

Report on the Annual Valuation of The Police and Firemen's Retirement System of New Jersey

Prepared as of July 1, 2016

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500 Plaza Drive
Secaucus, New Jersey 07096-1533

February 3, 2017

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

Members of the Board:

The law governing the operation of the Police and Firemen's Retirement System of New Jersey provides for annual actuarial valuations of the System. The results of the July 1, 2016 valuation are submitted in this report, which also includes a comparison with the preceding year's valuation.

The valuation provides information concerning the financial condition of the Plan as of July 1, 2016, and sets forth the basis for determining the recommended annual contribution for the State fiscal year beginning July 1, 2017.

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. These assumptions will be reviewed in a June 30, 2016 experience study and will remain in effect for valuation purposes until such time as the Board of Trustees adopts revised assumptions.

The Treasurer has recommended a change in the economic assumptions used for the valuation. The rate of investment return has been revised from 7.90% per annum to 7.65% per annum. The assumed future salary increases have been reduced by 0.5% at all ages for both the select and ultimate periods. In addition, the select period was extended from the fiscal year 2021 to the fiscal year 2026. Detailed information with regard to the change in the salary increase assumption is outlined in Appendix B. These assumptions will remain in effect for valuation purposes until such time the Board or Treasurer recommends revised 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. These assumptions were selected in accordance with the applicable Actuarial Standards of Practice published by the Actuarial Standards Board.

The valuation reflects the actual fiscal year 2016 State Pension contribution of \$138,324,000. In addition, the valuation also reflects the anticipated fiscal year 2017 State Pension contribution of \$193,550,939. This amount may be subject to change per the requirements of the State's fiscal year 2017 spending plan.



Reporting requirements of Statements No.67 and No.68 are effective as of June 30, 2014 and June 30, 2015 reporting dates, respectively. These requirements are addressed in separate reports.

The State of New Jersey's Division of Pensions and Benefits reported the individual data for members of the Police and Firemen's 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. Any Statements regarding funded ratios have no specific relevance to any funded position that might be determined in the event a settlement is contemplated. An analysis of the potential range of future results is beyond the scope of this valuation.

Use of this report for any other reason or by anyone other than the Board or staff of the State of New Jersey's 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 Conduent to review any statement you wish to make on the results contained in this report. Conduent will accept no liability for any such statement made without prior review by Conduent.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I 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,

A handwritten signature in black ink that reads "Aaron Shapiro".

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

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Section I – Summary of Key Results

The Police and Firemen's Retirement System of New Jersey was established effective July 1, 1944. Each year an actuarial valuation of the assets and liabilities of the System is made to determine the appropriate level of contributions. This report, prepared as of July 1, 2016, 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 below.

Valuation Fiscal Year	July 1, 2016 2018	July 1, 2015 2017
<u>Number of Active Participants</u>		
• Contributory	39,389	39,052
• Non-Contributory	1,400	1,307
• Total	40,789	40,359
<u>Limited Annual Compensation</u>		
• Contributory Participants	\$ 3,729,156,464	\$ 3,696,334,469
• Non-Contributory Participants	99,367,896	94,313,880
• Total Compensation	\$ 3,828,524,360	\$ 3,790,648,349
<u>Unlimited Annual Compensation</u>	\$ 3,828,784,360	\$ 3,790,724,117
<u>Annual Compensation for Contribution Purposes⁴</u>	\$ 3,726,807,562	\$ 3,695,509,355
Number of Pensioners and Beneficiaries	45,625	44,252
Total Annual Allowances	\$ 2,315,888,032	\$ 2,209,791,511
Number of Terminated Vested Members	47	51
Total Annual Allowances	\$ 971,076	\$ 1,028,508
<u>Assets</u>		
Total Present Market Value of Assets ¹	\$ 24,115,866,878	\$ 25,191,023,757
Total Valuation Assets ¹	\$ 26,348,593,227	\$ 25,939,616,259
<u>Contribution Amounts</u>		
Recommended Pension Contribution ²		
Normal Contribution	\$ 396,618,198	\$ 402,691,551
Accrued Liability Contribution ³	955,612,499	860,931,185
Total Pension Contribution ²	\$ 1,352,230,697	\$ 1,263,622,736

1. Includes discounted receivable contributions of \$179,796,506 as of July 1, 2016 and \$128,196,770 as of July 1, 2015, respectively. The amounts also include the present value of receivable ERI contributions of \$11,404,276 as of July 1, 2016 and \$12,887,608 as of July 1, 2015, respectively. The amounts also include the present value of Chapter 19, P.L. 2009 contribution deferrals of \$151,610,930 as of July 1, 2016 and of \$159,321,982 as of July 1, 2015, respectively.
2. The contribution amounts were calculated assuming payment on 7/1/17 and 7/1/16 respectively. Interest should be added from this date to the actual payment dates.
3. The accrued liability contribution does not include ERI payments and Local employer contributions due to Chapter 19, P.L. 2009 deferrals.
4. The amounts exclude compensation of \$2,348,902 for 17 contributing active members in 2016 who are age 65 or older and \$825,114 for 8 contributing active members in 2015 who are age 65 or older.

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

- The Appropriation Act of fiscal year 2016 which reduced the recommended State Pension contribution of \$461,081,051 to \$138,324,000. (This amount excludes the premium paid to the Non-Contributory Group Insurance Fund of \$7,930,178 for the lump sum death benefits.)
- The potential impact of the Appropriations Act of fiscal year 2017 which allows the State Treasurer to reduce the recommended State normal cost and accrued liability contribution for fiscal year 2017 from \$483,877,347 to \$193,550,939. Therefore, the fiscal year 2017 recommended State pension contribution of \$483,877,347 has been reduced to \$193,550,939 (40% of the recommended employer contribution) and has been recognized as a receivable discounted contribution of \$179,796,506 for purposes of this valuation. (This amount excludes the estimated premium paid to the Non-Contributory Group Insurance Fund of \$8,893,000 for lump sum death benefits.)
- Chapter 19, P.L. 2009 which provides that the State Treasurer will reduce the normal and accrued liability contributions for Local employers to 50 percent of the amount certified for fiscal year 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.
- The unauthorized early retirement incentive programs offered by certain Local employers. The additional liability incurred by the System due to these programs is included as a receivable contribution. Two locations paid off the additional liability during the fiscal year ending June 30, 2016.

There are no other changes to the benefit and contribution provisions since the previous valuation.

As required under Chapter 255, P.L. 1944, 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, 2010 – June 30, 2013 Experience Study and approved by the Board at the February 9, 2015 Board meeting. These assumptions will be reviewed in a June 30, 2016 experience study and will remain in effect for valuation purposes until such time as the Board of Trustees adopts revised assumptions.

The Treasurer has recommended a change in the economic assumptions used for the valuation. The rate of investment return has been revised from 7.90% per annum to 7.65% per annum. The assumed future salary increases have been reduced by 0.5% at all ages for both the select and ultimate periods. In addition, the select period was extended from the fiscal year 2021 to the fiscal year 2026. Please see Appendix B for more information with regard to the change in the salary increase assumption. As a result of the revised economic assumptions, the accrued liability increased \$50,220,658 for the State and \$381,998,273 for the Local Employers while the gross normal cost was reduced by \$2,465,975 for the State and \$11,832,521 for the Local Employers. In addition, the recommended contributions decreased \$6,909,000 for the State and increased \$5,789,000 for the Local Employers. These assumptions will remain in effect for valuation purposes until such time as the Board or the Treasurer recommends revised economic assumptions.

The valuation reflects future increases in the compensation limits imposed on certain member tiers. For members hired prior to May 22, 2010, the compensation limit for 2016 is \$265,000 and is assumed to increase by 3.00% annually. For members hired on or after May 22, 2010, the compensation limit for 2016 is \$118,500 and is assumed to increase by 4.0% annually.

Lastly, the employer receivable contribution included in the Market Value of Assets (MVA) and the Actuarial Value of Assets (AVA) has been discounted at the valuation interest rate of 7.65% from the expected payable date of June 30, 2017 to the valuation date for the State's MVA and AVA and from the expected payable date of April 1, 2017 to the valuation date for the Local's MVA and AVA.

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 for valuing the Fund are summarized in Appendix B.

The combination of the plan provisions, actuarial assumptions and member and beneficiary data is used to generate the overall recommended level of employer contributions. The recommended contribution schedule is summarized in Sections III (H) and III (I).

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, 2016 and July 1, 2015 is set forth in the following table.

Table I
Comparative Balance Sheet

	2016	2015
Assets		
Actuarial value of assets of Fund	\$ 26,348,593,227	\$ 25,939,616,259
Net unfunded accrued liability/(surplus)	<u>11,121,488,023</u>	<u>9,782,787,209</u>
Total Assets	\$ 37,470,081,250	\$ 35,722,403,468
Accrued Liabilities		
Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund	\$ 24,711,984,333	\$ 23,025,291,735
Present value of benefits to present active members	<u>12,758,096,917</u>	<u>12,697,111,733</u>
Total Accrued Liabilities	\$ 37,470,081,250	\$ 35,722,403,468

Section II – Employee Data

The data employed for the valuations were furnished to the actuaries by the Division of Pensions and Benefits. While the actuaries did not verify the data at their source, they did perform tests for internal consistency and reasonableness. The accuracy of the results presented in this report is dependent on the accuracy of the data. The following summarizes and compares the Fund membership as of July 1, 2016 and July 1, 2015 by various categories.

State Membership

Active Membership

Group	2016			2015		
	Number ³	Annual Compensation	Limited Annual Compensation	Number ³	Annual Compensation	Limited Annual Compensation
Men	5,628	\$ 413,461,128	\$ 413,461,128	5,608	\$ 422,341,421	\$ 422,341,421
Women	1,283	\$ 94,341,252	\$ 94,341,252	1,275	\$ 95,746,284	\$ 95,746,284
Policemen ¹	6,866	\$ 504,788,053	\$ 504,788,053	6,837	\$ 515,031,110	\$ 515,031,110
Firemen ²	45	\$ 3,014,327	\$ 3,014,327	46	\$ 3,056,595	\$ 3,056,595

1 There are 48 employer locations in 2016 and 49 employer locations in 2015 reporting payroll for policemen.

2 There are 5 employer locations in 2016 and 5 employer locations in 2015 reporting payroll for firemen.

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

Retired Members and Beneficiaries

Group	2016		2015	
	Number ⁴	Annual Allowances ⁵	Number ⁴	Annual Allowances ⁵
Deferred Terminated Vesteds	8	\$ 168,912	8	\$ 162,756
Service Retirements	4,498	\$ 234,599,718	4,353	\$ 224,873,195
Ordinary Disability Retirements	732	\$ 20,143,534	735	\$ 20,087,796
Accidental Disability Retirements	344	\$ 15,438,319	338	\$ 15,030,714
Beneficiaries	772	\$ 23,569,496	726	\$ 21,949,484

4 The number counts exclude 461 Domestic Relations beneficiaries in 2016 and 436 Domestic Relations beneficiaries in 2015.

5 Includes annual allowances paid to Domestic Relations beneficiaries.

Local Employer

Active Membership

Group	2016			2015		
	Number ³	Annual Compensation	Limited Annual Compensation	Number ⁴	Annual Compensation	Limited Annual Compensation
Men	30,951	\$ 3,057,605,333	\$ 3,057,409,941	30,606	\$ 3,014,686,145	\$ 3,014,610,377
Women	2,927	\$ 263,376,647	\$ 263,312,039	2,870	\$ 257,950,267	\$ 257,950,267
Policemen ¹	27,453	\$ 2,682,398,988	\$ 2,682,222,120	27,129	\$ 2,646,342,399	\$ 2,646,266,631
Firemen ²	6,425	\$ 638,582,992	\$ 638,499,860	6,347	\$ 626,294,013	\$ 626,294,013

1 There are 517 employer locations in 2016 and 516 employer locations in 2015 reporting payroll for policemen.

2 There are 143 employer locations in 2016 and 143 employer locations in 2015 reporting payroll for firemen.

3 There were 11 members hired on or after May 22, 2010 whose pay exceeded the Social Security wage base. In addition, there were 2 members limited by the 401(a)(17) annual compensation limit.

4 There were 3 members hired on or after May 22, 2010 whose pay exceeded the Social Security wage base.

Retired Members and Beneficiaries

Group	2016		2015	
	Number ⁵	Annual Allowances ⁶	Number ⁵	Annual Allowances ⁶
Deferred Terminated Vesteds	39	\$ 802,164	43	\$ 865,752
Service Retirements	25,476	\$1,628,463,614	24,691	\$1,549,557,173
Ordinary Disability Retirements	2,190	\$ 63,887,074	2,166	\$ 61,972,178
Accidental Disability Retirements	2,477	\$ 125,453,166	2,401	\$ 119,268,918
Beneficiaries	6,522	\$ 204,333,111	6,414	\$ 197,052,053

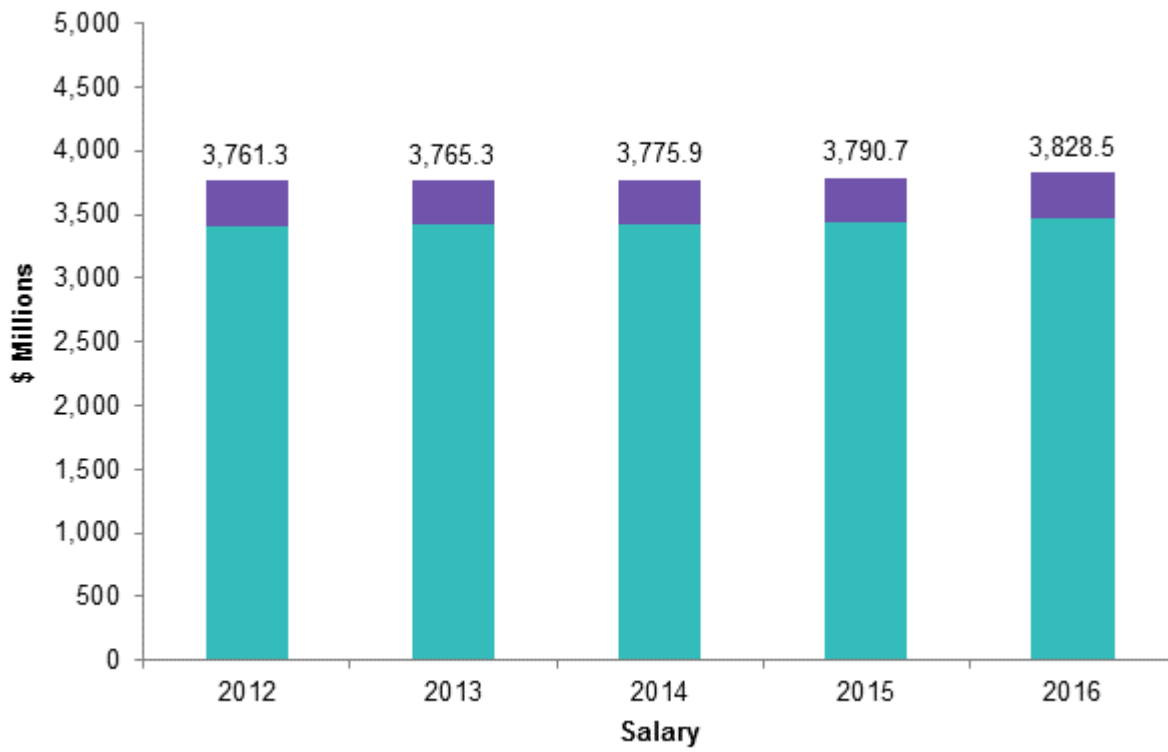
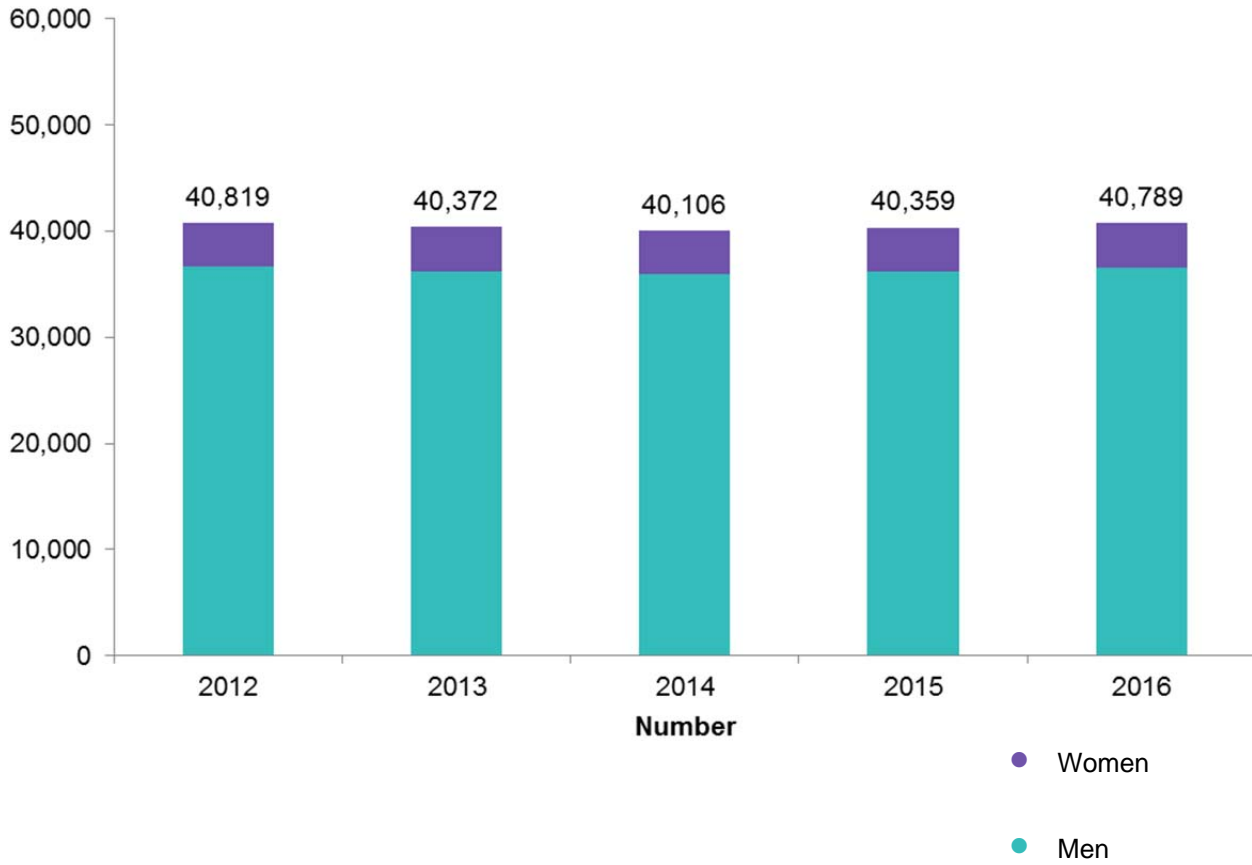
5 The number counts exclude 2,153 Domestic Relations beneficiaries in 2016 and 1,992 Domestic Relations beneficiaries in 2015.

6 Includes annual allowances paid to Domestic Relations beneficiaries.

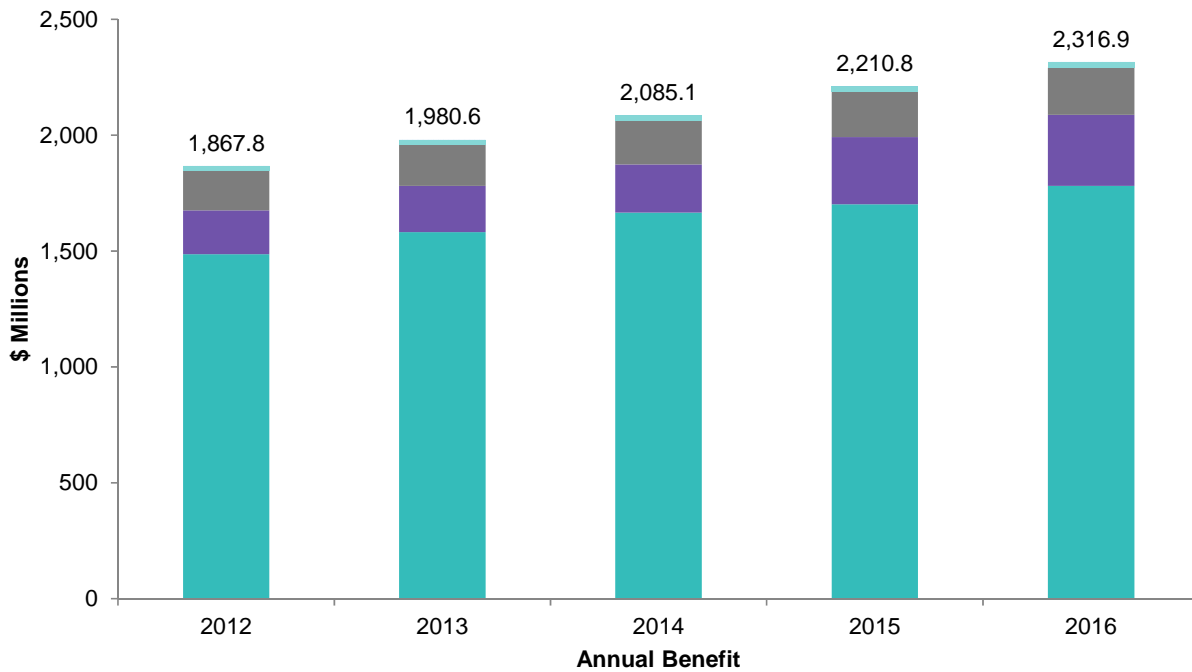
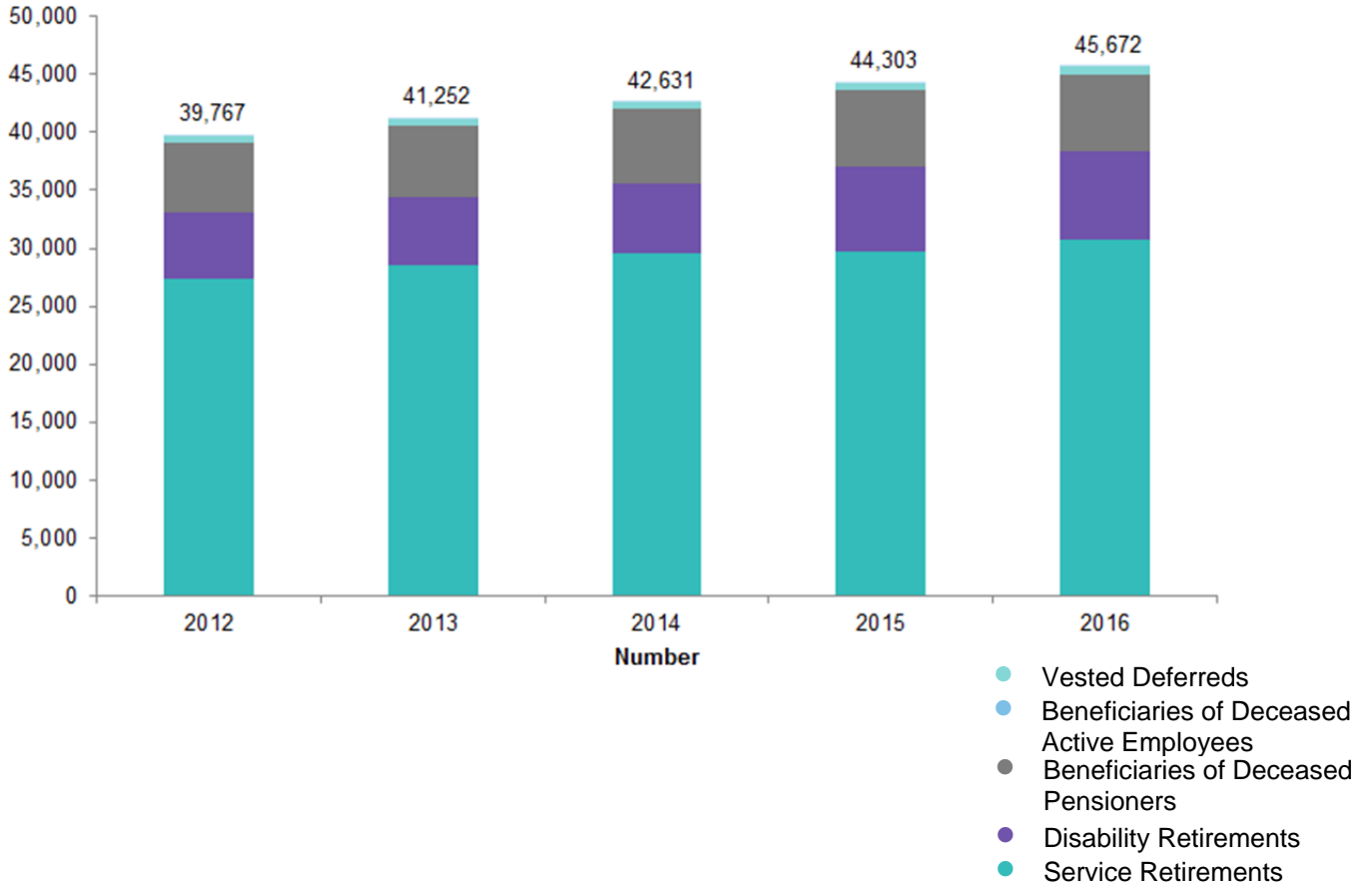
Appendix E provides a detailed distribution between groups.

Graphic presentations of the statistical data on membership are shown on the following pages.

**The Police and Firemen's Retirement System of New Jersey
Summary of Active Membership
(Total System)**



The Police and Firemen's Retirement System of New Jersey
Summary of Retired Participation
(Total System)



Section III – Assets, Liabilities and Contributions

A. Market Value of Assets as of June 30, 2016

1.	Assets		
	a. Cash	\$	1,609,548
	b. Securities Lending Collateral		392,745,430
	c. Investment Holdings		21,802,195,889
	d. Accrued Interest on Investments		3,304,248
	e. Loans Receivable		317,847,189
	f. Employers' Contributions Receivable – Chapter 19		129,299,915
	g. Employers' Contributions Receivable – Local		811,867,970
	h. Employers' Contribution Receivable – Local – ERI		12,887,608
	i. Employers' Contribution Receivable – NCGI – State		1,574,085
	j. Employers' Contribution Receivable – NCGI – Local		35,500,000
	k. Interest Receivable on Loans		3,629,317
	l. Members' Contributions Receivable		49,897,205
	m. New Jersey Mortgage Receivable		1,016,124,596
	n. Employers' Contributions Receivable – Delayed Enrollments		181,468
	o. Employers' Contributions Receivable – Delayed Appropriations		1,038,214
	p. Securities Sold In Transit		0
	q. Accounts Receivable – Other		<u>3,478,523</u>
	r. Total	\$	<u>24,583,181,205</u>
2.	Liabilities		
	a. Pension Payroll Payable	\$	147,329,197
	b. Pension Adjustment Payroll Payable		17,399,993
	c. Withholdings Payable		28,406,833
	d. Death Benefits Payable		5,884,168
	e. Securities Lending Collateral and Rebates Payable		392,272,151
	f. Accounts Payable – Other		5,450,198
	g. Administrative Expenses Payable		<u>1,712,001</u>
	h. Total Liabilities	\$	<u>598,454,541</u>
3.	Preliminary Market Value of Assets as of June 30, 2016: 1(r) - 2(h)	\$	23,984,726,664
4.	Discounted State Receivable Contributions	\$	179,796,506 ¹
5.	Adjustment to June 30, 2016 Financial Report due to Local employer deferred contributions under Chapter 19, P.L. 2009	\$	22,311,015
6.	Adjustment to June 30, 2016 Financial Report to reflect actuarial present value of receivable ERI contributions as of June 30, 2016	\$	(1,483,332)
7.	Adjustment to June 30, 2016 Financial Report for assets held in the Non-Contributory Group Insurance Premium Fund	\$	(27,544,768)
8.	Adjustment to June 30, 2016 Financial Report due to discounted fiscal year 2017 Local Employers receivable contributions	\$	<u>(41,939,207)</u>
9.	Market Value of Assets as of June 30, 2016 = 3. + 4. + 5. + 6. + 7. + 8.	\$	<u>24,115,866,878</u>

¹ Reflects the State's fiscal year 2017 anticipated contribution of \$193,550,939 discounted one year. This amount may be subject to change per the requirements of the State's fiscal year 2017 spending plan.

B. Reconciliation of Market Value of Assets from June 30, 2015 to June 30, 2016

	State	Local Employers	Total
1. Market Value of Assets as of June 30, 2015	\$ 1,759,526,168	\$ 23,347,332,752	\$ 25,106,858,920
2. Increases			
a. Pension Contributions			
(1) Members' Contributions	\$ 50,118,297	\$ 335,932,782	\$ 386,051,079
(2) Transfers from Other Systems	798,409	1,831,920	2,630,329
(3) Total	\$ 50,916,706	\$ 337,764,702	\$ 388,681,408
b. Employers' Contributions			
(1) Appropriations	\$ 76,858,000	\$ 841,211,389	\$ 918,069,389
(2) Non-Contributory Group Insurance	7,930,178	35,500,000	43,430,178
(3) Transfers from other Systems	76,260	282,669	358,929
(4) Additional Employers' Contributions	0	5,584,632	5,584,632
(5) Delayed Enrollments	(6,494)	148,528	142,034
(6) Delayed Appropriations	(1,959)	765,134	763,175
(7) Total	\$ 84,855,985	\$ 883,492,352	\$ 968,348,337
c. Investment Income	\$ (36,952,116)	\$ (113,741,043)	\$ (150,693,159)
d. Total	\$ 98,820,575	\$ 1,107,516,011	\$ 1,206,336,586
3. Decreases			
a. Benefits Provided by Members			
(1) Withdrawals of Members' Contributions	\$ 2,103,123	\$ 5,257,093	\$ 7,360,216
(2) Withdrawals of Transfers' Contributions	130,584	144,726	275,310
(3) Adjustment for Loans	352,663	0	352,663
(4) Total	\$ 2,586,370	\$ 5,401,819	\$ 7,988,189
b. Benefits Provided by Employers			
(1) Transfer Withdrawals - Employers' Benefits	\$ 39,652	\$ 13,097	\$ 52,749
(2) Death Benefit Claims – NCGI	7,930,178	30,441,853	38,372,031
(3) Administrative Expense	764,896	4,018,694	4,783,590
(4) Miscellaneous Expense	(179,260)	(311,439)	(490,699)
(5) Total	\$ 8,555,466	\$ 34,162,205	\$ 42,717,671
c. Retirement Allowances	\$ 275,072,566	\$ 1,792,763,905	\$ 2,067,836,471
d. Pension Adjustment	\$ 27,161,649	\$ 182,764,862	\$ 209,926,511
e. Total Decreases	\$ 313,376,051	\$ 2,015,092,791	\$ 2,328,468,842
4. a. Preliminary Market Value of Assets as of June 30, 2016 = 1 + 2(d) – 3(e)	\$ 1,544,970,692	\$ 22,439,755,972	\$ 23,984,726,664 ¹
b. Discounted State Receivable Contributions	\$ 101,201,273	\$ 78,595,233	\$ 179,796,506 ¹
c. Adjustment to June 30, 2016 Financial Report:			
(1) Reflect actual present value of receivable ERI contributions as of June 30, 2016	N/A	\$ (1,483,332)	\$ (1,483,332)
(2) Reflect actual present value of receivable Chapter 19, P.L. 2009 deferred contributions as of June 30, 2016	N/A	\$ 22,311,015	\$ 22,311,015
(3) Assets held in the Non-Contributory Group Insurance Premium Fund	\$ 0	\$ (27,544,768)	\$ (27,544,768)
(4) Adjustment to June 30, 2016 Financial Report for discounted fiscal year 2017 Local Employers receivable contributions	N/A	\$ (41,939,207)	\$ (41,939,207)
5. Market Value of Assets as of June 30, 2016 = 4(a)+4(b)+4(c)(1)+4(c)(2)+4(c)(3)+4(c)(4)	\$ 1,646,171,965	\$ 22,469,694,913	\$ 24,115,866,878

1 Reflects the State's fiscal year 2017 anticipated contribution of \$193,550,939 discounted one year. This amount may be subject to change per the requirements of the State's fiscal year 2017 spending plan.

C. Summary of Market Value of Assets by Source

1.	Reserve for Employers' Contributions	\$	(3,470,721,761)
2.	Reserve for Members' Contributions		3,614,531,970
3.	Reserve for Retirement Fund		23,813,371,687
4.	Reserve for Special Reserve Fund		0
5.	Discounted State Receivable Contributions		179,796,506
6.	Adjustment to the Chapter 19, P.L. 2009 Local deferred contributions		22,311,015
7.	Adjustment to the receivable Local ERI contributions		(1,483,332)
8.	Adjustment to June 30, 2016 Financial Report for discounted fiscal year 2017 Local Employers receivable contributions		<u>(41,939,207)</u>
9.	Total Market Value of Assets as of June 30, 2016	\$	24,115,866,878

D.(I) Development of Actuarial Value of Assets as of July 1, 2016

	State	Local Employers	Total
1. Actuarial Value of Assets as of June 30, 2015 (without State receivable contribution)	\$ 1,933,101,976	\$23,767,317,583	\$ 25,700,419,559
2. Net Cash Flow excluding Investment Income and Present Value of Remaining ERI Contributions	(177,603,360)	(796,962,087)	(974,565,447)
3. Additional Employer Contributions Paid to Satisfy Remaining ERI Obligations	0	0	0
4. Investment Income at Actuarially Assumed Rate of 7.90%	<u>142,316,375</u>	<u>1,765,276,590</u>	<u>1,907,592,965</u>
5. Expected Actuarial Value of Assets as of June 30, 2016 = 1. + 2. + 3. + 4.	\$ 1,897,814,991	\$24,735,632,086	\$ 26,633,447,077
6. Mark-up percentage	20.0%	20.0%	
7. Mark-up to Reflect Growth in Preliminary Market Value of Assets (without receivable contribution)	(70,568,860)	(487,612,727)	(558,181,587)
8. Discounted State Receivable Contribution	101,201,273	78,595,233	179,796,506
9. Present Value of Local Employer Contribution Deferral under the Provisions of Chapter 19, P.L. 2009	N/A	151,610,930	151,610,930
10. Present Value of Receivable ERI Contributions as of June 30, 2016	N/A	11,404,276	11,404,276
11. Adjustment to June 30, 2016 Financial Report discounted fiscal year 2017 Local Employers receivable contributions	N/A	(41,939,207)	(41,939,207)
12. Adjustment for Assets Held in the Non-Contributory Group Insurance Premium Fund	<u>0</u>	<u>(27,544,768)</u>	<u>(27,544,768)</u>
13. Actuarial Value of Assets as of June 30, 2016 = 5. + 7. + 8. + 9. + 10 + 11. + 12.	\$ 1,928,447,404	\$ 24,420,145,823	\$ 26,348,593,227

D.(II) Reconciliation of Fund Balances as of July 1, 2016

Assets			
	State	Local Employers	Total
Present assets of System creditable to:			
Retirement Reserve Fund:			
Credited to fund	\$ 3,048,150,235	\$ 20,765,221,452	\$ 23,813,371,687
Add (deduct) reserve transferable from (to) Reserve for Employers' Contributions Fund	<u>217,894,423</u>	<u>680,718,223</u>	<u>898,612,646</u>
	\$ 3,266,044,658	\$ 21,445,939,675 ²	\$ 24,711,984,333
Annuity Savings Fund:			
Credited to Fund	\$ 406,884,696	\$ 3,207,647,274	\$ 3,614,531,970
Reserve for Employers' Contributions Fund:			
Credited to Fund	\$ (1,526,587,527)	\$ 447,277,097	\$ (1,079,310,430)
Add (deduct) excess interest earnings transferable from (to) Special Reserve Fund	0	0	0
Add (deduct) reserve transferable from (to) Retirement Reserve Fund	<u>(217,894,423)</u>	<u>(680,718,223)</u>	<u>(898,612,646)¹</u>
	\$ (1,744,481,950)	\$ (233,441,126)	\$ (1,977,923,076)
Total Present Assets	\$ 1,928,447,404	\$ 24,420,145,823	\$ 26,348,593,227
Present value of prospective accrued liability contributions payable by the State and Local employers to the Reserve for Employers' Contributions Fund for basic allowances	<u>\$ 2,748,194,636</u>	<u>\$ 8,373,293,387</u>	<u>\$ 11,121,488,023</u>
Total Assets	\$ 4,676,642,040	\$ 32,793,439,210	\$ 37,470,081,250

1 It is recommended that the Retirement Reserve Fund be put into balance each year by transferring assets between the Reserve for Employers' Contributions Fund and the Retirement Reserve Fund so that the Retirement Reserve Fund will contain sufficient assets to cover the retiree and beneficiary liability. Therefore, we recommend that \$898,612,646 be transferred from the Reserve for Employers' Contribution Fund to the Retirement Reserve Fund to put the System in balance as of July 1, 2016.

2 Includes the present value of ERI payments of \$11,404,276.

E.1. Summary of Actuarial Accrued Liability as of July 1, 2016

	State	Local Employers	Total
1. Retirees and Beneficiaries			
a. Service Retirement	\$ 2,583,126,314	\$ 17,218,738,869 ¹	\$ 19,801,865,183
b. Disability Retirement	399,260,835	2,152,216,743	2,551,477,578
c. Beneficiaries	<u>283,657,509</u>	<u>2,074,984,063</u>	<u>2,358,641,572</u>
d. Total	\$ 3,266,044,658	\$ 21,445,939,675	\$ 24,711,984,333
2. Terminated Vested Members	\$ 1,510,756	\$ 7,541,180	\$ 9,051,936
3. Active Participants			
a. Service Retirement	\$ 1,232,139,993	\$ 10,218,480,762	\$ 11,450,620,755
b. Vested Retirement	9,350,274	50,127,524	59,477,798
c. Ordinary Disability	69,196,578	449,572,921	518,769,499
d. Accidental Disability	71,277,182	448,810,700	520,087,882
e. Ordinary Death	23,201,666	151,521,717	174,723,383
f. Accidental Death	2,261,132	14,235,914	16,497,046
g. Withdrawal of Contributions	<u>1,659,801</u>	<u>7,208,817</u>	<u>8,868,618</u>
h. Total	\$ 1,409,086,626	\$ 11,339,958,355	\$ 12,749,044,981
4. Total Actuarial Accrued Liability = 1(d) + 2 + 3(h)	\$ 4,676,642,040	\$ 32,793,439,210	\$ 37,470,081,250

¹ Includes the present value of ERI contributions of \$11,404,276.

E.2. Summary of Active Member Actuarial Accrued Liability & Normal Cost

State

Employee Type	Number of Members	Total Appropriation Salary	Actuarial Accrued Liability	Gross Pension Normal Cost
Tier 1	5,033	393,981,196	1,357,348,456	76,624,686
Tier 2	245	15,248,804	14,931,049	2,597,549
Tier 3	1,633	76,241,643	36,807,121	13,451,642
Total	6,911	485,471,643	1,409,086,626	92,673,877

Local Employers

Employee Type	Number of Members	Total Appropriation Salary	Actuarial Accrued Liability	Gross Pension Normal Cost
Tier 1	26,883	2,856,812,491	11,112,893,027	566,811,532
Tier 2	504	36,779,572	39,062,244	6,321,048
Tier 3	6,491	347,743,856	188,003,084	60,427,905
Total	33,878	3,241,335,919	11,339,958,355	633,560,485

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F. Summary of Unfunded Accrued Liability/(Surplus) and Required Contribution

I. Development of Unfunded Accrued Liability/(Surplus)	July 1, 2016			July 1, 2015		
	State	Local Employers ¹	Total	State	Local Employers ¹	Total
1. Present Value of Benefits	\$ 4,676,642,040	\$ 32,793,439,210	\$ 37,470,081,250	\$ 4,516,438,165	\$ 31,205,965,303	\$ 35,722,403,468
2. Actuarial Value of Assets	1,928,447,404	24,420,145,823	26,348,593,227	2,004,579,109	23,935,037,150	25,939,616,259
3. Unfunded Accrued Liability/(Surplus):						
(a) Basic Unfunded Accrued Liability/(Surplus) Excluding Chapters 204, 247, 428, 109 and 511	\$ 2,625,742,022	\$ 6,662,516,261	\$ 9,228,258,283	\$ 2,399,379,512	\$ 5,691,093,367	\$ 8,090,472,879
(b) Chapter 204	597,504	5,777,550	6,375,054	578,393	5,969,449	6,547,842
(c) Chapter 247	0	131,146,618	131,146,618	0	127,886,511	127,886,511
(d) Chapter 428 ²	121,855,110	669,777,119	791,632,229	111,901,151	609,078,762	720,979,913
(e) Chapter 109	0	580,996,007	580,996,007	0	534,773,904	534,773,904
(f) Chapter 511	0	323,079,832	323,079,832	0	302,126,160	302,126,160
(g) Gross Unfunded Accrued Liability/(Surplus) = (a) + (b) + (c) + (d) + (e) + (f)	\$ 2,748,194,636	\$ 8,373,293,387	\$ 11,121,488,023	\$ 2,511,859,056	\$ 7,270,928,153	\$ 9,782,787,209
4. Net adjustment to Gross Unfunded Accrued Liability to account for phase-in of State paid Local Obligations:						
(a) Chapter 247	\$ 106,993,286	\$ (106,993,286)	\$ 0	\$ 101,048,132	\$ (101,048,132)	\$ 0
(b) Chapter 428 ²	533,196,565	(533,196,565)	0	492,264,452	(492,264,452)	0
(c) Chapter 109	580,996,007	(580,996,007)	0	534,773,904	(534,773,904)	0
(d) Chapter 511	323,079,832	(323,079,832)	0	302,126,160	(302,126,160)	0
(e) Total Adjustments = (a) + (b) + (c) + (d)	\$ 1,544,265,690	\$ (1,544,265,690)	\$ 0	\$ 1,430,212,648	\$ (1,430,212,648)	\$ 0
5. Net Unfunded Accrued Liability/(Surplus) = 3(g) + 4(e)	\$ 4,292,460,326	\$ 6,829,027,697	\$ 11,121,488,023	\$ 3,942,071,704	\$ 5,840,715,505	\$ 9,782,787,209

1 Excludes unfunded accrued liability amounts due to Local ERI programs and Chapter 19, P.L. 2009 Local employer deferrals. The Local unfunded accrued liability amounts due to ERI programs are presented in Appendices F and G and the Chapter 19, P.L. 2009 Local employer deferrals are summarized in Appendix H.

2 The Chapter 428 unfunded accrued liability amounts include the unfunded accrued liability amounts due to Chapters 86 and 318.

II. Development of Unfunded Accrued Liability Contribution Amount	July 1, 2016			July 1, 2015		
	State	Local Employers ¹	Total	State	Local Employers ¹	Total
1. Accrued Liability Contribution due to:						
(a) Basic Unfunded Accrued Liability	\$ 209,549,104	\$ 531,706,580	\$ 741,255,684	\$ 195,665,504	\$ 464,099,425	\$ 659,764,929
(b) Chapter 204	61,311	592,844	654,155	58,375	602,473	660,848
(c) Chapter 247	0	10,466,244	10,466,244	0	10,428,937	10,428,937
(d) Chapter 428 ²	9,724,729	53,452,012	63,176,741	9,125,358	49,669,384	58,794,742
(e) Chapter 109	0	46,366,776	46,366,776	0	43,609,944	43,609,944
(f) Chapter 511	0	25,783,603	25,783,603	0	24,637,898	24,637,898
(g) Gross Unfunded Accrued Liability Contribution = (a) + (b) + (c) + (d) + (e) + (f)	\$ 219,335,144	\$ 668,368,059	\$ 887,703,203	\$ 204,849,237	\$ 593,048,061	\$ 797,897,298
2. Net adjustment to Gross Unfunded Accrued Liability Contribution due to State paid Local Obligations:						
(a) Chapter 247	\$ 10,466,244	\$ (10,466,244)	\$ 0	\$ 10,428,937	\$ (10,428,937)	\$ 0
(b) Chapter 428 ²	53,452,012	(53,452,012)	0	49,669,384	(49,669,384)	0
(c) Chapter 109	46,366,776	(46,366,776)	0	43,609,944	(43,609,944)	0
(d) Chapter 511	25,783,603	(25,783,603)	0	24,637,898	(24,637,898)	0
(e) Total Adjustment = (a) + (b) + (c) + (d)	\$ 136,068,635	\$ (136,068,635)	\$ 0	\$ 128,346,163	\$ (128,346,163)	\$ 0
3. Accrued Liability Contribution as of the Valuation Date = 1(g) + 2(e)	\$ 355,403,779	\$ 532,299,424	\$ 887,703,203	\$ 333,195,400	\$ 464,701,898	\$ 797,897,298
4. Interest to reflect 1 Year Delay in Payment	27,188,389	40,720,906	67,909,295	26,322,437	36,711,450	63,033,887
5. Accrued Liability Contribution as of July 1, 2017	\$ 382,592,168	\$ 573,020,330	\$ 955,612,498	\$ 359,517,837	\$ 501,413,348	\$ 860,931,185

1 Excludes Local ERI payments and Chapter 19, P.L. 2009 Local employer payments towards deferrals. The Local ERI payments are presented in Appendices F and G and the Chapter 19, P.L. 2009 Local employer payments towards deferrals are summarized in Appendix H.

2 The Chapter 428 unfunded accrued liability contribution amounts include the unfunded accrued liability contribution amounts due Chapters 86 and 318.

G. Development of Normal Cost as of July 1, 2017

	State	Local Employers	Total
1. Service Retirement	\$ 73,734,058	\$ 528,811,300	\$ 602,545,358
2. Ordinary Disability Retirement	5,126,082	29,039,326	34,165,408
3. Accidental Disability Retirement	8,011,838	43,627,437	51,639,275
4. Ordinary Death Benefits	827,149	4,220,189	5,047,338
5. Accidental Death Benefits	208,153	1,117,485	1,325,638
6. Vested Termination Retirement	850,147	4,452,458	5,302,605
7. Return of Members' Contributions Upon Withdrawal	917,778	4,241,865	5,159,643
8. Portion Attributable to Chapter 428	<u>2,998,672</u>	<u>18,050,425</u>	<u>21,049,097</u>
9. Total (without Non-Contributory Group Insurance Premium)	\$ 92,673,877	\$ 633,560,485	\$ 726,234,362
10. Expected Employee Contributions ¹	(47,072,855)	(310,728,439)	(357,801,294)
11. Portion of Local Normal Cost Payable by the State due to:			
(a) Chapter 511	\$ 12,331,372	\$ (12,331,372)	\$ 0
(b) Chapter 247	137,493	(137,493)	0
(c) Chapter 109	35,654,695	(35,654,695)	0
(d) Chapter 428	<u>18,050,425</u>	<u>(18,050,425)</u>	<u>0</u>
(e) Total	\$ 66,173,985	\$ (66,173,985)	\$ 0
12. Preliminary Pension Normal Cost as of July 1, 2016 = 9 + 10 + 11(e)	\$ 111,775,007	\$ 256,658,061	\$ 368,433,068
13. Interest to Reflect a 1 Year Delay in Payment to July 1, 2017	<u>8,550,788</u>	<u>19,634,342</u>	<u>28,185,130</u>
14. Net Pension Normal Cost as of July 1, 2017 = 12 + 13	\$ 120,325,795	\$ 276,292,403	\$ 396,618,198
15. Non-Contributory Group Insurance Fund Premium (one-year term cost)	\$ 8,893,000	\$ 35,809,000	\$ 44,702,000

¹ Member contributions of 10.0% of compensation shall reduce the normal cost contribution.

H. Summary of Total Recommended Contributions

The following chart summarizes the recommended contribution amounts:

	July 1, 2016			July 1, 2015		
	State	Local Employers	Total	State	Local Employers	Total
Active Participant Payroll	\$ 485,471,643	\$ 3,241,335,919	\$ 3,726,807,562	\$ 494,310,655	\$ 3,201,198,700	\$ 3,695,509,355
1. Normal Cost						
a) Normal Cost (without Chapters 109, 247, 428 and 511)	\$ 38,208,255	\$ 276,292,403	\$ 314,500,658	\$ 39,959,389	\$ 278,332,041	\$ 318,291,430
b) Normal Cost for Chapter 511	15,179,184	N/A	15,179,184	14,777,269	N/A	14,777,269
c) Normal Cost for Chapter 247	148,011	N/A	148,011	169,923	N/A	169,923
d) Chapter 109 Payment	44,130,992	N/A	44,130,992	43,862,001	N/A	43,862,001
e) Normal Cost for Chapter 428	22,659,353	0	22,659,353	25,590,928	0	25,590,928
f) Net Normal Cost = (a) + (b) + (c) + (d) + (e)	\$ 120,325,795	\$ 276,292,403	\$ 396,618,198	\$ 124,359,510	\$ 278,332,041	\$ 402,691,551
2. Accrued Liability ¹						
a) Basic Unfunded Actuarial Liability UAL Payment	\$ 225,579,610	\$ 572,382,133	\$ 797,961,743	\$ 211,123,080	\$ 500,763,280	\$ 711,886,360
b) Chapter 204 UAL Payment	66,001	638,197	704,198	62,987	650,068	713,055
c) Chapter 247 UAL Payment	11,266,912	N/A	11,266,912	11,252,823	N/A	11,252,823
d) Chapter 428 UAL Payment ²	68,009,763	N/A	68,009,763	63,439,525	N/A	63,439,525
e) Chapter 109 UAL Payment	49,913,834	N/A	49,913,834	47,055,130	N/A	47,055,130
f) Chapter 511 UAL Payment	27,756,049	N/A	27,756,049	26,584,292	N/A	26,584,292
g) Total Accrued Liability = (a)+(b)+(c)+(d)+(e)+(f)	\$ 382,592,169	\$ 573,020,330	\$ 955,612,499	\$ 359,517,837	\$ 501,413,348	\$ 860,931,185
3. Total Pension Contribution = 1(f) + 2(g)	\$ 502,917,964	\$ 849,312,733	\$ 1,352,230,697	\$ 483,877,347	\$ 779,745,389	\$ 1,263,622,736
4. Non-Contributory Group Insurance Premium (one-year term cost)	\$ 8,893,000	\$ 35,809,000	\$ 44,702,000	\$ 8,844,000	\$ 35,500,000	\$ 44,344,000

1 Does not include ERI and Chapter 19, P.L. 2009 Local employer payments. The entries for Chapters 247, 428, 109 and 511 include a payment required to fund the portions of the State-paid Local obligations that were not contributed due to the phase-in of contributions through fiscal year 2016.

2 Includes \$ 53,593,264 for the July 1, 2015 valuation and \$57,541,091 for the July 1, 2016 valuation attributable to Municipalities & Local Groups' liabilities which are payable by the State as required under Chapters 428, 86 and 318.

I. Summary of Recommended Contribution Rates

The following chart summarizes the rounded contribution rates that are applied to the applicable compensation for each location to produce the required contributions:

	July 1, 2016		July 1, 2015	
	State	Local Employers ⁵	State	Local Employers ⁵
1. Normal Contribution Rates:				
a) Basic Allowances	7.870%	8.513%	8.084%	8.683%
b) Chapter 511 ¹	3.127%	N/A	2.989%	N/A
c) Chapter 247 ¹				
• PERS Local normal rate applicable to pay for individuals without past service	N/A	12.720%	N/A	12.300%
• Total PERS Local rate applicable to pay for individuals with past service	N/A	1.760%	N/A	2.020%
• Portion of Municipalities & Local Groups costs payable by the State	0.030%	N/A	0.034%	N/A
d) Chapter 109 ¹	9.090%	N/A	8.873%	N/A
e) Chapter 428 ¹	4.667%	0.000%	5.177%	0.000%
2. Accrued Liability Contribution Rates:⁴				
a) Basic Allowances	46.466%	17.723%	42.711%	15.718%
b) Chapter 204	²	²	²	²
c) Chapter 247 ¹	2.321%	N/A	2.276%	N/A
d) Chapter 428 ^{1&3}	14.009%	N/A	12.834%	N/A
e) Chapter 109 ¹	10.282%	N/A	9.519%	N/A
f) Chapter 511 ¹	5.717%	N/A	5.378%	N/A
3. Non-Contributory Group Insurance Premium (one-year term cost)				
	1.832%	1.105%	1.789%	1.109%

1 Payment for certain costs under Chapters 109, 247, 511 and 428 (Chapter 8) for both Municipalities & Local Groups and State Locations are made by the State in accordance with the legislation.

2 Costs for locations affected by Chapter 204 are presented in Appendix C.

3 Includes the additional costs due to Chapter 86, P.L. 2001 and Chapter 318, P.L. 2001.

4 The rates shown for Chapters 247, 428, 109 and 511 include the rate required to fund the portions of the State-paid Local obligations that were not contributed due to the phase-in of contributions through fiscal year 2016.

5 Does not include ERI and the Chapter 19, P.L. 2009 Local employer payments. The Local ERI payments are presented in Appendices F and G and the Chapter 19, P.L. 2009 Local employer payments towards deferrals are summarized in Appendix H.

Section IV – Comments Concerning the Valuation

The variation in liabilities and contributions reflects the Fund's actual experience during the year. The Plan realized a net actuarial loss during the past year. This was primarily a result due to the investment return, which was less than that expected (5.35% on an actuarial value basis, rather than the 7.90% expected for the period July 1, 2015 to June 30, 2016). There was also a net actuarial loss due to demographic experience.

The following shows the development of the actuarial experience, identifies the major experience components and discusses the impact of the unfunded liability on various funded ratios.

A. Calculation of Net Actuarial Experience

1.	Unfunded Accrued Liability as of July 1, 2015	\$	9,782,787,209
2.	Normal Cost as of July 1, 2015		727,480,382
3.	Interest on (1) and (2) at 7.90%		830,311,140
4.	Actual Members' Contributions		388,681,408
5.	Expected Employer Contribution		1,187,297,447
6.	Expected interest on Members' contributions at 7.90%		<u>15,061,112</u>
7.	Expected Unfunded Accrued Liability as of July 1, 2016 = (1) + (2) + (3) – (4) – (5) – (6)	\$	9,749,538,764
8.	Change in Unfunded Accrued Liability due to revised fiscal year 2017 State contribution	\$	269,694,759
9.	Change in Unfunded Accrued Liability due to Chapter 19 adjustments for actuarial asset loss	\$	(3,339,206)
10.	Change in Unfunded Liability due to the revised economic assumptions	\$	432,218,931
11.	Change in Unfunded Accrued Liability due to the actual fiscal year 2016 State contribution ¹	\$	315
12.	Actual Unfunded Accrued Liability as of July 1, 2016	\$	11,121,488,023
13.	Actuarial (gain)/loss = (12) - (7) - (8) - (9) - (10) - (11)	\$	673,374,460

¹ The anticipated fiscal year 2016 contribution of \$138,324,315 has been decreased to \$138,324,000 to reflect the actual State contribution made during fiscal year 2016.

B. Components of Actuarial Experience

1.	Investment (Gain)/Loss	\$	558,181,587
2.	Other net (Gain)/Loss, including changes in employee data		<u>115,192,873</u>
3.	Total Actuarial (Gain)/Loss	\$	673,374,460

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, 2016	June 30, 2015	Change
Actuarial Value of Assets*			
State	41.2%	44.4%	-3.2%
Local Employers	74.5%	76.7%	-2.2%
Total System	70.3%	72.6%	-2.3%
Market Value of Assets			
State	35.2%	40.5%	-5.3%
Local Employers	68.5%	74.9%	-6.4%
Total System	64.4%	70.5%	-6.1%

* Statutory funded ratio

For purposes of Chapter 78, P.L. 2011, the "target funded ratio" is 78.570% and 79.285% for June 30, 2015 and June 30, 2016, respectively. The State's statutory funded ratio is 44.4% and 41.2% as of June 30, 2015 and June 30, 2016, respectively. Therefore, the State's statutory funded ratio did not reach the "target funded ratio" as of June 30, 2015 and remained below the "target funded ratio" as of June 30, 2016. The Local employers' statutory funded ratio is 76.7% and 74.5% as of June 30, 2015 and June 30, 2016, respectively. Therefore, the Local employers' statutory funded ratio also did not reach the "target funded ratio" as of June 30, 2015 and remained below the "target funded ratio" as of June 30 2016. However, the Local employer portion of the System did attain 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 funded ratio computed using assets valued on an actuarial value basis provides a different indication of the System's funded position, since the actuarial value smooths the investment (gains)/losses over time. Since July 1, 2000, the System's funded ratio on a market value basis has decreased by 49.8% (77.9% for State and 45.8% for Local). This decrease is primarily due to investment losses experienced over the period, contributions of less than the recommended contributions, the increase in benefits under Chapter 428, P.L. 1999, Chapter 86, P.L. 2001 and Chapter 318, P.L. 2001, and the strengthening of actuarial assumptions.

As of June 30, 2016, the total System market value of assets is less than the total actuarial liability attributable to retirees. If the assets contained in the Annuity Savings Fund (ASF) of \$ 3,614,531,970 (\$406,884,696 for State and \$ 3,207,647,274 for Local) are excluded, the ratio of the remaining market value of assets to the actuarial accrued liability for retirees is 83.0% (37.9% for State and 89.8% for Local).

As of June 30, 2016, the ratio of market value of assets to the prior year's benefit payment is 10.6 (5.4 for State and 11.4 for Local). This is an approximate indication of the number of years that the assets can cover benefit payments, excluding future increases in those payments, employer and member contributions, and investment income. The System ratio decreased by 9.4% (15.6% for State and 8.1% for Local) from the previous year's ratio of 11.7 (6.4 for State and 12.4 for Local). If ASF assets are excluded, since they represent accumulated contributions from active and inactive members, the ratio is 9.0 (4.1 for State and 9.8 for Local).

The valuation also reflects costs attributable to the following legislation:

Chapter 204, P.L. 1989

The provisions of Chapter 204 allowed employees who were previously excluded on the basis of their titles from PFRS membership to enter the Plan. Employers of such employees are required to contribute any additional contribution necessary to fund any unfunded liability arising from Chapter 204. The valuation reflects the additional accrued liability for three State locations and fifteen Municipality and Local Groups locations with certain employees participating in the Fund under the provisions of this legislation. Appendix C lists all applicable locations and the required contributions.

Chapter 511, P.L. 1991

The provisions of Chapter 511 increased the benefit payable to the surviving spouse of a retiree from 35% to 50% of the retiree's average final compensation. This law also raised the minimum annual spouse's benefit from \$1,600 to \$4,500 for benefits granted prior to January 14, 1992.

Chapter 511 required that the normal cost and accrued liability contribution attributable to this chapter be separately determined. As a result of Chapter 115, P.L. 1997, the accrued liability contribution attributable to Chapter 511 was eliminated at that time. However, because of the reductions (and anticipated reductions) in the required State contributions for fiscal years 2004 through 2017 due to the various Appropriation Acts and Chapter 1, P.L. 2010, the remaining required contributions that have not been made have been set up as an unfunded accrued liability attributable to Chapter 511. The following summarizes the applicable contribution rates for the current and previous valuations:

Chapter 511 Contribution Rate	June 30, 2016	June 30, 2015
Normal Cost	3.127%	2.989%
Accrued Liability	<u>5.717</u>	<u>5.378</u>
Total Rate	8.844%	8.367%

Chapter 247, P.L. 1993 and Chapter 201 P.L. 2001

Chapter 247 requires the State to pay the difference between the PFRS normal cost rate and the PERS normal cost rate for certain members who transferred into PFRS as of January 1, 1992 or later. In addition, the law requires the State to pay the "System" unfunded accrued liability contribution for Municipalities and Local Groups that transferred into PFRS on and after January 1, 1992 without past service. The following summarizes the number of active employees affected, the applicable contribution rates, and the Chapter 247 contributions for the current and previous valuations:

Chapter 247	June 30, 2016	June 30, 2015
Number of Active Employees	131	184
<u>Contribution Rates:</u>		
Normal Cost	0.030%	0.034%
Accrued Liability	<u>2.321%</u>	<u>2.276%</u>
Total Rate	2.351%	2.310%
<u>Contributions:</u>		
Normal Cost	\$ 148,011	\$ 169,923
Accrued Liability	<u>11,266,912</u>	<u>11,252,823</u>
Total Contribution	\$ 11,414,923	\$ 11,422,746

Chapter 201, P.L. 2001 made changes to Chapter 247, P.L. 1993 with respect to the benefits payable to members who transferred from PERS to PFRS as a result of the Chapter 247 legislation. The resulting increase in the unfunded accrued liabilities due to the increased benefits was fully funded by the recognition of additional market value surplus in the determination of the actuarial value of assets in the July 1, 1999 valuation. However, because of the reductions (and anticipated reductions) in the required State contributions for fiscal years 2004 through 2017 due to the various Appropriation Acts and Chapter 1, P.L. 2010, the remaining required contributions which were not paid have been added to the Chapter 247 unfunded accrued liability and will be included in future State contributions.

Chapter 59, P.L. 1999, Chapter 126, P.L. 2000 and Chapter 130, P.L. 2003

Chapter 59, P.L. 1999 authorizes municipalities, counties and other local units of government that enter into agreements to provide governmental services on a joint or consolidated basis, municipalities that join together to establish a new consolidated municipality, or school districts that have merged with one or more other school districts due solely to a municipal consolidation, to offer incentive programs for retirement or termination of employment for employees affected by the consolidation agreements. "County ERI Section 44" of Chapter 126, P.L. 2000 permitted local units to offer early retirement or termination incentives to certain employees of county governing bodies. Chapter 130, P.L. 2003 extended an Early Retirement Incentive Program similar to that offered by the State under Chapter 23, P.L. 2002 to members of Local employer locations. Appendix G lists all applicable locations and summarizes the contribution requirement under Chapter 59, Chapter 126 and Chapter 130.

Chapter 8, P.L. 2000

Chapter 8, P.L. 2000 required that, if valuation assets are insufficient to fund the normal cost and accrued liability costs attributable to Chapter 428, P.L. 1999, the contribution required to fund these costs for the State and other employers shall be paid by the State. For both the July 1, 2015 and July 1, 2016 valuations, valuation assets were not sufficient to fund the costs attributable to Chapter 428. In addition, because of the reductions (and anticipated reductions) in the required State contributions for fiscal years 2004 through 2017 due to the various Appropriation Acts and Chapter 1, P.L. 2010, the remaining required contributions which were not paid have been added to the Chapter 428 unfunded accrued liability and will be included in future State contributions. The following chart summarizes the applicable contribution rates and the Chapter 428 contributions for the current and previous valuations:

Chapter 428	June 30, 2016	June 30, 2015
Contribution Rates:		
Normal Cost	4.667%	5.177%
Accrued Liability	<u>14.009</u>	<u>12.834</u>
Total Rate	18.676%	18.011%
Contributions:		
Normal Cost	\$ 22,659,353	\$ 25,590,928
Accrued Liability	<u>68,009,763</u>	<u>63,439,525</u>
Total Contribution	\$ 90,669,116	\$ 89,030,453

Chapter 86, P.L. 2001

Chapter 86, P.L. 2001 amended the active death benefits provided to a beneficiary of a member who died in active duty on or after January 1, 1998 and before January 18, 2000. The law required an eligible beneficiary to apply for the increased benefits within 90 days of enactment and return the member's aggregate contributions to the System. The State is liable for all costs to the System attributable to this law, and these costs have been included in the Chapter 428 accrued liability contributions.

Chapter 318, P.L. 2001

Chapter 318, P.L. 2001 amended the active death benefits provided to a beneficiary of a member with 10 or more years of service who died in active service on or after June 1, 1995 and before January 1, 1998 and whose beneficiary had, on May 1, 2001, an appeal of a denial of a benefit related to death in the line of duty pending before the Board of Trustees. The law requires that the appeal be withdrawn or denied and that an eligible beneficiary apply for the increased benefits and return the member's aggregate contributions received. The State is liable for all costs to the System attributable to this law and these costs are also included in the Chapter 428 accrued liability contributions.

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.

Chapter 1, P.L. 2010

Chapter 1, P.L. 2010 amended the definition of Compensation and Final Compensation for members hired on or after May 22, 2010. Compensation for such members is to be limited to the annual maximum wage contribution base for Social Security pursuant to the Federal Insurance Contribution Act. In addition, Final Compensation has been changed to the average annual compensation of a member for the three fiscal years providing the largest benefit.

Chapter 78, P.L. 2011

Chapter 78, P.L. 2011 increases member contributions from 8.5% to 10.0% of compensation. In addition, Chapter 78, P.L. 2011 suspends cost of living adjustments for all current and future retirees and beneficiaries until reactivated as permitted by law; however, Chapter 78, P.L. 2011 does not reduce the benefits for cost of living adjustments that were made in prior years. In addition, for members hired after June 28, 2011 the special retirement benefit is changed to 60% of final compensation at 25 years of service plus 1% of final compensation for each year of service over 25 years. The maximum retirement benefit is 65% of final compensation. 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 actuarial valuation, the amortization period will 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 that valuation year using a 20 year amortization period.

D. Schedule of Assets and Liabilities

State

Actuarial Valuation Date	Market Value of Assets ¹ (a)	Actuarial Value of Assets ¹ (b)	Actuarial Accrued Liability (c)	Funded Ratio	
				Market Value (a)/(c)	Actuarial Value (b)/(c)
7/1/2016	\$ 1,646,171,965	\$ 1,928,447,404	\$4,676,642,040	35.2%	41.2%
7/1/2015	\$ 1,831,003,301	\$ 2,004,579,109	\$4,516,438,165	40.5%	44.4%
7/1/2014	\$ 1,950,490,493	\$ 2,062,185,965	\$4,365,609,664	44.7%	47.2%
7/1/2013	\$ 1,896,198,371	\$ 2,127,491,585	\$4,188,523,037	45.3%	50.8%
7/1/2012	\$ 1,829,418,795	\$ 2,137,727,566	\$4,026,954,882	45.4%	53.1%
7/1/2011	\$ 1,944,214,316	\$ 2,173,255,647	\$3,926,525,679	49.5%	55.3%
7/1/2010	\$ 1,771,575,807	\$ 2,190,654,958	\$3,672,361,258	48.2%	59.7%
7/1/2009	\$ 1,742,699,083	\$ 2,268,272,056	\$3,993,259,480	43.6%	56.8%
7/1/2008	\$ 2,131,625,019	\$ 2,343,170,793	\$3,749,118,910	56.9%	62.5%
7/1/2007	\$ 2,312,336,064	\$ 2,368,209,888	\$3,426,631,813	67.5%	69.1%

Local Employers

Actuarial Valuation Date	Market Value of Assets ¹ (a)	Actuarial Value of Assets ¹ (b)	Actuarial Accrued Liability (c)	Funded Ratio	
				Market Value (a)/(c)	Actuarial Value (b)/(c)
7/1/2016	\$22,469,694,913	\$24,420,145,823	\$32,793,439,210	68.5%	74.5%
7/1/2015	\$23,360,020,456	\$23,935,037,150	\$31,205,965,303	74.9%	76.7%
7/1/2014	\$23,143,934,984	\$23,066,498,788	\$30,239,286,907	76.5%	76.3%
7/1/2013	\$20,734,802,380	\$22,170,221,173	\$28,811,698,272	72.0%	76.9%
7/1/2012	\$19,296,197,115	\$21,549,327,079	\$27,705,168,437	69.6%	77.8%
7/1/2011	\$19,405,816,249	\$21,051,681,692	\$26,978,632,188	71.9%	78.0%
7/1/2010	\$17,108,014,883	\$20,367,865,987	\$25,601,998,126	66.8%	79.6%
7/1/2009	\$16,283,683,457	\$20,669,565,701	\$28,448,841,765	57.2%	72.7%
7/1/2008	\$18,907,241,962	\$20,404,804,535	\$26,871,106,532	70.4%	75.9%
7/1/2007	\$19,484,653,383	\$19,575,249,807	\$24,562,195,443	79.3%	79.7%

¹ The information in the above tables has been taken directly from the final valuation reports for each plan year and does not reflect subsequent changes in the actual employer contribution amounts from the reported receivable contribution after the valuation reports were issued.

E. Schedule of Employer Pension Contributions¹

State

Fiscal Year Ending June 30	Actuarially Determined Contribution ³ (a)	Actual Pension Contribution (b)	Contribution Deficiency (a) – (b)	Percentage of Contribution Made	
				Annual (b)/(a)	Five-Year Average
2017	\$ 483,877,347	\$ 193,550,939	\$ 290,326,408	40.0%	32.4%
2016	\$ 461,081,051	\$ 138,324,000	\$ 322,757,051	30.0%	27.2%
2015	\$ 414,316,953	\$ 139,297,000	\$ 275,019,953	33.6%	21.2%
2014	\$ 389,689,529	\$ 115,623,000	\$ 274,066,529	29.7%	14.5%
2013	\$ 393,637,547	\$ 112,468,000	\$ 281,169,547	28.6%	9.5%
2012	\$ 375,234,766	\$ 53,606,000	\$ 321,628,766	14.3%	14.1%
2011	\$ 339,480,900	\$ 0	\$ 339,480,900	0.0%	22.7%
2010	\$ 299,131,628	\$ 0	\$ 299,131,628	0.0%	29.6%
2009	\$ 271,788,383	\$ 13,038,000	\$ 258,750,383	4.8%	
2008	\$ 248,313,283	\$ 128,032,000	\$ 120,281,283	51.6%	

Local Employers

Fiscal Year Ending June 30	Actuarially Determined Contribution ³ (a)	Actual Pension Contribution (b)	Contribution Deficiency (a) – (b)	Percentage of Contribution Made	
				Annual (b)/(a)	Five-Year Average
2017	\$ 807,438,390	\$ 807,438,390	\$ 0	100.0%	100.0%
2016	\$ 804,063,662	\$ 804,063,662	\$ 0	100.0%	100.0%
2015	\$ 760,533,458	\$ 760,533,458	\$ 0	100.0%	100.0%
2014	\$ 726,928,577	\$ 726,928,577	\$ 0	100.0%	100.0%
2013	\$ 776,511,374	\$ 776,511,374	\$ 0	100.0%	94.9%
2012	\$ 762,531,584	\$ 762,531,584	\$ 0	100.0%	94.9%
2011	\$ 857,072,909	\$ 857,072,909	\$ 0	100.0%	90.9%
2010	\$ 718,078,464	\$ 717,576,451 ²	\$ 502,013	99.9%	83.0%
2009	\$ 671,753,023	\$ 500,500,162 ²	\$ 171,252,861	74.5%	
2008	\$ 613,536,348	\$ 613,536,348	\$ 0	100.0%	

¹ Excludes contribution for the NCGIPF.

² Reflects contribution reductions due to Chapter 19, P.L. 2009.

³ The information in the above tables has been taken directly from the final valuation reports for each plan year and does not reflect subsequent changes in the actual employer contribution amounts from the reported receivable contribution after the valuation reports were issued.

Section V – 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 ASC715 (formerly Statement No. 87) Accumulated Benefit Obligation (ABO) basis. This is the same approach as was used under GASB Statement No. 5 except that no assumption is made as to future salary increases and assets are at market value with receivables.

ASC 715 ABO Funded Ratios

Valuation Date: June 30, 2016			
	<u>State</u>	<u>Local Employers</u>	<u>Total</u>
Actuarial present value of accumulated benefits:			
Vested benefits			
Participants currently receiving payments	\$ 3,226,044,658	\$ 21,445,939,675	\$ 24,711,984,333
Other participants	<u>824,933,013</u>	<u>7,742,946,447</u>	<u>8,567,879,460</u>
	\$ 4,090,977,671	\$ 29,188,886,122	\$ 33,279,863,793
Non-vested benefits	<u>430,675,413</u>	<u>2,570,571,552</u>	<u>3,001,246,965</u>
Total	\$ 4,521,653,084	\$ 31,759,457,674	\$ 36,281,110,758
Assets at market value ¹	\$ 1,544,970,692	\$ 22,270,023,681	\$ 23,814,994,373
Ratio of assets to total present value	34.2%	70.1%	65.6%

Valuation Date: June 30, 2015			
	<u>State</u>	<u>Local Employers</u>	<u>Total</u>
Actuarial present value of accumulated benefits:			
Vested benefits			
Participants currently receiving payments	\$ 3,068,942,554	\$ 19,956,349,181	\$ 23,025,291,735
Other participants	<u>817,871,476</u>	<u>7,412,451,720</u>	<u>8,230,323,196</u>
	\$ 3,886,814,030	\$ 27,368,800,901	\$ 31,255,614,931
Non-vested benefits	<u>403,101,939</u>	<u>2,370,268,742</u>	<u>2,773,370,681</u>
Total	\$ 4,289,915,969	\$ 29,739,069,643	\$ 34,028,985,612
Assets at market value ¹	\$ 1,759,526,168	\$ 23,171,460,647	\$ 24,930,986,815
Ratio of assets to total present value	41.0%	77.9%	73.3%

1. Assets at market value do not include any receivable contribution for the State.

As in the case of the Governmental Accounting Standard Board Statement No. 5, the actuarial present value of vested and non-vested accrued benefits was based on an interest rate of 7.90% for 2015 and 7.65% in 2016.

Appendix A

Brief Summary of the Benefit and Contribution Provisions as Interpreted For Valuation Purposes

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 of Credited Service 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

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 10.0% of Compensation effective October 2011.

Appendix B

Outline of Actuarial Assumptions and Method

Valuation Interest Rate

7.65% 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:

Age	Annual Rates of					Ultimate Withdrawal
	Select Withdrawal					
	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

Age	Annual Rates of				
	Death			Disability	
	Ordinary	Female*	Accidental	Ordinary	Accidental
25	.035%	.019%	.006%	.045%	.029%
30	.041	.025	.006	.147	.278
35	.072	.045	.008	.265	.393
40	.100	.065	.008	.362	.423
45	.138	.103	.009	.394	.396
50	.195	.156	.009	.449	.179
55	.282	.233	.014	.554	.161
60	.435	.335	.013	1.024	.161
64	.593	.445	.008	1.680	.161
65					
and over	0.000	0.000	0.000	0.000	0.000

* RP2000 Employee Pre-Retirement mortality tables projected thirteen-years using Projection Scale BB and then projected on a generational basis using the Buck Modified 2014 Projection Scales. The above tables are representative for the 2016 valuation.

Age	Service Retirements Length of Service				Salary Increases Effective July 1, 2016		Salary Increases Effective July 1, 2015	
	Less Than 21 Years*	21 to 24 Years	25 Years	26 or More Years	FY2016 to FY2026	FY2026 and thereafter	FY2012 to FY2022	FY2022 and thereafter
25					8.98%	9.98%	9.48%	10.48%
30					5.97	6.97	6.47	7.47
35					4.17	5.17	4.67	5.67
40	4.00%	0.60%	45.57%	15.40%	3.33	4.33	3.83	4.83
45	4.00	0.60	54.83	15.40	2.90	3.90	3.40	4.40
50	4.30	0.60	57.62	18.48	2.75	3.75	3.25	4.25
55	6.00	0.00	64.94	24.47	2.60	3.60	3.10	4.10
60	3.20	0.00	77.49	27.34	2.35	3.35	2.85	3.85
64	37.50	0.00	85.24	51.03	2.10	3.10	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 three years using the Buck Modified 2014 Projection Scales is the base table as of the 2016 measurement date for male service retirements and will be further projected on a generational basis using the Buck Modified 2014 Projection Scales. RP-2000 Combined Healthy Mortality Tables projected thirteen-years using Projection Scale BB and then three years projected using the Buck Modified 2014 Projection Scales is the base table as of the 2016 measurement date for female service retirements and beneficiaries and will be further projected on a generational basis using the Buck Modified 2014 Projection Scales. Special mortality tables are used for the period after disability retirement. The following representative values of the assumed annual rates of mortality are effective 2016:

Age	Service Retirements		Beneficiaries		Age	Disability Retirements
	Men	Women	Men	Women		
55	0.344%	0.250%	0.337%	0.250%	35	0.598%
60	0.649	0.431	0.602	0.431	40	0.634
65	1.221	0.794	1.059	0.794	45	0.803
70	2.098	1.362	1.750	1.362	50	1.058
75	3.551	2.290	2.959	2.290	55	1.210
80	6.055	3.741	5.026	3.741	60	1.426
85	10.464	6.306	8.658	6.306	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.

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, 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.

Receivable Contributions

State contributions expected to be paid the June 30th following the valuation date are discounted by the valuation interest rate of 7.65% to the valuation date.

Local contributions expected to be paid the April 1st, following the valuation are discounted by the valuation interest rate of 7.65% to the valuation date.

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.

Summary of Changes from the July 1, 2015 Valuation

The rate of investment return has been revised from 7.90% per annum to 7.65% per annum. The assumed future salary increases have been reduced by 0.5% at all ages for both the select and ultimate periods. In addition, the select period was extended from the fiscal year 2021 to the fiscal year 2026. The impact of these assumption changes is shown in Section IV.A.

Appendix C

Additional Contribution Schedules

A. Additional Accrued Liability Contribution Schedule Due to Chapter 204, P.L. 1989

	July 1, 2016 Valuation		July 1, 2015 Valuation	
	Fiscal Year 2018 Payment*		Fiscal Year 2017 Payment*	
	Recommended	Years Remaining	Recommended	Years Remaining
State Locations				
• Location #00053:Juv. Jus. Comm/Community Prog.	\$ 1,897	16	\$ 1,810	17
• Location #00323:Dept. Div. of Human Resources	60,917	16	58,135	17
• Location #00498:Rutgers Biomedical and Health Sciences	<u>3,187</u>	16	<u>3,041</u>	17
Total	\$ 66,001		\$ 62,987	
Municipalities & Local Groups				
• Location #21202: Camden City	\$ 92,906	16	\$ 94,634	17
• Location #39300: Belmar Borough	12,428	16	12,660	17
• Location #46800: Roxbury Township	23,520	16	23,957	17
• Location #49700: West Windsor Township	34,886	16	35,535	17
• Location #57700: Sea Isle City	6,312	16	6,430	17
• Location #62400: NJ Institute of Technology	100,650	16	102,522	17
• Location #62500: Brookdale Community College	109,369	16	111,404	17
• Location #62700: Essex County College	32,869	16	33,480	17
• Location #75000: Lakewood Twp Fire District #1	17,455	16	17,779	17
• Location #75700: Middlesex County College	121,571	16	123,833	17
• Location #76200: Lower Camden Regional High School – District 1	2,624	16	2,673	17
• Location #77500: Hopewell Twp Fire District #1	10,817	16	11,018	17
• Location #78600: South Jersey Transit Authority	53,091	16	54,078	17
• Location #78700: Washington Township Board of Fire Comm	18,571	16	18,916	17
• Location #79600: Upper Freehold Twp	<u>1,128</u>	16	<u>1,149</u>	17
Total	\$ 638,197		\$ 650,068	

* Dollar amounts include one year of interest at 7.90% for fiscal year 2017 and 7.65% for fiscal year 2018.

B. Summary of Fiscal Year 2018 Contributions For State College Locations

Location	Location Name	Number of Members	2016 Appropriation Payroll	Normal Cost	Accrued Liability Contribution	Total Fiscal Year 2018 Pension Contribution	Non-Contributory Group Insurance Premium Fund
00410	Rowan University	29	\$ 2,007,925	\$ 497,664	\$ 1,582,145	\$ 2,079,809	\$ 36,785
00412	Kean University	13	951,472	235,822	749,712	985,534	17,431
00413	William Paterson University of NJ	22	1,510,315	374,332	1,190,053	1,564,385	27,669
00414	Montclair State University	35	2,557,838	633,960	2,015,448	2,649,408	46,860
00415	The College of NJ	10	725,769	179,882	571,870	751,752	13,296
00421	Richard Stockton College of NJ	17	1,057,163	262,018	832,992	1,095,010	19,367
00497	Rutgers Biomedical and Health Sciences	37	2,716,119	673,190	2,140,166	2,813,356	49,759
00498	Rutgers Biomedical and Health Sciences	17	1,252,562	310,447	990,143	1,300,590	22,947
62400	NJ Institute of Technology	31	2,282,548	565,730	1,899,183	2,464,913	41,816
90011	Rutgers University	<u>70</u>	<u>5,056,304</u>	<u>1,253,205</u>	<u>3,984,115</u>	<u>5,237,320</u>	<u>92,631</u>
Total		281	\$ 20,118,015	\$ 4,986,250	\$ 15,955,827	\$ 20,942,077	\$ 368,561

Appendix D

Additional Census Data Statistics

In response to prior requests from the Board of Trustees, we have performed additional calculations and constructed additional exhibits based on the July 1, 2016 valuation data.

Age Breakdown

1. Average Age at Retirement – split by Special/Service Retirements

The exhibit on page 43 provides information split between Police and Firemen and by type of retirement. The average age at retirement is 53.4, 52.7 and 55.0 for service, special, and deferred retirement, respectively.

2. Average Age at Entry

The average age at entry for Contributing active participants at July 1, 2016 is 26.4. The average age at entry for Non-Contributing active participants at July 1, 2016 is 31.4. The average age at entry for all actives at July 1, 2016 is 26.6.

3. & 4. Average Age at Death for Active participants and Retired participants.

We have assumed that all deaths between July 1, 2015 and June 30, 2016 occurred at the middle of the plan year; January 1, 2016. Based on this assumption, the average age at death for the various groups is as follows:

Active Contributing members at July 1, 2015	48.0
Active Non-Contributing members at July 1, 2015	48.2
Retired at July 1, 2015	77.5
Disabled at July 1, 2015	69.5
Beneficiary at July 1, 2015	83.7
Terminated Vested at July 1, 2015	N/A

5. & 6. Average Age at Retirement for those who retired under ordinary and accidental disability.

Specific information by category is contained on page 44. The average age at retirement is 42.4 and 40.4 for ordinary and accidental disability, respectively.

Breakdown of Members

1. Police/Firemen split for Active and Retirees

The Police/Firemen split summarized below for plan members can be found in Appendix E of this report.

	Policemen	Firemen	Unknown	Total
Active Contributing Members	33,037	6,352	0	39,389
Active Non-Contributing Members	1,282	118	0	1,400
Vested Terminated Participants	44	3	0	47
Retired Participants	24,043	5,294	637	29,974
Disabled Retired Participants	5,119	480	144	5,743
Beneficiaries	<u>4,023</u>	<u>1,173</u>	<u>2,098</u>	<u>7,294</u>
Total	67,548	13,420	2,879	83,847

Breakdown of Retired Members and Beneficiaries

1-6. Number of members receiving various benefits.

This information is included in Appendix E of this report and is summarized as follows:

	Number of Members
Receiving Special Retirement Benefits	27,665
Receiving Service Retirement Benefits	2,124
Receiving Deferred Retirement Benefits	185
Receiving Ordinary Disability Benefits	2,922
Receiving Accidental Disability Benefits	2,821

7. Members who died as a result of Accidental Death

We did not receive any information that indicates cause of death for deceased members.

8.-10. Number of Widows, Children, and Other Dependents

This information is included in Tables 9 and 10 of Appendix E of this report and is summarized as follows:

	Number
Widows/Widowers	6,966
Children	327
Other Dependents	<u>1</u>
	7,294

13. The Number of Beneficiaries and Children receiving benefits due to the accidental death of a member is 103 (99 Beneficiaries, 3 Children and 1 other dependent). We have no information to perform a further S.H.B.P./Local Health Benefits split.

Breakdown of Costs

The information contained in this section, "Breakdown of Costs", has been calculated in a manner consistent with that shown in prior reports.

1. Cost per member for Insurance.

Dividing the total death benefit cost of \$44,702,000 (\$8,893,000 for State location and \$35,809,000 for Local groups) by the number of active contributing members of 39,389 gives the total cost per member for insurance \$1,134.89.

2. Cost per member for Administration

Dividing the Administrative cost per member = \$4,783,590/83,847 members = \$57.05.

- 3.&4. The normal contribution rates for State Locations and Municipalities and Local Groups are summarized in Section III(I) of this report.

- 5.&6. The Accrued Liability rates for State Locations and Municipalities and Local Groups are also summarized in Section III(I) of this report.

Breakdown of Purchases

We do not receive information on the active data file regarding service purchases.

Breakdown of Inactive Members

To demonstrate the effect that inactive participants have on costs, we have split the liabilities attributable to beneficiaries used to calculate the Accrued Liability into specific categories. The information summarized below can be found in Section III.E.1 of this report.

	Actuarial Accrued Liability	Percentage of Total Accrued Liability
Service/Special Retirements	\$ 19,801,865,183	52.85%
Disableds	2,551,477,578	6.81%
Beneficiaries	2,358,641,572	6.29%
Deferred Terminated Vesteds	<u>9,051,936</u>	<u>0.02%</u>
Total	\$ 24,721,036,269	65.97%

The percentage shown on the right is the percent attributable to each inactive piece of the total Accrued Liability of \$37,470,081,250.

Additional Information Provided for Item 1. on Page 40

All Healthy Retirees as of July 1, 2016

Sex	Police or Firemen	Type of Retirement	Counts	Average Years of Service	Average Age at Retirement	Average Annual Benefit	Average Current Age
M	Police	Service	1,577	21.6	53.3	\$ 43,160	61.5
M	Police	Special	20,928	27.2	52.3	63,120	63.6
M	Police	Deferred	117	15.1	55.0	13,274	69.1
M	Firemen	Service	151	26.9	56.3	56,378	66.1
M	Firemen	Special	5,087	28.4	54.2	64,385	67.6
M	Firemen	Deferred	47	15.6	55.0	10,597	72.1
M	Unknown	Service	110	26.4	53.7	24,275	91.8
M	Unknown	Special	520	27.4	53.8	30,301	87.3
M	Unknown	Deferred	6	17.9	55.0	9,119	86.2
F	Police	Service	285	19.8	52.4	38,543	60.8
F	Police	Special	1,121	25.8	52.3	62,108	58.9
F	Police	Deferred	15	14.5	54.5	18,713	60.2
F	Firemen	Special	9	26.7	56.3	65,088	62.3
F	Unknown	Service	1	25.0	56.0	19,031	96.0

New Healthy Retirees as of July 1, 2016

Sex	Police or Firemen	Type of Retirement	Counts	Average Years of Service	Average Age at Retirement	Average Annual Benefit	Average Current Age
M	Police	Service	105	22.2	51.8	\$ 50,055	52.4
M	Police	Special	1,044	26.7	51.7	75,554	52.3
M	Police	Deferred	3	17.1	55.0	19,934	56.0
M	Firemen	Service	5	25.5	56.4	66,463	57.0
M	Firemen	Special	205	27.5	53.7	82,962	54.3
M	Firemen	Deferred	2	11.0	55.0	11,903	55.0
F	Police	Service	24	21.9	49.1	48,907	49.9
F	Police	Special	105	26.1	52.2	70,922	52.7
F	Police	Deferred	1	15.6	55.0	15,630	55.0
F	Firemen	Special	2	25.1	58.0	69,702	58.0

Additional Information Provided For Items 5. & 6. on Page 40

All Disabilities as of July 1, 2016

Sex	Police or Firemen	Type of Retirement	Counts	Average Years of Service	Average Age at Retirement	Average Annual Benefit	Average Current Age
M	Police	Ordinary	2,071	13.7	42.3	\$ 27,907	57.4
M	Police	Accidental	2,268	13.4	40.2	49,852	53.7
M	Firemen	Ordinary	277	14.3	42.7	28,327	59.5
M	Firemen	Accidental	197	15.2	42.8	50,697	57.9
M	Unknown	Ordinary	50	13.3	41.3	13,738	79.9
M	Unknown	Accidental	93	12.7	39.8	21,222	83.2
F	Police	Ordinary	517	12.8	42.7	29,262	53.6
F	Police	Accidental	263	11.9	39.3	51,020	48.9
F	Firemen	Ordinary	6	10.7	36.3	27,864	42.8
F	Unknown	Ordinary	1	17.3	54.0	14,424	85.0

New Disabilities as of July 1, 2016

Sex	Police or Firemen	Type of Retirement	Counts	Average Years of Service	Average Age at Retirement	Average Annual Benefit	Average Current Age
M	Police	Ordinary	62	15.0	42.7	\$ 40,140	43.9
M	Police	Accidental	91	16.5	42.8	68,780	43.6
M	Firemen	Ordinary	13	17.4	47.5	41,502	48.1
M	Firemen	Accidental	3	14.2	45.0	65,990	46.0
F	Police	Ordinary	27	12.9	41.7	31,950	42.9
F	Police	Accidental	7	12.4	39.9	53,663	41.3
F	Firemen	Ordinary	1	10.8	40.0	34,486	40.0

Reconciliation of Census Data

The following chart presents a reconciliation of census data from July 1, 2015 to June 30, 2016:

	Actives		Deferred Vested	Retirees				Beneficiaries	Dependents	Domestic Relations Beneficiaries	Total
	Contrib.	Noncontrib.		Service	Special	Deferred	Disabled				
Members as of July 1, 2015	39,052	1,307	51	2,057	26,801	186	5,640	6,803	337	2,428	84,662
Status Change											
To Contributing	252	(252)									0
To Noncontributing	(535)	535									0
Terminated Vested	(1)	(1)	2								0
Terminated Non-Vested	(81)	(135)									(216)
Service Retirement	(118)	(18)		136							0
Special Retirement	(1,349)	(7)			1,356						0
Deferred Vesteds Now Payable			(6)			6					0
New Disabled	(139)	(67)					206				0
New Death	(24)	(13)		(65)	(501)	(7)	(106)	(283)	(1)	(2)	(1,002)
Payments Began										307	307
Payments Ceased									(41)	(119)	(160)
New Actives	2,332	51									2,383
Rehires											0
New Beneficiaries								446	33		479
Data Corrections				(4)	9		3				8
Members as of June 30, 2016	39,389	1,400	47	2,124	27,665	185	5,743	6,966	328	2,614	86,461

Active Member Fifth Age and Service Distribution

The following charts present distributions of active members by age and service.

State Locations And Municipalities And Local Groups¹

Age	Service	1	5	10	15	20	25	30	35	40 and Above	Total
20	Number	307	2								309
	Salary	13,405,772	98,377								13,504,149
25	Number	2,818	760	17							3,595
	Salary	138,107,393	48,393,099	1,282,308							187,782,800
30	Number	1,952	2,753	1,587	50						6,342
	Salary	99,675,745	202,219,927	141,343,694	4,879,570						448,118,936
35	Number	708	1,413	3,601	1,631	27					7,380
	Salary	36,667,957	107,512,147	342,564,235	168,844,308	2,864,581					658,453,228
40	Number	134	522	1,923	3,485	1,275	33				7,372
	Salary	7,368,208	40,523,028	182,257,175	367,815,680	146,415,834	3,649,986				748,029,911
45	Number	6	82	1,026	2,484	3,754	1,112	18			8,482
	Salary	246,199	6,643,417	95,028,170	254,296,888	431,259,305	137,467,982	2,497,396			927,439,357
50	Number	8	6	144	883	1,846	1,483	384	3		4,757
	Salary	247,997	251,637	11,930,217	88,459,583	205,589,632	184,305,378	53,327,950	428,448		544,540,842
55	Number		5	35	119	632	558	386	129	1	1,865
	Salary		395,828	2,012,562	11,098,541	68,676,361	66,178,400	53,423,092	18,881,209	94,204	220,760,197
60	Number	3	4	12	15	144	163	94	116	30	581
	Salary	251,445	151,948	577,631	1,117,136	14,264,678	18,277,865	12,029,326	17,985,589	4,786,697	69,442,315
63	Number	1	3	8	9	30	13	11	15	16	106
	Salary	17,735	105,692	332,232	400,410	2,264,564	1,362,120	1,140,586	2,133,284	2,696,002	10,452,625
Total	Number	5,937	5,550	8,353	8,676	7,708	3,362	893	263	47	40,789
	Salary	295,988,451	406,295,100	777,328,224	896,912,116	871,334,955	411,241,731	122,418,350	39,428,530	7,576,903	3,828,524,360

¹ Based on limited annual compensation.

Average Age: 40.3 Years

Average Service: 13.7 Years

Average Salary: \$93,862

Number Vested: 27,716

Number Non Vested: 13,073

Active Member Fifth Age and Service Distribution (Continued)

State Locations¹

Age	Service	1	5	10	15	20	25	30	35	40 and Above	Total
20	Number	103	1								104
	Salary	4,316,396	56,229								4,372,625
25	Number	581	186								767
	Salary	25,711,493	10,911,453								36,622,946
30	Number	354	511	182	3						1,050
	Salary	16,400,610	32,428,742	12,747,987	204,926						61,782,265
35	Number	141	331	505	242	3					1,222
	Salary	6,608,026	21,855,298	37,863,593	19,825,598	244,505					86,397,020
40	Number	28	123	384	646	168	7				1,356
	Salary	1,368,350	8,265,497	29,632,327	55,508,782	15,074,261	636,594				110,485,811
45	Number	1	18	220	540	505	106	2			1,392
	Salary	50,105	1,283,915	17,012,138	46,026,340	45,922,472	9,662,851	208,980			120,166,801
50	Number	3	1	41	230	287	137	13			712
	Salary	96,951	38,669	2,926,247	19,614,728	25,516,113	12,489,187	1,214,895			61,896,790
55	Number			6	18	88	61	20	4		197
	Salary			347,878	1,361,853	7,816,197	5,420,955	1,774,030	454,432		17,175,345
60	Number	1		4	7	40	36	4	1	1	94
	Salary	15,489		206,963	488,216	3,353,534	3,123,691	344,328	133,004	124,077	7,789,302
63	Number	1		4	1	10	1				17
	Salary	17,735		208,288	68,724	735,698	83,030				1,113,475
Total	Number	1,213	1,171	1,346	1,687	1,101	348	39	5	1	6,911
	Salary	54,585,155	74,839,803	100,945,421	143,099,167	98,662,780	31,416,308	3,542,233	587,436	124,077	507,802,380

¹ Based on limited annual compensation.

Average Age: 39.44 Years

Average Service: 12.1 Years

Average Salary: \$73,477

Number Vested: 4,279

Number Non Vested: 2,632

There are 50 State employer locations who have reported payroll for the July 1, 2016 valuation.

Active Member Fifth Age and Service Distribution (continued)

Municipalities And Local Groups¹

Age	Service	1	5	10	15	20	25	30	35	40 and Above	Total
20	Number	204	1								205
	Salary	9,089,376	42,148								9,131,524
25	Number	2,237	574	17							2,828
	Salary	112,395,900	37,481,646	1,282,308							151,159,854
30	Number	1,598	2,242	1,405	47						5,292
	Salary	83,275,135	169,791,185	128,595,707	4,674,644						386,336,671
35	Number	567	1,082	3,096	1,389	24					6,158
	Salary	30,059,931	85,656,849	304,700,642	149,018,710	2,620,076					572,056,208
40	Number	106	399	1,539	2,839	1,107	26				6,016
	Salary	5,999,858	32,257,531	152,624,848	312,306,898	131,341,573	3,013,392				637,544,100
45	Number	5	64	806	1,944	3,249	1,006	16			7,090
	Salary	196,094	5,359,502	78,016,032	208,270,548	385,336,833	127,805,131	2,288,416			807,272,556
50	Number	5	5	103	653	1,559	1,346	371	3		4,045
	Salary	151,046	212,968	9,003,970	68,844,855	180,073,519	171,816,191	52,113,055	428,448		482,644,052
55	Number		5	29	101	544	497	366	125	1	1,668
	Salary		395,828	1,664,684	9,736,688	60,860,164	60,757,445	51,649,062	18,426,777	94,204	203,584,852
60	Number	2	4	8	8	104	127	90	115	29	487
	Salary	235,956	151,948	370,668	628,920	10,911,144	15,154,174	11,684,998	17,852,585	4,662,620	61,653,013
63	Number		3	4	8	20	12	11	15	16	89
	Salary		105,692	123,944	331,686	1,528,866	1,279,090	1,140,586	2,133,284	2,696,002	9,339,150
Total	Number	4,724	4,379	7,007	6,989	6,607	3,014	854	258	46	33,878
	Salary	241,403,296	331,455,297	676,382,803	753,812,949	772,672,175	379,825,423	118,876,117	38,841,094	7,452,826	3,320,721,980

¹ Based on limited annual compensation.

Average Age: 40.5 Years

Average Service: 14.1 Years

Average Salary: \$98,020

Number Vested: 23,437

Number Non Vested: 10,441

There are 586 Local employer locations who have reported payroll for the July 1, 2016 valuation.

Average Age And Average Annual Benefit At Retirement

	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
State										
All Retirees	56.4	\$ 31,132	52.1	\$ 52,247	45.8	\$ 25,457	40.5	\$ 42,207	45.4	\$ 30,530
New Retirees	54.1	\$ 42,931	51.8	\$ 62,226	43.0	\$ 31,532	44.2	\$ 55,117	45.8	\$ 27,375
Local										
All Retirees	52.7	\$ 41,381	52.8	\$ 60,416	41.2	\$ 26,109	40.3	\$ 46,214	47.6	\$ 23,535
New Retirees	50.8	\$ 55,504	52.1	\$ 82,700	43.0	\$ 42,581	42.4	\$ 71,836	47.2	\$ 29,539

	All Retirements (excluding Survivors)	
	Average Age At Retirement	Average Annual Benefit At Retirement
State		
All Retirees	50.9	\$ 46,216
Local		
All Retirees	50.9	\$ 55,614

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

*** Calculated as of Member's Date of Retirement**

Appendix E

Tabulations Used as a Basis for the 2016 Valuation

The following tables give the distribution of the number and salaries of members by age and length of service as of July 1, 2016. Tables are also given showing the number and retirement allowances of beneficiaries classified by age as of July 1, 2016.

Table 1

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
20	2	\$ 80,000	1	\$ 40,000
21	25	1,171,556	5	233,344
22	82	3,520,009	11	465,690
23	154	6,845,986	19	838,837
24	304	14,533,928	42	1,885,021
25	462	23,022,410	62	2,979,570
26	659	33,388,885	75	3,573,274
27	761	40,485,030	85	4,458,749
28	884	50,648,260	101	5,558,800
29	1,006	61,933,253	102	5,949,815
30	1,019	67,705,598	113	6,914,391
31	1,165	83,589,179	117	8,238,506
32	1,131	86,226,868	130	8,840,137
33	1,222	97,228,893	141	10,704,925
34	1,281	109,384,009	153	12,096,763
35	1,309	113,782,853	183	15,363,187
36	1,184	106,787,508	176	14,985,063
37	1,187	110,946,616	185	16,380,706
38	1,313	126,065,069	191	16,697,337
39	1,292	126,169,633	182	16,200,804
40	1,222	122,899,118	157	15,037,755
41	1,178	122,320,677	156	14,436,335
42	1,338	140,084,552	165	15,945,435
43	1,330	143,234,004	172	16,882,013
44	1,486	161,182,030	151	15,119,334
45	1,565	170,298,410	196	19,360,168
46	1,588	176,719,302	167	17,177,871
47	1,539	173,317,863	145	14,495,519
48	1,304	148,672,484	107	10,683,412
49	1,106	126,335,167	91	8,861,304
50	940	110,724,753	90	8,821,960
51	859	100,873,121	77	7,784,582
52	757	91,243,090	38	4,174,015
53	550	64,715,240	55	5,844,716
54	446	53,298,119	31	3,081,969
55	392	48,471,744	23	2,399,685
56	332	41,166,066	28	2,684,157
57	268	32,136,354	19	1,979,419
58	213	26,909,641	13	1,357,632

Table 1

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

State And Local
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
59	147	\$ 17,975,154	12	\$ 1,230,054
60	128	16,176,634	6	549,711
61	102	13,145,903	6	620,506
62	79	9,811,105	3	304,822
63	37	4,835,608	4	393,877
64	52	7,183,216	3	280,396
Total	35,400	\$ 3,387,244,898	3,989	\$ 341,911,566

The 39,389 total active contributing participants included in the July 1, 2016 valuation data consist of 33,037 policemen and 6,352 firemen.

Table 1A

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
20	2	\$ 80,000	1	\$ 40,000
21	4	160,000	1	40,000
22	30	1,244,637	9	368,958
23	45	1,923,198	10	431,353
24	83	3,710,662	17	737,609
25	94	4,376,564	20	951,438
26	118	5,415,426	23	1,065,882
27	145	6,827,478	27	1,384,829
28	170	8,827,144	28	1,427,104
29	168	9,183,053	32	1,701,380
30	150	8,602,442	32	1,757,159
31	156	9,041,169	29	1,785,410
32	170	10,409,456	44	2,653,753
33	194	12,445,638	37	2,292,815
34	182	11,880,825	45	3,016,493
35	185	12,463,056	51	3,509,453
36	181	12,999,444	35	2,499,752
37	175	12,832,624	52	3,838,876
38	213	15,939,313	47	3,647,285
39	232	18,338,737	52	4,041,280
40	199	16,041,468	42	3,420,613
41	198	16,384,701	49	3,942,853
42	220	18,466,582	52	4,273,287
43	208	17,529,528	52	4,219,981
44	229	19,471,770	36	3,021,510
45	247	21,400,432	61	5,095,840
46	241	20,992,130	46	4,029,431
47	196	17,341,893	55	4,728,513
48	190	16,599,548	38	3,274,396
49	150	13,201,241	42	3,712,240
50	120	10,505,681	28	2,414,896
51	105	9,180,371	31	2,717,250
52	88	7,912,318	9	817,559
53	70	6,224,960	17	1,526,792
54	52	4,652,361	8	688,361
55	25	2,208,192	8	754,009
56	24	2,094,506	9	796,361
57	33	2,915,062	4	374,843
58	19	1,757,527		

Table 1A

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

State Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
59	16	\$ 1,326,160	3	\$ 261,298
60	13	1,183,330	3	255,799
61	17	1,506,523	3	249,090
62	14	1,241,053	1	83,030
63	5	411,492	1	124,077
64	3	249,090	2	166,060
Total	5,379	\$ 397,498,785	1,192	\$ 88,138,918

The 6,571 total State active contributing participants included in the July 1, 2016 valuation data consist of 6,528 policemen and 43 firemen.

Table 1B

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
21	21	\$ 1,011,556	4	\$ 193,344
22	52	2,275,372	2	96,732
23	109	4,922,788	9	407,484
24	221	10,823,266	25	1,147,412
25	368	18,645,846	42	2,028,132
26	541	27,973,459	52	2,507,392
27	616	33,657,552	58	3,073,920
28	714	41,821,116	73	4,131,696
29	838	52,750,200	70	4,248,435
30	869	59,103,156	81	5,157,232
31	1,009	74,548,010	88	6,453,096
32	961	75,817,412	86	6,186,384
33	1,028	84,783,255	104	8,412,110
34	1,099	97,503,184	108	9,080,270
35	1,124	101,319,797	132	11,853,734
36	1,003	93,788,064	141	12,485,311
37	1,012	98,113,992	133	12,541,830
38	1,100	110,125,756	144	13,050,052
39	1,060	107,830,896	130	12,159,524
40	1,023	106,857,650	115	11,617,142
41	980	105,935,976	107	10,493,482
42	1,118	121,617,970	113	11,672,148
43	1,122	125,704,476	120	12,662,032
44	1,257	141,710,260	115	12,097,824
45	1,318	148,897,978	135	14,264,328
46	1,347	155,727,172	121	13,148,440
47	1,343	155,975,970	90	9,767,006
48	1,114	132,072,936	69	7,409,016
49	956	113,133,926	49	5,149,064
50	820	100,219,072	62	6,407,064
51	754	91,692,750	46	5,067,332
52	669	83,330,772	29	3,356,456
53	480	58,490,280	38	4,317,924
54	394	48,645,758	23	2,393,608
55	367	46,263,552	15	1,645,676
56	308	39,071,560	19	1,887,796
57	235	29,221,292	15	1,604,576
58	194	25,152,114	13	1,357,632
59	131	16,648,994	9	968,756

Table 1B

The Number And Annual Compensation Of
Contributing Active Members Distributed By Age
As Of July 1, 2016

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
60	115	\$ 14,993,304	3	\$ 293,912
61	85	11,639,380	3	371,416
62	65	8,570,052	2	221,792
63	32	4,424,116	3	269,800
64	49	6,934,126	1	114,336
Total	30,021	\$ 2,989,746,113	2,797	\$ 253,772,648

The 32,818 total Local active contributing participants included in the July 1, 2016 valuation data consist of 26,509 policemen and 6,309 firemen.

Table 2

The Number And Annual Compensation Of
Contributing Active Members Distributed By Service
As Of July 1, 2016

State And Local

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	298	\$ 12,381,540	53	\$ 2,206,491
1	1,739	78,678,529	200	9,211,447
2	1,535	78,467,501	204	10,103,722
3	1,419	81,729,717	172	9,499,500
4	1,149	73,340,309	111	6,695,634
5	883	60,809,914	85	5,605,166
6	577	41,935,246	59	4,228,401
7	893	70,761,521	120	9,183,163
8	1,305	108,200,949	159	11,999,485
9	1,367	120,879,593	182	14,550,885
10	1,405	129,992,905	202	17,497,873
11	1,612	155,048,219	234	20,774,743
12	1,256	123,198,332	162	14,207,017
13	1,284	128,200,539	245	22,801,113
14	1,350	135,681,488	244	23,146,000
15	1,452	148,010,834	186	17,790,488
16	1,608	168,474,728	192	19,130,293
17	1,496	160,505,819	155	15,685,747
18	1,528	166,071,407	170	17,321,107
19	1,561	168,418,865	145	14,587,648
20	1,205	134,031,670	138	14,601,689
21	1,430	166,630,081	148	15,688,179
22	1,648	194,266,427	113	12,095,218
23	1,105	130,119,531	89	9,243,605
24	1,005	119,767,081	76	7,865,580
25	793	96,253,716	48	5,141,378
26	559	69,516,875	34	3,869,508
27	394	50,982,486	21	2,299,809
28	384	50,454,518	16	1,854,915
29	297	39,415,175	14	1,625,164
30	218	30,232,364	4	477,592
31	178	25,139,670	3	341,040
32	106	15,347,302	2	191,404
33	59	8,365,450	1	112,542
34	58	8,400,662	1	169,292
35	68	9,942,059		
36	49	7,319,339		
37	58	9,085,444		
38	25	4,019,020	1	108,728
39	18	2,833,364		

Table 2

The Number And Annual Compensation Of
Contributing Active Members Distributed By Service
As Of July 1, 2016

State And Local
(Continued)

Years of Service	Men		Women	
	Number	Amount	Number	Amount
40	6	\$ 1,090,072		
41	3	478,489		
42	11	1,729,360		
43	5	911,832		
46	1	124,956		
Total	35,400	\$ 3,387,244,898	3,989	\$ 341,911,566

The 39,389 total active contributing participants included in the July 1, 2016 valuation data consist of 33,037 policemen and 6,352 firemen.

Table 2A

The Number And Annual Compensation Of
Contributing Active Members Distributed By Service
As Of July 1, 2016

State Only

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	90	\$ 3,600,000	28	\$ 1,141,283
1	361	15,328,921	57	2,551,423
2	266	12,384,237	74	3,480,751
3	212	10,458,444	48	2,392,422
4	239	13,703,999	49	2,806,206
5	230	14,471,666	41	2,585,678
6	75	4,773,910	12	734,843
7	114	7,690,425	23	1,543,131
8	280	19,355,683	54	3,787,959
9	190	13,483,101	49	3,430,413
10	198	14,654,733	51	3,771,426
11	187	13,840,871	66	4,912,295
12	208	16,250,934	52	4,083,195
13	173	13,838,547	67	5,318,571
14	250	20,681,494	81	6,687,012
15	294	24,620,238	59	4,920,616
16	279	23,856,454	52	4,384,657
17	226	19,347,713	47	4,177,441
18	276	24,228,887	54	4,802,591
19	361	32,522,525	56	4,988,532
20	176	15,357,434	31	2,815,593
21	117	10,467,473	33	2,959,503
22	133	12,017,687	27	2,553,092
23	113	10,369,547	24	2,248,969
24	131	11,728,329	32	2,856,260
25	67	6,050,124	13	1,117,078
26	47	4,411,965	5	457,720
27	29	2,653,994	3	244,505
28	13	1,208,246	3	273,211
29	23	2,183,359		
30	6	486,596		
31	5	419,066		
32	3	257,640		
33	1	83,030	1	112,542
35	2	188,921		
36	2	265,511		
37	1	133,004		
41	1	124,077		
Total	5,379	\$ 397,498,785	1,192	\$ 88,138,918

The 6,571 total State active contributing participants included in the July 1, 2016 valuation data consist of 6,528 policemen and 43 firemen.

Table 2B

The Number And Annual Compensation Of
Contributing Active Members Distributed By Service
As Of July 1, 2016

Local Only

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	208	\$ 8,781,540	25	\$ 1,065,208
1	1,378	63,349,608	143	6,660,024
2	1,269	66,083,264	130	6,622,971
3	1,207	71,271,273	124	7,107,078
4	910	59,636,310	62	3,889,428
5	653	46,338,248	44	3,019,488
6	502	37,161,336	47	3,493,558
7	779	63,071,096	97	7,640,032
8	1,025	88,845,266	105	8,211,526
9	1,177	107,396,492	133	11,120,472
10	1,207	115,338,172	151	13,726,447
11	1,425	141,207,348	168	15,862,448
12	1,048	106,947,398	110	10,123,822
13	1,111	114,361,992	178	17,482,542
14	1,100	114,999,994	163	16,458,988
15	1,158	123,390,596	127	12,869,872
16	1,329	144,618,274	140	14,745,636
17	1,270	141,158,106	108	11,508,306
18	1,252	141,842,520	116	12,518,516
19	1,200	135,896,340	89	9,599,116
20	1,029	118,674,236	107	11,786,096
21	1,313	156,162,608	115	12,728,676
22	1,515	182,248,740	86	9,542,126
23	992	119,749,984	65	6,994,636
24	874	108,038,752	44	5,009,320
25	726	90,203,592	35	4,024,300
26	512	65,104,910	29	3,411,788
27	365	48,328,492	18	2,055,304
28	371	49,246,272	13	1,581,704
29	274	37,231,816	14	1,625,164
30	212	29,745,768	4	477,592
31	173	24,720,604	3	341,040
32	103	15,089,662	2	191,404
33	58	8,282,420		
34	58	8,400,662	1	169,292
35	66	9,753,138		
36	47	7,053,828		
37	57	8,952,440		
38	25	4,019,020	1	108,728
39	18	2,833,364		

Table 2B

The Number And Annual Compensation Of
Contributing Active Members Distributed By Service
As Of July 1, 2016

Local Only
(Continued)

Years of Service	Men		Women	
	Number	Amount	Number	Amount
40	6	\$ 1,090,072		
41	2	354,412		
42	11	1,729,360		
43	5	911,832		
46	1	124,956		
Total	30,021	\$ 2,989,746,113	2,797	\$ 253,772,648

The 32,818 total Local active contributing participants included in the July 1, 2016 valuation data consist of 26,509 policemen and 6,309 firemen.

Table 3

The Number And Annual Compensation Of
 Non-Contributing Active Members Distributed By Age
 As Of July 1, 2016

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
22	3	\$ 85,739	1	\$ 40,000
23	4	103,144	2	79,844
24	9	402,844	3	100,495
25	25	1,024,964	5	246,213
26	23	1,019,219	6	278,290
27	40	1,772,731	3	136,239
28	42	2,062,705	4	205,171
29	41	2,183,166	7	372,727
30	27	1,436,140	6	314,773
31	38	1,914,001	3	127,307
32	35	1,953,841	5	315,316
33	32	2,077,128	2	92,976
34	41	2,744,164	9	613,461
35	27	2,010,725	8	591,646
36	34	2,455,395	10	763,060
37	36	2,616,153	10	852,307
38	36	2,749,897	7	567,310
39	27	2,330,856	8	589,855
40	29	2,455,666	7	610,586
41	28	2,398,008	8	636,184
42	20	1,496,486	12	973,956
43	33	2,666,708	8	661,272
44	39	3,342,980	5	369,015
45	47	4,102,655	6	586,538
46	48	4,362,763	6	516,412
47	33	2,740,874	3	205,398
48	39	3,595,124	8	591,204
49	40	3,410,482	9	785,770
50	37	2,760,632	5	386,801
51	24	1,974,319	8	603,058
52	36	2,869,212	6	450,906
53	26	1,756,343	3	165,378
54	24	1,756,670	4	299,490
55	24	1,969,884	3	146,673
56	14	898,397	3	212,420
57	14	1,023,090	3	256,968
58	10	658,487	1	53,332
59	12	866,539	4	230,098
60	11	828,729	2	125,935
61	8	845,816	3	241,954
62	9	728,932	1	90,436

Table 3

**The Number And Annual Compensation Of
Non-Contributing Active Members Distributed By Age
As Of July 1, 2016**

**State And Local
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
63	7	\$ 440,501		
64	47	2,734,062	4	\$ 254,951
Total	1,179	\$ 83,626,171	221	\$ 15,741,725

The 1,400 total active non-contributing participants included in the July 1, 2016 valuation data consist of 1,282 policemen and 118 firemen.

Table 3A

The Number And Annual Compensation Of
Non-Contributing Active Members Distributed By Age
As Of July 1, 2016

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
22	1	\$ 44,479	1	\$ 40,000
24	1	48,560	2	72,487
25	5	193,297	3	162,405
26	9	390,533	2	104,667
27	6	265,895	2	93,039
28	11	500,504	1	67,423
29	6	298,027	3	166,579
30	5	216,681	2	93,039
31	10	404,565	1	44,479
32	5	292,552	1	61,912
33	5	332,156		
34	9	570,461	2	155,537
35	6	369,443	3	205,024
36	5	365,411	4	264,180
37	11	757,349	5	307,291
38	6	385,757	5	389,446
39	5	359,548	3	212,795
40	5	340,440	2	156,890
41	4	311,928	5	375,378
42	8	557,084	8	625,676
43	9	652,632	3	234,408
44	7	554,620	1	75,689
45	11	916,103	2	160,002
46	9	692,153	2	138,872
47	10	748,460	1	86,578
48	9	755,832	1	83,030
49	8	566,810	3	245,824
50	8	604,676	1	89,739
51	7	459,117	4	318,254
52	8	517,424	4	277,830
53	6	438,431	3	165,378
54	3	166,886	3	199,464
55	1	58,192	1	52,127
56	2	109,967	1	80,396
57	2	138,024	1	76,940
58	1	52,127		
59	4	244,825	2	134,782
60	5	379,345	2	125,935
62	3	168,404		
63	2	94,159		
64	11	639,486	1	58,839
Total	249	\$ 15,962,343	91	\$ 6,202,334

The 340 total State active non-contributing participants included in the July 1, 2016 valuation data consist of 338 policemen and 2 firemen.

Table 3B

The Number And Annual Compensation Of
 Non-Contributing Active Members Distributed By Age
 As Of July 1, 2016

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
22	2	\$ 41,260		
23	4	103,144	2	\$ 79,844
24	8	354,284	1	28,008
25	20	831,667	2	83,808
26	14	628,686	4	173,623
27	34	1,506,836	1	43,200
28	31	1,562,201	3	137,748
29	35	1,885,139	4	206,148
30	22	1,219,459	4	221,734
31	28	1,509,436	2	82,828
32	30	1,661,289	4	253,404
33	27	1,744,972	2	92,976
34	32	2,173,703	7	457,924
35	21	1,641,282	5	386,622
36	29	2,089,984	6	498,880
37	25	1,858,804	5	545,016
38	30	2,364,140	2	177,864
39	22	1,971,308	5	377,060
40	24	2,115,226	5	453,696
41	24	2,086,080	3	260,806
42	12	939,402	4	348,280
43	24	2,014,076	5	426,864
44	32	2,788,360	4	293,326
45	36	3,186,552	4	426,536
46	39	3,670,610	4	377,540
47	23	1,992,414	2	118,820
48	30	2,839,292	7	508,174
49	32	2,843,672	6	539,946
50	29	2,155,956	4	297,062
51	17	1,515,202	4	284,804
52	28	2,351,788	2	173,076
53	20	1,317,912		
54	21	1,589,784	1	100,026
55	23	1,911,692	2	94,546
56	12	788,430	2	132,024
57	12	885,066	2	180,028
58	9	606,360	1	53,332
59	8	621,714	2	95,316
60	6	449,384		
61	8	845,816	3	241,954

Table 3B

**The Number And Annual Compensation Of
Non-Contributing Active Members Distributed By Age
As Of July 1, 2016**

**Local Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
62	6	\$ 560,528	1	\$ 90,436
63	5	346,342		
64	36	2,094,576	3	196,112
Total	930	\$ 67,663,828	130	\$ 9,539,391

The 1,060 total Local active non-contributing participants included in the July 1, 2016 valuation data consist of 944 policemen and 116 firemen.

Table 4

The Number And Annual Compensation Of
 Non-Contributing Active Members Distributed By Service
 As Of July 1, 2016

State And Local

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	35	\$ 1,226,827		
1	116	4,833,790	19	\$ 765,462
2	71	3,199,835	17	758,468
3	52	2,576,489	7	349,132
4	38	2,157,909	7	361,366
5	30	1,715,819	3	190,035
6	38	2,463,673	5	325,688
7	36	2,478,237	10	713,402
8	32	2,408,675	10	720,506
9	28	1,999,309	9	664,827
10	63	4,700,705	13	866,703
11	84	5,846,751	21	1,575,311
12	79	5,932,652	16	1,211,273
13	74	5,979,636	17	1,399,838
14	56	4,635,980	18	1,492,987
15	53	4,336,093	6	535,382
16	44	3,698,368	10	788,102
17	52	4,561,112	8	655,607
18	41	3,765,970	7	624,602
19	36	3,174,321	5	525,652
20	26	2,526,815	3	302,596
21	15	1,431,907	1	80,396
22	18	1,726,356	2	195,356
23	17	1,443,859	3	244,791
24	9	840,758	1	136,794
25	11	1,145,527	2	167,013
26	4	405,736		
27	4	439,056		
28	1	100,980		
29	5	532,868		
30	3	311,110		
31	1	142,584		
33	2	184,084		
34	1	191,604	1	90,436
35	1	101,946		
39	1	150,876		
41	2	257,954		
Total	1,179	\$ 83,626,171	221	\$ 15,741,725

The 1,400 total active non-contributing participants included in the July 1, 2016 valuation data consist of 1,282 policemen and 118 firemen.

Table 4A

The Number And Annual Compensation Of
Non-Contributing Active Members Distributed By Service
As Of July 1, 2016

State Only

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	5	\$ 206,963		
1	30	1,197,119	8	\$ 350,811
2	16	625,983	5	225,388
3	9	429,876	4	211,534
4	8	422,203	2	123,824
5	8	458,065	1	64,667
6	4	266,296	3	183,406
7	10	650,345	4	265,630
8	10	682,421	4	269,446
9	4	289,435	5	368,827
10	10	688,373	6	384,039
11	21	1,468,701	9	619,913
12	17	1,116,954	7	517,025
13	18	1,321,701	8	586,366
14	13	980,584	10	791,301
15	8	544,325	1	86,578
16	7	574,024	3	215,446
17	9	700,066	3	264,947
18	13	1,062,180	2	172,612
19	9	683,293		
20	9	712,333	1	83,030
21	1	106,265	1	80,396
22	2	156,488	1	80,396
23	5	370,487	1	89,739
24	1	83,030		
25	1	81,803	2	167,013
26	1	83,030		
Total	249	\$ 15,962,343	91	\$ 6,202,334

The 340 total State active non-contributing participants included in the July 1, 2016 valuation data consist of 338 policemen and 2 firemen.

Table 4B

The Number And Annual Compensation Of
 Non-Contributing Active Members Distributed By Service
 As Of July 1, 2016

Local Only

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	30	\$ 1,019,864		
1	86	3,636,671	11	\$ 414,651
2	55	2,573,852	12	533,080
3	43	2,146,613	3	137,598
4	30	1,735,706	5	237,542
5	22	1,257,754	2	125,368
6	34	2,197,377	2	142,282
7	26	1,827,892	6	447,772
8	22	1,726,254	6	451,060
9	24	1,709,874	4	296,000
10	53	4,012,332	7	482,664
11	63	4,378,050	12	955,398
12	62	4,815,698	9	694,248
13	56	4,657,935	9	813,472
14	43	3,655,396	8	701,686
15	45	3,791,768	5	448,804
16	37	3,124,344	7	572,656
17	43	3,861,046	5	390,660
18	28	2,703,790	5	451,990
19	27	2,491,028	5	525,652
20	17	1,814,482	2	219,566
21	14	1,325,642		
22	16	1,569,868	1	114,960
23	12	1,073,372	2	155,052
24	8	757,728	1	136,794
25	10	1,063,724		
26	3	322,706		
27	4	439,056		
28	1	100,980		
29	5	532,868		
30	3	311,110		
31	1	142,584		
33	2	184,084		
34	1	191,604	1	90,436
35	1	101,946		
39	1	150,876		
41	2	257,954		
Total	930	\$ 67,663,828	130	\$ 9,539,391

The 1,060 total Local active non-contributing participants included in the July 1, 2016 valuation data consist of 944 policemen and 116 firemen.

Table 5

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
40			1	\$ 51,638
41	3	\$ 135,233		
42	9	453,470	3	154,083
43	7	345,386	3	111,571
44	20	1,131,891	1	55,004
45	31	1,594,437	4	208,716
46	39	1,983,109	17	852,050
47	60	2,924,641	7	293,330
48	49	2,382,208	4	251,904
49	64	3,007,340	6	290,637
50	59	2,949,661	15	688,728
51	56	2,727,807	12	517,317
52	72	3,425,890	12	562,687
53	41	1,849,649	11	523,928
54	51	2,334,098	11	458,283
55	43	1,784,091	14	601,284
56	63	2,548,324	5	192,892
57	51	2,018,223	4	92,128
58	51	1,776,036	15	553,748
59	42	1,635,612	12	434,653
60	61	2,039,590	6	195,123
61	51	1,993,392	7	195,408
62	45	1,731,426	11	406,982
63	47	2,149,002	9	249,651
64	26	915,427	6	210,194
65	41	2,078,785	8	387,431
66	51	2,605,837	2	91,678
67	60	3,138,279	5	170,158
68	66	2,958,101	7	273,243
69	60	3,239,945	13	542,116
70	73	3,564,067	3	98,081
71	33	1,570,140	8	280,192
72	50	2,138,403	7	199,350
73	53	2,421,844	6	208,463
74	47	2,055,006	5	149,486
75	34	1,178,067	1	13,375
76	40	1,698,672	2	43,823
77	41	1,337,882	7	158,595
78	38	949,069	8	136,346
79	39	1,587,378	4	85,017

Table 5

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

**State And Local
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
80	23	\$ 655,180	1	\$ 25,136
81	15	515,564	1	20,575
82	15	344,572	6	109,088
83	16	305,938	2	41,055
84	16	230,036	2	37,696
85	11	151,365	2	41,094
86	9	174,705	1	14,557
87	14	362,813	2	33,967
88	11	231,898		
89	14	298,280		
90	16	368,379		
91	18	416,070		
92	17	456,882	1	11,482
93	10	244,144		
94	13	328,203		
95	8	201,988		
96	3	72,144	1	19,031
97	3	67,823		
98	4	98,935		
99	1	20,245		
100	3	79,387		
102	1	23,136		
Total	2,008	\$ 84,005,105	301	\$ 11,342,974

The 2,309 total service retirements consist of 1,994 policemen, 198 firemen and 117 retirees for whom the information was not reported.

Table 5A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
41	1	\$ 47,619		
42	1	41,090		
43	1	40,204		
44	2	94,612		
45	6	281,636		
46	1	40,192	4	\$ 180,729
47	10	468,502		
48	10	428,718		
49	9	393,451	1	41,503
50	5	246,528	4	169,458
51	7	292,976	1	36,415
52	10	421,205	2	83,216
53	5	195,470	4	164,321
54	9	335,507	6	248,198
55	8	326,528	3	120,628
56	10	333,779	2	65,044
57	9	255,765	4	92,128
58	6	148,518	8	281,195
59	8	310,266	5	198,274
60	12	390,735	2	64,913
61	9	286,554	4	68,851
62	5	152,903	2	59,571
63	10	374,317	4	103,881
64	7	277,613	1	39,684
65	10	391,789	1	9,840
66	16	633,664		
67	12	491,826	3	97,430
68	21	689,033	3	117,950
69	9	324,490	5	225,433
70	14	454,589	2	60,357
71	10	318,463	2	57,350
72	18	510,197	4	104,407
73	18	470,839	4	158,948
74	13	381,653	3	98,475
75	11	326,040		
76	9	244,983	2	43,823
77	13	261,110	3	39,866
78	15	277,095	2	40,703
79	14	361,383	1	25,242

Table 5A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

**State Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
80	6	\$ 182,187		
81	5	115,312	1	\$ 20,576
82	4	74,024	1	18,636
83	4	63,779		
84	6	76,858		
85	2	35,668	1	23,515
86				
87	1	21,416	1	15,817
88	2	39,254		
89	2	32,385		
90	2	44,186		
91	1	6,350		
92	3	37,057		
93	1	21,457		
94	1	13,346		
Total	404	\$ 13,085,121	96	\$ 3,176,377

The 500 total service retirements consist of 489 policemen, 2 firemen and 9 retirees for whom the information was not reported.

Table 5B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
40			1	\$ 51,638
41	2	\$ 87,614		
42	8	412,380	3	154,083
43	6	305,182	3	111,571
44	18	1,037,278	1	55,004
45	25	1,312,801	4	208,716
46	38	1,942,917	13	671,321
47	50	2,456,140	7	293,330
48	39	1,953,489	4	251,904
49	55	2,613,888	5	249,135
50	54	2,703,133	11	519,270
51	49	2,434,831	11	480,903
52	62	3,004,684	10	479,472
53	36	1,654,180	7	359,607
54	42	1,998,590	5	210,085
55	35	1,457,563	11	480,656
56	53	2,214,545	3	127,849
57	42	1,762,458		
58	45	1,627,517	7	272,553
59	34	1,325,346	7	236,379
60	49	1,648,856	4	130,209
61	42	1,706,838	3	126,556
62	40	1,578,523	9	347,410
63	37	1,774,686	5	145,769
64	19	637,814	5	170,509
65	31	1,686,996	7	377,590
66	35	1,972,173	2	91,678
67	48	2,646,453	2	72,728
68	45	2,269,069	4	155,293
69	51	2,915,455	8	316,683
70	59	3,109,477	1	37,724
71	23	1,251,677	6	222,842
72	32	1,628,207	3	94,943
73	35	1,951,005	2	49,515
74	34	1,673,353	2	51,011
75	23	852,027	1	13,375
76	31	1,453,689		
77	28	1,076,772	4	118,729
78	23	671,975	6	95,643
79	25	1,225,995	3	59,774

Table 5B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Service Retirements

**Local Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
80	17	\$ 472,994	1	\$ 25,136
81	10	400,252		
82	11	270,549	5	90,453
83	12	242,159	2	41,055
84	10	153,177	2	37,696
85	9	115,696	1	17,580
86	9	174,705	1	14,557
87	13	341,397	1	18,150
88	9	192,644		
89	12	265,895		
90	14	324,193		
91	17	409,720		
92	14	419,825	1	11,482
93	9	222,687		
94	12	314,857		
95	8	201,988		
96	3	72,144	1	19,031
97	3	67,823		
98	4	98,935		
99	1	20,245		
100	3	79,387		
102	1	23,136		
Total	1,604	\$ 70,919,984	205	\$ 8,166,597

The 1,809 total service retirements consist of 1,505 policemen, 196 firemen and 108 retirees for whom the information was not reported.

Table 6

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
44	6	\$ 394,231	2	\$ 117,229
45	44	3,125,314	5	367,118
46	110	7,891,100	7	405,478
47	186	13,428,505	11	749,001
48	282	20,449,147	25	1,672,200
49	399	29,685,173	40	2,703,141
50	563	41,750,229	50	3,481,070
51	650	47,572,732	48	3,510,151
52	752	55,544,830	63	4,123,832
53	789	58,074,521	56	3,818,040
54	757	54,426,818	67	4,098,495
55	876	63,013,386	63	3,997,468
56	855	60,888,074	51	3,420,830
57	867	62,730,913	63	4,138,879
58	853	62,056,125	55	3,510,258
59	969	69,692,410	56	3,754,047
60	933	66,462,737	42	2,729,281
61	1036	72,179,025	59	3,333,699
62	951	65,727,650	48	2,857,019
63	907	61,783,962	46	2,713,095
64	861	57,959,648	28	1,607,877
65	885	58,354,131	41	2,402,900
66	869	57,287,825	37	2,186,219
67	928	59,270,044	26	1,426,746
68	895	57,473,314	17	943,380
69	988	59,429,545	20	1,135,791
70	929	55,374,591	17	889,412
71	673	39,031,878	11	615,618
72	647	36,018,653	9	502,990
73	737	41,261,562	11	529,297
74	744	39,942,365	7	354,737
75	545	30,134,468	10	433,384
76	492	25,384,471	5	251,470
77	456	24,200,076	4	167,516
78	427	21,715,988	3	143,087
79	362	18,137,406	8	399,918
80	343	16,872,438	4	166,113
81	280	13,207,062	4	207,144
82	239	10,651,365	4	167,496
83	231	10,371,271		
84	199	8,641,132		
85	207	8,687,419	2	100,808

Table 6

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

**State And Local
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
86	170	\$ 6,790,891		
87	125	4,965,918	1	\$ 49,379
88	100	3,953,394		
89	106	4,086,854		
90	104	3,837,307		
91	62	2,431,541	1	32,008
92	51	1,679,325	1	29,176
93	35	1,297,182	1	34,598
94	19	686,417		
95	21	701,870		
96	7	276,076	1	27,057
97	5	168,409		
98	2	88,792		
99	4	113,563		
100	2	49,728		
Total	26,535	\$ 1,697,410,801	1,130	\$ 70,304,452

The 27,665 total special retirements consist of 22,049 policemen, 5,096 firemen and 520 retirees for whom the information was not reported.

Table 6A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
44	2	\$ 103,193		
45	12	686,263	1	\$ 53,639
46	23	1,358,319	2	107,349
47	36	2,121,801	2	117,955
48	58	3,427,597	7	423,234
49	74	4,342,922	11	643,568
50	123	7,346,032	22	1,329,295
51	140	8,104,343	14	925,767
52	148	8,801,508	28	1,601,349
53	140	8,064,065	19	1,067,195
54	159	8,949,460	26	1,419,259
55	174	9,872,911	32	1,774,716
56	186	10,376,472	19	1,033,739
57	148	8,352,795	22	1,297,256
58	131	7,348,690	26	1,495,624
59	173	9,693,312	16	913,820
60	148	8,179,996	15	835,570
61	165	9,144,477	30	1,577,274
62	137	7,532,549	16	848,422
63	130	7,163,837	17	992,909
64	125	6,671,498	11	609,723
65	126	6,759,319	19	1,034,810
66	105	5,573,950	13	721,253
67	123	6,526,906	11	572,373
68	101	5,476,158	8	422,121
69	106	5,511,120	5	269,356
70	89	4,388,213	5	255,412
71	60	3,043,880	4	215,374
72	63	3,067,108	7	358,208
73	38	1,898,864	5	215,935
74	57	2,791,224	2	82,777
75	39	1,797,390	6	244,811
76	42	1,951,974	2	85,768
77	25	1,143,501	1	36,178
78	30	1,362,130		
79	22	960,503	4	197,685
80	21	1,008,769		
81	16	708,133	3	154,593
82	8	363,429	1	39,285
83	8	360,592		
84	12	416,340		

Table 6A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

**State Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
85	13	\$ 454,565		
86	14	601,341		
87	7	236,805		
88	5	195,212		
89	1	23,532		
91	1	43,143		
92	1	25,518		
93	1	32,959		
Total	3,566	\$ 194,364,618	432	\$ 23,973,602

The 3,998 total special retirements consist of 3,905 policemen, 50 firemen and 43 retirees for whom the information was not reported.

Table 6B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
44	4	\$ 291,038	2	\$ 117,229
45	32	2,439,050	4	313,479
46	87	6,532,780	5	298,129
47	150	11,306,703	9	631,046
48	224	17,021,549	18	1,248,966
49	325	25,342,251	29	2,059,573
50	440	34,404,198	28	2,151,775
51	510	39,468,388	34	2,584,384
52	604	46,743,322	35	2,522,483
53	649	50,010,457	37	2,750,845
54	598	45,477,359	41	2,679,236
55	702	53,140,475	31	2,222,752
56	669	50,511,602	32	2,387,092
57	719	54,378,118	41	2,841,623
58	722	54,707,435	29	2,014,634
59	796	59,999,099	40	2,840,227
60	785	58,282,741	27	1,893,711
61	871	63,034,548	29	1,756,424
62	814	58,195,101	32	2,008,597
63	777	54,620,125	29	1,720,186
64	736	51,288,150	17	998,154
65	759	51,594,811	22	1,368,090
66	764	51,713,874	24	1,464,967
67	805	52,743,138	15	854,374
68	794	51,997,157	9	521,260
69	882	53,918,425	15	866,433
70	840	50,986,380	12	634,000
71	613	35,987,999	7	400,244
72	584	32,951,545	2	144,782
73	699	39,362,698	6	313,362
74	687	37,151,141	5	271,960
75	506	28,337,078	4	188,573
76	450	23,432,497	3	165,702
77	431	23,056,575	3	131,338
78	397	20,353,858	3	143,087
79	340	17,176,904	4	202,233
80	322	15,863,668	4	166,113
81	264	12,498,929	1	52,550
82	231	10,287,936	3	128,211
83	223	10,010,679		
84	187	8,224,792		

Table 6B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Special Retirements

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
85	194	\$ 8,232,854	2	\$ 100,808
86	156	6,189,549		
87	118	4,729,113	1	49,379
88	95	3,758,181		
89	105	4,063,322		
90	104	3,837,307		
91	61	2,388,398	1	32,008
92	50	1,653,807	1	29,176
93	34	1,264,224	1	34,598
94	19	686,417		
95	21	701,870		
96	7	276,076	1	27,057
97	5	168,409		
98	2	88,792		
99	4	113,563		
100	2	49,728		
Total	22,969	\$ 1,503,046,183	698	\$ 46,330,850

The 23,667 total special retirements consist of 18,144 policemen, 5,046 firemen and 477 retirees for whom the information was not reported.

Table 7

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
30	1	\$ 29,434		
31	1	19,468		
32	4	120,585		
33	5	138,493		
34	7	238,313	2	\$ 51,515
35	12	340,299	5	128,170
36	10	329,640	2	64,419
37	16	496,391	3	97,049
38	17	581,103	6	170,197
39	21	683,465	8	213,171
40	13	433,700	8	249,040
41	31	992,821	11	330,621
42	25	825,170	10	303,818
43	31	1,005,685	8	252,964
44	48	1,407,721	28	864,149
45	59	1,836,864	26	820,093
46	76	2,452,914	19	521,175
47	65	2,053,232	15	489,419
48	77	2,400,771	19	556,687
49	76	2,507,406	30	992,014
50	76	2,445,402	22	664,797
51	90	3,003,315	25	742,181
52	80	2,631,672	28	810,646
53	69	2,266,392	17	488,248
54	88	2,758,844	18	487,075
55	75	2,265,530	12	337,752
56	71	2,446,744	18	492,825
57	68	2,173,055	21	695,449
58	54	1,862,225	21	576,813
59	72	2,398,487	19	594,145
60	66	2,060,125	11	289,116
61	71	2,221,602	11	348,009
62	70	1,894,714	12	317,084
63	68	1,917,657	9	245,069
64	52	1,460,460	7	212,291
65	69	1,812,389	9	246,940
66	58	1,594,621	9	258,636
67	68	1,679,075	9	267,227
68	70	1,662,357	7	193,461
69	71	1,584,992	3	79,831
70	57	1,314,595	4	104,500

Table 7

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

State And Local
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
71	37	\$ 747,067	5	\$ 99,902
72	31	652,826	3	81,702
73	52	1,030,941	2	47,947
74	27	485,484	8	221,962
75	44	817,961	3	79,774
76	28	537,198	2	47,743
77	27	487,408		
78	18	385,151	2	58,786
79	13	235,507	1	21,547
80	12	224,836		
81	8	161,829	1	22,856
82	9	138,245	1	19,151
83	8	100,007	1	22,912
84	6	77,477	1	18,838
85	1	12,901	1	14,424
86	6	85,282	1	18,877
87	1	11,095		
88	1	15,405		
89	2	31,541		
90	3	39,207		
91	2	22,488		
92	4	50,007		
Total	2,398	\$ 68,697,591	524	\$ 15,333,017

The 2,922 ordinary disability retirees consist of 2,588 policemen, 283 firemen and 51 retirees for whom the information was not reported.

Table 7A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
33	2	\$ 53,456		
34	2	47,531	2	\$ 51,515
35	1	24,310	4	101,327
36	1	26,549	1	26,797
37	3	77,363	2	63,333
38	1	27,588	2	47,280
39	4	111,245	2	46,724
40	4	110,824	1	21,188
41	5	117,702	4	115,034
42	3	85,704	2	57,453
43	7	181,364	3	87,556
44	10	283,404	9	277,872
45	11	313,213	6	169,277
46	14	403,542	6	160,941
47	13	324,290	5	150,084
48	11	317,948	6	167,868
49	16	464,964	11	324,964
50	11	292,874	7	192,649
51	22	624,888	12	351,769
52	15	420,765	7	194,436
53	12	313,038	4	108,747
54	21	570,783	7	185,140
55	13	332,144	5	141,216
56	14	433,075	7	180,474
57	19	549,254	11	307,869
58	14	418,137	7	195,298
59	18	584,261	10	301,332
60	17	501,103	7	174,614
61	22	658,629	5	149,250
62	12	308,525	8	214,357
63	14	406,018	3	79,804
64	19	494,316	4	113,083
65	15	378,718	7	204,423
66	14	386,986	7	199,210
67	19	486,143	6	165,557
68	16	427,535	3	73,628
69	18	510,417	2	57,775
70	15	413,972	3	84,437
71	9	205,374	2	51,520
72	8	186,107	3	81,702

Table 7A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

State Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
73	11	\$ 273,384	1	\$ 25,455
74	4	111,009	4	106,049
75	11	263,885	3	79,774
76	8	207,698	1	23,651
77	7	170,438		
78	4	99,842		
79	1	23,730	1	21,547
80	2	61,363		
81	1	33,538	1	22,856
82	1	27,403		
84	1	15,680		
91	1	11,783		
92	1	12,887		
Total	518	\$ 14,186,699	214	\$ 5,956,835

The 732 ordinary disability retirees consist of 720 policemen, 3 firemen and 9 retirees for whom the information was not reported.

Table 7B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
30	1	\$ 29,434		
31	1	19,468		
32	4	120,585		
33	3	85,037		
34	5	190,781		
35	11	315,990	1	\$ 26,842
36	9	303,091	1	37,623
37	13	419,028	1	33,716
38	16	553,515	4	122,917
39	17	572,220	6	166,447
40	9	322,876	7	227,852
41	26	875,119	7	215,587
42	22	739,466	8	246,365
43	24	824,322	5	165,408
44	38	1,124,317	19	586,277
45	48	1,523,651	20	650,816
46	62	2,049,372	13	360,234
47	52	1,728,942	10	339,335
48	66	2,082,823	13	388,819
49	60	2,042,443	19	667,050
50	65	2,152,527	15	472,149
51	68	2,378,426	13	390,412
52	65	2,210,907	21	616,210
53	57	1,953,354	13	379,501
54	67	2,188,061	11	301,935
55	62	1,933,386	7	196,535
56	57	2,013,669	11	312,351
57	49	1,623,801	10	387,580
58	40	1,444,088	14	381,516
59	54	1,814,226	9	292,813
60	49	1,559,021	4	114,501
61	49	1,562,972	6	198,760
62	58	1,586,189	4	102,727
63	54	1,511,639	6	165,265
64	33	966,144	3	99,208
65	54	1,433,671	2	42,516
66	44	1,207,636	2	59,426
67	49	1,192,932	3	101,670
68	54	1,234,823	4	119,833
69	53	1,074,576	1	22,056

Table 7B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Ordinary Disability Retirements

**Local Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
70	42	\$ 900,623	1	\$ 20,063
71	28	541,693	3	48,382
72	23	466,719		
73	41	757,557	1	22,492
74	23	374,476	4	115,913
75	33	554,076		
76	20	329,500	1	24,092
77	20	316,970		
78	14	285,309	2	58,786
79	12	211,776		
80	10	163,473		
81	7	128,290		
82	8	110,841	1	19,151
83	8	100,007	1	22,912
84	5	61,797	1	18,838
85	1	12,901	1	14,424
86	6	85,282	1	18,877
87	1	11,095		
88	1	15,405		
89	2	31,541		
90	3	39,207		
91	1	10,706		
92	3	37,120		
Total	1,880	\$ 54,510,892	310	\$ 9,376,182

The 2,190 ordinary disability retirees consist of 1,868 policemen, 280 firemen and 42 retirees for whom the information was not reported.

Table 8

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
29			1	\$ 31,216
30	3	\$ 192,185		
31	4	169,411	1	50,632
32	8	430,651		
33	11	616,839	1	41,587
34	12	558,917	4	151,275
35	19	1,069,881	2	112,313
36	16	932,325	6	274,488
37	27	1,514,399	9	480,003
38	25	1,480,462	6	319,334
39	34	2,020,168	8	431,085
40	38	2,261,625	13	675,299
41	53	3,092,266	3	160,231
42	60	3,469,895	8	454,801
43	76	4,264,698	12	747,855
44	75	4,258,276	12	641,434
45	90	5,367,263	13	708,572
46	99	5,738,371	9	514,272
47	109	6,126,161	12	610,728
48	121	7,120,344	15	782,773
49	90	5,100,557	11	623,481
50	101	5,753,647	18	931,351
51	104	6,248,227	7	336,278
52	111	6,197,618	8	412,984
53	82	4,595,682	9	501,967
54	81	4,444,714	7	378,533
55	63	3,495,712	6	270,589
56	74	3,817,816	10	472,426
57	58	3,217,572	6	310,199
58	55	3,028,707	6	337,081
59	59	2,910,369	4	212,709
60	39	1,911,527	10	439,819
61	54	2,311,031	3	117,043
62	52	2,115,666	8	365,772
63	46	2,030,953	4	139,183
64	27	1,165,258		
65	47	2,082,049	2	94,870
66	39	1,575,536	2	62,698

Table 8

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

State And Local
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
67	43	\$ 1,753,760	1	\$ 12,914
68	55	2,007,768		
69	45	1,408,747	1	39,353
70	46	1,432,868	1	55,043
71	36	1,169,508	1	46,429
72	32	838,043		
73	27	816,413	2	93,253
74	34	1,000,750		
75	21	562,579		
76	16	458,330		
77	10	255,637	1	15,584
78	14	383,411		
79	12	296,629		
80	9	198,201		
81	15	354,549		
82	15	366,639		
83	14	319,458		
84	6	133,037		
85	11	249,636		
86	3	56,658		
87	5	98,668		
88	3	63,760		
89	3	64,690		
90	5	103,368		
91	6	144,218		
92	4	95,958		
93	3	51,559		
94	1	19,222		
95	2	43,186		
Total	2,558	\$ 127,434,028	263	\$ 13,457,457

The 2,821 accidental disability retirees consist of 2,531 policemen, 197 firemen and 93 retirees for whom the information was not reported.

Table 8A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
32	2	\$ 75,770		
33	1	39,047		
34	4	144,082	2	\$ 75,364
35	2	87,188	1	42,775
36	3	127,199	1	48,708
37	3	133,674	2	84,203
38	4	181,202	3	147,585
39	5	223,943	3	139,130
40	5	245,674	4	178,355
41	9	422,582	1	57,456
42	8	370,762		
43	12	550,952	3	174,139
44	7	326,808	3	146,904
45	9	426,033	3	139,935
46	12	560,447	2	103,081
47	16	743,207	3	119,321
48	11	526,985	4	161,375
49	13	587,090	2	133,212
50	10	512,918	5	248,175
51	15	711,758	1	44,244
52	11	474,433		
53	9	393,363	2	92,599
54	8	339,876	3	139,850
55	4	195,326	2	98,735
56	7	331,376	5	217,223
57	11	514,495		
58	8	384,354	1	59,661
59	8	310,158		
60	6	265,210	3	134,283
61	5	171,004	1	42,053
62	4	181,757	4	175,341
63	8	341,315	1	41,064
65	3	151,796	2	94,870
66	3	128,636		
67	2	83,111	1	12,914
68	8	344,580		
69	2	68,221	1	39,353
70	4	149,449		
72	1	39,582		
73	1	19,641		

Table 8A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

State Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
74	2	\$ 87,416		
75	1	52,856		
76	1	23,846		
77	1	31,804		
80	1	40,026		
81	1	31,926		
82	2	51,192		
83	1	23,537		
84	1	18,804		
Total	275	\$ 12,246,411	69	\$ 3,191,908

The 344 accidental disability retirees consist of 338 policemen and 6 retirees for whom the information was not reported.

Table 8B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
29			1	\$ 31,216
30	3	\$ 192,185		
31	4	169,411	1	50,632
32	6	354,881		
33	10	577,791	1	41,587
34	8	414,835	2	75,911
35	17	982,693	1	69,537
36	13	805,126	5	225,780
37	24	1,380,725	7	395,799
38	21	1,299,261	3	171,749
39	29	1,796,225	5	291,955
40	33	2,015,951	9	496,944
41	44	2,669,684	2	102,774
42	52	3,099,133	8	454,801
43	64	3,713,745	9	573,716
44	68	3,931,468	9	494,529
45	81	4,941,231	10	568,637
46	87	5,177,925	7	411,190
47	93	5,382,954	9	491,407
48	110	6,593,358	11	621,399
49	77	4,513,466	9	490,270
50	91	5,240,728	13	683,177
51	89	5,536,468	6	292,034
52	100	5,723,184	8	412,984
53	73	4,202,319	7	409,368
54	73	4,104,838	4	238,684
55	59	3,300,386	4	171,854
56	67	3,486,440	5	255,203
57	47	2,703,077	6	310,199
58	47	2,644,353	5	277,421
59	51	2,600,211	4	212,709
60	33	1,646,317	7	305,536
61	49	2,140,026	2	74,990
62	48	1,933,910	4	190,432
63	38	1,689,638	3	98,118
64	27	1,165,258		
65	44	1,930,254		
66	36	1,446,900	2	62,698
67	41	1,670,649		

Table 8B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Accidental Disability Retirements

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
68	47	\$ 1,663,189		
69	43	1,340,527		
70	42	1,283,420	1	\$ 55,043
71	36	1,169,508	1	46,429
72	31	798,461		
73	26	796,772	2	93,253
74	32	913,334		
75	20	509,723		
76	15	434,484		
77	9	223,833	1	15,584
78	14	383,411		
79	12	296,629		
80	8	158,176		
81	14	322,622		
82	13	315,447		
83	13	295,921		
84	5	114,233		
85	11	249,636		
86	3	56,658		
87	5	98,668		
88	3	63,760		
89	3	64,690		
90	5	103,368		
91	6	144,218		
92	4	95,958		
93	3	51,559		
94	1	19,222		
95	2	43,186		
Total	2,283	\$ 115,187,617	194	\$ 10,265,549

The 2,477 accidental disability retirees consist of 2,193 policemen, 197 firemen and 87 retirees for whom the information was not reported.

Table 9

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
3			1	\$ 14,404
4	1	\$ 13,013	1	10,041
6			1	13,521
7	1	10,560	1	12,802
8	1	8,811		
9			4	42,801
10	1	12,923	2	26,768
11	2	23,947	4	82,405
12	1	19,959	1	12,712
13	1	11,533		
14	1	13,552	7	86,878
15	3	36,035	7	110,602
16	1	20,569	5	88,194
17	5	64,927	7	86,455
18	3	48,454	5	72,856
19	1	16,301	2	29,149
20	1	20,085	2	22,075
23			1	89,465
25			1	13,036
26			2	94,410
28			1	11,194
30	1	11,705	1	44,280
32			3	133,305
33			1	30,830
34	1	11,973	3	142,013
35			3	120,460
36			7	272,279
37			3	134,411
38			3	93,556
39			7	274,846
40			6	256,203
41	1	38,840	6	248,225
42	2	75,810	8	291,131
43			14	545,416
44	1	31,518	19	889,559
45			14	627,539
46	1	33,669	9	375,970
47			19	815,528

Table 9

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

State And Local
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
48	1	\$ 36,262	15	\$ 650,285
49	1	45,006	19	781,117
50			12	507,315
51			17	772,505
52	1	23,344	14	639,894
53	1	65,421	18	794,572
54			29	1,267,789
55	1	33,367	16	696,429
56			19	886,272
57			22	900,843
58			16	703,200
59			13	545,110
60			23	1,000,334
61			15	606,174
62			14	657,135
63			13	557,145
64			15	594,480
65	1	39,264	22	945,192
66			13	582,194
67			9	376,535
68			12	486,343
69			10	396,042
70	1	36,607	9	339,394
71			8	250,691
72			5	157,961
73			6	209,653
74			7	252,799
75			7	228,388
76			5	152,876
78			2	64,505
79			3	81,188
81			1	56,798
82			2	72,976
83			1	23,882
84			1	23,951
85			1	27,708
86			3	66,761
87			3	59,041

Table 9

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

**State And Local
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
88			3	\$ 62,994
89			1	29,682
90			2	70,787
91			2	41,941
93			3	57,951
94			3	60,010
96			1	15,158
98			1	613
101			1	14,247
Total	37	\$ 803,455	618	\$ 23,984,179

The 655 beneficiaries are receiving active members' death benefits on behalf of 197 deceased policemen and 40 deceased firemen. Information was not reported for the other 418 beneficiaries.

Table 9A

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
4	1	\$ 13,013	1	\$ 10,041
6			1	13,521
7	1	10,560		
9			2	23,273
11			1	12,605
12			1	12,712
14	1	13,552	2	22,673
15			3	34,387
16	1	20,569	2	31,081
17	1	14,185	3	27,818
18	1	13,521		
19			1	14,184
20	1	20,085	1	13,037
25			1	13,036
28			1	11,194
32			1	40,597
33			1	30,830
34	1	11,973	2	89,665
35			1	29,811
36			1	41,286
38			1	31,225
39			1	33,377
41	1	38,840	1	34,449
42	1	28,422	1	24,880
43			6	198,734
44	1	31,518	2	79,049
45			2	75,364
46			1	28,598
47			4	143,290
48	1	36,262	2	60,052
49			4	136,141
50			1	30,193
51			2	89,155
52	1	23,344		
53			4	149,497
54			7	220,538
55	1	33,367	3	106,853
56			2	72,424
57			5	165,414
58			2	73,984

Table 9A

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

State Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
59			4	\$ 143,458
60			5	181,490
61			2	54,689
62			5	214,457
63			4	139,618
64			4	147,057
65	1	\$ 39,264	4	153,303
66			3	107,687
67			1	33,481
68			1	29,156
69			3	101,548
70			1	33,853
71			1	39,054
73			2	81,111
74			1	29,348
75			2	67,761
76			1	32,025
82			1	28,579
87			1	32,069
Total	15	\$ 348,475	123	\$ 3,874,712

The 138 beneficiaries are receiving active members' death benefits on behalf of 49 deceased policemen and 1 deceased fireman. Information was not reported for the other 88 beneficiaries.

Table 9B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
3			1	\$ 14,404
7			1	12,802
8	1	\$ 8,811		
9			2	19,528
10	1	12,923	2	26,768
11	2	23,947	3	69,800
12	1	19,959		
13	1	11,533		
14			5	64,206
15	3	36,035	4	76,215
16			3	57,113
17	4	50,742	4	58,637
18	2	34,934	5	72,856
19	1	16,300	1	14,964
20			1	9,038
23			1	89,465
26			2	94,410
30	1	11,705	1	44,280
32			2	92,708
34			1	52,349
35			2	90,649
36			6	230,993
37			3	134,411
38			2	62,331
39			6	241,469
40			6	256,203
41			5	213,775
42	1	47,388	7	266,251
43			8	346,682
44			17	810,509
45			12	552,175
46	1	33,669	8	347,372
47			15	672,240
48			13	590,233
49	1	45,006	15	644,976
50			11	477,122
51			15	683,350
52			14	639,894

Table 9B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
53	1	\$ 65,421	14	\$ 645,075
54			22	1,047,251
55			13	589,576
56			17	813,848
57			17	735,428
58			14	629,215
59			9	401,652
60			18	818,844
61			13	551,485
62			9	442,678
63			9	417,527
64			11	447,422
65			18	791,889
66			10	474,507
67			8	343,054
68			11	457,187
69			7	294,494
70	1	36,607	8	305,542
71			7	211,637
72			5	157,961
73			4	128,542
74			6	223,451
75			5	160,628
76			4	120,851
78			2	64,505
79			3	81,188
81			1	56,798
82			1	44,397
83			1	23,882
84			1	23,951
85			1	27,708
86			3	66,761
87			2	26,972
88			3	62,994
89			1	29,682
90			2	70,787
91			2	41,941
93			3	57,951
94			3	60,010

Table 9B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Active Members' Death Benefits

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
96			1	\$ 15,158
98			1	613
101			1	14,247
Total	22	\$ 454,980	495	\$ 20,109,467

The 517 beneficiaries are receiving active members' death benefits on behalf of 148 deceased policemen and 39 deceased firemen. Information was not reported for the other 330 beneficiaries.

Table 10

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
5			4	\$ 50,718
6	1	\$ 17,163	2	18,159
7			3	31,127
8			3	34,255
9			5	51,691
10			6	70,931
11	1	18,375	14	149,962
12	3	38,089	9	91,729
13	1	6,048	11	115,437
14			17	168,357
15	2	16,037	19	233,594
16	2	19,730	18	208,555
17	4	48,376	28	344,918
18	2	25,066	23	276,915
19	4	35,779	18	230,346
20			2	25,595
21			2	19,892
23			1	11,032
24			1	11,375
27			1	41,249
31			3	85,925
32	1	52,346		
33			1	10,738
35			2	18,040
37			3	108,528
38	1	47,833	5	128,374
39	1	7,878	4	102,832
40			3	107,718
41			5	169,871
42			5	147,632
43			7	290,991
44			4	149,454
45	2	88,151	15	609,280
46	2	49,781	15	538,083
47			9	426,646
48			17	682,672
49	1	31,334	16	673,643
50	1	29,453	30	1,251,453
51			37	1,369,739
52			30	1,285,369
53	1	2,592	38	1,437,624

Table 10

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

State And Local
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
54	2	\$ 22,425	37	\$ 1,482,723
55	3	96,891	47	2,005,609
56	3	74,379	46	1,803,556
57	1	5,550	49	1,894,350
58	3	79,842	63	2,533,835
59			87	3,658,825
60	2	94,479	110	4,233,202
61	1	38,637	115	4,331,969
62			89	3,523,087
63	1	7,765	88	3,431,723
64	2	37,008	112	3,966,277
65	1	29,618	130	4,700,775
66	2	75,745	119	4,319,744
67	1	49,553	145	5,620,038
68	1	15,849	160	5,717,378
69	4	141,903	188	6,648,237
70	1	38,727	179	6,435,788
71	1	15,793	151	5,028,947
72	1	30,613	183	5,972,901
73	3	128,635	196	6,764,468
74	1	45,282	213	7,031,312
75			230	7,632,857
76	1	20,969	194	6,355,657
77	3	77,242	204	6,688,038
78			189	5,578,545
79	2	69,760	200	5,814,913
80			219	6,157,079
81			200	5,613,047
82			189	5,482,948
83	2	57,824	183	4,885,300
84			190	5,066,581
85	2	47,882	165	4,287,846
86			214	5,481,494
87			192	4,890,198
88	1	17,455	194	4,781,245
89	1	28,961	197	4,713,659
90			140	3,300,416
91	1	35,296	142	3,354,801
92			107	2,440,090
93			94	2,059,062

Table 10

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

**State And Local
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
94			55	\$ 1,136,871.00
95			45	919,156
96			40	900,548
97			26	541,834
98			4	80,823
99			3	78,968
100			1	24,162
102			2	45,528
Total	77	\$ 1,918,114	6,562	\$ 201,196,859

The 6,639 beneficiaries are receiving retired members' death benefits on behalf of 3,826 deceased policemen, 1,133 deceased firemen and 1,680 deceased retirees for whom the information was not reported.

Table 10A

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
5			1	\$ 8,313
6			1	9,477
7			2	15,530
9			1	3,880
10			2	15,010
11			2	14,196
12	1	\$ 11,130	3	24,932
13			5	44,004
14			3	18,351
15			6	62,560
16			6	46,785
17			6	78,619
18			5	51,732
19	1	5,253	3	28,857
20			1	10,335
24			1	11,375
31			2	40,762
32	1	52,346		
33			1	10,738
38	1	47,833	2	46,058
39			2	38,156
40			3	107,718
41			1	31,035
43			2	98,997
45			6	202,349
46			3	108,995
47			3	105,999
48			2	93,869
49			3	102,891
50	1	29,453	5	187,173
51			8	246,432
52			5	184,766
53			5	192,111
54			7	248,740
55			8	351,195
56			5	170,840
57			9	306,899
58	1	21,603	11	415,432
59			10	369,203
60	2	94,479	16	606,853
61	1	38,637	26	876,772

Table 10A

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

State Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
62			10	\$ 431,782
63			10	350,811
64			13	450,147
65	1	\$ 29,617	23	832,367
66	1	35,304	13	466,327
67	1	49,553	17	595,994
68			22	760,910
69	3	109,776	24	847,633
70			17	598,432
71	1	15,793	14	429,571
72			14	412,971
73	1	45,912	19	612,177
74			21	672,151
75			13	404,537
76			19	536,070
77			16	468,037
78			18	518,232
79	2	69,760	12	342,660
80			11	298,235
81			16	530,389
82			15	437,716
83	1	27,472	10	226,199
84			8	223,111
85	1	28,086	7	172,116
86			13	323,401
87			10	295,292
88			8	180,751
89			10	261,862
90			4	94,770
91			3	69,403
92			3	74,142
94			5	90,763
95			1	18,980
96			1	18,424
Total	21	\$ 712,007	613	\$ 18,634,302

The 634 beneficiaries are receiving retired members' death benefits on behalf of 546 deceased policemen, 17 deceased firemen and 71 deceased retirees for whom the information was not reported.

Table 10B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
5			3	\$ 42,405
6	1	\$ 17,163	1	8,682
7			1	15,597
8			3	34,255
9			4	47,812
10			4	55,921
11	1	18,375	12	135,766
12	2	26,958	6	66,798
13	1	6,048	6	71,434
14			14	150,007
15	2	16,037	13	171,035
16	2	19,730	12	161,769
17	4	48,376	22	266,298
18	2	25,066	18	225,183
19	3	30,528	15	201,486
20			1	15,259
21			2	19,892
23			1	11,032
27			1	41,249
31			1	45,163
35			2	18,040
37			3	108,528
38			3	82,317
39	1	7,878	2	64,677
41			4	138,836
42			5	147,632
43			5	191,994
44			4	149,454
45	2	88,151	9	406,931
46	2	49,781	12	429,088
47			6	320,647
48			15	588,803
49	1	31,334	13	570,752
50			25	1,064,281
51			29	1,123,307
52			25	1,100,603
53	1	2,592	33	1,245,512
54	2	22,425	30	1,233,983
55	3	96,891	39	1,654,414
56	3	74,379	41	1,632,716
57	1	5,550	40	1,587,452

Table 10B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

Local Only
(Continued)

Age	Men		Women	
	Number	Amount	Number	Amount
58	2	\$ 58,240	52	\$ 2,118,402
59			77	3,289,621
60			94	3,626,349
61			89	3,455,196
62			79	3,091,306
63	1	7,765	78	3,080,912
64	2	37,008	99	3,516,129
65			107	3,868,408
66	1	40,441	106	3,853,417
67			128	5,024,045
68	1	15,848	138	4,956,469
69	1	32,126	164	5,800,604
70	1	38,727	162	5,837,355
71			137	4,599,376
72	1	30,613	169	5,559,930
73	2	82,724	177	6,152,291
74	1	45,282	192	6,359,162
75			217	7,228,320
76	1	20,969	175	5,819,587
77	3	77,242	188	6,220,000
78			171	5,060,313
79			188	5,472,253
80			208	5,858,843
81			184	5,082,657
82			174	5,045,231
83	1	30,351	173	4,659,101
84			182	4,843,471
85	1	19,796	158	4,115,731
86			201	5,158,093
87			182	4,594,906
88	1	17,456	186	4,600,494
89	1	28,961	187	4,451,797
90			136	3,205,646
91	1	35,296	139	3,285,398
92			104	2,365,948
93			94	2,059,062
94			50	1,046,108
95			44	900,176
96			39	882,125
97			26	541,834

Table 10B

The Number And Annual Retirement Allowances Of Beneficiaries Distributed By Age As Of July 1, 2016

Retired Members' Death Benefits

**Local Only
(Continued)**

Age	Men		Women	
	Number	Amount	Number	Amount
98			4	\$ 80,823
99			3	78,968
100			1	24,162
102			2	45,528
Total	56	\$ 1,206,107	5,949	\$ 182,562,557

The 6,005 beneficiaries are receiving retired members' death benefits on behalf of 3,280 deceased policemen, 1,116 deceased firemen and 1,609 deceased retirees for whom the information was not reported.

Table 11

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Deferred Terminated Vesteds

State And Local

Age	Men		Women	
	Number	Amount	Number	Amount
39	4	\$ 69,816		
40	1	26,364		
42	1	32,940		
43	1	20,856		
45	4	62,340	1	\$ 14,424
46	3	64,980		
47	7	148,032		
48	1	9,804		
49	4	76,404		
50	6	128,748		
51	2	35,412		
52			2	33,312
53	2	50,340		
54	3	72,060	1	38,820
55	3	77,556		
69	1	8,868		
Total	43	\$ 884,520	4	\$ 86,556

The 47 deferred terminated vested members consist of 44 policemen and 3 firemen.

Table 11A

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Deferred Terminated Vesteds

State Only

Age	Men		Women	
	Number	Amount	Number	Amount
40	1	\$ 26,364		
45	1	18,840		
46	2	39,840		
47	1	15,792		
50	1	10,260		
51	1	18,996		
54			1	\$ 38,820
Total	7	\$ 130,092	1	\$ 38,820

The 8 deferred terminated vested members consist of 8 policemen.

Table 11B

The Number And Annual Retirement Allowances Of Retired Members Distributed By Age As Of July 1, 2016

Deferred Terminated Vesteds

Local Only

Age	Men		Women	
	Number	Amount	Number	Amount
39	4	\$ 69,816		
42	1	32,940		
43	1	20,856		
45	3	43,500	1	\$ 14,424
46	1	25,140		
47	6	132,240		
48	1	9,804		
49	4	76,404		
50	5	118,488		
51	1	16,416		
52			2	33,312
53	2	50,340		
54	3	72,060		
55	3	77,556		
69	1	8,868		
Total	36	\$ 754,428	3	\$ 47,736

The 39 deferred terminated vested members consist of 36 policemen and 3 firemen.

Appendix F - Early Retirement Incentive (ERI) Contribution Schedule

Location Number	Location Name	ERI 1 Information	
		Current Payment	Present Value as of 7/1/2016
22100	East Rutherford Borough	\$ 78,903	\$ 813,436
25500	Glen Ridge Borough	56,735	584,903
34600	Wallington Borough	37,094	382,412
38800	Phillipsburg Town	11,104	114,474
43400	Bound Brook Borough	32,970	339,897
54400	Linwood City	51,697	532,963
57100	Mine Hill Township	18,023	185,806
61200	Raritan Township	<u>54,332</u>	<u>560,121</u>
	Total	\$ 340,858	\$ 3,514,012

Appendix G - Early Retirement Incentive (ERI) Contribution Schedule
Additional Contribution Schedules Due to Recent
Early Retirement Incentive (ERI) Legislation

Location Number	Location Name	Years and Form of Payment	ERI Information	
			Current Payment	Present Value as of 7/1/16
Chapter 126, P.L. 2000				
71600	Passaic County	15 Year - Level	\$ 175,027	\$ 429,510
71603	Passaic County	15 Year - Level	27,746	68,087
72000	Union County	15 Year - Level	49,600	247,297
72001	Union County	15 Year - Level	17,735	88,422
72003	Union County	15 Year - Level	54,629	172,547
72003	Union County (Effective 2006)	15 Year - Level	199,343	993,899
	Sub-Total		\$ 524,080	\$ 1,999,762
Chapter 130, P.L. 2003				
20300	Bayonne City	15 Year - Increasing	\$ 306,161	\$ 1,008,671
22100	East Rutherford Borough	15 Year - Increasing	50,502	203,584
22400	Union City	15 Year - Increasing	35,806	117,964
28300	Montclair Township	15 Year - Increasing	283,558	934,204
31800	Harrison Town	15 Year - Increasing	205,561	677,236
32500	Nutley Township	15 Year - Increasing	112,143	369,464
33300	Wood-Ridge Borough	15 Year - Increasing	34,784	140,222
35400	Belleville Township	15 Year - Increasing	48,362	194,959
36000	Livingston Township	15 Year - Increasing	76,301	307,587
43100	Ewing Township	15 Year - Increasing	164,250	541,132
43600	Roseland Borough	15 Year - Increasing	40,602	163,676
49300	Berkeley Heights Township	15 Year - Increasing	39,783	160,374
56500	Franklin Township	15 Year - Increasing	36,260	146,174
61200	Raritan Township	15 Year - Increasing	25,139	101,342
62600	Monroe Township	15 Year - Increasing	20,374	82,131
71100	Mercer County	15 Year - Increasing	158,349	521,693
72000	Union County	15 Year - Increasing	1,174	4,732
72003	Union County	15 Year - Increasing	53,422	215,357
	Sub-Total		\$ 1,692,531	\$ 5,890,502
	Total		\$ 2,216,611	\$ 7,890,264

**Appendix H - Local Employer Chapter 19, P,L. 2009
Deferral And Payment Schedule**

Location Number	Location Name	Fiscal Year 2018 Payment	Present Value as of July 1, 2016
20300	Bayonne City	\$ 613,524	\$ 3,679,853
20400	Salem City	24,215	145,239
20600	Plainfield City	350,896	2,104,637
21001	Elizabeth City	490,172	2,940,000
21002	Elizabeth City	350,886	2,104,577
21101	Newark City	1,831,142	10,983,004
21102	Newark City	894,098	5,362,710
21202	Camden City	304,472	1,826,195
21300	North Plainfield Borough	109,355	655,899
21600	Somerville Borough	43,277	259,569
21800	Roselle Borough	140,827	844,667
22000	Freehold Borough	52,231	313,274
22400	Union City	297,872	1,786,604
22501	Passaic City	265,747	1,593,926
22502	Passaic City	176,322	1,057,562
22800	Metuchen Borough	38,295	229,691
23000	West New York Town	172,911	1,037,103
23200	Oradell Borough	34,321	205,855
23301	Hoboken City	216,286	1,297,260
23302	Hoboken City	208,029	1,247,740
23400	Audubon Borough	25,027	150,110
23800	East Orange City	539,266	3,234,464
23900	Maplewood Township	155,743	934,129
24100	Hightstown Borough	19,681	118,042
24200	West Milford Township	78,831	472,819
24400	Saddle Brook Township	66,345	397,930
24500	Perth Amboy City	268,593	1,610,992
24600	Secaucus Town	102,397	614,167
24800	Lyndhurst Township	88,502	530,828
24900	Orange City	247,870	1,486,700
25500	Glen Ridge Borough	36,552	219,233
25600	Guttenberg Town	30,178	181,006
25801	Collingswood Borough	43,104	258,535
25802	Collingswood Borough	18,474	110,805
26100	Dunellen Borough	18,465	110,749
26600	Fairview Borough	52,595	315,459
26700	Keansburg Borough	43,955	263,636
27300	New Milford Borough	56,825	340,833
27400	Paramus Borough	183,834	1,102,616

**Appendix H - Local Employer Chapter 19, P.L. 2009
Deferral And Payment Schedule**

Location Number	Location Name	Fiscal Year 2018 Payment	Present Value as of July 1, 2016
27600	South Amboy City	\$ 37,197	\$ 223,103
27700	Weehawken Township	90,350	541,910
28000	Hackensack City	381,689	2,289,333
28500	Penns Grove Borough	18,448	110,648
28600	Matawan Borough	33,085	198,441
28700	Cedar Grove Township	50,195	301,067
28900	Bogota Borough	21,337	127,975
29100	Irvington Township	443,755	2,661,599
29200	Cinnaminson Township	63,441	380,514
29500	Little Ferry Borough	28,447	170,625
29700	Garwood Borough	22,915	137,442
30701	Paterson City	480,401	2,881,396
30702	Paterson City	380,160	2,280,159
30801	Atlantic City	471,046	2,825,289
30802	Atlantic City	349,164	2,094,250
31100	Fanwood Borough	27,894	167,303
31300	East Hanover Township	61,140	366,711
31600	Rutherford Borough	69,990	419,792
31800	Harrison Township	160,207	960,906
32200	Gloucester City	72,294	433,615
32600	Union Township	351,576	2,108,718
32700	Bloomfield Township	331,059	1,985,658
32900	Morristown Town	123,141	738,590
33200	Asbury Park City	184,347	1,105,693
33401	Trenton City	467,484	2,803,922
33402	Trenton City	349,079	2,093,742
33800	Lakewood Township	189,886	1,138,915
34000	North Arlington Borough	58,157	348,820
34100	Rahway City	204,066	1,223,968
34200	Verona Township	48,361	290,062
34301	Hillside Township	108,528	650,940
34302	Hillside Township	75,080	450,320
34600	Wallington Borough	39,293	235,673
34700	East Newark Borough	6,898	41,372
34800	Clifton City	466,148	2,795,906
34900	Wildwood City	78,677	471,896
35000	Palisades Park Borough	53,415	320,376
35100	Pleasantville City	158,738	952,094
35400	Belleville Township	283,450	1,700,105
35500	Dover Town	62,026	372,024
35600	South Orange Village	147,043	881,947
35800	Garfield City	106,764	640,359
35900	Linden City	387,456	2,323,923

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Location Number	Location Name	Fiscal Year 2018 Payment	Present Value as of July 1, 2016
36200	Bridgeton City	\$ 86,171	\$ 516,846
36400	Washington Borough	17,315	103,854
36700	Fairfield Township	57,796	346,656
36900	Middlesex Borough	46,252	277,413
37000	Middletown Township	165,934	995,256
37400	Maywood Borough	44,666	267,900
37700	Piscataway Township	133,981	803,605
38101	Jersey City	1,234,089	7,401,944
38102	Jersey City Fire Dept.	935,623	5,611,772
38500	Runnemede Borough	27,914	167,425
39500	Mountainside Borough	35,712	214,198
39900	Long Branch City	166,435	998,261
40400	Wanaque Borough	36,076	216,382
41000	Manville Borough	36,045	216,195
41400	Oceanport Borough	23,766	142,544
41500	Haworth Borough	19,178	115,029
41600	Little Falls Twp	32,286	193,646
41900	North Haledon Borough	25,712	154,216
42000	Haledon Borough	26,512	159,019
42500	Wharton Borough	30,306	181,775
43000	West Paterson Borough	38,678	231,989
43100	Ewing Township	139,880	838,984
43400	Bound Brook Borough	34,161	204,895
43500	Emerson Borough	33,755	202,460
43600	Roseland Borough	40,808	244,764
43700	Norwood Borough	23,284	139,656
43800	Prospect Park Borough	22,575	135,401
44100	Englewood Cliffs Borough	59,007	353,916
44800	Englishtown Borough	5,431	32,572
44900	Ringwood Borough	33,565	201,320
46300	Borough_Of Lake Como	13,738	82,398
46400	Aberdeen Township	46,394	278,264
46600	West Long Branch Borough	26,545	159,217
46700	Pt Pleasant Beach Borough	38,742	232,371
47300	Brooklawn Borough	6,028	36,156
47800	Hopatcong Borough	40,014	239,999
47900	West Deptford Township	53,860	323,048
48200	South Bound Brook Borough	19,457	116,699
48600	Gloucester Township	150,162	900,659
48800	Upper Saddle River Boro	32,733	196,330
49100	Willingboro Township	113,193	678,918
50000	Brielle Borough	25,011	150,011
50700	South Brunswick Township	125,011	749,802

**Appendix H - Local Employer Chapter 19, P.L. 2009
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Location Number	Location Name	Fiscal Year 2018 Payment	Present Value as of July 1, 2016
51100	Jefferson Township	\$ 58,212	\$ 349,147
51600	Wall Township	126,735	760,141
52800	Berlin Borough	23,371	140,177
53500	Winslow Township	108,765	652,361
53900	Berkeley Township Municipal Bld	121,620	729,467
54100	Mansfield Township	17,003	101,984
54300	Lebanon Township	11,488	68,902
54600	Vernon Township	50,747	304,377
54700	Seaside Heights Borough	31,800	190,736
54800	Manchester Township	88,518	530,922
55100	Pine Hill Borough	26,346	158,021
55300	Lindenwold Borough	55,857	335,023
55700	Bloomington Borough	24,741	148,392
56000	Howell Township	154,858	928,823
56200	Plainsboro Township	57,611	345,542
56300	Marlboro Township	129,984	779,633
56500	Franklin Township	34,301	205,733
58200	Egg Harbor Township	120,512	722,819
58400	Holmdel Township	70,514	422,938
58500	Milltown Borough	22,400	134,351
58900	Buena Borough	6,966	41,781
59000	Eastampton Township	22,198	133,142
59800	Chesilhurst Borough	8,276	49,636
59900	Egg Harbor City	14,625	87,721
60000	Harrison Township	16,815	100,857
60100	Woodbury Heights Borough	7,678	46,050
60600	Waterfront Comm Of Ny Harbor	1,895	11,365
61000	Somerdale Borough	14,595	87,540
61200	Raritan Township	54,508	326,935
62300	Nj Transit Corporation	263,137	1,578,272
63100	Allentown Borough	7,004	42,012
63300	Barnegat Township	38,708	232,165
67700	Lambertville City	9,824	58,924
68000	Lawnside Borough	7,726	46,338

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Location Number	Location Name	Fiscal Year 2018 Payment	Present Value as of July 1, 2016
68800	Mount Arlington Borough	\$ 13,621	\$ 81,695
69000	National Park Borough	4,405	26,419
70404	Camden County Regional	535,164	3,209,860
71600	Passaic County	886,860	5,319,300
71603	Passaic County	126,818	760,641
72000	Union County	413,978	2,482,996
72001	Union County	68,121	408,584
72003	Union County	318,891	1,912,679
72700	South Toms River Borough	7,327	43,946
73500	Union Beach Borough	12,442	74,627
74000	West Amwell Township	3,339	20,024
74100	Winfield Township	5,916	35,486
74400	Hamilton Twp Fire Comm Dist 2	10,196	61,153
75000	Lakewood Twp Fire District #1	4,983	29,890
75900	Gloucester Twp Fire District #2	3,387	20,313
79000	North Hudson Reg Fire & Rescue	513,814	3,081,806
	Total	\$ 25,277,343	\$ 151,610,930