Actuarial Valuation Report
as of
June 30, 2012

Maine Public Employees
Retirement System
Retiree Group Life Insurance

Presented by Cheiron

November 2012

Classic Values, Innovative Advice

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Via Email and UPS Delivery

November 29, 2012

Ms Sandy Matheson
Executive Director
Maine Public Employees Retirement System
#46 State House Station
Augusta, ME 04333-0046

Re: Maine Public Employees Retirement System Retiree Group Life Insurance Actuarial Valuation Report

Dear Sandy:

The purpose of this report is to present the estimated Postretirement Group Life Insurance obligations as of June 30, 2012 for the Maine Public Employees Retirement System (MainePERS). This report is for the use of the Maine Public Employees Retirement System and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

Section I summarizes the change in asset information from June 30, 2011 to June 30, 2012.

Sections II III, and IV contain the Liability and Asset information as of June 30, 2012. Per the System's direction, this is the information needed for the auditors. The assets represent the total group life reserve, an adjustments may be necessary if any reserves are not available to satisfy retiree liabilities. The liabilities are based on the biennial valuation as of June 30, 2012. The next full biennial valuation is scheduled to be performed as of June 30, 2014.

Appendix A describes the Participant Data, Assumptions, and Methods used in the calculation of the disclosure items contained in Sections I-IV.

Appendix B contains the substantive Plan Provisions provided by the System.

In preparing our report, we relied on information (some oral and some written) supplied by MainePERS. This information includes, but is not limited to, the plan provisions, 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.

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Actuarial computations provided in this report are for purposes of fulfilling employee benefit plan financial accounting requirements. The calculations reported in the enclosed sections have been made on a basis consistent with our understanding of the associated Actuarial Standards of Practice. Determinations for purposes other than meeting the employee benefit plan's financial accounting requirements (for example, establishing a long-term funding strategy) may be significantly different from the results in this report.

This report was prepared solely for MainePERS for the purposes described herein, except that the plan auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

We hereby certify that, 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 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

John Colberg, FSA, EA, MAAA
Principal Consulting Actuary

Michael J. Noble, FSA, FCA, EA, MAAA
Consulting Actuary

Introduction

Maine Public Employees Retirement System (MainePERS) engaged Cheiron to provide an analysis of the Postretirement Group Life Insurance liabilities as of June 30, 2012. The primary purposes of performing this actuarial valuation are to:

- Estimate the annual required contribution (ARC) for the Postretirement Group Life Insurance using GASB 43/45 methodology under the current funding strategy for information purposes;
- Provide disclosures for financial statements; and
- Estimate revenue based on current premium rates in force to be used for budgeting purposes.

We have determined costs and liabilities for the substantive Plan using actuarial assumptions and methods that we consider reasonable.

Below is a summary of the key results of our calculations:

- The ARC for fiscal year ending June 30, 2013 is $8,955,065.
- The actuarial liability under the Entry Age Normal Actuarial Cost Method as of July 1, 2012 is $173,851,503.

The fundamental principal underlying our analysis, as well as the GASB standard, is that the cost of benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. The *normal cost (*which is a component of the *ARC)* is the annual amount which would be sufficient to fund the substantive Plan benefits (net of retiree contributions) if it were paid from each employee's entry into the Plan until termination or retirement. The *actuarial liability* represents the portion of the value of the projected benefit at retirement that is allocated to service earned prior to the valuation date. The *unfunded actuarial liability* (UAL) represents the excess of the actuarial liability over Plan assets.

GASB's Statement 43 refers to the financial reporting for postemployment benefit plans other than pension plans and Statement 45 refers to the employer accounting for these plans. Statement 43 is generally applicable where an entity has a separate trust or fund for OPEB benefits. Statement 45 requires the plan sponsor to book the actuarial cost (net of employee, retiree, and their dependents' contributions) of the plan as an expense on its financial statements, and then accrue a liability to the extent actual contributions were less than this expense. Additional disclosures include a description of the substantive plan, summary of significant accounting policies (not included in this report), contributions, and a statement of funding progress, along with the methods and assumptions used for those disclosures.

The current premium rates were developed from a 2005 experience study. A more recent experience study was completed in 2012 and rate changes based on that experience study have been adopted by the Board. The premiums were unchanged for Teachers and PLD employees. Teachers pay $.05 bi-weekly per $1,000 of coverage for active coverage and the State contributes a dollar amount equal to the calculated ARC for retired teacher coverage. PLD employees pay $.46 monthly per $1,000 in coverage. The premiums for State employees have been increased from $.26 to $.29 bi-weekly per $1,000 of coverage for FY 2014. This premium includes $.07 for active coverage and $.22 for retiree coverage. It is anticipated that the premium for retiree coverage will be increased to $.24 for FY 2016, $.26 for FY 2018, and $.28 for FY 2020, These changes have been reflected in our projections.

Section I: Asset Reconciliation

The following chart shows the assets as of the valuation date reconciled from the prior valuation Date**.**

	State[1]	Teachers	PLDs	Judges[1]	Legislators[1]	Total
Balance June 30, 2011	**24.0**	**27.8**	**11.4**	**0.4**	**0.0**[2]	**63.6**
Claims and Expenses	(4.4)	(2.8)	(1.9)	(0.1)	0.0[2]	(9.2)
Premium Revenue	4.6	4.7	2.1	0.1	0.0[2]	11.5
Investment Income and Interest	0.1	0.4	0.0	0.0	0.0[2]	0.5
Net Change during Fiscal Year	**0.3**	**2.3**	**0.2**	**0.0**	**0.0**[2]	**2.8**
Balance June 30, 2012	**24.3**	**30.1**	**11.6**	**0.4**	**0.0**[2]	**66.4**

1 Split of assets, expenses, investment income and premiums for State, Judges, and Legislators estimated based on ratio of liabilities as of the valuation date.
2 Less than $0.05 million.

Section II: Financial Statement Information

The following chart shows Actuarial Liability, the assets as of the valuation date, and the Unfunded Actuarial Liability**.** The Actuarial Liability is calculated taking the Present Value of Future Benefits (shown in Section II) and subtracting the present value of future Normal Costs under the **Entry Age Normal** funding method.

As of June 30, 2012 (in millions)	**State**	**Teachers**	**PLDs**[1]	**Judges**	**Legislators**	**Total**
Actuarial Liability						
- Active Employees	$27.1	$29.5	$ 8.6	$0.6	$0.0[2]	$ 65.8
- Retirees	52.4	41.5	13.4	0.8	0.0	108.1
Total	**$79.5**	**$71.0**	**$22.0**	**$1.4**	**$0.0**	**$173.9**
Less: Assets at Valuation Date	24.3	30.1	11.6	0.4	0.0[2]	66.4
Unfunded Actuarial Liability (UAL)	**$55.2**	**$40.9**	**$ 10.4**	**$1.0**	**$0.0**[2]	**$107.5**

The ARC consists of two parts: (1) the *normal cost*, which represents the annual cost attributable to service earned in a given year, and (2) the amortization of the UAL. In the table below, we show the computed FYE 2013 ARC.

For Fiscal 2013 (in millions)	**State**	**Teachers**	**PLDs**[1]	**Judges**	**Legislators**	**Total**
Actuarial Required Contribution (ARC)						
- Normal Cost	$ 0.9	$ 0.5	$ 0.3	$0.0[2]	$0.0[2]	$ 1.7
- UAL Amortization[3]	3.6	2.7	0.9	0.1	0.0[2]	7.3
Total	**$ 4.5**	**$ 3.2**	**$ 1.2**	**$0.1**	**$0.0**[2]	**$ 9.0**

[1] Net of PLD premiums ($0.46 per month per $1000 of benefit)
[2] Less than $0.05 million
[3] Amortized as a level percent of pay over 25 years (PLDs over 18 years)

Section III: Balance Sheet Information

The following chart develops the Present Value of Future Benefits for the purpose of analyzing the overall financial obligations and the prospective funding source for Postretirement Life Insurance Benefits. The Present Value of Benefits 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.

As of June 30, 2012 (in millions)	State	Teachers	PLDs[1]	Judges	Legislators	Total
Assets						
- Current Value of Assets	$ 24.3	$ 30.1	$ 11.6	$ 0.4	$0.0	$ 66.4
- Future Employer Contributions	61.1	44.3	12.3	1.1	0.0	118.8
Total Present Value of Assets	**$ 85.4**	**$ 74.4**	**$ 23.9**	**$ 1.5**	**$0.0**	**$185.2**
Liabilities						
- Active Accrued Benefits	$ 19.6	$ 20.8	$ 6.3	$ 0.5	$ 0.0[2]	$ 47.2
- Active Future Accruals	13.4	12.0	4.2	0.2	0.0[2]	29.8
- Active Present Value of Benefits	$ 33.0	$ 32.8	$ 10.5	$ 0.7	$ 0.0[2]	$ 77.0
- Inactive Present Value of Benefits	52.4	41.6	13.4	0.8	0.0[2]	108.2
Total Present Value of Benefits	**$ 85.4**	**$ 74.4**	**$ 23.9**	**$ 1.5**	**$ 0.0[2]**	**$185.2**

[1] Net of PLD premiums ($0.46 per month per $1000 of benefit)

[2] Less than $0.05 million

Section IV: Estimated Revenue

The following chart develops estimated revenues generated by premiums paid on behalf of active participants.

As of June 30, 2012	State[1]	Teachers	PLDs[2]
Active Data			
- Total Payroll (in millions)	$ 553.5	$ 630.8	$ 246.9
- Insurance in Force[3]	14.4	16.4	6.4
Current Total Premium[3,4]	**$ 0.26**	**$ 0.20**	**$ 0.21**
Revenue from Premium Rates[4,5]			
- FY 2014 (in millions)	$ 4.3	$ 0.8	$ 1.4
- FY 2015 (in millions)	$ 4.5	$ 0.9	$ 1.4

The following chart for teachers shows the development of retiree cost on an actuarial basis for use in State budgeting and the cost of Life Insurance for death during employment (Active Cost).

	Teachers	
Projected Costs[5]	**FY 2014**	**FY 2015**
Retiree Cost		
- Normal Cost	$ 555,147	$ 574,577
- UAL Amortization[6]	2,792,647	2,890,390
- Total ARC = Retiree Cost	$ 3,347,794	$ 3,464,967
Active Cost	848,691	878,395
Total Cost	$ 4,196,485	$ 4,343,362

1 Including Judge and Legislator amounts, as these are not developed separately.
2 Net of PLD premiums ($0.46 per month per $1000 of benefit)
3 Biweekly amount per thousand
4 The Current Total Premium funds the cost of death benefits during employment and for State and PLDs the cost of postretirement benefits. For teachers, the premium does not include retiree costs, which are paid separately by the state.
5 Based on premium rates adopted for FY 2014. The State rates increase to $0.22 for retirees and $0.07 for actives for a total of $0.29. Teacher and PLD rates remain unchanged.
6 Amortized as a level percent of pay over 24 and 23 years, respectively.

Appendix A: Participant Data, Assumptions and Methods

Participant Data as of June 30, 2012[1]

Actives

Group	Count	Average Age	Average Service	Average Salary
State	11,876	48.5	16.1	$ 46,030
Teachers	13,595	46.9	10.7	$ 46,397
PLDs	5,573	49.3	12.8	$ 44,306
Judges	60	59.7	10.6	$113,467
Legislators	0	N/A	N/A	N/A
TOTAL	31,104	48.9	13.1	$ 47,011

Retirees

Group	Count	Average Age	Average Benefit[2]
State	8,245	69.4	$ 15,296
Teachers	6,134	70.9	$ 17,400
PLDs	2,590	70.9	$ 14,070
Judges	51	71.1	$ 32,963
Legislators	10	79.1	$ 4,405
TOTAL	17,030	60.2	$ 15,914

[1] As per the biennial measurement as of June 30, 2012
[2] Ultimate benefit (40% of initial base benefit)

Note that all assumptions are based on the MainePERS Pension assumptions, except where otherwise indicated.

Economic Assumptions

Valuation Date:	June 30, 2012
Investment Return:	7.25% per year.
Cost-of-Living Increases in Life Benefits:	N/A, unlike the Pension assumptions. (i.e., Life Benefits do not increase with Cost of Living increases)

Premium Expense Assumption:
To reflect administrative expenses associated with the distribution of benefits, the following loads have been added to the liabilities, normal cost, and benefit payments.

State Employees, Judges and Legislators: 9.58%
Teachers: 12.16%
PLDs: 8.70%

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Appendix A: Participant Data, Assumptions and Methods (continued)

Rates of Salary Increase
(experience-based sample rates by service including both merit scale increase and yearly increase):

Service	State	Teachers	PLD	Judges	Legislators
0	10.50%	13.50%	9.50%	3.50%	3.50%
5	6.00%	6.25%	4.00%	3.50%	3.50%
10	4.50%	5.00%	3.50%	3.50%	3.50%
15	3.95%	4.50%	3.50%	3.50%	3.50%
20	3.70%	3.70%	3.50%	3.50%	3.50%
25+	3.50%	3.50%	3.50%	3.50%	3.50%

The rates of salary increase in the prior full valuation are shown below.

Service	State	Teachers	PLDs	Judges	Legislators
0	10.00%	10.00%	10.50%	4.00%	4.75%
5	7.50%	7.50%	5.00%	4.00%	4.75%
10	5.28%	5.28%	4.50%	4.00%	4.75%
15	6.07%	6.07%	4.50%	4.00%	4.75%
20	4.90%	4.90%	4.50%	4.00%	4.75%
25+	4.75%	4.75%	4.50%	4.00%	4.75%

Demographic Assumptions

Rates of Termination
(experience-based sample rates by service):

Service	State	Teachers	PLDs	PLDs Special
0	30.0%	37.0%	20.0%	25.0%
5	7.5	12.0	7.5	4.0
10	4.4	6.9	2.5	2.5
15	4.0	5.5	2.5	2.5
20	4.0	5.5	2.5	2.5
25	4.0	5.5	2.5	2.5

(experience-based sample rates by age):

Age	Judge & Legislator
25	7.00%
30	6.00%
35	5.00%
40	4.00%
45	3.00%
50	2.00%
55	1.00%

Appendix A: Participant Data, Assumptions and Methods (continued)

The rates of termination in the prior valuation are shown below.

Service	State	Teachers	PLDs	PLDs Special
0	30.00%	37.00%	20.00%	25.00%
5	7.50%	12.50%	7.50%	4.00%
10	4.40%	6.00%	2.50%	2.50%
15	3.50%	4.50%	2.50%	2.50%
20	2.00%	3.00%	2.50%	2.50%
25+	2.00%	2.00%	2.50%	2.50%

Rates of Healthy Mortality
(experience-based sample deaths per 10,000 members by age):

	All Other Plans		Teachers	
Age	Male	Female	Male	Female
50	16	13	14	11
55	27	24	22	20
60	53	47	41	36
65	103	90	81	71
70	177	155	142	125
75	306	249	246	204
80	554	413	448	338
85	997	708	807	571
90	1,727	1,259	1,418	1,026
95	2,596	1,888	2,267	1,654

The rates of mortality in the prior valuation are shown below.

	Teachers		All Other Plans	
Age	Male	Female	Male	Female
20	5	3	5	3
25	6	3	7	3
30	7	3	9	4
35	8	4	9	5
40	10	6	12	8
45	14	9	17	10
50	24	13	28	15
55	40	21	48	25
60	73	41	8	48
65	133	79	156	93
70	217	125	255	148

Rates of Disabled Mortality
(experience-based sample deaths per 10,000 members by age):

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

Appendix A: Participant Data, Assumptions and Methods (continued)

Demographic Assumptions (continued)

Rates of Retirement
(experience-based sample retirements per 1,000 members by age):

	State Employees			Teachers		
Age	**Tier 1**	**Tier 2**	**Tier 3**	**Tier 1**	**Tier 2**	**Tier 3**
45	3	NA	NA	13	NA	NA
50	19	NA	NA	29	NA	NA
55	19	NA	NA	79	NA	NA
59	58	75	75	150	225	225
60	300	100	100	225	225	225
61	300	100	100	230	225	225
62	270	250	125	250	300	225
63	270	250	125	260	300	225
64	250	250	125	270	300	225
65	250	250	250	300	300	300
70	1,000	1,000	1,000	1,000	1,000	1,000

PLD Regular

Age	Assumption
45	50
50	50
55	100
60	270
65	300
70	1,000

PLD Special

Service	Assumption
20	400
21-24	300
25	400
26-29	300
30	400
31-34	300
35+	1,000

The rates of retirement in the prior valuation are shown below.

	State		Teachers	
Age	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**
45	28	28	18	18
50	42	42	39	39
55	103	103	106	106
59	200	148	156	156
60	228	148	225	225
61	133	133	139	139
62	268	250	277	277
63	202	202	224	224
64	221	221	223	223
65	478	478	485	485
70	589	589	570	570

Appendix A: Participant Data, Assumptions and Methods (continued)

Demographic Assumptions (continued)

Judges: Members in Tier 1 are assumed to retire at age 60. Members in Tier 2 are assumed to retire at a rate of 50% each year from age 62 through age 70. Members in Tier 3 are assumed to retire at a rate of 50% each year from age 65 through age 70.

Legislators: Members in Tier 1 are assumed to retire at age 60. Members in Tier 2 are assumed to retire at age 62. Members in Tier 3 are assumed to retire at age 65.

Participants who are not members of MainePERS: Age 62.

Rates of Disability
(experience-based sample disablements per 10,000 members by service):

Age	State	Teachers	PLDs	Judges & Legislators
25	6.8	3.5	3	6
30	7.6	3.8	4	6
35	10.2	3.8	5	7
40	19.0	5.1	7	11
45	27.9	11.6	15	22
50	42.7	18.2	33	42
55	53.0	24.8	61	72

The rates of disability in the prior valuation are shown below.

Service	State	Teachers	PLDs	Judges & Legislators
25	6.8	4.6	3	6
30	7.6	5	4	6
35	10.2	5.5	5	7
40	19	6	7	11
45	27.9	15.5	15	22
50	42.7	24.3	33	42
55	81	33	61	72

Participation Percent for Future Retirees:
100% of those currently enrolled (unique to this valuation).

Other Assumptions (Unique to this Valuation)

Conversion Charges: Apply to the cost of active group life insurance not retiree group life insurance.

Form of Benefit Payment: Lump Sum

Appendix A: Participant Data, Assumptions and Methods (continued)

Actuarial Cost Method

To be consistent with past analyses and with the Pension Plan funding, the individual entry age normal method is used to determine liabilities. Under this funding method, a normal cost rate is calculated for each member. 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 member is the product of annual salary and the normal cost rate. The normal cost for the group is the sum of the normal costs for all members.

The actuarial liability is defined as the present value of future benefits less the present value of future normal costs. The unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of the System's assets.

Asset Valuation Method

Figures are taken as reported by the MainePERS without audit or change, except that State assets are allocated to State, Judges and Legislators based on total actuarial liability.

Appendix B: Summary of Key Plan Provisions

Summary of Key Plan Provisions

Membership

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

Basic Insurance

Average final compensation calculated for retirement purposes.

Amount of Insurance for a Retiree

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

Retiree Contributions

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

Normal Retirement Age

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

Discontinued Coverages at Retirement

- Supplemental Life
- Accidental Death and Dismemberment
- Dependent Life

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