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# 2 0 1 6

## Maine Public Employees Retirement System

### **Comprehensive Annual Financial Report**

For the Fiscal Year Ended June 30, 2016



Maine



#### **Maine Public Employees Retirement System**

A Component Unit of the State of Maine

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

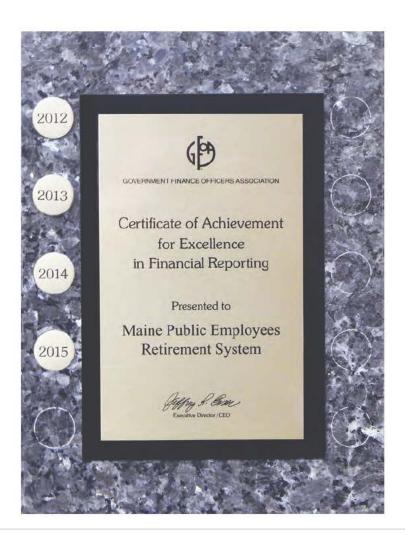
## Comprehensive Annual Financial Report

For the fiscal year ended June 30, 2016

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."

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. We respect the environment by printing on recycled paper and using soy-based inks—for a cleaner, healthier planet.

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Public Pension Coordinating Council

#### **Recognition Award for Funding** 2016

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 Helinble Alan H Winkle

Program Administrator

### **MainePERS Comprehensive Annual Financial Report**

For the fiscal year ended June 30, 2016

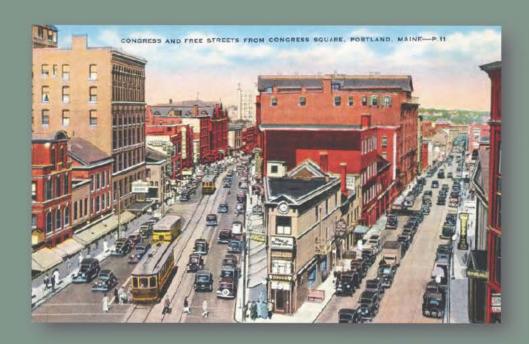
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## INTRODUCTORY SECTION



Portland





Retirement System



Brian H. Noyes, Chair

**BOARD OF TRUSTEES** 

Benedetto Viola, Vice Chair Shirrin L. Blaisdell Philip A. Brookhouse Terry Hayes, State Treasurer, ex-officio Peter M. Leslie Richard T Metivier Kenneth L. Williams

Sandra J. Matheson, Executive Director

#### LETTER OF TRANSMITTAL

#### December 22, 2016

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, 2016. 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 (Berry Dunn), has issued an unmodified opinion on the Maine PERS' financial statements. as of and for the year ended June 30, 2016. 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) 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 managed 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 twelve 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 their surviving spouses, 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 equation provides that, over the long term, contributions plus investment earnings must be equal to benefits. While investment market performance affects plan funding requirements, it does not directly affect benefits owed in the future.

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.





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 since the mid-1980s until 2008. High negative investment returns in fiscal years 2008 and 2009 adversely affected the funding ratio. Fiscal years 2010 and 2011 experienced strong investment returns, and in combination with changes to plan provisions, the funding ratio improved. Break-even returns in fiscal year 2012, combined with increased deductions for benefits, contributed to a modest decrease in the funding ratio that year. Strong investment returns in fiscal years 2013 and 2014 contributed to an increase in funding ratio to 77.6 percent and 81.3 percent, respectively. In fiscal year 2015, the funding level of the plan increased slightly to 82.2 percent. Although investment returns were lower than expected, the Plan experienced an actuarial gain in liability which contributed to this increase in overall funding level. As of the end of fiscal year 2016, the funding level of the plan had dropped to 80.4 percent. Weak returns during the period were the primary driver of the reduction. In addition, changes in actuarial assumptions adopted as a result of an actuarial experience study contributed to this decline in funding ratio.

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 as of June 30, 2015 the funded ratio was 96.9 percent. The funded ratio of this plan increased to 100.9 percent as of June 30, 2016. This was largely due to a transfer in assets attributable to past service for members who moved into this plan from another MainePERS administered plan.

The funded ratio of the Legislative Retirement Program has been above 100 percent for many years, and continues to be this year. As of June 30, 2016, the funded ratio was 148.5 percent, compared to 148.4 percent at June 30, 2015 and 143.6 percent at June 30, 2014.

The funded ratio of the Participating Local District Consolidated Retirement Plan was 86.1 percent as of June 30, 2016. This compares to 89.4 percent as of June 30, 2015 and 88.4 percent as of June 30, 2014. 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, had 74 participating employers with 1,034 participants at June 30, 2016. This program provides 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 focal point 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 programs had a return of .6% while the group life insurance program had a return of .9% for fiscal year 2016. Total value of the defined benefit portfolio decreased to \$12.3 billion at June 30, 2016 from \$12.6 billion at June 30, 2015. This decrease in the total value of the portfolio is due to a combination of low earnings and negative cash flow experienced by the defined benefit programs.



The current target asset allocation was last modified in December 2012 to increase investments in alternative strategies such as private equity, infrastructure, real estate, and natural resources.

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 contributions and/or investment earnings.

#### HIGHLIGHTS OF THE PAST YEAR

In the fall of 2014, we began the implementation phase of a new version of the integrated pension benefits information and operating system which was first put into operation in fiscal year 2012. This project continued throughout this past year and is expected to be complete in the winter of 2017. The new system will provide for more robust reporting capabilities as well as the introduction of a member self-service portal for active members and retirees.

#### **ACKNOWLEDGEMENTS**

We are pleased to acknowledge that for the twelfth 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 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 2016 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 retirement programs that cover State employees, the State's public school teachers, judges, legislators, and employees of the 295 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 System members and for the employees of a few PLDs for whom MainePERS administers only the Group Life Insurance Program. The System also administers defined contribution plans for some PLD employees.

#### **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. 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 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 exofficio. 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 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 2015 and 2016 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 carrying out 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 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 MainePERS 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. 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 the normal cost employer 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 normal cost employer 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.





#### Appendix A to Letter of Transmittal

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 2016 is 12 years, requiring full payment of the UAAL by the end of FY 2028.

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 in the actuarial valuation for each program.

#### **Financial Reporting**

Total operating expenses for staff and all other costs of operations, with the exception of certain investment related expenses required by law to be paid directly from investments, 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. 67, Financial Reporting for Pension Plans, GASB Statement No. 34, Basic Financial Statements - Management's Discussion and Analysis for State and Local Governments, and, with respect to the Group Life Insurance Program, GASB Statement No. 43, 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. This program focuses on a plan of in-depth audits of internal controls in all of the departments at 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, BerryDunn, has conducted an audit of the financial statements in accordance with, as stated in its audit report, United States generally accepted auditing standards and including those tests and procedures BerryDunn 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 and 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, 2016

#### **BOARD OF TRUSTEES**

Brian H. Noyes, *Chair* Appointed by the Governor

Benedetto Viola, Vice Chair Elected by the Maine State Employees Association

Richard Metivier Appointed by the Maine Municipal Association

Shirrin L. Blaisdell Appointed by the Governor from a List of Retired State and PLD

**Employees Nominated by Retirees** 

Kenneth L. Williams Elected by the Maine Education Association

Peter M. Leslie Appointed by the Governor

Terry Hayes, State Treasurer Ex-Officio Member

Phil Brookhouse Appointed by the Governor from a List of Nominees Submitted by

the Maine Education Association - Retired

#### SENIOR ADMINISTRATIVE STAFF

Sandra J. Matheson Executive Director

Michael J. Colleran General Counsel

Andrew H. Sawyer, CFA, CAIA 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

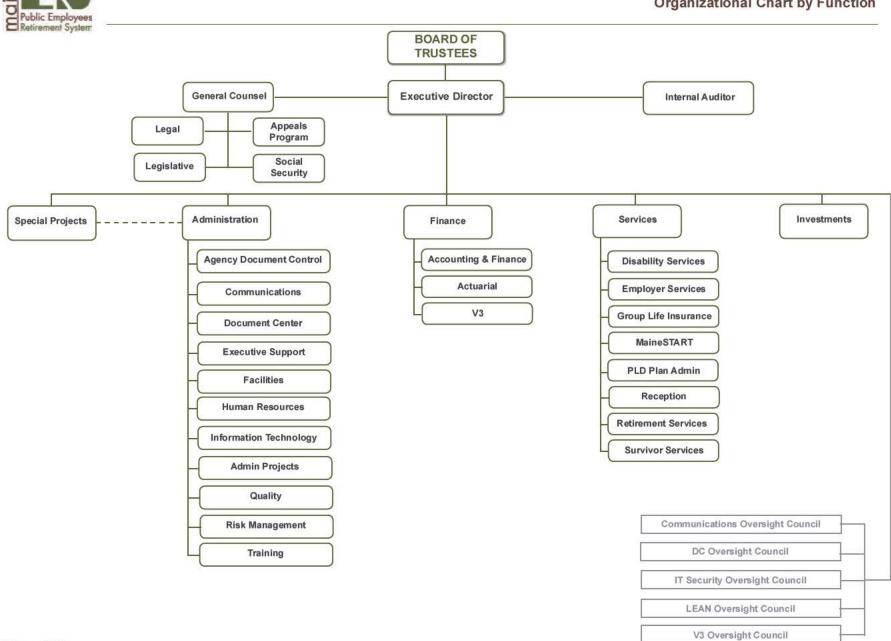
Auditors: BerryDunn

Internal Auditor: Randal L. Lloyd

See page 79 for a list of professional investment management firms.

#### **Organizational Chart by Function**

INTRODUCTORY SECTION





#### 2016 Legislative Update

### LEGISLATION ENACTED IN THE SECOND REGULAR SESSION OF THE 127<sup>TH</sup> LEGISLATURE

## An Act to Amend the Laws Governing Participating Local Districts in the Maine Public Employees Retirement System

PL 2015, c. 384 [L.D. 995] Effective Date: July 29, 2016

This law establishes how MainePERS membership issues are decided and addressed for participating local district employees whose plan participation is optional.

## An Act to Amend the Laws Pertaining to the Maine Public Employees Retirement System

PL 2015, c. 385 [L.D. 1021] Effective Date: March 6, 2016

This law primarily makes technical corrections. It also includes a change for members who retire from State employment on or after July 1, 2015 and whose retirement benefit would increase if lost wages due to frozen merit increases in fiscal year 2012 were included in the calculation of the retirement benefit. It permits members to elect to include the lost wages if they pay the associated back contributions and interest. Similar lost wages in other fiscal years are already treated in this manner, and this bill corrects an oversight that unintentionally excluded fiscal year 2012.

An Act to Allow Members of the State Employee and Teacher Retirement Program to
Reapply for Disability Retirement Benefits after Denial and To Direct the Board of Trustees of
the Maine Public Employees Retirement System To Explore the Feasibility of Offering Long-term
Disability Insurance Coverage

PL 2015, c. 392 [L.D. 1463] Effective Date: July 29, 2016

This law clarifies, but does not change, the terms under which a member who has been denied disability retirement benefits may reapply for benefits. The law also authorizes MainePERS to study the feasibility of offering a long-term disability insurance program.

continued on next page



#### 2016 Legislative Update

(concluded)

Resolve. Directing the Department of Administrative and Financial Services and the Maine
Public Employees Retirement System to Identify Retirees Whose Retirement Benefit Calculations
Were Adversely Affected by Certain Pay Freezes and To Calculate Costs Associated with
Authorizing Those Retirees To Include Such Lost Wages in Retirement Benefit Calculations

Resolve, c. 78 [L.D. 1677] Effective Date: April 15, 2016

This law directs the Department of Administrative and Financial Services and MainePERS to identify pre-July 1, 2015 retirees whose retirement benefit would increase if lost wages due to frozen merit increases in fiscal years 2012 and 2013 were included in the calculation of the retirement benefit, and to calculate the projected costs associated with permitting those increases. The information required by this law will be reported to the Legislature in January 2017 for further consideration.



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## FINANCIAL SECTION



Augusta





#### 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, 2016 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, 2016, and the changes in its fiduciary net position for the year then ended, in accordance with U.S. generally accepted accounting principles.

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CTION

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.

#### Other 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 relate 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.

#### Report on Summarized Comparative Information

The basic financial statements of the System as of and for the year ended June 30, 2015 were audited by other auditors whose report dated October 30, 2015, expressed an unmodified opinion on those statements. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2015 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 31, 2016 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 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 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 31, 2016



#### 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, 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. In addition, the System reports a Group Life Insurance Plan covering state employees (including judges and legislators), teachers, and participating employees of the PLD Plan, 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 comparative 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 comparative values reported for the previous fiscal year. The System reports the State Employee and Teacher Retirement Plan, the Judicial Plan, the Legislative Plan, the PLD Consolidated Plan, the PLD Agent Plan, the Defined Contribution Plans, the Group Life Insurance (GLI) Plan, the MainePERS OPEB Trust and the Retiree Health Insurance Trust 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 multiple-employer cost sharing defined benefit retirement plan administered by the System. In addition, the Schedules show summary information regarding each Plan's net position for the years presented. The Schedules also present each Plan's net pension liability as a percentage of the covered payroll of all members.

The Schedules of Employer Contributions (Required Supplementary Information) present the actuarially determined contributions for each multiple-employer cost sharing plan and compares them to actual employer contributions for the period presented. It also provides 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 the defined benefit plans for each year presented.

The Schedule of Funding Progress for the Group Life Insurance Plan (Required Supplementary Information) compares the actuarial value of plan assets with actuarial liabilities, as of actuarial valuation dates over a period of six years, and presents the unfunded actuarial accrued liability (UAAL). The Schedule also presents the actuarial funded ratio and the UAAL as a percentage of covered payroll of all participants.

The Schedule of Employer Contributions for the Group Life Insurance Plan (Required Supplementary Information) presents the annual required contributions as defined by GASB for all employers participating in the MainePERS group life insurance plan and compares them to actual employer contributions, over a period of six years. It also provides the percentage of the required to actual contributions for each year.





(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, 2016, 2015, and 2014:

#### Condensed Comparative Statements of Fiduciary Net Position

(Dollar Values Expressed in Millions)

	Jun	e 30, 2016	June 30, 2015		Jun	June 30, 2014	
Cash and Receivables	\$	65.8	\$	109.5	\$	55.2	
Investments at Fair Value		12,716.4		13,030.8		13,179.7	
Collateral on Loaned Securities		108.4		148.1		253.9	
Other Assets		7.4		9.2		8.7	
Total Assets	\$	12,898.0	\$	13,297.6	\$	13,497.5	
Investment Management Fees Payable	\$	10.7	\$	10.8	\$	8.3	
Other Liabilities		122.9		211.3		273.2	
Total Liabilities	\$	133.6	\$	222.1	\$	281.5	
Fiduciary Net Position - Held in Trust	\$	12,764.4	\$	13,075.5	\$	13,216.0	

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

(Dollar Values Expressed in Millions)

		e 30, 2016	June 30, 2015		June 30, 2014	
ADDITIONS:		:417		14		217
Member Contributions	\$	175.8	\$	169.6	\$	163.2
Employer Contributions		262.5		227.6		205.3
Non-Employer Contributing Entities Contributions		112.4		147.3		142.3
Net Investment and Other Income		54.6		248.9		1,943.5
Transfers from Other Plans		6.6		(2)		1
Total Additions	\$	611.9	\$	793.4	\$	2,454.3
DEDUCTIONS:						
Benefits	\$	879.9	\$	850.7	\$	805.9
Other		43.1		83.2		42.6
Total Deductions	\$	923.0	\$	933.9	\$	848.5
Net Increase (Decrease)	\$	(311.1)	\$	(140.5)	\$	1,605.8
Fiduciary Net Position - Held in Trust, Beginning of Year	\$	13,075.5	\$	13,216.0	\$	11,610.2
Fiduciary Net Position - Held in Trust, End of Year	\$	12,764.4	\$	13,075.5	\$	13,216.0

#### Fiduciary Net Position

The Fiduciary Net Position of the System decreased in fiscal year 2016 by \$311.1 million (2.4%) from the prior year's Fiduciary Net Position. While there was an expected increase in employer contributions for the year, income from investment activities was down significantly from prior years due to the low return environment. Net income from investment activities was \$54.6 million in fiscal year 2016 compared to \$248.9 million in fiscal year 2015.



(continued)

Comparatively, the Fiduciary Net Position of the System decreased in fiscal year 2015 by \$140.5 million (1%) from the prior year's Fiduciary Net Position. While there was an expected increase in employer contributions for the year, income from investment activities was down significantly from prior years due to the low return environment. Net income from investment activities was \$248.9 million in fiscal year 2015 compared to \$1,943.5 million in fiscal year 2014.

#### Assets

Investments at Fair Value decreased by \$314.4 million (2.4%) in fiscal year 2016. This decrease in Investments at Fair Value combined with a decrease of \$39.7 million in cash collateral on loaned securities and a decrease in cash of \$43.7 million contributed to a decrease in total assets of \$399.6 million during the fiscal year. The System records the cash collateral it holds due to its securities lending activity as an asset and corresponding liability. Total securities lending activity decreased by \$128 million (43%) due to a decreased utilization rate for domestic equities; however, non-cash collateral is not recorded in total assets on the System's financial statements.

Comparatively, Investments at Fair Value decreased by \$149 million (1%) in fiscal year 2015. This decrease in Investments at Fair Value combined with a decrease of \$106 million in cash collateral on loaned securities and an increase in cash of \$54 million contributed to a decrease in total assets of \$200 million during the fiscal year. The increase in cash at fiscal year-end was in anticipation of a one-time disbursement in System assets of approximately \$41 million. The System records the cash collateral it holds due to its securities lending activity as an asset and corresponding liability. Total securities lending activity actually increased by \$41 million (16%) due to an increased utilization rate for domestic equities; however, non-cash collateral is not recorded in total assets on the System's financial statements.

#### 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. The System records the cash collateral it holds due to its securities lending activity as an asset and corresponding liability. On June 30, 2016, total loans outstanding in the securities lending program were \$108.4 million.

Trades outstanding at June 30, 2015 totaled \$0.6 million. At June 30, 2014 trades outstanding totaled \$0.1 million. On June 30, 2015 and 2014, the total loans outstanding in the securities lending program were \$148.1 million and \$253.9 million, respectively.

#### Additions to Fiduciary Net Position

Additions to Fiduciary Net Position during fiscal year 2016 totaled \$611.9 million compared to additions of \$793.4 million to Fiduciary Net Position in fiscal year 2015. This was largely due to the fact that investment income net of fees and other deductions decreased by \$194.3 million. The decrease in investment income is primarily attributable to weak performance in the public equity markets.

Additions to Fiduciary Net Position during fiscal year 2015 totaled \$793.4 million compared to additions of \$2,454.3 million to Fiduciary Net Position in fiscal year 2014 This was largely due to the fact that investment income net of fees and other deductions decreased by \$1,694.6 million. The decrease in investment income is primarily attributable to smaller increases in the public markets.

#### Pension Contributions

The State's contributions on behalf of State employees totaled \$144.1 million, \$116.6 million, and \$109.6 million for fiscal years 2016, 2015, and 2014, respectively. The State's contributions on behalf of teachers totaled \$112.5 million, \$147.3 million, and \$142.3 million, for fiscal years 2016, 2015, and 2014, respectively. The State's contribution on behalf of judges totaled \$1.1 million, \$951.4 thousand, and \$932.2 thousand, for fiscal years 2016, 2015, and 2014, respectively. Based on the funding methodology used and considering the funded status of the Maine Legislative Retirement Plan, no employer contribution on behalf of Legislators was required in fiscal years 2016, 2015 or 2014.

The balance of employer contributions reported is from Participating Local District (PLD) employers. For PLDs in the Consolidated Plan, the range of employer contributions as a percent of earnable compensation in fiscal year 2016 was 4.4% to 14%; for fiscal year 2015 the range was 4% to 13.4%; and for fiscal year 2014 the range was 3.4% to 12.8%. The Consolidated Plan's funded status and established funding approach results in employers of the Consolidated Plan currently paying less than what the true normal cost would otherwise require. The employer rates have been incrementally increased over the past three years to reach a contribution rate closer to true normal cost.





(continued)

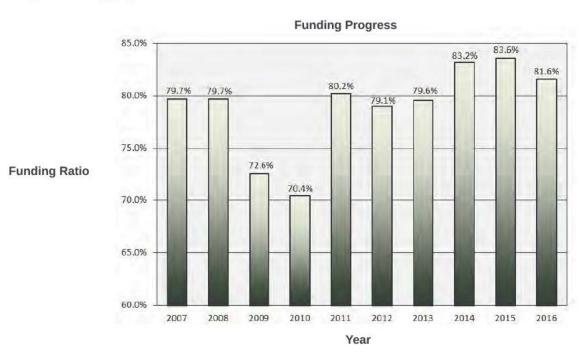
Member and employer data, contribution and benefit data for the 12 non-consolidated PLDs are specific to each PLD and are obtainable from the System.

#### Deductions from Fiduciary Net Position

Total deductions from Fiduciary Net Position restricted for benefits during fiscal year 2016 decreased by \$10.9 million (1.2%). The fiscal year 2016 decrease 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, offset by the absence of a one-time refund of plan assets previously held in closed plans which was reflected in the 2015 deductions in the amount of \$41 million. Benefit payments in fiscal year 2016 exceeded contributions by \$329.2 million. Contributions totaled \$550.7 million, and benefit payments totaled \$879.9 million.

Total deductions from Fiduciary Net Position restricted for benefits during fiscal year 2015 increased by \$85 million (10%). The fiscal year 2015 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. In addition, a one-time refund of plan assets previously held in closed plans was reflected in the amount of \$41 million. Benefit payments in fiscal year 2015 exceeded contributions by \$306 million. Contributions totaled \$545 million, and benefit payments totaled \$851 million.

#### System Funding Status - Aggregate



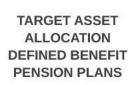
At June 30, 2016, the State/Teacher, Judicial, Legislative and PLD defined benefit plans were actuarially funded at 81.6%, a decrease from the actuarial funding level of 83.6% at June 30, 2015. As illustrated in the chart, the actuarial funded ratio of the System was flat between 2006 and 2007 at 79.7%. This was followed by two consecutive significant declines in 2009 to 72.6% and in 2010 to 70.4%. The 2009 decline was due primarily to low returns in the investment market downturn. In 2010, investment markets and returns improved, although not enough to offset the prior years' investment declines. Significant improvement in investment returns in 2011, combined with a decrease in the overall unfunded liabilities of the plan resulting from changes in assumptions adopted following the completion of an experience study in 2011, pushed the funding level to a high of 80.2% 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.

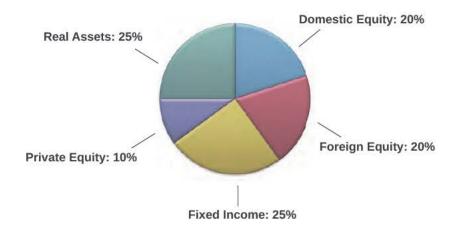


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#### Investments

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





The System's investment portfolio is invested across five asset classes: publicly traded domestic equity, publicly traded foreign equity, private equity, fixed income, and real assets. Publicly traded derivative securities are used in some portfolios to emulate one or more of the asset classes. The investment policy established by the System's Board of Trustees in 2012 assigned strategic target allocations for these asset classes, as show in the above chart. Real assets include infrastructure (10%), real estate (10%), and natural resources (5%).

Investments of the Group Life Insurance Plan and the Retiree Health Insurance Trust are invested separately from the assets of the defined benefit retirement plans. These target allocations for these assets are domestic equity (45%), foreign equity (25%), fixed income (25%), and real estate (5%).

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, 2016, total fair value of assets in these portfolios (together with the amounts otherwise managed) was \$12.7 billion. The total fair value of assets as of June 30, 2015 and June 30, 2014, respectively, was \$13.0 billion and \$13.2 billion. The investment return, net of all fees, for the fiscal year ended June 30, 2016 was 0.6%. The investment return for the fiscal years ended June 30, 2015 and June 30, 2014, respectively, was 2.0% and 16.7%. Investment returns in fiscal year 2016 were less than in fiscal year 2015, due primarily to weaker performance in the public equity markets. Over the five, ten and thirty year periods ended June 30, 2016, the average annual investment return for the total fund was 6.0%, 5.2%, and 7.9%, respectively.

#### System Membership - Aggregate

The following membership counts are derived from actuarial valuation data:

	2016	2015	% Change
Current active participants:			
Vested and nonvested	51,221	51,145	0.1%
Terminated participants			
Vested	10,140	9,768	3.8%
Inactives Due Refunds	44,615	43,267	3.1%
Retirees and beneficiaries receiving benefits	43,448	42,258	2.8%
Total Membership	149,424	146,438	2.0%





(concluded)

The number of active State employees at June 30, 2016 in the Regular and Special plans was 12,890, an increase of 74 from June 30, 2015. The number of Teachers at June 30, 2016 was 27,052, a decrease of 148 from June 30, 2015. Membership for judges was 62, an increase of 6 from the previous year. Membership for Legislators was 177, a decrease of 3 from June 30, 2015. Total active membership in the PLD Consolidated Plan and the 12 non-consolidated plans at June 30, 2016 was 11,040, an increase of 147 from June 30, 2015.

#### Group Life Insurance Plan

The Group Life Insurance Plan provides 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. The following summarized data, stated in millions, is derived from actuarial valuation data for the Group Life Insurance Plan:

	9	2016	3	2015	2014
Actuarial Value of Assets	\$	97.4	\$	95.6	\$ 92.1
Actuarial Liability		200.5	9	194.5	 186.7
Unfunded Actuarial Liability	\$	103.1	\$	98.9	\$ 94.6

#### **Defined Contribution Plans**

The Section 401(a), Section 457, and Section 403(b) Plans administered by the System's Board of Trustees 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 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 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, 2016, the Fiduciary Net Position Held in Trust for the Fund was \$203,088,334.

#### Currently Known Facts, Decisions, or Conditions

The System conducted an experience study for each of the plans administered by the System in 2016. An experience study is a summarization of actual experience over a defined period of time and is used as a guide in setting future actuarial assumptions. The experience study covered the period of June 30, 2012 through June 30, 2015 and addressed both economic and demographic assumptions. The System's consulting actuary made several recommendations for changes in actuarial assumptions as a result of this work, and the System's Board of Trustees adopted those recommendations effective with the actuarial valuation as of June 30, 2016, the results of which are reflected in the System's basic financial statements and related disclosures.

As previously reported, the System is upgrading its current benefits administration system. The initial project was expected to take 25 months and the final implementation is scheduled to take place in the coming fiscal year.

#### 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, 2016 With Summarized Information as of June 30, 2015

Assets:		State mployee and eacher Plan	}	Judicial Plan		Legislative Plan		PLD Consolidated Plan
Cash and cash equivalents (note 3)	\$	29,056,683	\$	178,587	\$	47,125	\$	944,257
Investments at fair value (note 3):	-	20,000,000	1000	110,001	*	11,1223		0.1,201
Common equity securities	2	2,068,110,046	3	12,663,720		2,244,334	29	489,690,490
Common/collective trusts	5	5,127,672,113		31,398,427		5,564,602	1,	214,138,616
Mutual funds		205,632,109		1,259,153		223,154		48,689,908
Partnerships	_2	2,522,150,236	9	15,443,958	-	2,737,063	. 1	597,198,871
Total investments	9	9,923,564,504	9	60,765,258		10,769,153	2,	349,717,885
Receivables:								
Contributions and								
premiums (notes 6 and 7)		16,586,941		529		<del></del>		9,846,147
Accrued interest and dividends		2,420,966		14,824		2,627		573,240
Due from brokers for securities sold	39	167,416	56	1,025	ş) <del>-</del>	182	19 <del>.</del>	39,641
Total receivables		19,175,323		16,378		2,809		10,459,028
Collateral on loaned securities (note 5)		86,969,098		532,540		94,380		20,592,686
Capital assets, net of accumulated								
depreciation	₹ <u>2</u>	5,910,760	% <u> </u>	36,194	(A <u>-</u>	6,414	<u> </u>	1,399,559
Total assets	10	0,064,676,368	(	61,528,957		10,919,881	2,	383,113,415
Liabilities:								
Accounts payable		5,420,430		33,191		5,882		1,283,458
Due to brokers for securities purchased		_		==		-7		-0
Other liabilities		3,398,630		20,811		3,688		804,733
Accrued investment management fees		8,542,103		52,306		9,270		2,022,613
Obligations under securities lending activities (note 5)	ş <del>.</del>	86,969,098	58 <del></del>	532,540	13 <del>-</del>	94,380	× <del>-</del>	20,592,686
Total liabilities	( <u>)</u>	104,330,261	8 <u>-</u>	638,848	0 <u>11</u>	113,220	( <u>-</u>	24,703,490
Fiduciary net position – held in trust	\$_9	9,960,346,107	\$_(	60,890,109	\$_	10,806,661	\$ <u>2</u> ,	358,409,925

See accompanying notes.





## STATEMENT OF FIDUCIARY NET POSITION June 30, 2016 With Summarized Information as of June 30, 2015

	PLD ent Plan	Group Life Insurance Plar	Defined Contribution Plans	MainePERS OPEB Trust	Retiree Health Insurance <u>Trust Fund</u>	2016 <u>Total</u>	2015 Summarized
\$	75,963	\$ 906,446	\$ 8,780	\$ -	\$ -	\$ 31,217,841	\$ 73,033,015
17, 8,	,985,812 ,320,624 694,599 ,519,502	97,890,263 - - - 97,890,263	29,079,466 - - 29,079,466	11,946,655 - - - 11,946,655	199,151,593 - - - 199,151,593	2,579,694,402 6,734,162,359 256,498,923 3,146,049,630 12,716,405,314	3,092,986,776 7,616,262,396 263,621,165 2,057,973,782 13,030,844,119
8-	83,949 8,178 566	752,214 	60,305	(E)	4,000,000	31,330,085 3,019,835 208,830	30,295,389 5,450,107 774,182
	92,693	752,214	60,305	5 <u>22</u>	4,000,000	34,558,750	36,519,678
	293,771	0 <del>-</del> 0	3-	-	-	108,482,475	148,124,858
82	19,966	,	<u> </u>	<u>. 42</u>	<u> </u>	7,372,893	9,135,883
34,	,002,930	99,548,923	29,148,551	11,946,655	203,151,593	12,898,037,273	13,297,657,553
	18,310	28,196	3-			6,789,467	47,302,094
	-	_	_	-	-	-	623,396
	11,480	2,053,743	6,411	1,303,498	33,168	7,636,162	15,218,458
	28,854	15,285	<u>~_</u>	1,730	30,091	10,702,252	10,848,870
ē <del>.</del>	293,771	a	<u>:</u>	<del>- 150</del>	<del>3                                    </del>	108,482,475	148,124,858
82	352,415	2,097,224	6,411	1,305,228	63,259	133,610,356	222,117,676
\$ <u>33</u> ,	650,515	\$ <u>97,451,699</u>	\$ <u>29,142,140</u>	\$ <u>10,641,427</u>	\$ <u>203,088,334</u>	\$ <u>12,764,426,917</u>	\$ <u>13,075,539,877</u>



## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION Year Ended June 30, 2016

With Summarized Information for the Year Ended June 30, 2015

Additions:	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan
Investment income:				
From investing activities:				
Net appreciation in the fair			_	_
value of plan investments	\$ 50,530,456	\$ 150,2		\$ 12,489,426
Interest	282,938	1,5		66,879
Dividends	49,389,946	302,4		11,694,632
Less: investment expenses	(61,027,608)	(333,2		20 30 W W 70
Net income from investing activities	39,175,732	121,0	13 46,408	9,877,128
From securities lending activities:				
Securities lending income	619,877	3,7	96 673	146,776
Securities lending expenses:				
Borrower rebates refunded	986,032	6,0	38 1,070	233,474
Management fees	(240,882)	(1,4	75) (261)	(57,036)
Total securities lending expenses	745,150	4,5	63 809	176,438
Net income from securities lending				
activities	1,365,027	8,3	591,482	323,214
Total investment income	40,540,759	129,3	72 47,890	10,200,342
Contributions and premiums (notes 6 and 7):				
Members	125,523,987	549,8	45 137,893	40,861,405
Employers	199,212,719	1,077,5	45 –	47,624,182
Non-employer contributing entities	112,477,836		3) =2	
Transfers from other plans	5,149	6,342,0	10 –	O -30 N
The second secon				,
Total contributions and premiums	437,219,691	7,969,4	00 137,893	88,485,587
Total additions	477,760,450	8,098,7	72 185,783	98,685,929
Deductions:				
Benefits paid, net	727,717,178	3,501,9	11 367,545	134,834,445
Refunds and withdrawals	16,806,566	3,301,5	- 77,786	5,085,235
Transfers to other plans			- 11,100	
(일) 이 회사인하다 전략 2명이 되었어요? 및 경기인의 및 경기의 특별하다 2명이 제한다고 보고	6,347,159	_		217,338
Claims processing expenses (note 7) Administrative expenses	0.640.004	47.5	77 0.050	0.000.004
1.	8,649,031	47,5		2,028,294
Total deductions	759,519,934	3,549,4	88 454,684	142,165,312
Net (decrease) increase in fiduciary net position	(281,759,484)	4,549,2	84 (268,901)	(43,479,383)
Fiduciary net position – held in trust, beginning of year	10,242,105,591	56,340,8	<u> 11,075,562</u>	2,401,889,308
Fiduciary net position – held in trust, end of year	\$ <u>9,960,346,107</u>	\$ 60,890,1	09 \$ 10,806,661	\$ <u>2,358,409,925</u>

See accompanying notes.



#### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION Year Ended June 30, 2016

With Summarized Information for the Year Ended June 30, 2015

PLD Agent Plan	Group Life Insurance Plan	Defined Contribution <u>Plans</u>	MainePERS OPEB Trust	Retiree Health Insurance <u>Trust Fund</u>	2016 <u>Total</u>	2015 Summarized
\$ 148,733 959 166,833 (208,740 107,785	1,534 3 – (57,877)	\$ 266,317 55 - (39,430) 226,942	\$ 143,468 - - (6,390) 137,078	\$ 2,447,943 - - (59,694) 2,388,249	\$ 67,136,205 354,259 61,607,440 (76,172,851) 52,925,053	\$ 168,511,205 252,332 132,923,200 (54,919,703) 246,767,034
2,094	p ==	7 <u>—</u> 8	<u> </u>	82	773,216	603,150
3,331 (814 2,517	<u> </u>		<u>-</u>	; <del>-</del>	1,229,945 (300,468) 929,477	1,942,392 (381,789) 1,560,603
4,611	₹ <del></del> -	( <del>- 8–8</del> )	(S	<del>2 -</del>	1,702,693	2,163,753
112,396	844,718	226,942	137,078	2,388,249	54,627,746	248,930,787
83,614 783,608 - - - 867,222	8,149,231	3,628,460 47,768 - 217,338 3,893,566	6,768 - - - 6,768	5,584,992 - - 5,584,992	175,757,556 262,486,813 112,477,836 6,564,497 557,286,702	169,555,836 227,590,115 147,283,716 5,355 544,435,022
979,618	13,966,301	4,120,508	143,846	7,973,241	611,914,448	793,365,809
2,779,624 - - - 29,962 2,809,586	983,816 635,444	1,866,147 - 92,220 	275,081 - - - - - - 275,081	- - - - 5,354 5,354	879,928,788 23,835,734 6,564,497 1,076,036 11,622,353 923,027,408	850,649,003 70,200,718 5,355 818,901 12,201,989 933,875,966
(1,829,968	3) 1,894,037	1,944,803	(131,235)	7,967,887	(311,112,960)	(140,510,157)
35,480,483	95,557,662	27,197,337	_10,772,662	_195,120,447	13,075,539,877	13,216,050,034
\$_33,650,515	\$ 97,451,699	\$_29,142,140	\$ <u>10,641,427</u>	\$ <u>203,088,334</u>	\$ <u>12,764,426,917</u>	\$13,075,539,877



#### NOTES TO FINANCIAL STATEMENTS June 30, 2016 and 2015

#### 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 295 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 System's Board of Trustees 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 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 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 System's Board of Trustees, in its fiduciary capacity, establishes the System's investment policies and oversees their overall implementation. The System administers five defined benefit pension plans including 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 actuarial valuations for each pension plan. Additional information regarding each plan can be found in Note 6 of this report.

#### Group Life Insurance Plan

The Group Life Insurance Plan was 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 Group Life Insurance Plan. Generally, benefit plan provisions can only be amended through statutory change. Employees are eligible for coverage under the Plan, subject to their membership in one or more of the aforementioned eligible employment classes and any other conditions of eligibility that the Board of Trustees of the System 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 System's Board of Trustees, in its fiduciary capacity, establishes the System's investment policies and oversees their overall implementation. The System maintains separate reserves and accounts for each of the employment classes and a biennial actuarial valuation for the plan is performed that provides separate data for each of the five classes. 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, 2016 were calculated as part of a full actuarial valuation.





#### NOTES TO FINANCIAL STATEMENTS

June 30, 2016 and 2015 continued

At June 30, 2016, the Group Life Insurance participant counts are as follows:

	32	Group Life Insurance Participants							
	State	Teachers	<u>Judges</u>	<u>Legislators</u>	PLD	Total			
Actives	11,702	14,045	61	1990	5,416	31,224			
Retirees	8,487	7,003	_40	11	2,671	18,212			
	20,189	21,048	101	11	8,087	49,436			

#### 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, 2016, participation in the defined contribution plans was as follows:

	401(a) Plan	457 Plan	403(b) Plan
Employers	9	64	1
Participants	74	582	378

Investments in the Defined Contribution Plans are individually directed and controlled by plan participants.

#### 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.

#### 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, 2015, from which the summarized information was derived.



#### NOTES TO FINANCIAL STATEMENTS

#### June 30, 2016 and 2015 continued

#### Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America 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. 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.

Net 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 and Refunds and Withdrawals

Pension and group life insurance benefits and contributions and premium refunds 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. All other assets managed by the System are invested separately from the assets of the defined benefit pension 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.





#### NOTES TO FINANCIAL STATEMENTS

#### June 30, 2016 and 2015 continued

#### 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, with a small percentage of contributions from select employers.

#### Risks and Uncertainties

The System makes investments in accordance with the Board of Trustees' 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 statement of fiduciary net position and the statement of changes in fiduciary net position.

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 of Trustees 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 of Trustees, on recommendation of its actuary, determines such a study to be necessary for actuarial soundness or prudent administration.

#### New Accounting Pronouncements

The System adopted Governmental Accounting Standards Board (GASB) Statement No. 72, Fair Value Measurement and Application for the year ended June 30, 2016. This statement addresses financial reporting and accounting issues related to fair value measurements. Adopting this statement required additional note disclosures related to fair value. The additional disclosures can be found in Note 3.

The System adopted GASB Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68 and Amendments to Certain Provisions of GASB Statements 67 and 68 for the year ended June 30, 2016. This statement establishes requirements for pensions that are not within the scope of GASB Statement No. 68 and clarifies certain provisions of GASB Statement Nos. 67 and 68. The adoption of this statement had no impact on the System's financial statements.

The System adopted GASB Statement No. 82 Pension Issues - an amendment of GASB Statements No. 67 No. 68 and No. 73 for the year ended June 30, 2016. This Statement provides clarification to address specific implementation issues encountered with the implementation of GASB Statement Nos. 67 and 68. The adoption of this statement had no impact on the System's financial statements.



June 30, 2016 and 2015 continued

In June 2015, GASB issued Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*. The objective of this statement is to improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. For defined benefit OPEB plans that are administered through trusts that meet the specified criteria, this statement requires two financial statements - a statement of fiduciary net position and a statement of changes in fiduciary net position. In addition, certain note disclosures and required supplemental information will be presented. This statement also requires the net OPEB liability to be measured as the total OPEB liability, less the amount of the OPEB plan's fiduciary net position. This statement establishes requirements for pensions that are not within the scope of GASB Statement No. 68 and clarifies certain provisions of GASB Statement Nos. 67 and 68. This statement is effective for financial statements for fiscal years beginning after June 15, 2016. Earlier application is encouraged. The System is currently evaluating the impact this guidance will have on its financial statements.

In June 2015, GASB issued Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. This statement establishes requirements for governments providing postemployment benefits other than pensions to recognize their long-term obligation for those benefits. The statement is effective with financial statements beginning after June 15, 2017. The System is currently evaluating the impact this guidance will have on its financial statements.

In December 2015, GASB issued Statement No. 78, Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans. This statement amends GASB Statement No. 68 to exclude pensions provided to employees of state or local governmental employers through certain cost-sharing multiple-employer defined benefit pension plans meeting the requirements in the statement. The statement is effective with financial statements for fiscal years beginning after December 15, 2015. Earlier application is encouraged. The System is currently evaluating the impact this guidance will have on its financial statements.

### 3. Cash and Cash Equivalents and Investments

The Board of Trustees 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: US equities (20%), non-US equities (20%), private equity (10%), fixed income (25%), and real assets (25%). Within real assets, the allocation is further defined to include: real estate (10%), infrastructure (10%), and natural resources (5%).

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.

The System's aggregate custodial credit risk exposure for cash and investments at June 30 is summarized in the table below:

Exposed to Custodial Credit Risk	2016	2015
(uninsured and uncollateralized) Not Exposed to Custodial Credit Risk	\$ 12,747,623,155	\$ 370,921 13,103,506,213
Total Fair Value	\$ <u>12,747,623,155</u>	\$ <u>13,103,877,134</u>





### June 30, 2016 and 2015 continued

Amounts 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:

	2016	2015
Cash and Cash Equivalents Investments	\$ 31,217,841 12,716,405,314	\$ 73,033,015 13,030,844,119
Total Fair Value	\$ <u>12,747,623,155</u>	\$ <u>13,103,877,134</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 for the fiscal years ended June 30:

Moody's Quality Rating	<u>2016</u>	2015
Aaa	\$ 2,186,860,834	\$ 2,258,487,65
Aa1	S=6	11,072,08
Aa2	141,299,351	171,592,76
A2	351,015,152	328,891,52
Baa1	364,982,883	285,436,17
Baa2	30,266,873	11,599,33
Ba2	20-30 20-30 20-30	15,026,40
Total credit risk debt	\$_3,074,425,093(1)	\$ 3,082,105,93

- (1) Includes direct investments in debt securities held by the System as well as debt securities underlying investments in common/collective trusts and mutual funds. In 2016, the amount included from common/collective trusts is \$3,036,463,253; the amount included from mutual funds is \$37,961,840.
- (2) Includes direct investments in debt securities held by the System as well as debt securities underlying investments in common/collective trusts and mutual funds. In 2015, the amount included from common/collective trusts is \$2,976,393,846; the amount included from mutual funds is \$105,712,087.

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.

Individual investments that constitute 5% or more of fiduciary net positon as of June 30, 2016 are as follows:

Pooled fixed income funds: BlackRock 0-5 Year TIPS

\$ 1,001,117,483

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



June 30, 2016 and 2015 continued

Capital Aggregate Index. The following table details the System's interest rate risk for its debt investments at June 30, 2016, using the segmented time distribution method. Maturities are based on the weighted average maturities of underlying investments in the common/collective trusts and mutual funds.

					Maturitie	es as of June 30, 201	16		
		Fair		Less than		1 to 6		6 to 10	10+
Investment Type		Value		1 Year		Years		Years	Years
Common/									
Collective Trusts	\$	3,036,463,253	\$	212,552,428	S	2,156,648,025	\$	382,442,547	\$ 284,820,253
Mutual Funds	8	37,961,840	\$ <u></u>	22,315,406	8	<u> </u>	2	15,646,434	 A CONTRACTOR OF THE CONTRACTOR
Total	\$	3,074,425,093	S	234,867,834	S	2,156,648,025	\$	398,088,981	\$ 284,820,253

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 or may not 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.





June 30, 2016 and 2015 continued

The System's direct and indirect exposure to foreign currency risk in U.S. dollars as of June 30, 2016 is highlighted in the following table:

Currency	Total	
Australian Dollar	\$ 130,374,433	
Brazilian Real	41,822,921	
Canadian Dollar	174,689,260	
Swiss Franc	164,403,463	
Chilean Peso	7,109,318	
Chinese Yuan Renminbi	401,024	
Columbian Peso	2,811,436	
Czech Koruna	1,001,317	
Danish Krone	35,835,539	
Egyptian Pound	1,218,666	
Euro	666,010,664	
British Pound Sterling	15,927,464	
Hong Kong Dollar	175,275,244	
Hungarian Forint	1,610,100	
India Rupee	48,479,612	
Indonesian Rupiah	15,670,230	
New Israeli Shekel	10,733,625	
Japanese Yen	418,518,013	
South Korean Won	84,731,606	
Mexican Peso	23,735,422	
Malaysian Ringgit	17,187,070	
Norwegian Krone	11,072,556	
New Zealand Dollar	3,574,717	
Philipine Peso	9,174,417	
Polish Zloty	6,492,564	
Qatar Rival	5,219,308	
Russian Ruble	13,761,500	
Swedish Krona	50,140,289	
Singapore Dollar	27,901,972	
Thai Baht	13,009,653	
Turkish Lira	7,779,403	
New Taiwan Dollar	70,090,451	
South African Rand	42,333,533	
United Arab Emirates Dirham	5,173,456	
United Kingdom Pound Sterling	355,503,254	
Total	\$ 2,658,773,500	

The System has entered into contracts to invest in common/collective trusts and partnerships with a focus on private equity, infrastructure, opportunistic and real estate investment strategies. As of June 30, 2016, the value of these investments is approximately \$3.2 billion and the remaining funding commitment is approximately \$2.7 billion.



June 30, 2016 and 2015 continued

For the year ended June 30, 2016, the annual money-weighted rate of return on all defined benefit plan investments, net of pension plan investment expense, was .48%. 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 accounting principles generally accepted in the United States of America. 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 as of June 30, 2016:

GASB 72 Disclosure			Fair Value Measurements Using					
		June 30, 2016		Level 1		Level 2		Level 3
nvestments by fair value level Common Equity Securities	\$	2,579,694,402	\$	2,579,694,402	\$	T.	\$	
Common/Collective Trusts		6,286,086,523		(#)		6,286,086,523		
Mutual Funds		256,498,923		256,498,923		2		
Collateral from loaned securities		108,482,475		786	***	108,482,475		
Total investments by fair value level	\$	9,230,762,323	\$	2,836,193,325	\$	6,394,568,998	\$	:
nvestments measured at the net asset value (N	IAV)							
Infrastructure funds	\$	840,844,251						
Natural Resources		399,141,834						
Private Equity		1,034,685,633						
Real estate funds (1)		1,319,453,748						
Total investments measured at the NAV	\$	3,594,125,466						
Total investments measured at fair value	\$	12,824,887,789						

### Equity and Fixed Income Securities

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 equity and fixed income securities which are valued using prices quoted in active markets for those securities.

The fair value method for investments measured at net asset value (NAV) per share (or its equivalent) is presented in the following table:

nvestments Measured at the NAV				Unfunded
		Fair Value	9	Commitments
Infrastructure funds (1)	S	840,844,251	\$	949,445,198
Natural Resources (2)		399,141,834		241,284,960
Private Equity (3)		1,034,685,633		1,597,629,668
Real estate funds (4)		1,319,453,748		361,800,352
Total investments measured at the NAV	s	3,594,125,466	S	3,150,160,178





### June 30, 2016 and 2015 continued

- (1) 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.
- (2) 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.
- (3) 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.
- (4) 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 (CMOs), 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.

Interest rate risk is the risk that fixed income securities and derivatives will decline in value because of changes in interest rates.

Credit risk is the risk that an issuer or guarantor of a fixed income security or derivative is unable or unwilling to make timely principal payments and/or interest payments.

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 Board approval 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 interest rate risk, 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.



June 30, 2016 and 2015 continued

Custodial credit risk is the risk that in the event of a financial institution failure, the System's investments may not be returned to it. Derivative securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either the counterparty or the counterparty's trust department or agent but not in the System's name.

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.

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 derivative investments as of June 30, 2016 or during the year then ended. The following table details the System's aggregate derivative investments activity during the year ended June 30, 2015. All changes in fair value are reported in net appreciation in fair value of plan investments in 2015.

	2015 Change	Fair Value at Jui	ne 30, 2015	June 30, 2015 Notional
	in Fair Value	Classification	<u>Amount</u>	Amount
Investment derivatives:				
Futures:				
Equity Index Futures Contracts	\$ <u>(95,310)</u>	Investments	\$	\$

### 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, 2016 and 2015.

Cash collateral is invested in a short-term investment account which had an interest sensitivity of 10 and 15 days as of June 30, 2016 and 2015, 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 2016 and 2015, 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.





### June 30, 2016 and 2015 continued

Custodial credit risk is the risk that the System's securities are not returned due to 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 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, 2016 and 2015, 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.

Aggregate securities on loan by asset class are as follows:

	2016	2015
Domestic equity securities on loan	\$ <u>168,693,689</u>	\$ <u>294,427,309</u>
Aggregate securities lending collateral: Short-term investment collateral pool Noncash collateral (debt and equity securities, at fair value)	\$ 108,482,475 64,728,274	\$ 148,124,858 153,361,711
Total collateral	\$ <u>173,210,749</u>	\$ <u>301,486,569</u>
Collateral ratio	<u>102 7</u> %	<u>102 4</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, 2016 there were 236 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>2016</u>	2015
Current participants: Vested and non-vested	39,942	40,016
Terminated participants: Vested	7,783	7,511
Inactive due refunds	37,656	36,810
Retirees and beneficiaries receiving benefits	34,181	_33,260
	119,562	_117,597



### June 30, 2016 and 2015 continued

### 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>2016</u>	<u>2015</u>
Current participants:		
Vested and non-vested	62	56
Terminated participants:		
Vested	2	3
Inactive due refunds	1	1
Retirees and beneficiaries receiving benefits	74	71
	<u>139</u>	_131

### 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>2016</u>	2015
Current participants:		
Vested and non-vested	177	180
Terminated participants:		
Vested	121	127
Inactive due refunds	107	115
Retirees and beneficiaries receiving benefits	_174	_170
	<u>579</u>	592

### Participating Local District 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, 2016 there were 283 employers participating in the plan.

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

	<u>2016</u>	2015
Current participants:		
Vested and non-vested	11,019	10,870
Terminated participants:		
Vested	2,221	2,112
Inactive due refunds	6,849	6,341
Retirees and beneficiaries receiving benefits	8,847	8,581
	_28,936	27,904





June 30, 2016 and 2015 continued

### 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, 2016 there were 12 employers in the plan.

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

	<u>2016</u>	<u>2015</u>
Current participants:		
Vested and non-vested	21	23
Terminated participants:		
Vested	13	15
Inactive due refunds	2	323
Retirees and beneficiaries receiving benefits	172	176
		_214

### 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 System's Board of Trustees and is currently 5.0%.

### **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.



### June 30, 2016 and 2015 continued

### Net Pension Liability - State Employee and Teacher Plan Employers

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, 2016, were as follows:

Total pension liability Plan fiduciary net position	\$ 13,069.9 
Net pension liability	\$ <u>3,109 6</u>
Plan fiduciary net position as a percentage of the total pension liability	76.2%

### Net Pension Liability - Judicial Plan

The components of the net pension liability of the State of Maine for the Judicial Plan, stated in millions of dollars as of June 30, 2016, were as follows:

Total pension liability	\$	63.7
Plan fiduciary net position	-	60.9
Net pension liability	\$_	28
Plan fiduciary net position as a percentage of the total pension liability		95.6%

### Net Pension Liability - Legislative Plan

The components of the net pension liability of the State of Maine for the Legislative Plan, stated in millions of dollars as of June 30, 2016, were as follows:

Total pension liability Plan fiduciary net position	\$ 7.7 
Net pension asset	\$ <u>(3.1</u> )
Plan fiduciary net position as a percentage of the total pension liability	140.7%

### Net Pension Liability - PLD Consolidated Plan Employers

The components of the net pension liability of the PLD Consolidated Plan participating employers, stated in millions of dollars as of June 30, 2016, were as follows:

Total pension liability	\$ 2,889.7
Plan fiduciary net position	2,358.4
Net pension liability	\$ <u>531.3</u>
Plan fiduciary net position as a percentage of the total pension liability	81.6%

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.





### June 30, 2016 and 2015 continued

### Actuarial Methods and Assumptions

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 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, 2016 was 12 years. All other gains, losses, and changes are amortized over ten-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 total pension liability was determined by an actuarial valuation as of June 30, 2016, 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, 2015, except as noted.

	State Employee & Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan	
Investment Rate of Return		compounded a year ending J	annually; 7.125% wa une 30, 2015	s used	
Inflation Rate	2.75%; 3.50% was used for the year ended June 30, 2015				
	For th	e year ended J	une 30, 2016:		
Annual Salary Increases,	State employees, 2.75% - 8.75%; Teachers, 2.75% - 14.50%	2.75%	2.75% - 9.00%		
including inflation	For the	e year ending J	une 30, 2015:		
	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%; 2.55% was used for the year ending June 30, 2015				
	For the year ended June 30, 2016:				
	For active members and non-disabled plans, the RP2014 Total Dataset Heal For all recipients of disability benefits, for n	thy Annuitant M	ortality Table, for ma tal Dataset Disabled	ales and females, is used.	
Mortality Rates	For the year ended June 30, 2015:				
	For active members and non-disabled retirees of the State employees, 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 201 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.				



June 30, 2016 and 2015 continued

The actuarial assumptions used in the June 30, 2016 were based on the results of an actuarial experience study for the period of June 30, 2012 to June 30, 2015. The actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period of July 1, 2005 to June 30, 2010.

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, 2016 are summarized in the following table:

	Long-Term Expected
Asset Class	Real Rate of Return
US equities	5.7%
Non-US equities	5.5
Private equity	7.6
Real assets	
Real estate	5.2
Infrastructure	5.3
Hard assets	5.0
Fixed income	2.9

### Discount Rate

The discount rate used to measure the total pension liability for each of the Defined Benefit Plans was 6.875%. 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 Defined Benefit 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 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 6.875%, as well as what the net pension liability would be if it were calculated using a discount rate of one percentage point lower (5.875%) or one percentage point higher (7.875%) than the current rate:

	1% Decrease	Current Rate	1% Increase
	(5.875%)	(6.875%)	<u>(7.875%</u> )
Net Pension Liability/(Asset):			
State Employee and Teacher Plan	\$ 4,714,339,826	\$ 3,109,608,841	\$ 1,768,100,312
Judicial Plan	8,732,452	2,831,162	(2,285,911
Legislative Plan	(2,359,862)	(3,127,203)	(3,774,964
PLD Consolidated Plan	881,913,266	531,330,709	201,269,751

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.





### June 30, 2016 and 2015 continued

### 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 \$257.3 million and \$263.8 million, and for judges in the total amount of \$1.1 million and \$1.0 million, for the years ended June 30, 2016 and 2015, respectively. There were no contributions due from the State of Maine on behalf of legislators in 2016 or 2015. In the fiscal year ended June 30, 2015, a contribution of \$9.8 million from the State of Maine to fund a one-time, non-cumulative cost-of-living-adjustment payment for eligible state employees, judges, legislators, and teachers is included. There was no contribution for this purpose in the fiscal year ended June 30, 2016.

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 unfunded actuarial accrued liability 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 2016 and 2015 are as follows.

Contribution Rates <sup>(1)</sup> (effect	ive July 1 through June 30 of each fisca	l year)
	2016	2015
State:		
Employees <sup>(2)</sup>	7.65 - 8.65%	7.65 - 8.65%
Employer <sup>(2)</sup>	21.64 - 41.59%	18.43 – 41.05%
Teachers:		
Employees	7.65%	7.65%
Employer	2.65%	2.65%
Non-employer entity	10.02%	13.03%
Judges:		
Employees	7.65%	7.65%
Employer	14.99%	13.24%
Legislative:		
Employees	7.65%	7.65%
Employer	0.00%	0.00%
Participating local districts:		
Employees <sup>(2)</sup>	4.0 - 9.0%	3.5 - 8.5%
Employers <sup>(2)</sup>	4.4 – 14.0%	4.0 - 13.4%

<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.



June 30, 2016 and 2015 continued

### 7. Group Life Insurance Plan

### Plan Description

The Group Life Insurance Plan is a cost-sharing multiple-employer defined benefit OPEB plan. Group Life Insurance Plan coverage is available to eligible participants and includes basic insurance which consists 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 plan.

The Group Life Insurance Plan provides 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. Eligible employment classes include retirees who were State employees, Teachers, and members of the Judiciary and the Legislature. Group Life Insurance benefits are also provided to the retired employees of PLDs who elect to participate in the Group Life Insurance Plan. At June 30, 2016, the employees of the State of Maine, the Judiciary, and the Legislature, as well as 230 school districts and 163 PLDs, were participating in the Group Life Insurance Plan.

### **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 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. Employers of 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.

### Annual Required Contribution

The annual required contributions and contributions made for all employment classes are as follows:

Year Ended	Annual Required Contribution	Annual Contribution
2016	\$ 9,200,000	\$ 8,149,231
2015	8,900,000	8,250,204
2014	9,018,298	7,950,385

### Funded Status and Funding Progress

The funded status of the plan, stated in millions of dollars, as of June 30, 2016 was as follows:

Actuarial accrued liability (AAL) Actuarial value of plan assets	\$	200.5 97.4
Unfunded actuarial accrued liability (UAAL)	\$	103.1
Funded ratio (actuarial value of plan assets/AAL) Covered payroll (active plan members)	\$	48.6% 1,537.6
UAAL as a percentage of covered payroll	Φ	6.7%





June 30, 2016 and 2015 continued

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 Funding Progress, presented as Required Supplementary Information immediately following the Notes to Financial Statements, presents 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.

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 2016 and June 30, 2015 are as follows:

	State Employees, including judges and legislators	Teachers	PLD Employees									
Investment Rate of Return	6.875% per annum, compounded annu	ally; 7.125% was used for the	year ended June 30, 2015									
Inflation Rate	2.75%; 3.50% was u	2.75%; 3.50% was used for the year ended June 30, 2015										
Annual Salary Increases,	For the year ended June 30, 2016:											
including inflation	2.75% - 8.75%	2.75% - 14.50%	2.75% - 9.00%									
	For the y	ear ended June 30, 2015:										
	3.50% - 10.50%	3.50% - 13.50%	3.50% - 9.50%									
Mortality Rates	For the y	ear ended June 30, 2016:	<u> </u>									
	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.											
	For the y	ear ended June 30, 2015:										
	For active members and non-disabled replans, the RP2000 Tables projected forwatwo years for these employees of the teach Ruling 96-7 Disabled Mor	ard to 2015 using Scale AA are	used; the ages are set back isability benefits, the Revenu									
Participation Rate for Future Retirees	100% 0	f those currently enrolled										
Conversion Charges	Apply to the cost of active gro	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, 2016, there were 21 years remaining in the amortization schedule for state employees and teachers, and 14 years remaining for PLD employees.



### June 30, 2016 and 2015 continued

### 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 \$.63 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 \$7.8 and \$7.9 million, respectively, for the years ended June 30, 2016 and 2015.

### 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.

### 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 \$983,616 and \$818,901 for the years ended June 30, 2016 and 2015, respectively, and are listed as claims processing expenses in the basic financial statements.

### 8. Defined Contribution Plans

The Defined Contribution Plans are funded by participants through voluntary deferrals of compensation into the plan, within the limits of plan provisions, and by employer contributions made into the Plan on behalf of employees. 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.

### 9. 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 are employees of the System and who retire from the System. Contributions are made to the Trust on an annual basis in an amount equal to the actuarially determined contribution amount.

### 10. Retiree Health Investment Trust Fund

The Maine State Legislature established the Retiree Health Insurance Post Employment Investment Trust (Investment Trust Fund) as an irrevocable trust for the sole purpose of holding and investing 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. The effective date of the establishment of the Investment Trust Fund was July 1, 2007. The assets in the Investment Trust Fund are unrelated to and not available to pay benefits for any plan administered by the System.





### June 30, 2016 and 2015 concluded

### 11. 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 must be funded over a period of not more than ten years. In addition, the amendment requires the use of actuarially sound current cost accounting, reinforcing existing statutory requirements.

### 12. 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 7.5% of their annual covered salaries. The System is required to contribute at the contribution rate established by the Board of Trustees under the actuarial valuation of the PLD Consolidated Plan. The contribution rate was 8.9% of annual covered payroll for 2016, 7.8% of annual covered payroll for 2015, and 6.5% of annual covered payroll for 2014.

The employer contributions on behalf of its employees, equal to the required contribution, were \$551,360, \$487,021 and \$369,870 for 2016, 2015 and 2014, 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 2016, 2015, and 2014 fiscal years. The total premiums the System paid on behalf of its active employees, equal to the required contributions, were \$31,261, \$31,849 and \$29,530 for 2016, 2015, and 2014, 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. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.

The total contributions for retiree health insurance coverage, equal to the required contributions, were \$0 for each year 2016, 2015, and 2014. The OPEB liability for this plan is immaterial and the Plan's assets exceed its actuarial liability at June 30, 2016 and 2015. 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 required contributions, were \$6,768, \$5,730 and \$6,108, for 2016, 2015, and 2014, respectively. The OPEB liability for this plan is immaterial.

### 13. 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.



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

June 30, 2016 (UNAUDITED)

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

war was		2016		2015		2014
Total pension liability Service cost	\$	202 207 052	æ.	101 E00 640	\$	106 076 754
Interest	Ф	203,297,053 882,785,134	\$	191,528,649 861,682,508	Ф	186,376,754 842,229,062
Changes of benefit terms		002,703,134		9,778,106		042,229,002
Differences between expected		<u>™</u>		9,770,100		
and actual experience		81,506,700		(44,287,643)		(17,694,276)
Changes of assumptions		30,436,605		(-1,201,010)		167,650,573
Benefit payments, including refunds		00,100,000				101,000,010
of member contributions	26-	(744,357,598)	E)	(722,573,349)	; <u>-</u>	(689,053,212)
Net change in total pension liability		453,667,894		296,128,271		489,508,901
Total pension liability, beginning		12,616,287,054	87	12,320,158,783		11,830,649,882
Total pension liability, ending (a)	\$	13,069,954,948	\$	12,616,287,054	\$_	12,320,158,783
Plan fiduciary net position						
Contributions – members	\$	125,523,987	\$	123,528,807	\$	121,033,152
Contributions – employers		199,212,719		173,935,492		162,920,147
Contributions – non-employer						
contributing entities		112,477,836		147,283,716		142,303,104
Investment income		40,540,759		191,829,057		1,517,432,345
Benefits paid, including refunds						
and withdrawals		(744,523,744)		(722,724,258)		(689,191,030)
Administrative expenses		(8,649,031)		(9,386,695)		(8,246,740)
Other	20-	(6,342,010)	£ <del>}</del>	722	<u> </u>	
Net change in fiduciary net position		(281,759,484)		(95,533,881)		1,246,250,978
Plan fiduciary net position, beginning	32	10,242,105,591	87	10,337,639,472	-	9,091,388,494
Plan fiduciary net position, ending (b)	\$_	9,960,346,107	\$	10,242,105,591	\$_	10,337,639,472
Plan's net pension liability, ending (a)-(b)	\$_	3,109,608,841	\$_	2,374,181,463	\$_	1,982,519,311
Plan fiduciary net position as a percentage of the total pension liability		76.21%		81.18%		83.91%
Covered employee payroll	\$	1,816,435,084	\$	1,699,160,889	\$	1,676,857,294
Plan net pension liability as a percentage of covered-employee payroll		171.19%		139.73%		118.23%

See notes to historical pension information.

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





# SCHEDULE OF HISTORICAL PENSION INFORMATION JUDICIAL PLAN

June 30, 2016 (UNAUDITED)

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

Tatal annulus Babillas		<u>2016</u>		2015		2014
Total pension liability Service cost Interest Changes of benefit terms	\$	1,396,704 4,154,433 2,016,584	\$	1,605,751 3,863,455 27,931	\$	1,530,119 3,773,959
Differences between expected and actual experience Changes of assumptions Benefit payments, including refunds		(1,745,956) 2,489,800		2,237,833 -		(324,891) 426,150
of member contributions	87	(3,501,911)	8f <u></u>	(3,383,995)	<u> 27 -                                  </u>	(3,219,480)
Net change in total pension liability Total pension liability, beginning	<u> </u>	4,809,654 58,911,617	18	4,350,975 54,560,642	42	2,185,857 52,373,785
Total pension liability, ending (a)	\$	63,721,271	\$	58,911,617	\$	54,560,642
Plan fiduciary net position Contributions – members Contributions – employers Investment income Benefits paid, including refunds	\$	549,845 1,077,545 129,372	\$	549,691 979,281 1,055,346	\$	528,192 932,223 8,416,042
and withdrawals Administrative expenses Other	8 <del>7</del>	(3,501,911) (47,577) 6,342,010	8 <del>.</del>	(3,383,995) (49,399) —	£	(3,219,480) (41,680)
Net change in fiduciary net position Plan fiduciary net position, beginning	5	4,549,284 56,340,825	8	(849,076) 57,189,901	70 <del>1</del>	6,615,297 50,574,604
Plan fiduciary net position, ending (b)	\$	60,890,109	\$	56,340,825	\$	57,189,901
Plan's net pension liability (asset), ending (a)-(b)	\$	2,831,162	\$	2,570,792	\$	(2,629,259)
Plan fiduciary net position as a percentage of the total pension liability		95.56%		95.64%		104.82%
Covered employee payroll	\$	7,188,426	\$	7,185,501	\$	6,742,444
Plan net pension liability (asset) as a percentage of covered-employee payroll		39.39%		35.78%		(39.00)%

See notes to historical pension information.

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



# SCHEDULE OF HISTORICAL PENSION INFORMATION LEGISLATIVE PLAN

June 30, 2016 (UNAUDITED)

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

		2016		2015		2014
Total pension liability						
Service cost	\$	411,624	\$	451,393	\$	400,072
Interest		547,268		544,526		510,813
Changes of benefit terms		9 <u>22</u>		4,418		<u> </u>
Differences between expected						
and actual experience		(245,867)		(508,125)		(46,483)
Changes of assumptions		(146,529)		(50		85,783
Benefit payments, including refunds						
of member contributions	y <del>-</del>	(445,331)	10	(439,112)	·	(317,606)
Net change in total pension liability		121,165		53,100		632,579
Total pension liability, beginning	9 <u>9</u>	7,558,293	65	7,505,193	12	6,872,614
Total pancian liability anding (a)	\$	7 670 450	ď	7 550 000	¢.	7 FOE 102
Total pension liability, ending (a)	Φ	7,679,458	Φ	7,558,293	Φ	7,505,193
Plan fiduciary net position						
Contributions – members	\$	137,893	\$	193,356	\$	139,501
Contributions – employers		(T)		4,418		3,857
Investment income		47,890		206,454		1,622,206
Benefits paid, including refunds						
and withdrawals		(445,331)		(439,112)		(317,606)
Administrative expenses	35	(9,353)	8.	(9,584)		(7,975)
Net change in fiduciary net position		(268,901)		(44,468)		1,440,073
Plan fiduciary net position, beginning	N <del></del>	11,075,562	129	11,120,030	19	9,679,957
Plan fiduciary net position, ending (b)	•	10,806,661	4	11,075,562	Φ	11,120,030
rian indiciary fiet position, chaing (b)	Ψ	10,000,001	Ψ	11,070,002	Ψ	11,120,000
Plan's net pension asset, ending (a)-(b)	\$	(3,127,203)	\$	(3,517,269)	\$	(3,614,837)
Plan fiduciary net position as a percentage						
of the total pension liability		140.72%		146.54%		148.16%
Covered employee payroll	\$	2,590,011	\$	2,527,525	\$	2,534,740
Plan net pension asset as a percentage						
of covered-employee payroll		(120.74)%		(139.16)%		(142.61)%

See notes to historical pension information.

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





# SCHEDULE OF HISTORICAL PENSION INFORMATION PLD CONSOLIDATED PLAN

June 30, 2016 (UNAUDITED)

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

Total nancian liability		2016		2015		2014
Total pension liability Service cost	\$	74,208,414	\$	75,805,492	\$	72,651,025
Interest	Ф	192,774,429	Ф	187,928,503	Ф	178,293,576
Differences between expected		192,774,429		107,920,303		170,293,370
and actual experience		(9,142,757)		(54,634,905)		19,939,857
Changes of assumptions		50,884,219		37,593,598		19,959,057
Benefit payments, including refunds		30,004,219		37,330,330		100
of member contributions		(139,919,680)		(135,414,526)		(127,161,357)
of member contributions	∯ <u></u>	(103,313,000)	_	(100,414,020)	13-	(127,101,007)
Net change in total pension liability		168,804,625		111,278,162		143,723,101
Total pension liability, beginning		2,720,936,007		2,609,657,845		2,465,934,744
rota, portolori nabinoj, pogiminoj	10	Liteologogiagi		Zioooiooi io io	1/2	Li iodiod ili ili
Total pension liability, ending (a)	\$	2,889,740,632	\$_	2,720,936,007	\$_	2,609,657,845
, 3()	100.	<del></del>	-	<del> iver cit u - i - ci - ci - ci - ci</del> - iii. iii		
Plan fiduciary net position						
Contributions – members	\$	40,861,405	\$	37,202,921	\$	33,210,510
Contributions – employers		47,624,182		43,366,730		32,706,160
Refunds of IUUAL account						
balances		× <del>-</del> 4.		(43,000,526)		
Investment income		10,200,342		46,075,304		361,125,177
Benefits paid, including refunds						
and withdrawals		(139,919,680)		(135,414,526)		(127,161,358)
Administrative expenses		(2,028,294)		(2,117,266)		(1,779,304)
Other	- 02	(217,338)			95	
Net change in fiduciary net position		(43,479,383)		(53,887,363)		298,101,185
Plan fiduciary net position, beginning	73 <u>.</u>	2,401,889,308		2,455,776,671	7	2,157,675,486
Plan fiduciary net position, ending (b)	\$	2,358,409,925	\$	2,401,889,308	\$_	2,455,776,671
Plan's net pension liability, ending (a)-(b)	\$	531,330,709	\$	319,046,699	\$_	153,881,174
DI ELL L						
Plan fiduciary net position as a percentage		04.0404		00.070/		0.4.4007
of the total pension liability		81.61%		88.27%		94.10%
Covered employee payroll	\$	521,870,235	\$	497,616,846	\$	460,029,637
Covered employee payroll	Φ	521,010,255	Φ	457,010,040	Ф	400,023,037
Plan net pension liability as a percentage						
of covered-employee payroll		101.81%		64.11%		33.45%
s. ss. sida dilipid/so pa/ioli		101.0170		51,1170		55.1070

See notes to historical pension information.

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

# SCHEDULE OF HISTORICAL PENSION INFORMATION STATE EMPLOYEE AND TEACHER PLAN

June 30, 2016 (UNAUDITED)

# SCHEDULE OF EMPLOYER CONTRIBUTIONS Last Ten Fiscal Years

A studyially data rasing d	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	\$301,891,511	\$302,028,725	\$304,328,386	\$263,553,204	\$252,019,252	\$327,087,524	\$317,030,874	\$318,844,303	\$304,149,938	\$302,161,554
Contributions in relation to the actuarially determined contribution	301,891,511	302,028,725	304,328,386	263,533,204	252,019,252	332,956,361	<u>328,246,031</u>	318,844,303	304,149,938	302,161,554
Contribution deficiency (excess)	\$	\$	\$		\$	\$ <u>(5 868 837</u> )	\$ <u>(11 215 157</u> )	\$	\$	\$
Covered-employee payroll	\$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	\$1,699,885,710	\$1,619,705,846	\$1,586,436,561
Contributions as a percentage of covered- employee payroll	16.62%	17.78%	18.15%	15.75%	14.67%	20.26%	19.63%	18.76%	18.78%	6 19.05%

See notes to historical pension information.

# SCHEDULE OF HISTORICAL PENSION INFORMATION JUDICIAL PLAN

June 30, 2016 (UNAUDITED)

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Last Ten Fiscal Years

Actuarially determined	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
contribution	\$ 1,077,545	\$ 951,351	\$ 932,223	\$ 841,397	\$ 810,721	\$ 987,261	\$ 961,083	\$ 1,267,869	\$ 1,211,358	\$ 914,220
Contributions in relation to the actuarially determined contribution	1,077,545	951,351	932,223	841,397	810,721	987,261	961,083	1,267,869	1,211,358	914,220
Contribution deficiency (excess)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Covered-employee payroll	\$ 7,188,426	\$ 7,185,501	\$ 6,742,444	\$ 6,742,444	\$ 6,790,274	\$ 6,790,233	\$ 6,956,364	\$ 6,718,453	\$ 6,461,343	\$ 6,611,028
Contributions as a percentage of covered- employee payroll	14.99%	13.24%	13.83%	12.48%	11.94%	14.54%	13.82%	18.87%	18.75%	13.83%

See notes to historical pension information.

# SCHEDULE OF HISTORICAL PENSION INFORMATION LEGISLATIVE PLAN

June 30, 2016 (UNAUDITED)

### SCHEDULE OF EMPLOYER CONTRIBUTIONS Last Ten Fiscal Years

Actuarially determined	2	2016	2	2015	2	014	2	2013	2	012	2	2011		2010	4	2009	4	2008	200	07
contribution	\$		\$	-8	\$	-31	\$	=1	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Contributions in relation to the actuarially determined contribution	<u> </u>	-:	<u> </u>	:	g <sub>i</sub>		Œ.	<del></del>	3 <u>75</u>		25		47	<del></del>	(S		(S		æ	
Contribution deficiency (excess)	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
Covered-employee payroll	\$2,59	90,011	\$2,52	27,525	\$2,53	4,740	\$2,5	34,740	\$2,42	4,480	\$2,39	95,694	\$2,3	84,083	\$2,32	26,785	\$2,2	54,173	\$2,151	,925
Contributions as a percentage of covered- employee 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 information.

# SCHEDULE OF HISTORICAL PENSION INFORMATION PLD CONSOLIDATED PLAN

June 30, 2016 (UNAUDITED)

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Last Ten Fiscal Years

Actuarially determined	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
contribution	\$46,968,321	\$40,302,580	\$35,263,952	\$29,704,314	\$25,056,574	\$19,995,608	\$15,384,689	\$14,701,513	\$13,699,552	\$14,022,965
Contributions in relation to the actuarially determined contribution	1 46,968,321	40,302,580	35,263,952	29,704,314	25,372,687	19,995,608	15,384,689	14,701,513	13,699,552	14,292,405
Contribution deficiency (excess)	\$	\$	\$		\$ <u>(316,113</u> )	\$	\$	\$	\$	\$ <u>(269,440)</u>
Covered-employee payroll	\$521,870,235	\$497,616,846	\$460,029,637	\$458,424,764	\$474,828,262	\$435,012,940	\$395,747,663	\$380,541,135	\$360,693,816	\$342,528,740
Contributions as a percentage of covere employee payroll	d- 9.00%	6 8.10%	5 7.67%	6.48%	5.34%	6 4.60%	ó 3.89%	6 3.86%	6 3.80%	6 4.17%

See notes to historical pension information.



### SCHEDULE OF HISTORICAL PENSION INFORMATION ALL DEFINED BENEFIT PLANS

June 30, 2016 (UNAUDITED)

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

<u>2016</u> <u>2015</u> <u>2014</u>

Annual money-weighted rate of return, net of investment expenses

0.48% 1.98% 16.66%

See notes to historical pension information.

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





# SCHEDULE OF HISTORICAL PENSION INFORMATION GROUP LIFE INSURANCE PLAN

June 30, 2016 (UNAUDITED)

### SCHEDULE OF FUNDING PROGRESS Dollars in Millions

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Actuarial Accrued Liability (AAL) Entry Age	(b-a) Unfunded AAL (UAAL)	(a/b) Funded <u>Ratio</u>	(c) Annual Covered Payroll	((b-a)/c) UAAL as a Percentage of Covered Payroll
June 30, 2016	\$ 97.4	\$ 200.5	\$ 103.1	48.6%	\$ 1,537.6	6.7%
June 30, 2015	95.6	194.5	98.9	49.2	1,481.3	6.7
June 30, 2014	92.1	186.7	94.6	49.3	1,481.3	6.4
June 30, 2013	76.2	180.9	104.7	42.1	1,481.2	7.1
June 30, 2012	66.4	173.9	107.5	38.2	1,431.2	7.5
June 30, 2011	63.6	167.4	103.8	38.0	1,546.1	6.7

See notes to historical pension information.

See accompanying independent auditor's report.

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended:	Annual Required <u>Contribution</u>	Annual Contribution	Percentage Contributed
2016	\$ 9,200,000	\$ 8,149,231	88.6%
2015	8,900,000	8,250,204	92.7
2014	9,018,298	7,950,385	88.2
2013	8,955,065	7,138,693	79.7
2012	10,900,000	7,005,992	64.3
2011	8,200,000	6,836,808	83.4

See notes to historical pension information.



# NOTES TO HISTORICAL PENSION INFORMATION June 30, 2016 (UNAUDITED)

### 1. Basis of Presentation

The schedule of investment returns 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 Program are invested separately.

### 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, 2016, 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 11 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 Initial Unpooled Unfunded Actuarial Liabilities (IUUALs) of PLDs are amortized over periods established for each PLD separately. There were no additional, or excess, contributions in fiscal year 2016 to pay off individual IUUALs. 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 INFORMATION June 30, 2016 (UNAUDITED)

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 2016 are as follows:

	State Employee and Teacher Plan	Judicial Plan	Legislative Plan	PLD Consolidated Plan											
Investment Rate of Return	6.875% per annum, compounded an used for the perio	: 100mm : 100	sed for the period ended 4 for the PLD Consolidat	집안 450 1(2017년 1917년 1917년 1일 2017년 1일 1일 1일 1917년 1일											
Inflation Rate	2.75%; 3.50% was us	ed for the periods ende	ed June 30, 2015 and Ju	ne 30, 2014											
Annual Salary Increases, including inflation	For the period ended 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%; 2.55% was used for the period	ended June 30, 2015; for the PLD Consol		period ended June 30, 2014											
Mortality Rates		For the period ended 3	June 30, 2016:												
	For active members and non-disable RP2014 Total Dataset Healthy Annu disability benefits, the RP2014 Total D	itant Mortality Table, fo	or males and females, is	used. For all recipients of											
	For the pe	riods ended June 30, 2	2015 and June 30, 2014:												
	For active members and non-disabled retirees of the State employees, 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.														

The actuarial assumptions used in the June 30, 2016 were based on the results of an actuarial experience study for the period of June 30, 2012 to June 30, 2015. The actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period of July 1, 2005 to June 30, 2010.

### 3. Actuarial Methods and Assumptions - Group Life Insurance Plan

Many of the assumptions used to determine the actuarial liability in this plan are the same as for the Defined Benefit 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, 2016, 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.



# NOTES TO HISTORICAL PENSION INFORMATION June 30, 2016 (UNAUDITED)

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

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, 2016, there were 21 years remaining in the amortization schedule for state employees and teachers, and 14 years remaining for PLD employees.

Significant actuarial assumptions employed by the actuary for funding purposes as of June 30, 2016 are as follows:

	State Employees, including judges and legislators	Teachers	PLD Employees											
Investment Rate of Return	6.875% per annum, compounded annually 7.25% was used for the year ended													
Inflation Rate	2.75%; 3.50% was used for the year	ears ended June 30, 2015 an	d June 30, 2014											
Annual Salary Increases, including inflation	For the year ended June 30, 2016:													
	2.75% - 8.75%	2.75% - 14.50%	2.75% - 9.00%											
	For the years ended June 30, 2015 and June 30, 2014:													
	3.50% - 10.50%	3.50% - 13.50%	3.50% - 9.50%											
Mortality Rates	For the year ended June 30, 2016:													
	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.													
	For the years ended June 30, 2015 and June 30, 2014:													
	For active members and non-disabled retirees of the State employees, 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 these employees of the teacher plan. For all recipients of disability benefits, the Revenue Ruling 96-7 Disabled Mortality Table for Males and Females is used.													
	are set back two years for these employe	ees of the teacher plan. For a	AA are used; the ages Il recipients of disabilit											
Participation Rate for Future Retirees	are set back two years for these employed benefits, the Revenue Ruling 96-7 Disa	ees of the teacher plan. For a	AA are used; the ages Il recipients of disabilit											
	are set back two years for these employed benefits, the Revenue Ruling 96-7 Disa	ees of the teacher plan. For a bled Mortality Table for Males nose currently enrolled	AA are used; the ages Il recipients of disabilit and Females is used.											

# Maine

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES For the Year Ended June 30, 2016

Consultants:		State imployee d Teacher Plan	J	udicial Plan	Legislative Plan		Plan		PI	PLD Agent Plan		Group Life Insurance Plan		Defined Contri- bution Plans		MainePERS OPEB Trust		Retiree Health Insurance Trust Fund		<u>Total</u>
Cambridge Associates	\$	252,912	\$	1.381	\$	274	\$	59.568	\$	865	\$	-8	\$		\$		\$		\$	315,000
Cliffwater Infrastructure	Ф	40,145	Ф	219	Φ	43	9	9,455	Φ	137	Φ		Φ	-	Φ	-	Ф	-	Φ	49,999
Cliffwater – Private Equity		401,447		2,192		434		94,553		1,373		-0		S=35		1000		100		499,999
ORG – Real Estate						271				855		_		-		_		_		
		250,073		1,366		2/1		58,900		000				2(-)		-		-		311,465
Strategic Investment Solutions –		22.275		477		25		7.605		111										40.000
General		32,375		177		35		7,625		111		_				-		-		40,323
Infrastructure:																				
Alinda Infrastructure		494,206		2,699		535		116,400		1,690		-88		23—2		-		-		615,530
ArcLight V		549,093		2,999		594		129,328		1,878		-01		20-07		-		_		683,892
ArcLight VI		2,519,507		13,759		2,726		593,418		8,618		=				3 <u></u>		3 <u>-2-</u> 2		3,138,028
Brookfield Infrastructure II		963,384		5,261		1,042		226,905		3,295		_		-		_		_		1,199,887
Brookfield Infrastructure III		210,644		1,150		228		49,613		720				10-1				-		262,355
Carlyle Infrastructure		260,779		1,424		282		61,421		892				25_11		(422)		(420)		324,798
Cube Infrastructure		403,571		2,204		437		95,053		1,380				-		-		-		502,645
First Reserve Energy				-1-0				00,000		2,000										000,000
Infrastructure		573,044		3,129		620		134,969		1,960				-		-		_		713,722
First Reserve Energy		010,011		0,120		020		10 1,000		1,000										120,122
Infrastructure II		534,176		2,917		578		125,814		1,827		=00				_		_		665,312
Global Infrastructure		501,351		2,738		542		118,083		1,715		_		-		_		-		624,429
Global Infrastructure II		1,223,160		6,680		1,323		288,090		4,184				-		_		_		1,523,437
Global Infrastructure III		822,839		4,494		890		193,803		2,814		=3				-		722		1,024,840
IFM Global Infrastructure		757,919		4,139		820		178,512		2,592		-0		3-3		120		120		943,982
KKR Infrastructure		709,415		3,874		768		167,088		2,426				-		_		-		883,571
KKR Infrastructure II		1,443,799		7,885		1,562		340,058		4,938						100				1,798,242
Meridiam Europe I		60,514		330		65		14,253		207										75.369
Mendiam Europe I		00,514		330		05		14,255		207				-		1.000		_		15,309

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

Infrastructure (continued):	State Employee nd Teacher Judicial Plan Plan			islative Plan	Cor	PLD nsolidated Plan	PLD Agent Plan		Group Life Insurance Plan		Defined Contri- bution Plans		MainePERS OPEB Trust		etiree lealth urance ist Fun	<u>Total</u>	
Meridiam Europe II	\$ 98,588	\$	538	\$ 107	\$	23,220	\$	337	\$	1777	\$	<del>575</del> .5	\$	=::	\$	=::	\$ 122,790
Meridiam NA II	722,605		3,946	782		170,195		2,472		200		-				-0.0	900,000
Meridiam NA II Secondary	192,695		1,052	208		45,385		659		-		-		-5.5		$- g_{\mu} g^{\mu}$	239,999
Stonepeak	735,318		4,016	796		173,189		2,515		-		77		-0.0		-	915,834
Natural resources: Agriculture Cultural Management Amerra III IFC US Farming	490,705 409,867 723,627		2,680 2,238 3,952	531 443 783		115,576 96,536 170,436		1,678 1,402 2,475		-							611,170 510,486 901,273
Orion II	80,069		437	87		18,859		274		-		-		-0		$- \epsilon_{ij} \epsilon_{ij}$	99,726
Taurus Mining	829,895		4,532	898		195,465		2,839		(100)		0000		-,2		-,2	1,033,629
Other investments: Grantham, Mayo, Van Oterloo Windham Capital	2,235,573 1,518,124		12,209 8,291	2,419 1,642		526,544 357,563		7,647 5,193		=		=		= 0 = 0 = 0 = 0		= 0	2,784,392 1,890,813
Domestic equity: Blackrock Extended Equity Blackrock DJ Total Stock Market	- 925,790		- 5,056	- 1,002		- 218,051		- 3,167		4,323		-		596 -	9	9,322	14,241 1,153,066
International equity: Blackrock ACWIEX_US	653,462		3,569	707		153,910		2,235		6,789		_		725	1	2,434	833,831

# Maine Public Employees Retirement System

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

Fixed income:					udicial Legislative Plan Plan		PLD Consolidated Plan		PLD Agent Plan		Group Life Insurance Plan		Defined Contri- bution Plans		MainePERS OPEB Trust		H Ins	etiree lealth urance st Fund		<u>Total</u>
Blackrock Custom Fixed																				
Income	\$	239,677	\$	1,309	\$	259	\$	56,451	\$	820	\$	-	\$	220	\$	-0	\$	-97	\$	298,516
Blackrock US Debt Index	*	200,017	4	1,000	Ψ.	200	4	00,101	4	020	Ψ.		Ψ.		-		*		~	200,010
Fund B		<u>447</u> 8		227		= 0				1 <u>112</u> 1	1	15,158		227		1,520	28	8,675		45,353
Private equity:																				
ABRY ASE IV		104,282		569		113		24,561		357		_		207		=0.0		-		129,882
ABRY ASF II		335,090		1,830		363		78,924		1,146		-								417,353
ABRY ASF III		481,737		2,631		521		113,463		1,648		-		777.5						600,000
ABRY Partners VII		76,487		418		83		18,015		262		-		_				_		95,265
ABRY Partners VIII		263,390		1,438		285		62,036		901		-		<del>200</del> 0	-6			-65		328,050
Advent GPE VII		270,977		1,480		293		63,823		927		-		-		$\pm i$		-i		337,500
Advent LAPEF VI		313,129		1,710		339		73,751		1,071		-		_		=86		-8		390,000
Affinity Asia Pacific IV		833,532		4,552		902		196,321		2,851		***		-		-8		-80		1,038,158
Berkshire VIII		240,868		1,315		261		56,732		824		_						-0.0		300,000
Blackstone Capital Partners VI		303,620		1,658		328		71,511		1,038				-				-0.0		378,155
Carlyle Asia Partners III		57,869		316		63		13,630		198		770		100		-, :				72,076
Carlyle Asia Partners IV		723,601		3,952		783		170,429		2,475		200		<u>000</u> 8		_00				901,240
Carlyle Power Partners II		1,150,826		6,285		1,245		271,054		3,936		-		-		-3		-8		1,433,346
Centerbridge III		361,801		1,976		391		85,215		1,237		(70)		(700°)		-,2		-,0		450,620
Charterhouse IX		(26,795)		(146)		(29)		(6,311)		(92)		_		_		=::		=		(33,373)
Charterhouse VIII		22,334		122		24		5,260		76		-		-		-0.0		-		27,816
CVC Capital VI		786,834		4,297		851		185,323		2,691		-		77.0		-		=		979,996
Encap Energy IX		191,858		1,048		208		45,188		656				-		-27		-2		238,958
Encap Energy VIII		254,509		1,390		275		59,944		871		-				-0.0		$-\frac{1}{2} (1)$		316,989
Encap Energy X		481,737		2,631		521		113,463		1,648		-		$\leftarrow$		$-\frac{1}{2}$		$-\frac{1}{2}$		600,000

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

Drivete envity (continued)			Judicial Plan		Legislative Plan		PLD Consolidated Plan		PLD Agent Plan		Group Life surance Plan	Defined Contri- bution Plans	MainePERS OPEB Trust		H Ins	etiree ealth urance st Fun		<u>Total</u>	
Private equity (continued): Encap Flatrock Midstream III	\$	240,868	\$	1,315	\$	261	\$	56,732	\$	824	\$	_	\$ -	\$		\$		\$	300,000
GTCR X	Φ	361,303	Φ	1,973	Φ	391	Φ	85,097	Φ	1,236	Φ	_	Φ -	1.00.1		Φ	=0	Φ	450,000
GTCR XI		497,025		2,714		538		117,064		1,700		_	_						619,041
Hellman & Friedman PE		357,398		1,952		387		84,178		1,222		_	_						445,137
HIG Bayside III Europe		481,737		2,631		521		113,463		1,648		_			=:: =:::		=0		600,000
HIG Bayside Loan Opp II		103,769		567		112		24,441		355		_	_						129,244
HIG Brazil		1,204,342		6,577		1,303		283,658		4,119		_	-				=		1,499,999
HIG Capital Europe II		399,152		2,180		432		94,012		1,365		_			=0 =0		=:		497,141
HIG Capital V		240.868		1,315		261		56,732		824		_	_						300,000
HIG Buyouts II		281,013		1,535		304		66,187		961		22	22						350,000
HIG Middle Market LBO II		642,316		3,508		695		151,284		2,197		_					_		800,000
Inflexion Buyout IV		484,142		2,644		524		114,030		1,656		_	_		_		_		602,996
Inflexion Capital I		316,853		1,730		343		74,628		1,084		_	<u>200</u>				_		394,638
Kelso IX		407,160		2,224		441		95,898		1,393		-	_		_0		-7		507,116
Kelso VIII		12,463		68		13		2,935		43		_	_		_				15,522
KKR North America		695.063		3.796		752		163,708		2,377		_	22		_		_		865,696
KKR Special Situations I		634.634		3,466		687		149,475		2,171		_	-						790,433
KKR Special Situations II		164,698		899		178		38,791		563		-	_				_		205,129
Oaktree		140,635		768		152		33,124		481		-	223		_		_		175,160
Onex Partners III		53,605		293		58		12,626		183			-		-01		-00		66,765
Onex Partners IV		817,162		4,463		884		192,466		2,795		_	-		=3		=		1,017,770
Paine & Partners		559,710		3,057		606		131,828		1,914		-	-		-		-0.0		697,115
Rhone V		1,115,398		6,091		1,207		262,709		3,815			-		- 5				1,389,220
Riverside Capital		10 20																	356
Appreciation VI		963,474		5,262		1,042		226,927		3,295		-	-		-8		-8		1,200,000
Riverside Micro-Cap III		526,518		2,875		570		124,011		1,801		-	-	,	=0.0		$= \frac{1}{2} \left( \frac{1}{2} \right)^{\frac{1}{2}}$		655,775

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

	State						Group									Retiree					
	E	mployee						PLD				Life	C	ontri-	Main	ePERS	H	lealth			
	an	d Teacher		Judicial	Leg	gislative	Co	nsolidated	PL	D Agent	Ins	surance	b	ution	OPEB		Ins	urance			
	_	Plan	Plan		Plan Plan		υ <del>.</del>	Plan	-	Plan Plans		Trust		Tru	Trust Fund		Total				
Private equity (continued):																					
Shoreview Capital III	\$	463,452	\$	2,531	\$	501	\$	109,157	\$	1,585	\$	_	\$	_	\$	_	\$	-	\$	577,226	
Sovereign Capital		1,062,468		5,802		1,150		250,243		3,634		-		-		-		-		1,323,297	
Summit GE VIII		416,500		2,275		451		98,098		1,425		1		-		-		200		518,749	
Summit Partners Credit II		391,411		2,138		423		92,189		1,339		(0.00)						-		487,500	
Summit VC III		219,080		1,196		237		51,600		749		-		-		-		_		272,862	
Summit VC IV		53,526		292		58		12,607		183		(100)		0.000				(100)		66,666	
TCV VIII		819,563		4,476		887		193,031		2,803		-		_		_				1,020,760	
Thomas Bravo Special																					
Opportunities II		92,002		502		100		21,669		315		-		-		-		-		114,588	
Thomas Bravo XI		543,956		2,971		589		128,118		1,861		_		-		_		-		677,495	
Thomas Bravo XII		254,791		1,391		276		60,011		871		1000		(		-		-		317,340	
Water Street Healthcare III		404,710		2,210		438		95,321		1,384		-		_		-		-		504,063	
Wayzata OPP III		361,303		1,973		391		85,097		1,236		-		-		-		-		450,000	
Wynnchurch IV		589,816		3,221		638		138,919		2,017				-		-		-		734,611	
Real estate:																					
Blackrock US Real Estate																					
Securities Fund B		_		_		-		_		_		4,656				590		9,263		14,509	
BREP VII		619,319		3,382		670		145,868		2,118		-		-		-		-		771,357	
BREP VIII		735,987		4,019		796		173,347		2,517		(100)				17.7		1000		916,666	
H/2 Credit Partners		777,923		4,248		842		183,224		2,661		-		_		-		-		968,898	
Harrison Street Real Estate		609,871		3,331		660		143,643		2,086		-		-		-		-		759,591	
High Street IV		171,853		939		186		40,477		588		_		_		-		-		214,043	
High Street V		130,016		710		141		30,623		445		_		100		<del></del> 5		( <del></del> )		161,935	
Invesco US Income		845,722		4,619		915		199,193		2,893		-		-		-		-		1,053,342	
JP Morgan		1,390,674		7,595		1,505		327,545		4,757		_		-		-		-		1,732,076	

# ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF INVESTMENT EXPENSES

For the Year Ended June 30, 2016 (concluded)

		State mployee d Teacher Plan		udicial Plan	_	islative Plan	Coi	PLD nsolidated Plan	PL	D Agent Plan	Ins	Group Life surance Plan	Co	fined ontri- ution lans	C	nePERS PEB rust	Ins	etiree lealth urance st Fund		Total
Real estate (continued):			α.		9		α.		12		12.		4.		12.		1			
KKR REPA I	\$	351,254	\$	1,918	\$	380	\$	82,731	\$	1,201	\$	-	\$	$\rightarrow$	\$	-	\$	-	\$	437,484
KKR REPE		257,594		1,407		279		60,671		881		-		-				-		320,832
Mesa West Core		638,554		3,487		691		150,398		2,184		-		-3		$(i_1,\dots,i_n)$				795,314
PMIT		164,417		898		178		38,725		562						-		_		204,780
Principal Global Investors		652,863		3,565		706		153,769		2,233		-		-		-		-		813,136
Prudential Real Estate		468,719		2,560		507		110,397		1,603		-		-0.0		-		-		583,786
Prudential Senior Housing V		397,097		2,169		430		93,528		1,358		<u> </u>		_		0.00		·		494,582
Smart Markets		832,123		4,544		900		195,990		2,846		-		-3		0.00		-		1,036,403
Walton Street RE VII		540,740		2,953		585		127,360		1,850		T-1		-,		0-0		-		673,488
Walton Street RE VIII		80,289		438		87		18,911		275				-2						100,000
Westbrook IX		139,227		760		151		32,792		476		-		-i		a = a		-		173,406
Westbrook X		333,703		1,822		361		78,597		1,141		-		$- \frac{1}{2} \left( \frac{1}{2} \right)$		-		_		415,624
Other investment expenses		640,149		3,496		693		150,774		2,190		=:	3	9,430		s=2		-		836,732
In-house investment management		2,787,596	-	15,221	-	3,010	-	656,561	-	9,540	_2	6,951			_2	2,959	<del>20</del>		_	3,501,838
Total investment expenses	\$ 6	1,027,608	\$	333,276	\$ 6	6,027	\$_1	4,373,809	\$ 2	08,740	\$_5	7,877	\$_3	9,430	\$_6	5,390	\$ 59	9,694	\$_	76,172,851

ADDITIONAL SUPPLEMENTARY INFORMATION
SCHEDULE OF ADMINISTRATIVE EXPENSES
For the Year Ended June 30, 2016

	State Employee and Teacher	Judicial	Legislative	PLD Consolidated	PLD Agent	Group Life Insurance	Defined Contri- bution	Retiree Health Insurance	
	Plan	_Plan_	Plan	Plan	Plan	Plan	Plans	Trust Fund	Total
Personal services	\$5,084,091	\$ 27,967	\$ 5,498	\$1,192,276	\$ 17,612	\$ 373,528	\$ 127,756	\$ 3,147	\$ 6,831,875
Professional fees	1,396,159	7,680	1,510	327,415	4,837	102,576	35,084	864	1,876,125
Communications	271,991	1,496	294	63,785	942	19,983	6,835	168	365,494
Computer support and system									
development	247,318	1,360	267	57,999	857	18,170	6,215	153	332,339
Office rent and building operations	261,219	1,437	282	61,259	905	19,192	6,564	162	351,020
Miscellaneous:									
Computer maintenance and supplies	558,292	3,071	604	130,926	1,934	41,018	14,029	346	750,220
Depreciation	531,536	2,924	575	124,651	1,841	39,052	13,357	329	714,265
Office equipment and supplies	17,751	98	19	4,163	61	1,304	446	11	23,853
Professional development	35,326	194	38	8,284	122	2,595	888	22	47,469
Medical records and exams	19,198	106	21	4,502	67	1,410	482	12	25,798
Miscellaneous operating expenses	226,150	1,244	245	53,034	784	16,616	5,682	140	303,895
Total miscellaneous	1,388,253	7,637	1,502	325,560	4,809	101,995	34,884	860	1,865,500
Total administrative expenses	\$8,649,031	\$ <u>47,577</u>	\$ <u>9,353</u>	\$2,028,294	\$ 29,962	\$ 635,444	\$ <u>217,338</u>	\$5,354	\$11,622,353

FINANCIAL SECTION



### ADDITIONAL SUPPLEMENTARY INFORMATION SCHEDULE OF PROFESSIONAL FEES For the Year Ended June 30, 2016

Professional	fees.
1 TOTOSSIONA	ICCS.

Audit	\$ 139,793
Actuarial services	434,382
Legal services	143,140
Medical consulting	165,661
Other services	993,149
	unacam (dbe vae h

Total professional fees \$\frac{1,876,125}{}

# INVESTMENT SECTION



Lewiston and Auburn





December 21, 2016

Board of Trustees (the "Board") Maine Public Employees Retirement System 46 State House Station Augusta, ME 04333 0046

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 other 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. 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,

ARLINGTON

BEIJING

BOSTON

DALLAS

LONDON

MENLO PARK

SINGAPORE

SYDNEY

Brian M. McDonnell Managing Director

Mr. Mr. Donel

125 High Street | Boston, Massachusetts 02110-2112 | tel 617.457.7500 | fax 617.457.7501 | www.cambridgeassociates.com





### INVESTMENT ACTIVITY

The table and graph below summarize the defined benefit portfolio activity for the ten years ended June 30, 2016. During this period, assets grew by \$2.7 billion from \$9.6 billion to \$12.3 billion. Substantially all of this increase is attributable to net investment gains. In the year ended June 30, 2016, benefit payments exceeded contributions, and this is expected to continue in the future.

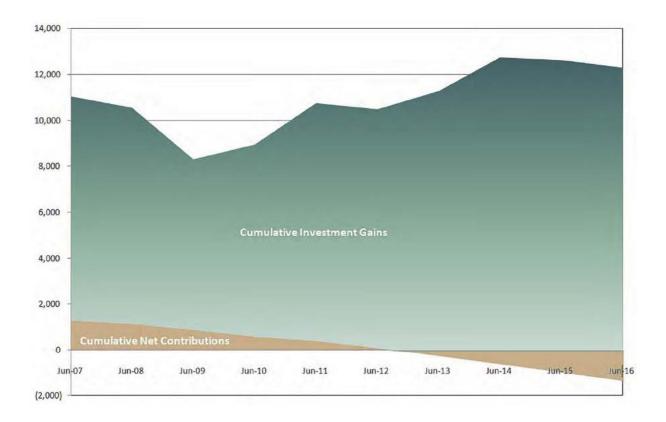
The rates of return displayed in the table are time weighted rates of return. The table displays the net invested assets of the investment portfolio. Securities lending liabilities are netted against securities lending collateral. Certain assets, such as cash in the System's operating bank accounts are 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
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%
2009	\$10,538	\$8,291	-18.8%
2008	\$11,031	\$10,538	-3.1%
2007	\$9,559	\$11,031	16.2%
		Annualized 10-year period	5.2%
		Cumulative 10-year period	66.4%



## SUMMARY OF INVESTMENT ACTIVITY (continued)



### INVESTMENT PORTFOLIO

The graph above illustrates the importance of investment returns to the financing of the System's benefit plans. In this section, the investment strategy MainePERS has adopted to optimize the financial health of the plans is reviewed.

The System invests essentially all of the plan assets in a number of major asset classes: publicly traded domestic stocks, publicly traded foreign stocks, cash and cash-like securities, publicly traded domestic bonds, infrastructure, private equity, natural resources, and real estate. MainePERS may use derivative positions to emulate these asset classes. The table and pie charts on the following page display the actual allocations at June 30, 2016. MainePERS assigns acceptable ranges and target allocations for each asset class. The current strategic targets are 20% for domestic stocks, 20% for foreign stocks, 25% for fixed income and 35% for alternatives including infrastructure, private equity, real estate and natural resources.

The Board of Trustees is of the view that a prudent investment strategy for these plan assets involves accepting some level of investment risk. 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 low risk and high return for the plans.

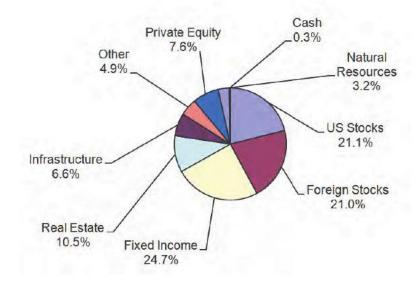




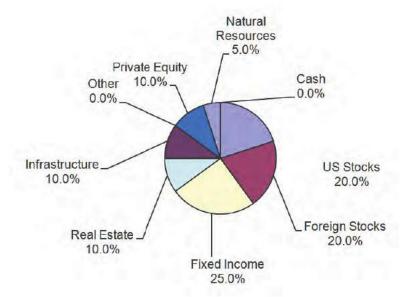
### STRATEGIC ASSET ALLOCATION

	US Stocks	Foreign Stocks	Fixed Income	Real <u>Estate</u>	<u>Infrastructure</u>	Other	Private Equity	Natural <u>Resources</u>	Cash	<u>Total</u>
Actual Allocation	21.1%	21.0%	24.7%	10.5%	6.6%	4.9%	7.6%	3.2%	0.3%	100.0%
Target Allocation	20.0%	20.0%	25.0%	10.0%	10.0%	0.0%	10.0%	5.0%	0.0%	100.0%

Actual Allocation at June 30, 2016



Strategic Target Allocation



### INVESTMENT SECTION





The System's Investment Policy has long-term, strategic asset class targets and requires the investment team to rebalance the portfolio to these targets as needed. In 2012, the System changed its target allocation to 20% domestic publicly traded stocks, 20% international publicly traded stocks, 25% fixed income investments, and 35% alternative investments. Alternative investments include private equity, infrastructure, real estate, and natural resources. While the Board has approved the new Asset Allocation targets, it will take several years to implement and fully fund the alternatives allocation.

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. For the past ten years, the System has invested between 60% and 70% of its assets in equities. Over sufficiently long periods, equities have generally outperformed bonds. The System expects this relationship to hold in the future.

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 assigned to them in accordance with the System's investment policies and the individual agreements between MainePERS and the investment managers.

Approximately 67% of assets were invested in passively managed index funds at June 30, 2016. 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.

In fiscal year 2016, the System conducted a thorough review of its strategic asset allocation. This type of review is typically conducted every three years with the assistance of the System's actuary and the general investment consultant. The results of this review are expected to lead to an updated strategic asset allocation to take effect in fiscal year 2017.





### BENEFIT PLANS - INVESTMENT PORTFOLIO

		at 06/30/2	016		at 06/30/2	2015
	22110	ions ollars	% of assets	77-77	ions ollars	% of assets
Passive Equity	723	040340400	12 17 17 12 13	2		12.55533
BlackRock (Domestic) BlackRock (International)	\$	2,597 2,580	21.1% 21.0%	\$	3,392	26.9% 25.0%
Total Passive Equity	\$	5,177	42.1%	\$	3,149 <b>6,541</b>	<b>51.9%</b>
rotal rassive Equity	4	0,277	74.14.70	-	0,012	021070
Passive Fixed Income			0.4 707			
BlackRock Custom Index Fund Total Passive Fixed Income	\$ <b>\$</b>	3,036 <b>3,036</b>	24.7% <b>24.7%</b>	\$ <b>\$</b>	2,976 <b>2,976</b>	23.6% <b>23.6%</b>
Total Passive Pixeu Ilicollie	Φ	3,030	24.770	φ	2,370	23.070
Real Estate						
Blackstone RE Partners VII	\$	76	0.6%	\$	74	0.6%
Blackstone RE Partners VII H/2 Credit Partners		20 97	0.2% 0.8%		0 98	0.0%
Harrison Street		101	0.8%		95	0.7%
High Street IV		25	0.2%		24	0.2%
High Street V		7	0.1%		0	0.0%
Invesco US Income JP Morgan Strategic Property Fund		158 156	1.3% 1.3%		56 209	0.4% 1.7%
KKR REPA I		30	0.2%		26	0.2%
Mesa West Core		100	0.8%		97	0.8%
Prima Advisors Mortgage Fund		91	0.7%		92	0.7%
Principal US Property Fund Prudential PRISA Fund		82 110	0.7% 0.9%		95 145	0.8% 1.2%
Prudential Senior Housing V		110	0.9%		4	0.0%
Smart Markets		172	1.4%		160	1.3%
Walton Street VII		44	0.4%		41	0.3%
Westbrook IX		13	0.1%		9	0.1%
Total Real Estate	\$	1,291	10.5%	\$	1,225	9.7%
Infrastructure						
Alinda Infrastructure Fund II	\$	57	0.5%	\$	54	0.4%
ArcLight Co-Invest		0	0.0%		11 44	0.1%
ArcLight Energy Partners V ArcLight Energy Partners VI		33 48	0.3% 0.4%		0	0.3%
Brookfield II		81	0.7%		63	0.5%
Brookfield III		8	0.1%		0	0.0%
Carlyle Infrastructure Fund		29	0.2%		40	0.3%
Carlyle Power Partners II Cube Infrastructure Fund		16 45	0.1% 0.4%		0 43	0.0%
First Reserve Energy		46	0.4%		45	0.4%
First Reserve Energy II		17	0.1%		4	0.0%
Global Infrastructure Partners Fund		31	0.3%		36	0.3%
Global Infrastructure Partners Fund II IFM Global Infrastructure		55 108	0.5% 0.9%		42 99	0.3% 0.8%
KKR Infrastructure		68	0.6%		67	0.5%
KKR Infrastructure II		33	0.3%		4	0.0%
KKR Co-Invest Project Atlanta		30	0.2%		21	0.2%
Meridiam Infrastructure Europe I (Secondary) Meridiam Infrastructure Europe I Class B (Secondary)		21 0	0.2% 0.0%		0	0.0%
Meridiam Infrastructure Europe II (Secondary)		11	0.1%		0	0.0%
Meridiam Infrastructure Europe II Class B (Secondary)		3	0.0%		0	0.0%
Meridiam Infrastructure North America II		33	0.3%		23	0.2%
Meridiam Infrastructure North America II (CIP) Meridiam Infrastructure North America II (Secondary)		0	0.0% 0.1%		0	0.0%
Stonepeak Infrastructure II		36	0.1%		0	0.0%
Total Infrastructure	\$	817	6.6%	\$	596	4.7%
Other Strategies						
Grantham, Mayo, Van Oterloo	\$	320	2.6%	\$	325	2.6%
Windham Capital		276	2.3%		294	2.3%
	\$	597	4.9%	\$	619	4.9%
Private Equity						
ABRY Advanced Securities Fund II	\$	14	0.1%	\$	15	0.1%
ABRY Advanced Securities Fund III ABRY Senior Equity IV		11 8	0.1% 0.1%		6 5	0.0%
ABRY VII		10	0.1%		10	0.0%
ABRY VIII		11	0.1%		4	0.0%
Advent International GPE VII		29	0.2%		24	0.2%
Advent LAPEF VI		3	0.0%			0.0%
Affinity Asia Pacific IV		23	0.2%		17	0.1%



# BENEFIT PLANS - INVESTMENT PORTFOLIO (concluded)

Private Equity (continued)						
Berkshire VIII	\$	11	0.1%	\$	9	0.1%
Blackstone Cap VI		28	0.2%		22	0.2%
Carlyle Asia Partners Fund III		9	0.1%		10	0.1%
Carlyle Asia Partners Fund IV		27	0.2%		16	0.1%
Centerbridge Capital		8	0.1%		2	0.0%
Charterhouse VIII Charterhouse IX		2	0.0%		3	0.0%
CVC Capital Partner VI		22	0.2%		4	0.0%
EnCap Energy Capital Fund VIII		11	0.1%		19	0.2%
EnCap Energy Capital Fund VIII Co-Invest		5	0.0%		12	0.1%
EnCap Energy Capital Fund IX		20	0.2%		14	0.1%
EnCap Energy Capital Fund X		8	0.1%		1	0.0%
EnCap Flatrock Midstream III		3	0.0%		1	0.0%
GTCR X GTCR XI		21 15	0.2% 0.1%		28 8	0.2% 0.1%
Hellman & Friedman		29	0.2%		20	0.1%
HIG Bayside Loan Opportunity II		16	0.1%		18	0.1%
HIG Bayside Loan Opportunity III (Europe)		16	0.1%		14	0.1%
HIG Bayside Brazil & Latin America		1	0.0%		(+)	0.0%
HIG Buyouts II		4	0.0%		6	0.1%
HIG Capital Partners V		3	0.0%		2	0.0%
HIG Middle Market LBO Fund II		2	0.0%		1	0.0%
Inflexion Buyout Fund IV		7	0.1% 0.0%		0	0.0%
Inflexion Supplemental Fund IV Inflexion Partnership Capital Fund I		2	0.0%		0	0.0%
Kelso VIII		2	0.0%		3	0.0%
Kelso IX		20	0.2%		97.5 175.0	0.0%
Kelso Hammer Co-Invest		35	0.3%		(+)	0.0%
KKR North America XI		44	0.4%		37	0.3%
KKR Special Situations		61	0.5%		64	0.5%
KKR Special Situations II		10	0.1%		3	0.0%
KKR Platinum Co-Invest Oaktree Opportunity Fund VIII		7 11	0.1% 0.1%		18	0.0%
Onex Partners III		8	0.1%		10	0.1%
Onex Partners IV		19	0.2%		16	0.1%
Paine & Partner		10	0.1%		5	0.0%
Riverside Capital Appreciation VI		38	0.3%		21	0.2%
Riverside Micro Cap Fund III		36	0.3%		23	0.2%
Riverside Capital Appreciation VI Co-Invest		10	0.1%		7	0.0%
Shoreview Capital III		8 7	0.1%		4	0.0%
Sovereign Capital IV Summit GE VIII		21	0.1% 0.2%		7 16	0.1%
Summit VC III		16	0.1%		12	0.1%
Summit Credit Partners II		38	0.3%		14	0.1%
Summit VC IV		1	0.0%		72	0.0%
Summit Co-Invest Paradigm		16	0.1%		16	0.1%
TCV VIII		42	0.3%		21	0.2%
Thoma Bravo XI		46	0.4%		24	0.2%
Thoma Brave Spac Con Fund		3	0.0%		-	0.0%
Thoma Bravo Spec Opp Fund Water Street Healthcare III		13 12	0.1%		4	0.0%
Wayzata Opportunities III		10	0.1%		7	0.0%
Wynnchurch Capital		4	0.0%			0.0%
Total Private Equity	\$	929	7.6%	\$	620	4.9%
Natural Resources	7.6			**		
ACM Permanent Crops	\$	26	0.2%	\$	12	0.1%
AMERRA Agri Fund II Orion Mine Finance II		41 3	0.3% 0.0%		(=)	0.0%
Taurus Mining Finance		9	0.1%		11	0.0%
Teays River		210	1.7%		11	0.0%
Twin Creeks Timber		88	0.7%		(7)	0.0%
US Farming Realty III		18	0.1%		158	0.0%
Total Natural Resources	\$	394	3.2%	\$	22	0.2%
Cook						
Cash Liquidity Account	e	41	0.3%	\$	11	0.1%
Total Cash	\$	41	0.3%	\$	11	0.1%
CONTRACTOR OF THE CONTRACTOR O						
Total Assets	\$	12,283	100%	\$	12,610	100%





## LARGEST HOLDINGS at June 30, 2016

Top 10 Direct Common Stock Holdings	Market Value	% of Assets
Apple	\$ 61,022,627	0.50%
Alphabet	47,892,151	0.39%
Microsoft	47,123,630	0.38%
Exxon Mobil	45,457,244	0.37%
Johnson & Johnson	38,883,685	0.32%
General Electric	33,986,138	0.28%
Amazon	32,246,553	0.26%
Berkshire Hathaway	31,442,162	0.26%
AT&T	30,931,274	0.25%
Facebook	30,596,413	0.25%

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.





### PERFORMANCE: ACTUAL RETURNS VS. BENCHMARK RETURNS

(All returns are time weighted)

		TOTAL FUND		D	OMESTIC EQUIT	Y		FOREIGN EQUIT	Υ	f	FIXED INCOME	2,3)
Fiscal Yead Ended <u>June 30</u>	Actual Return	Benchmark <sup>(5)</sup> Return	Excess Return (1)	Actual Return	Benchmark (6) Return	Excess Retum (1)	Actual Return	Benchmark <sup>(7)</sup> Return	Excess Return (1)	Actual Return	Benchmark <sup>(8)</sup> Return	Excess Return (1)
2016	0.6%	1.096	-0.4%	1.8%	2.0%	-0.3%	-10.1%	-9.8%	-0.3%	3.6%	6.0%	-2.496
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%
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%
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%
2012	0.6%	1.496	-0.8%	3.8%	4.0%	-0.2%	-14.3%	-14.2%	-0.2%	8.8%	9.0%	-0.1%
2011	22.4%	21.5%	0.9%	32.6%	32.496	0.2%	30.0%	30.3%	-0.3%	6.2%	3.9%	2.3%
2010	11.196	11.9%	-0.8%	18.3%	16.1%	2.2%	9.7%	10.9%	-1.2%	10.8%	9.5%	1.3%
2009	-18.8%	-19.4%	0.5%	-29.3%	-26.4%	-2.9%	-32.1%	-30.5%	-1.6%	-0.8%	6.1%	-6.9%
2008	-3.196	-1.9%	-1,2%	-15.0%	-12.5%	-2.4%	-7.5%	-6.2%	-1.3%	17.5%	7.196	10.3%
2007	16.2%	16.3%	-0.2%	19.9%	20.5%	-0.6%	29.8%	30.2%	-0.4%	3.4%	6.1%	-2.796
3 years ending 2016	6.2%	5.9%	0.3%	10.8%	11.0%	-0.2%	1.4%	1.6%	-0.2%	2.3%	4.1%	-1.8%
5 years ending 2016	6.0%	5.9%	0.1%	11.4%	11.5%	-0.1%	0.3%	0.696	-0.2%	2.7%	4.0%	-1.3%
10 years ending 2016	5.2%	5.2%	0.0%	6.9%	7.5%	-0.6%	1.7%	2.3%	-0.6%	4.9%	5.3%	-0.396

### Notes:

- 1. Excess Return is Actual Return minus Benchmark Return.
- 2. The asset class of General Fixed Income was closed in the 1st quarter of 2007 and re-opened in the 4th quarter of 2008.
- 3. Fixed Income includes TIPS as of 7/31/04.
- 4. The Real Estate Return for the year ending 06/30/05 is attributable to REIT's only.
- 5. Total Fund Benchmark: A combination of the benchmarks for the five major asset classes using the target asset class weights.
- 6. Domestic Equity Benchmark: Dow Jones US Total Stock Market Index.

TABLE CONTINUED ON NEXT PAGE





### PERFORMANCE: ACTUAL RETURNS VS. BENCHMARK RETURNS

(All returns are time weighted)

	REAL ESTATE (4)	in ii		INFRASTRUCTUR	RE		PRIVATE EQUIT	Υ	N.	ATURAL RESOUR	CES
Actual Return	Benchmark <sup>(9)</sup> Return	Excess Return (1)	Actual Return	Benchmark <sup>(10)</sup> Return	Excess Return (1)	Actual Return	Benchmark (11) Return	Excess Return (1)	Actual Return	Benchmark (11) Return	Excess Return (1)
10.2%	9.4%	0.8%									
11.4%	8.8%	2.6%									
10.7%	5.5%	5.1%									
10.2%	7.8%	2.4%									
11.1%	13.4%	-2.3%									
22.5%	16.0%	6.5%									
-4.1%	-1.5%	-2.6%		Data Not Meaningf	ul <sup>12</sup>		Data Not Meaningf	ul <sup>12</sup>		Data Not Meaningf	ul <sup>12</sup>
-35.0%	-19.6%	-15.4%									
3.0%	9.2%	-6.2%									
16.5%	17.2%	-0.7%									
10.8%	7.9%	2.8%									
10.7%	9.0%	1.8%									
4.3%	6.1%	-1.8%									

### Notes (continued):

- 7. Foreign Equity Benchmark: Morgan Stanley Capital International All Country World Ex-U.S. Free, since Jan. 1, 1998.
- 8. General Fixed Income Benchmark: Barclays Capital Aggregate Bond Index less Governments plus TIPS, since Oct 2008.
- 9. 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.
- 10. Infrastructure Benchmark: Consumer Price Index + 5%.
- 11. Private Equity Benchmark: Dow Jones US Total Stock Market Index + 3%.
- 12. Infrastructure, Private Equity, and Natural Resources returns are not meaningful at this stage of the program.

TABLE CONTINUED FROM PREVIOUS PAGE





### INVESTMENT PERFORMANCE

The table on the preceding pages 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, 2016. Because the System's investment strategy has changed very little from year to year, and because the majority of the System's assets are indexed, these results are determined almost entirely by the behavior of the capital markets. Negative returns for the fiscal years ended June 30, 2008 and 2009 were the result of declines in domestic and foreign stock markets, partially offset by gains in the domestic bond market.

Over the ten-year period, the annualized rate of return on the System's assets was 5.2%. MainePERS experienced eight years of positive returns and two 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 5.2%, the ten-year return has underperformed relative to the 7.125% investment return assumption utilized in the actuarial process.

The total return figures in the table on pages 82 and 83 are net of all expenses that can be directly attributed to the investment program (see Expenses, page 85). The table reports time weighted rates of return and all figures for periods greater than one year are annualized.





### 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 2016 can be attributed to continued funding of the Alternatives Programs.

### INVESTMENT MANAGEMENT EXPENSES

Detail for year ended 6/30/2016	Do	llar Expense
Passive Equity	\$	1,966,949
Passive Fixed Income		298,516
Other Investments		4,675,205
Real Estate		12,626,743
Infrastructure		17,158,662
Private Equity		30,641,085
Natural Resources		3,156,284
Consultants		1,216,786
Other Investment Expenses In House Expenses DC Investment Expenses Retiree Health Insurance Trust Expenses Group Life Insurance Expenses MainePERS OPEB		797,302 3,471,928 39,430 59,694 57,877 6,390
Total Investment Expenses - All Plans	\$	76,172,851

Total for FY ended June 30 Defined Benefit Plans	Millions	% of Total Assets
Defined Deficit Plans	<u>\$ Millions</u>	Assets
2016	76.0	0.61%
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%
2009	23.1	0.28%
2008	34.6	0.19%
2007	19.7	0.33%



# BROKERAGE COMMISSIONS

Year Ended June 30, 2016

Broker	Con	nmissions	 unt Trade Iillions)	Cost of Trade (%)	Total Shares (Millions)	Commissions (Cents per Share)
UBS	\$	19,064	\$ 392	0.005%	0.0	259.02
MERRILL LYNCH		10,709	234	0.005%	5.2	0.21
CITIGROUP		5,824	131	0.004%	2.7	0.22
BARCLAYS CAPITAL		4,390	78	0.006%	1.5	0.29
JP MORGAN CHASE		3,355	48	0.007%	1.1	0.30
DEUTSCHE BANK		2,671	41	0.006%	1.1	0.25
INSTINET		2,570	22	0.011%	0.9	0.29
WACHOVIA		1,749	27	0.007%	0.6	0.30
MORGAN STANLEY		1,590	28	0.006%	0.6	0.27
CREDIT SUISSE		1,518	13	0.012%	8.0	0.20
Other		2,987	425	0.001%	9.0	0.03
Total	\$	56,428	\$ 1,440	0.004%	23.4	0.24

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 85. 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.





### 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

FY Ended June 30	Opening Fair Market Value	10 To	Actual <u>Return</u>	Benchmark <u>Return</u>	<u>Performance</u>
2016	\$ 95.2	\$ 97.9	0.9%	1.0%	-0.1%
2015	\$ 92.2	\$ 95.2	2.6%	2.7%	-0.1%
2014	\$ 78.3	\$ 92.2	18.6%	18.3%	0.3%
2013	\$ 68.1	\$ 78.3	13.4%	13.1%	0.3%
2012	\$ 66.4	\$ 68.1	0.6%	0.5%	0.1%
2011	\$ 58.0	\$ 66.4	24.5%	24.4%	0.1%
2010	\$ 50.2	\$ 58.0	15.1%	15.1%	0.1%
2009	\$ 53.0	\$ 50.2	-18.8%	-19.0%	0.2%
2008	\$ 52.3	\$ 53.0	-3.1%	-1.9%	-1.2%
2007	\$ 44.3	\$ 52.3	16.2%	16.3%	-0.1%
		3 yrs ended 2016	7.1%	7.1%	0.0%
		5 yrs ended 2016	7.0%	6.9%	0.1%
		10 yrs ended 2016	6.3%	6.3%	-0.1%

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, 2016, 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



Bangoi



Gabriel Roeder Smith & Company Consultants & Actuaries One Towne Square Suite 800 Southfield, MI 48076-3723 248.799.9000 phone 248.799.9020 fax. www.gabrielroeder.com

March 21, 2016

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

Re: Completion of Actuarial Audit of June 30, 2015 Annual Valuations of the Maine Public Employees Retirement System

### Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) was pleased to have the opportunity to perform a limited actuarial audit of the following June 30, 2015 actuarial valuations administered by the Maine Public Employees Retirement System (MainePERS):

MainePERS State Employee and Teacher Retirement Program MainePERS Consolidated Plan for Participating Local Districts Maine Judicial Retirement Program Maine Legislative Retirement Program

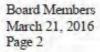
An actuarial audit involves a review of the retained actuary's work by an independent actuarial firm. The purpose of the audit was to provide an evaluation sufficient to allow the Auditor to express an actuarial opinion regarding the reasonableness and/or accuracy of valuation results, actuarial assumptions, and actuarial methods in accordance with generally recognized and accepted actuarial principles and practices. This particular audit was not a full replication audit. It was what GRS refers to as a Level Two audit (i.e., a review of the actuarial reports of the plan and a test of the valuation results using a mathematical model of plan activity or sampling).

In connection with this undertaking, GRS received and reviewed the following items:

- Actuarial valuation funding reports as of June 30, 2015,
- The most recent experience study covering the period 2000-2008 for MainePERS PLD.
- The most recent experience study covering the period 2005-2010 for the State and Teacher Retirement Program of the MainePERS,
- A full set of census data for plan participants and beneficiaries as of June 30, 2015, and
- A complete set of financial data as of June 30, 2015.

Our March 4, 2016 audit report provides numerous comments regarding audit findings related to the following:

- Review of Data Elements (Section II)
- Review of Experience Study and June 30, 2015 Actuarial Valuation Assumptions (Section III)
- Report Review/Results (Section IV)
- Review of Statutes and Board Regulations (Section V)
- Test of Valuation Results through Mathematical Modeling and Samples (Section VI)
- Actuarial Funding Method and Asset Valuation Method (Sections VII, VIII)



### FORMAL OPINION

The auditing actuarial firm, Gabriel, Roeder, Smith & Company, is independent of the retained actuarial firm, Cheiron. The auditing actuaries are not aware of any conflict of interest that would impair the objectivity of this work.

In the opinion of the auditing actuaries, the work of the retained actuaries fairly represents the financial position of the four plans that were audited. In particular:

- The actuarial assumptions and methods are reasonable and comply with generally accepted actuarial principles, State Law, and Board Regulations.
- With a few exceptions, the retained actuary is processing the data correctly.
- The retained actuary's actuarial valuation results, including accrued liability, normal cost, and expected contributions are correct to within acceptable tolerances.

We have presented many suggestions for areas where we believe the product can be improved. Of course, the retained actuary has access to information and a long history of experience with MainePERS that we do not have. We understand that the retained actuary may agree with some of our recommendations, while rejecting others.

We appreciate the opportunity to work on this project with MainePERS.

Sincerely,

James D. Anderson, FSA, EA, MAAA

Senior Consultant

Mark Buis, FSA, EA, MAAA

Kelvica J Stew

Senior Consultant

Rebecca L. Stouffer, ASA, MAAA

Consultant

JDA/RLS:bd

Gabriel Roeder Smith & Company





Classic Values, Innovative Advice

October 28, 2016

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 as of June 30, 2016 for each of the funded pension programs administered by the Maine Public Employees Retirement System (MainePERS). 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 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 of the Programs administered by MainePERS is to establish contribution rates that, over time, will remain level as a percentage of payroll. In order to achieve this, we developed a contribution rate that will provide for current cost (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 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. 43. 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 the Maine Public Employees Retirement System. This information includes, but is not limited to, the plan provisions, membership data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Page 1 of 2





We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found 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 a formal cash flow projection as described under Paragraph 41 of GASB Statement No. 67. However, Paragraph 43 allows for alternative methods to confirm the sufficiency of the 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 will result in the pension plan's projected fiduciary net position being greater than or equal to the benefit payments projected for each future period.

### **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
- · Solvency Test

### Certification

We believe that the pension plans administered by MainePERS are adequately and appropriately financed, in that the contributions 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. 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

Kina Ehist



Page 2 of 2



### SECTION I DEMOGRAPHIC INFORMATION

Number of Active Members   Annual Salaries of Active Members   Active Members   Annual Salaries of Active Members   Annual Salaries   An	5 2.88% 9 1.62% 3 7.92% 2 (8.93%)
2016	9 1.62% 3 7.92% 2 (8.93%)
2015	9 1.62% 3 7.92% 2 (8.93%)
2014   39,669   1,702,310,338   42,937   2012   39,360   1,718,449,172   43,66   2011   38,759   1,643,389,735   42,40   2010   39,884   1,672,252,868   41,92   2009   40,486   1,669,885,710   41,22   2008   41,561   1,619,705,846   38,9   2007   42,184   1,586,201,110   37,60   2008   41,561   1,619,705,846   38,9   2007   42,184   1,586,201,110   37,60   2016   10,870   490,974,092   45,14   2013   11,112   458,424,764   41,22   2012   10,772   474,828,262   44,00   2010   10,331   395,747,663   38,30   2009   9,719   380,541,135   39,14   2009   9,719   380,541,135   39,14   2007   9,587   342,528,740   35,72   2014   24   1,213,514   50,56   2014   24   1,213,514   50,56   2015   23   1,207,796   52,55   2014   24   1,213,514   50,56   2015   28   1,415,305   50,57   2014   24   24   1,213,514   50,56   2015   28   1,415,305   50,57   2014   24   24   1,213,514   50,56   2012   28   1,415,305   50,57   2014   24   1,213,514   50,56   2015   23   1,561,053   50,37   2009   43   1,758,909   40,90   2009   43   1,758,909   40,90   2009   43   1,758,909   40,90   2009   43   1,758,909   40,90   2009   43   1,974,113   45,91   2010   43   1,758,909   40,90   2009   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   43   1,974,113   45,91   2010   59   2,479,392   42,00   2011   59   6,790,274   115,00   2011   59   6,790,274   115,00   2011   59   6,790,274   115,00   2011   59   6,790,274   115,00   2009   57   6,718,453   117,86   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2009   57   6,718,453   117,86   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,364   117,96   2008   59   6,965,36	3 7.92% 2 (8.93%)
2013	2 (8.93%)
2013	2 (8.93%)
2012   39,360   1,718,449,172   43,60	
2011   38,759   1,643,389,735   42,40	
2010	0 1.13%
2009	
2008	205
2007         42,184         1,586,201,110         37,66           Consolidated Plan for Participating Local Districts           2016         11,019         \$ 505,798,133         \$ 45,96           2015         10,870         490,974,092         45,16           2014         10,848         460,029,637         42,46           2013         11,112         458,424,764         41,22           2012         10,772         474,828,262         44,09           2010         10,331         395,747,663         38,30           2009         9,719         380,541,135         39,18           2008         9,562         360,693,816         37,77           2007         9,587         342,528,740         35,77           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,44           2015         23         1,207,796         52,5;           2014         24         1,213,514         50,56           2013         28         1,415,305         50,56           2011         31         1,561,053         50,34           2010         43         1,758,909         40,9           2009<	I
2016	
2015	3000 (941 10144)
2015	2 1.63%
2014         10,848         460,029,637         42,40           2013         11,112         458,424,764         41,25           2012         10,772         474,828,262         44,00           2011         10,614         435,012,940         40,02           2010         10,331         395,747,663         38,31           2009         9,719         380,541,135         39,15           2008         9,562         360,693,816         37,72           2007         9,587         342,528,740         35,72           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,44           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,428,984         51,05           2011         31         1,561,053         50,56           2011         31         1,561,053         50,56           2011         31         1,758,909         40,99           2009         43         1,974,113         45,93           2008         50         2,089,427         41,76 <td< td=""><td>12.1 Extra 12.1 Extra</td></td<>	12.1 Extra
2013	
2012 10,772 474,828,262 44,00 2011 10,614 435,012,940 40,90 2010 10,331 395,747,663 38,30 2009 9,719 380,541,135 39,19 2008 9,562 360,693,816 37,72 2007 9,587 342,528,740 35,72  Withdrawn Participating Local Districts  2016 21 \$1,123,218 \$53,48 2015 23 1,207,796 52,53 2014 24 1,213,514 50,56 2013 28 1,428,984 51,03 2012 28 1,415,305 50,58 2011 31 1,561,053 50,38 2010 43 1,758,909 40,90 2009 43 1,974,113 45,99 2009 43 1,974,113 45,99 2008 50 2,089,427 41,78 2007 59 2,479,392 42,03  Dudicial Retirement System  2016 62 \$7,184,400 \$115,88 2014 60 6,688,159 111,46 2013 60 6,742,444 112,33 2012 59 6,790,233 115,08 2010 59 6,790,233 115,08 2010 59 6,956,364 117,96 2009 57 6,718,453 117,88 2008 59 6,956,364 117,96 2009 57 6,718,453 117,88 2008 59 6,461,343 109,55 2007 60 6,611,028 110,18	
2011         10,614         435,012,940         40,96           2010         10,331         395,747,663         38,30           2009         9,719         380,541,135         39,15           2007         9,562         360,693,816         37,77           2007         9,587         342,528,740         35,72           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,48           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,415,305         50,56           2011         31         1,561,053         50,38           2010         43         1,758,909         40,90           2009         43         1,974,113         45,92           2008         50         2,089,427         41,76           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2014         60         6,688,159         111,46           2013         60         6,742	
2010         10,331         395,747,663         38,36           2009         9,719         380,541,135         39,15           2008         9,562         360,693,816         37,77           2007         9,587         342,528,740         35,77           Withdrawn Participating Local Districts           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,44           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,56           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,78           2007         59         2,479,392         42,03           Dudicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2013         60         6,688,159         111,42 </td <td>COL 15-75 COL 15</td>	COL 15-75 COL 15
2009         9,719         380,541,135         39,19           2008         9,562         360,693,816         37,72           2007         9,587         342,528,740         35,72           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,48           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,415,305         50,55           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,92           2008         50         2,089,427         41,78           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,88           2015         56         6,851,612         122,33           2014         60         6,688,159         111,49           2013         60         6,742,444         112,33           2010         59         6,790,274	
2008         9,562         360,693,816         37,77           2007         9,587         342,528,740         35,72           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,48           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,54           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,78           2007         59         2,479,392         42,02           Dudicial Retirement System           2016         62         \$ 7,184,400         \$ 115,88           2013         60         6,681,612         122,33           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2010         59         6,790,274	
2007         9,587         342,528,740         35,72           Withdrawn Participating Local Districts           2016         21         \$ 1,123,218         \$ 53,48           2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,54           2011         31         1,561,053         50,33           2010         43         1,758,909         40,99           2009         43         1,974,113         45,93           2008         50         2,089,427         41,78           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,88           2015         56         6,851,612         122,38           2014         60         6,688,159         111,48           2013         60         6,742,444         112,33           2011         59         6,790,274         115,00           2011         59         6,790,233         <	
Withdrawn Participating Local Districts	
2016         21         \$ 1,123,218         \$ 53,44           2015         23         1,207,796         52,52           2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,55           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,76           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,86           2015         56         6,851,612         122,33           2014         60         6,688,159         111,46           2013         60         6,742,444         112,3           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718	8 3.12%
2015         23         1,207,796         52,55           2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,56           2011         31         1,561,053         50,32           2010         43         1,758,909         40,90           2009         43         1,974,113         45,92           2008         50         2,089,427         41,76           2007         59         2,479,392         42,02           Dudicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,37           2014         60         6,688,159         111,46           2013         60         6,742,444         112,33           2012         59         6,790,274         115,06           2011         59         6,790,233         115,06           2010         59         6,956,364         117,96           2009         57         6,718,453         117,86           2008         59         6,461,3	
2014         24         1,213,514         50,56           2013         28         1,428,984         51,03           2012         28         1,415,305         50,54           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,92           2008         50         2,089,427         41,76           2007         59         2,479,392         42,02           Dudicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,33           2014         60         6,688,159         111,46           2013         60         6,742,444         112,33           2012         59         6,790,274         115,06           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,65           2007         60         6,611,	7 1.85%
2013         28         1,428,984         51,03           2012         28         1,415,305         50,54           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,76           2007         59         2,479,392         42,03           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,85           2015         56         6,851,612         122,33           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	3 3.86%
2013         28         1,428,984         51,03           2012         28         1,415,305         50,54           2011         31         1,561,053         50,33           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,76           2007         59         2,479,392         42,03           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,85           2015         56         6,851,612         122,35           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,06           2011         59         6,790,233         115,06           2010         59         6,956,364         117,96           2009         57         6,718,453         117,86           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	3 (0.92%)
2012         28         1,415,305         50,54           2011         31         1,561,053         50,38           2010         43         1,758,909         40,90           2009         43         1,974,113         45,91           2008         50         2,089,427         41,76           2007         59         2,479,392         42,00           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,38           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	5 0.97%
2011         31         1,561,053         50,38           2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,76           2007         59         2,479,392         42,03           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,38           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	7 0.38%
2010         43         1,758,909         40,90           2009         43         1,974,113         45,93           2008         50         2,089,427         41,78           2007         59         2,479,392         42,03           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,33           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,08           2011         59         6,790,233         115,08           2010         59         6,956,364         117,96           2009         57         6,718,453         117,86           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	I
2009         43         1,974,113         45,92           2008         50         2,089,427         41,78           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,38           2014         60         6,688,159         111,48           2013         60         6,742,444         112,37           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	
2008         50         2,089,427         41,76           2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,81           2015         56         6,851,612         122,33           2014         60         6,688,159         111,46           2013         60         6,742,444         112,33           2012         59         6,790,274         115,00           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	
2007         59         2,479,392         42,02           Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,81           2015         56         6,851,612         122,33           2014         60         6,688,159         111,46           2013         60         6,742,444         112,33           2012         59         6,790,274         115,08           2011         59         6,790,233         115,08           2010         59         6,956,364         117,90           2009         57         6,718,453         117,86           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	
Judicial Retirement System           2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,31           2014         60         6,688,159         111,46           2013         60         6,742,444         112,37           2012         59         6,790,274         115,06           2011         59         6,790,233         115,00           2010         59         6,956,364         117,90           2009         57         6,718,453         117,80           2008         59         6,461,343         109,57           2007         60         6,611,028         110,18	25 50
2016         62         \$ 7,184,400         \$ 115,87           2015         56         6,851,612         122,38           2014         60         6,688,159         111,44           2013         60         6,742,444         112,33           2012         59         6,790,274         115,08           2011         59         6,790,233         115,08           2010         59         6,956,364         117,96           2009         57         6,718,453         117,86           2008         59         6,461,343         109,55           2007         60         6,611,028         110,18	4 0.05%
2015     56     6,851,612     122,38       2014     60     6,688,159     111,40       2013     60     6,742,444     112,33       2012     59     6,790,274     115,08       2011     59     6,790,233     115,08       2010     59     6,956,364     117,98       2009     57     6,718,453     117,88       2008     59     6,461,343     109,52       2007     60     6,611,028     110,18	
2014     60     6,688,159     111,46       2013     60     6,742,444     112,33       2012     59     6,790,274     115,08       2011     59     6,790,233     115,08       2010     59     6,956,364     117,96       2009     57     6,718,453     117,86       2008     59     6,461,343     109,55       2007     60     6,611,028     110,18	5-11 E-2-12-13-13-14-14-14-14-14-14-14-14-14-14-14-14-14-
2013     60     6,742,444     112,33       2012     59     6,790,274     115,08       2011     59     6,790,233     115,08       2010     59     6,956,364     117,90       2009     57     6,718,453     117,80       2008     59     6,461,343     109,50       2007     60     6,611,028     110,18	
2012     59     6,790,274     115,08       2011     59     6,790,233     115,08       2010     59     6,956,364     117,90       2009     57     6,718,453     117,80       2008     59     6,461,343     109,52       2007     60     6,611,028     110,18	
2011     59     6,790,233     115,08       2010     59     6,956,364     117,90       2009     57     6,718,453     117,80       2008     59     6,461,343     109,52       2007     60     6,611,028     110,18	
2010     59     6,956,364     117,90       2009     57     6,718,453     117,80       2008     59     6,461,343     109,52       2007     60     6,611,028     110,18	9 0.00%
2009     57     6,718,453     117,86       2008     59     6,461,343     109,57       2007     60     6,611,028     110,18	9 (2.39%)
2008         59         6,461,343         109,5           2007         60         6,611,028         110,18	4 0.03%
2007 60 6,611,028 110,18	8 7.63%
No. 4 (1971)	4 (0.61%)
Legislative Retirement Program*	4 8.18%
2016 177 \$ 2,590,011 \$ 14,63	3 3.92%
2015 180 2,534,548 14,08	10 PM
2014 181 2,517,431 13,90	300 mg/d/2000 mg/d/2000
2013 182 2,534,740 13,92	
2012 175 2,424,480 13,88	
2012 173 2,395,694 13,84	
2010 170 2,384,083 14,02	
(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2009 172 2,326,786 13,52	8 2.02%
2008 170 2,254,173 13,26 2007 170 2,151,925 12,69	

<sup>\*</sup> Legislative salaries in even-numbered valuation years have been increased to approximate a full session amount because data was based on that from the previous odd-numbered year.



### SECTION I DEMOGRAPHIC INFORMATION

(continued)

	Schedule o	f Benefit Recipients Va	luation Data	
Valuation Date	Total Number of Benefit Recipients at Year End	Annual Payments to	Average Annual Benefit	Percentage Increase in
June 30,	at rear End	Benefit Recipients	Annual Benefit	Average Benefi
State Employe	and Teacher Program			
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%
2009	27,544	525,718,969	19,087	5.44%
2008	26,821	485,529,823	18,103	4.21%
2007	26,301	456,863,471	17,371	5.84%
Consolidated F	Plan for Participating Loc	al Districts		
2016	8,847	\$ 135,629,476	\$ 15,331	0.70%
2015	8,581	130,647,324	15,225	3.02%
2013	8,333	123,149,154	14,778	2.99%
2013	8,122	116,539,396	14,349	(2.11%)
2013	7,520	110,230,682	14,658	5.77%
2012	7,409	102,681,024	13,859	2.70%
2010	7,172	96,787,246	13,495	1.61%
2009	7,021	93,249,060	13,281	5.86%
2009	6,939	87,059,562	12,546	4.94%
2007	6,872	82,159,217	11,956	5.26%
A STATE OF THE STATE OF T	ticipating Local Districts	02,100,217	11,550	5.2070
-1			Mark Watton Various	0.000.000.000
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	3.93%
2010	198	2,355,639	11,897	8.08%
2009	214	2,355,639	11,008	5.24%
2008	252	2,636,025	10,460	6.68%
2007	253	2,280,655	9,805	6.08%
Judicial Retire	ment Program			
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%
2009	53	2,603,792	49,128	(1.13%)
2008	50	2,484,586	49,692	0.84%
2007	43	2,119,008	49,279	0.52%
egislative Ret	irement Program			
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%
2009	130	229,960	1,769	3.33%
			211.00	210070
2008	120	205,417	1,712	10.95%



### SECTION I DEMOGRAPHIC INFORMATION

(concluded)

91 G27 P O 10	Ad	ded to Rolls	Remo	ved from Rolls	On Rolls at Year End		503 25
Year Ended June 30,	No. Annual Allowance		No. Annual Allowance		No.	Annual Allowance	
State Employee	and Teac	her Program					
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		691,848,269
2014	1,668	36,572,188	901	15,458,998	32,391		658,595,273
2013	1,995	37,073,840	856	13,895,682	31,624		637,482,083
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		547,042,21
2009	1,645	53,170,359	912	12,981,213	27,544		525,718,969
2008	1,462	42,000,560	942	13,334,208	26,821		485,529,823
2007	1,486	46,699,912	916	12,139,357	26,301		456,863,47
PLDs (Consolid	lated and	Non-Consolidated P	lans)				10 01
2016	545	\$ 8,708,434	283	\$ 3,725,340	9,019	\$	138,297,06
2015	623	12,030,018	390	4,577,535	8,757	855	133,313,96
2014	522	9,978,396	316	3,262,010	8,524		125,861,48
2013	881	9,563,286	300	3,280,453	8,318		119,145,09
2012	425	10,710,058	316	3,014,263	7,719		112,862,26
2011	516	8,796,407	276	2,862,417	7,610		105,166,47
2010	422	6,462,161	287	2,834,379	7,370		99,232,48
2009	326	8,821,806	287	2,912,694	7,235		95,604,69
2008	366	7,295,589	295	2,239,222	7,196		89,695,58
2007	333	7,007,117	245	2,110,419	7,125		84,639,22
Judicial Retirer	nent Prog	ram					
2016	7	\$ 426,643	4	\$ 230,879	74	\$	3,597,41
2015	6	312,332	2	161,430	71	1870.1	3,401,65
2014	6	254,034	4	262,201	67		3,250,74
2013	3	148,384	1	18,604	65		3,258,91
2012	3	142,235	2	112,433	63		3,129,13
2011	6	305,189	0	0	62		3,099,33
2010	3	190,353	0	0	56		2,794,14
2009	5	266,650	2	147,444	53		2,603,79
2009	8	394,226	1	71,836	50		2,484,58
2007	1	114,167	1	60,055	43		2,162,19
Legislative Ret	irement P	rogram	1				
2016	12	\$ 38,391	8	\$ 17,268	174	\$	348,59
2015	25	53,264	8	10,383	170		327,46
2014	5	10,934	7	7,779	153		284,58
2013	18	24,752	4	8,035	155		281,43
2012	2	9,025	6	13,289	141		264,71
2011	18	36,695	4	7,538	145		268,98
2010	5	15,259	4	5,396	131		239,82
2009	18	34,185	8	9,642	130		229,96
2008	9	28,388	6	3,501	120		205,41
2007	15	29,215	5	5,901	117		180,53





(continued)

# 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, 2016

		State Employee & Teacher Program		Consolidated Plan for PLDs		ludicial rogram	Legislative <u>Program</u>	
Type of Activity								
Investment Income	\$	(284,220,804)	\$	(63,941,136)	\$	(1,729,485)	\$	(295,325)
Combined Liability Experience	<u> </u>	(81,506,701)	_	9,142,757	85	1,745,956	34	245,867
Gain (or Loss) During Year from Financial Experience		(365,727,505)		(54,798,379)		16,471		(49,458)
Non-Recurring Items	\$ <del>\</del>	(30,436,605)		(50,884,219)	18	1,835,626	47	146,529
Composite Gain (or Loss) During Year	\$	(396,164,110)	\$	(105,682,598)	\$	1,852,097	\$	97,071

### as of June 30, 2016 PLDs (Consolidated State Employee and Non-Consolidated Judicial Legislative & Teacher Program Plans) Program Program **Total Pension Liability** Service Cost \$ 203.297.053 \$ 74.366.915 1,396,704 \$ 411.624 Interest 882,785,134 195,429,832 4,154,433 547,268 Change in benefit terms 0 0 2,016,584 Difference between expected and actual experience 81,506,700 50,824,625 (245,867)(1,745,956)Change in assumptions 30,436,605 (9,589,198)2,489,800 (146,529)Benefit payments, including refunds (3,501,911)(445,331)(744,357,598)(142,699,304)Net change in Total Pension Liability \$ 453,667,894 \$ 168,332,870 \$ 4,809,654 \$ 121,165 Total Pension Liability - beginning of year \$ 12,616,287,054 \$ 2,759,454,749 \$ 58,911,617 \$ 7,558,293 Total Pension Liability - end of year \$ 13,069,954,948 \$ 2,927,787,619 \$ 63,721,271 \$ 7,679,458 Plan Fiduciary Net Position Contributions - Employer \$ 311,527,411 \$ 1,077,545 \$ 48,407,790 \$ Contributions - Member 125,523,986 137,893 40,945,019 549,845 Transfers 6,342,010 (6,347,159)(217, 338)10,312,740 129,372 Net Investment Income 40,540,758 47,888 Benefit payments, including refunds (744,357,598) (142,699,304)(3,501,911)(445,331)Administrative Expenses (8,649,030)(2.058, 256)(47,577)(9,353)Net Change in Plan Fiduciary Net Position \$ (281,761,632) \$ (45,309,349) \$ 4,529,284 \$ (268,903)Plan Fiduciary Net Position - beginning of year \$ 10,242,097,022 \$ 2,437,369,789 \$ 56,340,825 \$ 11,075,564 Plan Fiduciary Net Position - end of year \$ 9,960,335,390 \$ 2,392,060,440 \$ 60.890.109 \$ 10,806,661 Net Pension Liability/(Asset) - end of year \$ 3,109,619,558 535,727,179 2,831,162 \$ (3.127,203)Discount Rate 5.875% 1% Decrease 5.875% 5.875% 5.875% 6.875% 6.875% 6.875% 6.875% Current Discount Rate 1% Increase 7.875% 7.875% 7.875% 7.875% Net Pension Liability 1% Decrease 4,714,339,826 \$ 890,114,435 \$ 8,732,452 \$ (2.359,862)Current Discount Rate (3,127,203)3,109,619,558 535,727,179 2,831,162 1% Increase 1,768,100,312 220,207,404 (2,285,911)(3,774,964)

Schedule of Change in Net Pension Liability





(continued)

						VENCY TEST ctuarial Liabilitie	es Fo	or					
Valuation (1) Date Active Member		(2) (3) Retirees, Active Members Reported Vested Terms (Employer Financed Assets		Retirees, Active Members Reported				Active Members Rep			of Actuarial Liabilitie Covered Reported Assets		
June 30,		Contributions		Beneficiaries		Portion)			(1)	(2)	(3)		
State Emplo	yee a	nd Teacher Progr	am										
2016	\$	2,359,818,665	\$	8,399,121,582	\$	2,311,014,701	\$	10,512,524,178	100%	97%	0%		
2015	1000	2,339,138,044	1000	7,831,348,903		2,445,800,107	123	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%		
2009		2,002,784,767		6,622,143,609		3,696,290,956		8,325,951,236	100%	95%	0%		
2008		1,898,148,565		6,209,005,616		3,560,878,330		8,631,557,629	100%	100%	15%		
2007		1,789,362,929		5,850,882,771		3,517,524,438		8,245,520,019	100%	100%	17%		
Consolidate	ed Plar	n for Participating	Loc	al Districts				1					
2016	\$	452,446,198	\$	1,654,981,662	\$	782,312,774	\$	2,489,157,281	100%	100%	49%		
2015	XSS	438,925,747	344	1,543,532,803		738,477,459	584	2,433,186,149	100%	100%	61%		
2014		423,097,001		1,462,031,828		724,529,016		2,379,733,634	100%	100%	68%		
2013		412,347,408		1,378,065,748		675,521,588		2,179,961,872	100%	100%	58%		
2012		398,895,449		1,262,186,227		707,745,483		2,103,481,277	100%	100%	63%		
2011		379,478,840		1,175,482,545		676,024,931		2,084,982,632	100%	100%	78%		
2010		347,801,024		1,083,097,662		654,598,374		2,011,019,138	100%	100%	89%		
2009		319,531,110		1,039,566,071		641,162,528		2,046,361,132	100%	100%	107%		
2008		294,627,592		990,913,007		628,335,716		2,151,832,580	100%	100%	138%		
2007		270,986,236		938,899,387		629,089,299		2,085,117,271	100%	100%	139%		
Withdrawn I	Partici	pating Local Dist	tricts		t <sub>i</sub> .				10				
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%		
2009		5,096,286		25,975,475		1,405,938		37,349,924	100%	100%	447%		
2008		5,617,830		28,899,915		5,234,960		49,820,012	100%	100%	292%		
2007		5,551,190		27,559,626		7,599,770		49,515,951	100%	100%	216%		



(concluded)

Valuation Date June 30,	r	(1) Active Member Contributions		(2) Retirees, ested Terms, Beneficiaries	(3) tive Members ployer Financed Portion)		Reported Assets	Lia	tion of Actu bilities Cove Reported As (2)	ered
hudiaial Dat				oerieliciaries	Foliony			(±)	(2)	(0)
udicial Ret	irement	Program	T	1		,				
2016	\$	10,592,002	\$	33,418,288	\$ 19,710,981	\$	64,265,782	100%	100%	1039
2015	346	9,717,368	2.5	30,422,680	18,771,569	26	57,074,951	100%	100%	909
2014		9,466,378		28,785,537	16,308,727		55,419,017	100%	100%	1059
2013		9,464,604		26,605,274	16,304,907		51,055,251	100%	100%	929
2012		9,379,428		24,731,810	12,229,440		49,735,004	100%	100%	1289
2011		9,028,737		24,690,578	14,148,982		49,324,784	100%	100%	1109
2010		8,510,723		26,915,670	17,723,306		47,677,635	100%	100%	699
2009		7,980,202		25,570,008	16,993,110		48,478,344	100%	100%	889
2008		7,481,505		24,943,576	15,209,371		50,418,942	100%	100%	1189
2007		6,941,423		21,133,577	18,767,351		48,225,053	100%	100%	1079
egislative	Retirem	ent Program				17				
2016	\$	2,505,647	\$	5,795,917	\$ (622,106)	\$	11,405,769	100%	100%	4999
2015	1	2,444,638		5,581,571	(467,916)		11,219,880	100%	100%	6839
2014		2,464,847		5,073,388	(33,042)		10,775,701	100%	100%	9,7989
2013		2,363,217		4,965,686	(456,289)		9,771,955	100%	100%	5359
2012		2,321,819		3,895,976	25,844		9,322,419	100%	100%	12,0139
2011		2,228,233		4,002,993	(506,033)		9,040,180	100%	100%	5559
2010		2,099,683		3,680,940	292,741		8,634,635	100%	100%	9759
2009		2,005,895		3,636,651	(142,737)		8,717,885	100%	100%	2,1559
2008		1,892,250		3,237,876	474,879		9,099,133	100%	100%	8369
2007*		1,783,293		3,101,175	211,170		8,721,571	100%	100%	18179

<sup>\*</sup> The funding method was changed for the Legislative Plan from the Aggregate to Entry Age Normal in 2007.





# 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 5% annual interest.

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 and state prison employees 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 include 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 military service credit, other purchased service credit, and service while receiving disability benefits under the Program.

### 5. Service Retirement Benefits

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

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.



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

(continued)

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 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.

### 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.





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

(continued)

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 65.

Form of Payment: Life annuity.

### B. Special Plans (State Employees)

### 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 prorated 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. Liquor Inspectors Employed Before September 1, 1984

Eligibility: Age 55 and 25 years of creditable service as a liquor inspector.

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.

### iv. State Prison Employees Employed Before September 1, 1984

Eligibility: Age 50 and 20 years of creditable service as a prison employee.

Benefit: one-half of average final compensation plus 2% for each year of service earned after qualification for retirement.

Form of Payment: Life annuity.

### v. 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 security officers and oil and hazardous materials emergency response workers.



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

(continued)

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, except oil and hazardous materials emergency response workers and certain prison employee benefits are reduced for retirement before age 55.

-AND-

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.

### vi. 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.

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.

### vii. 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 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%% 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 661/4% 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.





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

(continued)

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.

Benefit: Designated beneficiary, spouse, child(ren), 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 child(ren), 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, child(ren), older parents, or estate.

### 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 child(ren) 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 child(ren).
  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 child(ren), the surviving spouse and dependent child(ren) 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 child(ren) 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 credible 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.



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

(concluded)

## 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 which 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

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.

## 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.

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

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.





# STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

# A. Actuarial Assumptions

## 1. Rate of Investment Return:

	Previous	Revised
State Employees	7.125%	6.875%
Teachers	7.125%	6.875%

Rate is net of both administrative and investment expense.

# 2. Cost-of-Living Increases in Benefits:

	Previous	Revised
State Employees	2.55%	2.20%
Teachers	2.55%	2.20%

## 3. Rates of Salary Increase (% at Selected Years of Service):

	Previous As	ssumption	Revised Assumption		
Service	State Employees	Teachers	State Employees	Teachers	
0	10.50%	13.50%	8.75%	14.50%	
5	6.00	6.25	5.00%	5.75	
10	4.50	5.00	3.75%	4.75	
15	3.95	4.50	3.20%	4.00	
20	3.70	3.70	2.95%	2.75	
25 and over	3.50	3.50	2.75%	2.75	

The above rates previously include a 3.50% across-the-board increase at each year of service. The revised rates include a 2.75% across-the-board increase at each year of service.

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

	Previous As:	Revised Assumption	
Service	State Employees	Teachers	State Employees and Teachers
0	30.00%	37.00%	33.50%
5	7.50	12.00	10.50
10	4.40	6.90	5.95
15	4.00	5.50	4.25
20	4.00	5.50	4.00
25	4.00	5.50	4.00

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 Retired Healthy Lives at Selected Ages (number of deaths per 10,000 members):

		Previous As:	sumption			Revised Ass Showing 201		
	State E	mployees	Tea	chers	State E	mployees	Tea	chers
Age	Male	<u>Female</u>	Male	<u>Female</u>	Male	<u>Female</u>	Male	Female
50	16	13	14	11	42	32	40	27
55	27	24	22	20	59	43	56	36
60	53	47	41	36	79	63	76	52
65	103	90	81	71	113	97	107	80
70	177	155	142	125	175	156	167	129
75	306	249	246	204	285	256	272	211
80	554	413	448	338	480	432	457	357
85	997	708	807	571	837	766	796	632
90	1,727	1,259	1,418	1,026	1,469	1,365	1,398	1,126
95	2,596	1,888	2,267	1,654	2,314	2,242	2,203	1,849

Previous rates for State Employees are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. Current rates for Teachers are based on the same projected table but with a two-year set back. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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)\*:

	Previous Assumption				Revised Assumption Showing 2016 Values			
	State Em	ployees	Teacl	ners	State Emp	oloyees	Teach	ners
Age	Male	<u>Female</u>	Male	<u>Female</u>	Male	<u>Female</u>	Male	Female
20	3	2	2	1	4	2	4	2
25	3	2	3	2	5	2	4	2
30	4	2	4	2	4	3	4	2
35	7	4	6	3	5	4	5	3
40	10	6	9	5	6	5	6	4
45	12	9	11	7	10	8	9	6
50	16	13	14	11	17	13	16	27
55	27	24	22	20	29	20	27	36
60	53	47	41	36	48	30	46	52
65	103	90	81	71	85	45	81	80

<sup>\*</sup> 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.





# STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

Previous rates for State Employees are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. Current rates for Teachers are based on the same projected table but with a two-year set back. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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 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.

# Rates of Mortality for Disabled Lives and Retired Disabled Lives at Selected Ages (number of deaths per 10,000 members):

		Previous /	Assumptio	n		Revised A Showing 2		
	State E	mployees	Tead	chers	State E	mployees	Teac	hers
Age	Male	Female	Male	<u>Female</u>	Male	Female	Male	Female
25	92	72	92	72	84	24	84	24
30	112	89	112	89	80	31	80	31
35	134	109	134	109	94	43	94	43
40	160	126	160	126	114	59	114	59
45	193	144	193	144	177	92	177	92
50	236	165	236	165	216	121	216	121
55	295	191	295	191	249	152	249	152
60	362	226	362	226	282	181	282	181
65	446	272	446	272	337	220	337	220
70	576	331	576	331	437	300	437	300

Previous rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for males and females.

Revised 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.



# STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

# Rates of Retirement at Selected Ages (number retiring per 1,000 members):

			Previous A	Rev	ised Assumpti	ion			
	St	ate Employ	/ees		Teachers		State Em	ployees and T	eachers
Age	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
45	3	NA	NA	13	NA	NA	13	NA	NA
50	19	NA	NA	29	NA	NA	29	NA	NA
55	19	NA	NA	79	NA	NA	40	40	40
59	58	75	75	150	225	225	150	40	40
60	300	100	100	225	225	225	250	75	40
61	300	100	100	230	225	225	200	175	40
62	270	250	125	250	300	225	200	250	40
63	270	250	125	260	300	225	200	150	75
64	250	250	125	270	300	225	250	200	225
65	250	250	250	300	300	300	350	250	300
70	1,000	1,000	1,000	1,000	1,000	1,000	200	200	300
75	1,000	1,000	1,000	1,000	1,000	1,000	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 Special Plans

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. The revised assumptions do not change this assumption.

Members of the State Special 25 & Out Plan are previously 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. The revised assumption is for a rate of 25% per year beginning at 25 years of service, increasing to 50% per year after reaching 30 years of service, and finally to 100% per year beginning at 35 years of service.

Members of the 1998 Special Plan are previously assumed to retire at a rate of 25% per year eligible, increased to 50% with both 25 or more years of service and age at least 60, and with 100% retirement assumed at age 70. The revised rates for this group vary by age and whether service is less than 25 years or not. Sample revised rates are as follows:

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





# STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

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

	Previous Assumption		Revised Assumption						
	State		State Employees						
Age	Employees	Teachers	Regular	Special	Teachers				
25	6.8	3.5	5.0	5.4	2.1				
30	7.6	3.8	6.1	6.5	2.3				
35	10.2	3.8	9.3	9.9	2.3				
40	19.0	5.1	14.8	15.8	3.1				
45	27.9	11.6	22.8	24.4	7.0				
50	42.7	18.2	34.0	36.4	10.9				
55	53.0	24.8	39.9	42.6	14.9				
60	63.0	31.3	43.4	46.4	18.8				

<sup>\* 10%</sup> 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 married and have two children born when the member is 24 and 28; children are dependent until age 18; female spouse is three years younger than male spouse; member has no dependent parents; unmarried members 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.

## 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%

COLA Timing: September 1

## 13. Rationale for Assumptions:

The revised assumptions have been proposed by the actuary and adopted by the Board on July 14, 2016 for use starting with the 2016 valuation. The demographic assumptions are based on an experience study covering the period from June 30, 2012 through June 30, 2015. The Board continually reviews the investment return and inflation assumptions and adopted a reduced rate of 6.875%, effective with the 2016 valuation, at the advice of its investment consultants.

# 14. Changes since Last Valuation:

The COLA, salary increase, termination, retirement, disability, mortality, and disability mortality assumptions were updated based on the experience study covering the period from June 30, 2012 through June 30, 2015.



# STATE EMPLOYEE AND TEACHER PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(concluded)

### 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 Teachers 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 12 years of its prescribed amortization period remaining and all other gains and losses are amortized over ten-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.

## Changes since Last Valuation:

None.





## Consolidated Plan for Participating Local Districts

### 1. Member Contributions

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

Regular AC & AN	7.5%
Regular BC	4.0%
Special 1C & 1N	7.5%
Special 2C & 2N	7.5%

Special 3C & 3N 9.0% for first 25 years, 7.5% after Special 4C & 4N 8.5% for first 25 years, 7.5% after

Member contributions to increase by 0.5% in FY 17 (for 3C/3N & 4C/4N, both pre-25 years and post 25-years rates to increase by this amount). Member contributions earn 5% annual interest.

## 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.

### 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.



(continued)

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 21/4% for each year

that a member is younger than age

60 at retirement.

6% for each year that a member is New members to the Plan on or after July 1, 2014:

younger than age 65 at retirement.

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.

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.





(continued)

## 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.

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

Cost-of-Living Adjustment: See item 11.

### Special Plan 4N

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



(continued)

## 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.
- 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)).

### 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 child(ren) 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 child(ren). 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 child(ren), the surviving spouse and dependent child(ren) 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 child(ren) 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."

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

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

Benefit: Designated beneficiary, spouse, child(ren), 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 child(ren), 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, child(ren), older parents, or estate.

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

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

Benefit: 66%% 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.





(continued)

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 66% of average final compensation or ten years after the normal retirement date, if earlier, the disability converts to a service retirement benefit based on service and average final compensation at that time.

## 8. No-Age Disability Benefits

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

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

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

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

### 9. Termination Benefit

Eligibility: Termination of service other than by retirement or death with at least 5 years of credible 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 which have been in payment for twelve months for retirees who retired on or after September 1, 2015 or for six months for retirees who retire prior to September 1, 2015. The maximum annual increase is 3% (4% prior to the 2014 COLA).



(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:

Unadjusted benefit paid for the life of the member only.

Cash refund equal to the remaining member contribution balance, if any, at the date of death (where the Option 1:

member contribution balance has been reduced each month by the portion of the monthly benefit deemed to

be provided by member contributions).

100% joint and survivor annuity. Option 2:

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.





# A. Actuarial Assumptions

## 1. Discount Rate:

	Previous	Revised	
PLDs	7.125%	6.875%	

Rate is net of both administrative and investment expense.

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

	Previous	Revised
PLDs	2.55%	2.20%

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

Years of Service	Previous	Revised
0	9.5%	9.0%
1	7.5	4.8
2	6.0	3.6
3	4.7	3.1
4	4.3	2.75
5	4.0	2.75
10	3.5	2.75
15	3.5	2.75
20	3.5	2.75
25	3.5	2.75
30	3.5	2.75

The previous rates include a 3.50% across-the-board increase at each year of service. The revised rates include a 2.75% across-the-board increase at each year of service.

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

	Previous Assumption		Revised As:	sumption
Service	Regular	Special	Regular	Special
0	20.0%	25.0%	25.0%	25.0%
1	17.5	12.5	20.0	12.5
2	15.0	10.0	15.0	10.0
3	12.5	7.5	12.0	7.5
4	10.0	5.0	10.0	5.0
5	7.5	4.0	9.0	4.0
10	2.5	2.5	6.0	2.5
15	2.5	2.5	4.0	2.5
20	2.5	2.5	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.



(continued)

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

	Previous Assu	mption	Revised Ass (showing valu	
Age	Male	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	16	13	42	32
55	27	24	59	43
60	53	47	79	63
65	103	90	113	97
70	177	155	175	156
75	306	249	285	256
80	554	413	480	432
85	997	708	837	766
90	1,727	1,259	1,469	1,365
95	2,596	1,888	2,314	2,242

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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.

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

	Previous <i>I</i>	Assumption		ssumption lues in 2016)
Age	Male	Female	Male	<u>Female</u>
20	3	2	4	2
25	3	2	5	2
30	4	2	4	3
35	7	4	5	4
40	10	6	6	5
45	12	9	10	8
50	16	13	17	13
55	27	24	29	20
60	53	47	48	30
65	103	90	85	45

<sup>\*</sup> 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.





(continued)

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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):

	Previous	Assumption		Assumption alues in 2016)
Age	Male	<u>Female</u>	Male	Female
25	92	72	84	24
30	112	89	80	31
35	134	109	94	43
40	160	126	114	59
45	193	144	177	92
50	236	165	216	121
55	295	191	249	152
60	362	226	282	181
65	446	272	337	220
70	576	331	437	300

Previous rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for males and females.

Revised 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			
	Dravious Assumption	Revised A	ssumption
Age	Previous Assumption	Tier 1	Tier 2
45	50	50	50
50	50	50	50
55	100	50	50
60	270	200	50
65	300	250	200
70	1,000	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.



(continued)

	Special Plans			
Years of Service	Previous Assumption	Revised Assumption		
20	400	400		
21-24	300	300		
25	400	400		
26-29	300	300		
30	400	400		
31-34	300	300		
35+	1,000	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.

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

Age	Previous Assumption	Revised Assumption
25	3.0	1.8
30	4.0	2.4
35	5.0	3.0
40	7.0	4.2
45	15.0	9.0
50	33.0	19.8
55	61.0	36.6
60	0.0	65.0

<sup>10%</sup> 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%

COLA Timing: September 1





(concluded)

## 12. Rationale for Assumptions:

The revised assumptions have been proposed by the actuary and adopted by the Board on July 14, 2016 for use starting with the 2016 valuation. The demographic assumptions are based on an experience study covering the period from June 30, 2012 through June 30, 2015. The Board continually reviews the investment return and inflation assumptions and adopted a reduced rate of 6.875%, effective with the 2016 valuation, at the advice of its investment consultants.

## 13. Changes since Last Valuation:

The COLA, salary increase, termination, retirement, disability, mortality, and disability mortality assumptions were updated based on the experience study covering the period from June 30, 2012 through June 30, 2015.

### B. Actuarial Methods

## 1. Funding Method:

The entry age normal actuarial funding method is used to determine costs. Under this funding method, the total PLD contribution rate consists of two elements: the PLD normal cost rate and the Pooled Unfunded Actuarial Liability (PUAL) rate. The actual contribution for a given PLD will include an Individual Unpooled Unfunded Actuarial Liability (IUUAL) payment as well, unless the PLD came into the Plan without an IUUAL or has paid off its IUUAL.

For each of the Regular and Special Plans in the Consolidated Plan, an individual entry age normal cost rate is determined for each active member. The normal cost is determined by the following steps. First, an individual normal cost rate is determined by taking the value, as of entry age into a plan, of each active member's projected future benefits. Second, this value is then divided by the value, also at entry age, of the member's expected future salary. Finally, the rate is reduced by the member contribution rate to produce the employer normal contribution rate. These rates are then multiplied by each member's salary as of the valuation date to get the total normal cost dollars as of the valuation date for that plan and then divided by the total payroll at the valuation for the plan to get the normal cost rate for that plan. This process results in specific normal cost rates for each of the Regular and Special Plans in the Consolidated Plan.

The unfunded actuarial liability under the entry age normal funding method equals the present value, at the time of valuation, of the future benefit payments less the present value of future normal costs, future member contributions, future IUUAL payments, and current assets. Under the Consolidated Plan, a PUAL Rate is calculated for the Consolidated Plan in the Aggregate based on the PUAL being amortized over a 20-year period commencing with the June 30, 2015 valuation date and any layers of PUAL arising after that date amortized over individual 20-year periods. This amortization uses a level percentage of pay method with payroll assumed to increase at 3.5% per year. The amortization payment thus derived for the valuation year is then divided by the total payroll to develop a rate that is then allocated to each plan within the Consolidated Plan on the basis of total normal cost plus member contributions for each such plan. That is, those plans that constitute a larger portion of the overall liability will pay a larger portion of the pooled UAL payment when this rate is positive and receive a larger UAL credit when this rate is negative.

The Initial Unpooled Unfunded Actuarial Liability (IUUAL) was calculated at entry into the Consolidated Plan for each PLD that entered with liabilities in excess of their assets and is paid off through payment of a specific dollar amount until paid off.

### 2. Asset Valuation Method:

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

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

## 3. Changes since Last Valuation:

None.



## Judicial Retirement Program

## 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 plan.

### **Member Contributions**

Members are required to contribute 7.65% of earnable compensation. Member contributions earn 5% annual interest.

### 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.

#### Creditable Service

Creditable service includes the following:

- all judicial service as a member after November 30, 1984;
- 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 own and the employer's contributions on behalf of such service transferred to the Judicial Program.

## Service Retirement Benefits

Eligibility:

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

Eligibility for members in active service and inactive members:

25 years of creditable service.

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.

Eligibility for members in active service on or after October 1, 1999:

Attainment of age 60 and five years of creditable service.





(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.

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:

- 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 ju dicial 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



(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.

## 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%% 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 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%% 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.

## No Age Disability Retirement Benefits

Conditions: 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.





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# 8. Pre-Retirement Ordinary Death Benefits

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

Benefit: Designated beneficiary, spouse, child(ren), 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 child(ren), 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, child(ren), 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 child(ren) 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 child(ren).
  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 child(ren), the surviving spouse and dependent child(ren) shall share equally an annual sum equal to the member's average final compensation.
   When there are no longer any dependent child(ren), the surviving spouse shall receive two-thirds of the member's average final compensation until death.
- If the member leaves no spouse, the dependent child(ren) 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 5 years of credible 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 5 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.



(concluded)

Cost-of-living adjustments (COLA) are effective September 1 of each year and are applied to that portion of the benefit which 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

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.

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

be providedby 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.

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

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.





# JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

# A. Actuarial Assumptions

## 1. Annual Rate of Investment Return:

	Previous	Revised
Judicial	7.125%	6.875%

Rate is net of both administrative and investment expense.

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

	Previous	Revised
Judicial	2.55%	2.20%

# 3. Annual Rate of Individual Salary Increase:

	Previous	Revised
Judicial	3.50%	2.75%

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

Age	Previous Assumption	Revised Assumption
25	7%	7%
30	6	6
35	5	5
40	4	4
45	3	3
50	2	2
55	1	1

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

	Previous A	Assumption		Assumption alues in 2016
Age	<u>Male</u>	<u>Female</u>	Male	Female
50	16	13	42	32
55	27	24	59	43
60	53	47	79	63
65	103	90	113	97
70	177	155	175	156
75	306	249	285	256
80	554	413	480	432
85	997	708	837	766
90	1,727	1,259	1,469	1,365
95	2,596	1,888	2,314	2,242

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.



# **JUDICIAL RETIREMENT PROGRAM** ACTUARIAL ASSUMPTIONS and METHODS

(continued)

Revised 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.

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

	Previous	Assumption		Assumption alues in 2016)
Age	Male	<u>Female</u>	<u>Male</u>	Female
20	3	2	4	2
25	3	2	5	2
30	4	2	4	3
35	7	4	5	4
40	10	6	6	5
45	12	9	10	8
50	16	13	17	13
55	27	24	29	20
60	53	47	48	30
65	103	90	85	45

<sup>\* 5%</sup> of deaths assumed to arise out of and in the course of employment.

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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.

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

	Previous	Assumption		Assumption alues in 2016
Age	Male	<u>Female</u>	Male	<u>Female</u>
25	92	72	84	24
30	112	89	80	31
35	134	109	94	43
40	160	126	114	59
45	193	144	177	92
50	236	165	216	121
55	295	191	249	152
60	362	226	282	181
65	446	272	337	220
70	576	331	437	300

Previous rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for males and females.

Revised 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.





# JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

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

	Previ	ous Assump	tions	Rev	vised Assumpt	ions
Age	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
60-61	1,000	NA	NA	1,000	NA	NA
62-64	1,000	500	NA	1,000	500	NA
65-69	1,000	500	500	1,000	500	500
70-74	1,000	1,000	1,000	1,000	500	500
75+	1,000	1,000	1,000	1,000	1,000	1,000

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	Previous Assumption	Revised Assumption
25	0.6	0.0
30	0.6	0.0
35	0.7	0.0
40	1.1	0.0
45	2.2	0.0
50	4.2	0.0
55	7.2	0.0
60	0.0	0.0

## 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%

COLA Timing: September 1

### 12. Rationale for Actuarial Assumptions:

The previous assumptions were adopted by the MainePERS Trustees as a result of the prior experience study review performed in 2011 and covering the period July 1, 2005 through June 30, 2010, with the exception of the discount rate, inflation, and cost-of-living assumptions, which the Board continually reviews. The 7.125% discount rate, 3.50% inflation assumption, and



# JUDICIAL RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(concluded)

2.55% cost-of-living adjustment assumed rate were adopted by the Board effective with the June 30, 2014 valuation, at the advice of its investment consultants.

The revised 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:

The COLA, salary increase, termination, retirement, disability, mortality, and disability mortality assumptions were updated based on the experience study covering the period from June 30, 2012 through June 30, 2015.

### 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 Program 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.

### **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.

Please refer to the Maine Public Employees Retirement System State Employee and Teacher Retirement Program Actuarial Valuation Report as of June 30, 2015 for additional information about the actuarial value of assets, including its development.

## Changes since Last Valuation:

None.





## Legislative Retirement Program

## 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 5% annual interest.

### 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;
- 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 own 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.



(continued)

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

Eligibility for members in active service and inactive members:

25 years of creditable service.

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. Eliqibility 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

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.





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

Benefit: 66\%% 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 663/4% 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.

Benefit: Designated beneficiary, spouse, child(ren), 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 child(ren), 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, child(ren), older parents, or estate.

# 9. Pre-Retirement Accidental Death Benefits

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



(continued)

#### Benefit:

- If the member leaves no dependent child(ren), 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 child(ren) 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 child(ren). When there are no longer any dependent child(ren), 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 child(ren), the surviving spouse and dependent child(ren) shall share equally an annual sum equal to the member's average final compensation. When there are no longer any dependent child(ren), the surviving spouse shall receive two-thirds of the member's average final compensation until death.
- If the member leaves no spouse, the dependent child(ren) 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 credible 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 which 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

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.





(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\*.

# 14. Plan Changes since Prior Valuation

None.

<sup>\*</sup> 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.



# LEGISLATIVE RETIREMENT PROGRAM **ACTUARIAL ASSUMPTIONS and METHODS**

# A. Actuarial Assumptions

# 1. Annual Rate of Investment Return:

	Previous	Revised
_egislative	7.125%	6.875%

Rate is net of both administrative and investment expense.

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

	Previous	Revised
Legislative	2.55%	2.20%

# 3. Annual Rate of Individual Salary Increase:

	Previous	Revised
Legislative	3.50%	2.75%

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

Previous Assumption		Revised	Assumption
Age	Termination Rate	Service	Termination Rate
25	7%	0	0%
30	6	1 2	0
35	5	2	30
40	4	3	30
45	3	4	25
50	2	5	25
55	1	6	10
		7	10
		8	50
		9	50
		10	25
		11	25
		12	25
		13	25
		14	25
		15	25
		16+	50

The revised 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.





# 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):

	Previous Assumption		Revised Assumption (showing values in 2016)	
Age	<u>Male</u>	<u>Female</u>	Male	<u>Female</u>
50	16	13	42	32
55	27	24	59	43
60	53	47	79	63
65	103	90	113	97
70	177	155	175	156
75	306	249	285	256
80	554	413	480	432
85	997	708	837	766
90	1,727	1,259	1,469	1,365
95	2,596	1,888	2,314	2,242

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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)\*:

	Previous Assumption		Revised Assumption (showing values in 2016	
Age	Male	<u>Female</u>	Male	Female
20	3	2	4	2
25	3	2	5	2
30	4	2	4	3
35	7	4	5	4
40	10	6	6	5
45	12	6 9	10	8
50	16	13	17	13
55	27	24	29	20
60	53	47	48	30
65	103	90	85	45

<sup>\* 5%</sup> of deaths assumed to arise out of and in the course of employment.

Previous rates are based on the RP-2000 Mortality Table for males and females projected forward to 2015 using Scale AA. These assumptions were set in 2011 with a margin for future improvement based on the five-year experience study process.

Revised 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):

	Previous Assumption		Revised Assumption (showing values in 2016)	
Age	Male	Female	Male	<u>Female</u>
25	92	72	84	24
30	112	89	80	31
35	134	109	94	43
40	160	126	114	59
45	193	144	177	92
50	236	165	216	121
55	295	191	249	152
60	362	226	282	181
65	446	272	337	220
70	576	331	437	300

Previous rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for males and females.

Revised 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.

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

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

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

Age	Previous Assumption	Revised Assumption
25	0.6	0.0
30	0.6	0.0
35	0.7	0.0
40	1.1	0.0
45	2.2	0.0
50	4.2	0.0
55	7.2	0.0
60	0.0	0.0





# LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(continued)

# 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%

COLA Timing: September 1

## 12. Rationale for Actuarial Assumptions:

The previous assumptions were adopted by the MainePERS Trustees as a result of the prior experience study review performed in 2011 and covering the period July 1, 2005 through June 30, 2010, with the exception of the discount rate, inflation, and cost-of-living assumptions, which the Board continually reviews. The 7.125% discount rate, 3.50% inflation assumption, and 2.55% cost-of-living adjustment assumed rate were adopted by the Board effective with the June 30, 2014 valuation, at the advice of its investment consultants.

The revised 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:

The COLA, salary increase, termination, retirement, disability, mortality, and disability mortality assumptions were updated based on the experience study covering the period from June 30, 2012 through June 30, 2015.

## 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 Program 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.



#### LEGISLATIVE RETIREMENT PROGRAM ACTUARIAL ASSUMPTIONS and METHODS

(concluded)

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.

#### **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.

Please refer to the Maine Public Employees Retirement System State Employee and Teacher Retirement Program Actuarial Valuation Report as of June 30, 2015 for additional information about the actuarial value of assets, including its development.

#### Changes since Last Valuation:

None.

## STATISTICAL SECTION



Biddeford



#### 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.

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#### **DEFINED BENEFIT PLANS** CHANGES IN FIDUCIARY NET POSITION - STATE EMPLOYEE AND TEACHER PLAN

								Fisca	IY	ear						
		2016	2015		2014	2013		2012		2011	2010	2009		2008		2007
Additions																
Member contributions	\$	125,523,987	\$ 123,528	,807	\$ 121,033,152	\$ 121,059,113	5	121,071,499	\$	124,356,773 \$	125,814,747	\$ 124,008,211	\$	122,250,236	\$	121,491,868
Employer contributions		199,212,719	173,468	,932	155,000,664	136,937,972		125,839,206		184,423,671	183,937,026	187,865,547	্ব	168,706,479		176,442,958
Non-employer entity contributions		112,477,836	147,283	3.716	149,443,199	126,762,205		126,343,975		148,728,049	144,496,637	131,104,913	1	127,457,492		125,900,783
Investment Income (net of expenses)		40,540,759	191,829	,057	1,517,432,345	929,806,764		43,821,836		1,583,183,960	748,522,308	(1,575,728,247)	(7	267,689,374)	1	,213,499,641
Transfer from other funds	_	5,149		5	191	140	_			(E)	84	2		2	_	×.
Total additions to fiduciary net position		477,760,450	636,107	7,512	1,942,909,360	1,314,566,060	_	417,076,516		2,040,692,453	1,202,770,718	(1,132,749,576)		150,724,833	1	,637,335,250
Deductions																
Benefit payments		727,717,178	703,292	2,105	667,506,634	651,525,831		612,512,717		574,135,970	548,688,977	524,001,240	4	185,447,952		455,153,301
Refunds		16.806.566	19,432	2.153	21,684,397	17,891,255		21.024.589		20,747,236	17,214,436	37,390,057		21,737,697		16.964.468
Administrative expenses		8,649,031	8,917	7,135	7,467,351	7,651,933		7,268,110		7,553,424	7,461,728	7,882,567		23		823
Transfer to other funds		6,347,159		5	183	176	_	5		5.0000 Million	7000 COURTS (1-1)			- 5	_	
Total deductions from fiduciary net position	1	759,519,934	731,641	1,393	696,658,382	677,069,024	_	640,805,416		602,436,630	573,365,141	569,273,864	į	507,185,649		472,117,769
Change in fiduciary net position	\$	(281,759,484)	\$ (95,533	3,881)	\$ 1,246,250,978	\$ 637,497,036	S	(223,728,900)	\$	1,438,255,823 \$	629,405,577	\$ (1,702,023,440)	\$ (3	356,460,816	\$ 1	,165,217,481
Fiduciary Net Position																
Beginning of Year	\$1	0,242,105,591	\$ 10,337,639	1,472	\$ 9,091,388,494	\$ 8,453,891,458	5	8,677,620,358	\$	7,239,364,535 \$	6,609,958,958	\$ 8,311,982,398	\$ 8.6	668 443,214	\$ 7	.503,225,733
End of Year			\$ 10,242,105	1000	\$ 10,337,639,472	9,091,388,494				8,677,620,358 \$					45 B	,668,443,214

### **DEFINED BENEFIT PLANS** CHANGES IN FIDUCIARY NET POSITION - JUDICIAL PLAN

								Fiscal Y	'ear					
	37	2016	2015		2014		2013	2012	20	011	2010	2009	2008	2007
Additions														
Member contributions	\$	549,845 \$	54	19,691 \$	528, 19	2 \$	518,094 \$	517,419 \$	6	518,138 \$	530,521 \$	508,074 \$	540,082 \$	477,564
Employer contributions		1,077,545	9	79,281	932,22	3	841,397	810,721		987,261	961,083	1,267,869	1,211,358	914,220
Non-employer entity contributions				9.7%			12	353		5.	286		0.70	15
Investment Income (net of expenses)		129,372	1,0	55,347	8,416,04	2	5,195,908	238,870	(	9,044,929	4,368,320	(9,198,191)	(1,560,205)	7,137,803
Transfer from other funds		6,342,010												
Total additions to fiduciary net position	-	8,098,772	2,5	34,319	9,876,45	7	6,555,399	1,567,010	10	0,550,328	5,859,924	(7,422,248)	191,235	8,529,587
Deductions														
Benefit payments		3,501,911	3,3	33,995	3,219,48	0	3,282,344	3,171,846	- 4	3,034,095	2,799,764	2,582,178	2,337,289	2,176,006
Refunds		8		(*)	(6)		80	583		124	18.	29,128	( <del>*</del> )	55
Administrative expenses		47,577	1	19,399	41,68	1	42,858	40,852		43,534	30,222	31,024	o≅ā	
Transfer to other funds		8		\$ <b>4</b> 2	12		9	129		8	(2)	¥	923	70
Total deductions from fiduciary net position	<u> </u>	3,549,488	3,4	33,394	3,261,16	1	3,325,202	3,212,698	- 3	3,077,753	2,829,986	2,642,330	2,337,289	2,176,006
Change in fiduciary net position	\$	4,549,284 \$	(84	19,075) \$	6,615,29	6 \$	3,230,197 \$	(1,645,688) \$		7,472,575 \$	3,029,938 \$	(10,064,578) \$	(2,146,054) \$	6,353,581
Fiduciary Net Position														
Beginning of Year	\$	56,340,825 \$	57,1	39,900 \$	50,574,60	4 \$	47,344,407 \$	48,990,095 \$	4	1,517,520 \$	38,487,582 \$	48,552,160 \$	50,698,214 \$	44,344,633
End of Year	\$	60,890,109 \$	56,34	10,825 \$	57,189,90	0 \$	50,574,604 \$	47,344,407 \$	48	8,990,095 \$	41,517,520 \$	38,487,582 \$	48,552,160 \$	50,698,214

#### **DEFINED BENEFIT PLANS** CHANGES IN FIDUCIARY NET POSITION - LEGISLATIVE PLAN

						Fiscal Yea	ar				
		2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Additions											
Member contributions	\$	137,893 \$	193,356 \$	139,501 \$	194,669 \$	133,579 \$	182,065 \$	129,308 \$	179,037 \$	124,354 \$	160,058
Employer contributions		15	4,418	3,857	6,507	478	5	653		(10,020)	-
Non-employer entity contributions		12	27	925	더	925	더	727	2	327	10
Investment Income (net of expenses)		47,890	206,453	1,622,295	975,524	48,845	1,634,305	780,615	(1,645,122)	(281,186)	1,278,702
Transfer from other funds	_	15	-	176	-	156	5	253		á <del>z</del> s	15.
Total additions to fiduciary net position		185,783	404,227	1,765,653	1,176,700	182,424	1,816,370	909,923	(1,466,085)	(166,852)	1,438,760
Deductions											
Benefit payments		367,545	327,875	308,770	280,254	274,088	255,181	245,572	230,373	218,540	180,846
Refunds		77,786	111,237	8,836	82,768	5,613	93,809	68,762	134,503	21,220	32,458
Administrative expenses		9,353	9,584	7,975	8,040	7,241	7,551	7,741	10,111	626	8
Transfer to other funds	_	35		(#)	Ę	(8)	E	186	*	( <del>e</del> )	æ
Total deductions from fiduciary net position		454,684	448,696	325,581	371,062	286,942	356,541	312,075	374,987	239,760	213,304
Change in fiduciary net position	\$	(268,901) \$	(44,469) \$	1,440,072 \$	805,638 \$	(104,518) \$	1,459,829 \$	597,848 \$	(1,841,072) \$	(406,612) \$	1,225,456
Fiduciary Net Position											
Beginning of Year	\$	11,075,562 \$	11,120,031 \$	9,679,959 \$	8,874,321 \$	8,978,839 \$	7,519,010 \$	6,921,162 \$	8,762,234 \$	9,168,846 \$	7,943,390
End of Year	S.	10 806 661 \$	11 075 562 \$	11 120 031 \$	9 679 959 \$	8 874 321 \$	8 978 839 \$	7 519 010 S	6 921 162 \$	8 762 234 \$	9 168 846

#### **DEFINED BENEFIT PLANS** CHANGES IN FIDUCIARY NET POSITION - PLD CONSOLIDATED PLAN

									Fisca	l Ye	ear							
	_	2016	2015	2014			2013		2012		2011		2010		2009	20	80	2007
Additions																		
Member contributions	\$	40,861,405	\$ 37,202,921	33,210,5	10 3	5	31,658,619	\$	32,343,655	\$	35,022,928	\$	32,332,068	\$	29,710,526	\$ 27	,473,405	\$ 32,751,311
Employer contributions		47,624,182	43,366,730	32,706,1	60		26,465,471		22,260,128		17,459,677		12,311,355		11,582,485	12	1,179,699	11,236,146
Non-employer entity contributions		580	×	1,00			*		( <del>*</del> )		3		83		35		8	183
Investment Income (net of expenses)		10,200,342	46,075,304	361,125,1	77	2	221,313,918		10,111,043		381,383,555		182,525,441		(389,931,938)	(66	,322,263)	309, 156, 215
Transfer from other funds	_	(9)	9	62	Ģ.		2		943		S		9	_	ją.		9	828
Total additions to fiduciary net position	<u>-</u>	98,685,929	126,644,955	427,041,8	47	2	279,438,008		64,714,826		433,866,160		227,168,864		(348,638,927)	(26	,669,159)	353,143,672
Deductions																		
Benefit payments		134,834,445	129,476,010	121,559,2	57		114,627,512		108,646,611		101,288,867		96,702,118		93,095,725	85	735,837	81,416,856
Refunds *		5,085,235	48,939,042	5,602,1	01		6,051,774		22,911,291		11,353,634		5,822,392		8,041,146	5	,496,757	4,913,684
Administrative expenses		2,028,294	2,117,266	1,779,3	04		1,810,389		1,732,139		1,827,587		1,668,738		1,754,829	1	,941,924	1,965,164
Transfer to other funds	_	217,338	2	79	8				627 -		<u> </u>		25	_	Œ		5.	561
Total deductions from fiduciary net position		142,165,312	180,532,318	128,940,6	62		122,489,675		133,290,041		114,470,088		104,193,248	_	102,891,700	93	3,174,518	88,295,704
Change in fiduciary net position	\$	(43,479,383)	\$ (53,887,363)	298,101,1	85 \$	5	156,948,333	\$	(68,575,215)	S	319,396,072	\$	122,975,616	\$	(451,530,627)	\$ (119	,843,677)	\$ 264,847,968
Fiduciary Net Position																		
Beginning of Year	\$	2.401.889.308	\$ 2 455 776 671	2.157.675.4	86 9	5 21	000.727.153	S	2.069.302.368	S	1749.906.296	S	1.626.930.680	\$	2.078.461.307	\$ 2198	304.984	\$ 1.933,457.016
End of Year				2,455,776.6		11	157.675.486	5	2,000,002,000		1,140,000,200	Ψ	1,020,000,000		1.626.930.680	\$ 2,130		2,198,304,984

<sup>\*</sup> 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 employers.

#### **DEFINED BENEFIT PLANS** CHANGES IN FIDUCIARY NET POSITION - PLD AGENT PLAN

						Fiscal \	Yea	r				
_	2016	2015	2014		2013	2012		2011	2010	2009	2008	2007
\$	83,614 \$	94,468 \$	94,136	5	106,000 \$	105,380	\$	124,472 \$	132,049 \$	146,253 \$	155,015 \$	180,492
	783,608	916,671	667,846		656,047	102,509		302,338	9,024	2,776	3,133	5,121
	· · · · · · · · · · · · · · · · · · ·	23	111192		327	82		28	62	28	143	28
	112,396	662,680	5,581,964		3,591,957	79,872		6,669,837	6,005,408	(11,619,730)	(1,576,140)	7,794,089
					55 Ye			vn 25	-	75 C1 25 4A	\$5.50 Com \$5.00	
	979,618	1,673,819	6,343,946		4,354,004	287,761		7,096,647	6,146,481	(11,470,701)	(1,417,992)	7,979,702
	2,779,624	2,780,492	2,702,486		2,644,060	2,608,985		2,442,356	2,397,937	2,695,479	2,606,044	2,460,991
	m m	50 NO	1.897,634		853	201,244		9.190	141	17.109	52,877	28,141
	29,962	32,253	27,981		30,704	30,884		33,525	31,457	41,741	49,134	49,585
_	æ	-80	33		(*)	19		8	14	8	(+)	8
	2,809,586	2,812,745	4,628,101		2,674,764	2,841,113		2,485,071	2,429,535	2,754,329	2,708,055	2,538,717
\$	(1,829,968) \$	(1,138,926) \$	1,715,845	3	1,679,240 \$	(2,553,352)	\$	4,611,576 \$	3,716,946 \$	(14,225,030) \$	(4,126,047) \$	5,440,985
S	35.480.483 \$	36.619.409 \$	34.903.564	5	33.224.324 \$	35,777,676	S	31.166.100 \$	27.449.154 \$	41.674.184 \$	45.800.231 \$	40.359.246
S	33,650,515 \$	35,480,483 \$			34,903,564 \$			35,777,676 \$	31,166,100 \$	27,449,154 \$	41,674,184 \$	45,800,231
		\$ 83,614 \$ 783,608	\$ 83,614 \$ 94,468 \$ 783,608 916,671	\$ 83,614 \$ 94,468 \$ 94,136 \$ 783,608 916,671 667,846	\$ 83,614 \$ 94,468 \$ 94,136 \$ 783,608 916,671 667,846	\$ 83,614 \$ 94,468 \$ 94,136 \$ 106,000 \$ 783,608 916,671 667,846 656,047	2016         2015         2014         2013         2012           \$ 83,614 \$ 94,468 \$ 94,136 \$ 106,000 \$ 105,380 783,608 916,671 667,846 656,047 102,509 1 112,396 662,680 5,581,964 3,591,957 79,872 112,396 662,680 5,581,964 3,591,957 79,872 112,396 1 1,673,819 6,343,946 4,354,004 287,761         2,779,618 1,673,819 6,343,946 4,354,004 287,761         2,877,614 2,780,492 2,702,486 2,644,060 2,608,985 1,897,634 - 201,244 29,962 32,253 27,981 30,704 30,884 1 1,679,962 32,253 27,981 30,704 30,884 1 1,982,968 2,812,745 4,628,101 2,674,764 2,841,113         2,809,586 2,812,745 4,628,101 2,674,764 2,841,113         \$ (1,829,968) \$ (1,138,926) \$ 1,715,845 \$ 1,679,240 \$ (2,553,352)           \$ 35,480,483 \$ 36,619,409 \$ 34,903,564 \$ 33,224,324 \$ 35,777,676	2016       2015       2014       2013       2012         \$ 83,614 \$ 94,468 \$ 94,136 \$ 106,000 \$ 105,380 \$ 783,608 916,671 667,846 656,047 102,509 1 112,396 662,680 5,581,964 3,591,957 79,872 1 12,396 662,680 5,581,964 3,591,957 79,872 1 12,396 1 1,673,819 6,343,946 4,354,004 287,761       3,591,957 79,872 1 12,796,761         979,618 1,673,819 6,343,946 4,354,004 287,761 1 2,779,624 2,780,492 2,702,486 2,644,060 2,608,985 1 1,897,634 1 2,962 32,253 27,981 30,704 30,884 1 1,9962 32,253 27,981 30,704 30,884 1 1,9962 1 1	\$ 83,614 \$ 94,468 \$ 94,136 \$ 106,000 \$ 105,380 \$ 124,472 \$ 783,608 916,671 667,846 656,047 102,509 302,338	2016         2015         2014         2013         2012         2011         2010           \$ 83,614         \$ 94,468         \$ 94,136         \$ 106,000         \$ 105,380         \$ 124,472         \$ 132,049         \$ 783,608         916,671         667,846         656,047         102,509         302,338         9,024	2016         2015         2014         2013         2012         2011         2010         2009           \$ 83,614         \$ 94,468         \$ 94,136         \$ 106,000         \$ 105,380         \$ 124,472         \$ 132,049         \$ 146,253         \$ 783,608         916,671         667,846         656,047         102,509         302,338         9,024         2,776         2,796         3,777         3,797         2,695,479         2,779         2,779         2,695,479         2,772         2,772         3,776         3,747         3,747         3,747<	2016         2015         2014         2013         2012         2014         2010         2009         2008           \$ 83,614 \$ 94,468 \$ 94,136 \$ 106,000 \$ 105,380 \$ 124,472 \$ 132,049 \$ 146,253 \$ 155,015 \$ 783,608 916,671 667,846 656,047 102,509 302,338 9,024 2,776 3,133 1 112,396 662,680 5,581,964 3,591,957 79,872 6,669,837 6,005,408 (11,619,730) (1,576,140)           112,396 662,680 5,581,964 3,591,957 79,872 6,669,837 6,005,408 (11,619,730) (1,576,140)           979,618 1,673,819 6,343,946 4,354,004 287,761 7,096,647 6,146,481 (11,470,701) (1,417,992)           2,779,624 2,780,492 2,702,486 2,644,060 2,608,985 2,442,356 2,397,937 2,695,479 2,606,044 1 17,109 52,877 29,962 32,253 27,981 30,704 30,884 33,525 31,457 41,741 49,134 1 17,109 52,877 29,962 32,253 27,981 30,704 30,884 33,525 31,457 41,741 49,134 1 17,491 1 17,491 1 17,491 1 17,491 1 17,491 1 1 17,491 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

## GROUP LIFE INSURANCE PLAN CHANGES IN FIDUCIARY NET POSITION

								Fisca	Yea	ır				
		2016		2015	2014		2013	2012		2011	2010	2009	2008	2007
Additions														
Member contributions	5	4,972,352 \$	00	4,820,666 \$	4,708,184 \$	5	4,580,678 \$	4,504,407	\$	4,633,560 \$	4,578,292 \$	4,501,396 \$	5,643,608 \$	6,614,117
Employer contributions		8,149,231		8,250,204	7,950,385		7,138,693	7,005,992		6,836,808	6,825,209	6,812,155	6,363,100	2,223,692
Other contributions		62		23	34		327	92		23	84	28	220,933	243,115
Investment Income (net of expenses)		844,718		2,634,035	14,763,783		9,380,206	467,352		11,060,639	5,522,062	(8,851,694)	(1,755,010)	6,978,299
Transfer from other funds	_			50 NO	15.		25 NO	-			37		3831	m .c
Total additions to fiduciary net position		13,966,301		15,704,905	27,422,352		21,099,577	11,977,751		22,531,007	16,925,563	2,461,857	10,472,631	16,059,223
Deductions														
Benefit payments		10,453,004		11,137,510	10,273,054		10,426,687	8,197,040		8,664,079	8,555,182	9,966,568	8,210,909	8,020,342
Refunds		1 <del>1</del>			45		6 <del>2</del> 3	3,702		18,145	25,819	32,291	20,511	30,157
Administrative expenses		1,619,260		1,176,885	1,153,841		892,115	1,035,953		970,354	1,053,242	987,371	842,136	856,436
Transfer to other funds		14		20	전		940	12		9	22	9	198	€0
Total deductions from fiduciary net position		12,072,264		12,314,395	11,426,895		11,318,802	9,236,695		9,652,578	9,634,243	10,986,230	9,073,556	8,906,935
Change in fiduciary net position	\$	1,894,037 \$	N.	3,390,510 \$	15,995,457 \$	5 .	9,780,775 \$	2,741,056	\$	12,878,429 \$	7,291,320 \$	(8,524,373) \$	1,399,075 \$	7,152,288
Fiduciary Net Position														
Beginning of Year	\$	95,557,662 \$	7	92,167,152 \$	76,171,695 \$		66,390,920 \$	63,649,864	\$	50,771,435 \$	43,480,115 \$	52,004,488 \$	50,605,413 \$	43,453,125
End of Year	\$	97,451,699 \$	i i	95,557,662 \$	92,167,152 \$		76,171,695 \$	66,390,920	\$	63,649,864 \$	50,771,435 \$	43,480,115 \$	52,004,488 \$	50,605,413

## DEFINED CONTRIBUTION PLANS CHANGES IN FIDUCIARY NET POSITION

						F	iscal Year				
	<u></u>	2016	2015	2014	2013		2012	2011	2010	2009	2008
Additions											
Member contributions	\$	3,628,460	\$ 3,165,927 \$	3,505,423	\$ 2,662,317 \$		2,888,874 \$	2,790,771	\$ 2,381,995 \$	1,967,488	\$ 1,181,618
Employer contributions		47,768	131,589	109,515	111,327		43,434	47,377	53,956	153,334	16,583
Other contributions			9#3	*2	3		100	*	19	÷1	-
Investment Income (net of expenses)		226,942	719,767	3,210,308	1,815,398		318,640	1,939,674	742,235	(1,173,821)	(512,020)
Transfer from other funds	3	217,338	920	26	8			2	<u>2</u>	37	S ,
Total additions to fiduciary net position		4,120,508	4,017,283	6,825,246	4,589,042		3,250,948	4,777,822	3,178,186	947,001	686,181
Deductions											
Benefit payments		153	153	7.9			323	5	87	53	5
Refunds and with drawals		1,866,147	1,718,286	2,032,458	643,765		1,055,018	770,630	411,390	470,750	570,014
Administrative expenses		309,558	130,964	112,015	113,827		45,964	50,143	56,686	159,635	16,583
Transfer to other funds		8	(+)	<del>2</del> ((	æ		<i>(4)</i>	Ψ.	19	÷(	-
Total deductions from fiduciary net position		2,175,705	1,849,250	2,144,473	757,592		1,100,982	820,773	468,076	630,385	586,597
Change in fiduciary net position	\$	1,944,803	\$ 2,168,033 \$	4,680,773	\$ 3,831,450 \$	Ę	2,149,966 \$	3,957,049	\$ 2,710,110 \$	316,616	\$ 99,584
Fiduciary Net Position											
Beginning of Year	\$	27,197,337	\$ 25,029,304 \$	20,348,531	\$ 16,517,081 \$		14,367,115 \$	10,410,066	\$ 7,699,956 \$	7,383,340	\$ 7,283,756
End of Year	\$	29,142,140	\$ 27,197,337 \$	25,029,304	\$ 20,348,531 \$		16,517,081 \$	14,367,115	\$ 10,410,066 \$	7,699,956	\$ 7,383,340

<sup>\*</sup>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.

#### RETIREE HEALTH INVESTMENT TRUST FUND CHANGES IN FIDUCIARY NET POSITION

							Fiscal Y	ear						
		2016	2015		2014	2013	2012		2011	ă	2010		2009	2008
Additions														
Member contributions	5	197	\$ 148 3	S	12	\$ 33	\$ nec g	\$	- \$		3	\$	- \$	923
Employer contributions		5,584,992	(*)		2	1,840,385	6,000,000		14,411,368		80		*1	100,000,000
Other contributions		1.55	853		.9		924		27		2:		- E	353
Investment Income (net of expenses)		2,388,249	5,405,438		29,564,596	18,706,315	959,334		23,350,728		13,143,997		(16,084,427)	(1.609.855
Transfer from other funds		· •	( <del>-</del> );		ia.	至	(6)		14		8		=1	5-31
Total additions to fiduciary net position		7,973,241	5,405,438		29,564,596	20,546,700	6,959,334		37,762,096	24	13,143,997	9	(16,084,427)	98,390,145
Deductions														
Benefit payments			170		100	8	355		85		3		8	67.6
Refunds		: 22	526		· ·	9	920		<u> </u>		(4)		8	828
Administrative expenses		5,354	117,844		90,030	85,609	68,643		64,510		56,754		55,695	28,347
Transfer to other funds			17.6				070				2		5	57.6
Total deductions from fiduciary net position		5,354	117,844		90,030	85,609	68,643		64,510		56,754		55,695	28,347
Change in fiduciary net position	S	7,967,887	\$ 5,287,594	\$	29,474,566	\$ 20,461,091	\$ 6,890,691	\$	37,697,586 \$		13,087,243	\$	(16,140,122) \$	98,361,798
Fiduciary Net Position														
Beginning of Year	5	195,120,447	\$ 189,832,853	5	160,358,287	\$ 139,897,196	\$ 133,006,505	\$	95,308,919 \$	9	32,221,676	\$	98,361,798 \$	923
End of Year	5	203,088,334	\$ 195,120,447	5	189,832,853	\$ 160,358,287	\$ 139,897,196	\$	133,006,505 \$		95,308,919	\$	82,221,676 \$	98,361,798

<sup>\*</sup>The Retiree Health Investment Trust was established in FY2008.

#### **DEFINED BENEFIT PLANS** BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION BY TYPE

#### LAST TEN FISCAL YEARS

#### STATE EMPLOYEE AND TEACHER PLAN

STATE EINT EO LEE AND TEACHER TEA	•												
						Fiscal Y	ear						
	2016	2015	2014	2013	20	12	2011	2010	20	109	2008		2007
Type of Benefit													
Service retirement benefits	\$ 683,518,206	\$ 658,113,295	\$ 622,008,923										
Disability benefits	26,795,729	27,863,125	28,930,711										
Pre-Retirement death benefits	17,403,242	17,315,685	16,567,000										
Total benefits	\$ 727,717,177	\$ 703,292,105	\$ 667,506,634	-	\$	- \$	<u> </u>	\$ 	\$	- \$		\$	
Type of Refund													
Death	\$ 2,778,790	\$ 3,120,006	\$ 3,247,581										
Separation	14,027,776	16,312,147	18,436,816										
Other		- A - A - A - A - A - A - A - A - A - A	ere ere										
Total refunds	\$ 16,806,566	\$ 19,432,153	\$ 21,684,397	5 -	\$	- \$	. 4	\$ 12	\$	- \$	92	5	20

Data by type of refund, by plan, was not readily available for the years prior to 2014. This information will continue to be populated until the requisite ten years is displayed.

#### JUDICIAL PLAN

						Fisc	al Ye	аг				
	2016		2015	2014	2013	2012		2011	2010	2009	2008	2007
Type of Benefit Service retirement benefits Disability benefits Pre-Retirement death benefits	\$ 3,501,911	S	3,383,995 \$ - -	3,194,250 25,230								
Total benefits	\$ 3,501,911	S	3,383,995 \$	3,219,480	\$ 5/	\$ <u> </u>	\$	=======================================	\$ <u></u>	\$ ===	\$ 	\$ 
Type of Refund												
Death	\$ 529	S	- \$	120								
Separation	526		2	120								
Other	 200		ji ji	141								
Total refunds	\$ 143	\$	- \$	123	\$ 20	\$ 82	\$	28	\$ 82	\$ 28	\$ 82	\$ 28

Data by type of refund, by plan, was not readily available for the years prior to 2014. 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

								Fis	cal '	Year						
		2016		2015		2014	2013	2012			2011	2010	2009	2008	2007	
Type of Benefit																
Service retirement benefits Disability benefits Pre-Retirement death benefits	\$	312,108 19,245 36,192		289,432 8,142 30,301	\$	271,025 7,994 29,751										
Total benefits	\$	367,545	\$	327,875	\$	308,770	\$ 153	\$ 		\$	(3.)	\$ 951	\$ 	\$ 251	\$	III
Type of Refund																
Death	\$	6,122	5	11,524	5	5										
Separation		71,664		99,713		8,836										
Other	2	Ξ.		-		×										
Total refunds	\$	77,786	\$	111,237	\$	8,836	\$ 141	\$ 5	3	\$	(2)	\$ 121	\$ 35	\$ 125	\$	2

Data by type of refund, by plan, was not readily available for the years prior to 2014. This information will continue to be populated until the requisite ten years is displayed.

#### PLD CONSOLIDATED PLAN

						Fis	al Y	еаг							
		2016	2015	2014	2013	2012		2011			2010	2009	2008	2007	
Type of Benefit	6														
Service retirement benefits	\$ 1	123,607,716	\$ 118,281,904	\$ 110,537,271											
Disability benefits		6,954,282	6,994,050	7,133,396											
Pre-Retirement death benefits	S-	4,272,447	4,200,056	3,888,590											
Total benefits	\$ 1	134,834,445	\$ 129,476,010	\$ 121,559,257	\$ 15	\$ 747	\$		ù	\$	524	\$ 2	\$ 149	\$	29
Type of Refund															
Death	\$	589,655	\$ 1,141,276	\$ 613,327											
Separation		4,495,580	4,797,240	4,988,774											
Other *	85	-	43,000,526	573											
Total refunds	\$	5,085,235	\$ 48,939,042	\$ 5,602,101	\$ 	\$ -	S		_	S	-	\$ _	\$ -	\$	2

Data by type of refund, by plan, was not readily available for the years prior to 2014. This information will continue to be populated until the requisite ten years is displayed.

<sup>\*</sup> 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.

# DEFINED BENEFIT PLANS BENEFIT AND REFUND DEDUCTIONS FROM FIDUCIARY NET POSITION BY TYPE (continued)

#### LAST TEN FISCAL YEARS

D			

							Fisc	al Ye	ar				
		2016		2015	2014	2013	2012		2011	2010	2009	2008	2007
Type of Benefit Service retirement benefits Disability benefits Pre-Retirement death benefits	\$	2,779,624	\$	2,780,492 \$	2,702,486 - -								
Total benefits	\$	2,779,624	\$	2,780,492 \$	2,702,486 \$	8	\$ Ξ.	\$	-	\$ Ξ	\$ E	\$ Ξ.	\$ Ξ
Type of Refund	2		2	2									
Death	\$	Σ.	\$	- \$	×								
Separation		-		*	2000 CO 100 CO 1								
Other	96	8		2	1,897,634								
Total refunds	\$	S	\$	- \$	1,897,634 \$	S	\$ 8	\$	୍ର	\$ 음	\$ 25	\$ S	\$ 55

Data by type of refund, by plan, was not readily available for the years prior to 2014. This information will continue to be populated until the requisite ten years is displayed.

#### PENSION COMBINED

						Fisca	I Y	ear					
		2016	2015	2014	2013	2012		2011	2010	2009		2008	2007
Type of Benefit	-												
Service retirement benefits	\$	813,719,565	\$ 782,849,118	\$ 738,713,955	\$ 714,823,347	\$ 670,876,190	\$	625,577,713	\$ 595,870,176	\$ 564,341,497	\$	516,877,544	\$ 484,050,311
Disability benefits		33,769,256	34,865,317	36,097,330	37,020,969	36,778,342		36,289,226	35,862,703	45,703,611		53,404,352	51,475,049
Pre-Retirement death benefits		21,711,881	21,546,043	20,485,341	20,515,684	19,559,715		19,289,534	19,001,489	12,559,888		6,063,767	5,862,639
Total benefits	\$	869,200,702	\$ 839,260,478	\$ 795,296,626	\$ 772,360,000	\$ 727,214,247	\$	681,156,473	\$ 650,734,368	\$ 622,604,996	\$	576,345,663	\$ 541,387,999
Type of Refund													
Death	\$	3,374,567	\$ 4,272,805	\$ 3,860,908	\$ 4,359,439	\$ 4,406,322	\$	5,139,665	\$ 2,533,464	\$ 4,833,774	\$	3,517,392	\$ 3,272,721
Separation		18,595,020	21,209,100	23,434,426	18,412,052	21,003,032		20,567,589	18,099,434	38,700,530		21,950,987	17,176,811
Other *	_	5	43,000,526	1,897,634	1,254,306	18,733,381		6,496,738	2,462,834	2,077,637	_	1,840,172	1,489,218
Total refunds	\$	21,969,587	\$ 68,482,431	\$ 29,192,968	\$ 24,025,797	\$ 44,142,736	\$	32,203,992	\$ 23,095,732	\$ 45,611,942	\$	27,308,551	\$ 21,938,751

Data by type of refund, by plan, was not readily available for the years prior to 2014. 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**

										Fiscal Ye	ea	ir				
		2016		2015		2014		2013		2012		2011	2010	2009	2008	2007
Type of Benefit																
Basic active claims	S	3,980,171	5	3,679,454 \$	5	3,201,313 \$	5	3,150,890 \$	5	2,579,586 \$		1,670,491 \$	1,401,542 \$	2,109,195 \$	1,667,981 \$	1,650,657
Supplemental claims		1,060,000		1,412,000		1,506,000		1,861,008		549,000		972,344	1,242,024	1,520,346	1,471,000	1,505,000
Dependent claims		205,000		175,000		205,000		190,000		160,000		300,000	210,000	190,477	245,000	182,942
Accidental Death & Dismemberment claims		36,000		130,000		233,000		415,000		212,000		408,000	166,000	801,156	95,000	21,000
Basic retiree claims		5,053,663		5,660,521		5,081,721		4,670,754		4,600,319		5,131,699	5,373,083	5,215,134	4,647,103	4,509,130
		10,334,834		11,056,975		10,227,034		10,287,652		8,100,905		8,482,534	8,392,649	9,836,308	8,126,084	7,868,729
Conversion expense	_	118,170		80,535		46,020		139,035		96,135		181,545	162,533	130,260	84,825	151,613
Total benefits	\$	10,453,004	5	11,137,510 \$	5	10,273,054 \$	5	10,426,687 \$	5	8,197,040 \$		8,664,079 \$	8,555,182 \$	9,966,568 \$	8,210,909 \$	8,020,342
Type of Refund																
Group Life Insurance premiums	\$	- (	5	- \$	5	- \$	5	- 9	5	3,702 \$	i.	18,145 \$	25,819 \$	32,291 \$	20,511 \$	30,157
Total refunds	\$	- (	5	- \$	5	- \$	5	2- 9	5	3,702 \$		18,145 \$	25,819 \$	32,291 \$	20,511 \$	30,157





### DEFINED BENEFIT PLANS - RETIRED MEMBERS BY TYPE OF BENEFIT LAST TEN FISCAL YEARS

#### STATE EMPLOYEE AND TEACHER PLAN

		Service Retiree		Pre-Retirement	
Fiscal Year		Beneficiary	Disability Benefit	Death Benefits	Total Pension
Ended June 30:	Service Retirees	Recipients	Recipients	Recipients	Benefit Recipients
2016	25,734	6,143	1,660	644	34,181
2015	24,880	6,059	1,684	637	33,260
2014	24,039	6,015	1,699	638	32,391
2013	23,314	5,983	1,684	643	31,624
2012	22,145	5,948	1,754	638	30,485
2011	20,689	5,842	1,714	655	28,900
2010	20,021	5,823	1,720	684	28,248
2009	19,368	5,797	1,683	696	27,544
2008	18,746	5,588	1,690	797	26,821
2007	18,251	5,553	1,687	810	26,301

#### JUDICIAL PLAN

		Service Retiree		Pre-Retirement	
Fiscal Year		Beneficiary	Disability Benefit	Death Benefits	Total Pension
Ended June 30:	Service Retirees	<b>Recipients</b>	<u>Recipients</u>	Recipients	Benefit Recipients
2016	51	22	1	0	74
2015	49	21	1	0	71
2014	47	19	1	0	67
2013	46	17	2	0	65
2012	45	17	1	0	63
2011	43	18	1	0	62
2010	39	17	0	0	56
2009	36	17	0	0	53
2008	35	14	1	0	50
2007	31	11	1	0	43

#### **LEGISLATIVE PLAN**

		Service Retiree		Pre-Retirement	
Fiscal Year		Beneficiary	Disability Benefit	Death Benefits	Total Pension
Ended June 30:	Service Retirees	Recipients	Recipients	Recipients	Benefit Recipients
2016	137	29	2	6	174
2015	139	25	1	5	170
2014	124	23	1	5	153
2013	126	23	1	5	155
2012	114	21	1	5	141
2011	116	22	1	6	145
2010	104	21	1	5	131
2009	108	18	0	4	130
2008	97	18	0	5	120
2007	96	18	0	3	117



### DEFINED BENEFIT PLANS - RETIRED MEMBERS BY TYPE OF BENEFIT (concluded)

#### LAST TEN FISCAL YEARS

#### PLD CONSOLIDATED PLAN

		Service Retiree		Pre-Retirement	
Fiscal Year		Beneficiary	Disability Benefit	Death Benefits	Total Pension
Ended June 30:	Service Retirees	Recipients	Recipients	Recipients	Benefit Recipients
2016	6,279	1,987	405	176	8,847
2015	6,061	1,947	406	167	8,581
2014	5,853	1,898	408	174	8,333
2013	5,659	1,883	406	174	8,122
2012	5,181	1,826	347	166	7,520
2011	5,060	1,827	348	174	7,409
2010	4,830	1,824	347	171	7,172
2009	5,382	1,134	339	166	7,021
2008	5,253	1,065	396	225	6,939
2007	5,182	1,056	397	237	6,872

#### PLD AGENT PLAN

		Service Retiree		Pre-Retirement	
Fiscal Year		Beneficiary	Disability Benefit	Death Benefits	Total Pension
Ended June 30:	Service Retirees	Recipients	Recipients	Recipients	Benefit Recipients
2016	126	46	0	0	172
2015	129	47	0	0	176
2014	137	54	0	0	191
2013	140	56	0	0	196
2012	143	56	0	0	199
2011	201	0	0	0	201
2010	198	0	0	0	198
2009	214	0	0	0	214
2008	252	0	0	0	252
2007	253	0	0	0	253





#### **DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS**

#### LAST TEN FISCAL YEARS

#### STATE EMPLOYEE AND TEACHER PLAN

Retirement Effective Dates July 1, 2012 - June 30, 2016 <sup>a</sup>						Year	s of C	reditable Se	rvice					
Period 7/1/2015 to 6/30/2016		Less than 5		5-10		10-15		15-20		20-25		25-30	Gre	eater than 30
Average Monthly Benefit Average Final Salary Number of Active Retirants	\$	170 10,649 1,070	\$	485 32,076 1,259	\$	780 32,842 2,663	\$	1,229 36,832 2,467	\$	1,806 40,960 3,331	\$	2,105 43,503 6,670	\$	3,040 50,158 9,164
Period 7/1/2014 to 6/30/2015 Average Monthly Benefit Average Final Salary Number of Active Retirants	\$	178 11,307 930	\$	472 31,831 1,182	\$	755 31,809 2,550	\$	1,188 35,631 2,332	\$	1,757 40,059 3,283	\$	2,050 42,711 6,569	\$	2,970 49,231 8,889
Period 7/1/2013 to 6/30/2014 Average Monthly Benefit Average Final Salary Number of Active Retirants	\$ \$	189 12,446 786	\$	463 31,627 1,105	\$	725 30,576 2,426	\$	1,153 34,457 2,245	\$	1,715 38,903 3,215	\$	2,002 41,888 6,430	\$	2,907 48,257 8,586
Period 7/1/2012 to 6/30/2013 Average Monthly Benefit Average Final Salary Number of Active Retirants	\$ \$	210 40,079 650	\$ \$	465 33,962 1,009	\$ \$	708 30,962 2,319	\$ \$	1,139 33,820 2,160	\$ \$	1,700 38,005 3,123	\$ \$	1,987 41,170 6,337	\$ \$	2,877 47,284 8,360

<sup>\*</sup>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, 2016*						Year	s of C	reditable Se	rvice					
		Less than 5		5-10		10-15		15-20		20-25		25-30	Gr	eater than 30
Period 7/1/2015 to 6/30/2016		200000-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-		90000000		50000000000000000000000000000000000000		2010/0100		16 PL 4 1 TUT 1 TV 1		14 de 15	0 1000	
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 Active Retirants		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	S	17,129	\$	57,420	S	79,169	\$	86,262	\$	103,183	\$	110,586	\$	111,931
Number of Active Retirants		4		12	8	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	S	78,970	\$	84,290	\$	103,183	\$	110,586	5	111,931
Number of Active Retirants		1		9		15		12		5		9		5
Period 7/1/2012 to 6/30/2013														
Average Monthly Benefit	\$	315	\$	1,623	S	5,070	S	4,229	\$	4,750	\$	5,464	\$	5,541
Average Final Salary	5	118,269	5	112,541	5	87,240	S	93,463	5	110,809	5	110,586	5	109,339
Number of Active Retirants	36	1	52704	5	100	17	45,000	9	(100)	6	253	9	- 156	4

<sup>&</sup>quot;This table will continue to be populated until the requisite ten years of data is presented.

#### LEGISLATIVE PLAN

Retirement Effective Dates July 1, 2012 - June 30, 2016°						Year	s of C	reditable Se	rvice					
		Less than 5		5-10		10-15		15-20		20-25		25-30	Great	ter than 30
Period 7/1/2015 to 6/30/2016		23-2-13-6-1-4-1-4-1		2000		2.5740000000		A STATE OF THE STA		100000000000000000000000000000000000000		of the contract	Section NA	Processing Commenced
Average Monthly Benefit	\$	80	\$	159	\$	263	\$	402	\$	138	\$	73	\$	27
Average Final Salary	\$	10,120	\$	12,078	S	11,681	S	12,773	\$	153	\$	71	\$	
Number of Active Retirants		23		97		14		3		0		0		0
Period 7/1/2014 to 6/30/2015														
Average Monthly Benefit	S	79	S	155	S	254	S	382	S		S	27	S	64
Average Final Salary	\$	10,270	S	11,994	\$	11,153	S	13,204	S	(=8)	\$	43	S	70
Number of Active Retirants		24	5.	96		16	3.	4	9570	0	1000	0	100	0
Period 7/1/2013 to 6/30/2014														
Average Monthly Benefit	S	67	5	149	S	247	S	374	5	138	S	-	S	9-
Average Final Salary	\$ \$	9,603	5	11.643	\$	11.138	Ś	13,204	\$	5-6	5	-	Ś	100
Number of Active Retirants		22		84		14		4		0		0		0
Period 7/1/2012 to 6/30/2013														
Average Monthly Benefit	5	69	5	148	\$	256	Ś	374	\$	143	\$	≦;	\$	(2)
Average Final Salary	\$	18,728	Ś	11,778	Ś	11,339	Ś	13,204	\$	543	Ś	\$	Ś	<b>SE</b>
Number of Active Retirants	23.5	24	200	87	1970	11	- 10	4	87.0	0	270	0	77.	0

<sup>\*</sup>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

DI	n	CON	POI	IDA:	TO	DI A	
М	L)	LUN	SUL	IUA		PLA	N

Retirement Effective Dates July 1, 2012 - June 30, 2016*				Year	s of C	reditable Se	rvice				
	Less than 5	5-10		10-15		15-20		20-25	25-30	Gr	reater than 30
Period 7/1/2015 to 6/30/2016	2	2. <del></del>		1,000		2.		-	7,000		
Average Monthly Benefit	\$ 138	\$ 511	\$	748	\$	1,281	\$	1,809	\$ 2,228	\$	3,015
Average Final Salary	\$ 7,707	\$ 23,663	\$	27,128	\$	33,490	\$	33,885	\$ 41,686	\$	47,280
Number of Active Retirants	1,328	1,176		1,201		1,252		1,139	1,031		618
Period 7/1/2014 to 6/30/2015											
Average Monthly Benefit	\$ 139	\$ 497	\$	727	\$	1,256	\$	1,797	\$ 2,206	Ş	3,004
Average Final Salary	\$ 7,777	\$ 23,320	5	26,728	\$	32,942	\$	32,952	\$ 41,008	\$	46,870
Number of Active Retirants	1,186	1,050		1,130		1,167		1,090	1,037		638
Period 7/1/2013 to 6/30/2014											
Average Monthly Benefit	\$ 139	\$ 471	\$	675	\$	1,178	\$	1,748	\$ 2,138	\$	2,919
Average Final Salary	\$ 8,018	\$ 23,316	\$	25,525	\$	31,381	\$	31,737	\$ 40,026	\$	46,278
Number of Active Retirants	1,007	926		1,064		1,046		1,072	1,063		656
Period 7/1/2012 to 6/30/2013											
Average Monthly Benefit	\$ 136	\$ 449	5	629	\$	1,103	\$	1,710	\$ 2,086	\$	2,858
Average Final Salary	\$ 39,573	\$ 35,552	\$	28,806	\$	36,407	\$	32,317	\$ 39,707	\$	46,137
Number of Active Retirants	882	779		1,002		906		1,083	1,076		656

<sup>\*</sup>This table will continue to be populated until the requisite ten years of data is presented.

#### PLD AGENT PLAN

Retirement Effective Dates July 1, 2012 - June 30, 2016 <sup>a</sup>				Year	s of C	reditable Se	ervice				
	Less than 5		5-10	10-15		15-20		20-25	25-30	Gr	eater than 30
Period 7/1/2015 to 6/30/2016											
Average Monthly Benefit	\$ 49	S	337	\$ 501	\$	839	\$	1,816	\$ 2,221	\$	2,523
Average Final Salary	\$ 1,915	\$	15,644	\$ 15,294	\$	24,795	\$	31,502	\$ 38,440	5	46,217
Number of Active Retirants	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 Active Retirants	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 Active Retirants	20		4	23		22		34	34		21
Period 7/1/2012 to 6/30/2013											
Average Monthly Benefit	\$ 37	\$	273	\$ 450	\$	797	\$	1,748	\$ 2,065	\$	2,319
Average Final Salary	\$ 39,810	\$	20,825	\$ 13,898	\$	26,695	\$	29,884	\$ 35,644	\$	42,989
Number of Active Retirants	23		4	25		23		35	34		19

<sup>\*</sup>This table will continue to be populated until the requisite ten years of data is presented.





### **DEFINED BENEFIT PLANS - AVERAGE BENEFIT PAYMENTS**

(concluded)

#### LAST TEN FISCAL YEARS

#### ALL DEFINED BENEFIT PENSION PLANS, COMBINED

Retirement Effective Dates July 1, 2006 - June 30, 2016						Year	s of C	reditable Se	ervice					
		Less than 5		5-10		10-15		15-20		20-25		25-30	Gr	eater than 30
Period 7/1/2015 to 6/30/2016	772	200202	72	2283	72	2222	72	007200	72	0.07/2002	72	925935202	72	927246
Average Monthly Benefit	S	172		504		782		1,262		1,812		2,126	\$	3,038
Average Final Salary	\$	8,943	\$	27,562	5	27 28 2	\$	35,902	5	39,162	\$	43,310	\$	49,980
Number of Active Retirants		2,425		2,538		3,899		3,748		4,510		7,745		9,818
Period 7/1/2014 to 6/30/2015														
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 Active Retirants		2,143		2,340		3,719		3,529		4,410		7,652		9,561
Period 7/1/2013 to 6/30/2014														
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 Active Retirants		1,821		2,123		3,537		3,320		4,328		7,537		9,274
Period 7/1/2012 to 6/30/2013														
Average Monthly Benefit	\$	364	\$	433	\$	681	1779	Comment of the Commen	\$	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 Active Retirants		440		1,482		3,112		2,860		4,288		7,658		9,194
Period 7/1/2011 to 6/30/2012														
Average Monthly Benefit	S	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 Active Retirants		568		1,402		3,013		2,777		4,182		7,413		8,863
Period 7/1/2010 to 6/30/2011														
Average Monthly Benefit	S	419	\$	399	\$	636	S	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 Active Retirants		551		1,276		2,913		2,681		4,083		7,060		8,221
Period 7/1/2009 to 6/30/2010														
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	\$		\$	37,655	\$	43,265
Number of Active Retirants		559		1,175		2,819		2,594		3,898		6,782		7,868
Period 7/1/2008 to 6/30/2009														
Average Monthly Benefit	S	388	\$	398	\$	616	\$	1,017	\$	1,625	\$	1,907	\$	2,737
Average Final Salary	\$	23,532	\$	24,858	\$		\$	27,456	\$	31,630	\$	36,735	\$	42,107
Number of Active Retirants		451		1,132		2,810		2,570		3,827		6,657		7,501
Period 7/1/2007 to 6/30/2008														
Average Monthly Benefit	\$	148	\$	371	\$	585	\$	966	\$	1,565	\$	1,831	\$	2,643
Average Final Salary	S	19,644	\$	23,981	\$	21,766	\$	26,250	\$	30,720	\$	35,744	\$	41,078
Number of Active Retirants		371		1,065		2,796		2,510		3,718		6,412		6,789
Period 7/1/2006 to 6/30/2007														
Average Monthly Benefit	\$	143	\$	357	\$	561	\$	931	\$	1,514	\$	1,769	\$	2,549
Average Final Salary	\$	18,663	\$	22,659	\$	20,722	\$	25,350	\$	29,825	\$	34,774	\$	39,620
Number of Active Retirants		371		1,009		2,806		2,484		3,682		6,264		6,476



#### **DEFINED BENEFIT PLANS** RETIRED MEMBERS BY TYPE OF BENEFIT AND OPTION As of June 30, 2016

#### STATE EMPLOYEES AND TEACHER PLAN

			Type of Re	tirement						Option Se	elected				
Amount of Monthly Benefit	Number of Retired Members	1	2	3	4	0	1	2	3	4	5	6	7	8	Other
\$0 - \$250	2,301	1,307	797	5	192	640	212	274	60	19	710	87	36	37	226
\$251 - \$500	2,922	1,340	1,246	8	330	700	209	250	94	15	1,119	88	20	30	397
\$501 - \$750	3,153	1,486	999	16	652	777	203	271	108	18	894	98	31	33	720
\$751 - \$1,000	2,291	1,605	533	28	125	796	203	254	178	18	472	89	40	54	187
\$1,001 - \$1,250	2,259	1,747	327	55	130	835	215	233	163	23	408	87	49	40	206
\$1,251 - \$1,500	2,460	2,033	262	80	85	921	265	259	133	11	472	110	42	72	175
\$1,501 - \$1,750	2,608	2,192	206	138	72	1,004	292	264	143	24	445	92	59	66	219
\$1,751 - \$2,000	2,601	2,202	198	135	66	987	304	259	131	23	461	89	67	74	206
Over \$2,001	13,893	12,712	498	547	136	6,164	1,618	1,320	649	248	1,657	489	475	587	686
Totals	34,488	26,624	5,066	1,010	1,788	12,824	3,521	3,384	1,659	399	6,638	1,229	819	993	3,022

#### JUDICIAL PLAN

	-	Ту	pe of Ret	irement						Option Se	lected				
Amount of Monthly Benefit	Number of Retired Members	1	2	3	4	0	1	2	3	4	5	6	7	8	Other
\$0 - \$250	2	2	0	0	0	0	0	0	1	0	0	1	0	0	0
\$251 - \$500	2	1	1	0	0	1	0	0	0	0	1	0	0	0	0
\$501 - \$750	3	2	1	0	0	1	0	1	0	0	1	0	0	0	0
\$751 - \$1,000	5	1	4	0	O	1	0	0	0	0	2	0	0	0	2
\$1,001 - \$1,250	4	1	3	0	0	0	0	1	0	0	2	0	0	0	1
\$1,251 - \$1,500	3	2	1	0	0	0	0	0	1	0	2	0	0	0	0
\$1,501 - \$1,750	6	5	1	0	0	0	0	6	0	0	0	0	0	0	0
\$1,751 - \$2,000	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0
Over \$2,001	65	52	13	0	0	16	3	18	12	1	9	3	0	2	1
Totals	92	68	24	0	0	19	4	27	14	1	17	4	0	2	4

#### LEGISLATIVE PLAN

948 H W	200 (20 NO) E		ype of Re	tirement						Option Se	elected				
Amount of Monthly Benefit	Number of Retired Members	1	2	3	4	0	1	2	3	4	5	6	7	8	Other
\$0 - \$250	153	125	27	0	1	66	11	38	8	1	15	9	1	1	3
\$251 - \$500	15	12	1	1	1	7	3	2	0	0	0	1	0	0	2
\$501 - \$750	6	0	0	1	5	0	0	0	0	0	0	0	0	0	8
\$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
Totals	174	137	28	2	7	73	14	40	8	1	15	10	1	1	11





# DEFINED BENEFIT PLANS RETIRED MEMBERS BY TYPE OF BENEFIT AND OPTION As of June 30, 2016

(concluded)

#### PLD CONSOLIDATED PLAN

	9-	1	Type of Re	tirement						Option Se	elected				
Amount of Monthly Benefit	Number of Retired Members	1	2	3	4	0	1	2	3	4	5	6	7	8	Other
\$0 - \$250	2,196	1,482	580	10	124	717	211	307	91	22	501	94	42	45	166
\$251 - \$500	1,572	1,001	469	15	87	427	169	275	64	13	386	64	23	22	129
\$501 - \$750	1,431	925	289	19	198	360	149	212	73	14	259	69	26	29	240
\$751 - \$1,000	924	687	159	26	52	282	101	158	66	13	140	41	22	13	88
\$1,001 - \$1,250	836	669	118	30	19	246	104	162	59	9	119	41	21	18	57
\$1,251 - \$1,500	658	540	68	27	23	193	74	110	23	11	128	35	16	16	52
\$1,501 - \$1,750	590	491	48	34	17	158	64	103	39	7	120	26	17	5	51
\$1,751 - \$2,000	500	405	48	40	7	160	51	55	26	5	114	24	4	14	47
Over \$2,001	1,756	1,545	73	114	24	601	169	234	90	27	292	105	47	53	138
Totals	10,463	7,745	1,852	315	551	3,144	1,092	1,616	531	121	2,059	499	218	215	968

#### PLD AGENT PLAN

2 (20)	W 0 19 14	т	ype of Ret	tirement						Option Se	elected				
Amount of Monthly Benefit	Number of Retired Members	1	2	3	4	0	1	2	3	4	5	6	7	8	Other
\$0 - \$250	42	29	10	0	3	15	2	8	1	0	7	4	0	2	3
\$251 - \$500	32	13	16	0	3	8	1	1	3	0	15	1	0	0	3
\$501 - \$750	32	19	12	0	1	7	6	2	1	0	11	3	0	0	2
\$751 - \$1,000	12	6	2	1	3	1	0	3	2	0	1	0	0	0	5
\$1,001 - \$1,250	17	15	2	0	0	6	0	3	1	1	3	1	2	0	0
\$1,251 - \$1,500	9	8	1	0	0	3	0	3	1	0	1	0	0	1	0
\$1,501 - \$1,750	12	11	0	0	1	2	2	3	1	4	2	0	0	0	1
\$1,751 - \$2,000	7	7	0	0	0	2	0	2	0	0	3	0	0	0	0
Over \$2,001	49	45	4	0	0	7	3	8	5	1	21	4	0	0	0
Totals	212	153	47	1	11	51	14	33	15	3	64	13	2	3	14

## EMPLOYEE CONTRIBUTION RATES LAST TEN FISCAL YEARS

#### Fiscal Year

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Judicial Employees	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
Legislative Employees	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
School Teacher Employees	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
State of Maine Employees										
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 Groups	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
HazMat/DEP	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%	8.65%
Participating Local District Employees										
Employee Class:										
AC - General COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
BC - General COLA	4.00%	3.50%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
1C - Special COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
2C - Special COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
3C - Special COLA	9.00%	8.50%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
4C - Special COLA	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
AN - General No COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
1N - Special No COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
2N - Special No COLA	7.50%	7.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
3N - Special No COLA	9.00%	8.50%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
4N - Special No COLA	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%

## **EMPLOYER CONTRIBUTION RATES** LAST TEN FISCAL YEARS

#### Fiscal Year

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Judicial Employees	14.99%	13.24%	13.25%	11.98%	11.99%	14.12%	14.35%	15.85%	15.87%	15.01%
Legislative Employees	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
School Teacher Employees	13.38%	15.68%	15.68%	13.85%	13.85%	17.28%	17.28%	16.72%	16.72%	17.23%
State of Maine Employees										
Employee Class:										
General	22.37%	18.43%	18.14%	14.21%	14.18%	16.92%	16.38%	17.37%	17.01%	15.88%
Police - Grandfathered	38.01%	41.05%	40.43%	39.36%	39.22%	51.26%	50.19%	48.69%	47.70%	44.04%
Marine Wardens - Grandfathered	40.41%	31.62%	31.20%	33.44%	33.33%	54.49%	53.32%	40.67%	39.94%	45.63%
Game Wardens - Grandfathered	41.59%	36.50%	35.98%	38.60%	38.47%	54.48%	53.30%	50.14%	49.11%	47.07%
Prison Wardens - Grandfathered	27.28%	29.51%	29.05%	26.83%	26.74%	27.03%	25.81%	25.68%	25.15%	24.29%
Forest Rangers - Grandfathered	21.64%	22.73%	22.36%	13.69%	13.65%	22.32%	21.84%	22.18%	21.70%	18.21%
1998 Special Groups	28.71%	23.04%	22.65%	17.39%	17.33%	19.06%	18.27%	19.50%	19.09%	18.11%
HazMat/DEP	28.71%	23.04%	22.65%	17.39%	17.33%	19.06%	18.27%	19.50%	19.09%	18.11%
Participating Local District Employees										
Employee Class:										
AC - General COLA	8.90%	7.80%	6.50%	5.30%	4.40%	3.50%	2.80%	2.80%	2.80%	2.80%
BC - General COLA	5.80%	4.70%	3.90%	3.20%	2.70%	2.10%	1.70%	1.70%	1.70%	1.70%
1C - Special COLA	14.00%	13.40%	12.80%	12.20%	10.20%	8.10%	6.50%	6.50%	6.50%	6.50%
2C - Special COLA	8.90%	8.30%	7.90%	7.50%	6.30%	5.00%	4.00%	4.00%	4.00%	4.00%
3C - Special COLA	11.40%	11.00%	10.50%	10.00%	8.30%	6.60%	5.30%	5.30%	5.30%	5.30%
4C - Special COLA	7.60%	7.20%	6.90%	6.60%	5.50%	4.40%	3.50%	3.50%	3.50%	3.50%
AN - General No COLA	5.60%	4.10%	3.40%	2.80%	2.40%	1.90%	1.50%	1.50%	1.50%	1.50%
1N - Special No COLA	8.70%	7.50%	7.10%	6.80%	5.60%	4.50%	3.60%	3.60%	3.60%	3.60%
2N - Special No COLA	5.20%	4.40%	4.20%	4.00%	3.30%	2.60%	2.20%	2.20%	2.20%	2.20%
3N - Special No COLA	7.00%	6.10%	5.80%	5.50%	4.50%	3.60%	2.90%	2.90%	2.90%	2.90%
4N - Special No COLA	4.40%	4.00%	3.80%	3.60%	3.00%	2.40%	1.90%	1.90%	1.90%	1.90%

#### PRINCIPAL PARTICIPATING EMPLOYERS

#### **CURRENT YEAR AND NINE YEARS AGO**

	2016				2007		
Participating Entity	Covered Employees	Rank	Percentage of Total System	Participating Entity	Covered Employees	Rank	Percentage of Total System
State of Maine	14,485	1	25.41	State of Maine	15,896	1	25.26
Maine Veterans Home - Central Office	1,412	2	2.48	Portland School Department	1,317	2	2.09
Portland School Department	1,215	3	2.13	City of Portland	820	3	1.30
City of Portland	888	4	1.56	Lewiston School Department	810	4	1.29
Lewiston School Department	822	5	1.44	Bangor School Department	721	5	1.15
Bangor School Department	593	6	1.04	RSU #75 - MSAD #75 Topsham	711	6	1.13
RSU #6 - MSAD #6 Bar Mills	577	7	1.01	Auburn School Department	651	7	1.03
South Portland School Department	541	8	0.95	RSU #6 - MSAD #6 Bar Mills	618	8	0.98
Auburn School Department	533	9	0.93	Sanford School Department	595	9	0.95
RSU #14	507	10	0.89	RSU #54 - MSAD #54 Skowhegan	578	10	0.92
All Others *	35,434	11	62.16	All Others *	40,208	11	63.90
Total (555 Participating Entities)	57.007		100.00	Total (545 Participating Entities)	62.925		100.00

<sup>\* &</sup>quot;All Others" includes employees covered under two or more employer types. In 2016, "All Others" consisted of:

	Employer Count	Member Count
Judicial Retirement System	1	66
Legislative Retirement System	1	179
Participating Local Districts	321	10,147
School Districts	222	25,042
Total	545	35,434

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 Benefit Administration System.





#### 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: Various Reporting Entity: (as follows)

Central Maine Community College Eastern Maine Community College Kennebec Valley Community College Maine Community College System - Admin

Maine Dairy & Nutrition Council

Maine Developmental Disabilities Council

Maine Potato Board

ME Community College - Career Advantage MECDHH/Gov. Baxter School for the Deaf Northern Maine Community College

Northern New England Passenger Rail Authority

Southern Maine Community College Washington County Community College Wild Blueberry Commission of Maine York County Community College

Participants: **Teachers** 

Employers: State of Maine; School Administrative

Units

Reporting Entity: (as follows)

Acton School Department Andover School Department AOS #43 Central Office AOS #43 Howland AOS #43 Milo

AOS #47 Central Office AOS #47 Dedham AOS #47 Orrington AOS #77 Alexander AOS #77 Central Office AOS #77 Charlotte AOS #77 Eastport AOS #77 Lubec

AOS #77 Pembroke AOS #77 Perry AOS #77 Robbinston AOS #81 Central Office AOS #81 CSD #8 Airline

AOS #81 Holden AOS #90 Baileyville AOS #90 Central Office AOS #90 East Range

AOS #90 Lee

AOS #90 Princeton

AOS #91 Bar Harbor

AOS #91 Central Office

AOS #91 Cranberry Isle

AOS #91 Frenchboro

AOS #91 MDI High School

AOS #91 Mt Desert

AOS #91 Southwest Harbor

AOS #91 Swans Island

AOS #91 Tremont

AOS #91 Trenton

AOS #92 Central Office

AOS #92 Vassalboro

AOS #92 Waterville

AOS #92 Winslow

AOS #93 Bristol

AOS #93 Central Office

AOS #93 Great Salt Bay

AOS #93 Jefferson

AOS #93 Nobleboro

AOS #93 South Bristol

AOS #94 Central Office

AOS #94 Harmony

AOS #94 MSAD 46

AOS #96 Central Office

AOS #96 Cutler

AOS #96 East Machias

AOS #96 Jonesboro

AOS #96 Machias

AOS #96 Machiasport

AOS #96 Marshfield

AOS #96 Northfield

AOS #96 Roque Bluffs

AOS #96 Wesley

AOS #96 Whiting

AOS #96 Whitneyville

AOS #98 Boothbay Harbor

AOS #98 Central Office

AOS #98 Edgecomb

AOS #98 Georgetown

AOS #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



TEACHERS (continued)

Chebeague Island School Department

Cherryfield School Department

CSD #19 Five Town Csd

CSD #13 Deer Isle - Stonington

CSD #17 Moosabec CSD #18 Wells-Ogunquit

Dayton School Department

East Millinocket School Department Fastern Aroostook RSU #39

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 Gorham School Department

Gould Academy

Greenbush School Department Hancock School Department

Hermon School Department

Indian Island Indian Township

Isle Au Haut School Department Islesboro School Department

K.I.D.S. RSU #2

Kittery School Department

Lamoine School Department

Lee Academy

Lewiston School Department

Lincoln Academy

Lincolnville School Department Lisbon School Department

Long Island School Department Madawaska School Department

Maine Central Institute Maine Education Association

Maine Indian Education

Maine School of Science & Mathematics

Medway School Department Milford School Department Millinocket School Department

Monhegan Plantation School Department

MSAD #4 Guilford

MSAD #7 North Haven

MSAD #8 Vinalhaven MSAD #12 Jackman

MSAD #13 Bingham

MSAD #20 Fort Fairfield

MSAD #23 Carmel

MSAD #24 Van Buren

MSAD #27 Fort Kent

MSAD #28 Camden MSAD #32 Ashland

MSAD #33 St. Agatha MSAD #42 Mars Hill

MSAD #45 Washburn

MSAD #53 Pittsfield MSAD #58 Kingfield

MSAD #59 Madison

MSAD #65 Matinicus

Northport School Department Otis School Department

Oxford Hill Technical School #11

Pleasant Point School

Portland School Department

Region 2 Southern Aroostook County

Region 3 Northern Penobscot County

Region 4 United Technologies Center

Region 7 Waldo County Technical Center

Region 8 Cooperative Board for Vocationa Region 9 School of Applied Technology

Region 10 - Cumberland-Sagadahoc County

Regional School Unit #1

Regional School Union #26

Regional School Unit No. 22 Regional School Unit #78

RSU #3 - MSAD #3 Unity

**RSU #4** 

RSU #5

RSU #6 - MSAD #6 Bar Mills

RSU #9 - MSAD #9 Farmington

RSU #10

RSU #11 - MSAD #11 Gardiner

RSU #13

RSU #14

RSU #15 - MSAD #15 Gray

RSU #16

RSU #17 - MSAD #17 South Paris

RSU #18

RSU #19

RSU #20

RSU #21

**RSU #23** 

**RSU #24** 

RSU #25

RSU #29 - MSAD #29 Houlton

RSU #34

RSU #35 - MSAD #35 Eliot

RSU #37 - MSAD #37 Harrington

RSU #38





**TEACHERS** (continued)

RSU #40 - MSAD #40 Waldoboro RSU #44 - MSAD #44 Bethel RSU #49 - MSAD #49 Fairfield

RSU #50

RSU #51 - MSAD #51 Cumberland Center

RSU #52 - MSAD #52 Turner RSU #54 - MSAD #54 Skowhegan RSU #55 - MSAD #55 Cornish RSU #57 - MSAD #57 Waterboro RSU #60 - MSAD #60 North Berwick RSU #61 - MSAD #61 Bridgton RSU #64 - MSAD #64 East Corinth

RSU #67 - MSAD #67 Lincoln

RSU #68 - MSAD #68 Dover-Foxcroft

RSU #70 d/b/a MSAD #70

RSU #71

RSU #72 - MSAD #72 Fryeburg

RSU #73

RSU #74 - MSAD #74 North Anson RSU #75 - MSAD #75 Topsham RSU #79 - MSAD #1 Presque Isle

RSU #84 d/b/a MSAD #14 Saco School Department Sanford School Department Scarborough School Department School Agent Carrabassett School Agent Coplin Plantation

School Agent Pleasant Ridge Plantation

Sheepscot Valley RSU #12

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: 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

PROGRAM: PARTICIPATING LOCAL DISTRICT

RETIREMENT PROGRAM

Employers: PLDs (Active and Withdrawn)

Reporting Entities: (as follows)

Androscoggin County

Androscoggin Valley Council of Government

Aroostook County

Auburn Housing Authority Auburn Lewiston Airport Auburn Public Library

Auburn Water And Sewer District

Auburn, City of Augusta, City of

Augusta Housing Authority

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 Sciences

Belfast Water District Belfast, City of

Berwick Sewer District Berwick, Town of Bethel, Town of

**Biddeford Housing Authority** 

Biddeford, City of

Boothbay Harbor, Town of Boothbay Region Water District Bowdoinham Water District Brewer Housing Authority



#### **CONSOLIDATED PLAN FOR PLDs** (continued)

Brewer, City of Brownville, Town of Brunswick Fire & 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 & Police Carrabassett Valley, Town of Chesterville, Town of Cheverus High School

Coastal Counties Workforce Community School District #912 Community School District #918

Corinna Sewer District Corrinna, Town of

China, Town of

Cornville Regional Charter School

**Cumberland County** Cumberland, Town of Damariscotta, 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 Jackman Utility District

Jay, Town of Kennebec County

Kennebec Sanitary Treatment District

Kennebec Water District

Kennebunk Kennebunkport Wells Water District

Kennebunk Light & Power District

Kennebunk Sewer District Kennebunk, Town of Kennebunkport, Town of Kittery Water District Kittery, Town of Knox County Sheriffs 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 & Sagadahoc Multi-County Jail Authority

Lincoln Academy Lincoln County

Lincoln County Sheriffs 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





#### CONSOLIDATED PLAN FOR PLDs (continued)

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 Management Association Maine School of Science and Mathematics

Maine State Housing Authority Maine Turnpike Authority Maine Veterans' Homes Maine Virtual Academy Mapleton, Town of Mars Hill Utility District Mars Hill, Town of

Mechanic Falls Sanitary District Mechanic Falls, Town of

Medway, Town of

Midcoast Council of Governments

Milford, Town of Millinocket, Town of Milo Water District Monmouth, Town of Monson, Town of

Mount Desert Island Regional School District

Mount Desert Water District
MSAD #13 Bingham
MSAD #31 Howland
MSAD #41 Milo
MSAD #53 Pittsfield
Mt. Desert, Town of
New Gloucester, Town of
Newport, Town of
Newport Water District
North Berwick Water District
North Berwick, Town of

Northern Oxford Regional Solid Waste Board

Norway Water District Norway, Town of

Old Orchard Beach, Town of Old Town Housing Authority Old Town Water District

Old Town, City of Orono, Town of Orrington, Town of

Otisfield, Town of Ogunquit, Town of Orland, Town of Oxford County Oxford, Town of Paris Utility District

Paris, Town of Penobscot County Penquis C.A.P. Phippsburg, Town of

Phippsburg, Town of Piscataquis County Pittsfield, Town of

Pleasant Pt. Passamaquoddy Reservation Housing Authority

Poland, Town of

Portland Housing Authority Portland Public Library Portland, City of

Princeton, Town of
Region 4 So. Penobscot
Regional School Unit #1
Regional School Unit #2
Regional School Unit #4
Regional School Unit #5
Regional School Unit #9
Regional School Unit #10

Regional School Unit #16
Regional School Unit #20
Regional School Unit #21
Regional School Unit #24
Regional School Unit #24
Regional School Unit #25
Regional School Unit #26
Regional School Unit #29
Regional School Unit #34
Regional School Unit #39
Regional School Unit #39
Regional School Unit #49

Regional School Unit #49
Regional School Unit #51
Regional School Unit #54
Regional School Unit #60
Regional School Unit #67
Regional School Unit #71
Regional School Unit #73
Richmond Utility District
Richmond, Town of
Rockland, City of
Rockport, Town of
Rumford Fire & Police

Rumford Mexico Sewerage District

Rumford Water District Rumford, Town of Sabattus, Town of Saco, City of



#### **CONSOLIDATED PLAN FOR PLDs** (continued)

Sagadahoc County

Sanford Housing Authority

Sanford Sewerage District

Sanford Water District

Sanford, City of

Scarborough, Town of

Searsport Water District

Searsport, Town of

Skowhegan, Town of

Somerset County

South Berwick Sewer District

South Berwick Water District

South Berwick, Town of

South Portland Housing Authority

South Portland, City of

St. Agatha, Town of

Thomaston, Town of

Thompson Free Library

Topsham Sewer District

Topsham, Town of

Trenton, Town of

Tri-Community Recycle/Sanitary Landfill

Union, Town of

United Technologies Center, Region 4

Van Buren Housing Authority

Van Buren, Town of

Vassalboro, Town of

Veazie Fire & Police

Waldo County

Waldo County Technical Center

Waldoboro, Town of

Washburn Water and Sewer District

Washburn, Town of

Washington County

Waterboro, Town of

Waterville Fire & Police

Waterville Sewer District

Wells Fire and Police

Wells, Town of

West Bath, Town of

Westbrook Fire & Police

Westbrook, City of

Wilton, Town of

Windham, Town of

Winslow, Town of

Winter Harbor Utility District

Winterport Water & Sewer Districts

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 #903

Fort Kent, Town of

**Knox County** 

Limestone Water & Sewer District

Milo, Town of

New Canada, Town of

Norway-Paris Solid Waste Incorporated

Presque Isle, City of

Western Maine Community Action



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