

**Maine Public Employees  
Retirement System  
State Employee and Teacher  
Retirement Program  
Actuarial Valuation Report**

**as of June 30, 2011**

**Produced by [Cheiron](#)**

**November 2011**

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November 22, 2011

Board of Trustees  
Maine Public Employees Retirement System  
#46 State House Station  
Augusta, Maine 04333-0046

Dear Members of the Board:

We are pleased to submit the June 30, 2011 Actuarial Valuation Report for the Plans in the State Employee and Teacher Retirement Program of the Maine Public Employees Retirement System. This report contains information on assets, liabilities, and contributions of the System's Retirement Programs, as well as the required accounting statement disclosures under the Government Accounting Standards Board Statement #25.

The purpose of this report is to present the annual actuarial valuation of the State Employee and Teacher Retirement Program. This report is for the use of the 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.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23. The actuarial assumptions reflect our understanding of the likely future experience of the plans in the program and the assumptions as a whole represent our best estimate for the future experience of the those plans. The accuracy of the results presented in this report is dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the plans could vary from our results.

We hereby certify that, to the best of our knowledge, this report and its contents, which are based on the information and data supplied by the System, are work products of Cheiron, Inc. These work products are complete and accurate and have been prepared in accordance with generally recognized and accepted actuarial principles and practices which 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



MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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ACTUARIAL VALUATION AS OF JUNE 30, 2011

**FOREWORD**

Cheiron has performed the actuarial valuation of the plans in the Maine Public Employees Retirement System State Employee and Teacher Program as of June 30, 2011. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the plans in the Program;
- 2) **Indicate trends**, both historical and prospective, in the financial condition of the plans in the Program;
- 3) **Report on the contribution rate** developed in this valuation. In July 2012, these valuation results will be rolled forward one year and then adjusted for actual plan assets as of July 1, 2012, to determine the contributions to be paid in Fiscal Years 2014 and 2015; and
- 4) **Provide specific information** and documentation required by the Government Accounting Standards Board (GASB).

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

**Section I** presents a summary containing our key findings and discloses important trends experienced by the plans in the Program in recent years.

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

**Section III** shows similar information on liabilities, measured for actuarial, accounting, and government reporting purposes.

**Section IV** develops the State contribution rates that would be applied absent the State's biennial budgeting process.

**Section V** includes the required disclosures under GASB Statement No. 25.

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

- Program membership by plan at the valuation date (Appendix A);
- The actuarial methods and assumptions used in the valuation (Appendix B); and
- Major benefit provisions of the Program and the various plans included in the Program (Appendix C).

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**SECTION I  
BOARD SUMMARY**

**General Comments**

The State of Maine’s annual contributions to the plans in this Program are determined on a biennial basis. The contribution rates used in the State’s budgeting process to produce the applicable State budget contributions will be based on a roll forward of valuation results from every odd-numbered year. This means the contribution rates to be used for State budgets in FY 2014 and FY 2015 will be based on the liabilities of this, 2011 valuation, adjusted for anticipated growth in benefits and reductions due to payouts to reflect our best estimate of the June 30, 2012 liability. The budgeting process will combine this expected liability with the actual plan assets as of June 30, 2012.

The State of Maine composite rate produced by the June 30, 2010 valuation for all plans in the State Employees and Teacher Retirement Program was 23.75% of payroll. The State composite rate produced in this valuation is 15.51% of payroll. This decrease in the contribution rate was largely attributable to recent plan changes.

State law requires that a portion of any General Fund surplus must be allocated to the Maine Public Employee Retirement System (MainePERS) on an annual basis. The surplus allocation taken into account in this valuation report was \$5.9 million.

There were a number of changes to both the program or plan provisions and actuarial assumptions since the 2010 valuation. These changes are detailed in Appendix B and C. The assumption changes reduced the liability of the System by \$174 million while legislated plan changes reduced it an additional \$1.648 billion.

**Experience from July 1, 2010 through June 30, 2011 (FY 2011)**

As of June 30, 2011, the Program had an Unfunded Actuarial Liability (UAL) of \$2.545 billion. This represents a significant decrease of \$1.759 billion from the \$4.304 billion UAL measured as of June 30, 2010. The specific factors contributing to this change are presented in Table I-1 below.

<b>Table I-1 Components of UAL Change</b>		<b>\$ in billions</b>
1. Unfunded Actuarial Liability as of June 30, 2010		\$ 4.304
2. Decrease expected as of June 30, 2011		(0.057)
3. Decrease due to benefit changes		(1.648)
4. Decrease due to assumption changes		(0.174)
5. Increase due to recognized investment losses		0.029
6. Increase due to liability losses during the year		<u>0.091</u>
7. Actuarial Liability as of June 30, 2011		\$ 2.545

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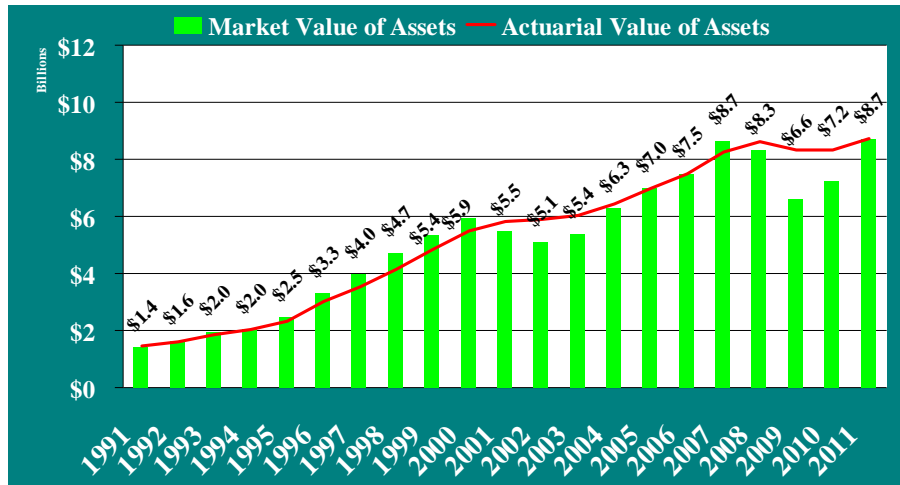
**SECTION I  
BOARD SUMMARY**

**Historical Trends**

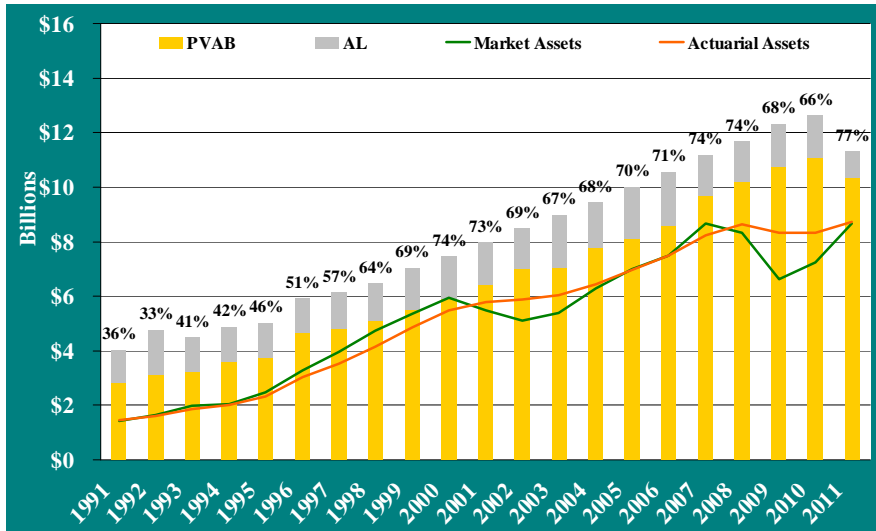
We present a series of charts which display key historical trends in the Program’s financial condition. Following the historical review, we present projections of the probable condition of the Program into the future under various market return scenarios.

Growth in Assets

The graph to the right illustrates how well the actuarial smoothing method has insulated the Program from market volatility. Also, there has generally been an upward trend for both the market value and actuarial value of assets since 1991. The market value of assets are shown in the graph labels. The few exceptions are the years immediately following the severe market declines in the last decade.



Assets and Liabilities



This next graph illustrates the progress of assets against liabilities. The colored bars represent different measures of liability mentioned in Section III of this report. The yellow bars represent the Present Value of Accrued Benefits (PVAB) as of the valuation date. The actuarial liability (AL), used for funding purposes, is represented

by the top of the grey bar. We compare the actuarial value of assets to this measure of liability in developing the funding ratios. These are the percentages shown in the graph labels. As of June 30, 2011 the Plan is funded 77% on this measure, which represents the highest funded percentage for the Plan over this period.

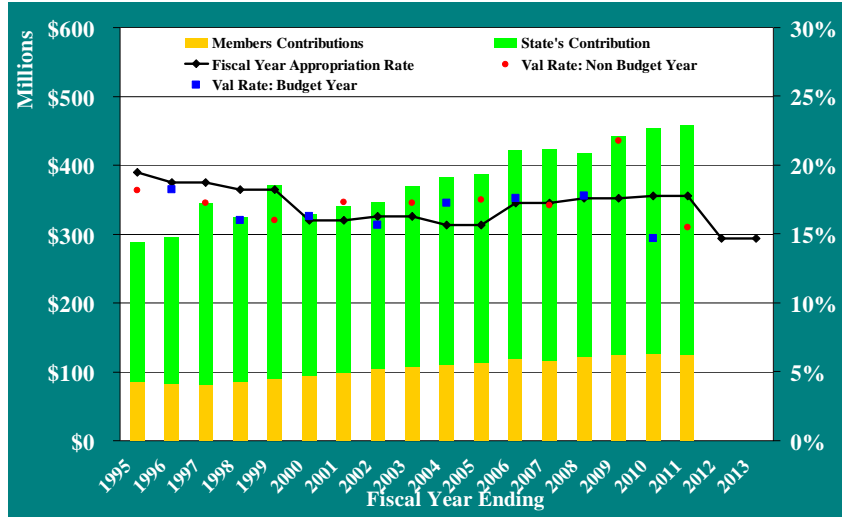
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In 2011 the Legislature made changes to the Plan's benefits which drastically reduced the liability under either measure. These changes are described in Appendix B of this report.

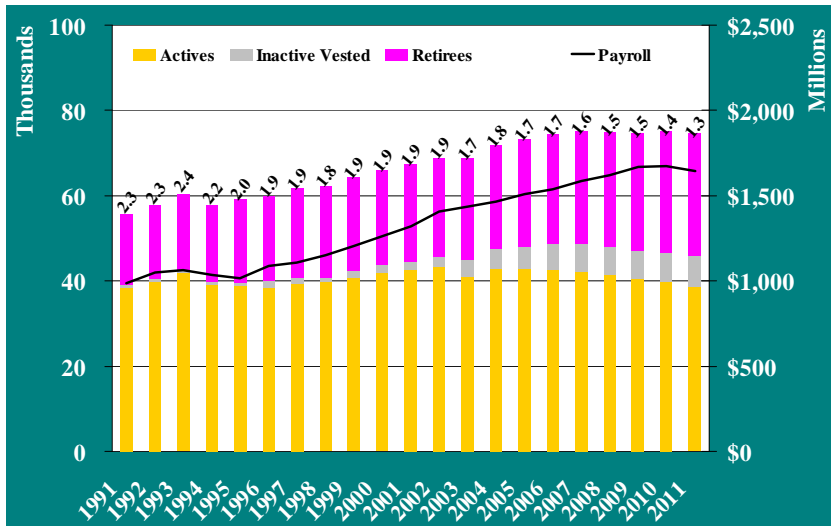
Contributions

This graph shows the history of contributions to the Program both as dollar amounts and as a percentage of payroll. The stacked bars in this graph show the contributions made by both the State and the members in dollar terms. These bars should be read in relation to the axis on the left-hand side. The solid black line shows the State's Fiscal Year Appropriation contribution rate as a percent of payroll and should reference the right-hand axis.



The member contribution rate is set by the statutes, depending on the plan in which the member participates. The employer contribution rate paid by the State is set by the actuarial process, on a biennial basis. The contribution rate paid during FY 2011 was based on the June 30, 2008 valuation.

Participant Trends



As with many funds in this country, there has been a steady growth in the number of retired members as the Program has matured. The bars in the graph to the left show the number of active members, terminated vesteds and retirees over the last 21 years. The labels above each bar show the ratio of active members per inactive member, which has been declining since 1991. We anticipate that this ratio will continue to decline as the baby boom generation enters retirement. While a declining ratio would

continue to decline as the baby boom generation enters retirement. While a declining ratio would

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be a concern in a plan with no prefunding, in MainePERS's case, it merely indicates that on a cash flow basis, there is more money being paid for benefits than made in contributions. The more negative that a Plan's cash flows are, the more sensitive (in terms of contribution volatility) the Plan is to volatile investment markets.



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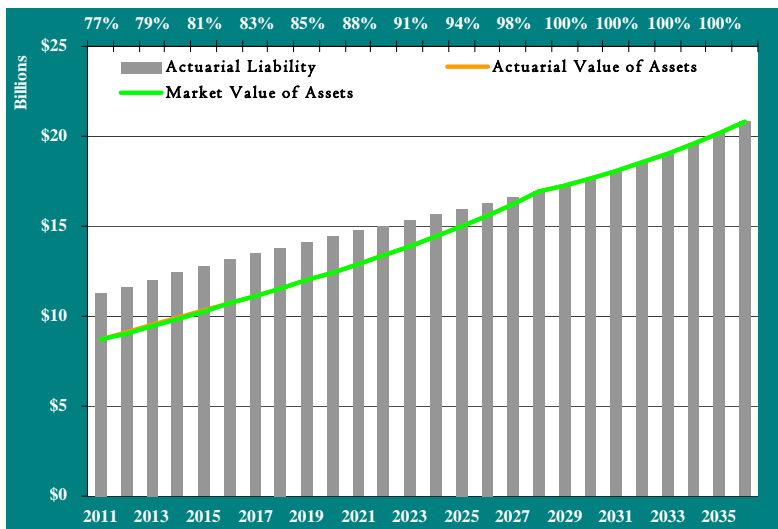
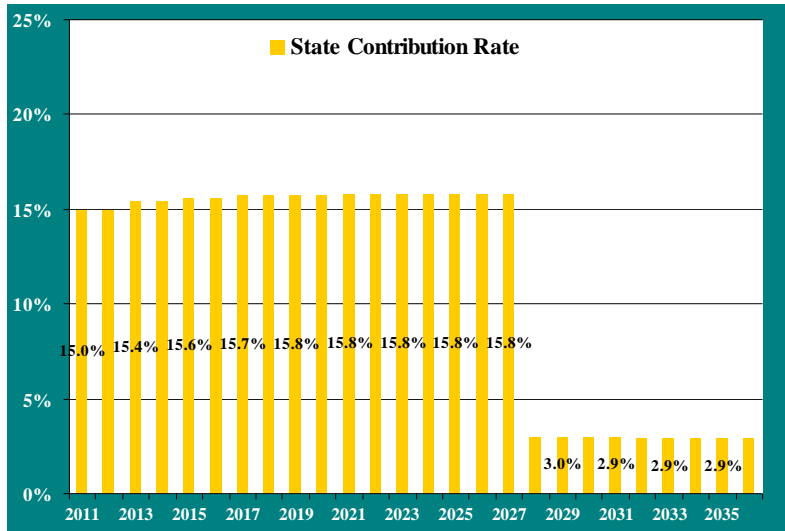
**SECTION I  
BOARD SUMMARY**

**Projections**

Our analysis of the projected financial trends for MainePERS is an important part of this valuation. In this section, we present a sensitivity analysis of future valuation results in terms of benefit security (assets over liabilities) and the State's expected cost progression. We first present a baseline projection of these future results if the assumed 7.25% investment return were achieved each year. We then present the same projections based on earnings 1% above and 1% below the assumed 7.25% return. The primary purpose of presenting these projections is to demonstrate how sensitive future valuation results could be to positive and down investment markets.

Base Line Projections

The charts on this page show the expected progress of the Program's funding status over the next 25 years measured in terms of the employer contribution rate and the funding ratio for the fiscal year beginning in that year. The chart on the right shows that the State's overall composite contribution rate is projected to remain fairly level until the UAL has been paid off in FY beginning 2027, if all actuarial assumptions are met, including the 7.25% investment assumption. While the chart shows that by 2028 the UAL will be paid off, and the State's contribution rate would drop to the Normal Cost, the reality is that there will be gains and losses each and every year resulting in amortization payments (negative or positive) occurring every year.



This next chart projects Assets and Liabilities and shows that if all actuarial assumptions are exactly met, the Program's funded ratio is projected to improve from the current level of 77% to 100% funding in 2028, the year that the Maine Constitution mandates that the Program's UAL is to be paid off. However as just mentioned earlier, annual gains and losses will always occur, meaning that by 2028 there will be either an unfunded actuarial liability (if

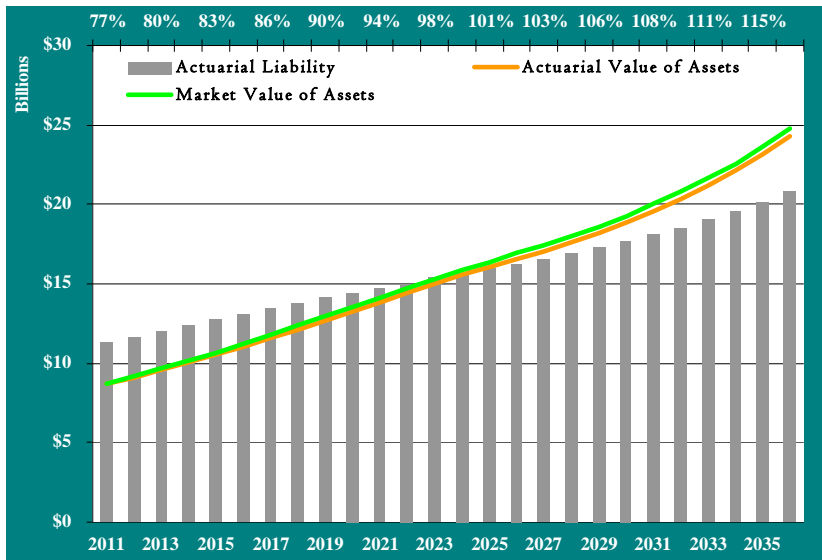
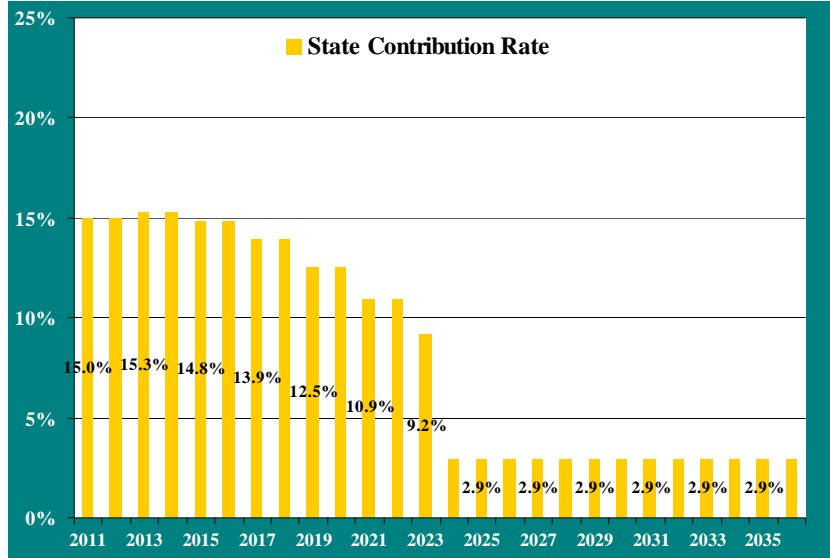
more losses occur) or a surplus of plan assets (if more gains occur).

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Projections with Asset Returns of 8.25%

The future funding of this Program will be largely driven by the investment earnings. Relatively minor changes in the market returns can have significant effects on the Program's status. The chart to the right shows that if the Program were to earn 8.25% annual returns each year, the contribution rate would decline throughout the UAL pay off period and the UAL would be projected to have been paid in full by 2023.

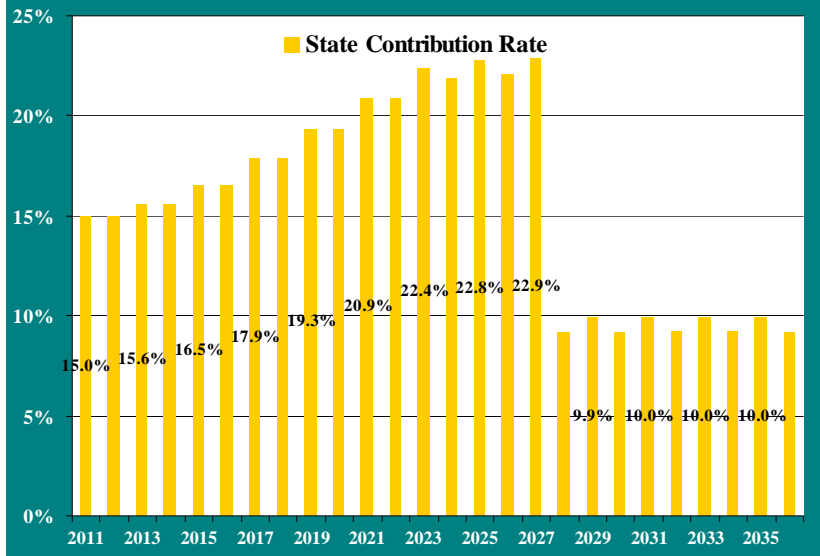


Assuming the same 8.25% return on investments, this next chart shows that the Program's funded level would increase to reach 100% by 2024 and then continue to improve.

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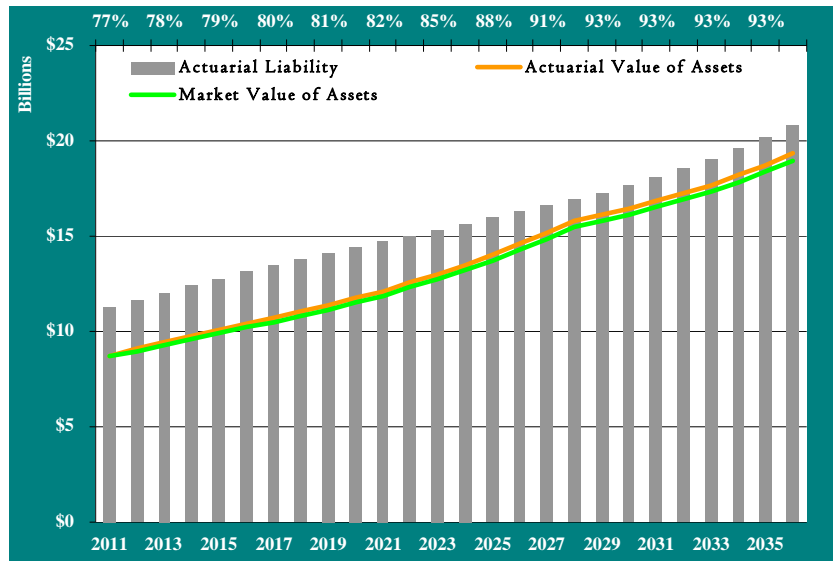
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Projections with Asset Returns of 6.25%



Just as returns in excess of the earnings assumption will lead to declining State contributions and an improved funded status, the opposite will occur if investment earnings are below the assumption. The graphs on this page show the projections under a 6.25% annual return scenario. The State's contribution rate would rise to around 23% of payroll in order to meet the requirement of full funding in 2028.

The Program's funded ratio would increase to 93% over the next 24 years. In this scenario, the Program would still have an Unfunded Actuarial Liability at the end of the current amortization period. The Constitutional Amendment would be satisfied, in that the UAL existing on July 1, 1997 would be paid off by 2028, but new losses that create additional UAL would have to be funded over ten years.



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SECTION I  
BOARD SUMMARY

<b>Table I-2</b>			
<b>Summary of Principal Results</b>			
<b>Total State Employee and Teacher Program</b>			
<b>Valuation as of:</b>	<b>June 30, 2010</b>	<b>June 30, 2011</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	39,884	38,759	(2.8%)
Retired Members	20,021	20,689	3.3%
Beneficiaries of Retirees	5,823	5,842	0.3%
Survivors of Deceased Members	684	655	(4.2%)
Disabled Members	1,720	1,714	(0.3%)
Deferred "Vested" Members	6,749	7,074	4.8%
Total	74,881	74,733	(0.2%)
Annual Salaries of Active Members	\$ 1,672,252,868	\$ 1,643,389,735	(1.7%)
Annual Payments to Benefit Recipients	\$ 547,042,219	\$ 569,141,838	4.0%
<b><u>Assets and Liabilities</u></b>			
Total Actuarial Liability	\$ 12,617,144,005	\$ 11,281,665,186	(10.6%)
Assets/Actuarial (Smoothed)	8,313,459,810	8,736,885,121	5.1%
Unfunded Actuarial Liability	\$ 4,303,684,195	\$ 2,544,780,065	(40.9%)
Funding Ratio	65.89%	77.44%	
Present Value of Accrued Benefits	\$ 11,071,757,869	\$ 10,334,098,094	(6.7%)
Assets/Market Value	7,239,332,094	8,677,947,874	19.9%
Unfunded PVAB	\$ 3,832,425,775	\$ 1,656,150,220	(56.8%)
Accrued Benefit Funding Ratio	65.39%	83.97%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 12</b>	<b>Fiscal Year 13</b>	
Normal Cost Contribution	5.51%	2.93%	
Unfunded Actuarial Liability Contribution	18.24%	12.58%	
Total Contribution	23.75%	15.51%	

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SECTION I  
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<b>Table I-3</b>			
<b>Summary of Principal Results</b>			
<b>Teachers</b>			
<b>Valuation as of:</b>	<b>June 30, 2010</b>	<b>June 30, 2011</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	26,022	25,495	(2.0%)
Retired Members	11,611	12,180	4.9%
Beneficiaries of Retirees	2,542	2,601	2.3%
Survivors of Deceased Members	282	274	(2.8%)
Disabled Members	711	702	(1.3%)
Deferred "Vested" Members	4,993	5,161	3.4%
<b>Total</b>	<b>46,161</b>	<b>46,413</b>	<b>0.5%</b>
Annual Salaries of Active Members	\$ 1,087,036,508	\$ 1,074,639,515	(1.1%)
Annual Payments to Benefit Recipients	\$ 320,137,395	\$ 338,228,540	5.7%
<b><u>Assets and Liabilities</u></b>			
Total Actuarial Liability	\$ 8,223,113,332	\$ 7,361,705,930	(10.5%)
Assets/Actuarial (Smoothed)	5,418,749,271	5,732,486,621	5.8%
Unfunded Actuarial Liability	\$ 2,804,364,061	\$ 1,629,219,309	(41.9%)
Funding Ratio	65.09%	77.87%	
Present Value of Accrued Benefits	\$ 7,116,688,979	\$ 6,717,390,638	(5.6%)
Assets/Market Value	4,718,628,153	5,693,816,434	20.7%
Unfunded PVAB	\$ 2,398,060,826	\$ 1,023,574,204	(57.3%)
Accrued Benefit Funding Ratio	66.30%	84.76%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 12</b>	<b>Fiscal Year 13</b>	
Normal Cost Contribution	5.25%	2.65%	
Unfunded Actuarial Liability Contribution	18.28%	12.31%	
<b>Total State Contribution</b>	<b>23.53%</b>	<b>14.96%</b>	

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SECTION I  
BOARD SUMMARY

<b>Table I-4</b>			
<b>Summary of Principal Results</b>			
<b>State Employees (Regular and Special Plans)</b>			
<b>Valuation as of:</b>	<b>June 30, 2010</b>	<b>June 30, 2011</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	13,862	13,264	(4.3%)
Retired Members	8,410	8,509	1.2%
Beneficiaries of Retirees	3,281	3,241	(1.2%)
Survivors of Deceased Members	402	381	(5.2%)
Disabled Members	1,009	1,012	0.3%
Deferred "Vested" Members	1,756	1,913	8.9%
Total	28,720	28,320	(1.4%)
Annual Salaries of Active Members	\$ 585,216,360	\$ 568,750,220	(2.8%)
Annual Payments to Benefit Recipients	\$ 226,904,824	\$ 230,913,298	1.8%
<b><u>Assets and Liabilities</u></b>			
Total Actuarial Liability	\$ 4,394,030,673	\$ 3,919,959,256	(10.8%)
Assets/Actuarial (Smoothed)	2,894,710,539	3,004,398,500	3.8%
Unfunded Actuarial Liability	\$ 1,499,320,134	\$ 915,560,756	(38.9%)
Funding Ratio	65.88%	76.64%	
Present Value of Accrued Benefits	\$ 3,955,068,890	\$ 3,616,707,456	(8.6%)
Assets/Market Value	2,520,703,941	2,984,131,440	18.4%
Unfunded PVAB	\$ 1,434,364,949	\$ 632,576,016	(55.9%)
Accrued Benefit Funding Ratio	63.73%	82.51%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 12</b>	<b>Fiscal Year 13</b>	
Normal Cost Contribution	5.98%	3.47%	
Unfunded Actuarial Liability Contribution	18.16%	13.07%	
Total State Contribution	24.14%	16.54%	

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SECTION I  
BOARD SUMMARY

<b>Table I-5</b>			
<b>Summary of Principal Results</b>			
<b>State Employees (Regular Plan)</b>			
<b>Valuation as of:</b>	<b>June 30, 2010</b>	<b>June 30, 2011</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	12,041	11,455	(4.9%)
Retired Members	7,579	7,648	0.9%
Beneficiaries of Retirees	2,917	2,872	(1.5%)
Survivors of Deceased Members	392	371	(5.4%)
Disabled Members	933	933	0.0%
Deferred "Vested" Members	1,756	1,913	8.9%
<b>Total</b>	<b>25,618</b>	<b>25,192</b>	<b>(1.7%)</b>
Annual Salaries of Active Members	\$ 491,192,049	\$ 475,965,739	(3.1%)
Annual Payments to Benefit Recipients	\$ 195,897,215	\$ 198,690,063	1.4%
<b><u>Assets and Liabilities</u></b>			
Total Actuarial Liability	\$ 3,716,542,037	\$ 3,300,409,113	(11.2%)
Assets/Actuarial (Smoothed)	2,507,661,208	2,556,721,618	2.0%
Unfunded Actuarial Liability	\$ 1,208,880,829	\$ 743,687,495	(38.5%)
Funding Ratio	67.47%	77.47%	
Present Value of Accrued Benefits	\$ 3,338,268,118	\$ 3,045,598,579	(8.8%)
Assets/Market Value	2,183,662,720	2,539,474,495	16.3%
Unfunded PVAB	\$ 1,154,605,398	\$ 506,124,084	(56.2%)
Accrued Benefit Funding Ratio	65.41%	83.38%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 12</b>	<b>Fiscal Year 13</b>	
Normal Cost Contribution	5.75%	3.37%	
Unfunded Actuarial Liability Contribution	17.44%	12.69%	
<b>Total State Contribution</b>	<b>23.19%</b>	<b>16.06%</b>	

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SECTION I  
BOARD SUMMARY

<b>Table I-6</b>			
<b>Summary of Principal Results</b>			
<b>State Employees (Special Plans - Composite)</b>			
<b>Valuation as of:</b>	<b>June 30, 2010</b>	<b>June 30, 2011</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	1,821	1,809	(0.7%)
Retired Members	831	861	3.6%
Beneficiaries of Retirees	364	369	1.4%
Survivors of Deceased Members	10	10	0.0%
Disabled Members	76	79	3.9%
Deferred "Vested" Members	<u>0</u>	<u>0</u>	0.0%
Total	3,102	3,128	0.8%
Annual Salaries of Active Members	\$ 94,024,311	\$ 92,784,481	(1.3%)
Annual Payments to Benefit Recipients	\$ 31,007,609	\$ 32,223,235	3.9%
<b><u>Assets and Liabilities</u></b>			
Total Actuarial Liability	\$ 677,488,636	\$ 619,550,143	(8.6%)
Assets/Actuarial (Smoothed)	<u>387,049,331</u>	<u>447,676,882</u>	15.7%
Unfunded Actuarial Liability	\$ 290,439,305	\$ 171,873,261	(40.8%)
Funding Ratio	57.13%	72.26%	
Present Value of Accrued Benefits	\$ 616,800,772	\$ 571,108,877	(7.4%)
Assets/Market Value	<u>337,041,221</u>	<u>444,656,945</u>	31.9%
Unfunded PVAB	\$ 279,759,551	\$ 126,451,932	(54.8%)
Accrued Benefit Funding Ratio	54.64%	77.86%	
<b><u>Contributions as a Percentage of Payroll</u></b>			
	<b>Fiscal Year 12</b>	<b>Fiscal Year 13</b>	
Normal Cost Contribution	7.21%	3.99%	
Unfunded Actuarial Liability Contribution	<u>21.89%</u>	<u>15.04%</u>	
Total State Contribution	29.10%	19.03%	



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**SECTION II  
ASSETS**

Pension program assets play a key role in the financial operation of the Program and in the decisions the Trustees make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, State contributions, and the ultimate security of participants' benefits.

The assets of the Program include amounts contributed for all programs for which the System is the Plan Sponsor, namely, the State Employee and Teacher Retirement Program, the Judicial Retirement Program, the Legislative Retirement Program, the Participating Local District Retirement Program, which includes the Consolidated Plan for Participating Local Districts (PLDs), along with several plans of PLDs who withdrew from the System, as the assets of all these programs are co-mingled for investment purposes. In performing the annual valuation, the actuarial value of assets that is developed reflects all defined benefit plan assets and subsequently it is allocated across all of the defined benefit plans included in the programs administered by MainePERS.

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

- **Disclosure** of assets at June 30, 2010 and June 30, 2011;
- Statement of the **changes** in market values during the year;
- Development of the **actuarial value of assets**;
- **Allocation** of actuarial value to subplans;
- Assessment of **investment performance**; and
- Projection of expected **cash flows** for the next ten years.

### **Disclosure**

The market value of assets represents a “snap-shot” or “cash-out” value which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. Because these fluctuations would result in volatility in the resulting contributions if the market value were used, unadjusted, in the valuation process, an actuarial value is developed.

The actuarial values are market values which have been smoothed and are used for evaluating the Program's ongoing liability to meet its obligations.

Current actuarial methods employed in this Program set the actuarial value equal to the expected value plus one-third of the difference between the actual market value of assets and the expected value of assets. 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 7.25% rate.

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**SECTION II  
ASSETS**

<b>Table II-1</b>		
<b>Changes in Market Value of Total Defined Benefit Plan Assets (All Programs)</b>		
<b>Value of Assets – June 30, 2010</b>		<b>\$ 9,069,441,021</b>
<b><u>Additions</u></b>		
Contributions:		
Employer Contributions	\$ 351,705,636	
Employee Contributions	160,204,377	
Transfer	<u>(5,149)</u>	
Total Contributions		\$ 511,904,864
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	\$ 2,001,829,455	
Interest on Bank Balances	<u>165,050</u>	
Total Investment Income		\$ 2,001,994,505
Investment Activity Expenses:		
Management Fees	\$ (17,985,001)	
Investment Related Expense	(1,599,106)	
Banking Fees	<u>(29,570)</u>	
Total Investment Activity Expenses		\$ (19,613,677)
Net Income from Investing Activities		\$ 1,982,380,828
Total Additions		\$ 2,494,285,692
<b><u>Deductions</u></b>		
Retirement Benefits	\$ (625,390,774)	
Disability Benefits	(36,289,226)	
Survivor Benefits	(19,289,534)	
Refunds and Other Expenses	<u>(41,669,613)</u>	
Total Deductions		\$ 722,639,147
<b><u>Total</u></b>		
Net Increase (Decrease)		\$ 1,771,646,545
<b>Value of Assets – June 30, 2011</b>		<b>\$ 10,841,087,566</b>

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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**SECTION II  
ASSETS**

<b>Table II-2 Development of Actuarial Value of Assets (All Programs) as of June 30, 2011</b>		
1.	Actuarial Value of Assets at June 30, 2010	\$ 10,415,109,080
2.	Amount in (1) with Interest to June 30, 2011	11,170,204,488
3.	Employer and Member Contributions for the Plan Year Ended June 30, 2011	511,904,864
4.	Interest on Contributions Assuming Received Uniformly Throughout the Year to June 30, 2011	18,231,880
5.	Disbursements from Trust Except Investment Expenses, July 1, 2010 through June 30, 2011	(722,639,147)
6.	Interest on Disbursements Assuming Payments Made Uniformly throughout the Year to June 30, 2011	<u>(26,171,844)</u>
7.	Expected Value of Assets at June 30, 2011 = (2) + (3) + (4) + (5) + (6)	\$ 10,951,530,241
8.	Actual Market Value of Assets at June 30, 2011	10,841,087,566
9.	Excess of (8) Over (7)	<u>(110,442,675)</u>
10.	Actuarial Value of Assets at June 30, 2011 = (7) + 33 $\frac{1}{3}$ % of (9)	\$ 10,914,716,016

### **Actuarial Value of Assets**

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, volatile contribution rates which could develop from short-term fluctuations in the market value of assets. For this Program, the actuarial value has been calculated by adding one-third of the difference between actual market value and expected value, to the expected value. The previous table illustrates the calculation of actuarial value of assets for the June 30, 2011 valuation.

### **Allocation of Actuarial Value of Assets**

The assets for all of the defined benefit plans in the programs administered by MainePERS are commingled for investment purposes. The actuarial smoothing methodology is applied on the market value of total assets. This produces an asset ratio which is then applied to the market value of assets attributable to each of the programs. The asset value derived in this valuation is 1.00679 (\$10,914,716,016 ÷ \$10,841,087,566). The allocation of actuarial value of assets to each of the System’s retirement programs is shown in the following chart.

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**SECTION II  
ASSETS**

<b>Table II-3 Allocation of Actuarial Value of Assets as of June 30, 2011</b>		
	<b>Market Value</b>	<b>Actuarial Value</b>
Teachers	\$ 5,693,816,434	\$ 5,732,486,621
State (Regular & Special)	2,984,131,440	3,004,398,500
Judges	48,992,049	49,324,784
Legislators	8,979,197	9,040,180
Participating Local Districts (Consolidated & Non-Consolidated)	<u>2,105,168,446</u>	<u>2,119,465,931</u>
<b>Total Fund</b>	<b>\$10,841,087,566</b>	<b>\$ 10,914,716,016</b>

**Investment Performance**

The market value of assets returned a positive 22.11% during FY 2011. This is significantly higher than the assumed return of 7.25%. The returns in FY 2010 and FY 2009 were positive 11.28% and negative 19.00% respectively.

On an actuarial value of assets basis, the return for FY 2011 was a positive 6.89%. This return is lower than the return on a market value basis and does not meet the 7.25% assumption; therefore, this return gives rise to an investment loss this year.

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**SECTION II  
ASSETS**

<b>Table II-4 Projection of State and Teacher Program Benefit Payments and Contributions</b>				
<b>FY Ending June 30</b>	<b>Expected Benefit Payments</b>	<b>Expected State Contributions</b>	<b>Expected Member Contributions</b>	<b>Total Expected Contribution</b>
2012	\$ 609,803,000	\$ 254,890,000	\$ 126,705,000	\$ 381,595,000
2013	642,294,000	258,713,000	128,606,000	387,319,000
2014	673,754,000	267,768,000	133,107,000	400,875,000
2015	704,166,000	277,140,000	137,766,000	414,906,000
2016	748,438,000	286,840,000	142,588,000	429,428,000
2017	791,752,000	296,879,000	147,578,000	444,457,000
2018	834,104,000	307,270,000	152,744,000	460,014,000
2019	874,190,000	318,024,000	158,090,000	476,114,000
2020	912,656,000	329,155,000	163,623,000	492,778,000
2021	949,189,000	340,676,000	169,349,000	510,025,000

We provide this projection of cash flows in and out of the Program for informational purposes. The Board may share these projections with its investment advisor for consideration of the growing gap between cash coming in from State and member contributions and cash being paid out to provide benefits. The chart shows this gap is expected to widen over time.

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

Expected contributions are based on the current covered payroll and the composite State contribution rate developed in this valuation of 15.51% of payroll. We have assumed that payroll will increase by 3.50% per year (1.50% in year 1) in the projection period and that the contribution rate will remain constant.

The projection of member contributions is similarly based on a 3.50% per year increase in covered payroll multiplied by the average aggregate member contribution rate of 7.71%.

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**SECTION III  
LIABILITIES**

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

- **Disclosure** of liabilities at June 30, 2010 and June 30, 2011;
- Statement of **changes** in these liabilities during the year; and
- An **allocation** of liabilities to the Teachers, State Regular and State Special plans.

**Disclosure**

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

- **Present Value of Future Benefits:** Used for analyzing the overall financial obligations, this represents the amount of money needed today to fully pay off all future benefits, assuming participants continue to earn salary increases and accrue benefits under the current program and plan provisions.
- **Actuarial Liability:** Used for funding calculations and GASB disclosures, this liability is calculated taking the Present Value of Future Benefits above and subtracting the value of accruals that are assigned to future years. This offset is equal to the present value of future Member Contributions and future Employer Normal Costs under an acceptable actuarial funding method. For MainePERS, this method is referred to as the **Entry Age Normal** funding method.
- **Present Value of Accrued Benefits:** Used for communicating the liabilities for benefits accrued as of the valuation date. These liabilities are also required for accounting purposes (FASB ASC Topic 960) and used to assess whether the Program can meet its current benefit commitments.

The following table discloses each of these liabilities for the current and prior years' valuations. With respect to the actuarial liability and the present value of accrued benefits, a subtraction of the appropriate value of assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

The present value of future benefits is compared to the current market value of assets, the expected future value of member contributions and the expected future value of State contributions made on behalf of current members assuming the valuation rate remains constant. The difference between the present value of future benefits (PVB) and these anticipated resources indicates a shortfall representing additional funding required on the payroll of new hires to pay for benefits of existing members. This surplus or a shortfall indicates the size of the State and Teacher Program's allocation of the stored gains or losses that remain outside of the valuation process. These gains or losses may enter the rate-making processes depending on the future investment performance.

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**SECTION III  
LIABILITIES**

<b>Table III-1 Disclosure of Liabilities</b>		
	<b>June 30, 2010</b>	<b>June 30, 2011</b>
<b>Present Value of Future Benefits (PVB)</b>		
Active Participant Benefits	\$ 7,638,231,191	\$ 6,018,900,898
Retiree Benefits	6,423,967,840	5,968,859,934
Terminated Vested and Inactive Members	<u>432,860,587</u>	<u>484,524,796</u>
<b>Total PVB</b>	<b>\$ 14,495,059,618</b>	<b>\$ 12,472,285,628</b>
Market Value of Assets (MVA)	\$ 7,239,332,094	\$ 8,677,947,874
Future Employee Contributions	1,095,782,658	861,613,785
Future State Contributions Assuming No Further Gains or Losses or New Hires	5,087,299,261	2,873,786,722
Projected (Surplus)/Shortfall	<u>1,072,645,605</u>	<u>58,937,247</u>
<b>Total Resources</b>	<b>\$ 14,495,059,618</b>	<b>\$ 12,472,285,628</b>
<b>Actuarial Liability</b>		
Present Value of Future Benefits (PVB)	\$ 14,495,059,618	\$ 12,472,285,628
Present Value of Future Normal Costs (PVFNC)		
Employer Portion	782,132,955	329,006,657
Employee Portion	<u>1,095,782,658</u>	<u>861,613,785</u>
<b>Actuarial Liability (AL = PVB – PVFNC)</b>	<b>\$ 12,617,144,005</b>	<b>\$ 11,281,665,186</b>
Actuarial Value of Assets (AVA)	8,313,459,810	8,736,885,121
<b>Net (Surplus)/Unfunded (AL – AVA)</b>	<b>\$ 4,303,684,195</b>	<b>\$ 2,544,780,065</b>
<b>Present Value of Accrued Benefits</b>		
Present Value of Future Benefits (PVB)	\$ 14,495,059,618	\$ 12,472,285,628
Present Value of Future Benefit Accruals (PVFBA)	<u>3,423,301,749</u>	<u>2,138,187,534</u>
<b>Accrued Liability (PVAB = PVB – PVFBA)</b>	<b>\$ 11,071,757,869</b>	<b>\$ 10,334,098,094</b>
Market Value of Assets (MVA)	7,239,332,094	8,677,947,874
<b>Net (Surplus)/Unfunded (PVAB – MVA)</b>	<b>\$ 3,832,425,775</b>	<b>\$ 1,656,150,220</b>

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**SECTION III  
LIABILITIES**

**Changes in Liabilities**

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

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

Unfunded liabilities will change because of all of the above, and also due to changes in assets resulting from:

- State contributions being different than expected
- Investment earnings being different than expected
- A change in the method used to measure Plan assets

In each valuation we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the Program. Below we present key changes in liabilities since the last valuation.

	<b>Table III-2 Present Value of Future Benefits</b>	<b>Actuarial Liability</b>	<b>Present Value of Accrued Benefits</b>
Liabilities 6/30/2010	\$ 14,495,059,618	\$ 12,617,144,005	\$ 11,071,757,869
Liabilities 6/30/2011	<u>12,472,285,628</u>	<u>11,281,665,186</u>	<u>10,334,098,094</u>
Liability Increase (Decrease)	\$ (2,022,773,990)	\$ (1,335,478,819)	\$ (737,659,775)
Change Due to:			
Program/Plan Amendment	\$ (1,831,331,591)	\$ (1,648,358,313)	\$ (1,652,267,764)
Assumption Change	(661,387,082)	(173,700,565)	424,343,809
Actuarial (Gain)/Loss	N/C	91,222,335	N/C
Benefits Accumulated and Other Sources	\$ 469,944,683	\$ 395,357,724	\$ 490,264,180

N/C = Not calculated



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**SECTION III  
LIABILITIES**

<b>Table III-3</b>				
<b>Allocation of Actuarial Liability as of June 30, 2011</b>				
	<b>Total Program</b>	<b>Teachers</b>	<b>State Regular</b>	<b>Special Plans</b>
1. Actuarial Liabilities for:				
a. Active Members	\$ 4,828,280,456	\$ 3,343,927,958	\$ 1,224,129,290	\$ 260,223,208
b. Retired, Disabled and Beneficiary Members	\$ 5,968,859,934	\$ 3,659,819,840	\$ 1,949,713,159	\$ 359,326,935
c. Vested Deferred and Inactive Status Members	\$ 484,524,796	\$ 357,958,132	\$ 126,556,664	\$ 0
2. Total Actuarial Liability (1(a) + 1(b) + 1(c))	\$ 11,281,665,186	\$ 7,361,705,930	\$ 3,300,409,113	\$ 619,550,143
3. Actuarial Value of Assets	\$ 8,736,885,121	\$ 5,732,486,621	\$ 2,556,721,618	\$ 447,676,882
4. Unfunded Actuarial Liability (2 – 3)	\$ 2,544,780,065	\$ 1,629,219,309	\$ 743,687,495	\$ 171,873,261

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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**SECTION IV  
CONTRIBUTIONS**

In the process of evaluating the financial condition of any pension program, the actuary analyzes the assets and liabilities to determine the level of contributions needed to achieve and maintain an appropriate funded status. Typically, the primary goal in setting contributions is to maintain, over time, a pattern of contributions that is both stable and predictable.

For the plans in this Program, the funding methodology employed is the **Entry Age Actuarial Cost Method**. Under this method, there are two components to the total contribution: the **normal cost rate**, and the **unfunded actuarial liability rate (UAL rate)**. The normal cost rate 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 a representative new entrant’s projected future benefits. Second, this value is then divided by the value, also at entry age, of the member’s expected future salary to produce a total normal cost rate. Finally, the total normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate.

The UAL rate is that percentage of member payroll which, when applied to each year’s payroll, is sufficient to amortize the unfunded actuarial liability (UAL) over 17 years from June 30, 2011.

The table below presents and compares the composite State contribution rate for all plans in the Program for this valuation and the prior one.

<b>Table IV-1</b>		
<b>Composite State Rate</b>		
	<b>June 30, 2010</b>	<b>June 30, 2011</b>
Normal Cost Rate	5.51%	2.93%
UAL Rate	<u>18.24%</u>	<u>12.58%</u>
Total State Rate	23.75%	15.51%*

\* State law requires that a portion of any General Fund surplus must be allocated to the Maine Public Employee Retirement System (MainePERS) on an annual basis. The surplus allocation taken into account in this valuation report was \$5.9 million. Had that surplus not been allocated to the MainePERS the composite State rate would have been 15.54% of payroll.

The charts on the pages that follow show the contribution rate component for each plan within the State and Teacher Program and the development of the UAL amortization rate for each plan.

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**SECTION IV  
CONTRIBUTIONS**

<b>Table IV-2</b>			
<b>State Employer Contribution Rates</b>			
<b>Valuation Date</b>	<b>New Entrant</b>	<b>Unfunded</b>	<b>Total</b>
<b>June 30, 2011</b>	<b>Normal Cost</b>	<b>Actuarial Liability</b>	<b>Contributions*</b>
	<b>Contributions*</b>	<b>Contributions*</b>	<b>Contributions*</b>
Total State	2.93%	12.58%	15.51%
Teacher	2.65	12.31	14.96
State Regular	3.37	12.69	16.06
State Police (Closed)	10.64	40.08	50.72
Marine Resources (Closed)	10.84	40.83	51.67
Inland Fish & Wildlife (Closed)	10.98	41.36	52.34
Prison Employees (Closed)	6.71	25.27	31.98
Forest Rangers (Closed)	4.41	16.61	21.02
25 & Out Plan	3.49	13.15	16.64
1998 Special Plan	4.10	15.44	19.54

\*As a Percent of Payroll

The rates developed above are for valuation purposes only. Actual budgeted rates are set based on the process described in the Board Summary section.

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**SECTION IV  
CONTRIBUTIONS**

<b>Table IV-3 Derivation of Unfunded Actuarial Liability Rates</b>									
<b>Valuation Date June 30, 2011</b>	<b>Teachers</b>	<b>State Regular</b>	<b>State Police</b>	<b>Marine Resources</b>	<b>Inland F&amp;W</b>	<b>Prison Employees (Closed)</b>	<b>Forest Rangers (Closed)</b>	<b>25 &amp; Out Plan</b>	<b>1998 Special Plan</b>
1. Present Value of Future Benefits	\$ 8,093,688,436	\$ 3,687,905,674	\$ 156,236,261	\$ 16,865,673	\$ 55,938,214	\$ 49,536,348	\$ 24,750,843	\$ 114,725,432	\$ 272,638,747
2. Normal Cost Rate	2.65%	3.37%	10.64%	10.84%	10.98%	6.71%	4.41%	3.49%	4.10%
3. Present Value of Future Payroll	\$ 7,106,626,276	\$ 3,516,302,728	\$ 873,417	\$ 76,356	\$ 322,530	\$ 601,443	\$ 478,151	\$ 184,642,158	\$ 379,014,206
4. Present Value of Future Normal Cost (2) x (3)	\$ 188,325,596	\$ 118,499,402	\$ 92,932	\$ 8,277	\$ 35,414	\$ 40,357	\$ 21,086	\$ 6,444,011	\$ 15,539,582
5. Present Value of Future Contributions	\$ 543,656,910	\$ 268,997,159	\$ 75,551	\$ 6,605	\$ 27,899	\$ 52,025	\$ 41,360	\$ 15,971,547	\$ 32,784,729
6. Actuarial Liability (1) – (4) – (5)	\$ 7,361,705,930	\$ 3,300,409,113	\$ 156,067,778	\$ 16,850,791	\$ 55,874,901	\$ 49,443,966	\$ 24,688,397	\$ 92,309,874	\$ 224,314,436
7. Actuarial Value of Assets	\$ 5,732,486,621	\$ 2,556,721,618	\$ 152,876,373	\$ 16,567,381	\$ 54,657,993	\$ 48,409,264	\$ 23,967,639	\$ 47,068,533	\$ 104,129,700
8. Unfunded Actuarial Liability (6) – (7)	\$ 1,629,219,309	\$ 743,687,495	\$ 3,191,405	\$ 283,410	\$ 1,216,908	\$ 1,034,702	\$ 720,758	\$ 45,241,341	\$ 120,184,736
9. Estimated Payroll	\$ 1,074,639,515	\$ 475,965,739	\$ 646,746	\$ 56,374	\$ 238,973	\$ 332,496	\$ 352,407	\$ 27,951,396	\$ 63,206,089
10. Amortization Factor	12.3129	12.3129	12.3129	12.3129	12.3129	12.3129	12.3129	12.3129	12.3129
11. Unfunded Actuarial Liability Rate (8) / (9) / (10)	12.31%	12.69%	40.08%	40.83%	41.36%	25.27%	16.61%	13.15%	15.44%

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**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

ASC Topic 960 of the Financial Accounting Standards Board (FASB) requires the disclosure of certain information regarding the funded status of a retirement program. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The FASB ASC Topic 960 disclosures provide a quasi “snap shot” view of how assets compare to liabilities if contributions were to stop and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if all plans in the Program were to terminate.

The GASB-25 actuarial accrued liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB ASC Topic 960) and the actuarial accrued liability (GASB-25) are determined assuming that the plans in the Program are ongoing and participants will continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.25% per annum.

FASB ASC Topic 960 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2010 and June 30, 2011 are exhibited in Table V-1. Table V-2 reconciles the FASB ASC Topic 960 liabilities determined as of the prior valuation, June 30, 2010 to the liabilities as of June 30, 2011.

Tables V-3 through V-5 are exhibits required for the System’s Comprehensive Annual Financial Report. The GFOA recommends showing 6-10 years of experience in each of these exhibits. This report will continue to add years of experience to the charts and eventually build up to the recommended disclosure. Table V-3 shows the Notes to Required Supplementary Information. Table V-4 is a history of gains and losses in Accrued Liability, and Table V-5 is the Solvency Test which shows the portion of Accrued Liability covered by Assets.

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**SECTION V**  
**ACCOUNTING STATEMENT INFORMATION**

<b>Table V-1</b>		
<b>Accounting Statement Information</b>		
	<b>June 30, 2010</b>	<b>June 30, 2011</b>
<b>A. FASB ASC Topic 960 Basis</b>		
1. Present Value of Benefits Accrued to Date		
a. Members Currently Receiving Payments	\$ 6,423,967,840	\$ 5,968,859,934
b. Vested Terminated	432,860,587	484,524,796
c. Active Members	<u>4,214,929,442</u>	<u>3,880,713,364</u>
d. Total PVAB	\$ 11,071,757,869	\$ 10,334,098,094
2. Assets at Market Value	<u>7,239,332,094</u>	<u>8,677,947,874</u>
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$ 3,832,425,775	\$ 1,656,150,220
4. Ratio of Assets to Value of Benefits (2) / (1)(d)	65.39%	83.97%
<b>B. GASB No. 25 Basis</b>		
1. Actuarial Liabilities		
a. Members Currently Receiving Payments	\$ 6,423,967,840	\$ 5,968,859,934
b. Vested Deferred and Inactive Status Members	432,860,587	484,524,796
c. Active Members	<u>5,760,315,578</u>	<u>4,828,280,456</u>
d. Total	\$ 12,617,144,005	\$ 11,281,665,186
2. Actuarial Value of Assets	<u>8,313,459,810</u>	<u>8,736,885,121</u>
3. Unfunded Actuarial Liability	\$ 4,303,684,195	\$ 2,544,780,065
4. Ratio of Actuarial Value of Assets to Actuarial Liability (2) / (1)(d)	65.89%	77.44%

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SECTION V  
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Table V-2 Statement of Changes in Total Actuarial Present Value of All Accrued Benefits	Accumulated Benefit Obligation (FASB ASC Topic 960)
Actuarial Present Value of Accrued Benefits as of June 30, 2010	\$ 11,071,757,869
Increase (Decrease) During Years Attributable to:	
Passage of Time	759,586,966
Benefits Paid – FY 2011	(594,696,270)
Assumption Change	424,343,809
Plan Changes	(1,652,267,764)
Benefits Accrued, Other Gains/Losses	325,373,483
Net Increase (Decrease)	\$ (737,659,775)
Actuarial Present Value of Accrued Benefits as of June 30, 2011	\$ 10,334,098,094

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**Table V-3**  
**NOTE TO REQUIRED SUPPLEMENTARY INFORMATION**

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	June 30, 2011
Actuarial cost method	Entry age
Amortization method	Level percent closed
Remaining amortization period	17 years
Asset valuation method	3-Year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.25%
Projected salary increases*	3.50%
*Includes inflation at	3.50%
Cost-of-living adjustments	2.55%

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the experience of the plans in the Program, completed in 2011.

The rate of employer contributions to the plans in the Program is composed of the normal cost and an amortization of the unfunded actuarial accrued liability. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability.



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**Table V-4**  
**ANALYSIS OF FINANCIAL EXPERIENCE**  
**Gain and Loss in Accrued Liability During Years Ended June 30**  
**Resulting from Differences Between Assumed Experience and Actual Experience**

	<i>Gain (or Loss) for Year ended June 30, 2006</i>	<i>Gain (or Loss) for Year ended June 30, 2007</i>	<i>Gain (or Loss) for Year ended June 30, 2008</i>	<i>Gain (or Loss) for Year ended June 30, 2009</i>	<i>Gain (or Loss) for Year ended June 30, 2010</i>	<i>Gain (or Loss) for Year ended June 30, 2011</i>
<b>Type of Activity</b>						
Investment Income	\$ (2,036,992)	\$209,910,525	\$(160,831,089)	\$(843,411,410)	\$(534,019,417)	\$ (29,110,015)
Combined Liability Experience	<u>48,354,919</u>	<u>(39,346,019)</u>	<u>68,570,730</u>	<u>(91,293,558)</u>	<u>248,398,931</u>	<u>(91,222,335)</u>
Gain (or Loss) During Year from Financial Experience	\$ 46,317,927	\$170,564,505	\$ (92,260,359)	\$(934,704,969)	\$(285,620,486)	\$ (120,332,350)
Non-Recurring Items	<u>5,292,234</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,822,058,877</u>
Composite Gain (or Loss) During Year	\$ <b>51,610,161</b>	\$ <b>170,564,505</b>	\$ <b>(92,260,359)</b>	\$ <b>(934,704,969)</b>	\$ <b>(285,620,486)</b>	\$ <b>1,701,726,527</b>

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SECTION V  
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**Table V-5**  
**SOLVENCY TEST**  
**Aggregate Actuarial Accrued Liabilities For**

Valuation Date June 30,	(1) Active Member Contributions	(2) Retirees Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Actuarial Accrued Liabilities Covered by Reported Assets		
					(1)	(2)	(3)
2011	\$ 2,229,984,968	\$ 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	2,002,784,768	6,622,143,609	3,696,290,955	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%
2006	1,645,241,719	5,367,785,679	3,534,271,796	7,504,219,546	100%	100%	14%
2005	1,569,409,748	4,832,994,427	3,596,845,863	6,964,597,457	100%	100%	16%

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<b>Active Member Data as of June 30, 2011</b>	
<b><u>Teachers</u></b>	
Count	25,495
Average Current Age	46.9
Average Service	15.9
Average Valuation Pay	\$ 42,151
<b><u>State Employee Regular Plan</u></b>	
Count	11,455
Average Current Age	48.5
Average Service	13.8
Average Valuation Pay	\$ 41,551
<b><u>Forest Rangers Special Plan (Closed Plan)</u></b>	
Count	6
Average Current Age	53.4
Average Service	32.2
Average Valuation Pay	\$ 58,735
<b><u>Inland Fisheries &amp; Wildlife Officers Special Plan (Closed Plan)</u></b>	
Count	4
Average Current Age	56.5
Average Service	32.3
Average Valuation Pay	\$ 59,743
<b><u>Prison Employees Special Plan (Closed Plan)</u></b>	
Count	6
Average Current Age	52.7
Average Service	28.9
Average Valuation Pay	\$ 55,416

MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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<b>Active Member Data as of June 30, 2011</b>	
<b><u>State Police Special Plan (Closed Plan)</u></b>	
Count	9
Average Current Age	56.2
Average Service	29.5
Average Valuation Pay	\$ 71,861
<b><u>Marine Resource Officers Special Plan (Closed Plan)</u></b>	
Count	1
Average Current Age	54.7
Average Service	32.2
Average Valuation Pay	\$ 56,374
<b><u>State Employee Special 25 &amp; Out Plan</u></b>	
Count	443
Average Current Age	40.6
Average Service	14.1
Average Valuation Pay	\$ 63,096
<b><u>State Employee 1998 Special Plan</u></b>	
Count	1,340
Average Current Age	44.9
Average Service	12.0
Average Valuation Pay	\$ 47,169
<b><u>State Employee Totals (Excludes Teachers)</u></b>	
Count	13,264
Average Current Age	47.9
Average Service	13.7
Average Valuation Pay	\$ 42,879

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<b>Non-Active Member Data as of June 30, 2011</b>			
<b>Teachers</b>			
	<b>Count</b>	<b>Total Annual Benefit</b>	<b>Average Annual Benefit</b>
Retired	12,180	\$ 291,206,302	\$ 23,909
Retired – Concurrent Beneficiaries	1,406	8,061,481	5,734
Disabilities / 1122	1	23,985	23,985
Disabilities / 3 and 3A	701	19,206,612	27,399
Beneficiaries	1,195	18,156,074	15,193
Pre-Retirement Death Benefits	274	1,574,086	5,745
Terminated Vested	5,161	38,555,156	7,470

<b>Non-Active Member Data as of June 30, 2011</b>			
<b>State Regular</b>			
	<b>Count</b>	<b>Total Annual Benefit</b>	<b>Average Annual Benefit</b>
Retired	7,648	\$ 148,761,198	\$ 19,451
Retired – Concurrent Beneficiaries	1,099	5,804,067	5,281
Disabilities / 1122	4	61,199	15,300
Disabilities / 3 and 3A	929	20,368,083	21,925
Beneficiaries	1,773	21,619,777	12,194
Pre-Retirement Death Benefits	371	2,075,739	5,595
Terminated Vested	1,913	16,333,105	8,538

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<b>Non-Active Member Data as of June 30, 2011</b>			
<b>Special Plans</b>			
	<b>Count</b>	<b>Total Annual Benefit</b>	<b>Average Annual Benefit</b>
Retired	861	\$ 26,047,879	\$ 30,253
Retired – Concurrent Beneficiaries	159	939,172	5,907
Disabilities / 1122	2	38,434	19,217
Disabilities / 3 and 3A	77	1,948,921	25,311
Beneficiaries	210	3,171,766	15,104
Pre-Retirement Death Benefits	10	77,063	7,706
Terminated Vested	0	0	0

**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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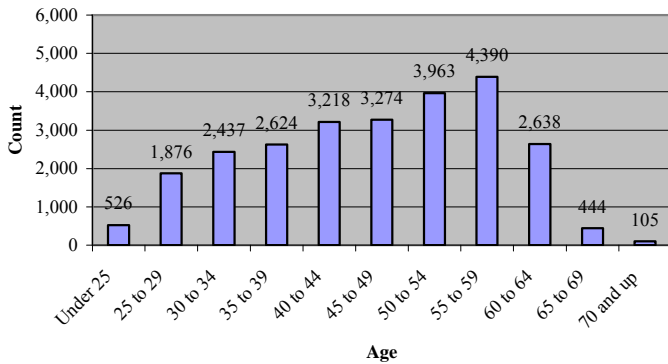
**APPENDIX A  
MEMBERSHIP INFORMATION**

**Distribution of Active Members  
As of June 30, 2011**

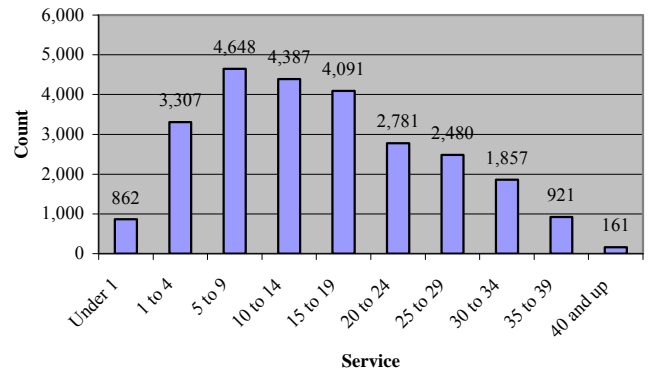
**Teachers**

	Years of Service										Totals	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	218	273	35	0	0	0	0	0	0	0	0	526
25 to 29	169	854	807	46	0	0	0	0	0	0	0	1,876
30 to 34	101	478	973	855	30	0	0	0	0	0	0	2,437
35 to 39	102	418	529	831	742	2	0	0	0	0	0	2,624
40 to 44	106	417	610	598	1,108	369	10	0	0	0	0	3,218
45 to 49	50	316	576	592	506	695	532	7	0	0	0	3,274
50 to 54	52	237	504	648	616	516	874	509	7	0	0	3,963
55 to 59	40	177	343	466	672	639	594	996	458	5	5	4,390
60 to 64	21	98	203	282	360	483	381	290	419	101	101	2,638
65 to 69	3	26	56	47	48	67	75	48	27	47	47	444
70 and up		13	12	22	9	10	14	7	10	8	8	105
<b>Total</b>	<b>862</b>	<b>3,307</b>	<b>4,648</b>	<b>4,387</b>	<b>4,091</b>	<b>2,781</b>	<b>2,480</b>	<b>1,857</b>	<b>921</b>	<b>161</b>	<b>161</b>	<b>25,495</b>

**Age Distribution**



**Service Distribution**



**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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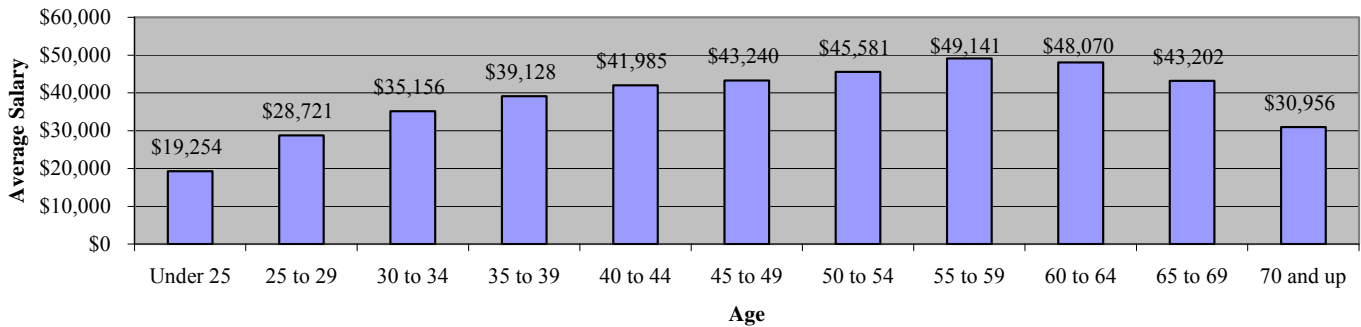
**APPENDIX A  
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**Distribution of Active Members  
As of June 30, 2011**

**Teachers**

	Average Salary Years of Service										Average	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	\$ 16,581	\$ 20,834	\$ 23,572	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 19,254
25 to 29	19,498	27,012	32,076	35,477	0	0	0	0	0	0	0	28,721
30 to 34	22,427	29,847	35,734	38,839	38,871	0	0	0	0	0	0	35,156
35 to 39	22,304	28,320	36,281	42,344	45,936	46,387	0	0	0	0	0	39,128
40 to 44	25,023	27,660	36,001	42,474	48,859	51,280	50,383	0	0	0	0	41,985
45 to 49	20,418	28,593	31,769	38,818	46,822	54,106	53,680	54,187	0	0	0	43,240
50 to 54	22,540	29,438	32,112	37,964	43,720	52,166	55,643	56,591	59,675	0	0	45,581
55 to 59	18,582	30,384	36,408	38,069	42,373	50,846	54,233	58,648	60,077	54,452	0	49,141
60 to 64	29,091	27,179	35,161	37,735	43,535	48,889	52,194	54,960	59,217	57,744	0	48,070
65 to 69	12,190	19,630	29,445	33,564	43,427	47,652	46,653	54,298	55,251	53,917	0	43,202
70 and up	0	12,237	18,556	21,766	25,147	31,316	45,334	29,626	48,280	65,673	0	30,956
<b>Average</b>	<b>\$ 20,518</b>	<b>\$ 27,553</b>	<b>\$ 34,125</b>	<b>\$ 39,536</b>	<b>\$ 45,580</b>	<b>\$ 51,473</b>	<b>\$ 54,003</b>	<b>\$ 57,270</b>	<b>\$ 59,413</b>	<b>\$ 56,919</b>	<b>\$</b>	<b>\$ 42,151</b>

**Average Salary Distribution**





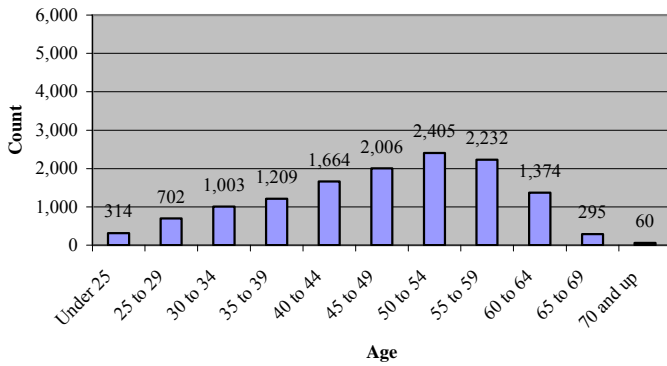
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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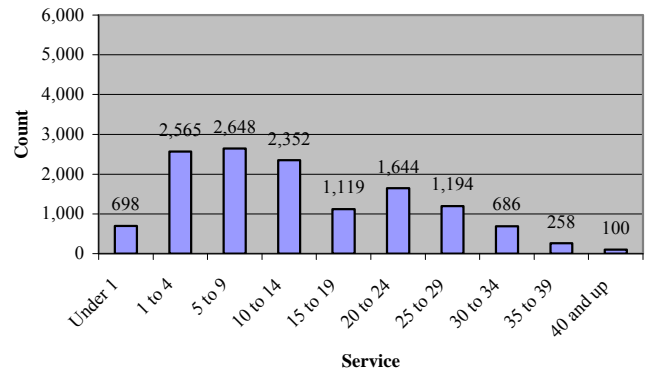
**Distribution of Active Members  
As of June 30, 2011**

	State										Totals
	Years of Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	130	167	17	0	0	0	0	0	0	0	314
25 to 29	134	353	200	15	0	0	0	0	0	0	702
30 to 34	81	357	399	163	3	0	0	0	0	0	1,003
35 to 39	78	295	348	389	93	6	0	0	0	0	1,209
40 to 44	62	343	351	405	237	245	21	0	0	0	1,664
45 to 49	76	312	366	374	197	408	259	14	0	0	2,006
50 to 54	60	301	373	401	213	389	385	264	19	0	2,405
55 to 59	36	264	309	346	204	333	304	277	145	14	2,232
60 to 64	32	145	226	199	140	210	181	99	81	61	1,374
65 to 69	8	27	53	46	27	41	38	23	12	20	295
70 and up	1	1	6	14	5	12	6	9	1	5	60
<b>Total</b>	<b>698</b>	<b>2,565</b>	<b>2,648</b>	<b>2,352</b>	<b>1,119</b>	<b>1,644</b>	<b>1,194</b>	<b>686</b>	<b>258</b>	<b>100</b>	<b>13,264</b>

**Age Distribution**



**Service Distribution**



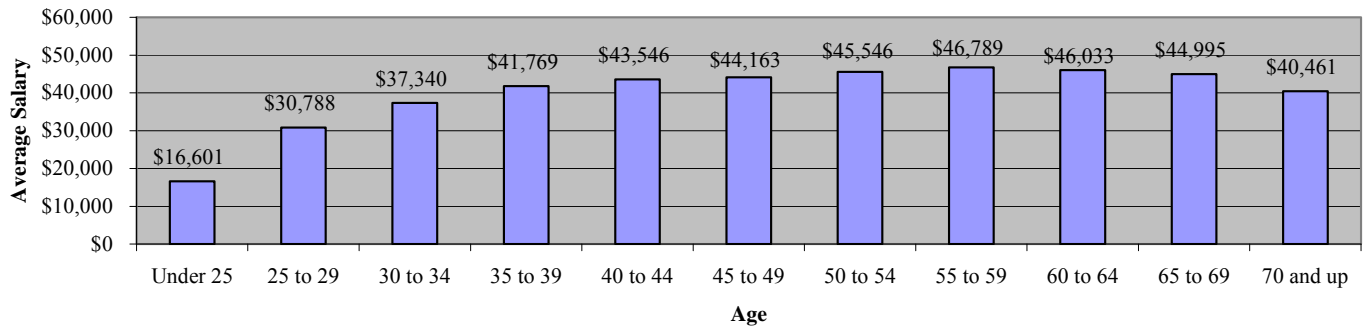
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**APPENDIX A  
MEMBERSHIP INFORMATION**

**Distribution of Active Members  
As of June 30, 2011**

	State											Average
	Average Salary											
	Years of Service											
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	\$ 11,515	\$ 20,384	\$ 18,334	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 16,601	
25 to 29	17,706	33,057	35,041	37,521	0	0	0	0	0	0	30,788	
30 to 34	20,034	34,272	41,200	43,005	48,400	0	0	0	0	0	37,340	
35 to 39	17,117	35,668	42,584	48,057	51,953	49,476	0	0	0	0	41,769	
40 to 44	19,470	35,088	42,248	46,163	53,841	48,562	49,255	0	0	0	43,546	
45 to 49	17,344	34,082	42,053	45,728	50,227	51,013	49,425	45,493	0	0	44,163	
50 to 54	19,880	35,960	41,531	43,905	51,025	50,816	50,585	51,042	44,129	0	45,546	
55 to 59	25,907	36,706	42,550	45,308	49,259	49,219	50,857	55,617	48,258	48,800	46,789	
60 to 64	23,032	33,902	41,698	45,370	48,346	47,398	52,575	57,050	52,379	49,442	46,033	
65 to 69	20,584	33,522	36,276	43,222	41,295	51,058	49,815	56,736	56,176	60,629	44,995	
70 and up	584	31,079	37,741	34,021	36,058	43,513	34,857	58,379	47,428	41,768	40,461	
Average	\$ 17,737	\$ 33,866	\$ 41,167	\$ 45,425	\$ 50,592	\$ 49,717	\$ 50,577	\$ 53,930	\$ 49,613	\$ 51,206	\$ 42,879	

**Average Salary Distribution**



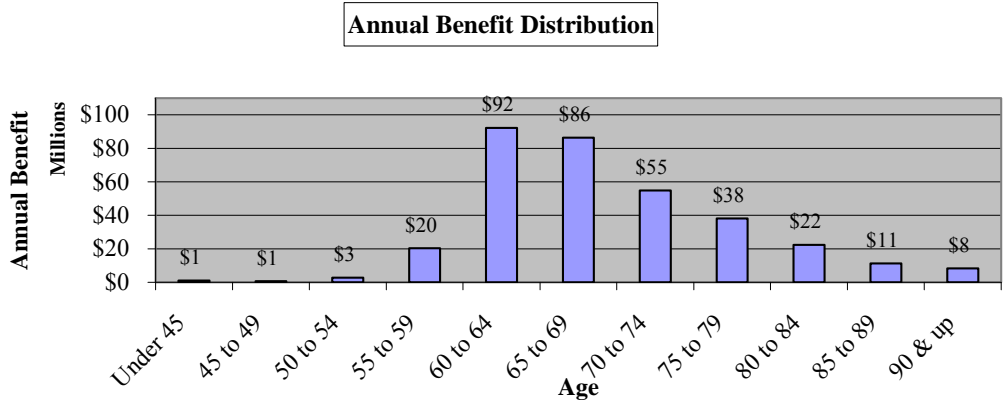
**MAINE PUBLIC EMPLOYEES RETIREMENT SYSTEM STATE EMPLOYEE  
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**APPENDIX A  
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**Distribution of Retirees, Disabled  
Members, Beneficiaries, and Survivors  
As of June 30, 2011**

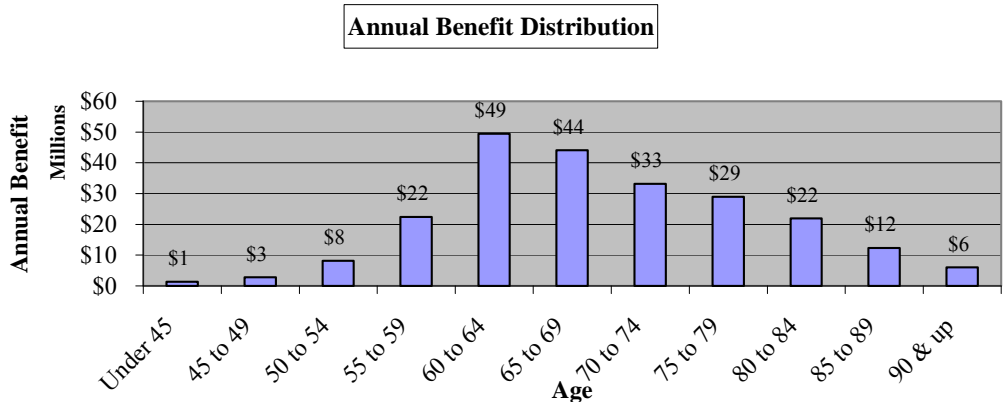
**Teachers**

Age	Count	Annual Benefit
Under 45	157	\$ 1,128,476
45 to 49	51	688,055
50 to 54	148	2,736,032
55 to 59	836	20,235,041
60 to 64	3,620	92,136,806
65 to 69	3,782	86,386,916
70 to 74	2,604	54,784,910
75 to 79	1,950	38,195,127
80 to 84	1,305	22,397,790
85 to 89	752	11,293,012
90 & up	552	8,246,375
<b>Total</b>	<b>15,757</b>	<b>\$ 338,228,540</b>



**State**

Age	Count	Annual Benefit
Under 45	170	\$ 1,347,370
45 to 49	184	2,837,809
50 to 54	462	8,193,847
55 to 59	1,075	22,475,081
60 to 64	2,353	49,467,912
65 to 69	2,323	44,132,683
70 to 74	1,945	33,176,435
75 to 79	1,777	28,969,819
80 to 84	1,452	21,963,730
85 to 89	901	12,312,123
90 & up	501	6,036,488
<b>Total</b>	<b>13,143</b>	<b>\$ 230,913,298</b>



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**APPENDIX B**  
**SUMMARY OF PROGRAM AND PLAN PROVISIONS**

**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.

**Contribution Requirements for Special State Employee Groups**

State police, inland fisheries and wildlife officers, and marine resources officers employed before 9/1/84 – 8.65% of earnable compensation for 20 years; 7.65% thereafter.

Forest rangers and state prison employees employed before 9/1/84 – 8.65% of earnable compensation until eligible for retirement; 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 – 8.65% of earnable compensation for 25 years; 7.65% thereafter.

State police employed on or after 9/16/84 and special agent investigators hired before 6/21/82 – 8.65% of earnable compensation for 25 years; 7.65% thereafter.

Inland fisheries and wildlife officers and marine resources officers employed on or after 9/1/84 – 8.65% of earnable compensation for 25 years; 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) which 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 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

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less than ten years of service at July 1, 1993. For members for whom sick and vacation pay is includible 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)*

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

Normal Retirement Age: 60

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

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

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 approximately 2¼% for each year retirement age is less than age 60.

Form of Payment: Life annuity.

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

Normal Retirement Age: 62

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

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

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

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

Benefit:  $1/50$  of average final compensation multiplied by years of membership service and up to 25 years of prior service, reduced by 6% for each year retirement age is less than age 62.

Form of Payment: Life annuity.

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

Normal Retirement Age: 65

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

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

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

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

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.

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

***i. State Police Employed Before 9/16/84; Inland Fisheries and Wildlife Officers and Marine Resource Officers Employed Before 9/1/84***

Eligibility: 20 years of creditable service in named positions.

Benefit: one-half of average final compensation plus 2% for each year of service in excess of 20. If greater, the pro-rated portion of the benefit for service before July 1, 1976 is based on annual pay instead of average final pay.

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

***ii. Forest Rangers Employed Before 9/1/84***

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. Airplane Pilots Employed Before 9/1/84***

Eligibility: Age 55 and 25 years of creditable service as an airplane pilot.

Benefit: Greater of (1) one-half of average final compensation plus 2% for each year of service earned after qualification for retirement, and (2) if retiring after age 60, the benefit under the general formula.

Form of Payment: Life annuity.

***iv. Liquor Inspectors Employed Before 9/1/84***

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.

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v. *State Prison Employees Employed Before 9/1/84*

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.

vi. *1998 Special Plan*

1998 Entrants: State prison employees, airline pilots, forest rangers and liquor inspectors, employed after 8/31/84; defense, veterans and emergency management firefighters employed on and after 7/1/98.

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

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

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

Benefit: For service prior to coverage in the 1998 Special Plan, 1/50 of average final compensation multiplied by years of service reduced for retirement before age 60 or 62, 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.

vii. *25 & Out Plan*

1998 Entrants: State police employed on or after 9/16/84 and special agent investigators hired before 6/21/82.

2002 Entrants: Inland fisheries and wildlife officers and marine resources officers employed on and after 8/31/84.



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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.

**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.

Benefit: 66 $\frac{2}{3}$ % of average final compensation, reduced by employment earnings over the specified statutory limit, and to the extent that the benefit, in combination with Worker's 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 five or two years, depending on disability plan, 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 the service retirement benefit equals or exceeds the disability benefit.

Conversion to Service Retirement: During the period of disability, average final compensation is increased with cost-of-living adjustments and service is credited. On the date when service benefits reach a level of 66 $\frac{2}{3}$ % of average final compensation or ten years after the normal retirement date, if earlier, the disability benefit converts to a service retirement benefit based on service and average final compensation at that point.

**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.

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 Worker's 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 five or two years, depending on disability plan, 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.

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Conversion to Service Retirement: During the period of disability, average final compensation is increased with cost-of-living adjustments and service is credited. 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 point.

**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 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.

**9. Pre-Retirement Accidental Death Benefits:**

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

- 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. When there is no longer any dependent child, the surviving spouse shall receive 2/3 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 is no longer any dependent child, the surviving spouse shall receive 2/3 of member's average final compensation until death.
- If the member leaves no spouse, the dependent child(ren) shall be paid an annual sum 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. Refund of Contributions:**

Eligibility: Termination of service without retirement or death.

Benefit: Member's accumulated contributions with interest.

**11. 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

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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 the non-zero COLA.

Cost-of-living adjustments are effective September 1 and are applied to that portion of the benefit which is not in-excess of \$20,000 (indexed) for all benefits which have been in payment for twelve months. 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.

Members on service retirement who did not have ten years of service on July 1, 1993 will not receive a cost-of-living adjustment until 12 months after their normal retirement age.

No cost-of-living adjustments will be made until September 2014.

**12. Methods of Payment of Service Retirement Benefits:**

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

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

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

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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. Changes Since Prior Valuation:**

Members with less than five years of creditable service on July 1, 2011 – As detailed in #5Aiii above, members who are not vested by July 1, 2011 and all those hired after July 1, 2011 will reach Normal Retirement Age at age 65. Early Retirement benefits are reduced from age 65.

Cost of Living – As detailed in #11 above, the cap on the annual COLA was lowered from 4.0% per year to 3.0% per year. Also, COLAs are only granted on the first \$20,000 of annual benefit (indexed). No cost-of-living adjustments will be made until September 2014.

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Any changes from the assumptions found in Appendix B of the 2010 report have been highlighted below.

**A. Actuarial Assumptions**

**1. Rate of Investment Return:**

	Previous	Revised
State Employees	7.75%	7.25%
Teachers	7.75%	7.25%

Rate is net of both administrative and investment expense.

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

	Previous	Revised
State Employees	3.75%	2.55%
Teachers	3.75%	2.55%

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

Service	Previous Scale State Employees and Teachers	Revised Scale	
		State Employees	Teachers
0	10.00%	10.50%	13.50%
5	7.50	6.00	6.25
10	6.07	4.50	5.00
15	5.28	3.95	4.50
20	4.90	3.70	3.70
25 and over	4.75	3.50	3.50

The above rates include a 3.50% (previously 4.75%) across-the-board increase at each year of service. For fiscal years ending 2011 and 2012, the 3.50% assumption has been temporarily reduced to 1.50%.

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

Service	Previous		Revised	
	State Employees	Teachers	State Employees	Teachers
0	30.00%	37.00%	30.00%	37.00%
5	7.50	12.50	7.50	12.00
10	4.40	6.00	4.40	6.90
15	3.50	4.50	4.00	5.50
20	2.00	3.00	4.00	5.50
25	2.00	2.00	4.00	5.50

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.

**5. Rate of Mortality for Active Healthy Lives and Retired Healthy Lives at Selected Ages (number of deaths per 10,000 members)\*:**

Age	Previous				Revised			
	State Employees		Teachers		State Employees		Teachers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	28	15	24	13	16	13	14	11
55	48	25	40	21	27	24	22	18
60	86	48	73	41	53	47	41	36
65	156	93	133	79	103	90	81	71
70	255	148	217	125	177	155	142	125
75	400	244	340	207	306	249	246	204
80	667	424	567	360	554	413	448	338
85	1,046	728	889	619	997	708	807	571
90	1,644	1,250	1,398	1,063	1,727	1,259	1,418	1,026
95	2,512	2,002	2,135	1,702	2,596	1,888	2,267	1,654

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

Rates for State Employees are based on the RP 2000 Mortality Table for Males and Females projected forward for 2015 using Scale AA. Rates for Teachers are based on the same projected table but with a 2 year set back.

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

Age	State Employees		Teachers	
	Male	Female	Male	Female
25	92	72	92	72
30	112	89	112	89
35	134	109	134	109
40	160	126	160	126
45	193	144	193	144
50	236	165	236	165
55	295	191	295	191
60	362	226	362	226
65	446	272	446	272
70	576	331	576	331

Rates are based on the Revenue Ruling 96-7 Disabled Mortality Table for Males and Females.

No Change.

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

Age	Previous				Revised					
	State Employees		Teachers		State Employees			Teachers		
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
45	28	28	18	18	8	NA	NA	13	NA	NA
50	42	42	39	39	56	NA	NA	29	NA	NA
55	103	103	106	106	56	NA	NA	79	NA	NA
59	200	148	156	100	173	113	113	150	225	225
60	228	148	225	100	300	150	150	225	225	225
61	133	133	139	100	300	150	150	230	225	225
62	268	250	277	250	270	250	188	250	300	225
63	202	202	224	224	270	250	188	260	300	225
64	221	221	223	223	250	250	188	270	300	225
65	478	478	485	485	250	250	250	300	300	300
70	589	589	570	570	1,000	1,000	1,000	1,000	1,000	1,000

\* Members of Special Groups are assumed to retire at a rate of 50% per year, once they reach eligibility for unreduced benefits at every age.

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 are those who had not or were hired after that date but had 5 years of service by July 1, 2011. Tier 3 are those who did not have 5 years of service by July 1, 2011.

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

Age	Previous		Revised	
	State Employees	Teachers	State Employees	Teachers
25	6.8	4.6	6.8	3.4
30	7.6	5.0	7.6	3.8
35	10.2	5.5	10.2	3.8
40	19.0	6.8	19.0	5.1
45	27.9	15.5	27.9	11.6
50	42.7	24.3	42.7	18.2
55	81.0	33.0	53.0	24.8
60	119.3	41.8	63.0	31.3

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

**9. 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.

No Change.

**10. 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 benefits are increased by 1.0% for state employees and 1.3% for teachers.

No Change.

**11. Date of Adoption of Assumptions**

The assumptions were adopted by the Trustees as a result of the latest experience study review performed in 2011 and covering the period July 1, 2005 through June 30, 2010.

**12. Changes Since Last Valuation**

See highlighted areas above



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**B. Actuarial Methods**

**1. Funding Method:**

The Entry Age Normal method is used to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded actuarial liability (UAL) rate.

For Teachers and State Employees, including each of the State Special Plans, a normal cost rate is determined for a typical new entrant. This rate is determined by taking the value, as of age at entry into a plan in the Program, of the member's projected future benefits, reducing it by the value of future member contributions, and dividing it by the value, also as of the member's entry age, of the member's expected future salary.

In addition to contributions required to meet a plan's normal cost, contributions are required to fund the plan's unfunded actuarial liability. The actuarial liability is defined as the present value of future benefits less the present value of future normal costs and future member contributions. The unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of assets. The actuarial liability includes projections of future member pay increases and future service credits and should not be confused with the Accrued Benefit Liability.

The unfunded actuarial liability is amortized by annual payments. The payments are determined so that they will be a level percentage of pay, assuming payroll increases 3.50% per year (for FY2011 and FY2012 we used a 1.5% growth assumption). The UAL measured as of June 30, 2011 is amortized over a 17 year period.

**2. Asset Valuation Method:**

For purposes of determining the State contribution to the plans in the Program, 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.