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The Police and Firemen's Retirement System of New Jersey

Information Required Under Governmental Accounting Standards Board Statement No. 67 as of June 30, 2015

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February 29, 2016

Board of Trustees
The Police and Firemen's Retirement System
of New Jersey
Trenton, New Jersey

Members of the Board:

This valuation provides information concerning the Police and Firemen's Retirement System of New Jersey in accordance with the Governmental Accounting Standards Board (GASB) Statement No. 67. This Statement is an amendment of Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 50, Pension Disclosures, effective for the fiscal years ending June 30, 2014 and later.

We certify that the information contained in this Actuarial Report has been prepared in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information fairly presents the actuarial position of the Police and Firemen's Retirement System of New Jersey in accordance with the requirements of GASB Statement No. 67 as of June 30, 2015.

The Board of Trustees may use this report for the review of the operation of the Plan and as a source of information for the State financial statements. The report may also be used in the preparation of the Plan's audited financial statements.

Use of this report for any other purpose or by anyone other than the Board of Trustees or the staff of the Division of Pensions and Benefits may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. You should ask Buck to review any statement you wish to make on the results contained in this report. Buck will accept no liability for any such statement made without prior review by Buck.

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 such future differences is beyond the scope of this valuation.

In preparing the actuarial results, we have relied upon information provided by the Division of Pensions and Benefits regarding Plan provisions, Plan participants, Plan assets, contribution rates and other matters used in the actuarial valuation. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The accuracy of the results presented herein is dependent on the accuracy of the data.

As required under Chapter 255, P.L. 1944, experience studies are performed once in every three year period. The valuation was prepared using the demographic assumptions recommended on the basis of the July 1, 2010 – June 30, 2013 Experience Study and approved by the Board of Trustees at the February 9, 2015 Board meeting. The valuation reflects the economic assumptions which include a rate of investment return of 7.90% per annum. Assumed future salary increases are increased by 1.00% per annum beginning fiscal year ending 2022. These assumptions will remain in effect for valuation purposes until such time as the Board or the Treasurer recommends revised economic assumptions.

In my opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the System and to reasonable long-term expectations. The mortality improvement assumption was selected in accordance with Actuarial Standard of Practice No. 35.

If there is reason to believe that the assumptions that were used are unreasonable, that the Plan provisions are incorrectly described, that important Plan provisions relevant to this actuarial report are not described, or that conditions have changed since the calculations were made, you should contact the authors of this actuarial note prior to relying on this information.

This report was prepared under my supervision. I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Academy's qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice. I am available to answer questions and supply any additional information.

Buck Consultants, LLC

Aaron Shapiro

Aaron Shapiro, FSA, EA, MAAA
Principal, Consulting Actuary

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Section I – GASB 67 Information

Notes to the Financial Statements for the Year Ended June 30, 2015

Summary of Significant Accounting Policies

Method used to value investments. Investments are reported at fair value.

Actuarial cost method. Entry Age Normal – Level Percentage of Pay

Plan Description

Plan administration. The State of New Jersey Division of Pensions and Benefits administers the Police and Firemen's Retirement System of New Jersey (Plan), a governmental cost sharing multiple-employers defined benefit pension plan that provides pensions for all individuals who become full-time policemen and firemen and who at the time of enrollment are no older than age 35.

The general responsibility for the proper operation of the Plan is vested in the Board of Trustees (Board), and the pension committees established pursuant to Chapter 78 P.L. 2011.

The Board of Trustees consists of 11 members, two policeman and two firemen who are active members of the System, one retiree of the System, five members appointed by the Governor and the State Treasurer. The Director of the Division of Pensions and Benefits of the State Department of the Treasury shall appoint a qualified employee of the division who shall be the secretary of the Board.

In accordance with Chapter 78, P.L. 2011, a pension committee is to be established for the State portion of the System and the Local portion of the System when the "target funded ratio" is achieved. The "target funded ratio" is defined as the ratio of the actuarial value of assets over the actuarially determined accrued liabilities expressed as a percentage that will be 75% in State fiscal year 2012, and increased annually by equal increments in each of the subsequent seven fiscal years, until the ratio reaches 80% at which time it is to remain for all subsequent fiscal years. The Local portion of the System has attained the required "target funded ratio" in Fiscal Year 2012, thus a pension committee has been established for the Local Employer portion of the System. The State portion of the System has not attained the required "target funded ratio" in fiscal Years 2012, 2013 or 2014, thus a pension committee has not yet been established for the State portion of the System.

The pension committees consist of ten members; five members appointed by the Governor as representatives of the public employer whose employees are enrolled in the retirement system, two members who shall be appointed by the head of the union representing the greatest number of police office members , one member who shall be appointed by the head of the union representing the second greatest number of police officer members, one member appointed by the head of the union representing the greatest number of firefighter members and one member who shall be appointed by the head of the union representing the second greatest number of firefighter members.

Chapter 78, P.L. 2011 grants the authority to amend the benefit terms of the Plan to the pension committees. The pension committees will have the discretionary authority to modify the member contribution rate, formula for calculation of final compensation, age at which a member may be eligible and the benefits for service and special retirement and benefits provided for disability benefit. The pension committees will have the authority to reactivate the cost of living adjustment and set the duration and extent of the activation. The pension committees must give priority consideration to the reactivation of the cost of living adjustment. No decision of the pension committees shall be implemented if the direct or indirect result of the decision will be that the Plan's funded ratio falls below the target funded ratio in any valuation period during the 30 years following the implementation of the decision.

Plan membership. Pension plan membership consisted of the following:

	June 30, 2013	June 30, 2014
Inactive plan members or beneficiaries currently receiving	39,137	40,334
Inactive plan members entitled to but not yet receiving	58	55
Active plan members	40,372	40,106
	79,567	80,495

Benefits provided. Please see Section III of the report for a summary of Plan provisions.

Contributions. The Board establishes contributions based on an actuarially determined contribution recommended by an independent actuary and a contribution for the Non-Contributory Group Insurance Premium Fund (NCGIPF). The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by Plan members during the year, with an additional amount to finance a portion of any unfunded accrued liability. For the year ended June 30, 2015, the State and Local Employers contributed $959,814,917 to the Plan, per the financial statement. This amount excludes delayed enrollments, delayed appropriations, additional employer contributions, retroactive employer contributions, and transfer from other Systems. In addition, the administrative loan fee revenue is not included and has been used as an offset to administrative expenses.

Investments

Rate of return. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. A system specific money-weighted rate of return has not been calculated. The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the co-mingled trust is as follows.

June 30, 2014	June 30, 2015
16.636%	4.05%

Receivables

Short term contributions due as of the end of the reporting period. The statutorily required Local employers' receivable pension contributions due by the end of the reporting period. The Local employers' statutorily required contribution is calculated as of the July 1 preceding the fiscal year in which contributions are made. The fiscal year ended June 30, 2014 Plan Fiduciary Net Position includes the statutorily required contribution of $733,206,389 which was determined by the July 1, 2013 actuarial valuation and is payable by June 30, 2015 and a contribution of $37,113,411 for the NCGIPF. The fiscal year ended June 30, 2015 Plan Fiduciary Net Position includes the statutorily required contribution of $776,513,844 which was determined by the July 1, 2014 actuarial valuation and is payable by June 30, 2016 and $36,337,000 for the NCGIPF.

Contributions that are payable to the pension plan more than one year after the end of the reporting period. The present value as of the end of the Plan's reporting period of statutorily required contributions to the Plan by certain Local employers who participated in Chapter 19, P.L. 2009 and/or incurred additional liabilities due to its adoption of prior early retirement incentive programs. Please see Section III of the report for a summary of Plan provisions.

The Plan Fiduciary Net Position includes the following Local employers' receivables which are contributions that are payable to the pension plan more than one year after the end of the reporting period:

	Present Value as of Fiscal Year Ended	
	June 30, 2014	June 30, 2015
Chapter 19, P.L. 2009	$ 151,549,516	$ 140,757,467
Early Retirement Incentive Programs	15,506,632	14,274,396
Total	$ 167,056,148	$ 155,031,863

Net Pension Liability

The components of the net pension liability were as follows:

	June 30, 2014	June 30, 2015
Total pension liability	$ 42,507,164,403	$ 47,517,765,905
Plan fiduciary net position	(25,020,485,785)	(25,106,858,921)
Plan's net pension liability	$ 17,486,678,618	$ 22,410,906,984
Plan fiduciary net position as a percentage of the total pension liability	58.86%	52.84%

Actuarial assumptions

The total pension liability as of June 30, 2015 was determined by rolling forward the Plan's total pension liability as of July 1, 2014 to June 30, 2015 using the following actuarial assumptions, applied to all periods included in the measurement. In addition, an amount of $800,782 has been added to the liability as of June 30, 2015 equal to the amount in the June 30, 2015 Plan Fiduciary Net Position for transfers from other systems. All other methods and assumptions used to determine the total pension liability are set forth in Section II.

Long-Term Expected Rate of Return

The arithmetic mean return on the portfolio was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2015 are summarized in the following table. The capital market assumptions are per Buck's investment consulting practice for 2015.

Asset Class	Index	Target Allocation*	Long-Term Expected Real Rate of Return
Cash	Citigroup 90-Day T-Bills	5.00%	1.04%
U.S. Treasuries	Barclays Long U.S. Treasury	1.75%	1.64%
Investment Grade Credit	Aggregate Bonds	10.00%	1.79%
Mortgages	Barclays Mortgage	2.10%	1.62%
High Yield Bonds	Barclays High Yield	2.00%	4.03%
Inflation-Indexed Bonds	Barclays U.S. TIPS	1.50%	3.25%
Broad US Equities	Wilshire 5000/Russell 3000	27.25%	8.52%
Developed Foreign Equities	MSCI EAFE	12.00%	6.88%
Emerging Market Equities	MSCI Emerging Markets	6.40%	10.00%
Private Equity	Cambridge Associates	9.25%	12.41%
Hedge Funds/Absolute Return	HFRI Fund of Funds	12.00%	4.72%
Real Estate (Property)	NCREIF Property Index	2.00%	6.83%
Commodities	S&P GSCI	1.00%	5.32%
Global Debt ex US	Barclays Global Aggregate ex US	3.50%	-0.40%
REIT	FTSE NAREIT	4.25%	5.12%
Assumed Inflation – Mean			3.04%
Assumed Inflation – Standard Deviation			2.59%
Portfolio Arithmetic Mean Return			9.36%
Portfolio Standard Derivation			11.94%
Long-Term Expected Rate of Return selected by State Treasurer			**7.90%**

*Based on target asset allocation for 2015.

The Tables presented in pages 8 through 11 illustrate the projections and calculations used to determine the discount rate as required by paragraphs 40−45 of this Statement as of June 30, 2015. A similar analysis was performed in determining the discount rate as of June 30, 2014. In determining the discount rate on Tables 1 and 2, the Fiduciary Net Plan Position at the beginning of each year does not reflect receivable contributions as those amounts are not available at the beginning of the year to pay plan benefits. The discount rate is the single rate that reflects (1) the long-term expected rate of return on Plan investments that are expected to be used to finance the payment of benefits, to the extent that the Plan's fiduciary net position is projected to be sufficient to make projected benefit payments and Plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another scale), to the extent that the conditions for use of the long-term expected rate of return are not met.

Discount rate. The discount rates used to measure the total pension liability were 6.32% as of June 30, 2014 and 5.79% as of June 30, 2015. As discussed with the Division of Pensions and Benefits and in accordance with Paragraph 42 of the GASB Statement No. 67, the projection of cash flows used to determine the discount rate assumed that the Locals will contribute 100.0% of their actuarially determined contribution and the NCGIPF contribution while the State will contribute 21.24% of its actuarially determined contribution and 100% of its NCGIPF contribution. The 21.24% contribution rate is the average of the actual State contribution amounts paid in the last five years in comparison to the annual actuarially determined contributions. Based on those assumptions, the pension Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members until fiscal year 2045. Municipal bond rates of 4.29% as of June 30, 2014 and 3.80% as of June 30, 2015 were used in the development of the blended GASB discount rate after that point. As selected by the State Treasurer, the rates are based on the Bond Buyer Go 20-Bond Municipal Bond Index. Based on the long-term rate of return of 7.90% and the municipal bond rates of 4.29% as of June 30, 2014 and 3.80% as of June 30, 2015, the blended GASB discount rates are 6.32% as of June 30, 2014 and 5.79% as of June 30, 2015. The assumed discount rate has been determined in accordance with the method prescribed by GASB Statement No. 67. We believe this assumption is reasonable for the purposes of the measurements required by the Statement.

Should contributions to the Plan be different from those outlined above, the results shown in Tables 1 and 2 would be different and may result in the Fiduciary Net Plan Position not being sufficient to cover the Plan's benefit payments at some other future date and thus changing the discount rate used to determine the Plan's Total Pension Liability.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability, calculated using the discount rate of 5.79%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.79%) or 1-percentage-point higher (6.79%) than the current rate:

	1% Decrease (4.79%)	**Current Discount Rate (5.79%)**	**1% Increase (6.79%)**
Net Pension Liability	$ 29,053,805,391	$ 22,410,906,984	$ 16,996,545,615

Schedules of Required Supplementary Information

Schedule of Changes in the Net Pension Liability and Related Ratios

	Increase (Decrease)		
Changes in Net Pension Liability	**Total Pension Liability (a)**	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) - (b)**
Balances as of June 30, 2014	$ 42,507,164,403	$ 25,020,485,785	$ 17,486,678,618
Changes for the year:			
Service cost	994,248,683		994,248,683
Interest on total pension liability	2,680,664,300		2,680,664,300
Effect of plan changes	0		0
Effect of economic/demographic (gains) or losses	(215,122,438)		(215,122,438)
Effect of assumptions changes or inputs	3,755,474,472		3,755,474,472
Benefit payments	(2,205,464,297)	(2,205,464,297)	0
Administrative expenses		(4,531,012)	4,531,012
Member contributions		386,991,641	(386,991,641)
Net investment income		922,598,676	(922,598,676)
Employer contributions		959,814,917	(959,814,917)
Transfers from other system	800,782	800,782	0
Employer contribution - Delayed Enrollment		224,629	(224,629)
Employer contribution - Delayed Appropriations		865,936	(865,936)
Employer contribution - Retroactive		24,536,440	(24,536,440)
Employer contribution - Additional		535,424	(535,424)
Balances as of June 30, 2015	$ 47,517,765,905	$ 25,106,858,921	$ 22,410,906,984

Plan fiduciary net position as a percentage of the total pension liability	52.84%
Covered-employee payroll as of the July 1, 2014 actuarial valuation	$3,682,677,356
Net pension liability as a percentage of covered-employee payroll	608.55%

Notes to Schedule:

Benefit changes. None.

Changes of assumptions. The discount rate changed from 6.32% as of June 30, 2014 to 5.79% as of June 30, 2015 in accordance with Paragraph 44 of the GASB Statement No. 67. In addition, the demographic assumptions with respect to non-vested withdrawal, disability, service retirement, active death, salary increase rates and inactive mortality were revised in accordance with the results of the July 1, 2010 – June 30, 2013 experience study and approved by the Board of Trustees at the February 9, 2015 Board meeting. The assumptions are highlighted in Section II – Actuarial Assumptions and Methods.

Employer Contributions. Includes the State's actual contributions of $63,364,195, State-paid Local employers' actual contributions of $76,038,000 and Local employers' receivable contributions of $776,513,844 and contributions to the NCGIPF of $43,898,878.

Schedule of Contributions

	2014	2015
Actuarially determined contribution[1]	$1,150,719,106	$1,217,110,411
Contributions related to the actuarially determined contribution[2]	880,431,697	941,950,336
Contribution deficiency (excess)	$ 270,287,409	$ 275,160,075

1. The above actuarially determined contributions are based on the assumption and methods in effect as of July 1, 2012 and July 2013, respectively. Please refer to the appropriate valuation report for the assumptions and methods used.

2. The amount represents the actual employer contributions made during fiscal year.

Notes to Schedule

Valuation date: Actuarially determined contributions are calculated as of the July 1 preceding the fiscal year in which contributions are made. That is, the contribution calculated as of the July 1, 2013 actuarial valuation will be made during the fiscal year ended June 30, 2015.

The methods and assumptions used to determine the actuarially determined contributions to the plan are set forth in Appendix B in July 1, 2013 valuation report.

Schedule of Investment Returns

	2014	2015
Annual money-weighted rate of return, net of investment expenses	**16.636%**	**4.05%**

Table 1

Projection of Fiduciary Net Position

(000's omitted)

Fiscal Year June 30	Beginning Fiduciary Net Plan Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Projected Investment Earnings	Ending Fiduciary Net Plan Position
2015	$ 24,075,158	$ 386,992	$ 942,019	$ 2,205,464	$ 4,531	$ 927,716	$ 24,121,890
2016	24,121,890	345,322	948,704	2,302,558	4,667	1,846,046	24,954,737
2017	24,954,737	337,698	969,925	2,414,986	4,807	1,907,465	25,750,032
2018	25,750,032	331,090	996,299	2,516,793	4,951	1,966,466	26,522,143
2019	26,522,143	323,583	1,024,293	2,618,558	5,100	2,023,624	27,269,985
2020	27,269,985	313,231	1,050,866	2,734,219	5,253	2,078,182	27,972,792
2021	27,972,792	300,999	1,077,607	2,856,348	5,410	2,128,837	28,618,477
2022	28,618,477	290,029	1,099,845	2,968,650	5,573	2,175,308	29,209,436
2023	29,209,436	281,235	1,125,813	3,079,491	5,740	2,217,648	29,748,901
2024	29,748,901	270,287	1,149,745	3,196,818	5,912	2,255,533	30,221,736
2025	30,221,736	258,291	1,171,004	3,319,933	6,089	2,287,826	30,612,835
2026	30,612,835	244,619	1,191,060	3,445,346	6,272	2,313,463	30,910,359
2027	30,910,359	229,662	1,181,371	3,573,743	6,460	2,330,950	31,072,139
2028	31,072,139	214,366	1,195,758	3,696,225	6,654	2,338,371	31,117,755
2029	31,117,755	198,593	1,210,732	3,815,909	6,854	2,336,688	31,041,005
2030	31,041,005	182,709	968,158	3,930,265	7,059	2,325,509	30,580,057
2031	30,580,057	164,687	954,372	4,051,423	7,271	2,283,431	29,923,853
2032	29,923,853	145,005	935,223	4,176,122	7,489	2,225,624	29,046,094
2033	29,046,094	125,832	912,147	4,290,911	7,695	2,150,642	27,936,109
2034	27,936,109	106,936	888,045	4,394,804	7,881	2,057,728	26,586,133
2035	26,586,133	90,288	865,294	4,475,925	8,026	1,946,850	25,004,614
2036	25,004,614	77,444	845,923	4,525,368	8,115	1,819,125	23,213,623
2037	23,213,623	65,585	831,948	4,561,883	8,181	1,675,495	21,216,587
2038	21,216,587	51,782	820,438	4,601,808	8,252	1,515,425	18,994,172
2039	18,994,172	37,064	807,013	4,638,863	8,319	1,337,589	16,528,656
2040	16,528,656	26,111	791,366	4,646,168	8,332	1,141,805	13,833,438
2041	13,833,438	20,039	781,063	4,620,622	8,286	929,444	10,935,076
2042	10,935,076	15,423	776,865	4,581,923	8,217	701,720	7,838,944
2043	7,838,944	11,706	774,193	4,533,602	8,130	458,809	4,541,920
2044	4,541,920	8,755	772,588	4,476,689	8,028	200,412	1,038,958
2045	1,038,958	6,464	771,860	4,412,152	7,912	(73,916)	0
2046	0	0	0	4,341,086	7,785	0	0
2047	0	0	0	4,264,315	7,647	0	0
2048	0	0	0	4,182,434	7,500	0	0
2049	0	0	0	4,096,053	7,345	0	0
2050	0	0	0	4,005,721	7,183	0	0
2051	0	0	0	3,911,802	7,015	0	0
2052	0	0	0	3,814,592	6,841	0	0
2053	0	0	0	3,714,324	6,661	0	0
2054	0	0	0	3,611,185	6,476	0	0
2055	0	0	0	3,505,341	6,286	0	0
2056	0	0	0	3,396,927	6,092	0	0
2057	0	0	0	3,286,067	5,893	0	0
2058	0	0	0	3,172,847	5,690	0	0
2059	0	0	0	3,057,383	5,483	0	0
2060	0	0	0	2,939,788	5,272	0	0
2061	0	0	0	2,820,230	5,057	0	0
2062	0	0	0	2,698,904	4,840	0	0
2063	0	0	0	2,576,073	4,620	0	0
2064	0	0	0	2,452,055	4,397	0	0
2065	0	0	0	2,327,212	4,173	0	0
2066	0	0	0	2,201,948	3,949	0	0
2067	0	0	0	2,076,694	3,724	0	0
2068	0	0	0	1,951,936	3,500	0	0
2069	0	0	0	1,828,191	3,278	0	0

Table 1
(continued)
Projection of Fiduciary Net Position
(000's omitted)

Fiscal Year June 30	Beginning Fiduciary Net Plan Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Projected Investment Earnings	Ending Fiduciary Net Plan Position
2070	$ 0	$ 0	$ 0	$ 1,705,967	$ 3,059	$ 0	$ 0
2071	0	0	0	1,585,728	2,844	0	0
2072	0	0	0	1,467,880	2,632	0	0
2073	0	0	0	1,352,803	2,426	0	0
2074	0	0	0	1,240,834	2,225	0	0
2075	0	0	0	1,132,273	2,030	0	0
2076	0	0	0	1,027,426	1,842	0	0
2077	0	0	0	926,590	1,662	0	0
2078	0	0	0	830,109	1,489	0	0
2079	0	0	0	738,305	1,324	0	0
2080	0	0	0	651,533	1,168	0	0
2081	0	0	0	570,127	1,022	0	0
2082	0	0	0	494,393	887	0	0
2083	0	0	0	424,577	761	0	0
2084	0	0	0	360,881	647	0	0
2085	0	0	0	303,433	544	0	0
2086	0	0	0	252,222	452	0	0
2087	0	0	0	207,190	372	0	0
2088	0	0	0	168,111	301	0	0
2089	0	0	0	134,692	242	0	0
2090	0	0	0	106,519	191	0	0
2091	0	0	0	83,127	149	0	0
2092	0	0	0	63,984	115	0	0
2093	0	0	0	48,563	87	0	0
2094	0	0	0	36,330	65	0	0
2095	0	0	0	26,777	48	0	0
2096	0	0	0	19,444	35	0	0
2097	0	0	0	13,912	25	0	0
2098	0	0	0	9,816	18	0	0
2099	0	0	0	6,841	12	0	0
2100	0	0	0	4,724	8	0	0
2101	0	0	0	3,244	6	0	0
2102	0	0	0	2,229	4	0	0
2103	0	0	0	1,545	3	0	0
2104	0	0	0	1,087	2	0	0
2105	0	0	0	782	1	0	0
2106	0	0	0	578	1	0	0
2107	0	0	0	440	1	0	0
2108	0	0	0	343	1	0	0
2109	0	0	0	272	0	0	0
2110	0	0	0	218	0	0	0
2111	0	0	0	176	0	0	0
2112	0	0	0	142	0	0	0
2113	0	0	0	114	0	0	0
2114	0	0	0	91	0	0	0
2115	0	0	0	72	0	0	0
2116	0	0	0	56	0	0	0
2117	0	0	0	42	0	0	0
2118	0	0	0	31	0	0	0
2119	0	0	0	22	0	0	0
2120	0	0	0	15	0	0	0
2121	0	0	0	10	0	0	0
2122	0	0	0	7	0	0	0
2123	0	0	0	4	0	0	0
2124	0	0	0	3	0	0	0
2125	0	0	0	2	0	0	0
2126	0	0	0	1	0	0	0
2127	0	0	0	1	0	0	0

Table 2

Actuarial Present Values of Projected Benefit Payments
(000's omitted)

Fiscal Year Ending June 30	Beginning Fiduciary Net Plan Position	Benefit Payments	Benefit Payments: Funded Portion	Benefit Payments: Unfunded Portion	Present Value of Benefit Payments: Funded Portion at 7.90%	Present Value of Benefit Payments: Unfunded Portion at 3.80%	Present Value of Benefit Payments: Using Single Discount Rate of 5.79%
2015	$ 24,075,158	$ 2,205,464	$ 2,205,464	$ 0	$ 2,123,192	$ 0	$ 2,144,269
2016	24,121,890	2,302,558	2,302,558	0	2,054,369	0	2,116,158
2017	24,954,737	2,414,986	2,414,986	0	1,996,921	0	2,098,024
2018	25,750,032	2,516,793	2,516,793	0	1,928,734	0	2,066,816
2019	26,522,143	2,618,558	2,618,558	0	1,859,797	0	2,032,707
2020	27,269,985	2,734,219	2,734,219	0	1,799,763	0	2,006,339
2021	27,972,792	2,856,348	2,856,348	0	1,742,496	0	1,981,255
2022	28,618,477	2,968,650	2,968,650	0	1,678,410	0	1,946,465
2023	29,209,436	3,079,491	3,079,491	0	1,613,603	0	1,908,644
2024	29,748,901	3,196,818	3,196,818	0	1,552,438	0	1,872,933
2025	30,221,736	3,319,933	3,319,933	0	1,494,184	0	1,838,621
2026	30,612,835	3,445,346	3,445,346	0	1,437,097	0	1,803,657
2027	30,910,359	3,573,743	3,573,743	0	1,381,514	0	1,768,491
2028	31,072,139	3,696,225	3,696,225	0	1,324,247	0	1,729,005
2029	31,117,755	3,815,909	3,815,909	0	1,267,031	0	1,687,308
2030	31,041,005	3,930,265	3,930,265	0	1,209,454	0	1,642,769
2031	30,580,057	4,051,423	4,051,423	0	1,155,457	0	1,600,739
2032	29,923,853	4,176,122	4,176,122	0	1,103,819	0	1,559,712
2033	29,046,094	4,290,911	4,290,911	0	1,051,121	0	1,514,883
2034	27,936,109	4,394,804	4,394,804	0	997,749	0	1,466,654
2035	26,586,133	4,475,925	4,475,925	0	941,766	0	1,411,982
2036	25,004,614	4,525,368	4,525,368	0	882,456	0	1,349,456
2037	23,213,623	4,561,883	4,561,883	0	824,445	0	1,285,900
2038	21,216,587	4,601,808	4,601,808	0	770,770	0	1,226,168
2039	18,994,172	4,638,863	4,638,863	0	720,089	0	1,168,400
2040	16,528,656	4,646,168	4,646,168	0	668,418	0	1,106,199
2041	13,833,438	4,620,622	4,620,622	0	616,073	0	1,039,913
2042	10,935,076	4,581,923	4,581,923	0	566,185	0	974,771
2043	7,838,944	4,533,602	4,533,602	0	519,197	0	911,710
2044	4,541,920	4,476,689	4,476,689	0	475,143	0	850,998
2045	1,038,958	4,412,152	1,038,958	3,373,192	102,199	1,081,488	792,831
2046	0	4,341,086	0	4,341,083	0	1,340,855	737,372
2047	0	4,264,315	0	4,264,315	0	1,268,923	684,693
2048	0	4,182,434	0	4,182,434	0	1,198,996	634,796
2049	0	4,096,053	0	4,096,053	0	1,131,245	587,664
2050	0	4,005,721	0	4,005,721	0	1,065,797	543,253
2051	0	3,911,802	0	3,911,802	0	1,002,706	501,484
2052	0	3,814,592	0	3,814,592	0	941,992	462,260
2053	0	3,714,324	0	3,714,324	0	883,653	425,478
2054	0	3,611,185	0	3,611,185	0	827,664	391,025
2055	0	3,505,341	0	3,505,341	0	773,994	358,793
2056	0	3,396,927	0	3,396,927	0	722,597	328,669
2057	0	3,286,067	0	3,286,067	0	673,425	300,543
2058	0	3,172,847	0	3,172,847	0	626,418	274,308
2059	0	3,057,383	0	3,057,383	0	581,524	249,860
2060	0	2,939,788	0	2,939,788	0	538,687	227,102
2061	0	2,820,230	0	2,820,230	0	497,860	205,944
2062	0	2,698,904	0	2,698,904	0	459,000	186,299
2063	0	2,576,073	0	2,576,073	0	422,072	168,089
2064	0	2,452,055	0	2,452,055	0	387,045	151,241
2065	0	2,327,212	0	2,327,212	0	353,891	135,685
2066	0	2,201,948	0	2,201,948	0	322,584	121,356
2067	0	2,076,694	0	2,076,694	0	293,097	108,190
2068	0	1,951,936	0	1,951,936	0	265,404	96,125
2069	0	1,828,191	0	1,828,191	0	239,478	85,104

Table 2
(continued)
Actuarial Present Values of Projected Benefit Payments
(000's omitted)

			Benefit Payments		Present Value of Benefit Payments		
Fiscal Year Ending June 30	Beginning Fiduciary Net Plan Position	Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 7.90%	Unfunded Portion at 3.80%	Using Single Discount Rate of 5.79%
2070	$ 0	$ 1,705,967	$ 0	$ 1,705,967	$ 0	$ 215,287	$ 75,069
2071	0	1,585,728	0	1,585,728	0	192,787	65,959
2072	0	1,467,880	0	1,467,880	0	171,926	57,716
2073	0	1,352,803	0	1,352,803	0	152,647	50,280
2074	0	1,240,834	0	1,240,834	0	134,887	43,595
2075	0	1,132,273	0	1,132,273	0	118,580	37,604
2076	0	1,027,426	0	1,027,426	0	103,661	32,254
2077	0	926,590	0	926,590	0	90,064	27,497
2078	0	830,109	0	830,109	0	77,733	23,286
2079	0	738,305	0	738,305	0	66,605	19,577
2080	0	651,533	0	651,533	0	56,625	16,331
2081	0	570,127	0	570,127	0	47,736	13,508
2082	0	494,393	0	494,393	0	39,880	11,073
2083	0	424,577	0	424,577	0	32,994	8,989
2084	0	360,881	0	360,881	0	27,018	7,222
2085	0	303,433	0	303,433	0	21,885	5,740
2086	0	252,222	0	252,222	0	17,526	4,510
2087	0	207,190	0	207,190	0	13,869	3,502
2088	0	168,111	0	168,111	0	10,842	2,686
2089	0	134,692	0	134,692	0	8,368	2,034
2090	0	106,519	0	106,519	0	6,376	1,521
2091	0	83,127	0	83,127	0	4,793	1,122
2092	0	63,984	0	63,984	0	3,554	816
2093	0	48,563	0	48,563	0	2,599	586
2094	0	36,330	0	36,330	0	1,873	414
2095	0	26,777	0	26,777	0	1,330	289
2096	0	19,444	0	19,444	0	930	198
2097	0	13,912	0	13,912	0	641	134
2098	0	9,816	0	9,816	0	436	89
2099	0	6,841	0	6,841	0	293	59
2100	0	4,724	0	4,724	0	195	38
2101	0	3,244	0	3,244	0	129	25
2102	0	2,229	0	2,229	0	85	16
2103	0	1,545	0	1,545	0	57	11
2104	0	1,087	0	1,087	0	39	7
2105	0	782	0	782	0	27	5
2106	0	578	0	578	0	19	3
2107	0	440	0	440	0	14	2
2108	0	343	0	343	0	10	2
2109	0	272	0	272	0	8	1
2110	0	218	0	218	0	6	1
2111	0	176	0	176	0	5	1
2112	0	142	0	142	0	4	1
2113	0	114	0	114	0	3	0
2114	0	91	0	91	0	2	0
2115	0	72	0	72	0	2	0
2116	0	56	0	56	0	1	0
2117	0	42	0	42	0	1	0
2118	0	31	0	31	0	1	0
2119	0	22	0	22	0	0	0
2120	0	15	0	15	0	0	0
2121	0	10	0	10	0	0	0
2122	0	7	0	7	0	0	0
2123	0	4	0	4	0	0	0
2124	0	3	0	3	0	0	0
2125	0	2	0	2	0	0	0
2126	0	1	0	1	0	0	0
2127	0	1	0	1	0	0	0

Section II – Actuarial Assumptions and Methods

Investment Rate of Return: 7.90% per annum, compounded annually.

COLA: No future COLA is assumed.

Compensation Limit Increase: 401(a)(17) Limit – 3.00% per annum, Social Security Wage Base – 4.00% per annum

Separations from Service and Salary Increases: Representative values of the assumed annual rates of separation and annual rates of salary increases are as follows:

Annual Rates of

	Select Withdrawal					Ultimate Withdrawal
Age	Up to the 1st Year	2nd Year	3rd Year	4th Year	5 to 9 Years	After 9 Years
25	6.90%	2.03%	1.18%	0.60%	0.35%	0.00%
30	9.30	2.75	1.76	1.31	0.60	0.24
35	9.80	3.17	1.76	1.57	0.77	0.24
40	13.70	2.25	1.85	1.74	0.67	0.27
45	3.50	2.25	1.85	2.32	1.35	0.28
50	0.00	2.25	1.85	2.00	1.60	0.30
55	0.00	0.00	0.00	0.00	0.00	0.00

Annual Rates of

	Death			Disability	
	Ordinary				
Age	Male*	Female*	Accidental	Ordinary	Accidental
25	.036%	.020%	.006%	.045%	.029%
30	.043	.025	.006	.147	.278
35	.074	.046	.008	.265	.393
40	.103	.068	.008	.362	.423
45	.145	.108	.009	.394	.396
50	.205	.161	.009	.449	.179
55	.290	.235	.014	.554	.161
60	.442	.342	.013	1.024	.161
64	.602	.458	.008	1.680	.161
65 and over	0.000	0.000	0.000	0.000	0.000

* RP2000 Employee Pre-Retirement mortality tables projected fourteen-years using Projection Scale BB. These base tables are effective 2014 and are projected on a generational basis using Projection Scale BB.

	Service Retirements Length of Service				Salary Increases	
Age	Less Than 21 Years*	21 to 24 Years	25 Years	26 or More Years	FY2012 to FY2021	FY2022 and thereafter
25					9.48%	10.48%
30					6.47	7.47
35					4.67	5.67
40	4.00%	0.60%	45.57%	15.40%	3.83	4.83
45	4.00	0.60	54.83	15.40	3.40	4.40
50	4.30	0.60	57.62	18.48	3.25	4.25
55	6.00	0.00	64.94	24.47	3.10	4.10
60	3.20	0.00	77.49	27.34	2.85	3.85
64	37.50	0.00	85.24	51.03	2.60	3.60
65 and over	100.00	100.00	100.00	100.00		

* Retirement assumption prior to age 55 is for any member as of January 18, 2000 upon completion of 20 years of service.

Deaths after Retirement: RP-2000 Combined Healthy Mortality Tables projected one year using Projection Scale AA and one year using Projection Scale BB is the base table as of the 2014 measurement date for male service retirements and will be further projected on a generational basis using Projection Scale BB. RP-2000 Combined Healthy Mortality Tables projected fourteen years using projection Scale BB is the base table as of the 2014 measurement date for female service retirements and beneficiaries and will be further projected on a generational basis using Projection Scale BB. Special mortality tables are used for the period after disability retirement. The following representative values of the assumed annual rates of mortality are effective 2014:

	Service Retirements		Beneficiaries			
Age	Men	Women	Men	Women	Age	Disability Retirements
55	0.354%	0.253%	0.348%	0.253%	35	0.598%
60	0.659	0.439	0.612	0.439	40	0.634
65	1.241	0.820	1.076	0.820	45	0.803
70	2.155	1.414	1.797	1.414	50	1.058
75	3.674	2.374	3.062	2.374	55	1.210
80	6.277	3.875	5.209	3.875	60	1.426
85	10.833	6.540	8.964	6.540	65	1.949

Marriage: Husbands are assumed to be 3 years older than wives. Among the active population, 90% of participants are assumed married. No children are assumed. Neither the percentage married nor the number of children assumption is individually explicit, but they are considered reasonable as a single combined assumption.

VALUATION METHOD:

Funding calculations: 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, 2018 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, 2028 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 was used. 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.

Section III – Summary of Plan Provisions

New Jersey Statutes, Title 43, Chapter 16A.

Eligibility for Membership

Enrollment is restricted to eligible policemen and firemen who are permanent and full-time and who pass the physical and mental fitness requirements. The maximum enrollment age is 35.

1. Definitions

Plan Year	The 12-month period beginning on July 1 and ending on June 30.
Credited Service	A year of service is credited for each year an employee is a Member of the Retirement System plus service, if any, covered by a prior service liability.
Average Final Compensation (AFC)	The average annual compensation for the three consecutive years of Service immediately preceding retirement or the highest three consecutive fiscal years of Membership Service.
Compensation	Base salary upon which contributions by a Member to the Annuity Savings Fund were based in the last year of Service. For Accidental Death, benefits are computed at the annual rate of salary. In accordance with Chapter 1, P.L. 2010, for members hired on or after May 22, 2010 Compensation cannot exceed the annual maximum wage contribution base for Social Security pursuant to the Federal Insurance Contribution Act.
Final Compensation (FC)	Annual compensation received by the member in the last 12 months of Credited Service preceding his retirement. In accordance with Chapter 1, P.L. 2010, for members hired on or after May 22, 2010, FC means the average annual compensation for the three fiscal years of membership providing the largest benefit.
Accumulated Deductions	The sum of all amounts deducted from the compensation of a Member or contributed by him or on his behalf without interest.

2. Benefits

Service Retirement	Eligibility means age 55 or 20 years of credited service for an employee who was a member of the Retirement System as of January 18, 2000 and age 55 for an employee who became a member of the Retirement System after January 18, 2000; mandatory at age 65 (except that a member hired prior to January 1, 1987 may remain a member of the Retirement System until the member attains the earlier of age 68 or 25 years of creditable service). Benefit is an annual retirement allowance equal to a member annuity plus an employer pension which together equals the greater of:

(i) 1/60th of FC for each year of Credited Service; or

(ii) 2% of FC multiplied by years of Credited Service up to 30 plus 1% of FC multiplied by years of Service over 30. (Prior to January 18, 2000, this benefit was based on AFC rather than FC. However, Policy Memorandum 4-2000, which interpreted the provisions of Chapter 428, P.L. 1999, authorized the change in the salary basis).

(iii) 50% of FC if the member has 20 or more years of Credited Service.

Chapter 428 also requires that, in addition to the 50% of FC benefit, any member as of January 18, 2000 who will have 20 or more years of Credited Service and is required to retire upon attaining age 65 (except that a member hired prior to January 1, 1987 may remain a member of the System until the member attains the earlier of age 68 or 25 years of creditable service), shall receive an additional benefit equal to 3% of FC for each year of Credited Service over 20 years but not over 25 years.

Special Retirement

After completion of 25 years of Credited Service. The annual retirement benefit is equal to a member annuity plus an employer pension which together equal 65% of FC plus 1% of FC for each year of Credited Service over 25. Effective for members hired after June 28, 2011, the annual retirement benefit is equal to a member annuity plus an employer pension which together equal 60% of FC plus 1% of FC for each year of Credited Service over 25. There is a maximum benefit of 70% of FC (65% of FC for members hired after June 28, 2011) except for those members with 30 or more years of Credited Service on June 30, 1979.

Vested Termination

(A) Eligible upon termination of service prior to age 55 and prior to 10 years of Credited Service. The benefit equals a refund of Accumulated Deductions less any outstanding loans.

(B) Eligible upon termination of service prior to age 55 and after 10 years of Credited Service (but less than 20 years if a member on or prior to January 18, 2000 or less than 25 years of service if a member after January 18, 2000). The benefit is a deferred retirement benefit, commencing at age 55, equal to a member annuity plus an employer pension which together provide a retirement allowance equal to 2% of FC multiplied by years of Credited Service up to 30 plus 1% of FC multiplied by years of Credited Service over 30.

Death Benefits

Ordinary Death Benefit - Lump Sum (NCGIPF)

(1) If a member dies prior to retirement, the benefit payable is as follows:

A lump sum amount equal to 3-1/2 times FC payable to the member's beneficiary.

(2) After retirement but prior to age 55, the benefit is as follows:

(i) For death while a Disabled Retiree the benefit is equal to 3-1/2 times Compensation.

(ii) For death while a Deferred Retiree the benefit is equal to his Accumulated Deductions.

(iii) For death while a Retiree who has completed 20 years of Credited Service, the benefit is equal to 1/2 times FC.

(3) After retirement and after age 55, the benefit payable is equal to 1/2 times Compensation. (Note: If a Member is not disabled, 10 years of Credited Service is required for Members enrolling after July 1, 1971.)

Ordinary Death Benefit - Survivor Annuity

(1) If a member dies prior to retirement, the benefit payable to a widow (widower) is equal to 50% of FC (20% of FC payable to one child, 35% of FC payable to two children or 50% of FC payable to three or more children if there is no surviving widow or widower or if the widow or widower dies or remarries or 25% of FC payable to one parent or 40% of FC payable to two parents if no surviving widow, widower or child. If no widow, widower, child or parent, the benefit payable to a beneficiary is the aggregate Accumulated Contributions at the time of death).

(2) For any member who retired after December 18, 1967, the benefit payable to a widow (widower) is equal to 50% of FC plus 15% of FC for one child and 25% of FC for two or more children.

If no spouse, or spouse remarries, the benefit is equal to 20% of FC for one child, 35% for two children, and 50% for three or more children.

There is also a minimum benefit payable to widows (widowers) of $4,500 a year.

(3) For any member who retired with an Accidental Disability Benefit, the benefit payable is equal to $4,500 a year to the widow (widower). If there is no widow (widower) the benefit payable is $600 a year for 1 child, $960 a year for 2 children, and $1,500 a year for 3 or more children. The benefit for children is payable until age 18.

Accidental Death Benefit

A death while active resulting from injuries received from an accident during performance of duty is eligible for a lump sum equal to the Accumulated Deductions plus 3-1/2 times Compensation plus an annuity benefit payable is as follows:

(i) The benefit to a widow or widower is equal to 70% of Compensation.

(ii) The benefit, when there is no spouse, or spouse is remarried, is equal to 20% of Compensation for one child, 35% for two children, 50% for three or more children. The benefit is payable while the children are under age 18, or until age 24 if they are full-time students, or it is payable for life if they are disabled.

(iii) The benefit, when there is no spouse or children, is equal to 25% of Compensation for one parent and 40% for two parents.

(iv) The benefit, when there is no relation as stated above, is equal to the Accumulated Deductions and is payable to a beneficiary or to the Member's estate. This is also the minimum benefit payable under (i), (ii) and (iii).

Disability Benefits

Ordinary Disability Retirement

A Member is eligible for Ordinary Disability Retirement if he (she) has 4 years of Service and is totally and permanently incapacitated from the performance of usual or available duties. The benefit is equal to the greater of:

(i) 1-1/2% of FC times the number of years of Credited Service; or

(ii) 40% of FC.

In addition, a member who has at least 20 years but less than 25 years of Credited Service and who is required to retire upon application by the employer on and after January 18, 2000 shall receive a benefit equal to a member annuity plus an employer pension which together provide a total retirement allowance equal to 50% of FC plus 3% of FC multiplied by the number of years of Credited Service over 20 but not over 25.

Accidental Disability Retirement

A Member is eligible upon total and permanent incapacitation from the performance of usual or available duties as a result of injury during the performance of regular duties. The benefit payable is equal to a Member annuity plus an employer pension which together equals 2/3 of the Compensation at date of injury.

Special Disability Retirement

A member is eligible for Special Disability Retirement if he (she) has 5 years of Credited Service, is under age 55, and has received a heart transplant. The benefit payable is equal to a Member annuity plus an employer pension which together equals 50% of FC.

3. Member Contributions

Each member contributes 8.5% of Compensation. Chapter 78, P.L. 2011 increased the Member Contributions from 8.5% to 10.0% of Compensation effective October 2011.

4. Chapter 19, P.L. 2009

Chapter 19, P.L. 2009 provides that the State Treasurer will reduce for Local employers the normal and accrued liability contributions to 50 percent of the amount certified for fiscal years 2009. The additional unfunded liability will be paid by Local employers in level annual payments over a period of 15 years, with the first payment due in the fiscal year ending June 30, 2012. The unfunded liability will be adjusted annually by the rate of return on the actuarial value of assets. The legislation also provides that a Local employer may opt to pay 100 percent of the recommended contribution for fiscal year 2009. Employers making this election will be credited with the full payment. In addition, certain employers who were eligible to defer 50% of their fiscal year 2009 recommended contributions but instead paid 100% of the 2009 recommended contributions are permitted to elect to defer 50% of their recommended 2010 fiscal year contributions. The additional unfunded liability will be paid by Local employers in level annual payments over a period of 15 years, with the first payment due in the fiscal year ending June 30, 2012. The unfunded liability will be adjusted by the rate of return on the actuarial value of assets.

5. Early Retirement Incentive Contribution

The following legislation provides additional retirement benefits to certain employees of Local employers: Ch. 99, P.L. 1993, Ch. 59, P.L. 1999, Ch. 126, P.L. 2000 and Ch. 130, P.L. 2003. The cost of the enhanced pension benefits will be funded by employer contributions to the retirement system and paid by the employer that elected to participate. The additional pension liability shall be paid by each electing employer entity over a period of years provided by the legislation.