

### 7. No Age Disability Retirement 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 on termination of service and ceases on cessation of disability or after two 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 (not subject to a cap) (see item 12). 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 time.

### 8. Pre-Retirement Ordinary Death Benefits

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

Benefit: Designated beneficiary, spouse, children, or parents entitled to benefit calculated as if deceased member had retired under Option 2 (see item 13); 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.

## STATE EMPLOYEE AND TEACHER PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

### 9. Pre-Retirement Accidental Death Benefits

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

Benefit:

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

### 10. Termination Benefit

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

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

### 11. Refund of Contributions

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

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

### 12. Cost-of-Living Adjustments

All service and disability retirement and survivor benefits 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 (COLA) are effective September 1 of each year and are applied to that portion of the benefit that is not in excess of a COLA cap whose value grows annually with the same adjustment as the COLA (see values below) for all benefits that have been in payment for at least twelve months as of that date. The maximum annual increase is 3%. Average final compensation used in determining disability benefits for disabled members is similarly adjusted for purposes of determining the recipient's service retirement benefit if and when the recipient moves to service retirement.

COLA Cap History: (value as of September 1 of listed year when COLA effective):

2014 -	\$20,000.00
2015 -	\$20,420.00
2016 -	\$20,940.71
2017 -	\$21,474.70
2018 -	\$21,818.30
2019 -	\$22,451.03

Members who did not have ten years of service on July 1, 1993 will begin receiving cost-of-living adjustments at the later of 12 months after their normal retirement age and the first September 1 following a minimum of twelve months of being in receipt of their benefit.

**STATE EMPLOYEE AND TEACHER PROGRAM**  
**SUMMARY OF PROGRAM AND PLAN PROVISIONS**  
*(concluded)*

**13. 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.

**14. Plan Changes since Prior Valuation**

None.

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

## STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

### A. Actuarial Assumptions

#### 1. Annual Rate of Investment Return

State Employees	6.75%
Teachers	6.75%

Rate is net of both administrative and investment expense.

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

State Employees	2.20%
Teachers	2.20%

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

Service	State Employees	Teachers
0	8.75%	14.50%
5	5.00%	5.75
10	3.75%	4.75
15	3.20%	4.00
20	2.95%	2.75
25 and over	2.75%	2.75

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

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

Service	State Employees and Teachers
0	33.50%
5	10.50
10	5.95
15	4.25
20	4.0
25	4.0

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.

**STATE EMPLOYEE AND TEACHER PROGRAM  
ACTUARIAL ASSUMPTIONS and METHODS**

(continued)

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

(Showing values in 2019)				
Age	State Employees		Teachers	
	Male	Female	Male	Female
50	40	31	38	26
55	57	42	54	35
60	77	62	74	51
65	110	94	105	78
70	170	152	162	125
75	277	249	264	205
80	467	421	444	347
85	815	747	776	616
90	1,447	1,345	1,377	1,110
95	2,299	2,228	2,189	1,838

Rates for State Employees 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. Proposed rates for Teachers are based on 99% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table for both males and females, using the RP-2014 Total Dataset Employee Mortality Table for ages prior to the start of the Healthy Annuitant Mortality Table, respectively, both projected 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.

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

(Showing values in 2019)				
Age	State Employees		Teachers	
	Male	Female	Male	Female
20	4	2	3	1
25	4	2	4	2
30	4	2	4	2
35	5	3	5	3
40	6	5	6	4
45	9	7	9	6
50	17	12	16	10
55	28	20	26	16
60	47	29	44	24
65	83	43	79	36

\* For State Regular and Teachers 5% of deaths assumed to arise out of and in the course of employment; for State Special 20% of deaths are assumed to arise out of and in the course of employment.

Rates for State Employees 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. Proposed rates for Teachers are based on 99% of the RP-2014 Total Dataset Healthy Annuitant Mortality Table for both males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table

## STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(continued)*

rates after the end of the Total Employee Mortality Table, respectively, both projected 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 2019)				
Age	State Employees		Teachers	
	Male	Female	Male	Female
25	81	24	81	24
30	78	30	78	30
35	92	42	92	42
40	110	57	110	57
45	171	90	171	90
50	209	118	209	118
55	242	148	242	148
60	275	176	275	176
65	329	214	329	214
70	425	291	425	291

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)

*Teachers and State Regular Plans*

State Employees and Teachers			
Age	Tier 1	Tier 2	Tier 3
45	13	NA	NA
50	29	NA	NA
55	40	40	40
59	150	40	40
60	250	75	40
61	200	175	40
62	200	250	40
63	200	150	75
64	250	200	225
65	350	250	300
70	200	200	300
75	1,000	1,000	1,000

In the case of State Regular and Teacher employees, Tier 1 refers to those who had accrued at least 10 years of service by July 1, 1993. Tier 2 refers to those who had not accrued at least 10 years of service by July 1, 1993 or were hired after that date but had five years of service by July 1, 2011. Tier 3 refers to those who did not have five years of service by July 1, 2011. Rates are only applied for early retirement when the member is at least age 57. Earlier rates are applicable for normal retirement.

**STATE EMPLOYEE AND TEACHER PROGRAM  
ACTUARIAL ASSUMPTIONS and METHODS**  
(continued)

*State Special Plans*

Members of the 1998 Special Plan are assumed to retire at rates that vary by age and whether service is less than 25 years or not. Sample rates are as follows:

1998 Special Plan Retirement		
Age	Service < 25	Service >= 25
55	20.0%	25.0%
57	10.0	25.0
60	20.0	30.0
62	15.0	30.0
65	23.4	30.0
67	36.8	50.0
70	100.0	100.0

Members of the 25 & Out Plan are assumed to retire at rates that vary by service. Sample rates are as follows:

25 & Out Plan	
Service	Rate
< 24	0.0%
25 - 29	25.0%
30 - 34	50.0%
35+	100.0%

Members of State Special Plans other than the 25 & Out Plan and the 1998 Special Plan are all currently assumed to retire at a rate of 50% per year, beginning when they reach eligibility for unreduced benefits, with a 100% assumed rate at age 70. Rates are only applied when the member is at least age 50.

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

Age	State Employees		
	Regular	Special	Teachers
25	5.0	5.4	2.1
30	6.1	6.5	2.3
35	9.3	9.9	2.3
40	14.8	15.8	3.1
45	22.8	24.4	7.0
50	34.0	36.4	10.9
55	39.9	42.6	14.9
60	43.4	46.4	18.8

\* 10% assumed to receive Workers Compensation benefits offsetting disability benefit; also, current rates for State Special groups are higher by 7 per 10,000 at all ages.

**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. Vacation/Sick Leave Credits**

For members who had ten years of service on July 1, 1993, credits for unused vacation and sick leave may be used to increase final average compensation and/or creditable service. In order to reflect this, projected retirement benefits are increased by 0.48% for state (regular) employees and 0.75% for teachers for impacted members.

**12. 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: 5% assumed for all future years

## STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(concluded)*

COLA Timing: September 1

Special Plan Member Contribution Rates: For members of Special Plans where the contribution rate drops from 8.65% to 7.65% after a given number of years, 8.65% is used for all years for valuation purposes as a simplifying assumption reflecting data limitations.

### 13. 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.

### 14. Changes since Last Valuation

None.

### 15. Rationale for Change in Actuarial Assumptions

N/A

## B. Actuarial Methods

### 1. Funding Method

For the plans in this Program, the funding methodology employed is the entry age normal funding method. Under this method, there are two components to the total contribution: the normal cost rate (NC rate), and the unfunded actuarial liability rate (UAL rate). Both of these rates are developed for each Plan within the Program, consisting of the Teacher Program, the State Regular Plan, and several State Special Plans.

For each Plan in the Program, 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 benefit. 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 Plans in the Program.

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 employer normal cost contributions, future member contributions, future UAL payments, and current assets. The UAL rate determined is the percentage that applied to member payroll is expected to amortize the UAL according to the Program's amortization policy. Specifically, the remaining original UAL has 9 years of its prescribed amortization period remaining and all other gains and losses are amortized over twenty-year periods beginning on the date as of which they occur.

### 2. Asset Valuation Method

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

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

### 3. Changes since Last Valuation

None.

### 4. Rationale for Change

N/A

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS

### Consolidated Plan for Participating Local Districts

#### 1. Member Contributions

Prior to FY 2020, 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

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

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

#### 2. Average Final Compensation

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

#### 3. Creditable Service

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

Effective August 1, 2019, the ability to use accrued, unused vacation and sick leave towards retirement benefits is 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

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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

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.

### **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.

### **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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

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.

### **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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

### **Special Plan 4N**

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

### **Special Plan Notes**

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

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

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

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

**Form of Payment:** Payment begins upon 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.

### **6. No-Age Disability Benefits**

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

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

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

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

### **7. Pre-Retirement Ordinary Death Benefits**

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

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

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.

### 8. 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."

### 9. Termination Benefit

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

Benefit: The member's choice of a refund of the accumulated contributions with interest or a retirement benefit using creditable service and average final compensation as of 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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS SUMMARY OF PROGRAM AND PLAN PROVISIONS *(concluded)*

### 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

None

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

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS ACTUARIAL ASSUMPTIONS and METHODS

### A. Actuarial Assumptions

#### 1. Annual Rate of Investment Return

PLDs	6.75%
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Rate is net of both administrative and investment expense.

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

PLDs	1.91%
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#### 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.

#### 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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS ACTUARIAL ASSUMPTIONS and METHODS

*(continued)*

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

(Showing values in 2019)		
Age	Male	Female
50	40	31
55	57	42
60	77	62
65	110	94
70	170	152
75	277	249
80	467	421
85	815	747
90	1,447	1,345
95	2,299	2,228

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.

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

(Showing values in 2019)		
Age	Male	Female
20	4	2
25	4	2
30	4	2
35	5	3
40	6	5
45	9	7
50	17	12
55	28	20
60	47	29
65	83	43

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

Rates are based on 104% and 120% of the RP-2014 Total Dataset Employee Mortality Table, respectively, for males and females, using the RP-2014 Total Dataset Healthy Annuitant Mortality Table rates after the end of the Total Employee Mortality Table, both projected from the 2006 base rates using the RPEC\_2015 model, with an ultimate rate of 0.85% for ages 20-85, grading down to an ultimate rate of 0.00% for ages 111-120, and convergence to the ultimate rate in the year 2020.

**CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS  
ACTUARIAL ASSUMPTIONS and METHODS**

*(continued)*

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

(Showing values in 2019)		
Age	Male	Female
25	81	24
30	78	30
35	92	42
40	110	57
45	171	90
50	209	118
55	242	148
60	275	176
65	329	214
70	425	291

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.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS ACTUARIAL ASSUMPTIONS and METHODS

*(continued)*

### 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: 5% assumed for all future years

COLA Timing: September 1

Member Contribution Rates: For purposes of developing liability amounts, the member contribution rates in effect for FY 2019 are assumed to continue for all periods in the future instead of the rates developed annually beginning with FY 2020 based on the risksharing framework.

### 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.

### 13. Changes since Last Valuation:

None.

### 14. Rationale for Change in Actuarial Assumptions:

N/A.

## CONSOLIDATED PLAN FOR PARTICIPATING LOCAL DISTRICTS ACTUARIAL ASSUMPTIONS and METHODS *(concluded)*

### B. Actuarial Methods

#### 1. Funding Method

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

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

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

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

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

#### 2. Asset Valuation Method

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

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

#### 3. Changes since Last Valuation

None.

## JUDICIAL RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

### Judicial Retirement Program

#### 1. Membership

Membership is a condition of employment for all judges serving on or after December 1, 1984.

Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

Judges who retired prior to December 1, 1984 are covered under a different program.

#### 2. Member Contributions

Members are required to contribute 7.65% of earnable compensation. Member contributions earn annual interest at the rate adopted by the Board of Trustees each February.

#### 3. 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.

For active judges as of July 1, 2003, July 1, 2004, and July 1, 2010, average final compensation shall be increased to reflect missed salary increases.

#### 4. Creditable Service

Creditable service includes the following:

- A. All judicial service as a member after November 30, 1984;
- B. All judicial service before December 1, 1984;
- C. Service credited while receiving disability benefits under the Program; and
- D. All service creditable under the State Employee and Teacher Program provided the member elects to have the member's and the employer's contributions on behalf of such service transferred to the Judicial Program.

#### 5. Service Retirement Benefits

Eligibility:

##### ***A. Eligibility for Members with at Least Ten Years of Creditable Service on July 1, 1993***

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 70 with at least one year of service immediately before retirement.
- iii. Eligibility for members not in active service at retirement and not in active service on or after October 1, 1999:  
Attainment of age 60 and ten years of creditable service.
- iv. Eligibility for members not in active service at retirement, but in active service on or after October 1, 1999:  
Attainment of age 60 and five years of creditable service.

## JUDICIAL RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(continued)*

### **B. Eligibility for Members with Less Than Ten Years of Creditable Service on July 1, 1993**

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 70 with at least one year of service immediately before retirement.
- iii. Eligibility for members not in active service at retirement and not in active service on or after October 1, 1999:  
Attainment of age 62 with ten years of creditable service.
- iv. Eligibility for members in active service on or after October 1, 1999:  
Attainment of age 62 and five years of creditable service.

### **C. Eligibility for Members with Less Than Five Years of Creditable Service on July 1, 2011**

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 70 with at least one year of service immediately before retirement.
- iii. Eligibility for members not in active service at retirement and not in active service on or after October 1, 1999:  
Attainment of age 65 with ten years of creditable service.
- iv. Eligibility for members in active service on or after October 1, 1999:  
Attainment of age 65 and five years of creditable service.

Benefit Sum of:

- (1) for service after November 30, 1984 and before July 1, 1998 and creditable service allowed under Section 1302(3), 2% of average final compensation multiplied by years of service;
- (2) for service on or after July 1, 1998, 3% of average final compensation multiplied by years of service; and,
- (3) for judicial service prior to December 1, 1984, 75% of November 30, 1984 salary for the position held at retirement, pro-rated for prior service less than ten years.

The benefit is reduced for retirement before age 60 at the approximate rates listed in the table below, for members with at least ten years creditable service on July 1, 1993.

Age	Reduction	Age	Reduction
45	29.3%	53	16.6%
46	28.0	54	14.6
47	26.6	55	12.5
48	25.2	56	10.3
49	23.6	57	7.9
50	22.0	58	5.4
51	20.3	59	2.8
52	18.5	60	0.0

## JUDICIAL RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(continued)*

The benefit is reduced for retirement before age 62 by 6% for each year the member's age is less than age 62, if less than ten years creditable service on July 1, 1993, but at least five years creditable service on July 1, 2011.

The benefit is reduced for retirement before age 65 by 6% for each year the member's age is less than age 65, if less than five years creditable service on July 1, 2011.

Maximum Benefit: Total benefit cannot exceed 70% of average final compensation except as provided under the minimum benefit provision.

Minimum Benefit: For a judge in service and age 50 or older on December 1, 1984, 75% of salary on June 30, 1984 for the position held at retirement, increased by 6% per year from June 30, 1984 to June 30, 1989 or retirement date if earlier, and increased beyond June 30, 1989 by the cost-of-living increase granted the previous September.

Form of Payment: Life annuity; except, for a judge in service and age 50 before December 1, 1984, 50% joint and survivor annuity to surviving spouse.

### **6. Disability Retirement Benefits Other Than No Age Benefits (See Item 7)**

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

Benefit: 66 $\frac{2}{3}$ % 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 on termination of service and ceases on cessation of disability or after two years, unless the member is unable to engage in any substantially gainful activity, in which case payments cease on the earlier of age 70 and the date that the service retirement benefit 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 (not subject to a cap) (see item 12). On the date when service benefits reach a level of 66 $\frac{2}{3}$ % of average final compensation or at age 70, if earlier, the disability converts to a service retirement benefit based on service and average final compensation at that time.

### **7. No Age Disability Retirement Benefits**

Eligibility: Disabled as defined in the Judicial Retirement Program 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. A member in service on November 30, 1984 may elect benefits applicable for retirement before December 1, 1984.

Form of Payment: Payment begins on termination of service and ceases on cessation of disability or after two 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 (not subject to a cap) (see item 12). 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 time.

## JUDICIAL RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(continued)*

### 8. Pre-Retirement Ordinary Death Benefits

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

Benefit: Designated beneficiary, spouse, children, or parents entitled to benefit calculated as if deceased member had retired under Option 2 (see item 13); 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.

Minimum Benefit: For a judge in service prior to December 1, 1984, one-half of the judge's retirement benefit determined on date of death, payable to the spouse and/or dependent children.

### 9. Pre-Retirement Accidental Death Benefits

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

Benefit:

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

### 10. Termination Benefit

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

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

### 11. Refund of Contributions

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

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

### 12. Cost-of-Living Adjustments

All service and disability retirement and survivor benefits 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 (COLA) are effective September 1 of each year and are applied to that portion of the benefit that is not in excess of a COLA cap whose value grows annually with the same adjustment as the COLA (see values below) for all benefits that have been in payment for at least twelve months as of that date. The maximum annual increase is 3%. Average final compensation used in determining disability benefits for disabled members is similarly adjusted for purposes of determining the recipient's service retirement benefit if and when the recipient moves to service retirement.

## JUDICIAL RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(concluded)*

COLA Cap History: (value as of September 1 of listed year when COLA effective):

2014 - \$20,000.00  
2015 - \$20,420.00  
2016 - \$20,940.71  
2017 - \$21,474.70  
2018 - \$21,818.30  
2019 - \$22,451.03

Members who did not have ten years of service on July 1, 1993 will begin receiving cost-of-living adjustments at the latter of 12 months after their normal retirement age and the first September 1 following a minimum of twelve months of being in receipt of their benefit.

Minimum benefits are increased 6% per year from July 1985 through June 1989, and as described above thereafter.

### 13. 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.

### 14. Program Changes since Prior Valuation

None.

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

## JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

### A. Actuarial Assumptions

#### 1. Annual Rate of Investment Return

Judicial	6.75%
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Rate is net of both administrative and investment expense.

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

Judicial	2.20%
----------	-------

#### 3. Annual Rate of Individual Salary Increase:

Judicial	2.75%
----------	-------

#### 4. Sample Rates of Termination (% at Selected Ages)

Age	Termination Rate
25	7%
30	6
35	5
40	4
45	3
50	2
55	1

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)

Age	Showing values in 2019	
	Male	Female
50	40	31
55	57	42
60	77	62
65	110	94
70	170	152
75	277	249
80	467	421
85	815	747
90	1,447	1,345
95	2,299	2,228

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.

## JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

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

Showing values in 2019		
Age	Male	Female
20	4	2
25	4	2
30	4	2
35	5	3
40	6	5
45	9	7
50	17	12
55	28	20
60	47	29
65	83	43

\* 5% of deaths 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 2019		
Age	Male	Female
25	81	24
30	78	30
35	92	42
40	110	57
45	171	90
50	209	118
55	242	148
60	275	176
65	329	214
70	425	291

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)

Age	Tier 1	Tier 2	Tier 3
60-61	1,000	NA	NA
62-64	1,000	500	NA
65-69	1,000	500	500
70-74	1,000	500	500
75+	1,000	1,000	1,000

## JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(continued)*

In the case of judicial employees, Tier 1 refers to those who had accrued at least 10 years of service by July 1, 1993. Tier 2 refers to those who had not accrued at least 10 years of service by July 1, 1993 or were hired after that date but had five years of service by July 1, 2011. Tier 3 refers to those who did not have five years of service by July 1, 2011.

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

Age	Disability Rate
25	0%
30	0
35	0
40	0
45	0
50	0
55	0
60	0

### 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: 5% assumed for all future years

COLA Timing: September 1

### 12. Rationale for Actuarial 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. 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.

### 13. Changes since Last Valuation

None.

### 14. Rationale for Change in Actuarial Assumptions

N/A.

## JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(concluded)*

### B. Actuarial Methods

#### 1. Funding Method

The entry age normal actuarial funding method is used to determine costs. Under this funding method, the total employer contribution rate consists of two elements: the employer normal cost rate and the unfunded actuarial liability (UAL) rate.

Under this method, the actuarial present value of the projected benefits of each active included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to the year beginning on the valuation date is called the normal cost. For each active, the normal cost is determined by taking the value, as of entry age into the Program, of the member's projected benefits, reduced by the value of future member contributions, and then dividing it by the value, also as of the member's entry age, of the member's expected future salary. This rate is then multiplied by the member's salary at the valuation date to produce the normal cost for each member, which are then aggregated across all members to get the total normal cost for the Program. This total normal cost is then divided by the total salary for the Program at the valuation date to get the normal cost rate for the Program.

The portion of the actuarial present value not provided for at the valuation date by the actuarial present value of the future normal costs is called the actuarial liability. The unfunded actuarial liability is defined as the total actuarial liability at the valuation date less the actuarial value of the Program's assets at the valuation date. Contributions are made to fund this unfunded actuarial liability (UAL). The UAL rate for this Program is developed by amortizing the unfunded liability over an open ten-year period, assuming these amortization payments increase over the previous year at a rate of 2.75% per year. The resulting amortization for the year beginning on the valuation date is then divided by the total payroll for the Program to develop the UAL rate.

The total rate for the Program is produced by adding the normal cost rate and the UAL rate, subject to the requirement that the total rate cannot be less than 0%.

By using an open amortization period, this funding method results in the expectation that any unfunded liability in the Program as of a valuation date will never be fully reduced to zero if all of the valuation assumptions are exactly met.

#### 2. Asset Valuation Method

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

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

#### 3. Changes since Last Valuation

None.

## LEGISLATIVE RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

### Legislative Retirement Program

#### 1. Membership

Except as provided by statute, membership is mandatory for every legislator in service in the Legislature on or after December 3, 1986, and optional for those who were members of the Retirement System on December 2, 1986.

Membership ceases on the earlier of withdrawal of contributions, retirement, or death.

#### 2. Member Contributions

Members are required to contribute 7.65% of earnable compensation. Member contributions earn annual interest at the rate adopted by the Board of Trustees each February.

#### 3. 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.

#### 4. Creditable Service

Creditable service includes the following:

- A. All legislative service as a member after December 2, 1986;
- B. All legislative service before December 3, 1986, for which contributions have been made to the Retirement System at the applicable rate, including appropriate interest;
- C. Service credited while receiving disability benefits under the Program; and
- D. All service creditable under the Retirement System as a State Employee provided the member elects to have the member's and the employer's contributions on behalf of such service transferred to the Legislative Program.

#### 5. Service Retirement Benefits

Eligibility:

##### ***A. Eligibility for Members with at Least Ten Years of Creditable Service on July 1, 1993***

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 60.
- iii. Eligibility for members not in active service at retirement, and not in active service on or after October 1, 1999:  
Attainment of age 60 and ten years of creditable service.
- iv. Eligibility for members not in active service at retirement, but in active service on or after October 1, 1999:  
Attainment of age 60 and five years of creditable service.

## LEGISLATIVE RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(continued)*

### **B. Eligibility for Members with Less Than Ten Years of Creditable Service on July 1, 1993**

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 62.
- iii. Eligibility for members not in active service at retirement, and not in active service on or after October 1, 1999:  
Attainment of age 62 with ten years of creditable service.
- iv. Eligibility for members not in active service at retirement, but in active service on or after October 1, 1999:  
Attainment of age 62 and five years of creditable service.

### **C. Eligibility for Members with Less Than Five Years of Creditable Service on July 1, 2011**

- i. Eligibility for members in active service and inactive members:  
25 years of creditable service.
- ii. Eligibility alternative for members in active service:  
Attainment of age 65.
- iii. Eligibility for members not in active service at retirement, and not in active service on or after October 1, 1999:  
Attainment of age 65 with ten years of creditable service.
- iv. Eligibility for members not in active service at retirement, but in active service on or after October 1, 1999:  
Attainment of age 65 and five years of creditable service.

Benefit: 1/50 of average final compensation multiplied by years of creditable service.

The benefit is reduced for retirement before age 60 at the approximate rates listed in the table below, for members with at least ten years creditable service on July 1, 1993.

Age	Reduction	Age	Reduction
45	29.3%	53	16.6%
46	28.0	54	14.6
47	26.6	55	12.5
48	25.2	56	10.3
49	23.6	57	7.9
50	22.0	58	5.4
51	20.3	59	2.8
52	18.5	60	0.0

The benefit is reduced for retirement before age 62 by 6% for each year the member's age is less than age 62, if less than ten years creditable service on July 1, 1993, but at least five years creditable service on July 1, 2011.

## LEGISLATIVE RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

The benefit is reduced for retirement before age 65 by 6% for each year the member's age is less than age 65, if less than five years creditable service on July 1, 2011.

Minimum benefit \$100 per month if at least ten years of creditable service.

Form of Payment: Life annuity.

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

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

Benefit: 66 $\frac{2}{3}$ % 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 on termination of service and ceases on cessation of disability or after two 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 and 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 (not subject to a cap) (see item 12). On the date when service benefits reach a level of 66 $\frac{2}{3}$ % 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.

### 7. No Age Disability Retirement Benefits

Eligibility: Disabled as defined in the Legislative Retirement Program 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 on termination of service and ceases on cessation of disability or after two 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 (not subject to a cap) (see item 12). 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 time.

### 8. Pre-Retirement Ordinary Death Benefits

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

Benefit: Designated beneficiary, spouse, children, or parents entitled to benefit calculated as if deceased member had retired under Option 2 (see item 13); 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.

## LEGISLATIVE RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

(continued)

### 9. Pre-Retirement Accidental Death Benefits

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

Benefit:

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

### 10. Termination Benefit

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

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

### 11. Refund of Contributions

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

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

### 12. Cost-of-Living Adjustments

All service and disability retirement and survivor benefits 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 (COLA) are effective September 1 of each year and are applied to that portion of the benefit that is not in excess of a COLA cap whose value grows annually with the same adjustment as the COLA (see values below) for all benefits that have been in payment for at least twelve months as of that date. The maximum annual increase is 3%. Average final compensation used in determining disability benefits for disabled members is similarly adjusted for purposes of determining the recipient's service retirement benefit if and when the recipient moves to service retirement.

COLA Cap History: (value as of September 1 of listed year when COLA effective):

2014 -	\$20,000.00
2015 -	\$20,420.00
2016 -	\$20,940.71
2017 -	\$21,474.70
2018 -	\$21,818.30
2019 -	\$22,451.03

Members who did not have ten years of service on July 1, 1993 will begin receiving cost-of-living adjustments at the latter of 12 months after their normal retirement age and the first September 1 following a minimum of twelve months of being in receipt of their benefit.

## LEGISLATIVE RETIREMENT PROGRAM SUMMARY OF PROGRAM AND PLAN PROVISIONS

*(concluded)*

### 13. 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.

### 14. Program Changes since Prior Valuation

None.

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

## LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

### A. Actuarial Assumptions

#### 1. Annual Rate of Investment Return

Legislative	6.75%
-------------	-------

Rate is net of both administrative and investment expense.

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

Legislative	2.20%
-------------	-------

#### 3. Annual Rate of Individual Salary Increase

Legislative	2.75%
-------------	-------

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

Service	Termination Rate
0	0%
1	0
2	30
3	30
4	25
5	25
6	10
7	10
8	50
9	50
10	25
11	25
12	25
13	25
14	25
15	25
16+	50

The rates shown are only applicable in the fiscal years ending in odd years while zero terminations are assumed in the fiscal years ending in even years.

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.

**LEGISLATIVE RETIREMENT PROGRAM  
ACTUARIAL ASSUMPTIONS and METHODS**

(continued)

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

Showing values in 2019		
Age	Male	Female
50	40	31
55	57	42
60	77	62
65	110	94
70	170	152
75	277	249
80	467	421
85	815	747
90	1,447	1,345
95	2,299	2,228

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.

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

Showing values in 2019		
Age	Male	Female
20	4	2
25	4	2
30	4	2
35	5	3
40	6	5
45	9	7
50	17	12
55	28	20
60	47	29
65	83	43

\* 5% of deaths 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.

## LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(continued)*

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

Showing values in 2019		
Age	Male	Female
25	81	24
30	78	30
35	92	42
40	110	57
45	171	90
50	209	118
55	242	148
60	275	176
65	329	214
70	425	291

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):

Age	Fiscal Years Ending Even	Fiscal Years Ending Odd
57-69	0	250
70+	0	1,000

Note that the all retirement rates are only applied once the member is eligible to retire, so those in with 62 or 65 normal retirement ages are not assumed to retire until eligible. No retirements are assumed prior to age 57, regardless of service amount.

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

Age	Disability Rate
25	0%
30	0
35	0
40	0
45	0
50	0
55	0
60	0

### 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.

## LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

### 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: 5% assumed for all future years

COLA Timing: September 1

### 12. Rationale for Actuarial 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. 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.

### 13. Changes since Last Valuation

None.

### 14. Rationale for Change in Actuarial Assumptions

N/A.

## B. Actuarial Methods

### 1. Funding Method

The entry age normal actuarial funding method is used to determine costs. Under this funding method, the total employer contribution rate consists of two elements: the employer normal cost rate and the unfunded actuarial liability (UAL) rate.

Under this method, the actuarial present value of the projected benefits of each active included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to the year beginning on the valuation date is called the normal cost. For each active, the normal cost is determined by taking the value, as of entry age into the Program, of the member's projected benefits, reduced by the value of future member contributions, and then dividing it by the value, also as of the member's entry age, of the member's expected future salary. This rate is then multiplied by the member's salary at the valuation date to produce the normal cost for each member, which are then aggregated across all members to get the total normal cost for the Program. This total normal cost is then divided by the total salary for the Program at the valuation date to get the normal cost rate for the Program.

The portion of the actuarial present value not provided for at the valuation date by the actuarial present value of the future normal costs is called the actuarial liability. The unfunded actuarial liability is defined as the total actuarial liability at the valuation date less the actuarial value of the Program's assets at the valuation date. Contributions are made to fund this unfunded actuarial liability (UAL). The UAL rate for this Program is developed by amortizing the unfunded liability over an open ten-year period, assuming these amortization payments increase over the previous year at a rate of 2.75% per year. The resulting amortization for the year beginning on the valuation date is then divided by the total payroll for the Program to develop the UAL rate.

The total rate for the Program is produced by adding the normal cost rate and the UAL rate, subject to the requirement that the total rate cannot be less than 0%.

By using an open amortization period, this funding method results in the expectation that any unfunded liability in the Program as of a valuation date will never be fully reduced to zero if all of the valuation assumptions are exactly met.

## LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

*(concluded)*

### 2. Asset Valuation Method

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

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

### 3. Changes since Last Valuation

None.

## RETIREE GROUP LIFE INSURANCE SUMMARY OF PROGRAM AND PLAN PROVISIONS

### Membership

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

### Basic Insurance

Average final compensation calculated for retirement purposes.

### Amount of Insurance for a Retiree

- Service Retirement: The Basic Insurance will be reduced by 15% per year until the amount equal to the greater of (a) 40% of the initial Basic Insurance, or (b) \$2,500.
- Disability Retirement: The amount of basic life insurance in force prior to retirement will be continued until normal retirement age. At normal retirement age, the amount of insurance will be reduced as for service retirement.

### Retiree Contribution

- |                  |  |
|------------------|--|
| State Employees: | None   |
| Teachers:        | None   |
| Judges:          | None   |
| Legislators:     | None   |
| PLD:             | PLD must pay \$0.46 per month per \$1,000 of base benefit, based on the coverage amounts declining from 100% to 40%. |

### Normal Retirement Age

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

### Discontinued Coverages at Retirement

- Supplemental Life
- Accidental Death and Dismemberment
- Dependent Life

(Discontinued coverage may be ported to another group term product or converted to an individual policy. MainePERS is charged a fee for those active employees who convert to an individual policy upon termination from employment. Conversion charges are considered a cost of active, not retiree group life insurance. Therefore, it is not included in these liabilities.)

## RETIREE GROUP LIFE INSURANCE ACTUARIAL ASSUMPTIONS AND METHODS

### Economic Assumptions

<i>Valuation Date:</i>	June 30, 2018
<i>State Sponsored Plans Beginning of Year Investment Return:</i>	6.75% per year
<i>State Sponsored Plans End of Year Investment Return:</i>	6.75% per year
<i>PLD GASB Beginning of Year Investment Return:</i>	5.13% per year
<i>PLD GASB End of Year Investment Return:</i>	4.98% per year
<i>Cost-of-Living Increases in Life Benefits:</i>	N/A. Unlike pension benefits, Life Benefits do <u>not</u> increase with Cost of Living.
<i>Premium Expense Assumption:</i>	To reflect administrative expenses associated with the distribution of benefits, the following loads have been added to the liabilities, normal cost, and benefit payments.
<b>State Employees, Judges and Legislators:</b>	9.52%
<b>Teachers:</b>	13.07%
<b>Participating Local Districts:</b>	8.66% of claims
<i>Conversion Charges:</i>	Applies to the cost of active group life insurance, not retiree group life insurance.
<i>Form of Benefit Payment:</i>	Lump Sum.
<b>Other Assumptions and Methods</b>	All other assumptions and methods match those used for the pension valuation as of June 30, 2018.

# STATISTICAL SECTION



*Chestnut*

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM  
STATISTICAL SECTION  
(UNAUDITED)**

This section of the Maine Public Employees Retirement System’s Comprehensive Annual Financial Report presents detailed information as a context for understanding this year’s financial statements, note disclosures, and supplementary information. This information has not been audited by the independent auditor.

**TABLE OF CONTENTS**

	<b>Page</b>
<b>FINANCIAL TRENDS</b> .....	149 - 161

These tables contain trend information that may assist the reader in assessing the System’s current financial performance by placing it in historical perspective. Unless otherwise noted, the information in the Financial Trends tables is derived from the annual financial reports for the relevant year.

Changes in Fiduciary Net Position (Last Ten Fiscal Years)	
Defined Benefit Plans.....	149
Group Life Insurance Plan.....	154
Defined Contribution Plans.....	156
Retiree Health Investment Trust Fund.....	157
Benefit and Refund Deductions from Fiduciary Net Position by Type (Last Ten Fiscal Years)	
Defined Benefit Plans.....	158
Group Life Insurance Plan.....	161

<b>OPERATING INFORMATION</b> .....	162 - 171
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These tables contain service and infrastructure indicators that can enhance one’s understanding of how the information in the System’s financial statements relates to the services the System provides and the activities it performs. Unless otherwise noted, the information in these tables is derived from the System’s pension administration records.

Defined Benefit Plans Average Benefit Payments, Last Ten Fiscal Years.....	162
Defined Benefit Plans Retired Members by Type of Benefit and Option.....	166
Employee Contribution Rates, Last Ten Fiscal Years.....	168
Employer Contribution Rates, Last Ten Fiscal Years.....	169
Principal Participating Employers, Current Year and Nine Years Ago.....	170
Participating Employers, Detailed Listing.....	171

**DEFINED BENEFIT PLANS  
CHANGES IN FIDUCIARY NET POSITION - STATE EMPLOYEE AND TEACHER PLAN  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 146,019,051	\$ 140,844,879	\$ 139,464,284	\$ 125,523,986	\$ 123,528,807	\$ 121,033,152	\$ 121,059,118	\$ 121,071,499	\$ 124,356,773	\$ 125,814,747
Employer contributions	218,530,984	211,251,144	211,037,365	199,212,719	173,936,492	162,920,147	136,937,972	125,839,206	184,423,671	183,937,036
Non-employer entity contributions	132,980,832	129,421,735	116,080,164	112,477,836	147,283,716	142,303,104	126,762,206	126,343,975	148,728,049	144,496,637
Investment income (net of expenses)	768,987,130	1,077,827,555	1,256,043,735	40,540,758	191,829,057	1,517,432,346	929,806,764	43,821,836	1,563,183,980	748,522,308
Transfer from other funds	-	-	-	-	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>1,266,517,947</b>	<b>1,559,345,313</b>	<b>1,722,625,548</b>	<b>477,755,299</b>	<b>636,577,072</b>	<b>1,943,688,749</b>	<b>1,314,566,060</b>	<b>417,076,516</b>	<b>2,040,692,453</b>	<b>1,202,770,718</b>
<b>Deductions</b>										
Benefit payments	832,934,948	792,397,467	762,449,708	727,171,177	703,292,105	667,506,634	661,525,831	612,512,717	574,136,970	548,688,977
Refunds	18,718,610	17,984,303	17,876,272	16,806,566	19,432,153	21,684,397	17,891,255	21,024,589	20,747,236	17,214,436
Administrative expenses	11,180,852	10,076,242	9,216,027	8,649,030	9,386,695	8,246,740	7,651,988	7,268,110	7,553,424	7,461,728
Transfer to other funds	311,233	-	124,178	6,342,010	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>863,145,643</b>	<b>820,458,012</b>	<b>789,666,185</b>	<b>759,514,783</b>	<b>732,110,953</b>	<b>697,437,771</b>	<b>677,069,024</b>	<b>640,805,416</b>	<b>602,436,630</b>	<b>573,365,141</b>
<b>Change in fiduciary net position</b>	<b>\$ 403,372,304</b>	<b>\$ 738,887,301</b>	<b>\$ 932,959,363</b>	<b>\$ (281,759,484)</b>	<b>\$ (65,533,881)</b>	<b>\$ 1,246,250,978</b>	<b>\$ 637,497,036</b>	<b>\$ (223,728,900)</b>	<b>\$ 1,438,255,823</b>	<b>\$ 629,405,577</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 11,632,192,771	\$ 10,893,305,470	\$ 9,960,346,107	\$ 10,242,105,591	\$ 10,337,639,472	\$ 9,091,388,494	\$ 8,453,891,458	\$ 8,677,620,358	\$ 7,239,364,535	\$ 6,609,958,958
End of Year	\$ 12,035,565,075	\$ 11,632,192,771	\$ 10,893,305,470	\$ 9,960,346,107	\$ 10,242,105,591	\$ 10,337,639,472	\$ 9,091,388,494	\$ 8,453,891,458	\$ 8,677,620,358	\$ 7,239,364,535

**DEFINED BENEFIT PLANS  
CHANGES IN FIDUCIARY NET POSITION - JUDICIAL PLAN  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 620,075	\$ 603,875	\$ 584,451	\$ 549,845	\$ 549,691	\$ 528,192	\$ 518,094	\$ 517,419	\$ 518,138	\$ 530,521
Employer contributions	1,212,666	1,179,328	1,144,445	1,077,545	979,281	932,223	841,397	810,721	987,261	961,083
Non-employer entity contributions	-	-	-	-	-	-	-	-	-	-
Investment Income (net of expenses)	4,709,445	6,606,905	7,799,507	129,372	1,055,347	8,416,042	5,195,908	238,870	9,044,929	4,388,320
Transfer from other funds	-	-	-	6,342,010	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>6,542,186</b>	<b>8,390,108</b>	<b>9,528,403</b>	<b>8,098,772</b>	<b>2,584,319</b>	<b>9,876,457</b>	<b>6,555,399</b>	<b>1,567,010</b>	<b>10,550,328</b>	<b>5,889,824</b>
<b>Deductions</b>										
Benefit payments	4,021,982	3,804,709	3,651,927	3,501,911	3,383,995	3,219,480	3,282,344	3,171,846	3,034,095	2,799,764
Refunds	45,524	-	-	-	-	-	-	-	124	-
Administrative expenses	68,475	61,708	56,436	47,577	49,399	41,681	42,858	40,852	43,534	30,222
Transfer to other funds	2,604	-	-	-	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>4,138,585</b>	<b>3,866,417</b>	<b>3,708,363</b>	<b>3,549,488</b>	<b>3,433,394</b>	<b>3,261,161</b>	<b>3,325,202</b>	<b>3,212,698</b>	<b>3,077,753</b>	<b>2,829,986</b>
<b>Change in fiduciary net position</b>	<b>\$ 2,403,601</b>	<b>\$ 4,523,691</b>	<b>\$ 5,820,040</b>	<b>\$ 4,549,284</b>	<b>\$ (849,075)</b>	<b>\$ 6,615,296</b>	<b>\$ 3,230,197</b>	<b>\$ (1,645,688)</b>	<b>\$ 7,472,575</b>	<b>\$ 3,029,938</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 71,233,840	\$ 66,710,149	\$ 60,890,109	\$ 56,340,825	\$ 57,189,900	\$ 50,574,604	\$ 47,344,407	\$ 48,990,095	\$ 41,517,520	\$ 38,487,582
End of Year	\$ 73,637,441	\$ 71,233,840	\$ 66,710,149	\$ 60,890,109	\$ 56,340,825	\$ 57,189,900	\$ 50,574,604	\$ 47,344,407	\$ 48,990,095	\$ 41,517,520

**DEFINED BENEFIT PLANS  
CHANGES IN FIDUCIARY NET POSITION - LEGISLATIVE PLAN  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 220,611	\$ 153,881	\$ 202,388	\$ 137,893	\$ 193,366	\$ 139,501	\$ 194,669	\$ 133,579	\$ 182,065	\$ 129,308
Employer contributions	-	-	-	-	4,418	3,857	6,507	-	-	-
Non-employer entity contributions	-	-	-	-	-	-	-	-	-	-
Investment income (net of expenses)	845,407	1,176,462	1,366,222	47,890	206,453	1,622,295	975,524	48,845	1,634,305	780,615
Transfer from other funds	45,285	-	-	-	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>1,111,303</b>	<b>1,330,343</b>	<b>1,568,610</b>	<b>185,783</b>	<b>404,227</b>	<b>1,765,653</b>	<b>1,176,700</b>	<b>182,424</b>	<b>1,816,370</b>	<b>909,923</b>
<b>Deductions</b>										
Benefit payments	482,660	427,063	399,142	367,545	327,875	308,770	280,254	274,088	255,181	245,572
Refunds	124,180	32,682	69,901	77,786	111,237	8,836	82,768	5,613	93,809	58,762
Administrative expenses	12,262	11,002	10,003	9,353	9,584	7,975	8,040	7,241	7,551	7,741
Transfer to other funds	-	-	-	-	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>619,102</b>	<b>470,747</b>	<b>479,046</b>	<b>454,684</b>	<b>448,696</b>	<b>325,581</b>	<b>371,062</b>	<b>286,942</b>	<b>356,541</b>	<b>312,075</b>
<b>Change in fiduciary net position</b>	<b>\$ 492,201</b>	<b>\$ 859,596</b>	<b>\$ 1,089,564</b>	<b>\$ (268,901)</b>	<b>\$ (44,469)</b>	<b>\$ 1,440,072</b>	<b>\$ 805,638</b>	<b>\$ (104,518)</b>	<b>\$ 1,459,829</b>	<b>\$ 597,848</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 12,755,821	\$ 11,896,225	\$ 10,806,661	\$ 11,075,562	\$ 11,120,031	\$ 9,679,959	\$ 8,874,321	\$ 8,978,839	\$ 7,519,010	\$ 6,921,162
End of Year	\$ 13,248,022	\$ 12,755,821	\$ 11,896,225	\$ 10,806,661	\$ 11,075,562	\$ 11,120,031	\$ 9,679,959	\$ 8,874,321	\$ 8,978,839	\$ 7,519,010

**DEFINED BENEFIT PLANS  
CHANGES IN FIDUCIARY NET POSITION - PLD CONSOLIDATED PLAN  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 54,927,202	\$ 48,050,202	\$ 46,080,851	\$ 40,861,405	\$ 37,202,921	\$ 33,210,510	\$ 31,658,619	\$ 32,343,655	\$ 35,022,928	\$ 32,332,068
Employer contributions	61,487,037	56,092,662	51,387,011	47,624,182	43,366,730	32,706,160	26,465,471	22,260,128	17,459,677	12,311,365
Non-employer entity contributions	-	-	-	-	-	-	-	-	-	-
Investment Income (net of expenses)	188,620,107	259,699,519	299,780,948	10,200,342	46,075,304	361,125,177	221,313,918	10,111,043	381,383,555	182,525,441
Transfer from other funds	268,552	-	124,177	-	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>305,302,888</b>	<b>363,842,383</b>	<b>387,372,987</b>	<b>96,685,959</b>	<b>126,644,955</b>	<b>427,041,847</b>	<b>279,438,008</b>	<b>64,714,826</b>	<b>433,886,150</b>	<b>227,168,864</b>
<b>Deductions</b>										
Benefit payments	158,671,037	147,516,388	140,413,488	134,834,445	129,476,010	121,559,257	114,627,512	108,646,611	101,288,867	96,702,118
Refunds *	6,728,643	4,571,527	5,750,078	5,085,235	48,939,042	5,602,101	6,051,774	22,911,291	11,353,634	5,822,382
Administrative expenses	2,706,977	2,411,666	2,209,324	2,028,294	2,117,266	1,779,304	1,810,389	1,732,139	1,827,887	1,688,738
Transfer to other funds	220,000	386,621	196,378	217,338	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>168,326,657</b>	<b>154,886,172</b>	<b>148,569,268</b>	<b>142,165,312</b>	<b>180,532,318</b>	<b>128,940,662</b>	<b>122,489,675</b>	<b>133,290,041</b>	<b>114,470,288</b>	<b>104,193,248</b>
<b>Change in fiduciary net position</b>	<b>\$ 136,976,241</b>	<b>\$ 208,956,211</b>	<b>\$ 248,813,719</b>	<b>\$ (43,479,353)</b>	<b>\$ (53,887,363)</b>	<b>\$ 298,101,185</b>	<b>\$ 156,948,333</b>	<b>\$ (68,575,215)</b>	<b>\$ 319,396,072</b>	<b>\$ 122,975,616</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 2,816,179,855	\$ 2,607,223,644	\$ 2,358,409,925	\$ 2,401,889,308	\$ 2,456,776,671	\$ 2,157,675,486	\$ 2,000,727,153	\$ 2,069,302,368	\$ 1,749,906,296	\$ 1,625,930,680
End of Year	\$ 2,953,156,096	\$ 2,816,179,855	\$ 2,607,223,644	\$ 2,358,409,925	\$ 2,401,889,308	\$ 2,456,776,671	\$ 2,157,675,486	\$ 2,000,727,153	\$ 2,069,302,368	\$ 1,749,906,296

\* Refunds in fiscal year 2015 reflect the return of approximately \$41 million of non-Plan cash being managed by the System on behalf of PLD Consolidated Plan employees.

**DEFINED BENEFIT PLANS  
CHANGES IN FIDUCIARY NET POSITION - PLD AGENT PLAN  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 68,708	\$ 68,609	\$ 76,783	\$ 83,614	\$ 94,468	\$ 94,136	\$ 106,000	\$ 106,380	\$ 124,472	\$ 132,049
Employer contributions	638,946	594,730	630,639	783,608	916,671	667,846	656,047	102,509	302,338	9,024
Non-employer entity contributions	-	-	-	-	-	-	-	-	-	-
Investment income (net of expenses)	2,377,478	3,477,465	4,160,113	112,396	662,680	5,581,964	3,591,957	79,872	6,669,837	6,005,408
Transfer from other funds	-	-	-	-	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>3,085,132</b>	<b>4,140,804</b>	<b>4,867,535</b>	<b>979,618</b>	<b>1,673,819</b>	<b>6,343,946</b>	<b>4,354,004</b>	<b>287,761</b>	<b>7,096,647</b>	<b>6,146,481</b>
<b>Deductions</b>										
Benefit payments	2,842,649	2,788,425	2,777,307	2,779,624	2,780,492	2,702,486	2,644,060	2,608,986	2,442,356	2,397,937
Refunds	201,763	-	-	-	-	1,897,634	-	201,244	9,190	141
Administrative expenses	36,552	33,056	4,005	29,962	32,253	27,981	30,704	30,864	33,525	31,457
Transfer to other funds	-	-	-	-	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>3,079,964</b>	<b>2,821,481</b>	<b>2,781,312</b>	<b>2,809,586</b>	<b>2,812,745</b>	<b>4,628,101</b>	<b>2,674,764</b>	<b>2,841,113</b>	<b>2,485,071</b>	<b>2,429,535</b>
<b>Change in fiduciary net position</b>	<b>\$ 5,168</b>	<b>\$ 1,319,323</b>	<b>\$ 2,086,223</b>	<b>\$ (1,829,968)</b>	<b>\$ (1,138,926)</b>	<b>\$ 1,715,845</b>	<b>\$ 1,679,240</b>	<b>\$ (2,553,352)</b>	<b>\$ 4,611,576</b>	<b>\$ 3,716,946</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 37,066,061	\$ 36,736,738	\$ 33,650,515	\$ 35,480,483	\$ 36,619,409	\$ 34,903,564	\$ 33,224,324	\$ 35,777,676	\$ 31,166,100	\$ 27,449,154
End of Year	\$ 37,061,229	\$ 37,056,061	\$ 35,736,738	\$ 33,650,515	\$ 35,480,483	\$ 36,619,409	\$ 34,903,564	\$ 33,224,324	\$ 35,777,676	\$ 31,166,100

**GROUP LIFE INSURANCE PLAN  
CHANGES IN FIDUCIARY NET POSITION**

**LAST TEN FISCAL YEARS \***

**GROUP LIFE INSURANCE PLAN - ACTIVE EMPLOYEES**

	Fiscal Year		
	2019	2018	2017
<b>Additions</b>			
Member contributions	\$ 4,245,342	\$ 3,865,718	\$ 4,464,169
Employer contributions	1,231,777	1,041,734	1,066,443
Non-employer entity contributions	-	-	-
Investment Income (net of expenses)	869,669	754,459	947,664
<b>Total additions to fiduciary net position</b>	<b>6,346,788</b>	<b>5,661,911</b>	<b>6,478,276</b>
<b>Deductions</b>			
Benefit payments	2,295,347	4,229,368	4,222,130
Refunds	-	-	-
Administrative expenses	73,556	73,496	56,138
Transfer to other funds	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>2,368,903</b>	<b>4,302,864</b>	<b>4,278,268</b>
<b>Change in fiduciary net position</b>	<b>\$ 3,977,885</b>	<b>\$ 1,359,047</b>	<b>\$ 2,200,008</b>
<b>Fiduciary Net Position</b>			
Beginning of Year	\$ 9,654,965	\$ 8,295,918	\$ 6,095,910
<b>End of Year</b>	<b>\$ 13,632,850</b>	<b>\$ 9,654,965</b>	<b>\$ 8,295,918</b>

\*The System currently has this information available for the years indicated. Additional information will be added to the schedule each year until the requisite ten years is obtained.

**GROUP LIFE INSURANCE PLAN  
CHANGES IN FIDUCIARY NET POSITION**

**LAST TEN FISCAL YEARS \***

**GROUP LIFE INSURANCE PLAN - STATE EMPLOYEE & TEACHER RETIREES**

	Fiscal Year		
	2019	2018	2017
<b>Additions</b>			
Employer contributions	\$ 4,209,464	\$ 4,179,011	\$ 3,650,300
Non-employer entity contributions	3,546,978	3,459,442	3,270,928
Investment Income (net of expenses)	6,418,113	7,804,837	9,885,897
Transfer from other funds	-	-	-
<b>Total additions to fiduciary net position</b>	<b>14,174,555</b>	<b>15,443,290</b>	<b>16,807,125</b>
<b>Deductions</b>			
Benefit payments	7,118,082	7,269,808	6,759,071
Refunds	-	-	-
Administrative expenses	726,320	769,717	580,641
<b>Total deductions from fiduciary net position</b>	<b>7,844,402</b>	<b>8,039,525</b>	<b>7,339,712</b>
<b>Change in fiduciary net position</b>	<b>\$ 6,330,153</b>	<b>\$ 7,403,765</b>	<b>\$ 9,467,413</b>
<b>Fiduciary Net Position</b>			
Beginning of Year	\$ 94,286,629	\$ 86,882,864	\$ 77,415,451
<b>End of Year</b>	<b>\$ 100,616,782</b>	<b>\$ 94,286,629</b>	<b>\$ 86,882,864</b>

**GROUP LIFE INSURANCE PLAN - PLD RETIREES**

	Fiscal Year		
	2019	2018	2017
<b>Additions</b>			
Employer contributions	\$ 1,100,509	\$ 1,069,640	\$ 1,037,124
Non-employer entity contributions	-	-	-
Investment Income (net of expenses)	1,037,784	1,333,324	1,738,914
Transfer from other funds	-	-	-
<b>Total additions to fiduciary net position</b>	<b>2,138,293</b>	<b>2,402,964</b>	<b>2,776,038</b>
<b>Deductions</b>			
Benefit payments	1,581,540	1,530,346	1,529,148
Refunds	-	-	-
Administrative expenses	119,519	133,624	104,294
<b>Total deductions from fiduciary net position</b>	<b>1,701,059</b>	<b>1,663,970</b>	<b>1,633,442</b>
<b>Change in fiduciary net position</b>	<b>\$ 437,234</b>	<b>\$ 738,994</b>	<b>\$ 1,142,596</b>
<b>Fiduciary Net Position</b>			
Beginning of Year	\$ 15,821,928	\$ 15,082,934	\$ 13,940,338
<b>End of Year</b>	<b>\$ 16,259,162</b>	<b>\$ 15,821,928</b>	<b>\$ 15,082,934</b>

\*The System currently has this information available for the years indicated. Additional information will be added to the schedule each year until the requisite ten years is obtained.

## DEFINED CONTRIBUTION PLANS CHANGES IN FIDUCIARY NET POSITION LAST TEN FISCAL YEARS

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ 3,712,509	\$ 3,256,015	\$ 3,218,801	\$ 3,628,460	\$ 3,165,927	\$ 3,505,423	\$ 2,662,317	\$ 2,888,874	\$ 2,790,771	\$ 2,381,995
Employer contributions	634,731	587,906	560,505	47,768	131,589	109,515	111,327	43,434	47,377	53,956
Other contributions	-	-	-	-	-	-	-	-	-	-
Investment Income (net of expenses)	2,488,685	2,801,636	3,447,427	226,942	719,767	3,210,308	1,815,398	318,640	1,839,674	742,235
Transfer from other funds	220,000	386,621	186,378	217,338	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>7,055,925</b>	<b>7,032,178</b>	<b>7,413,111</b>	<b>4,120,508</b>	<b>4,017,283</b>	<b>6,825,246</b>	<b>4,589,042</b>	<b>3,250,948</b>	<b>4,777,822</b>	<b>3,178,186</b>
<b>Deductions</b>										
Benefit payments	-	-	-	-	-	-	-	-	-	-
Refunds and withdrawals	3,292,801	2,774,078	2,072,166	1,866,147	1,718,286	2,032,458	643,765	1,055,018	770,630	411,390
Administrative expenses	299,377	496,042	284,202	309,568	130,964	112,015	113,827	45,964	50,143	56,686
Transfer to other funds	-	-	-	-	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>3,592,178</b>	<b>3,270,120</b>	<b>2,356,368</b>	<b>2,175,705</b>	<b>1,849,250</b>	<b>2,144,473</b>	<b>757,592</b>	<b>1,100,982</b>	<b>820,773</b>	<b>468,076</b>
<b>Change in fiduciary net position</b>	<b>\$ 3,463,747</b>	<b>\$ 3,762,058</b>	<b>\$ 5,056,743</b>	<b>\$ 1,944,803</b>	<b>\$ 2,168,033</b>	<b>\$ 4,680,773</b>	<b>\$ 3,831,450</b>	<b>\$ 2,149,966</b>	<b>\$ 3,957,049</b>	<b>\$ 2,710,110</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 37,960,941	\$ 34,198,883	\$ 29,142,140	\$ 27,197,337	\$ 25,029,304	\$ 20,348,531	\$ 16,517,081	\$ 14,367,115	\$ 10,410,066	\$ 7,699,956
End of Year	\$ 41,424,688	\$ 37,960,941	\$ 34,198,883	\$ 29,142,140	\$ 27,197,337	\$ 25,029,304	\$ 20,348,531	\$ 16,517,081	\$ 14,367,115	\$ 10,410,066

**RETIREE HEALTH INVESTMENT TRUST FUND  
CHANGES IN FIDUCIARY NET POSITION**

**LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Additions</b>										
Member contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Employer contributions	2,000,000	2,000,000	4,000,000	5,584,992	-	-	1,840,385	6,000,000	14,411,368	-
Other contributions	-	-	-	-	-	-	-	-	-	-
Investment income (net of expenses)	18,845,823	21,271,236	26,513,072	2,388,249	5,405,438	29,564,596	18,706,315	959,334	23,350,728	13,143,997
Transfer from other funds	-	-	-	-	-	-	-	-	-	-
<b>Total additions to fiduciary net position</b>	<b>20,845,823</b>	<b>23,271,236</b>	<b>30,513,072</b>	<b>7,973,241</b>	<b>5,405,438</b>	<b>29,564,596</b>	<b>20,546,700</b>	<b>6,959,334</b>	<b>37,762,096</b>	<b>13,143,997</b>
<b>Deductions</b>										
Benefit payments	-	-	-	-	-	-	-	-	-	-
Refunds	-	-	-	-	-	-	-	-	-	-
Administrative expenses	3,000	6,480	5,844	5,354	117,844	90,030	85,609	68,643	64,510	56,754
Transfer to other funds	-	-	-	-	-	-	-	-	-	-
<b>Total deductions from fiduciary net position</b>	<b>3,000</b>	<b>6,480</b>	<b>5,844</b>	<b>5,354</b>	<b>117,844</b>	<b>90,030</b>	<b>85,609</b>	<b>68,643</b>	<b>64,510</b>	<b>56,754</b>
<b>Change in fiduciary net position</b>	<b>\$ 20,842,823</b>	<b>\$ 23,264,756</b>	<b>\$ 30,507,228</b>	<b>\$ 7,967,887</b>	<b>\$ 5,287,594</b>	<b>\$ 29,474,566</b>	<b>\$ 20,461,091</b>	<b>\$ 6,890,691</b>	<b>\$ 37,697,586</b>	<b>\$ 13,087,243</b>
<b>Fiduciary Net Position</b>										
Beginning of Year	\$ 256,860,318	\$ 233,595,562	\$ 203,088,334	\$ 195,120,447	\$ 189,832,853	\$ 160,358,287	\$ 139,897,196	\$ 133,006,505	\$ 95,308,919	\$ 82,221,676
End of Year	\$ 277,703,141	\$ 256,860,318	\$ 233,595,562	\$ 203,088,334	\$ 195,120,447	\$ 189,832,853	\$ 160,358,287	\$ 139,897,196	\$ 133,006,505	\$ 95,308,919

**DEFINED BENEFIT PLANS  
BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION  
BY TYPE**

**LAST TEN FISCAL YEARS**

**STATE EMPLOYEE AND TEACHER PLAN**

Type of Benefit	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Service retirement benefits	\$ 789,638,248	\$ 748,896,621	\$ 718,059,271	\$ 683,518,206	\$ 658,113,295	\$ 622,008,923	\$ 604,712,027	\$ 566,668,373	\$ 528,676,257	\$ 503,788,858
Disability benefits	24,240,969	24,787,516	26,232,096	26,795,729	27,863,125	28,930,711	30,077,965	29,864,477	29,632,446	29,273,855
Pre-Retirement death benefits	19,055,731	18,713,331	18,158,342	17,403,242	17,315,685	16,567,000	16,736,839	15,979,866	15,827,267	15,626,264
<b>Total benefits</b>	<b>\$ 832,934,948</b>	<b>\$ 792,397,468</b>	<b>\$ 762,449,709</b>	<b>\$ 727,717,177</b>	<b>\$ 703,292,105</b>	<b>\$ 667,506,634</b>	<b>\$ 651,525,831</b>	<b>\$ 612,512,716</b>	<b>\$ 574,135,970</b>	<b>\$ 548,688,977</b>
<b>Type of Refund</b>										
Death	\$ 3,819,233	\$ 3,079,428	\$ 4,373,110	\$ 2,778,790	\$ 3,120,006	\$ 3,247,581	\$ 3,955,186			
Separation	14,899,378	14,904,875	13,503,162	14,027,776	16,312,147	18,436,816	13,936,069			
Other	-	-	-	-	-	-	-			
<b>Total refunds</b>	<b>\$ 18,718,610</b>	<b>\$ 17,984,303</b>	<b>\$ 17,876,272</b>	<b>\$ 16,808,566</b>	<b>\$ 19,432,153</b>	<b>\$ 21,684,397</b>	<b>\$ 17,891,255</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

**JUDICIAL PLAN**

Type of Benefit	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Service retirement benefits	\$ 4,021,982	\$ 3,804,709	\$ 3,651,927	\$ 3,501,911	\$ 3,383,995	\$ 3,194,250	\$ 3,207,656	\$ 3,107,656	\$ 2,986,751	\$ 2,762,420
Disability benefits	-	-	-	-	-	25,230	74,688	63,911	37,344	37,344
Pre-Retirement death benefits	-	-	-	-	-	-	-	-	-	-
<b>Total benefits</b>	<b>\$ 4,021,982</b>	<b>\$ 3,804,709</b>	<b>\$ 3,651,927</b>	<b>\$ 3,501,911</b>	<b>\$ 3,383,995</b>	<b>\$ 3,219,480</b>	<b>\$ 3,282,344</b>	<b>\$ 3,171,646</b>	<b>\$ 3,034,095</b>	<b>\$ 2,799,764</b>
<b>Type of Refund</b>										
Death	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Separation	45,524	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<b>Total refunds</b>	<b>\$ 45,524</b>	<b>\$ -</b>								

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

**DEFINED BENEFIT PLANS  
BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION  
BY TYPE (continued)**

**LAST TEN FISCAL YEARS**

**LEGISLATIVE PLAN**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Type of Benefit</b>										
Service retirement benefits	\$ 421,421	\$ 363,478	\$ 347,133	\$ 312,108	\$ 289,432	\$ 271,025	\$ 242,015	\$ 231,584	\$ 215,154	\$ 205,545
Disability benefits	15,022	14,629	14,377	19,245	8,142	7,994	8,099	7,863	7,863	7,863
Pre-Retirement death benefits	46,217	48,956	37,632	36,192	30,301	29,751	30,140	34,641	32,164	32,164
<b>Total benefits</b>	<b>\$ 482,660</b>	<b>\$ 427,063</b>	<b>\$ 399,142</b>	<b>\$ 367,545</b>	<b>\$ 327,875</b>	<b>\$ 308,770</b>	<b>\$ 280,254</b>	<b>\$ 274,088</b>	<b>\$ 255,181</b>	<b>\$ 245,572</b>
<b>Type of Refund</b>										
Death	\$ -	\$ -	\$ 14,720	\$ 6,122	\$ 11,524	\$ -	\$ -	\$ -	\$ -	\$ -
Separation	124,180	32,682	55,181	71,664	99,713	8,836	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<b>Total refunds</b>	<b>\$ 124,180</b>	<b>\$ 32,682</b>	<b>\$ 69,901</b>	<b>\$ 77,786</b>	<b>\$ 111,237</b>	<b>\$ 8,836</b>	<b>\$ 82,768</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

**PLD CONSOLIDATED PLAN**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Type of Benefit</b>										
Service retirement benefits	\$ 147,218,859	\$ 136,330,957	\$ 129,354,921	\$ 123,607,716	\$ 118,281,904	\$ 110,537,271	\$ 104,017,589	\$ 98,259,313	\$ 91,247,190	\$ 86,778,139
Disability benefits	6,413,911	6,469,460	6,596,594	6,954,282	6,994,950	7,133,396	6,860,218	6,942,091	6,611,574	6,552,114
Pre-Retirement death benefits	5,038,267	4,715,941	4,461,983	4,272,447	4,200,956	3,888,590	3,749,705	3,545,207	3,430,103	3,371,865
<b>Total benefits</b>	<b>\$ 158,671,037</b>	<b>\$ 147,516,358</b>	<b>\$ 140,413,498</b>	<b>\$ 134,834,445</b>	<b>\$ 129,476,010</b>	<b>\$ 121,559,257</b>	<b>\$ 114,627,512</b>	<b>\$ 108,646,611</b>	<b>\$ 101,288,867</b>	<b>\$ 96,702,118</b>
<b>Type of Refund</b>										
Death	\$ 785,480	\$ 574,813	\$ 938,577	\$ 589,655	\$ 1,141,276	\$ 613,327	\$ 982,328	\$ -	\$ -	\$ -
Separation	5,943,162	3,996,714	4,811,501	4,485,580	4,797,240	4,988,774	5,069,446	-	-	-
Other*	-	-	-	-	43,000,526	-	-	-	-	-
<b>Total refunds</b>	<b>\$ 6,728,643</b>	<b>\$ 4,571,527</b>	<b>\$ 5,750,078</b>	<b>\$ 5,085,235</b>	<b>\$ 48,939,042</b>	<b>\$ 5,602,101</b>	<b>\$ 6,051,774</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

\* Refunds in fiscal year 2015 reflect the return of approximately \$43 million of non-Plan cash being managed by the System on behalf of PLD Consolidated Plan employers.

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

**DEFINED BENEFIT PLANS  
BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION  
BY TYPE (continued)**

**LAST TEN FISCAL YEARS**

PLD AGENT PLAN	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Type of Benefit</b>										
Service retirement benefits	\$ 2,842,649	\$ 2,788,425	\$ 2,777,307	\$ 2,779,624	\$ 2,780,492	\$ 2,702,486	\$ 2,644,060	\$ 2,608,985	\$ 2,442,356	\$ 2,397,937
Disability benefits	-	-	-	-	-	-	-	-	-	-
Pre-Retirement death benefits	-	-	-	-	-	-	-	-	-	-
<b>Total benefits</b>	<b>\$ 2,842,649</b>	<b>\$ 2,788,425</b>	<b>\$ 2,777,307</b>	<b>\$ 2,779,624</b>	<b>\$ 2,780,492</b>	<b>\$ 2,702,486</b>	<b>\$ 2,644,060</b>	<b>\$ 2,608,985</b>	<b>\$ 2,442,356</b>	<b>\$ 2,397,937</b>
<b>Type of Refund</b>										
Death	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Separation	201,763	-	-	-	-	1,897,634	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
<b>Total refunds</b>	<b>\$ 201,763</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,897,634</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

PENSION COMBINED	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Type of Benefit</b>										
Service retirement benefits	\$ 944,143,159	\$ 892,184,190	\$ 854,190,558	\$ 813,719,565	\$ 782,849,118	\$ 738,713,955	\$ 714,823,347	\$ 670,876,190	\$ 625,577,708	\$ 595,870,176
Disability benefits	30,669,902	31,271,605	32,843,057	33,769,256	34,865,317	36,097,330	37,020,969	36,778,342	36,289,227	35,862,703
Pre-Retirement death benefits	24,140,215	23,478,228	22,657,957	21,711,881	21,546,043	20,485,341	20,515,684	19,559,715	19,289,534	19,001,489
<b>Total benefits</b>	<b>\$ 998,953,276</b>	<b>\$ 946,934,023</b>	<b>\$ 909,691,572</b>	<b>\$ 869,200,702</b>	<b>\$ 839,260,478</b>	<b>\$ 795,296,626</b>	<b>\$ 772,360,000</b>	<b>\$ 727,214,247</b>	<b>\$ 681,156,469</b>	<b>\$ 650,734,368</b>
<b>Type of Refund</b>										
Death	\$ 4,604,713	\$ 3,654,240	\$ 5,326,407	\$ 3,374,567	\$ 4,272,805	\$ 3,860,908	\$ 4,937,513	\$ 4,406,322	\$ 5,139,665	\$ 2,533,464
Separation	21,214,007	18,934,271	18,369,844	18,595,020	21,209,100	23,434,426	19,088,284	21,003,032	20,567,589	18,099,434
Other*	-	-	-	-	43,000,526	1,897,634	-	18,733,381	6,496,738	2,462,834
<b>Total refunds</b>	<b>\$ 25,818,720</b>	<b>\$ 22,588,511</b>	<b>\$ 23,696,251</b>	<b>\$ 21,969,587</b>	<b>\$ 68,482,431</b>	<b>\$ 29,192,968</b>	<b>\$ 24,025,797</b>	<b>\$ 44,142,736</b>	<b>\$ 32,203,992</b>	<b>\$ 23,095,732</b>

\* Refunds in fiscal year 2015 reflect the return of approximately \$43 million of non-Plan cash being managed by the System on behalf of PLD Consolidated Plan employers.

Data by type of refund, by plan, was not readily available for the years prior to 2013. This information will continue to be populated until the requisite ten years is displayed.

**GROUP LIFE INSURANCE PLAN  
BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION  
BY TYPE (concluded)**

**LAST TEN FISCAL YEARS \***

**GROUP LIFE INSURANCE PLAN - ACTIVE EMPLOYEES**

	Fiscal Year	
	2019	2017
<b>Type of Benefit **</b>		
Basic active claims	\$ 1,458,745	\$ 2,118,390
Supplemental claims	438,000	1,758,000
Dependent claims	202,500	237,500
Accidental Death & Dismemberment claims	125,000	60,000
	2,224,245	4,173,890
Conversion expense	1,755	55,478
Total benefits	\$ 2,226,000	\$ 4,229,368

**GROUP LIFE INSURANCE PLAN - STATE EMPLOYEE & TEACHER RETIREES**

	Fiscal Year	
	2019	2017
<b>Type of Benefit **</b>		
Basic retiree claims	\$ 6,406,178	\$ 7,269,809
Total benefits	\$ 6,406,178	\$ 7,269,809

**GROUP LIFE INSURANCE PLAN - PLD RETIREES**

	Fiscal Year	
	2019	2017
<b>Type of Benefit **</b>		
Basic retiree claims	\$ 1,461,880	\$ 1,530,346
Total benefits	\$ 1,461,880	\$ 1,530,346

\* The System currently has this information available for the years indicated. Additional information will be added to the schedule each year until the requisite ten years is obtained.

\*\* Benefit amounts displayed in 2018 and beyond include the cost of third-party processing activities.

## DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS

### LAST TEN FISCAL YEARS

**STATE EMPLOYEE AND TEACHER PLAN**
**Retirement Effective Dates  
July 1, 2012 - June 30, 2019\***

	<u>Years of Creditable Service</u>						
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>Greater than 30</u>
Period 7/1/2018 to 6/30/2019							
Average Monthly Benefit	\$ 157	\$ 504	\$ 856	\$ 1,333	\$ 1,940	\$ 2,269	\$ 3,241
Average Final Salary	\$ 9,126	\$ 32,761	\$ 35,302	\$ 39,506	\$ 43,727	\$ 45,871	\$ 52,845
Number of Service Retirees	1,482	1,526	2,925	2,817	3,528	6,893	10,009
Period 7/1/2017 to 6/30/2018							
Average Monthly Benefit	\$ 159	\$ 497	\$ 830	\$ 1,292	\$ 1,889	\$ 2,205	\$ 3,165
Average Final Salary	\$ 9,253	\$ 32,389	\$ 34,666	\$ 38,544	\$ 42,761	\$ 45,081	\$ 51,936
Number of Service Retirees	1,334	1,413	2,812	2,664	3,454	6,836	9,672
Period 7/1/2016 to 6/30/2017							
Average Monthly Benefit	\$ 165	\$ 493	\$ 806	\$ 1,265	\$ 1,857	\$ 2,163	\$ 3,108
Average Final Salary	\$ 9,821	\$ 32,228	\$ 33,672	\$ 37,623	\$ 41,937	\$ 44,336	\$ 50,999
Number of Service Retirees	1,198	1,345	2,744	2,544	3,402	6,767	9,415
Period 7/1/2015 to 6/30/2016							
Average Monthly Benefit	\$ 170	\$ 485	\$ 780	\$ 1,229	\$ 1,806	\$ 2,105	\$ 3,040
Average Final Salary	\$ 10,649	\$ 32,076	\$ 32,842	\$ 36,832	\$ 40,960	\$ 43,503	\$ 50,158
Number of Service Retirees	1,070	1,259	2,663	2,467	3,331	6,670	9,164
Period 7/1/2014 to 6/30/2015							
Average Monthly Benefit	\$ 178	\$ 472	\$ 755	\$ 1,188	\$ 1,757	\$ 2,050	\$ 2,970
Average Final Salary	\$ 11,307	\$ 31,831	\$ 31,809	\$ 35,631	\$ 40,059	\$ 42,711	\$ 49,231
Number of Service Retirees	930	1,182	2,550	2,332	3,283	6,569	8,889
Period 7/1/2013 to 6/30/2014							
Average Monthly Benefit	\$ 189	\$ 463	\$ 725	\$ 1,153	\$ 1,715	\$ 2,002	\$ 2,907
Average Final Salary	\$ 12,446	\$ 31,627	\$ 30,576	\$ 34,457	\$ 38,903	\$ 41,888	\$ 48,257
Number of Service Retirees	786	1,105	2,426	2,245	3,215	6,430	8,586
Period 7/1/2012 to 6/30/2013							
Average Monthly Benefit	\$ 210	\$ 465	\$ 708	\$ 1,139	\$ 1,700	\$ 1,987	\$ 2,877
Average Final Salary	\$ 40,079	\$ 33,962	\$ 30,962	\$ 33,820	\$ 38,005	\$ 41,170	\$ 47,284
Number of Service Retirees	650	1,009	2,319	2,160	3,123	6,337	8,360

\*This table will continue to be populated until the requisite ten years of data is presented.

**JUDICIAL PLAN**
**Retirement Effective Dates  
July 1, 2012 - June 30, 2019\***

	<u>Years of Creditable Service</u>						
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>Greater than 30</u>
Period 7/1/2018 to 6/30/2019							
Average Monthly Benefit	\$ 566	\$ 1,757	\$ 3,953	\$ 4,077	\$ 4,715	\$ 5,668	\$ 5,340
Average Final Salary	\$ 13,088	\$ 49,706	\$ 76,249	\$ 92,037	\$ 96,657	\$ 110,586	\$ 111,931
Number of Service Retirees	7	13	16	19	9	9	5
Period 7/1/2017 to 6/30/2018							
Average Monthly Benefit	\$ 562	\$ 1,778	\$ 3,985	\$ 4,037	\$ 4,779	\$ 5,615	\$ 5,293
Average Final Salary	\$ 13,088	\$ 55,919	\$ 78,254	\$ 92,037	\$ 97,926	\$ 110,586	\$ 111,931
Number of Service Retirees	7	13	14	19	8	9	5
Period 7/1/2016 to 6/30/2017							
Average Monthly Benefit	\$ 442	\$ 1,729	\$ 4,358	\$ 4,244	\$ 4,738	\$ 5,586	\$ 5,268
Average Final Salary	\$ 10,273	\$ 57,420	\$ 84,234	\$ 89,784	\$ 103,183	\$ 110,586	\$ 111,931
Number of Service Retirees	6	12	12	20	5	9	5
Period 7/1/2015 to 6/30/2016							
Average Monthly Benefit	\$ 440	\$ 1,707	\$ 4,317	\$ 4,199	\$ 4,696	\$ 5,542	\$ 5,229
Average Final Salary	\$ 10,273	\$ 57,420	\$ 84,234	\$ 87,575	\$ 103,183	\$ 110,586	\$ 111,931
Number of Service Retirees	6	12	12	19	5	9	5
Period 7/1/2014 to 6/30/2015							
Average Monthly Benefit	\$ 388	\$ 1,689	\$ 4,606	\$ 4,154	\$ 4,655	\$ 5,499	\$ 5,190
Average Final Salary	\$ 17,129	\$ 57,420	\$ 79,169	\$ 86,262	\$ 103,183	\$ 110,586	\$ 111,931
Number of Service Retirees	4	12	13	15	5	9	5
Period 7/1/2013 to 6/30/2014							
Average Monthly Benefit	\$ 315	\$ 1,590	\$ 4,861	\$ 4,000	\$ 4,621	\$ 5,464	\$ 5,164
Average Final Salary	\$ 8,279	\$ 54,733	\$ 78,970	\$ 84,290	\$ 103,183	\$ 110,586	\$ 111,931
Number of Service Retirees	1	9	15	12	5	9	5
Period 7/1/2012 to 6/30/2013							
Average Monthly Benefit	\$ 315	\$ 1,623	\$ 5,070	\$ 4,229	\$ 4,750	\$ 5,464	\$ 5,541
Average Final Salary	\$ 118,269	\$ 112,541	\$ 87,240	\$ 93,463	\$ 110,809	\$ 110,586	\$ 109,339
Number of Service Retirees	1	5	17	9	6	9	4

\*This table will continue to be populated until the requisite ten years of data is presented.

## DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS (continued) LAST TEN FISCAL YEARS

### LEGISLATIVE PLAN

**Retirement Effective Dates**  
July 1, 2012 - June 30, 2019\*

	<u>Years of Creditable Service</u>						
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>Greater than 30</u>
Period 7/1/2018 to 6/30/2019							
Average Monthly Benefit	\$ 88	\$ 169	\$ 282	\$ 358	\$ -	\$ -	\$ -
Average Final Salary	\$ 9,314	\$ 12,478	\$ 12,409	\$ 14,524	\$ -	\$ -	\$ -
Number of Service Retirees	26	116	17	7	0	0	0
Period 7/1/2017 to 6/30/2018							
Average Monthly Benefit	\$ 86	\$ 166	\$ 274	\$ 351	\$ -	\$ -	\$ -
Average Final Salary	\$ 9,777	\$ 12,318	\$ 12,388	\$ 14,665	\$ -	\$ -	\$ -
Number of Service Retirees	23	104	17	4	0	0	0
Period 7/1/2016 to 6/30/2017							
Average Monthly Benefit	\$ 82	\$ 161	\$ 279	\$ 363	\$ -	\$ -	\$ -
Average Final Salary	\$ 9,646	\$ 12,109	\$ 12,284	\$ 14,900	\$ -	\$ -	\$ -
Number of Service Retirees	23	105	16	3	0	0	0
Period 7/1/2015 to 6/30/2016							
Average Monthly Benefit	\$ 80	\$ 159	\$ 263	\$ 402	\$ -	\$ -	\$ -
Average Final Salary	\$ 10,120	\$ 12,078	\$ 11,681	\$ 12,773	\$ -	\$ -	\$ -
Number of Service Retirees	23	97	14	3	0	0	0
Period 7/1/2014 to 6/30/2015							
Average Monthly Benefit	\$ 79	\$ 155	\$ 254	\$ 382	\$ -	\$ -	\$ -
Average Final Salary	\$ 10,270	\$ 11,994	\$ 11,153	\$ 13,204	\$ -	\$ -	\$ -
Number of Service Retirees	24	96	16	4	0	0	0
Period 7/1/2013 to 6/30/2014							
Average Monthly Benefit	\$ 67	\$ 149	\$ 247	\$ 374	\$ -	\$ -	\$ -
Average Final Salary	\$ 9,603	\$ 11,643	\$ 11,138	\$ 13,204	\$ -	\$ -	\$ -
Number of Service Retirees	22	84	14	4	0	0	0
Period 7/1/2012 to 6/30/2013							
Average Monthly Benefit	\$ 69	\$ 148	\$ 256	\$ 374	\$ -	\$ -	\$ -
Average Final Salary	\$ 18,728	\$ 11,778	\$ 11,339	\$ 13,204	\$ -	\$ -	\$ -
Number of Service Retirees	24	87	11	4	0	0	0

\*This table will continue to be populated until the requisite ten years of data is presented.

### PLD CONSOLIDATED PLAN

**Retirement Effective Dates**  
July 1, 2012 - June 30, 2019\*

	<u>Years of Creditable Service</u>					
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>
Period 7/1/2018 to 6/30/2019						
Average Monthly Benefit	\$ 151	\$ 566	\$ 862	\$ 1,403	\$ 1,988	\$ 2,411
Average Final Salary	\$ 7,750	\$ 24,631	\$ 30,073	\$ 35,969	\$ 38,828	\$ 44,497
Number of Service Retirees	1,795	1,602	1,443	1,387	1,447	977
Period 7/1/2017 to 6/30/2018						
Average Monthly Benefit	\$ 145	\$ 545	\$ 820	\$ 1,350	\$ 1,923	\$ 2,337
Average Final Salary	\$ 7,736	\$ 24,418	\$ 29,145	\$ 35,125	\$ 37,357	\$ 43,630
Number of Service Retirees	1,639	1,451	1,329	1,331	1,326	994
Period 7/1/2016 to 6/30/2017						
Average Monthly Benefit	\$ 139	\$ 528	\$ 790	\$ 1,307	\$ 1,859	\$ 2,268
Average Final Salary	\$ 7,669	\$ 24,049	\$ 28,550	\$ 34,100	\$ 35,609	\$ 42,422
Number of Service Retirees	1,478	1,297	1,271	1,276	1,233	1,008
Period 7/1/2015 to 6/30/2016						
Average Monthly Benefit	\$ 138	\$ 511	\$ 748	\$ 1,281	\$ 1,809	\$ 2,228
Average Final Salary	\$ 7,707	\$ 23,663	\$ 27,128	\$ 33,490	\$ 33,885	\$ 41,686
Number of Service Retirees	1,328	1,176	1,201	1,252	1,139	1,031
Period 7/1/2014 to 6/30/2015						
Average Monthly Benefit	\$ 139	\$ 497	\$ 727	\$ 1,256	\$ 1,797	\$ 2,206
Average Final Salary	\$ 7,777	\$ 23,320	\$ 26,728	\$ 32,942	\$ 32,952	\$ 41,008
Number of Service Retirees	1,186	1,050	1,130	1,167	1,090	1,037
Period 7/1/2013 to 6/30/2014						
Average Monthly Benefit	\$ 139	\$ 471	\$ 675	\$ 1,178	\$ 1,748	\$ 2,138
Average Final Salary	\$ 8,018	\$ 23,316	\$ 25,525	\$ 31,381	\$ 31,737	\$ 40,026
Number of Service Retirees	1,007	926	1,064	1,046	1,072	1,063
Period 7/1/2012 to 6/30/2013						
Average Monthly Benefit	\$ 136	\$ 449	\$ 629	\$ 1,103	\$ 1,710	\$ 2,086
Average Final Salary	\$ 39,573	\$ 35,552	\$ 28,806	\$ 36,407	\$ 32,317	\$ 39,707
Number of Service Retirees	882	779	1,002	906	1,083	1,076

\*This table will continue to be populated until the requisite ten years of data is presented.

**DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS**  
(continued)

**LAST TEN FISCAL YEARS**

**PLD AGENT PLAN**

**Retirement Effective Dates**  
**July 1, 2012 - June 30, 2019\***

	<u>Years of Creditable Service</u>						
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>Greater than 30</u>
Period 7/1/2018 to 6/30/2019							
Average Monthly Benefit	\$ 63	\$ 451	\$ 619	\$ 905	\$ 1,931	\$ 2,369	\$ 2,825
Average Final Salary	\$ 1,974	\$ 10,786	\$ 17,952	\$ 25,145	\$ 32,493	\$ 39,754	\$ 48,478
Number of Service Retirees	28	2	11	16	30	31	20
Period 7/1/2017 to 6/30/2018							
Average Monthly Benefit	\$ 59	\$ 351	\$ 540	\$ 874	\$ 1,843	\$ 2,247	\$ 2,591
Average Final Salary	\$ 1,858	\$ 14,768	\$ 17,146	\$ 25,602	\$ 31,931	\$ 39,102	\$ 46,194
Number of Service Retirees	26	4	16	18	31	33	23
Period 7/1/2016 to 6/30/2017							
Average Monthly Benefit	\$ 60	\$ 340	\$ 505	\$ 846	\$ 1,815	\$ 2,216	\$ 2,576
Average Final Salary	\$ 1,988	\$ 15,590	\$ 15,597	\$ 24,795	\$ 31,931	\$ 38,813	\$ 46,217
Number of Service Retirees	24	5	19	20	31	33	22
Period 7/1/2015 to 6/30/2016							
Average Monthly Benefit	\$ 49	\$ 337	\$ 501	\$ 839	\$ 1,816	\$ 2,221	\$ 2,523
Average Final Salary	\$ 1,915	\$ 15,644	\$ 15,294	\$ 24,795	\$ 31,502	\$ 38,440	\$ 46,217
Number of Service Retirees	23	5	19	20	33	31	22
Period 7/1/2014 to 6/30/2015							
Average Monthly Benefit	\$ 45	\$ 337	\$ 455	\$ 837	\$ 1,820	\$ 2,189	\$ 2,501
Average Final Salary	\$ 1,609	\$ 15,644	\$ 13,693	\$ 24,755	\$ 31,406	\$ 36,887	\$ 45,304
Number of Service Retirees	21	5	21	20	33	33	21
Period 7/1/2013 to 6/30/2014							
Average Monthly Benefit	\$ 45	\$ 275	\$ 457	\$ 833	\$ 1,795	\$ 2,118	\$ 2,483
Average Final Salary	\$ 1,661	\$ 16,653	\$ 13,692	\$ 24,627	\$ 30,255	\$ 36,436	\$ 45,304
Number of Service Retirees	20	4	23	22	34	34	21

**DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS**  
(concluded)

**LAST TEN FISCAL YEARS**

**ALL DEFINED BENEFIT PENSION PLANS, COMBINED**

**Retirement Effective Dates**  
**July 1, 2009 - June 30, 2019**

	<u>Years of Creditable Service</u>						
	<u>Less than 5</u>	<u>5-10</u>	<u>10-15</u>	<u>15-20</u>	<u>20-25</u>	<u>25-30</u>	<u>Greater than 30</u>
<b>Period 7/1/2018 to 6/30/2019</b>							
Average Monthly Benefit	\$ 177	\$ 543	\$ 873	\$ 1,369	\$ 1,962	\$ 2,291	\$ 3,242
Average Final Salary	\$ 8,355	\$ 28,174	\$ 33,602	\$ 38,499	\$ 42,334	\$ 45,742	\$ 52,683
Number of Service Retirees	3,306	3,243	4,404	4,237	5,017	7,913	10,598
<b>Period 7/1/2017 to 6/30/2018</b>							
Average Monthly Benefit	\$ 173	\$ 530	\$ 839	\$ 1,326	\$ 1,906	\$ 2,226	\$ 3,164
Average Final Salary	\$ 8,388	\$ 27,950	\$ 32,915	\$ 37,612	\$ 41,281	\$ 44,935	\$ 51,762
Number of Service Retirees	2,998	2,975	4,177	4,024	4,823	7,876	10,286
<b>Period 7/1/2016 to 6/30/2017</b>							
Average Monthly Benefit	\$ 172	\$ 518	\$ 812	\$ 1,295	\$ 1,863	\$ 2,181	\$ 3,105
Average Final Salary	\$ 8,593	\$ 27,750	\$ 32,079	\$ 36,657	\$ 40,248	\$ 44,131	\$ 50,799
Number of Service Retirees	2,701	2,757	4,047	3,853	4,675	7,821	10,048
<b>Period 7/1/2015 to 6/30/2016</b>							
Average Monthly Benefit	\$ 172	\$ 504	\$ 782	\$ 1,262	\$ 1,812	\$ 2,126	\$ 3,038
Average Final Salary	\$ 8,943	\$ 27,562	\$ 31,106	\$ 35,902	\$ 39,162	\$ 43,310	\$ 49,980
Number of Service Retirees	2,425	2,538	3,899	3,748	4,510	7,745	9,818
<b>Period 7/1/2014 to 6/30/2015</b>							
Average Monthly Benefit	\$ 173	\$ 490	\$ 759	\$ 1,222	\$ 1,772	\$ 2,077	\$ 2,973
Average Final Salary	\$ 8,697	\$ 27,354	\$ 30,250	\$ 34,875	\$ 38,303	\$ 42,528	\$ 49,081
Number of Service Retirees	2,143	2,340	3,719	3,529	4,410	7,652	9,561
<b>Period 7/1/2013 to 6/30/2014</b>							
Average Monthly Benefit	\$ 179	\$ 470	\$ 727	\$ 1,168	\$ 1,728	\$ 2,026	\$ 2,908
Average Final Salary	\$ 9,877	\$ 27,332	\$ 29,082	\$ 33,579	\$ 37,127	\$ 41,680	\$ 48,133
Number of Service Retirees	1,821	2,123	3,537	3,320	4,328	7,537	9,274
<b>Period 7/1/2012 to 6/30/2013</b>							
Average Monthly Benefit	\$ 364	\$ 433	\$ 681	\$ 1,105	\$ 1,698	\$ 2,006	\$ 2,881
Average Final Salary	\$ 28,688	\$ 30,446	\$ 28,554	\$ 32,680	\$ 36,429	\$ 41,244	\$ 47,413
Number of Service Retirees	440	1,482	3,112	2,860	4,288	7,658	9,194
<b>Period 7/1/2011 to 6/30/2012</b>							
Average Monthly Benefit	\$ 647	\$ 427	\$ 671	\$ 1,083	\$ 1,678	\$ 1,979	\$ 2,845
Average Final Salary	\$ 25,200	\$ 59,515	\$ 27,199	\$ 31,429	\$ 35,443	\$ 40,189	\$ 46,386
Number of Service Retirees	568	1,402	3,013	2,777	4,182	7,413	8,863
<b>Period 7/1/2010 to 6/30/2011</b>							
Average Monthly Benefit	\$ 419	\$ 399	\$ 636	\$ 1,035	\$ 1,599	\$ 1,877	\$ 2,681
Average Final Salary	\$ 26,382	\$ 27,791	\$ 25,452	\$ 29,842	\$ 34,108	\$ 38,836	\$ 44,693
Number of Service Retirees	551	1,276	2,913	2,681	4,083	7,060	8,221
<b>Period 7/1/2009 to 6/30/2010</b>							
Average Monthly Benefit	\$ 617	\$ 388	\$ 617	\$ 1,016	\$ 1,583	\$ 1,867	\$ 2,653
Average Final Salary	\$ 25,338	\$ 26,322	\$ 23,944	\$ 28,556	\$ 32,700	\$ 37,655	\$ 43,265
Number of Service Retirees	559	1,175	2,819	2,594	3,898	6,782	7,868

## DEFINED BENEFIT PLANS RETIRED MEMBERS BY TYPE OF BENEFIT AND OPTION As of June 30, 2019

**STATE EMPLOYEES AND TEACHER PLAN**

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement Benefit				Benefit Option Selected *									
		Service Retiree	Beneficiary	Disability	Pre-Retire Death Benefit	Full Benefit to Retiree	1	2	3	4	5	6	7	8	Other
\$0 - \$250	2,389	1,473	871	23	22	700	250	286	61	27	633	103	39	50	240
\$251 - \$500	2,776	1,340	1,311	10	115	694	207	260	73	17	982	104	23	34	382
\$501 - \$750	3,128	1,482	1,158	25	463	774	223	257	98	20	878	112	36	37	693
\$751 - \$1,000	2,193	1,501	661	31	-	782	212	246	136	23	433	88	38	56	179
\$1,001 - \$1,250	2,146	1,620	468	58	-	801	211	247	146	18	363	96	38	50	176
\$1,251 - \$1,500	2,212	1,743	369	100	-	809	236	214	143	17	371	122	65	57	178
\$1,501 - \$1,750	2,367	1,913	305	149	-	916	287	261	106	19	407	88	51	62	170
\$1,751 - \$2,000	2,608	2,158	266	184	-	1,006	307	259	122	30	461	117	63	69	174
Over \$2,001	16,652	14,841	817	994	-	7,356	2,036	1,601	721	321	1,868	668	612	753	716
<b>Totals</b>	<b>36,471</b>	<b>28,071</b>	<b>6,226</b>	<b>1,574</b>	<b>600</b>	<b>13,838</b>	<b>3,969</b>	<b>3,631</b>	<b>1,606</b>	<b>492</b>	<b>6,396</b>	<b>1,498</b>	<b>965</b>	<b>1,168</b>	<b>2,908</b>

**JUDICIAL PLAN**

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement Benefit				Benefit Option Selected *									
		Service Retiree	Beneficiary	Disability	Pre-Retire Death Benefit	Full Benefit to Retiree	1	2	3	4	5	6	7	8	Other
\$0 - \$250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$251 - \$500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$501 - \$750	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0
\$751 - \$1,000	2	0	2	0	0	0	0	0	0	0	1	0	0	0	1
\$1,001 - \$1,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$1,251 - \$1,500	2	0	2	0	0	0	0	0	0	0	2	0	0	0	0
\$1,501 - \$1,750	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
\$1,751 - \$2,000	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Over \$2,001	69	55	13	1	0	16	5	19	10	3	9	3	0	2	2
<b>Totals</b>	<b>76</b>	<b>55</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>5</b>	<b>20</b>	<b>10</b>	<b>3</b>	<b>13</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>4</b>

**LEGISLATIVE PLAN**

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement Benefit				Benefit Option Selected *									
		Service Retiree	Beneficiary	Disability	Pre-Retire Death Benefit	Full Benefit to Retiree	1	2	3	4	5	6	7	8	Other
\$0 - \$250	171	142	29	0	0	71	18	40	7	0	17	12	1	1	4
\$251 - \$500	26	24	1	0	1	17	1	5	1	0	0	1	0	0	1
\$501 - \$750	7	0	0	2	5	0	0	0	0	0	0	0	0	0	7
\$751 - \$1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$1,001 - \$1,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$1,251 - \$1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$1,501 - \$1,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\$1,751 - \$2,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Over \$2,001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>204</b>	<b>166</b>	<b>30</b>	<b>2</b>	<b>6</b>	<b>88</b>	<b>19</b>	<b>45</b>	<b>8</b>	<b>0</b>	<b>17</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>12</b>

\* There are eight options available to retirees for their monthly retirement benefit:

Full Benefit to Retiree: provides the highest benefit to the retiree; there is no benefit provided for a beneficiary(ies)

Option 1: the monthly benefit is reduced, and remaining contributions and interest, if any, are paid to a beneficiary(ies) upon retiree's death in a one-time, lump-sum payment

Option 2: the monthly benefit is reduced, and the same monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 3: the monthly benefit is reduced, and one-half of the monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 4: the monthly benefit is reduced, and a retiree-designated percentage of the monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 5: the monthly benefit is split (up to 49%) with a beneficiary(ies) while both the retiree and beneficiary(ies) are living; upon death of either, the other receives the higher benefit for the remainder of his/her life

Option 6: similar to Option 2, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Option 7: similar to Option 3, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Option 8: similar to Option 4, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Other: default option for specific circumstances such as disability benefits, survivor benefits, and qualified domestic relations order benefits

## DEFINED BENEFIT PLANS

### RETIRED MEMBERS BY TYPE OF BENEFIT AND OPTION

As of June 30, 2019  
(concluded)

**PLD CONSOLIDATED PLAN**

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement Benefit				Benefit Option Selected *									
		Service Retiree	Beneficiary	Disability	Pre-Retire Death Benefit	Full Benefit to Retiree	1	2	3	4	5	6	7	8	Other
\$0 - \$250	1,504	1,012	465	20	7	522	137	189	61	17	306	69	32	42	129
\$251 - \$500	1,154	676	436	13	29	298	136	196	50	8	289	45	13	9	110
\$501 - \$750	1,151	669	333	15	134	287	121	156	49	10	235	45	16	21	211
\$751 - \$1,000	835	575	236	24	-	246	87	146	51	8	150	38	16	15	78
\$1,001 - \$1,250	699	519	148	32	-	208	93	124	41	8	92	47	12	10	64
\$1,251 - \$1,500	563	423	115	25	-	163	74	96	13	4	95	35	12	11	60
\$1,501 - \$1,750	527	415	75	37	-	151	57	88	25	5	111	28	10	3	49
\$1,751 - \$2,000	497	393	59	45	-	161	58	66	21	3	101	21	8	11	47
Over \$2,001	2,604	2,284	151	168	1	855	288	389	130	49	404	174	84	77	154
<b>Totals</b>	<b>9,534</b>	<b>6,966</b>	<b>2,018</b>	<b>379</b>	<b>171</b>	<b>2,891</b>	<b>1,051</b>	<b>1,450</b>	<b>441</b>	<b>112</b>	<b>1,783</b>	<b>502</b>	<b>203</b>	<b>199</b>	<b>902</b>

**PLD AGENT PLAN**

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement Benefit				Benefit Option Selected *									
		Service Retiree	Beneficiary	Disability	Pre-Retire Death Benefit	Full Benefit to Retiree	1	2	3	4	5	6	7	8	Other
\$0 - \$250	13	9	4	0	0	5	1	3	1	0	3	0	0	0	0
\$251 - \$500	20	5	15	0	0	3	0	0	1	0	15	1	0	0	0
\$501 - \$750	28	14	14	0	0	7	4	2	2	0	12	0	0	0	1
\$751 - \$1,000	11	4	7	0	0	1	0	3	1	0	2	0	0	0	4
\$1,001 - \$1,250	14	13	1	0	0	5	0	2	2	1	2	0	2	0	0
\$1,251 - \$1,500	8	6	2	0	0	3	0	0	1	0	3	1	0	0	0
\$1,501 - \$1,750	15	14	1	0	0	2	2	4	0	1	3	0	0	2	1
\$1,751 - \$2,000	4	4	0	0	0	1	0	2	0	0	1	0	0	0	0
Over \$2,001	50	46	4	0	0	10	3	8	4	1	21	3	0	0	0
<b>Totals</b>	<b>163</b>	<b>115</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>10</b>	<b>24</b>	<b>12</b>	<b>3</b>	<b>62</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>6</b>

\* There are eight options available to retirees for their monthly retirement benefit:

Full Benefit to Retiree: provides the highest benefit to the retiree; there is no benefit provided for a beneficiary(ies)

Option 1: the monthly benefit is reduced, and remaining contributions and interest, if any, are paid to a beneficiary(ies) upon retiree's death in a one-time, lump-sum payment

Option 2: the monthly benefit is reduced, and the same monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 3: the monthly benefit is reduced, and one-half of the monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 4: the monthly benefit is reduced, and a retiree-designated percentage of the monthly benefit is paid to a beneficiary(ies) upon the retiree's death

Option 5: the monthly benefit is split (up to 49%) with a beneficiary(ies) while both the retiree and beneficiary(ies) are living; upon death of either, the other receives the higher benefit for the remainder of his/her life

Option 6: similar to Option 2, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Option 7: similar to Option 3, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Option 8: similar to Option 4, except the retiree's monthly benefit will increase to the Full Benefit amount in the event the beneficiary(ies) dies before the retiree

Other: default option for specific circumstances such as disability benefits, survivor benefits, and qualified domestic relations order benefits

**EMPLOYEE CONTRIBUTION RATES  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Judges</b>	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
<b>Legislators</b>	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
<b>School Teacher Employees</b>	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
<b>State of Maine Employees</b>										
Employee Class:										
General	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
Police - Grandfathered	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
Marine Wardens - Grandfathered	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
Game Wardens - Grandfathered	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
Prison Wardens - Grandfathered	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
Forest Rangers - Grandfathered	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
1998 Special Plan Groups	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
25-Year/No-Age Special Plan Groups	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
<b>Participating Local District Employees</b>										
Employee Class:										
AC - General COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
BC - General COLA	4.50%	4.50%	4.50%	4.00%	3.50%	3.00%	3.00%	3.00%	3.00%	3.00%
1C - Special COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
2C - Special COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
3C - Special COLA	9.50%	9.50%	9.50%	9.00%	8.50%	8.00%	8.00%	8.00%	8.00%	8.00%
4C - Special COLA	9.00%	9.00%	9.00%	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%
AN - General No COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
1N - Special No COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
2N - Special No COLA	8.00%	8.00%	8.00%	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%
3N - Special No COLA	9.50%	9.50%	9.50%	9.00%	8.50%	8.00%	8.00%	8.00%	8.00%	8.00%
4N - Special No COLA	9.00%	9.00%	9.00%	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%

**EMPLOYER CONTRIBUTION RATES  
LAST TEN FISCAL YEARS**

	Fiscal Year									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Judges</b>	14.94%	14.94%	14.98%	14.99%	13.24%	13.25%	11.98%	11.99%	14.12%	14.35%
<b>Legislators</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>School Teacher Employees</b>	15.05%	15.05%	13.38%	13.38%	15.68%	15.68%	13.85%	13.85%	17.28%	17.28%
<b>State of Maine Employees</b>										
Employee Class:										
General	24.01%	24.05%	22.69%	22.37%	18.43%	18.14%	14.21%	14.18%	16.92%	16.38%
Police - Grandfathered	46.42%	46.51%	38.56%	38.01%	41.05%	40.43%	39.36%	39.22%	51.26%	50.19%
Marine Wardens - Grandfathered	0.00%	0.00%	40.99%	40.41%	31.62%	31.20%	33.44%	33.33%	54.49%	53.32%
Game Wardens - Grandfathered	47.64%	47.73%	42.18%	41.59%	36.50%	35.98%	38.60%	38.47%	54.48%	53.30%
Prison Wardens - Grandfathered	0.00%	0.00%	27.75%	27.28%	29.51%	29.05%	26.83%	26.74%	27.03%	25.81%
Forest Rangers - Grandfathered	24.94%	24.99%	21.99%	21.64%	22.73%	22.36%	13.69%	13.65%	22.32%	21.84%
1998 Special Plan Groups	26.19%	26.24%	29.16%	28.71%	23.04%	22.65%	17.39%	17.33%	19.06%	18.27%
25-Year/No-Age Special Plan Groups	23.44%	23.48%	23.96%	23.57%	20.42%	20.08%	15.43%	15.38%	24.87%	24.34%

**Participating Local District Employees**

Employee Class:

AC - General COLA	10.00%	9.60%	9.50%	8.90%	7.80%	6.50%	5.30%	4.40%	3.50%	2.80%
BC - General COLA	6.30%	6.10%	6.40%	5.80%	4.70%	3.90%	3.20%	2.70%	2.10%	1.70%
1C - Special COLA	16.30%	15.70%	14.20%	14.00%	13.40%	12.80%	12.20%	10.20%	8.10%	6.50%
2C - Special COLA	10.50%	10.10%	9.10%	8.90%	8.30%	7.90%	7.50%	6.30%	5.00%	4.00%
3C - Special COLA	12.70%	12.20%	11.40%	11.40%	11.00%	10.50%	10.00%	8.30%	6.60%	5.30%
4C - Special COLA	8.70%	8.40%	7.70%	7.60%	7.20%	6.90%	6.60%	5.50%	4.40%	3.50%
AN - General No COLA	7.30%	7.00%	6.50%	5.60%	4.10%	3.40%	2.80%	2.40%	1.90%	1.50%
1N - Special No COLA	10.90%	10.50%	9.30%	8.70%	7.50%	7.10%	6.80%	5.60%	4.50%	3.60%
2N - Special No COLA	5.70%	5.50%	5.60%	5.20%	4.40%	4.20%	4.00%	3.30%	2.60%	2.20%
3N - Special No COLA	7.80%	7.50%	7.40%	7.00%	6.10%	5.80%	5.50%	4.50%	3.60%	2.90%
4N - Special No COLA	4.10%	3.90%	4.60%	4.40%	4.00%	3.80%	3.60%	3.00%	2.40%	1.90%

## PRINCIPAL PARTICIPATING EMPLOYERS CURRENT YEAR AND NINE YEARS AGO

2019		2010	
Participating Entity	Covered Employees	Participating Entity	Covered Employees
	Rank		Rank
	Percentage of Total		Percentage of Total
State of Maine	14,424	State of Maine	15,449
Maine Veterans Home	1,423	Maine Veterans Home	1,358
Portland School Department	1,216	Portland School Department	1,239
Lewiston School Department	990	Portland, City of	841
Portland, City of	948	Lewiston School Department	776
Bangor School Department	581	Bangor School Department	680
Regional School Unit No. 6	563	Auburn School Department	640
South Portland School Department	555	Regional School Unit No. 14	599
Auburn School Department	554	Regional School Unit No. 75	584
Regional School Unit No. 60	512	Regional School Unit No. 6	572
All Others *	36,381	All Others *	36,269
	58,147	Total (605 Participating Entities)	59,007
	100.00%		100.00%

\* "All Others" includes employees covered under two or more employer types. In 2019, "All Others" consisted of:

Participating Local Districts School Districts	Employers	Members
	323	11,167
	223	25,214
<b>Total</b>	<b>546</b>	<b>36,381</b>

Note: Covered employees of these employers are eligible to participate in the Defined Benefit Plans administered by MainePERS, which provide normal and disability retirement benefits and certain survivor benefits, as well as benefits under the Group Life Insurance Plan.

Data for this table are derived from the System's pension administration records.

## PARTICIPATING EMPLOYERS, DETAILED LISTING

**PROGRAM: STATE EMPLOYEE / TEACHER  
RETIREMENT PROGRAM**

**Participants:** State Employees  
**Employer:** State of Maine  
**Reporting Entity:** State of Maine

**Participants:** State Employees  
**Employers:** State of Maine Component Units  
**Reporting Entity:** (as follows)

Maine Community College System  
 Maine Dairy & Nutrition Council  
 Maine Developmental Disabilities Council  
 Maine Potato Board  
 MECDHH/Governor Baxter School for the Deaf  
 Northern New England Passenger Rail Authority  
 Wild Blueberry Commission of Maine

**Participants:** Teachers  
**Employers:** State of Maine; School Administrative Units  
**Reporting Entity:** (as follows)

Acton School Department  
 Andover School Department  
 AOS No. 43 Central Office  
 AOS No. 43 Howland  
 AOS No. 43 Milo  
 AOS No. 47 Central Office  
 AOS No. 47 Dedham  
 AOS No. 47 Orrington  
 AOS No. 77 Alexander  
 AOS No. 77 Central Office  
 AOS No. 77 Charlotte  
 AOS No. 77 Eastport  
 AOS No. 77 Lubec  
 AOS No. 77 Pembroke  
 AOS No. 77 Perry  
 AOS No. 77 Robbinston  
 AOS No. 90 Baileyville  
 AOS No. 90 Central Office  
 AOS No. 90 East Range  
 AOS No. 90 Lee  
 AOS No. 90 Princeton  
 AOS No. 91 Bar Harbor  
 AOS No. 91 Central Office  
 AOS No. 91 Cranberry Isle  
 AOS No. 91 Frenchboro  
 AOS No. 91 MDI High School  
 AOS No. 91 Mt Desert  
 AOS No. 91 Southwest Harbor  
 AOS No. 91 Swans Island  
 AOS No. 91 Tremont  
 AOS No. 91 Trenton  
 AOS No. 92 Central Office

AOS No. 92 Vassalboro  
 AOS No. 92 Waterville  
 AOS No. 92 Winslow  
 AOS No. 93 Bristol  
 AOS No. 93 Central Office  
 AOS No. 93 Great Salt Bay  
 AOS No. 93 Jefferson  
 AOS No. 93 Nobleboro  
 AOS No. 93 South Bristol  
 AOS No. 94 Central Office  
 AOS No. 94 Harmony  
 AOS No. 94 MSAD 46  
 AOS No. 96 Central Office  
 AOS No. 96 Cutler  
 AOS No. 96 East Machias  
 AOS No. 96 Jonesboro  
 AOS No. 96 Machias  
 AOS No. 96 Machiasport  
 AOS No. 96 Marshfield  
 AOS No. 96 Northfield  
 AOS No. 96 Roque Bluffs  
 AOS No. 96 Wesley  
 AOS No. 96 Whiting  
 AOS No. 96 Whitneyville  
 AOS No. 98 Boothbay Harbor  
 AOS No. 98 Central Office  
 AOS No. 98 Edgecomb  
 AOS No. 98 Georgetown  
 AOS No. 98 Southport  
 Athens School Department  
 Auburn School Department  
 Augusta School Department  
 Bangor School Department  
 Biddeford School Department  
 Brewer School Department  
 Brunswick School Department  
 Calais School Department  
 Cape Elizabeth School Department  
 Caswell School Department  
 Chebeague Island School Department  
 Cherryfield School Department  
 Community School District No. 8 Airline  
 Community School District No. 13 Deer Isle-Stonington  
 Community School District No. 17 Moosabec  
 Community School District No. 18 Wells-Ogunquit  
 Community School District No. 19 Five Town  
 Dayton School Department  
 East Millinocket School Department  
 Easton School Department  
 Ellsworth School Department  
 Erskine Academy  
 Eustis School Department  
 Falmouth School Department  
 Fayette School Department  
 Foxcroft Academy  
 Fryeburg Academy  
 George Stevens Academy  
 Glenburn School Department

## PARTICIPATING EMPLOYERS, DETAILED LISTING *(continued)*

**TEACHERS *(continued)***

Gorham School Department	Region 10 Cumberland-Sagadahoc County
Gould Academy	Regional School Unit No. 1
Greenbush School Department	Regional School Unit No. 2
Hancock School Department	Regional School Unit No. 4
Hermon School Department	Regional School Unit No. 5
Indian Island School	Regional School Unit No. 10
Indian Township School	Regional School Unit No. 12
Isle Au Haut School Department	Regional School Unit No. 13
Islesboro School Department	Regional School Unit No. 14
Kittery School Department	Regional School Unit No. 16
Lamoine School Department	Regional School Unit No. 18
Lee Academy	Regional School Unit No. 19
Lewiston School Department	Regional School Unit No. 20
Lincoln Academy	Regional School Unit No. 21
Lincolntonville School Department	Regional School Unit No. 22
Lisbon School Department	Regional School Unit No. 23
Long Island School Department	Regional School Unit No. 24
Madawaska School Department	Regional School Unit No. 25
Maine Central Institute	Regional School Unit No. 26
Maine Education Association	Regional School Unit No. 34
Maine Indian Education	Regional School Unit No. 38
Maine Ocean School	Regional School Unit No. 39
Maine School Administrative District No. 4 Guilford	Regional School Unit No. 50
Maine School Administrative District No. 7 North Haven	Regional School Unit No. 56
Maine School Administrative District No. 8 Vinalhaven	Regional School Unit No. 71
Maine School Administrative District No. 12 Jackman	Regional School Unit No. 73
Maine School Administrative District No. 13 Bingham	Regional School Unit No. 78
Maine School Administrative District No. 20 Fort Fairfield	Regional School Unit No. 89
Maine School Administrative District No. 23 Carmel	RSU No. 3 - MSAD No. 3 Unity
Maine School Administrative District No. 24 Van Buren	RSU No. 6 - MSAD No. 6 Bar Mills
Maine School Administrative District No. 27 Fort Kent	RSU No. 9 - MSAD No. 9 Farmington
Maine School Administrative District No. 28 Camden	RSU No. 11 - MSAD No. 11 Gardiner
Maine School Administrative District No. 32 Ashland	RSU No. 15 - MSAD No. 15 Gray
Maine School Administrative District No. 33 St. Agatha	RSU No. 17 - MSAD No. 17 South Paris
Maine School Administrative District No. 42 Mars Hill	RSU No. 29 - MSAD No. 29 Houlton
Maine School Administrative District No. 45 Washburn	RSU No. 35 - MSAD No. 35 Eliot
Maine School Administrative District No. 53 Pittsfield	RSU No. 37 - MSAD No. 37 Harrington
Maine School Administrative District No. 58 Kingfield	RSU No. 40 - MSAD No. 40 Waldoboro
Maine School Administrative District No. 59 Madison	RSU No. 44 - MSAD No. 44 Bethel
Maine School of Science and Mathematics	RSU No. 49 - MSAD No. 49 Fairfield
Medway School Department	RSU No. 51 - MSAD No. 51 Cumberland Center
Milford School Department	RSU No. 52 - MSAD No. 52 Turner
Millinocket School Department	RSU No. 54 - MSAD No. 54 Skowhegan
Monhegan Plantation School Department	RSU No. 55 - MSAD No. 55 Cornish
Northport School Department	RSU No. 57 - MSAD No. 57 Waterboro
Otis School Department	RSU No. 60 - MSAD No. 60 North Berwick
Oxford Hills Technical School No. 11	RSU No. 61 - MSAD No. 61 Bridgton
Pleasant Point School	RSU No. 63 - MSAD No. 63
Portland School Department	RSU No. 64 - MSAD No. 64 East Corinth
Region 2 Southern Aroostook County	RSU No. 67 - MSAD No. 67 Lincoln
Region 3 Northern Penobscot County	RSU No. 68 - MSAD No. 68 Dover-Foxcroft
Region 4 United Technologies Center	RSU No. 70 - MSAD No. 70
Region 7 Waldo County Technical Center	RSU No. 72 - MSAD No. 72 Fryeburg
Region 8 Midcoast School of Technology	RSU No. 74 - MSAD No. 74 North Anson
Region 9 School of Applied Technology	RSU No. 75 - MSAD No. 75 Topsham
	RSU No. 79 - MSAD No. 1 Presque Isle
	RSU No. 84 - MSAD No. 14
	Saco School Department

**PARTICIPATING EMPLOYERS, DETAILED LISTING** *(continued)*

**TEACHERS** *(continued)*

Sanford School Department  
 Scarborough School Department  
 School Agent Carrabassett  
 School Agent Coplin Plantation  
 School Agent Pleasant Ridge Plantation  
 Sebago Public Schools  
 South Portland School Department  
 St. George School Department  
 Thornton Academy  
 Union 60 Greenville  
 Union 60 Shirley  
 Union 69 Appleton  
 Union 69 Hope  
 Union 76 Brooklin  
 Union 76 Sedgwick  
 Union 93 Blue Hill  
 Union 93 Brooksville  
 Union 93 Castine  
 Union 93 Penobscot  
 Union 93 Surry School Department  
 Union 103 Beals  
 Union 103 Jonesport  
 Union 122 New Sweden  
 Union 122 Westmanland  
 Union 122 Woodland  
 Vanceboro School Department  
 Veazie School Department  
 Washington Academy  
 West Bath School Department  
 Westbrook School Department  
 Winthrop School Department  
 Wiscasset School Department  
 Yarmouth School Department  
 York School Department

**PROGRAM:** PARTICIPATING LOCAL DISTRICT  
 RETIREMENT PROGRAM  
**Employers:** CONSOLIDATED PLDs  
 (Active and Withdrawn)  
**Reporting Entities:** (as follows)

Acton, Town of  
 Alfred, Town of  
 Androscoggin County  
 Androscoggin Valley Council of Governments  
 Anson-Madison Sanitary District  
 Aroostook County  
 Aroostook Waste Solutions  
 Auburn Housing Authority  
 Auburn Lewiston Airport  
 Auburn Public Library  
 Auburn Water and Sewer District  
 Auburn, City of  
 Augusta Housing Authority  
 Augusta, City of  
 Baileyville, Town of  
 Bangor Housing Authority  
 Bangor Public Library  
 Bangor Water District  
 Bangor, City of  
 Bar Harbor, Town of  
 Bath Water District  
 Bath, City of  
 Baxter Academy of Technology and Science  
 Belfast Water District  
 Belfast, City of  
 Berwick Sewer District  
 Berwick, Town of  
 Bethel, Town of  
 Biddeford Housing Authority  
 Biddeford, City of  
 Boothbay Harbor Sewer District  
 Boothbay Harbor, Town of  
 Boothbay Region Water District  
 Bowdoinham Water District  
 Brewer Housing Authority  
 Brewer, City of  
 Bridgton Water District  
 Brownville, Town of  
 Brunswick Fire and Police  
 Brunswick Public Library Association  
 Brunswick Sewer District  
 Brunswick, Town of  
 Buckfield, Town of  
 Bucksport, Town of  
 Calais, City of  
 Camden, Town of  
 Cape Elizabeth Police  
 Caribou Fire and Police  
 Carrabassett Valley, Town of  
 Chesterville, Town of  
 Cheverus High School  
 China, Town of  
 Coastal Counties Workforce

**PROGRAM:** LEGISLATIVE RETIREMENT PROGRAM  
**Participants:** Legislators  
**Employer:** State of Maine  
**Reporting Entity:** Office of the Executive Director,  
 Maine Legislature

**PROGRAM:** JUDICIAL RETIREMENT PROGRAM  
**Participants:** Judges  
**Employer:** State of Maine  
**Reporting Entity:** Administrative Office of the Courts

## PARTICIPATING EMPLOYERS, DETAILED LISTING *(continued)*

**CONSOLIDATED PLDs *(continued)***

Community School District No. 912  
 Community School District No. 918  
 Corinna Sewer District  
 Corinna, Town of  
 Cornville Regional Charter School  
 Cumberland County  
 Cumberland, Town of  
 Damariscotta, Town of  
 Danforth, Town of  
 Dayton, Town of  
 Dexter, Town of  
 Dover-Foxcroft Water District  
 Dover-Foxcroft, Town of  
 Durham, Town of  
 Eagle Lake Water & Sewer District  
 East Millinocket, Town of  
 Easton, Town of  
 Eliot, Town of  
 Ellsworth, City of  
 Erskine Academy  
 Fairfield, Town of  
 Falmouth Memorial Library  
 Falmouth, Town of  
 Farmington Village Corporation  
 Farmington, Town of  
 Fayette, Town of  
 Fort Fairfield Housing Authority  
 Fort Fairfield Utilities District  
 Fort Fairfield, Town of  
 Franklin County  
 Freeport, Town of  
 Frenchville, Town of  
 Fryeburg, Town of  
 Gardiner Water District  
 Gardiner, City of  
 Glenburn, Town of  
 Good Will Home Association  
 Gorham Fire and Police  
 Gorham, Town of  
 Gould Academy  
 Grand Isle, Town of  
 Greater Augusta Utility District  
 Greenville, Town of  
 Hallowell, City of  
 Hampden Water District  
 Hampden, Town of  
 Hancock County  
 Hancock, Town of  
 Harpswell, Town of  
 Harrison, Town of  
 Hartland, Town of  
 Hermon, Town of  
 Hodgdon, Town of  
 Holden, Town of  
 Houlton Water Company  
 Houlton, Town of

Indian Township Tribal Government  
 Jackman Utility District  
 Jay, Town of  
 Kennebec County  
 Kennebec Sanitary Treatment District  
 Kennebec Water District  
 Kennebunk Kennebunkport Wells Water District  
 Kennebunk Light and Power District  
 Kennebunk Sewer District  
 Kennebunk, Town of  
 Kennebunkport, Town of  
 Kittery Water District  
 Kittery, Town of  
 Knox County Sheriff's Office  
 Lebanon, Town of  
 Levant, Town of  
 Lewiston Auburn 911  
 Lewiston Housing Authority  
 Lewiston, City of  
 Lewiston-Auburn Water Pollution Control Authority  
 Limestone, Town of  
 Lincoln Academy  
 Lincoln and Sagadahoc Multi-County Jail Authority  
 Lincoln County  
 Lincoln County Sheriff's Office  
 Lincoln Sanitary District  
 Lincoln Water District  
 Lincoln, Town of  
 Linneus, Town of  
 Lisbon Water Department  
 Lisbon, Town of  
 Livermore Falls Water District  
 Livermore Falls, Town of  
 Lovell, Town of  
 Lubec Water District  
 Lubec, Town of  
 M.A.D.S.E.C.  
 Madawaska Water District  
 Madawaska, Town of  
 Maine Academy of Natural Sciences  
 Maine County Commissioners Association  
 Maine Maritime Academy  
 Maine Municipal Association  
 Maine Municipal Bond Bank  
 Maine Principals' Association  
 Maine Public Employees Retirement System  
 Maine School Administrative District No. 13 Bingham  
 Maine School Administrative District No. 31 Howland  
 Maine School Administrative District No. 41 Milo  
 Maine School Administrative District No. 53 Pittsfield  
 Maine School Management Association  
 Maine School of Science and Mathematics  
 Maine State Housing Authority  
 Maine Turnpike Authority  
 Maine Veterans' Homes  
 Maine Virtual Academy  
 Mapleton, Castle Hill, and Chapman, Towns of  
 Mars Hill Utility District

**PARTICIPATING EMPLOYERS, DETAILED LISTING** *(continued)*

**CONSOLIDATED PLDs** *(continued)*

Mars Hill, Town of	Regional School Unit No. 21
Mechanic Falls Sanitary District	Regional School Unit No. 23
Mechanic Falls, Town of	Regional School Unit No. 24
Medway, Town of	Regional School Unit No. 25
Mexico, Town of	Regional School Unit No. 26
Midcoast Council of Governments	Regional School Unit No. 29
Milford, Town of	Regional School Unit No. 34
Millinocket, Town of	Regional School Unit No. 39
Milo Water District	Regional School Unit No. 49
Monmouth, Town of	Regional School Unit No. 51
Monson, Town of	Regional School Unit No. 54
Mount Desert Island Regional School District	Regional School Unit No. 56
Mount Desert Water District	Regional School Unit No. 60
Mt. Desert, Town of	Regional School Unit No. 67
Naples, Town of	Regional School Unit No. 71
New Gloucester, Town of	Regional School Unit No. 73
Newport Water District	Richmond Utilities District
Newport, Town of	Richmond, Town of
North Berwick Water District	Rockland, City of
North Berwick, Town of	Rockport, Town of
Northern Oxford Regional Solid Waste Board	Rumford Fire and Police
Norway Water District	Rumford Mexico Sewerage District
Norway, Town of	Rumford Water District
Ogunquit, Town of	Rumford, Town of
Old Orchard Beach, Town of	Sabattus, Town of
Old Town Housing Authority	Saco, City of
Old Town Water District	Sagadahoc County
Old Town, City of	Sanford Housing Authority
Orland, Town of	Sanford Sewerage District
Orono, Town of	Sanford Water District
Orrington, Town of	Sanford, City of
Otis, Town of	Scarborough, Town of
Otisfield, Town of	Searsport Water District
Oxford County	Searsport, Town of
Oxford, Town of	Skowhegan, Town of
Paris Utility District	Somerset County
Paris, Town of	South Berwick Sewer District
Penobscot County	South Berwick Water District
Penquis	South Berwick, Town of
Phippsburg, Town of	South Portland Housing Authority
Piscataquis County	South Portland, City of
Pittsfield, Town of	Southwest Harbor, Town of
Pleasant Pt. Passamaquoddy Reservation Housing Authority	St. Agatha, Town of
Poland, Town of	Thomaston, Town of
Portland Housing Authority	Thompson Free Library
Portland Public Library	Topsham Sewer District
Portland, City of	Topsham, Town of
Princeton, Town of	Trenton, Town of
Regional School Unit No. 1	Union, Town of
Regional School Unit No. 2	United Technologies Center, Region 4
Regional School Unit No. 4	Van Buren Housing Authority
Regional School Unit No. 5	Van Buren, Town of
Regional School Unit No. 9	Vassalboro, Town of
Regional School Unit No. 10	Veazie Fire and Police
Regional School Unit No. 16	Waldo County
Regional School Unit No. 20	Waldo County Technical Center
	Waldoboro, Town of
	Washburn Water and Sewer District

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**PARTICIPATING EMPLOYERS, DETAILED LISTING** *(concluded)*

**CONSOLIDATED PLDs** *(concluded)*

Washburn, Town of  
Washington County  
Waterboro, Town of  
Waterville Fire and Police  
Waterville Sewerage District  
Wells Fire and Police  
Wells, Town of  
West Bath, Town of  
Westbrook Fire and Police  
Westbrook Housing Authority  
Westbrook, City of  
Wilton, Town of  
Windham, Town of  
Winslow, Town of  
Winter Harbor Utility District  
Winterport Water District  
Winthrop Utilities District  
Winthrop, Town of  
Wiscasset, Town of  
Yarmouth Water District  
Yarmouth, Town of  
York County  
York Sewer District  
York Water District  
York, Town of

**PROGRAM:** PARTICIPATING LOCAL DISTRICT  
RETIREMENT PROGRAM  
**Employers:** PLDs (Non-Consolidated)  
**Reporting Entities:** (as follows)

Bingham Water District  
Bridgton, Town of  
Cape Elizabeth, Town of  
Community School District No. 903  
Fort Kent, Town of  
Knox County  
Limestone Water and Sewer District  
Milo, Town of  
New Canada, Town of  
Presque Isle, City of  
Western Maine Community Action





**MainePERS**  
PUBLIC EMPLOYEES RETIREMENT SYSTEM