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October 12, 2015

Ms. Brenda Halpin, Director
State of Connecticut
Office of the State Comptroller
Retirement Services Division
55 Elm Street
Hartford, CT 06106

Dear Brenda:

Enclosed is the "Connecticut State Employees Retirement System Roll Forward Actuarial Valuation Report prepared as of June 30, 2015".

Please let us know if there are any questions concerning the report.

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

JJG/EJK:kc

Enc.

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**CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM**

**ROLL FORWARD ACTUARIAL VALUATION REPORT
PREPARED AS OF JUNE 30, 2015**





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October 12, 2015

State of Connecticut
State Employees Retirement Commission
55 Elm Street
Hartford, CT 06106

Members of the Commission:

Connecticut General Statutes Section 5-155a governs the operation of the Connecticut State Employees Retirement System (SERS). At the direction of the Commission, the actuary provides a roll forward valuation of the Retirement System as an informational update to our projected required employer contribution amount from our most recent biennial actuarial valuation. It is not recommended that the results of a roll forward valuation be used as the basis of adjusting the scheduled contribution requirements but rather as information as to the expected condition of the System at the end of the interim fiscal year.

This report provides the results of the roll forward actuarial valuation of the Retirement System prepared as of June 30, 2015. The investment performance for the fiscal year ending June 30, 2015 was unfavorable. The fund returned 2.76%, which is lower than the 8.00% that is assumed. We have not performed a reconciliation of census data or development of liabilities as of June 30, 2015. We use roll forward techniques from the June 30, 2014 biennial valuation to best estimate what payroll and liabilities will be as of June 30, 2015. Therefore, the only actual experience incorporated in the results of a roll forward valuation is the investment return for the plan year. The roll forward results reflecting this unfavorable investment experience show that it could be expected that the required employer rate would be slightly more than the rate determined in the latest actuarial valuation of the System.

The actuarial assumptions recommended by the actuary and adopted by the Commission are reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used is the projected unit credit method. Gains and losses are reflected in the unfunded accrued liability which is being amortized as a level percent of payroll within an 16-year period. This period is based on the funding policy of SERS that amortizes the unfunded accrued liability over a declining period of years, starting with 40 years as of July 1, 1991.

This is to certify that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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Members of the Commission
October 12, 2015
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Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'John J. Garrett', with a stylized, cursive script.

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel', with a stylized, cursive script.

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

JJG/EJK:kc



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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ROLL FORWARD VALUATION REPORT
PREPARED AS OF JUNE 30, 2015**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the 2015 roll forward valuation and the two fiscal year's Actuarially Determined Employer Contributions (ADECs) as determined in the 2014 biennial valuation are summarized below:

Valuation Date	June 30, 2015 Roll Forward Valuation	June 30, 2015 Projected from 2014 Valuation	June 30, 2014
Number of active members			49,976
Annual compensation			\$ 3,487,576,617
Retired members and beneficiaries:			
Number			45,803
Annual allowances			\$ 1,576,606,022
Deferred Vested Members:			
Number			1,457
Annual allowances			\$ 20,956,362
Assets:			
Market Value	\$ 10,668,379,585	\$ 11,160,147,957	\$ 10,472,567,077
Actuarial Value	\$ 11,375,780,630	\$ 11,423,879,331	\$ 10,584,795,257
Unfunded actuarial accrued liability	\$ 14,879,731,911	\$ 14,831,633,210	\$ 14,920,814,520
Amortization period (years)	16	16	17
Funded Ratio	43.3%	43.5%	41.5%
For Fiscal Year Ending	June 30, 2017	June 30, 2017	June 30, 2016
Actuarially Determined Employer Contribution (ADEC):			
Normal	\$ 287,224,701	\$ 287,224,701	\$ 278,812,817
Accrued liability	<u>1,286,074,893</u>	<u>1,281,917,659</u>	<u>1,235,654,507</u>
Total	\$ 1,573,299,594	\$ 1,569,142,360	\$ 1,514,467,324
Actuarially Determined Employer Contribution (ADEC) Rates:			
Normal	8.00%	8.00%	7.99%
Accrued liability	<u>35.80%</u>	<u>35.69%</u>	<u>35.43%</u>
Total	43.80%	43.69%	43.42%



- Schedule A of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule E gives a summary of the benefit and contribution provisions of the plan.

SECTION II - ASSETS

- As of June 30, 2015, the total market value of assets amounted to \$10,668,379,585 as reported by the Comptroller's Office compared to \$10,472,567,077 as of June 30, 2014. This represents an investment return of 2.76% for the fiscal year (which may be compared to the assumed investment return of 8.00%). The market value of assets as of June 30, 2015 includes \$6,158,929 of receivables. The actuarial value of assets used for the current valuation was \$11,375,780,630. Schedule A shows the development of the actuarial value of assets as of June 30, 2015.
- Schedule B shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at market value.

SECTION III – CONTRIBUTIONS PAYABLE BY EMPLOYER

The following table shows the amount and rate of contribution payable by the employer as determined from the June 30, 2014 valuation for the 2016/2017 fiscal year.

Contribution for	Contribution Amount	Contribution Rate
A. Employer Normal Cost	\$287,224,701	8.00%
B. Unfunded Actuarial Accrued Liabilities (16 year level percent of payroll amortization)	\$1,281,917,659	35.69%
C. Total (A. + B.)	\$1,569,142,360	43.69%



SECTION IV – ACCOUNTING INFORMATION

Governmental Accounting Standards Board (GASB) has issued Statements No. 67 and 68 which replaces Statement No. 25 and 27 for plan years beginning after June 15, 2013. The information required under the new GASB Statements will be in separate reports. The following information is provided for informational purposes only.

- The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - PUC (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2010	\$9,349,605	\$21,054,197	\$11,704,592	44.4%	\$3,295,666	355.2%
6/30/2011	10,122,765	21,126,725	11,003,960	47.9	3,210,666	342.7
6/30/2012	9,744,986	23,018,752	13,273,766	42.3	3,354,682	395.7
6/30/2013*	9,784,500	23,768,191	13,983,691	41.2	3,139,010	445.5
6/30/2014	10,584,795	25,505,610	14,920,815	41.5	3,487,577	427.8
6/30/2015*	11,375,781	26,255,513	14,879,732	43.3	3,592,204	414.2

*Roll forward valuation.

- The following shows the schedule of employer contributions (all dollar amounts are in thousands).

Fiscal Year Ending June 30	Valuation Date Ending June 30	Actuarially Determined Employer Contribution	Actual Contribution	Percentage Contributed
2012	2011	\$ 926,372	\$ 926,343	100.0%
2013	2011	1,059,652	1,058,113	99.9
2014	2012	1,268,935	1,268,890	100.0
2015	2012	1,379,189	1,371,651	99.5
2016	2014	1,514,467	N/A	N/A
2017	2014	1,569,142	N/A	N/A



3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2015. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2015
Actuarial cost method	Projected Unit Credit
Amortization method	Level percent of payroll, closed
Remaining amortization period	16 years
Asset valuation method	5-year smoothed actuarial value
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases*	4.00% - 20.00%
Cost-of-living adjustments	2.30% - 3.60%
Social Security Wage Base	3.50%
*Includes inflation at	3.00%



SCHEDULE A

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

	June 30, 2015	June 30, 2014
(1) Actuarial Value Beginning of Year*	\$10,584,795,257	\$9,784,500,362
(2) Market Value End of Year**	10,668,379,585	10,472,567,077
(3) Market Value Beginning of Year	10,472,567,077	9,182,442,986
(4) Cash Flow		
(a) Contributions**	1,565,148,396	1,419,894,684
(b) Disbursements	<u>(1,657,588,460)</u>	<u>(1,570,558,006)</u>
(c) Net: (4)(a) + (4)(b)	(92,440,064)	(150,663,322)
(5) Investment Income		
(a) Market Total: (2) – (3) – (4)(c)	288,252,572	1,440,787,413
(b) Assumed Rate	8.00%	8.00%
(c) Amount for Immediate Recognition: [(1) x (5)(b)] + [(4)(c) less Receivable**] x (5)(b) x 0.5	842,839,661	776,485,566
(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)	(554,587,089)	664,301,847
(6) Phased-In Recognition of Investment Income		
(a) Current Year: (5)(d) x 0.20	(110,917,418)	132,860,369
(b) First Prior Year	132,860,369	40,945,727
(c) Second Prior Year	40,945,727	(182,178,789)
(d) Third Prior Year	(182,178,789)	159,875,887
(e) Fourth Prior Year	<u>159,875,887</u>	<u>22,969,457</u>
(f) Total Recognized Investment Gain	40,585,776	174,472,651
(7) Preliminary Actuarial Value End of Year: (1) + (4)(c) + (5)(c) + (6)(f)	11,375,780,630	10,584,795,257
(8) Final Actuarial Value End of Year Using 20% Corridor: Greater of [(7) and .8 x (2)], but no more than 1.2 x (2)	11,375,780,630	10,584,795,257
(9) Difference Between Market & Actuarial Values: (2) – (8)	\$(707,401,045)	\$(112,228,180)
(10) Rate of Return on Preliminary Actuarial Value	8.33%	9.73%

* Before corridor constraints, if applicable.

** Includes receivables of: \$6,158,929 at 6/30/2015 and \$6,198,255 at 6/30/2014.



SCHEDULE B

**SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)**

	YEAR ENDING	
	June 30, 2015	June 30, 2014
<u>Receipts for the Year</u>		
Contributions:		
Members	\$ 187,338,535	\$ 144,806,616
State	1,101,007,100	1,024,371,178
Federal (Net of Transfers)	<u>270,643,832</u>	<u>244,518,635</u>
Subtotal	\$ 1,558,989,467	\$ 1,413,696,429
Amount Receivable	6,158,929	6,198,255
Investment Earnings (net of expenses)	<u>288,252,572</u>	<u>1,440,787,413</u>
TOTAL	\$ 1,853,400,968	\$ 2,860,682,097
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 1,650,464,672	\$ 1,563,029,412
Refunds to Members	<u>7,123,788</u>	<u>7,528,594</u>
TOTAL	\$ 1,657,588,460	\$ 1,570,558,006
<u>Excess of Receipts over Disbursements</u>	\$ 195,812,508	\$ 1,290,124,091
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 10,472,567,077	\$ 9,182,442,986
Excess of Receipts over Disbursements	<u>195,812,508</u>	<u>1,290,124,091</u>
Asset Balance as of the End of Year	\$ 10,668,379,585	\$ 10,472,567,077
Rate of Return	2.76%	15.82%



SCHEDULE C

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted or reaffirmed by the Commission for the June 30, 2012 and later valuations.

VALUATION INTEREST RATE: 8.00% per annum, compounded annually, net of expenses.

SALARY INCREASES:

No salary increases are assumed for the 2012 & 2013 fiscal years. From fiscal year 2014 through 2016 salary increases are assumed to be 1% less than the table below. After the 2016 fiscal year, salary increases are assumed to continue using the same service schedule prior to 2012, which are as follows:

Years of Service	Rate
0	10.00%
1	20.00%
2	10.00%
3	6.25%
4	6.00%
5	5.75%
6	5.50%
7	5.50%
8	5.50%
9	5.50%
10	5.00%
11	5.00%
12	5.00%
13	5.00%
14	5.00%
15+	4.00%

COST OF LIVING ADJUSTMENTS:

Group	Rate
Pre July 1, 1980 Retirees	3.60%
July 1, 1980 – June 30, 1997 Retirees	3.00%
July 1, 1997 – October 1, 2011 Retirees	2.60%
Post October 1, 2011 Retirees	2.30%

SOCIAL SECURITY WAGE BASE INCREASES: 3.50% per annum.

PAYROLL GROWTH ASSUMPTION: 3.75% per annum.



IMPACT OF LONGLEY DECISION: Benefits for members retiring from service on or after the *Longley* decision date are assumed to increase by 0.084% as a result of the revised treatment of longevity pay. Retroactive application of *Longley* has been reflected in this valuation to the extent impacted retiree benefits have been recalculated.

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

WITHDRAWAL

Annual Rates of Non-Hazardous Withdrawal*								
Age	Years of Service							
	0	1	2	3	4	5	6-9	10+
Men								
20	40%	40%	40%	20%	20%	8%	5%	5.0%
25	30	30	20	10	10	8	4	5.0
30	25	22	14	8	7	8	4	4.0
35	25	15	10	7	6	6	4	3.0
40	25	15	9	7	6	5	4	2.5
45	25	15	9	7	6	5	4	2.2
50	25	15	9	7	6	5	4	1.5
55+	25	15	9	7	6	5	4	0.0
Women								
20	35%	45%	30%	20%	20%	10%	5%	5.0%
25	25	25	15	12	9	10	5	5.0
30	20	20	10	9	7	8	5	4.0
35	20	15	9	7	6	6	4	3.0
40	20	15	8	7	6	5	4	2.5
45	20	15	8	7	6	5	3	2.0
50	20	15	8	7	6	5	3	1.5
55+	20	15	8	7	6	5	3	0.0

- * For Hazardous Male Employees, multiply male rates by 35%
- * For Hazardous Female Employees, multiply female rates by 55%



DISABILITY

Annual Rates of Disability		
Age	Hazardous	Non-Hazardous
25	0.00%	0.01%
30	0.05	0.04
35	0.15	0.05
40	0.25	0.12
45	0.30	0.16
50	0.45	0.24
55	0.60	0.40
60	0.80	0.60
65	1.10	0.80
70	1.40	1.00

RETIREMENT: The assumed annual rates of retirement are shown below.

Annual Rates of Retirement		
Hazardous Employees		
Tier I, II & IIa		
Age	First Year Eligible For	All Years After
44 and Less	18.0%	10.0%
45-48	25.0%	10.0%
49-59	10.0%	10.0%
60-69	25.0%	15.0%
70-79	100.0%	20.0%
80	100.0%	100.0%
Tier III		
49 and Less	18.0%	10.0%
50-59	25.0%	10.0%
60-69	10.0%	10.0%
70-79	100.0%	20.0%
80	100.0%	100.0%



Annual Rates of Retirement			
Non-Hazardous Employees			
Tier I, II & IIa			
Age	Early Retirement	Normal Retirement	
		First Year	Other Years
55	7.5%	15.0%	12.5%
56-59	5.0%	15.0%	12.5%
60	5.0%	25.0%	12.5%
61	15.0%	25.0%	15.0%
62	10.0%	10.0%	30.0%
63	35.0%	35.0%	25.0%
64	45.0%	45.0%	25.0%
65-69	65.0%	65.0%	25.0%
70-79	100.0%	100.0%	20.0%
80	100.0%	100.0%	100.0%
Tier III			
Age	Early Retirement	Normal Retirement	
		First Year	Other Years
58-59	5.0%	7.5%	5.0%
60	5.0%	12.5%	12.5%
61	10.0%	15.0%	15.0%
62	10.0%	10.0%	30.0%
63	10.0%	35.0%	25.0%
64	10.0%	45.0%	25.0%
65-69	25.0%	65.0%	25.0%
70-79	25.0%	100.0%	20.0%
80	100.0%	100.0%	100.0%

* These rates also apply for Tier I Plan B and Tier I Plan C members upon attainment of age 60 with at least 10 years of service.



DEATHS AFTER RETIREMENT: The RP2000 Mortality Table for Annuitants and Non-Annuitants projected with Scale AA 15 years for men (set back 2 years) and 25 years for women (set back 1 year) is used for the period after retirement and for dependent beneficiaries. Representative values of the assumed annual rates of mortality are as follows:

Age	Men	Women	Age	Men	Women
40	0.086%	0.044%	65	0.810%	0.760%
45	0.107	0.069	70	1.425	1.311
50	0.142	0.101	75	2.460	2.083
55	0.219	0.198	80	4.483	3.482
60	0.414	0.392	85	8.075	5.981

In our opinion, the projection of the mortality rates with Scale AA continues to provide a sufficient margin in the assumed rates of mortality to allow for additional improvement in mortality experience.

55% (men) and 80% (women) of the RP-2000 Disability Mortality Table is used for the period after disability.

ASSET METHOD: Actuarial Value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 1/5 of the difference between market value and expected actuarial value. In addition, the actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

VALUATION METHOD: Projected Unit Credit cost method. See Schedule E for a brief description of this method.

SPOUSES: For members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

PERCENT MARRIED: 80% of active members are assumed to be married with an average of two children who are on average age 12.

OTHER ASSUMPTIONS:

- 20% of Pre-Retirement deaths are assumed to be service related,
- 50% of Tier I Hazardous Employees are assumed to be State Police,
- To take into account State Police Supplemental Benefits and the offset of Workers Compensation, Social Security, and Non-Rehabilitation Earnings, the following minimum and maximum benefits as a percent of salary are assumed for disability benefits:

	<u>Minimum</u>	<u>Maximum</u>
Tier I State Police	60%	80%
All Other Members	40%	60%



SCHEDULE D

ACTUARIAL COST METHOD

The valuation is prepared on a projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 8.00%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members, beneficiaries and members entitled to deferred vested benefits to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.

The Projected Unit Credit cost method is used to develop employer contributions. The employer contributions required to support the benefits of the System consist of a normal contribution and an unfunded actuarial accrued liability contribution.

The Actuarial Accrued Liability is determined as the present value of benefits accrued to the valuation date, where the accrued benefit for each active member is the pro-rata portion (based on service to the valuation date) of the projected benefit payable at termination, death, disability or retirement. The Actuarial Accrued Liability for deferred vested and inactive members is the present value as of the valuation date of their remaining benefit payments.

The normal contribution is determined as the present value of the portion of the projected benefit attributable to the year following the valuation date.

The Unfunded Actuarial Accrued Liability is determined by subtracting the Actuarial Value of Assets from the Actuarial Accrued Liability.



SCHEDULE E

SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

The Connecticut State Employees Retirement System (CT SERS) is a defined benefit pension plan established by the Connecticut General Assembly for the purpose of providing retirement allowances and other benefits for State employees in Connecticut, and their survivors and other beneficiaries.

Eligibility Requirements

Tier I	All State Employees, Elected Officials and their Appointees hired prior to July 1, 1984. Those employees hired between July 1, 1982 and January 1, 1984 could elect to move to Tier II.
Tier II	All State Employees, Elected Officials and their Appointees hired on or after July 1, 1984.
Tier IIA	All State Employees, Elected Officials and their Appointees hired on or after July 1, 1997.
Tier III	All State Employees, Elected Officials and their Appointees hired on or after July 1, 2011.

Final Average Earnings (FAE)

Tier I, II, and IIA	Average Salary of the three highest paid years of service. Effective January 1, 1986, no one year's earnings can be greater than 130% of the average of the two preceding years in calculating the Final Average Earnings.
Tier III	Average Salary of the five highest paid years of service. No one year's earnings can be greater than 130% of the average of the two preceding years in calculating the Final Average Earnings.

Normal Retirement Benefit

Eligibility	<p><u>Tier I Hazardous</u> – 20 years of credited service.</p> <p><u>Tier I Plans B and C</u> – Earliest of age 55 with 25 years of service, age 60 with 10 years of service, or age 70 with 5 years of service.</p> <p><u>Tier II Hazardous</u> – 20 years of credited service.</p> <p><u>Tier II and IIA</u> – For those who will be eligible for retirement on or before July 1, 2022, the earliest of age 62 with 10 years of vesting service (effective July 1, 1992), age 60 with 25 years</p>
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of vesting service, age 70 with 5 years of vesting service, or age 62 with 5 years of actual state service for terminations on or after July 1, 1997.

For those who will not be eligible for retirement on or before July 1, 2022, the earliest of age 65 with 10 years of vesting service, age 63 with 25 years of vesting service, age 70 with 5 years of vesting service.

Tier III Hazardous – Earlier of Age 50 and 20 years of benefit service or 25 years of benefit service.

Tier III – Age 63 and 25 years of benefit service or Age 65 and 10 years of benefit service.

Benefit

Tier I Hazardous – 50% of FAE plus 2% for each year of service in excess of 20.

Tier I Plan B – 2% of FAE times years of service up to age 65. Thereafter, 1% of FAE up to \$4,800, plus 2% of FAE in excess of \$4,800 times years of service. At age 70, greater of 1.25% of FAE up to \$4,800 plus 2.5% of FAE in excess of \$4,800 times years of service (maximum 20 years) or 1.0% of FAE up to \$4,800 plus 2% of FAE in excess of \$4,800 times year of service. Minimum benefit with 25 years is \$833.34 per month.

Tier I Plan C – 2% of FAE times years of service. At age 70, greater of 2.5% of FAE times years of service (maximum 20 years) or 2.0% of FAE times years of service. Minimum benefit with 25 years is \$833.34 per month.

Tier II, IIA and III Hazardous – 2.5% of FAE times years of service up to 20 years plus 2.0% of FAE times years of service in excess of 20 years, if any. Minimum benefit with 25 years is \$360 per month.

Tier II, IIA and III All Others – 1.333% of FAE plus 0.50% of FAE in excess of year's breakpoint*, times years of service from October 1, 1982 up to 35 years plus 1.625% of FAE times years of service in excess of 35 years, if any. Minimum benefit with 25 years if \$360 per month.

* \$10,700 increased by 6% each year after 1982, rounded to nearest \$100 but not greater than Social Security Covered Compensation.



Early Retirement Benefit

Eligibility

Hazardous – None.

Tier I – Age 55 with 10 years of service.

Tier II and IIA – Age 55 with 10 years of service.

Tier III – Age 58 with 10 years of service.

Benefit

Tier I – Benefit is Normal Retirement Benefit reduced for retirement prior to age 60 with less than 25 years of service.

Tier II, IIA and III – Benefit is Normal Retirement Benefit reduced 0.25% (effective July 1, 1991) for each month prior to age 60 if at least 25 years of service or age 62 if at least 10 but less than 25 years of service.

For those who retire on or after October 2, 2011 but prior to meeting the age and service requirements for a normal retirement, will be subject to a benefit reduced by 0.50% for each month prior to Normal Retirement.

Disability Retirement Benefit

Tier I

For non-service disabilities occurring prior to age 60 with at least 5 years of service, benefit is 3% of FAE times years of service; maximum benefit is 1.667% of FAE times year of service projected to age 65.

For service disabilities occurring prior to age 60, benefit is 1.667% of Salary times years of service projected to age 65 (maximum 30 years).

Exception: State Police benefit is equal to the normal retirement benefit if more than 20 years of service. State Police also receives an additional benefit of \$360 per month plus \$300 to spouse plus \$300 to a surviving dependent child.

Tier II, IIA and III

Prior to age 65 for service related disability or at any age with at least 10 years of service, benefit is 1.333% of FAE plus 0.50% of FAE in excess of the year's breakpoint, times service projected to age 65 (maximum 30 years).



Deferred Vested Retirement Benefit

Eligibility

Tier I - 10 years of service.

Tier II and IIA – Effective July 1, 1997, 5 years of actual state service, 10 years of vesting service, or age 70 with 5 years of service.

Tier III – 10 years of benefit service.

Benefit

Tier I – Benefit is payable at Normal Retirement Age or an Early Retirement Benefit is payable at age 55.

Tier II and IIA – Benefit is payable at Normal Retirement Age or an Early Retirement Benefit is payable at age 55.

Tier III – Benefit is payable at Normal Retirement Age or an Early Retirement Benefit is payable at age 58.

Pre-Retirement Spouse's Benefit

Tier I

State Police – Survivor benefits to spouse of \$670 per month plus \$300 to a surviving dependent child.

If eligible for early or normal retirement, 50% of the average of the Life Benefit and the 50% Joint & Survivor Benefit the member would have received.

If not eligible for retirement but with 25 years of service, the same benefit calculated as though age 55 using service and earnings at death.

If not eligible for retirement, return of contributions (5% interest).

Tier II, IIA and III

If eligible for early or normal retirement, 50% of the 50% Joint & Survivor Benefit the member would have received.

If not eligible for retirement but with 25 years of service, the same benefit calculated as though age 55 using service and earnings at death.

If not eligible for retirement, return of contributions (5% interest).

Tiers I, II, IIA and III

If death is due to employment and there are dependent children under age 18, spouse will be paid \$100,000 in 10 annual installments while living and not remarried. In addition, \$50 per month will be paid to each child while under age 18.

If death is due to employment and there are no dependent children under age 18, spouse will be paid \$50,000 in not less than 10 annual installments.



Payment Options

50% or 100% Joint and Survivor (Normal Form if married).
Straight life annuity (Normal Form if not married).
10 or 20 year certain and life annuity.

Cost of Living Adjustments (COLA)

Annual adjustments each July 1 of up to 5% for retirements prior to July 1, 1980; 3% for retirements after July 1, 1980. For members (and beneficiaries) not covered by Social Security and age 62 and over, the maximum increase is 6%.

For employees retiring after June 30, 1999, the annual adjustment will be 60% of the increase in CPI up to 6% and 75% of the increase in the CPI over 6%. This adjustment will be no less than 2.5% and no greater than 6%.

Employees retiring between July 1, 1997 and June 30, 1999 made an irrevocable choice between the above formula and a fixed 3% annual adjustment.

An employee from Tier IIA must have at least 10 years of actual state service or directly make the transition into retirement in order to be eligible for annual adjustments.

For employees retiring on or after October 2, 2011, the minimum COLA shall be 2.0% and the maximum COLA shall be 7.5%.

Member Contributions*

Tier I – Hazardous	4% of earnings up to Social Security Taxable Wage Base plus 5% of earnings above that level.
Tier I – Plan B	2% of earnings up to Social Security Taxable Wage Base plus 5% of earnings above that level.
Tier I – Plan C	5% of earnings.
Tier II – Hazardous	4% of earnings.
Tier II – All Others	None.
Tier IIA & III – Hazardous	5% of earnings.
Tier IIA & III – All Others	2% of earnings.

* Increased for anyone electing to maintain retirement eligibility.



**Hybrid Defined Benefit/Defined
Contribution Plan for Employees
of Higher Learning**

Individuals hired on or after July 1, 2011 otherwise eligible for the Alternate Retirement Plan ("ARP") shall be eligible to be members of the new Hybrid Plan in addition to their existing choices. Individuals who are currently members of the ARP shall be eligible to join the Hybrid Plan on a one time option at the full actuarial cost. The Hybrid Plan shall have defined benefits identical to Tier II/IIA and Tier III for individuals hired on or after July 1, 2011, but shall require employee contributions 3% higher than the contribution required from the Applicable Tier II/IIA/III Plan. An employee shall have the option, upon leaving state service, of accepting the defined benefit amount, or electing to receive a return of his/her contributions to the Hybrid Plan, plus a 5% employer match, plus 4% interest ("cash out option"). In the event the employee elects the cash out option, he/she shall permanently waive any entitlement they may have to health insurance as a retired state employee unless they convert the cash out option to a periodic payment as would be required under the current ARP Plan.