

**THE STATE POLICE RETIREMENT SYSTEM
OF NEW JERSEY
ANNUAL REPORT
OF THE ACTUARY
PREPARED AS OF JULY 1, 2013**



A Xerox Company

February 27, 2014

Board of Trustees
The State Police Retirement System
of New Jersey
Trenton, New Jersey 08625

Members of the Board:

The law governing the operation of the State Police Retirement System of New Jersey provides for annual actuarial valuations of the System. The results of the July 1, 2013 valuation are submitted in this report, which also includes a comparison with the results of the July 1, 2012 valuation.

The valuation provides information concerning the financial condition of the Plan as of July 1, 2013, and sets forth the basis for determining the recommended annual contribution for the plan year beginning July 1, 2013.

The valuation reflects Chapter 78, P.L. 2011, which increased member contributions from 7.50% to 9.00% of salary. Effective with the July 1, 2012 actuarial valuation, the determination of the State's normal cost contributions have been revised to reflect the use of all member contributions as an offset to the gross normal cost. This was the methodology used to determine the State's normal cost contribution prior to the enactment of Chapter 78, P.L. 2011 and is consistent with the methodology typically used by contributory public-sector retirement systems to calculate the employer's normal cost contribution. The July 1, 2012 results, which are shown for comparison purposes in this report, reflect this change in method. Appendix D develops the revised results of sections presented in the Annual Report of the Actuary Prepared as of July 1, 2012, which was published February 15, 2013, affected by the change in method.

As required under Section 32 of Chapter 89, P.L. 1965, experience studies are performed once in every three year period. The valuation was prepared using demographic assumptions recommended on the basis of the July 1, 2008 – June 30, 2011 Experience Study and approved by the Board of Trustees at the September 25, 2012 Board meeting. These assumptions will remain in effect for valuation purposes until such time as the Board adopts revised demographic assumptions.

The valuation reflects economic assumptions which were recommended by the Treasurer, which include a rate of investment return of 7.90% per annum and the assumed future salary increases of 3.45% per annum for fiscal year ending 2012 through fiscal year ending 2021 and 4.45% per annum for fiscal years ending 2022 and thereafter. These assumptions will remain in effect for valuation purposes until such time the Board or the Treasurer recommends revised assumptions.

The valuation reflects the State contributions under Chapter 1, P.L. 2010, which allows the State Treasurer to reduce the recommended pension contribution for the 2015 fiscal year to no less than 4/7th of the recommended contribution. Under the same law, the fiscal year 2013 recommended pension contribution of \$89,535,903 has been reduced to \$25,582,000, and the fiscal year 2014 recommended pension contribution of \$103,193,378 has been reduced to \$44,225,734. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan.

Board of Trustees
February 27, 2014
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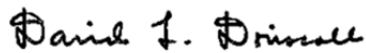
The State of New Jersey's Division of Pensions and Benefits reported the individual data for members of the State Police Retirement System of New Jersey as of the valuation date for use in the preparation of this report. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Division of Pensions and Benefits. The accuracy of the results presented in this report is dependent on the accuracy of the data.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of future results is beyond the scope of this valuation.

We are both Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. We meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

The Table of Contents, which follows, highlights the Sections of the Report.

Respectfully submitted,



David L. Driscoll, FSA, EA, MAAA, FCA
Principal, Consulting Actuary



Aaron Shapiro, FSA, EA, MAAA
Director, Retirement Actuary

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REPORT ON THE ANNUAL
VALUATION OF
THE STATE POLICE RETIREMENT SYSTEM
OF NEW JERSEY
PREPARED AS OF JULY 1, 2013

SECTION I - SUMMARY OF KEY RESULTS

The State Police Retirement System of New Jersey became effective July 1, 1965 under terms of Chapter 89 of the Laws of 1965. This report, prepared as of July 1, 2013, presents the results of the annual actuarial valuation of the Fund.

For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized on the following pages.

Valuation Data	July 1, 2013	July 1, 2012
Number of Members	2,481	2,721
Annual Compensation	\$ 262,063,829	\$ 283,219,927
Number of Pensioners and Beneficiaries	3,253	3,030
Total Annual Allowance	\$ 187,939,922	\$ 169,491,353
<u>Assets</u>		
Market Value of Assets	\$ 1,832,851,456*	\$ 1,755,429,511
Valuation Assets	\$ 1,990,797,312*	\$ 1,995,388,133
<u>Contribution Rates</u>		
Pension Contribution		
a) Recommended Contribution		
Normal Contribution	12.02%	12.44%
Accrued Liability Contribution	29.54	24.00
Total Pension Contribution	41.56%	36.44%
b) Chapter 1, P.L. 2010 Minimum Contribution		
Normal Contribution	6.87%	5.33%
Accrued Liability Contribution	16.88	10.28
Total Pension Contribution**	23.75%	15.61%
Non-Contributory Group Insurance Premium	0.76%	0.67%
<u>Contribution Amounts</u>		
Pension Contribution		
a) Recommended Contribution		
Normal Contribution	\$ 31,491,069	\$ 35,231,062
Accrued Liability Contribution	77,413,634	67,962,316
Total Pension Contribution	\$ 108,904,703	\$ 103,193,378
b) Chapter 1, P.L. 2010 Minimum Contribution		
Normal Contribution	\$ 17,994,897	\$ 15,099,027
Accrued Liability Contribution	44,236,362	29,126,707
Total Pension Contribution**	\$ 62,231,259	\$ 44,225,734
Non-Contributory Group Insurance Premium	\$ 2,000,000	\$ 1,900,000

* Assets include a fiscal year 2014 receivable contribution of \$44,225,734 instead of the \$103,193,378 contribution recommended for the July 1, 2012 valuation (potential effect of Chapter 1, P.L. 2010).

** Chapter 1, P.L. 2010 allows the State to make a contribution for fiscal year 2015 equal to 4/7th of the recommended contribution and for fiscal year 2014 equal to 3/7th of the recommended contribution. The contributions could be subject to change per the requirements of the State's fiscal year 2015 and 2014 pending plans.

The major benefit and contribution provisions of the statute as reflected in the valuation are summarized in Appendix A.

The valuation reflects the State contributions under Chapter 1, P.L. 2010, which allows the State Treasurer to reduce the recommended pension contribution for the 2015 fiscal year to no less than 4/7th of the recommended contribution. Under the same law, the fiscal year 2013 recommended pension contribution of \$89,535,903 has been reduced to \$25,582,000, and the fiscal year 2014 recommended pension contribution of \$103,193,378 has been reduced to \$44,225,734. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan.

There were no other changes to the benefit and contribution provisions.

The valuation reflects Chapter 78, P.L. 2011, which increased member contributions from 7.50% to 9.00% of salary. Effective with the July 1, 2012 actuarial valuation, the determination of the State's normal cost contributions have been revised to reflect the use of all member contributions as an offset to the gross normal cost. This was the methodology used to determine the State's normal cost contribution prior to the enactment of Chapter 78, P.L. 2011 and is consistent with the methodology typically used by contributory public-sector retirement systems to calculate the employer's normal cost contribution. The July 1, 2012 results, which are shown for comparison purposes in this report, reflect this change in method. Appendix D develops the revised results of sections presented in the Annual Report of the Actuary Prepared as of July 1, 2012, which was published February 15, 2013, affected by the change in method.

As required under Chapter 89, P.L. 1965 experience studies are performed once in every three year period. The valuation was prepared using demographic assumptions recommended on the basis of the July 1, 2008 – June 30, 2011 Experience Study and approved by the Board of Trustees at the September 25, 2012

Board meeting. As mandated by the statute, these assumptions will remain in effect for valuation purposes until such time the Board adopts revised demographic assumptions.

The valuation reflects economic assumptions which were recommended by the Treasurer, which include a rate of investment return of 7.90% per annum and the assumed future salary increases of 3.45% per annum for fiscal year ending 2012 through fiscal year ending 2021 and 4.45% per annum for fiscal years ending 2022 and thereafter. These assumptions will remain in effect for valuation purposes until such time the Board or the Treasurer recommends revised assumptions.

There were no other changes to the actuarial assumptions and methods from those used in the prior valuation. The actuarial assumptions and methods used in this valuation are summarized in Appendix B.

The combination of the plan provisions, actuarial assumptions and member and beneficiary data is used to generate the overall required level of employer contributions. These contributions are composed of two separate portions, an “accrued liability contribution” and a “normal contribution”. The recommended contribution is developed in Section III F.

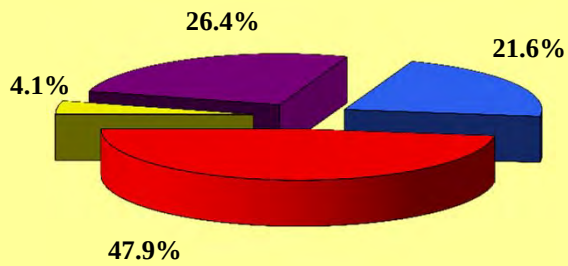
The valuation generates a balance sheet which summarizes in some detail the total present and prospective assets and liabilities of the Fund. A summary comparison of the balance sheets as of July 1, 2012 and July 1, 2013 is set forth in the following table. The allocation of assets among the various investment alternatives is shown in graphic form on page 6.

TABLE I
COMPARATIVE BALANCE SHEET

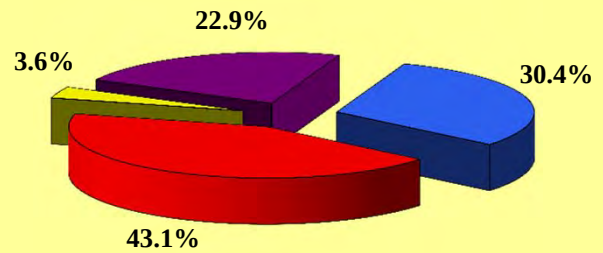
	2013	2012
<u>ASSETS</u>		
Actuarial value of assets of Fund	\$ 1,990,797,312	\$ 1,995,388,133
Unfunded accrued liability/(surplus)	879,793,388	772,380,680
Total Assets	\$ 2,870,590,700	\$ 2,767,768,813
<u>ACCRUED LIABILITIES</u>		
Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund	\$ 2,034,551,263	\$ 1,822,707,659
Present value of benefits to present active members and terminated vested members	836,039,437	945,061,154
Total Accrued Liabilities	\$ 2,870,590,700	\$ 2,767,768,813

THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

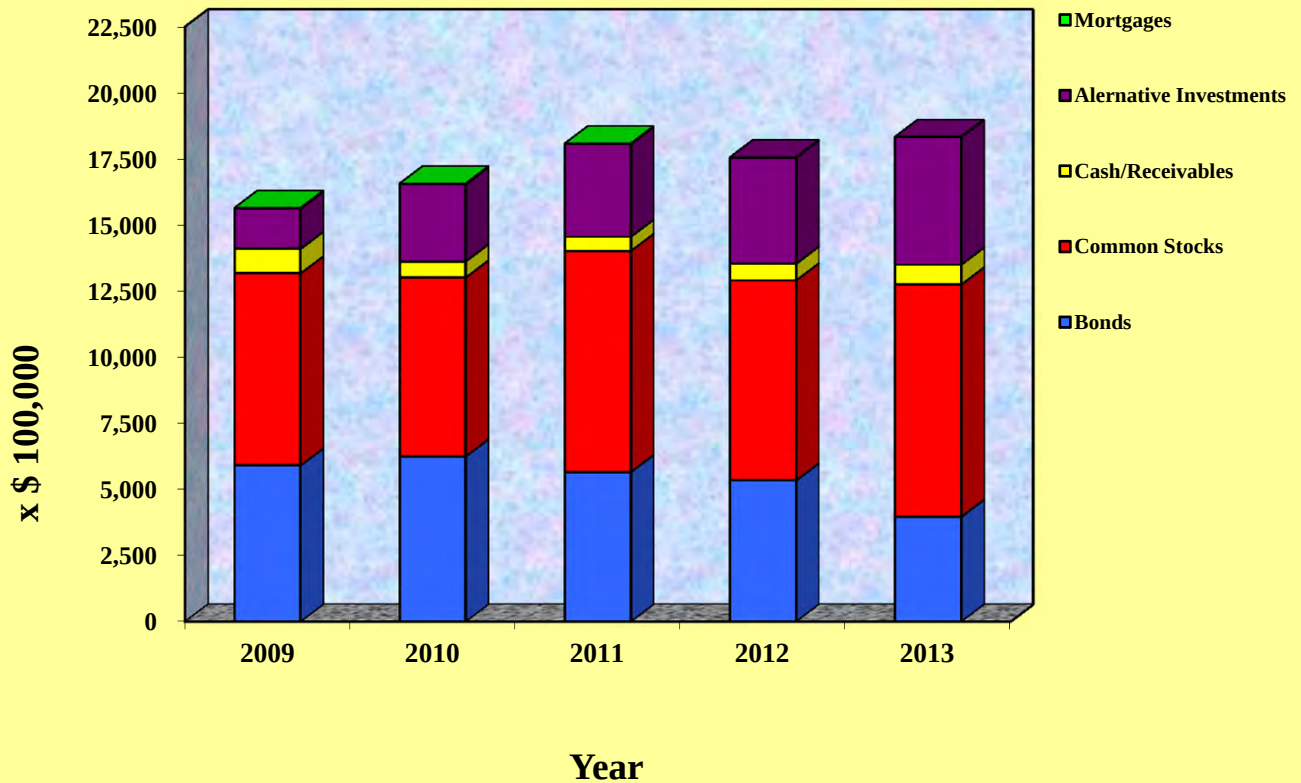
ASSET ALLOCATION MARKET VALUE



2013



2012



SECTION II - EMPLOYEE DATA

The data employed for the valuations were furnished to the actuary by the Division of Pensions and Benefits. The following summarizes and compares the Fund membership as of July 1, 2012 and July 1, 2013 by various categories.

ACTIVE MEMBERSHIP

Group	2013		2012	
	Number	Annual Compensation[⊘]	Number	Annual Compensation[⊘]
Men	2,373	\$ 251,008,967	2,607	\$ 271,904,629
Women	108	\$ 11,054,862	114	\$ 11,315,298

[⊘] There were no members hired on or after May 22, 2010 whose pay exceeded the Social Security wage base.

RETIRED MEMBERS AND BENEFICIARIES

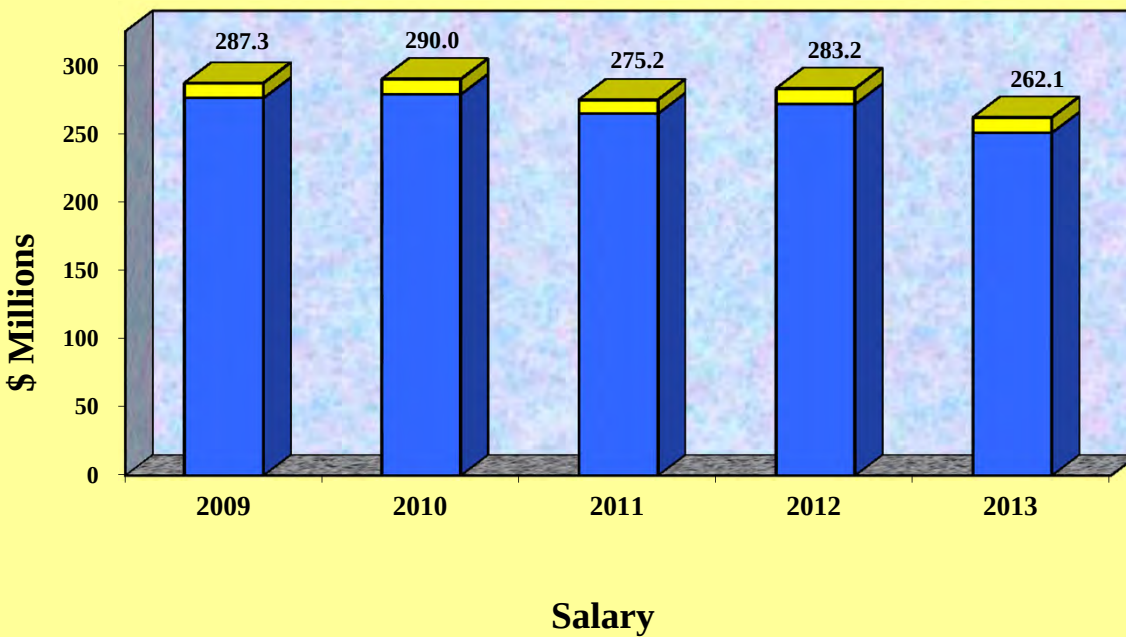
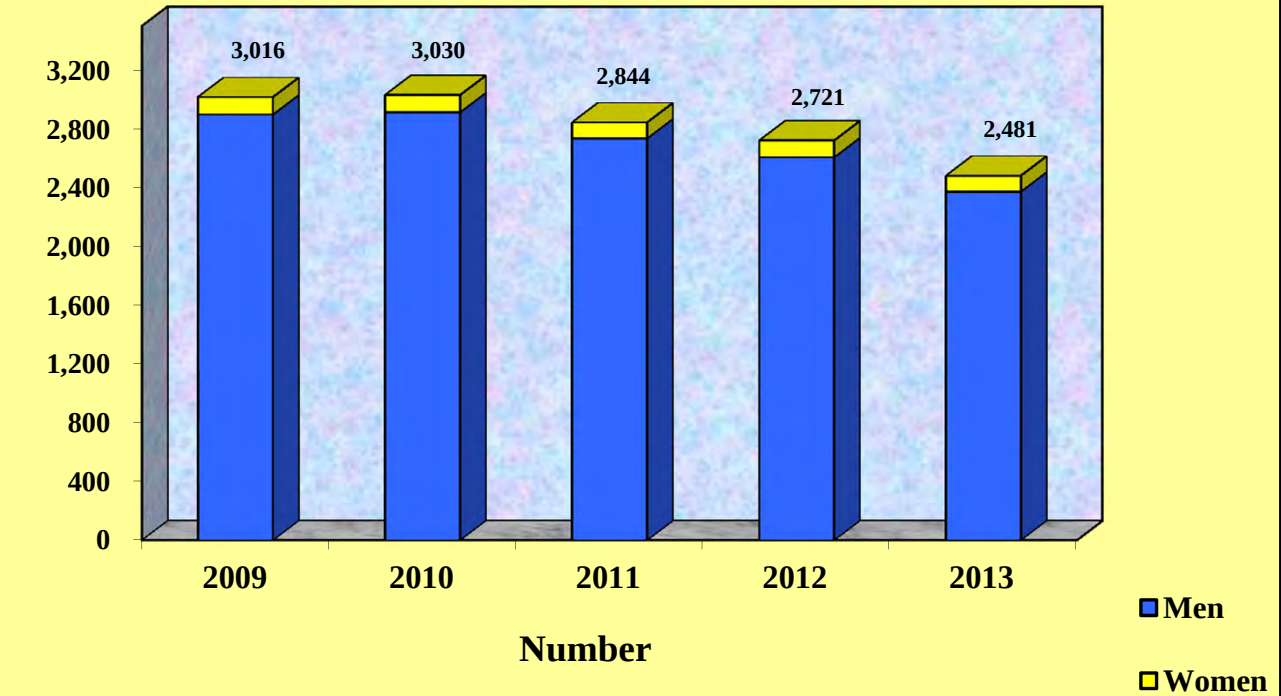
Group	2013		2012	
	Number	Annual Allowances	Number	Annual Allowances
Service Retirements	2,576	\$ 161,345,504	2,366	\$ 144,028,362
Ordinary Disability Retirements	132	\$ 4,598,330	134	\$ 4,612,430
Accidental Disability Retirements	144	\$ 7,908,668	140	\$ 7,551,546
Beneficiaries of Deceased Pensioners	341	\$ 11,505,486	329	\$ 10,777,588
Beneficiaries of Deceased Active Employees	60	\$ 2,581,934	61	\$ 2,521,427

Appendix C provides a detailed distribution between groups.

Graphic presentations of the statistical data on membership for the five preceding years are shown on the following pages.

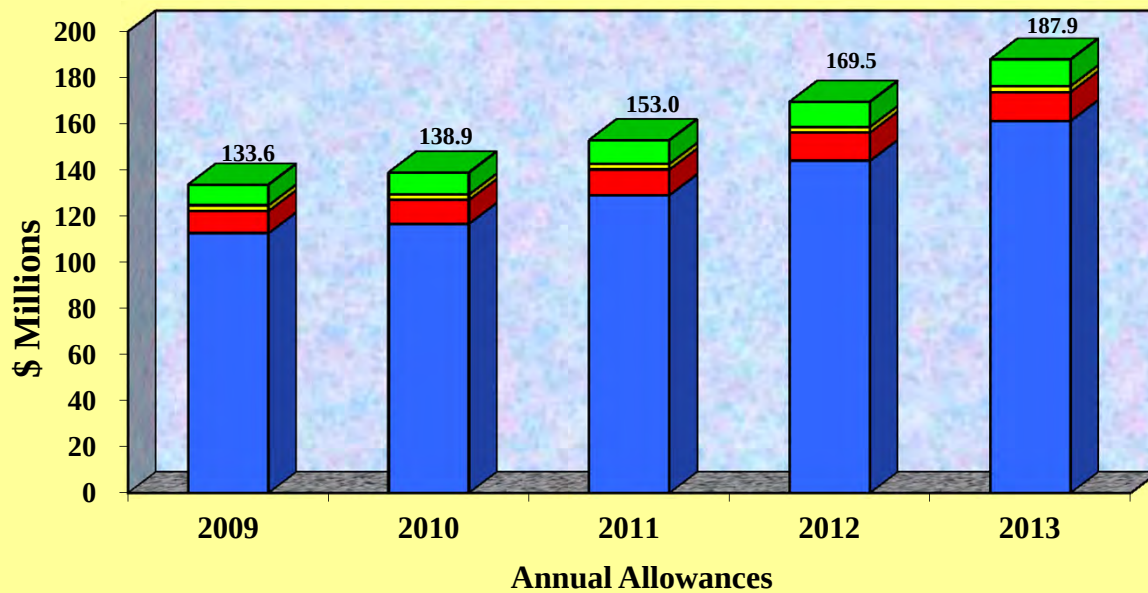
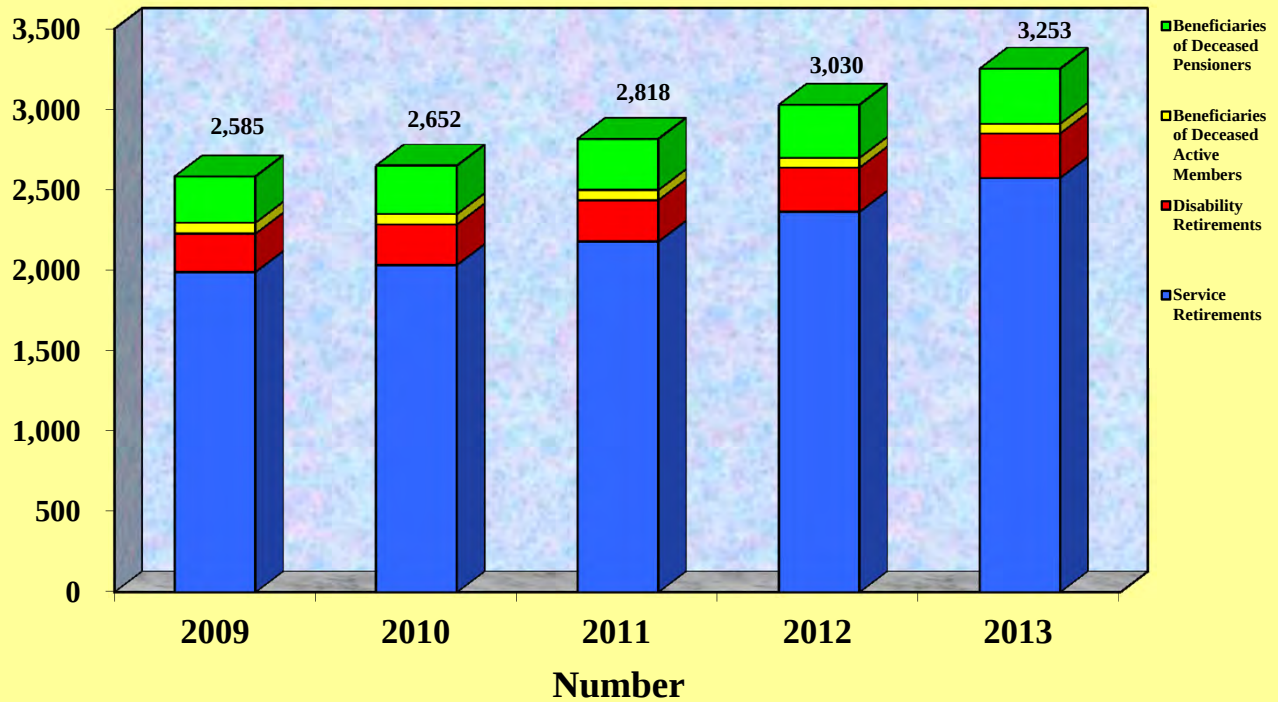
THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

SUMMARY OF ACTIVE PARTICIPATION



THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

SUMMARY OF RETIRED PARTICIPATION



SECTION III - ASSETS, LIABILITIES AND CONTRIBUTIONS

A. Market Value of Assets as of June 30, 2013

1.	Assets		
a.	Cash	\$	529,005
b.	Securities Lending Collateral		37,999,531
c.	Accounts Receivable		22,381
d.	Investment Holdings		1,785,464,254
e.	Interest Receivable on Investments		120
f.	Employer Contribution Receivable – NCGI		0
g.	Members' Contributions Receivable		1,074,313
h.	Dividends Receivable		0
i.	Loans Receivable		17,034,973
j.	Interest Receivable – Member Loans		359,192
k.	Total	\$	1,842,483,769
2.	Liabilities		
a.	Pension Payroll Payable	\$	11,175,544
b.	Securities Lending Collateral and Rebates Payable		37,976,944
c.	Pension Adjustment Payroll Payable		1,954,005
d.	Withholdings Payable		2,393,939
e.	Securities Purchased in Transit		0
f.	Accounts Payable – Other		283,901
g.	Death Benefits Payable		73,714
h.	Total	\$	53,858,047
3.	Preliminary Market Value of Assets as of June 30, 2013: 1(k) - 2(h)	\$	1,788,625,722
4.	State Appropriations Receivable		44,225,734 *
5.	Market Value of Assets as of June 30, 2013: 3. + 4.	\$	1,832,851,456 **

* The fiscal year 2014 recommended pension contribution of \$103,193,378 has been reduced to \$44,225,734 to reflect Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan.

** Excludes assets held in the Non-Contributory Group Insurance Fund.

B. Reconciliation of Market Value of Assets: June 30, 2012 to June 30, 2013

1.	Market Value of Assets as of June 30, 2012	\$	1,729,847,825
2.	Increases		
a.	Pension Contributions		
	Members' Contributions	\$	21,870,016
	Transfer from Other Systems		5,631
b.	Employers' Contributions		
	State Appropriations		25,582,000
	Non-Contributory Group Insurance		2,195,047
	Transfer from Other Systems		0
	Administrative Fee Loans		4,432
c.	Income		
	Per Statement		191,873,255
d.	Total	\$	241,530,381
3.	Decreases		
a.	Benefits Provided by Members		
	Withdrawals – Members' Contributions		
	Regular	\$	17,657
	Suspense		0
	Adjustment – Member Account Loans – State		21,227
b.	Benefits Provided by Employers and Members		
	Retirement Allowances		156,528,482
c.	Benefits Provided by Employers		
	Benefit Expense – Pension Adjustment		23,695,185
	Administrative Expense		307,834
	Administrative Expense Loans		0
	Adjusted Member Accounts Expense- State		(12,948)
	NCGI Premium Expense		2,195,047
d.	Total	\$	182,752,484
4.	Preliminary Market Value of Assets as of June 30, 2013: 1. + 2.(d) – 3.(d)	\$	1,788,625,722
5.	State Appropriations Receivable		44,225,734 *
6.	Market Value of Assets as of June 30, 2013: 4. + 5.	\$	1,832,851,456 **

* The fiscal year 2014 recommended pension contribution of \$103,193,378 has been reduced to \$44,225,734 to reflect Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan.

** Excludes assets held in the Non-Contributory Group Insurance Fund.

C. Development of Actuarial Value of Assets as of July 1, 2013

The actuarial value of plan assets is determined using a five-year average market value with write up. The following summary shows the development of the actuarial value of plan assets for the current valuation:

1.	Actuarial Value of Assets as of July 1, 2012	\$	1,969,806,447
2.	Net Cash Flow (excluding investment income)		(133,095,358)
3.	Expected Investment Income at 7.90%		
	a. Interest on assets as of July 1, 2012	\$	155,614,709
	b. Interest on Net Cash Flow		<u>(6,267,756)</u>
	c. Total	\$	149,346,953
4.	Expected Actuarial Value of Assets as of July 1, 2013:		
	1. + 2. + 3.(c)	\$	1,986,058,042
5.	20% of Difference from Preliminary Market Value of Assets		(39,486,464)
6.	Receivable Employer Contributions		<u>44,225,734 *</u>
7.	Actuarial Value of Assets as of July 1, 2013 = 4. + 5. + 6.	\$	1,990,797,312 **

* The fiscal year 2014 recommended pension contribution of \$103,193,378 has been reduced to \$44,225,734 to reflect Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan.

** Excludes assets held in the Non-Contributory Group Insurance Fund.

D. Accrued Liabilities as of July 1, 2013

1.	Retirees and Beneficiaries		
	a. Service Retirements	\$	1,781,387,469
	b. Disability Retirements		143,644,508
	c. Beneficiaries		<u>109,519,286</u>
	d. Total	\$	2,034,551,263
2.	Terminated Vested Members	\$	0
3.	Contributing Active Participants		
	a. Service Retirement	\$	760,943,412
	b. Ordinary Disability		22,099,823
	c. Accidental Disability		24,056,617
	d. Ordinary Death		7,919,323
	e. Accidental Death		8,157,118
	f. Vested Termination		1,555,481
	g. Withdrawal Benefits		<u>171,375</u>
	h. Total	\$	824,903,149
4.	Non-Contributing Active Participants	\$	11,136,288
5.	Total Accrued Liability* =		
	1.(d) + 2. + 3.(h) + 4.	\$	2,870,590,700

*Excludes lump sum death benefits payable from the Non-Contributory Group Insurance Premium Fund.

E. Development of Normal Cost as of July 1, 2013

1.	Service Retirement	\$	43,191,689
2.	Ordinary Disability		1,981,222
3.	Accidental Disability		2,189,802
4.	Ordinary Death		663,056
5.	Accidental Death		784,820
6.	Vested Termination		144,623
7.	Withdrawal Benefits		<u>32,842</u>
8.	Total Pension Normal Cost*	\$	48,988,054
	= 1. + 2. + 3. + 4. + 5. + 6. + 7.		

*Excludes lump sum death benefits payable from the Non-Contributory Group Insurance Premium Fund.

F. Development of Recommended State Pension Contributions

1.	Accrued Liability	\$	2,870,590,700
2.	Actuarial Value of Assets		<u>1,990,797,312</u>
3.	Unfunded Actuarial Accrued Liability/(Surplus) = 1. - 2.	\$	879,793,388
4.	Amortization Period		30
5.	Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2014 (Level Dollar)	\$	77,413,634
6.	a. Gross Normal Cost (excluding Non-Contributory Group Insurance Premium)	\$	48,988,054
	b. Expected Member Contributions		<u>19,802,633</u>
	c. State Normal Cost = (a) - (b)	\$	29,185,421
	d. State Normal Cost payable July 1, 2014 = (c) * 1.079	\$	31,491,069
7.	Total Recommended Pension Contribution as of July 1, 2014 = 5. + 6.(d)	\$	108,904,703

G. Development of Chapter 1, P.L. 2010 Minimum Required Pension Contributions*

1.	State Normal Cost payable July 1, 2014 = F.6(d). x 4/7	\$	17,994,897
2.	Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2014 = F.5. x 4/7		<u>44,236,362</u>
3.	Total Minimum Contribution** = 1. + 2.	\$	62,231,259

* Chapter 1, P.L. 2010 allows the State Treasurer to reduce the recommended contribution for the 2015 fiscal year to no less than 4/7th of the recommended contribution.

**Contribution could be subject to change per the requirements of the State's fiscal year 2015 spending plan.

**H. Non-Contributory Group Insurance Premium
(One-Year Term Cost)**

\$ 2,000,000

SECTION IV - COMMENTS CONCERNING THE VALUATION

The variation in liabilities and contributions reflects the System's actual experience during the year. The System experienced a net actuarial loss during the year that ended June 30, 2013.

The loss is primarily due to an actual return on System assets less than expected. For valuation purposes, a 7.90% per annum rate of return was assumed for the period July 1, 2012 through June 30, 2013. The actual return on the Fund's actuarial value of assets was 5.77% for this period. There was a liability loss due to experience among active and retired members.

The following shows the development of the actuarial experience and identifies the major experience components:

A. Calculation of Actuarial Experience for the Year Ended June 30, 2013

1.	Unfunded Accrued Liability/(Surplus) as of July 1, 2012	\$ 772,380,680
2.	Gross Normal Cost as of July 1, 2012	53,694,657
3.	Interest on (1) and (2) at 7.90%	65,259,952
4.	Actual Members' Contributions Received	21,870,016
5.	Employers' Contributions (including receivable)	44,225,734
6.	Interest on Contributions at 7.90%	<u>863,866</u>
7.	Expected Unfunded Accrued Liability/(Surplus) as of July 1, 2013 = (1) + (2) + (3) - (4) - (5) - (6)	\$ 824,375,673
8.	Actual Unfunded Accrued Liability as of July 1, 2013	<u>879,793,388</u>
9.	Actuarial (Gain)/Loss = (9) - (8)	\$ 55,417,715

B. Components of Actuarial Experience

1.	Investment (Gain)/Loss	\$ 39,486,464
2.	Other (Gain)/Loss, including mortality, changes in employee data and salary increases different than expected	<u>15,931,251</u>
3.	Total Actuarial (Gain)/Loss	\$ 55,417,715

C. Funded Ratios

The following table presents the System's funded ratios based on the actuarial value of assets (including receivables) and market value basis (including receivables).

	June 30, 2013	June 30, 2012	Change
Actuarial Value of Assets*	69.4%	72.1%	(2.7)%
Market Value of Assets	63.8%	63.4%	0.4%

*Statutory funded ratio.

The System's statutory funded ratio is 72.1% and 69.4% as of June 30, 2012 and June 30, 2013, respectively. For purposes of Chapter 78, P.L. 2011, the "target funded ratio" is 76.428% and 77.142% for June 30, 2012 and June 30, 2013, respectively. Therefore, the System's statutory funded ratio fell below the "target funded ratio" for June 30, 2012 and the "target funded ratio" for June 30, 2013.

There is a difference on a market value basis since the actuarial value smoothes the investment gains and losses over time. Since July 1, 2000, the funded ratio on a market value basis has decreased by 69.0%. This decrease is primarily due to investment losses experienced over the period, State contributions less than the GASB Annual Required Contribution, and the strengthening of actuarial assumptions.

As of June 30, 2013, the market value of assets is less than the actuarial liability attributable to retirees. Furthermore, if the assets contained in the Annuity Savings Fund (ASF) of \$180,019,772 are excluded, the funded ratio of the remaining market value of assets to the actuarial accrued liability for retirees is 81.2%.

As of June 30, 2013, the ratio of market value of assets to the prior year's benefit payment is 10.2. This is a simplistic measure of the number of years that the assets can cover benefit payments, excluding: future increases in those payments, State and member contributions, and investment income. This ratio decreased by 6% from the previous year's ratio of 10.8. If ASF assets are excluded, since they represent accumulated contributions from active and inactive members, the ratio is 9.2.

Statement No. 5 of the Governmental Accounting Standards Board, issued November 1986, established standards of disclosure of pension information by public retirement systems. Statement No. 25 of the Governmental Accounting Standards Board, issued November 1994, established financial reporting standards for defined benefit pension plans and for the notes to the financial statements of defined contribution plans of state and local governmental liabilities and superseded Statement No. 5 effective for periods beginning after June 15, 1996. Statement No. 27, Accounting for Pensions by State and Local Governmental Employers superseded Statement 5 for employers participating in pension plans and is effective for periods beginning after June 15, 1997. Statement No. 50, Accounting for Pensions by State and Local Governmental Employers amends the note disclosure and required supplementary information (RSI) of Statements No. 25 and No. 27 to conform with applicable changes adopted in Statements No. 43 and 45 for Postemployment Benefit Plans other than Pension Plans. Statement No. 50 is intended to improve the transparency of reported information about pensions by State and Local governmental plans and employers. Statement No. 50 is effective for periods beginning after June 15, 2007. Statement No. 67, issued June 2013, Financial Reporting for Pension Plans, replaced the requirements of Statement No. 25 and Statement No. 50 as they relate to pension plans that are administered through trusts effective for fiscal years beginning after June 15, 2013. Statement No. 68 replaces the requirements of Statement No. 27, Accounting for Pensions by State and Local Governmental Employers and Statement No. 50, Pension Disclosures, as they relate to governments that provide pensions through pension plans administered as trusts effective for fiscal years beginning after June 15, 2014.

The information required by Statements No. 25, No. 27 and No. 50 is presented in the following tables. These include the development of the Annual Required Contribution (ARC), the development of the Net Pension Obligation (NPO), the Schedule of Funding Progress and the Schedule of Employer Contributions. The ARC, NPO and Schedule of Employer Contributions are provided for informational purposes only since the reporting requirements of Statements No. 67 and No. 68 will be effective as of the June 30, 2014 and June 30, 2015 reporting dates, respectively.

(A) Development of the Annual Required Contribution (ARC) as of June 30, 2015

1.	Actuarial Value of Plan Assets as of June 30, 2013	
(a)	Valuation Assets as of June 30, 2013	\$ 1,990,797,312
(b)	Adjustment for Receivable Contributions included in (a)	<u>44,225,734*</u>
(c)	Valuation Assets as of June 30, 2013 for GASB Disclosure = (a) - (b)	\$ 1,946,571,578
2.	Actuarial Accrued Liability as of June 30, 2013	\$ 2,870,590,700
3.	Unfunded Actuarial Accrued Liability/(Surplus) as of June 30, 2013 = 2. - 1.	\$ 924,019,122
4.	Amortization of Unfunded Actuarial Accrued Liability/(Surplus) over 30 years (Level Dollar)	\$ 75,352,259
5.	Normal Cost as of June 30, 2013 (excludes NCGIPF)	\$ 29,185,421
6.	Annual Required Contribution as of June 30, 2015	
(a)	Annual Required Contribution as of June 30, 2013 = 4. + 5.	\$ 104,537,680
(b)	Interest Adjustment to June 30, 2015	17,169,373
(c)	Non-Contributory Group Insurance Premium	<u>2,000,000</u>
(d)	Annual Required Contribution as of June 30, 2015 = (a) + (b) + (c)	\$ 123,707,053

* Receivable contribution for fiscal year 2014.

(B) Development of the Net Pension Obligation (NPO) as of June 30, 2015

1.	Annual Required Contribution as of June 30, 2015	\$ 123,707,053
2.	Interest on Net Pension Obligation	66,046,094
3.	Adjustment to Annual Required Contribution	<u>(73,562,557)</u>
4.	Annual Pension Cost = 1. + 2. + 3.	\$ 116,190,590
5.	Expected Employer Contributions for Fiscal Year 2015	\$ 64,231,259*
6.	Net Pension Obligation at June 30, 2014	\$ 836,026,513**
7.	Increase in Net Pension Obligation = 4. - 5.	\$ 51,959,331
8.	Net Pension Obligation at June 30, 2015 = 6. + 7.	\$ 887,985,844

* The recommended contribution of \$110,904,703 has been reduced to \$64,231,259 in accordance with Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2015 spending plan. Included in the Expected Employer Contribution for fiscal year 2015 is 100% of the Non-Contributory Group Insurance premium of \$2,000,000.

** The June 30, 2014 Net Pension Obligation amount has been revised from the amount shown in the prior year's report to reflect the adjustment to the fiscal year 2013 employer contribution.

Actuarial Valuation Date	GASB Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll $\frac{(b-a)}{c}$
6/30/2008	\$ 2,127,263,509	\$ 2,609,164,869	\$ 481,901,360	81.5%	\$ 281,087,566	171.4%
6/30/2009	\$ 2,063,962,877	\$ 2,825,455,568	\$ 761,492,691	73.0%	\$ 287,267,502	265.1%
6/30/2010 ^o	\$ 2,019,350,048	\$ 2,497,094,137	\$ 477,744,089	80.9%	\$ 289,980,657	164.8%
6/30/2011 ^o	\$ 2,002,813,881	\$ 2,581,950,846	\$ 579,136,965	77.6%	\$ 275,219,752	210.4%
6/30/2012 ^o	\$ 1,969,806,447	\$ 2,767,768,813	\$ 797,962,366	71.2%	\$ 283,219,927	281.7%
6/30/2013 ^o	\$ 1,946,571,578	\$ 2,870,590,700	\$ 924,019,122	67.8%	\$ 262,063,829	352.6%

^oReflects Chapter 78, P.L. 2011.

(D) **Schedule of Employer Contributions**

Fiscal Year [#]	Annual Required Contribution	Employer Contribution	Percentage Contributed
2010	\$ 91,411,237	\$ 1,018,200*	1.1%
2011	\$ 114,120,061	\$ 2,201,604**	1.9%
2012 ^{##}	\$ 98,869,662	\$ 13,545,607 ^o	13.7%
2013 ^{##}	\$ 99,876,582	\$ 27,777,047 ^{oo}	27.8%
2014 ^{##}	\$ 115,674,429	\$ 46,125,734 [†]	39.9%
2015 ^{##}	\$ 123,707,053	\$ 64,231,259 ^{††}	51.9%

* The fiscal year 2010 recommended contribution of \$84,031,012 was reduced to \$1,018,200 in accordance with the provisions of the Appropriation Act for fiscal year 2010.

** The fiscal year 2011 recommended contribution of \$105,345,281 was reduced to \$2,201,604 in accordance with provisions of the Appropriation Act for fiscal year 2011.

^o The fiscal year 2012 recommended contribution of \$91,471,744 was reduced to \$13,545,607 in accordance with Chapter 1, P.L. 2010.

^{oo} The fiscal year 2013 recommended contribution of \$91,535,903 has been reduced to \$27,777,047 in accordance with Chapter 1, P.L. 2010.

[†] The fiscal year 2014 recommended contribution of \$105,093,378 has been reduced to \$46,125,734 in accordance with Chapter 1, P.L. 2010. This amount could be subject to change per the requirements of the State's fiscal year 2014 spending plan.

^{††} The fiscal year 2015 recommended contribution of \$110,904,703 has been reduced to \$64,231,259 in accordance with Chapter 1, P.L. 2010. This amount could be subject to change per the requirements of the State's fiscal year 2015 spending plan.

[#] The contribution amounts reflect premiums paid to the Non-Contributory Group Insurance Premium Fund.

^{##} Reflects Chapter 78, P.L. 2011.

- (E) The information presented in the required supplementary schedules were determined as part of the actuarial valuation. Additional information follows:

Valuation Date	June 30, 2013
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Dollar, Open
Remaining Amortization Period	30 years
Asset Valuation Method	Five-Year Average of Market Value
Actuarial Assumptions:	
Investment Rate of Return	7.90%
Projected Salary Increase	3.45% for fiscal year ending 2012 through fiscal year ending 2021 and 4.45% for fiscal years ending 2022 and thereafter
Cost of Living Adjustments	0.00%

SECTION VI - LEVEL OF FUNDING

Although the value of accrued benefits and the funding ratios shown in the previous section are required for the State's financial statements, it is instructive to also look at these values under an alternative approach. For this purpose, we are presenting liabilities determined on a Financial Accounting Standards Board Statement No. 87 Accumulated Benefit Obligation (ABO) basis. This is the same approach as GASB Statement No. 25 except that no assumption is made as to future salary increases and assets are at market value with receivables.

<u>FASB 87 ABO Funded Ratios</u>		
Actuarial present value of accumulated benefits:		
Vested benefits	<u>June 30, 2013</u>	<u>June 30, 2012</u>
Participants currently receiving payments	\$ 2,034,551,263	\$ 1,822,707,659
Other participants	569,172,400	668,573,170
	\$ 2,603,723,663	\$ 2,491,280,829
Non-vested benefits	115,605,938	127,734,627
Total	\$ 2,719,329,601	\$ 2,619,015,456
Assets at market value	\$ 1,832,851,456	\$ 1,755,429,511
Ratio of assets to total present value	67.4%	67.0%

As in the case of the Governmental Accounting Standard Board Statement No. 25, the actuarial present value of vested and non-vested accrued benefits was based on an interest rate of 7.90% for 2013 and 2012.

APPENDIX A

BRIEF SUMMARY OF THE BENEFIT AND CONTRIBUTION PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

Eligibility for Membership

All members of the former State Police and Benevolent Fund: full-time commissioned officers, non-commissioned officers or troopers of the Division of State Police. Membership is a condition of employment.

1. Definitions

Plan Year	The 12-month period beginning on July 1 and ending on June 30.
Service	Service rendered while a member as described above.
Credited Service	A year is credited for each year of service as an officer or trooper in the State Police. Service with other State Retirement Systems is included in the calculation of the retirement benefit at the rate of 1% of final compensation for each year of service credit.
Compensation	Based on contractual salary, including maintenance allowance, received by the member in the last 12 months of credited service preceding retirement, termination or death. Compensation does not include individual salary adjustments granted primarily in anticipation of the retirement or for temporary or extracurricular duties beyond the ordinary work day. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code; Chapter 1, P.L. 2010 provides that for members hired on or after May 22, 2010, the amount of compensation used for employer and member contributions and benefits under the System cannot exceed the annual maximum wage contribution base for Social Security, pursuant to the Federal Insurance Contributions Act.)
Final Compensation	Average compensation received by member in last 12 months of credited service preceding retirement or death. Such term includes the value of the member's maintenance allowance for the same period. (Chapter 1, P.L. 2010 provides that for members hired on or after May 22, 2010, Final Compensation means the average annual salary for service for which contributions are made during any three fiscal years of membership providing the largest possible benefit to the member or the member's beneficiary. Such term shall include the value of the member's maintenance allowance.)
Aggregate Contributions	The sum of all amounts deducted from the compensation of a member or contributed by him or on his behalf. For contribution

purposes, compensation does not include overtime, bonuses, maintenance or any adjustments before retirement.

Adjusted Final Compensation The amount of compensation or compensation as adjusted, as the case may be, increased by the same percentage increase which is applied in any adjustments of the compensation schedule of active members after the member's death and before the date on which the deceased member of the retirement system would have accrued 25 years of service under an assumption of continuous service, at which time that amount will become fixed. Adjustments to compensation or adjusted compensation shall take effect at the same time as any adjustments in the compensation schedule of active members.

2. Benefits

Service Retirement Mandatory retirement at age 55. Voluntary retirement prior to age 55 with 20 years of credited service. Benefit is an annual retirement allowance equal to the greater of (a), (b), or (c), as follows:

- (a) 50% of final compensation;
- (b) For members retiring with 25 or more years of service, 65% of final compensation, plus 1% for each year of service in excess of 25 years, to a maximum of 70% of final compensation.
- (c) For members as of August 29, 1985 who would not have 20 years of service by age 55, benefit as defined in (a) above. For members as of August 29, 1985 who would have 20 years of service but would not have 25 years of service at age 55, benefit as defined in (a) above plus 3% for each year of service in excess of 20 years.

Vested Termination Termination of service prior to age 55. Benefit for 10 to 20 years of service - Refund of aggregate contributions, or a deferred life annuity beginning at age 55 equal to 2% of final compensation for each year of service up to 20 years.

Non-Vested Termination Termination of service prior to age 55 and less than 10 years of service – Return of aggregate contributions.

Ordinary Death

Before Retirement Death of an active member of the plan. Benefit is equal to:

- (a) Lump sum payment equal to 3-1/2 times compensation, plus
 - (b) Spousal life annuity of 50% of final compensation payable until spouse's death or remarriage. If there is no surviving spouse, or upon death or remarriage, a total of
- 23

20%, 35% or 50% of final compensation payable to one, two or three dependent children. If there is no surviving spouse (or dependent children), 25% or 40% of final compensation to one or two dependent parents.

Minimum benefit: Aggregate contributions.

After Retirement

Death of a retired member of the plan. The benefit is equal to:

- (a) Lump sum of 50% of compensation, plus
- (b) Spousal life annuity of 50% of final compensation payable until spouse's death or remarriage. If there is no surviving spouse, or upon death or remarriage, a total of 20%, 35% or 50% of final compensation payable to one, two or three dependent children, respectively.

Accidental Death

Death of an active member of the plan resulting during performance of duties. Benefit is equal to:

- (a) Lump sum payment equal to 3-1/2 times compensation, plus
- (b) Spousal life annuity of 70% of adjusted final compensation payable until spouse's death. If there is no surviving spouse, or upon death of the surviving spouse, a total of 20%, 35% or 50% of adjusted final compensation payable to one, two or three dependent children. If there is no surviving spouse or dependent children, 25% or 40% of adjusted final compensation to one or two dependent parents.

Ordinary Disability Retirement

Mentally or physically incapacitated for the performance of his usual duty and of any other available duty in the Division of State Police and such incapacity is likely to be permanent.

- (a) The benefit for members with less than four years of service is a refund of the member's aggregate contributions.
- (b) For members with at least four years of service, the benefit is an immediate life annuity equal to 40% of final compensation plus 1-1/2% of final compensation for years of creditable service in excess of 26-2/3.
- (c) For members who are forced to retire with 20 but less than 25 years of service, the benefit is 50% of the member's final compensation plus 3% of final compensation for each year of service in excess of 20 years, to a maximum of 65% of final compensation.

For death following disability retirement, a lump sum equal to 3-1/2 times compensation if death occurs prior to age 55 or 1/2 of compensation after age 55.

Accidental Disability Retirement

Totally and permanently disabled as a direct result of a traumatic event occurring during and as a result of his regular or assigned duties. Benefit is an immediate life annuity equal to 2/3 of final compensation. Upon death after disability retirement, lump sum benefit of 3-1/2 times final compensation if death occurs before 55 and 1/2 times final compensation if death occurs after 55.

Loan Provision

Eligible if an active member of the State Police Retirement System with at least 3 years of contributory service. If eligible, a member may borrow an amount which is greater than \$50, but not more than 50% of aggregate contributions. The loan accrues interest at a rate set by the State Treasurer, which is based on a commercially reasonable rate as required by the Internal Revenue Code. An administrative fee may be charged for the loan.

Member Contributions

Each member contributes 7.5% of Compensation. Chapter 78, P.L. 2011 increased Member Contributions from 7.5% to 9.0% of Compensation effective October 2011.

APPENDIX B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION INTEREST RATE: 7.90% per annum, compounded annually.

COLA: No future COLA is assumed.

SALARY INCREASES: Salaries are assumed to increase by 3.45% per year for fiscal year ending 2012 through fiscal year ending 2021 and 4.45% per year for fiscal years ending 2022 and thereafter.

TERMINATION: Withdrawal rates vary by length of service. Illustrative rates are shown below:

<u>Age</u>	<u>Lives per Thousand</u>	
	<u>Less Than 5 Years of Service</u>	<u>Five to Nineteen Years of Service</u>
25	5.0	0.0
30	5.0	4.0
35	8.3	1.0
40	0.0	1.5
45	0.0	2.0
50	0.0	0.0

SEPARATIONS FROM SERVICE: Representative mortality, disability and retirement rates are as follows:

<u>Age</u>	<u>Ordinary Death**</u>		<u>Annual Rates of*</u>		
	<u>Male</u>	<u>Female</u>	<u>Accidental Death</u>	<u>Ordinary Disability</u>	<u>Accidental Disability</u>
25	0.4	0.2	0.4	0.6	0.3
30	0.4	0.3	0.5	0.9	0.5
35	0.6	0.5	0.5	2.4	1.9
40	0.9	0.7	0.5	2.5	2.1
45	1.2	1.1	0.6	3.1	2.1
50	1.7	1.7	0.9	5.4	2.2

* Per one thousand lives.

** RP-2000 Combined Healthy Male (set back 3 years) and RP-2000 Combined Healthy Female Mortality Tables projected on a generational basis from the base year of 2012 using Projection Scale AA. Rates shown above are unadjusted for Projection Scale AA.

MARRIAGE: Husbands are assumed to be 3 years older than wives. Among the active population, 83.3% of participants are assumed married. No children are assumed. Neither the percentage married nor the number of children assumption is individually explicit but are considered reasonable as a single combined assumption.

VALUATION METHOD: Projected Unit Credit Method. This method essentially funds the System's benefits accrued to the valuation date. Experience gains and losses are recognized in future accrued liability contributions. In accordance with Chapter 78, P.L. 2011, beginning with the July 1, 2010 actuarial

valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars, it will amortize the unfunded accrued liability over an open 30 year period. Beginning with the July 1, 2019 actuarial valuation, the accrued liability contribution shall be computed so that if the contribution is paid annually in level dollars it will amortize the unfunded accrued liability over a closed 30 year period (i.e., for each subsequent valuation, the amortization period shall decrease by one year.) Beginning with the July 1, 2029 actuarial valuation, when the remaining amortization period reaches 20 years, any increase or decrease in the unfunded accrued liability as a result of actuarial losses or gains for subsequent valuation years shall serve to increase or decrease, respectively, the amortization period for the unfunded accrued liability, unless an increase in the amortization period will cause it to exceed 20 years. If an increase in the amortization period as a result of actuarial losses for a valuation year would exceed 20 years, the accrued liability contribution shall be computed for the valuation year using a 20 year amortization period.

ASSET VALUATION METHOD: A five-year average of market values with write-up. (This method takes into account appreciation (depreciation) in investments in order to smooth asset values by averaging the excess of the actual over the expected income, on a market value basis, over a five-year period).

DEATHS AFTER RETIREMENT: For healthy inactive members and beneficiaries of deceased members the RP-2000 Combined Healthy Male (set back 3 years) and RP-2000 Combined Healthy Female Mortality tables projected on a generational basis from the base year of 2012 using Projection Scale AA. For disabled members the RP-2000 Combined Healthy Male (set forward 5 years) and RP-2000 Combined Healthy Female Mortality (set forward 5 years) tables are used. Illustrative rates of mortality unadjusted for Projection Scale AA are shown below:

<u>Lives per Thousand</u>				
<u>Retired Members and Beneficiaries of Deceased</u>			<u>Disabled Members</u>	
	<u>Members</u>			
<u>Age</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
55	2.7	2.7	6.8	5.1
60	4.7	5.1	12.7	9.7
65	8.8	9.7	22.2	16.7
70	16.1	16.7	37.8	28.1
75	27.3	28.1	64.4	45.9
80	46.9	45.9	110.8	77.5
85	80.5	77.5	183.4	131.7
90	136.0	131.7	267.5	194.5

RATES OF RETIREMENT: Rates of retirement vary by length of service and age (if more than 24 years of service) with 100% of those remaining at age 55 retiring at age 55. The rates are shown below:

<u>Service</u>	<u>Lives Per 100</u>
20	2.0
21	0.5
22	0.0
23	0.0
24	0.0
25	45.5
Greater than 25 :	
(a) through age 42	5.0
(b) ages 43-47	25.0
(c) ages 48-53	30.0
(d) age 54	55.0

APPENDIX C

TABULATIONS USED AS A BASIS FOR THE 2013 VALUATION

The following tables give a reconciliation of data from July 1, 2012 to June 30, 2013. Tables are also given showing active member number and salaries by age and length of service as of July 1, 2013 and showing the number and retirement allowances of beneficiaries classified by age as of July 1, 2013.

TABLE 1
RECONCILIATION OF DATA FROM JULY 1, 2012 TO JUNE 30, 2013

	Actives		Deferred Vested	Retirees				Beneficiaries	Dependents	Domestic Relations Beneficiaries		Total
	Contrib.	Noncontrib.		Service	Special	Deferred	Disabled			Retirees	Disabilities	
Members as of July 1, 2012	2,683	38	0	395	1,823	4	252	384	6	144	22	5,751
Changed to Contributing	5	(5)										
Changed to Noncontributing	(10)	10										
Terminated Vested		(1)				1						
Terminated Non-Vested		(1)										(1)
Service Retirement	(6)	(3)		9								
Special Retirement	(219)				219							
New Disabled	(7)						7					
New Death	(3)			(21)	(15)		(3)	(19)				(61)
Payments Began												
Payments Ceased									(1)	(3)	(2)	(6)
New Actives												
Rehires												
New Beneficiaries								34		19		53
Data Corrections					1	1			(3)	(1)		(2)
Members as of June 30, 2013	2,443	38	0	383	2,028	6	256	399	2	159	20	5,734

TABLE 2
DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

SERVICE	1	5	10	15	20	25	30	35	TOTAL
AGE									
25	Number	40	28						68
	Salary	2,983,768	2,289,233						5,273,001
30	Number	27	321	85					433
	Salary	1,999,922	27,759,575	8,269,579					38,029,076
35	Number	13	192	392	26				623
	Salary	965,156	17,253,289	40,576,792	2,713,876				61,509,113
40	Number		46	203	211	42			502
	Salary		4,170,444	21,700,464	23,839,912	5,059,979			54,770,799
45	Number		2	54	119	180	121	2	478
	Salary		153,702	5,873,827	13,627,211	21,469,351	14,910,556	271,100	56,305,747
50 and over	Number			5	18	64	253	35	377
	Salary			364,435	2,106,764	7,598,433	31,345,353	4,502,301	46,176,093
TOTAL	Number	80	589	739	374	286	374	37	2,481
	Salary	5,948,846	51,626,243	76,785,097	42,287,763	34,127,763	46,255,909	4,773,401	262,063,829

TABLE 3

**THE NUMBER AND ANNUAL COMPENSATION OF
ACTIVE MEMBERS DISTRIBUTED BY AGE
AS OF JUNE 30, 2013**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
25	6	\$ 447,565	2	\$ 149,188
26	10	745,942	2	149,188
27	21	1,642,060	1	74,594
28	45	3,597,813	1	83,311
29	50	4,096,842	2	149,188
30	83	7,106,925	2	172,468
31	86	7,519,227	11	947,848
32	115	10,452,757	4	351,697
33	129	12,067,979	3	277,887
34	125	11,975,013	6	546,692
35	118	11,714,770	4	387,612
36	129	12,978,820	9	886,434
37	95	9,620,717	4	413,660
38	110	11,342,323	8	802,601
39	85	8,980,137	5	556,478
40	84	9,067,159	6	612,593
41	89	9,858,689	3	342,824
42	107	11,908,844	7	821,706
43	105	12,027,754	7	788,114
44	92	10,625,516	2	218,352
45	80	9,267,607	2	224,772
46	84	9,889,489	3	354,881
47	102	12,297,058	3	344,546
48	97	11,919,968	4	487,312
49	99	11,987,563		
50	75	9,086,893	3	381,609
51	60	7,409,056	1	137,364
52	39	4,732,136	2	258,207
53	20	2,499,778	1	133,736
54	33	4,142,567		
TOTAL	2,373	\$ 251,008,967	108	\$ 11,054,862

Of the 2,481 active members included in the June 30, 2013 valuation data, 1,511 are vested and 970 have not yet completed the vesting service requirement.

TABLE 4

**THE NUMBER AND ANNUAL COMPENSATION OF
ACTIVE MEMBERS DISTRIBUTED BY SERVICE
AS OF JUNE 30, 2013**

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	1	\$ 71,488		
1	61	4,550,246	10	\$ 745,942
2	6	431,981		
3	3	223,783	1	74,594
4	80	6,425,019	1	80,414
5	148	12,271,256	7	583,178
6	64	5,458,674	7	603,352
7	91	8,064,954	6	532,386
8	254	24,393,790	9	867,957
9	163	16,076,271	4	388,889
10	118	12,162,776	10	1,054,704
11	57	5,893,622	3	306,806
12	273	29,810,552	14	1,524,838
13	33	3,415,077	3	324,319
14	29	3,102,141	1	109,176
15	118	13,300,559	6	680,009
16	103	11,650,470	5	570,806
17	19	2,113,446		
18	145	17,158,288	10	1,218,399
19	102	12,187,336	4	497,754
20	81	9,750,250		
21	6	702,114		
22	7	811,056		
23	12	1,388,885	1	112,386
24	65	7,913,225	2	271,100
25	131	16,085,396	2	249,646
26	103	12,863,040	1	124,471
27	60	7,585,049		
28	21	2,676,292		
29	6	760,945	1	133,736
30	5	648,142		
31	3	395,572		
32	3	408,465		
34	1	112,386		
35	1	146,421		
TOTAL	2,373	\$ 251,008,967	108	\$ 11,054,862

Of the 2,481 active members included in the June 30, 2013 valuation data, 1,511 are vested and 970 have not yet completed the vesting service requirement.

TABLE 5

State Police Retirement System of New Jersey

	Service Retirement		Special Retirement (25 Years of Service)		Ordinary Disability		Accidental Disability		Survivors	
	Average Age At Retirement	Average Annual Benefit At Retirement	Average Age At Retirement	Average Annual Benefit At Retirement	Average Age At Retirement	Average Annual Benefit At Retirement	Average Age At Retirement	Average Annual Benefit At Retirement	Average Age At Retirement**	Average Annual Benefit At Retirement
All Retirees	50.4	\$ 28,870	51.2	\$ 64,430	41.6	\$ 33,987	40.1	\$ 50,890	47.3	\$ 22,778
New Retirees	51.3	\$ 60,297	49.4	\$ 85,004	33.0	\$ 34,701	50.0	\$ 74,481	47.5	\$ 26,977

	All Retirements (excluding Survivors)	
	Average Age At Retirement	Average Annual Benefit At Retirement*
All Retirees	50.0	\$ 56,982

* The Average Annual Benefit at Retirement does not reflect COLA's granted after retirement.

** Calculated as of member's date of retirement.

TABLE 6

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

SERVICE RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
40			1	\$ 13,676
41			1	20,738
42			1	21,906
43				
44			3	36,712
45	4	\$ 309,883		
46	13	1,013,855	3	38,337
47	30	2,378,838	3	104,904
48	53	4,219,620	8	278,109
49	79	6,221,616	11	361,616
50	89	7,247,856	10	337,394
51	79	6,306,360	11	423,073
52	83	6,657,885	13	425,652
53	57	4,578,204	9	346,782
54	88	6,980,522	18	660,246
55	79	6,156,406	9	247,514
56	95	7,279,255	11	505,303
57	89	6,629,608	8	271,614
58	61	4,480,162	11	329,502
59	81	6,057,652	8	371,398
60	51	3,813,106	5	82,597
61	60	4,341,553	3	100,462
62	70	4,752,212	5	68,418
63	50	3,536,277	2	36,622
64	68	4,708,348	6	148,901
65	66	4,115,860	1	31,212
66	87	5,658,610	9	204,296
67	95	5,782,182	8	161,918
68	74	4,313,718	8	145,985
69	68	3,793,733	1	16,049
70	85	4,778,592		
71	82	4,369,516	1	12,000
72	85	4,412,566	3	52,772
73	55	2,906,442		
74	43	2,241,756	3	77,114
75	51	2,496,687	3	64,351

TABLE 6

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

**SERVICE RETIREMENTS
(CONTINUED)**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
76	26	\$ 1,244,549		
77	29	1,265,743	1	\$ 2,600
78	24	1,133,324		
79	16	788,778	1	25,968
80	15	634,529		
81	27	1,230,524		
82	28	1,226,314		
83	27	1,060,157		
84	20	795,347		
85	33	1,433,316		
86	13	427,787		
87	14	423,855		
88	12	390,787		
89	11	318,524		
90	3	93,807		
91	2	47,233		
92	2	79,787		
93	2	83,057		
94	1	33,294		
96	1	38,196		
98	1	31,975		
TOTAL	2,377	\$ 155,319,763	199	\$ 6,025,741

TABLE 7

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

BENEFICIARIES OF DECEASED PENSIONERS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
47			1	\$ 45,902
50			1	49,252
51			3	143,528
54			3	153,297
55	1	\$ 10,100	1	40,675
56			5	224,658
57			2	124,105
58			2	104,702
59			2	69,443
60			1	36,516
61			3	135,059
62			1	54,071
63			9	416,517
64			2	77,442
65			9	334,132
66	1	10,132	13	535,451
67			4	155,118
68			7	294,929
69			9	355,539
70			10	361,948
71	1	41,306	13	535,590
72			12	426,400
73			11	386,285
74			6	241,350
75			13	461,032
76			8	293,943
77			6	178,070
78			12	385,867
79			7	197,801
80			9	293,972
81			21	630,807

TABLE 7

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

**BENEFICIARIES OF DECEASED PENSIONERS
(CONTINUED)**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
82			16	\$ 426,665
83			18	529,843
84			16	472,074
85			18	496,671
86			13	392,599
87			10	293,558
88			5	143,312
89			10	300,122
90			4	95,479
91			5	141,286
92			3	86,902
93			3	88,792
94			5	107,508
95			3	77,178
96			1	21,826
98			2	26,732
TOTAL	3	\$ 61,538	338	\$ 11,443,948

TABLE 8

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

BENEFICIARIES OF DECEASED ACTIVE EMPLOYEES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
33			2	\$ 122,932
37			1	75,469
38			1	47,113
40			1	76,154
45			1	42,679
47			2	130,089
48			1	76,449
49			1	37,577
50			2	151,690
51			1	76,449
52			1	52,511
54			1	65,123
55			2	111,851
58			1	40,928
59			1	45,884
61			2	107,005
62			2	84,074
63			1	56,211
64			3	100,965
66			1	36,769
67			1	50,776
68			3	113,569
69			3	115,826
70			3	146,710
71			1	47,768
72			2	80,957
73			2	62,886
74			1	21,964
76			1	41,037
78			1	29,387
79			1	36,622
81			2	48,074
83			1	27,716
84			1	22,518
86			1	24,205
87			1	32,548
88			1	19,466
89			2	52,289
92			2	33,242
93			1	20,460

TABLE 8

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

**BENEFICIARIES OF DECEASED ACTIVE EMPLOYEES
(CONTINUED)**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
97			1	15,992
TOTAL			60	\$ 2,581,934

TABLE 9

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

ORDINARY DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
31	1	\$ 34,268		
34	1	31,970		
37	2	75,927		
41			1	\$ 38,141
42	1	40,556	1	28,593
44	1	30,554		
45	3	86,873		
46	2	73,660		
47	7	258,846	3	38,404
48	4	112,840		
49	8	281,429	3	119,446
50	5	216,122	4	118,481
51	5	198,204	3	71,064
52	5	195,046	3	72,623
53	1	37,270	1	18,497
54	6	302,669	2	65,299
55	4	178,259	1	9,007
56	4	248,077	1	51,125
57	3	146,915		
58	1	56,880		
59	4	205,922	1	26,235
60	2	83,864		
61	3	143,500		
62	2	29,357	1	8,141
63	1	26,351	1	21,833
64	1	50,998		
65	2	28,573		
66	4	132,403	1	32,532
68	2	49,944		
69	3	105,885	1	13,757
70	1	23,847		
71	3	82,557		
72	2	39,317		
73	4	105,321		
74	2	75,309		
75	2	40,046		
76	1	19,311		
88	1	16,282		
TOTAL	104	\$ 3,865,152	28	\$ 733,178

TABLE 10

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JUNE 30, 2013**

ACCIDENTAL DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
31	1	\$ 48,700	1	\$ 50,082
32	1	47,708		
34	1	67,815		
35	3	195,133		
37	1	72,552		
38	1	58,530		
39	2	134,716		
40	3	159,400		
41	4	236,631		
42	6	387,972		
43	2	126,931		
44	1	50,017		
45	5	289,172		
46	8	511,011	2	147,646
47	4	259,952		
48	8	543,127	1	57,133
49	9	546,515	1	7,752
50	8	520,916	1	61,104
51	7	421,810		
52	8	421,420	3	27,717
53	4	264,376	1	40,988
54	4	269,782	1	3,380
55	2	96,843	1	31,413
56	1	71,460	2	112,506
57	4	206,630		
58	1	63,937		
59	3	177,645		
61	3	140,156	1	10,452
63	3	176,931	1	51,830
66	1	54,720		
67	1	36,349		
68	1	74,400		
69	2	65,090		
70	1	28,265		
71	5	161,462		
72	1	26,722		
73	1	25,289		
74	3	105,442		
75	1	45,399		
76	1	51,305		
82	1	29,096		
88	1	35,338		
TOTAL	128	\$ 7,306,665	16	\$ 602,003

APPENDIX D

REVISED RESULTS OF THE JULY 1, 2012 ACTUARIAL VALUATION

Chapter 78, P.L. 2011 increased member contributions from 7.50% to 9.00% of salary. Effective with the July 1, 2012 actuarial valuation, the determination of the State's normal cost contributions have been revised to reflect the use of all member contributions as an offset to the gross normal cost. This was the methodology used to determine the State's normal cost contribution prior to the enactment of Chapter 78, P.L. 2011 and is consistent with the methodology typically used by contributory public-sector retirement systems to calculate the employer's normal cost contribution.

Appendix D develops the revised results of sections presented in the Annual Report of the Actuary Prepared as of July 1, 2012, which was published February 15, 2013, affected by the change in method. A comparison of the revised results (Revised) with the results of the February 15, 2013 published report (Original) is also provided. All other sections of the February 15, 2013 published report remains unchanged.

Valuation Data	July 1, 2012 Original	July 1, 2012 Revised
Number of Members	2,721	2,721
Annual Compensation	\$ 283,219,927	\$ 283,219,927
Number of Pensioners and Beneficiaries	3,030	3,030
Total Annual Allowance	\$ 169,491,353	\$ 169,491,353
<u>Assets</u>		
Market Value of Assets*	\$ 1,755,429,511	\$ 1,755,429,511
Valuation Assets*	\$ 1,995,388,133	\$ 1,995,388,133
<u>Contribution Rates</u>		
Pension Contribution		
a) Recommended Contribution		
Normal Contribution	13.78%	12.44%
Accrued Liability Contribution	24.00	24.00
Total Pension Contribution	37.77%	36.44%
b) Chapter 1, P.L. 2010 Minimum Contribution		
Normal Contribution	5.90%	5.33%
Accrued Liability Contribution	10.28	10.28
Total Pension Contribution**	16.19%	15.61%
Non-Contributory Group Insurance Premium	0.67%	0.67%
<u>Contribution Amounts</u>		
Pension Contribution		
a) Recommended Contribution		
Normal Contribution	\$ 39,015,307	\$ 35,231,062
Accrued Liability Contribution	67,962,316	67,962,316
Total Pension Contribution	\$ 106,977,623	\$ 103,193,378
b) Chapter 1, P.L. 2010 Minimum Contribution		
Normal Contribution	\$ 16,720,846	\$ 15,099,027
Accrued Liability Contribution	29,126,707	29,126,707
Total Pension Contribution**	\$ 45,847,553	\$ 44,225,734
Non-Contributory Group Insurance Premium	\$ 1,900,000	\$ 1,900,000

* Assets include a fiscal year 2013 receivable contribution of \$25,581,686 instead of the \$89,535,903 contribution recommended for the July 1, 2011 valuation (potential effect of Chapter 1, P.L. 2010).

** Chapter 1, P.L. 2010 allows the State to make a contribution for fiscal year 2014 equal to 3/7th of the recommended contribution. The contributions could be subject to change per the requirements of the State's fiscal year 2014 spending plan.

SECTION III - ASSETS, LIABILITIES AND CONTRIBUTIONS**F. Development of Recommended State Pension Contributions**

	<u>Original</u>	<u>Revised</u>
1. Accrued Liability	\$ 2,767,768,813	\$ 2,767,768,813
2. Actuarial Value of Assets	<u>1,995,388,133</u>	<u>1,995,388,133</u>
3. Unfunded Actuarial Accrued Liability/(Surplus) = 1. - 2.	\$ 772,380,680	\$ 772,380,680
4. Amortization Period	30	30
5. Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2013 (Level Dollar)	\$ 67,962,316	\$ 67,962,316
6. a. Gross Normal Cost (excluding Non-Contributory Group Insurance Premium)	\$ 53,694,657	\$ 53,694,657
b. Expected Member Contributions	<u>17,535,892*</u>	<u>21,043,070</u>
c. State Normal Cost = (a) - (b)	\$ 36,158,765	\$ 32,651,587
d. State Normal Cost payable July 1, 2013 = (c) * 1.079	\$ 39,015,307	\$ 35,231,062
7. Total Recommended Pension Contribution as of July 1, 2013 = 5. + 6.(d)	\$ 106,977,623	\$ 103,193,378

* Only reflects pre-Chapter 78, P.L. 2011 member contributions of 7.50% of salary. Based on discussions with the Division of Pensions and Benefits, the increase in member contributions due to Chapter 78, P.L. 2011 shall not reduce the State's normal cost contribution.

G. Development of Chapter 1, P.L. 2010 Minimum Required Pension Contributions*

	<u>Original</u>	<u>Revised</u>
1. State Normal Cost payable July 1, 2013 = F.6(d). x 3/7	\$ 16,720,846	\$ 15,099,027
2. Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2013 = F.5. x 3/7	<u>29,126,707</u>	<u>29,126,707</u>
3. Total Minimum Contribution** = 1. + 2.	\$ 45,847,553	\$ 44,225,734

* Chapter 1, P.L. 2010 allows the State Treasurer to reduce the recommended contribution for the 2014 fiscal year to no less than 3/7th of the recommended contribution.

**Contribution could be subject to change per the requirements of the State's fiscal year 2014 spending plan.

SECTION V - ACCOUNTING INFORMATION**(A) Development of the Annual Required Contribution (ARC) as of June 30, 2015**

	<u>Original</u>	<u>Revised</u>
1. Actuarial Value of Plan Assets as of June 30, 2012		
(a) Valuation Assets as of June 30, 2012	\$ 1,995,388,133	\$ 1,995,388,133
(b) Adjustment for Receivable Contributions included in (a)	<u>25,581,686*</u>	<u>25,581,686*</u>
(c) Valuation Assets as of June 30, 2012 for GASB Disclosure = (a) - (b)	\$ 1,969,806,447	\$ 1,969,806,447
2. Actuarial Accrued Liability as of June 30, 2012	\$ 2,767,768,813	\$ 2,767,768,813
3. Unfunded Actuarial Accrued Liability/(Surplus) as of June 30, 2012 = 2. - 1.	\$ 797,962,366	\$ 797,962,366
4. Amortization of Unfunded Actuarial Accrued Liability/(Surplus) over 30 years (Level Dollar)	\$ 65,072,535	\$ 65,072,535
5. Normal Cost as of June 30, 2012 (excludes NCGIPF)	\$ 36,158,765	\$ 32,651,587
6. Annual Required Contribution as of June 30, 2014		
(a) Annual Required Contribution as of June 30, 2012 = 4. + 5.	\$ 101,231,300	\$ 97,724,122
(b) Interest Adjustment to June 30, 2014	16,626,330	16,050,307
(c) Non-Contributory Group Insurance Premium	<u>1,900,000</u>	<u>1,900,000</u>
(d) Annual Required Contribution as of June 30, 2013 = (a) + (b) + (c)	\$ 119,757,630	\$ 115,674,429

* Receivable contribution for fiscal year 2013.

(B) Development of the Net Pension Obligation (NPO) as of June 30, 2014

	<u>Original</u>	<u>Revised</u>
1. Annual Required Contribution as of June 30, 2014	\$ 119,757,630	\$ 115,674,429
2. Interest on Net Pension Obligation	61,116,523	61,116,523
3. Adjustment to Annual Required Contribution	<u>(68,071,968)</u>	<u>(68,071,968)</u>
4. Annual Pension Cost = 1. + 2. + 3.	\$ 112,802,185	\$ 108,718,984
5. Expected Employer Contributions for Fiscal Year 2014	\$ 47,747,553*	\$ 46,125,734**
6. Net Pension Obligation at June 30, 2013	\$ 773,626,868 ^Ø	\$ 773,626,868 ^Ø
7. Increase in Net Pension Obligation = 4. - 5.	\$ 65,054,632	\$ 62,593,250
8. Net Pension Obligation at June 30, 2014 = 6. + 7.	\$ 838,681,500	\$ 836,220,118

* The recommended contribution of \$108,877,623 has been reduced to \$47,747,553 in accordance with Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan. Included in the Expected Employer Contribution for fiscal year 2014 is 100% of the Non-Contributory Group Insurance premium of \$1,900,000.

** The recommended contribution of \$105,093,378 has been reduced to \$46,125,734 in accordance with Chapter 1, P.L. 2010. This amount may be subject to change per the requirements of the State's fiscal year 2014 spending plan. Included in the Expected Employer Contribution for fiscal year 2014 is 100% of the Non-Contributory Group Insurance premium of \$1,900,000.

^Ø The June 30, 2013 Net Pension Obligation amount has been revised from the amount shown in the prior year's report to reflect the adjustment to the fiscal year 2012 employer contribution.

(C) Schedule of Funding Progress

Actuarial Valuation Date	GASB Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll $\frac{(b-a)}{c}$
6/30/2007	\$ 2,066,754,160	\$ 2,485,649,230	\$ 418,895,070	83.1%	\$ 275,301,995	152.2%
6/30/2008	\$ 2,127,263,509	\$ 2,609,164,869	\$ 481,901,360	81.5%	\$ 281,087,566	171.4%
6/30/2009	\$ 2,063,962,877	\$ 2,825,455,568	\$ 761,492,691	73.0%	\$ 287,267,502	265.1%
6/30/2010 ^o	\$ 2,019,350,048	\$ 2,497,094,137	\$ 477,744,089	80.9%	\$ 289,980,657	164.8%
6/30/2011 ^o	\$ 2,002,813,881	\$ 2,581,950,846	\$ 579,136,965	77.6%	\$ 275,219,752	210.4%
6/30/2012 ^o	\$ 1,969,806,447	\$ 2,767,768,813	\$ 797,962,366	71.2%	\$ 283,219,927	281.7%

^oReflects Chapter 78, P.L. 2011.**(E) Schedule of Employer Contributions**

Fiscal Year [#]	Annual Required Contribution	Employer Contribution	Percentage Contributed
2009	\$ 86,385,254	\$ 5,574,860*	6.5%
2010	\$ 91,411,237	\$ 1,018,200**	1.1%
2011	\$ 114,120,061	\$ 2,201,604 ^o	1.9%
2012 ^{##}	\$ 98,869,662	\$ 13,545,607 ^{oo}	13.7%
2013 ^{##}	\$ 99,876,582	\$ 27,581,686 [†]	27.6%
2014 ^{##}			
Original	\$ 119,757,630	\$ 47,747,553 ^{††}	39.9%
Revised	\$ 115,674,429	\$ 46,125,734 ^{†††}	39.9%

* The fiscal year 2009 recommended contribution of \$77,679,416 was reduced to \$5,574,860 in accordance with the provisions of the Appropriation Act for fiscal year 2009.

** The fiscal year 2010 recommended contribution of \$84,031,012 was reduced to \$1,018,200 in accordance with the provisions of the Appropriation Act for fiscal year 2010.

^o The fiscal year 2011 recommended contribution of \$105,345,281 was reduced to \$2,201,604 in accordance with provisions of the Appropriation Act for fiscal year 2011.^{oo} The fiscal year 2012 recommended contribution of \$91,471,744 was reduced to \$13,545,607 in accordance with Chapter 1, P.L. 2010.[†] The fiscal year 2013 recommended contribution of \$91,535,903 has been reduced to \$27,581,686 in accordance with Chapter 1, P.L. 2010. This amount could be subject to change per the requirements of the State's fiscal year 2013 spending plan.^{††} The fiscal year 2014 recommended contribution of \$108,877,623 has been reduced to \$47,747,553 in accordance with Chapter 1, P.L. 2010. This amount could be subject to change per the requirements of the State's fiscal year 2014 spending plan.^{†††} The revised fiscal year 2014 recommended contribution of \$105,093,378 has been reduced to \$46,125,734 in accordance with Chapter 1, P.L. 2010. This amount could be subject to change per the requirements of the State's fiscal year 2014 spending plan.[#] The contribution amounts reflect premiums paid to the Non-Contributory Group Insurance Premium Fund.^{##} Reflects Chapter 78, P.L. 2011.