THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY ANNUAL REPORT OF THE ACTUARY PREPARED AS OF JULY 1, 2007

DOC:V00412JC.DOC





January 18, 2008

Commission
Consolidated Police and Firemen's Pension
Fund of New Jersey
Trenton, New Jersey

Ladies and Gentlemen:

The law governing the operation of The Consolidated Police and Firemen's Pension Fund of New Jersey provides for annual actuarial valuations of the Fund. The results of the July 1, 2007 valuation are submitted in this report which also includes a comparison with the preceding year's valuation.

The valuation shows the financial condition of the Plan as of July 1, 2007 and gives the basis for determining the required annual contribution for the plan year beginning July 1, 2007.

The valuation was prepared on the basis of the same assumptions as were employed for the previous valuation which include a 2.00% per annum rate of investment return.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent qualified actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board and generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the Fund, and on actuarial assumptions that are individually and in the aggregate internally consistent and reasonable based on the actual experience of the Fund.

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

Respectfully submitted,

Janet H. Cranna, F.S.A., E.A., M.A.A.A.

Principal, Consulting Actuary

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# REPORT ON THE ANNUAL VALUATION OF THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY PREPARED AS OF JULY 1, 2007

#### **SECTION I - SUMMARY OF KEY RESULTS**

The Consolidated Police and Firemen's Pension Fund of New Jersey was established by Chapter 358, P.L. 1952. This report, prepared as of July 1, 2007 presents the results of the annual actuarial valuation of the Fund.

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

Valuation Date	July 1, 2007	July 1, 2006
Participant Data		
Active Members Retired Members and Beneficiaries Total Participants	0 <u>620</u> 620	0 <u>719</u> 719
Annual Compensation Annual Retirement Allowances	\$ 0 4,317,804	\$ 0 4,895,135
Assets  Market Value of Assets Actuarial Value of Assets	\$ 16,618,771 19,858,423	\$ 19,998,008 24,237,730
Contribution Amounts  Normal Contribution Accrued Liability Contribution*	\$ 0 	\$ 0 <u>522,176</u>
Total Contribution	\$ 1,256,398***	\$ 522,176**

<sup>\*</sup> The unfunded accrued liability has been amortized over a period of one year.

\*\* The required contribution could be subject to reduction in accordance with the provisions of the Appropriation Act for

fiscal year 2008.

\*\*\* The required contribution could be subject to reduction in accordance with the provisions of the Appropriation Act for fiscal year 2009.

The major benefit and contribution provisions of the statute as reflected in the valuation are summarized in Appendix A. There were no changes from the provisions used in the previous valuation.

The actuarial assumptions and methods used for valuing the Fund are summarized in Appendix B. There were no changes in actuarial assumptions and methods since the previous valuation.

The combination of the plan provisions, actuarial assumptions and member and beneficiary data is used to generate the overall required level of State contributions. The required State contribution is developed in Section III E.

The valuation also 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, 2006 and July 1, 2007 is set forth in the following table. The allocation of assets among the various investment alternatives is shown in graphic form on page 5.

### TABLE I COMPARATIVE BALANCE SHEET

		2007	2006		
<u>ASSETS</u>					
Actuarial value of assets of Fund	\$	19,858,423	\$	24,237,730	
Unfunded accrued liability/(surplus)		1,231,763		511,937	
Total Assets	\$	21,090,186	\$	24,749,667	
<u>LIABILITIES</u>					
Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund	\$	21,090,186	\$	24,749,667	
Present value of benefits to present active members		0		0	
Total Liabilities	\$	21,090,186	\$	24,749,667	

### THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY **ASSET ALLOCATION MARKET VALUE** 2.5% 0.1% 2.7% 97.5% 97.2% 2007 2006 3,000 ■ Cash/Receivables 2,500 **■** Mortgages **■** Bonds 2,000 x \$ 10,000 1,500 -1,000 **500** · 0 -2003 2004 2005 2006 2007 Year

#### **SECTION II - EMPLOYEE DATA**

The data employed for the valuations were furnished to the actuary by the Division of Pensions and Benefits. Appendix C contains summary tables which present the number and retirement allowances of members classified by age. The following summarizes and compares the Fund membership as of July 1, 2006 and July 1, 2007 by various categories.

#### **ACTIVE MEMBERSHIP**

• There have been no active participants in the Plan since July 1, 1992.

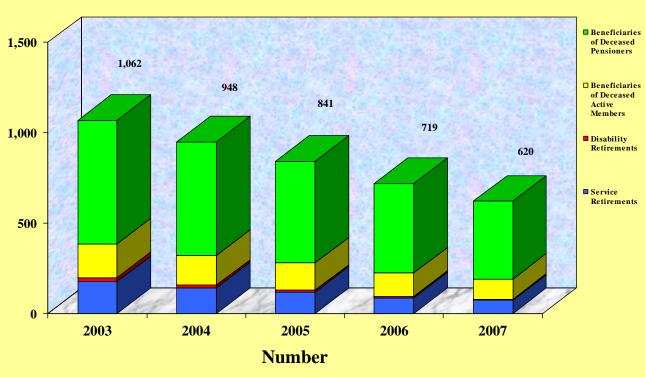
#### RETIRED MEMBERS AND BENEFICIARIES

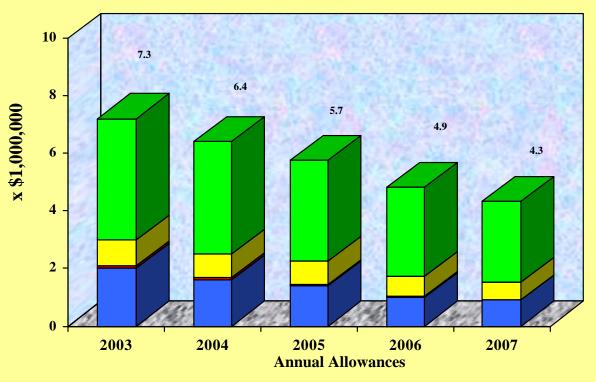
	20	2006				
GROUP	Number	A	Annual llowances	Number	A	Annual llowances
Service Retirements	73	\$	926,688	87	\$	1,049,715
Ordinary Disability Retirements	5	\$	18,719	7	\$	27,747
Accidental Disability Retirements	1	\$	5,950	1	\$	5,950
Beneficiaries of Deceased Pensioners	431	\$	2,802,875	495	\$	3,148,912
Beneficiaries of Deceased Active Employees	110	\$	563,572	129	\$	662,811

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

# THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY

#### SUMMARY OF RETIRED PARTICIPATION





#### A. Market Value of Assets as of June 30, 2007

	1.	Assets		
		a. Cash	\$	131,585
		b. Securities Lending Collateral		7,972
		c. Investment Holdings		14,587,957
		d. Accrued Interest on Investments		2,780
		e. Accounts Receivable - Other		1,073,943
		f. Administrative Expense Receivable		30,213
		<ul><li>g. Employers' Contributions Receivable – Pension Adjustment</li><li>h. Total</li></ul>	\$	566,141 16,400,591
		h. Total	Ф	10,400,391
	2.	Liabilities		
		a. Pension Payroll Payable	\$	69,382
		b. Pension Adjustment Payroll Payable		130,653
		c. Withholdings Payable		78,079
		d. Securities Lending Collateral and Rebates Payable		7,972
		e. Administrative Expense Payable		3,541
		f. Accounts Payable – Other		14,369
		g. Total	\$	303,996
	3.	Preliminary Market Value of Assets as of June 30, 2007		
		=1(h)-2(g)	\$	16,096,595
	4.	State Appropriations Receivable	\$	522,176
	5.	Market Value of Assets as of June 30, $2007 = 3. + 4$ .	\$	16,618,771
В.	Recon	ciliation of Market Value of Assets from June 30, 2006 to June	30, 2007	
В.	<b>Recon</b> 1.		30, 2007 \$	18,214,106
В.	1.	Market Value of Assets as of June 30, 2006		18,214,106
В.		Market Value of Assets as of June 30, 2006 Increases	\$	
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations		1,784,000
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local	\$	1,784,000 25,773
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment	\$	1,784,000 25,773 7,362,588
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income	\$	1,784,000 25,773 7,362,588 611,939
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment	\$	1,784,000 25,773 7,362,588
В.	1.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income	\$	1,784,000 25,773 7,362,588 611,939
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances	\$	1,784,000 25,773 7,362,588 611,939
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment	\$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense	\$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses	\$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense	\$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0
В.	1. 2. 3.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total	\$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884
В.	1. 2.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total  Preliminary Market Value of Assets as of June 30, 2007	\$ \$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884 11,901,811
В.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	Market Value of Assets as of June 30, 2006  Increases  a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total  Preliminary Market Value of Assets as of June 30, 2007 = 1. + 2(e) – 3(e)	\$ \$ \$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884 11,901,811
В.	1. 2. 3.	Market Value of Assets as of June 30, 2006  Increases a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total  Preliminary Market Value of Assets as of June 30, 2007	\$ \$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884 11,901,811
В.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>	Market Value of Assets as of June 30, 2006  Increases  a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total  Preliminary Market Value of Assets as of June 30, 2007 = 1. + 2(e) – 3(e)	\$ \$ \$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884 11,901,811
В.	<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Market Value of Assets as of June 30, 2006  Increases  a. State Appropriations b. Administrative Revenue – Local c. Pension Adjustment d. Investment Income e. Total  Decreases a. Retirement Allowances b. Benefit Expense – Pension Adjustment c. Miscellaneous Expense d. Administrative Expenses e. Total  Preliminary Market Value of Assets as of June 30, 2007 = 1. + 2(e) – 3(e)  State Appropriations Receivable	\$ \$ \$ \$ \$	1,784,000 25,773 7,362,588 611,939 9,784,300 4,511,339 7,362,588 0 27,884 11,901,811

#### C. <u>Development of Actuarial Value of Assets as of July 1, 2007</u>

D.

1.	Actuarial Value of Assets as of July 1, 2006 (without State Appropriations Receivable)	\$	22,453,828
2.	Net Cash Flow excluding Investment Income and receivable Employer Contributions		(2,729,450)
3.	Expected Investment Income at 2.0%: <ul> <li>a. Interest on Assets as of July 1, 2006</li> <li>b. Interest on Net Cash Flow</li> <li>c. Total</li> </ul>	\$ <del>\$</del>	449,077 (27,295) 421,782
4.	Expected Actuarial Value of Assets as of July 1, 2007 = 1. + 2. + 3 (c)	\$	20,146,160
5.	20% of Difference from Preliminary Market Value of Assets		(809,913)
6.	State Appropriations Receivable		522,176
7.	Actuarial Value of Assets as of July 1, 2007 $= 4. + 5. + 6.$	\$	19,858,423
Prese	ent Value of Benefits		
1.	Active Members		
	<ul> <li>a. Service Retirement</li> <li>b. Death After Retirement</li> <li>c. Total: (a) + (b)</li> </ul>	\$ <del>\$</del>	0 0 0
2.	Service Retirees		4,612,977
3.	Disability Retirees		119,240
4.	Beneficiaries of Deceased Pensioners		14,014,606
5.	Beneficiaries of Deceased Active Employees		2,343,363
6.	Total Present Value of Benefits $= 1(c) + 2. + 3. + 4. + 5.$	\$	21,090,186

#### E. <u>Development of State Contribution</u>

1.	Present Value of Benefits as of July 1, 2007	\$ 21,090,186
2.	Actuarial Value of Assets	 19,858,423
3.	Unfunded Accrued Liability/(Net Surplus) = $1 2$ .	\$ 1,231,763
4.	Amortization Years Remaining*	1
5.	Total State Contribution as of July 1, 2007	\$ 1,231,763
6.	Total State Contribution as of July 1, 2008	\$ 1,256,398

<sup>\*</sup>The latest unfunded accrued liability payment schedule required the amortization of any plan gains or losses over the remainder of the 9 year period that began on June 30, 1991. Without additional guidance, we have assumed the immediate payment of any unfunded accrued liability.

#### SECTION IV - COMMENTS CONCERNING THE VALUATION

The variation in liabilities and contributions reflects the Fund's actual experience during the year. The Fund experienced a net actuarial loss during the year that ended June 30, 2007.

The experience loss is primarily due to an actual return on Fund assets less than that expected, in conjunction with losses due to deaths less than expected. For valuation purposes, a 2.0% per annum rate of return was assumed. The actual return on the Fund's actuarial value of assets was approximately (1.84)% for the period from July 1, 2006 through June 30, 2007.

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

#### A. Calculation of Actuarial Experience for the Year Ended June 30, 2007

	1.	Unfunded Accrued Liability as of July 1, 2006	\$ 511,937
	2.	Interest on 1. at 2.0%	10,239
	3.	Contributions Receivable	522,176
	4.	Interest on 3.	 0
	5.	Expected Unfunded Accrued Liability as of July 1, 2007 = 1. + 2 3 4.	\$ 0
	6.	Actual Unfunded Accrued Liability as of July 1, 2007	\$ 1,231,763
	7.	Actuarial Loss/(Gain) = $6 5$ .	\$ 1,231,763
В.	Comp	onents of Actuarial Experience	
	1.	Investment Loss/(Gain)	\$ 809,913
	2.	Other Loss/(Gain), including mortality and changes in employee data	 421,850
	3.	Total Actuarial Loss/(Gain) Loss = $1. + 2$ .	\$ 1,231,763

#### **SECTION V - ACCOUNTING INFORMATION**

Statement No. 5 of the Governmental Accounting Standards Board, issued November 1986, established standards of disclosure of pension information by public retirement systems. Statement No. 25 of the Governmental Accounting Standards Board, issued November 1994, established financial reporting standards for defined benefit pension plans and for the notes to the financial statements of defined contribution plans of state and local governmental liabilities and superseded Statement No. 5 effective for periods beginning after June 15, 1996. Statement No. 27, Accounting for Pensions by State and Local Governmental Employers superseded Statement 5 for employers participating in pension plans and is effective for periods beginning after June 15, 1997.

The information required by both Statements No. 25 and No. 27 is presented in the following tables. These include the development of the Annual Required Contribution (ARC), the development of the Net Pension Obligation (NPO), the Schedule of Funding Progress and the Schedule of Employer Contributions.

#### (A) Development of the Annual Required Contribution (ARC) as of June 30, 2009

1. Actuarial Value of Plan Assets as of June 30, 2007

	(a)	Valuation Assets as of June 30, 2007	\$ 19,858,423
	(b)	Adjustment for Receivable Contributions included in (a)	 522,176
	(c)	Valuation Assets as of June 30, 2007 for GASB Disclosure = (a) - (b)	\$ 19,336,247
2.		narial Accrued Liability as of June 30, 2007 for GASB closure	\$ 21,090,186

3.	Unfunded Actuarial Accrued Liability/(Surplus) as of June 30, 2007 = 2 1 (c)	\$ 1,753,939
4.	Amortization of Unfunded Actuarial Accrued Liability/(Surplus) over 1 year	\$ 1,753,939
5.	Normal Cost as of June 30, 2007	\$ 0
6.	Annual Required Contribution as of June 30, 2009	
	(a) Annual Required Contribution as of June 30, 2007 = 4. + 5.	\$ 1,753,939
	(b) Interest Adjustment to June 30, 2009	 70,859
	(c) Annual Required Contribution as of June 30, 2009 = (a) + (b)	\$ 1,824,798
<b>(B)</b>	<u>Development of the Net Pension Obligation (NPO) as of June 30, 2009</u> :	
1.	Annual Required Contribution as of June 30, 2009	\$ 1,824,798
2.	Interest on Net Pension Obligation	37,328
3.	Adjustment to Annual Required Contribution	 (1,903,743)
4.	Annual Pension Cost = $1. + 2. + 3$ .	\$ (41,617)
5.	Expected Employer Contributions for Fiscal Year 2009	 1,256,398
6.	Increase in Net Pension Obligation = 4 5.	\$ (1,298,015)
7.	Net Pension Obligation at June 30, 2008	 1,866,415
8.	Net Pension Obligation at June 30, 2009 = 6. + 7.	\$ 568,400

#### C. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)		Actuarial Accrued Liability (b)		Unfunded Actuarial ecrued Liability (b-a)	Funded Ratio (a/b)	Pa	vered syroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll (b-a) c
					,	(******)			
6/30/02	\$	31,842,796	\$ 36,350,384	\$	4,507,408	87.6%	\$	0	N/A
6/30/03	\$	27,623,585	\$ 41,396,376	\$	13,772,791	66.7%	\$	0	N/A
6/30/04	\$	21,735,396	\$ 35,052,202	\$	13,316,806	62.0%	\$	0	N/A
6/30/05	\$	21,886,445	\$ 30,031,591	\$	8,145,146	72.9%	\$	0	N/A
6/30/06	\$	22,453,828	\$ 24,749,667	\$	2,295,839	90.7%	\$	0	N/A
6/30/07	\$	19,336,247	\$ 21,090,186	\$	1,753,939	91.7%	\$	0	N/A

#### D. Schedule of Employer Contributions

Fiscal Year	Annual Required Contribution			Employer ontribution	Percentage Contributed	
2004	\$	5,330,714	\$	1,950,425	36.6%	
2005	\$	14,329,212	\$	7,046,000	49.2%	
2006	\$	13,854,805	\$	6,397,000	46.2%	
2007	\$	8,474,210	\$	1,784,000	21.1%	
2008	\$	2,388,591	\$	522,176	21.9%	
2009	\$	1,824,798	\$	1,256,398	68.9%	

### E. The information presented in the required supplementary schedules was determined as part of the actuarial valuation. Additional information follows:

Valuation Date June 30, 2007

Actuarial Cost Method Projected Unit Credit

Amortization Method Level Dollar, closed

Remaining Amortization Period 1 year

Asset Valuation Method 5 year average of market value

**Actuarial Assumptions:** 

Investment Rate of Return 2.00%

#### APPENDIX A

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

#### Eligibility for Membership

Member of a municipal police department, municipal paid or part-paid fire department or county police department, or a paid or part-paid fire department of a fire district located in a township who has contributed to this pension fund; and who is not covered by the Police and Firemen's Retirement System which became effective on July 1, 1944.

<u>Active Member</u>: Any member who is a policeman, fireman, detective, lineman, driver of police van, fire alarm operator, or inspector of combustibles and who is subject to call for active service as such.

Employee Member: Any member who is not subject to active service or duty.

#### 1. <u>Definitions</u>

Plan Year The 12-month period beginning on July 1 and ending on June 30.

Service Service rendered while a member as described above.

Compensation Base salary; not including individual salary adjustments which are granted

primarily in anticipation of retirement or additional remuneration for performing temporary duties beyond the regular work day. (Effective June 30, 1996 Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the

Internal Revenue Code.)

Final

Compensation Compensation received during the last 12 months of service preceding retire-

ment or termination of service.

Average Salary Salary averaged over the last three years prior to retirement or other

termination of service.

#### 2. Benefits:

#### Service Retirement

Mandatory retirement at age 65 with 25 years of service (a municipality may retain the Chief of Police until age 70). Voluntary retirement after 25 years of service for an active member and after age 60 with 25 years of service for an employee member. Benefit is life annuity equal to 60% of final compensation, plus 1% of final compensation for years of service in excess of 25.

#### Death Benefit

#### While on duty:

Immediate life annuity equal to 70% of average salary payable to the spouse. If there is no spouse or if the spouse dies or remarries, 20% of final compensation will be payable to one surviving child and 35% (50%) of final compensation will be payable, to two (three) surviving children. If there is no surviving spouse or child, 25% (40%) of final compensation will be payable to one (two) surviving dependent parent(s). The minimum spousal annuity is \$4,500 per annum.

#### While not on duty after retirement:

Life annuity equal to 50% of the member's average salary payable to the spouse, plus 15% (25%) to one (two or more) surviving child (children). If there is no surviving spouse or if the surviving spouse dies or remarries, 20% (35%, 50%) of the member's average salary to one (two, three or more) surviving child (children). In the event that there is no surviving spouse or child, 25% (40%) of the member's average salary will be payable to one (two) dependent parent(s). The minimum spousal annuity is \$4,500 per annum.

#### Ordinary Disability Retirement

Totally and permanently incapacitated from service for any cause other than as a direct result of a traumatic event occurring during the performance of duty. Benefit is an immediate life annuity equal to 1/2 of average salary.

#### Accidental Disability Retirement

Totally and permanently incapacitated as a direct result of a traumatic event occurring while performing regular or assigned duties. Benefit is an immediate life annuity equal to 2/3 of average salary.

#### 3. Contributions

Each member contributes 7% of his salary to the pension fund.

#### APPENDIX B

#### **OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

VALUATION INTEREST RATE: 2.00% per annum, compounded annually for development of costs.

DEATHS AFTER RETIREMENT: Rates vary by age. Representative values of the assumed orders of mortality are as follows:

	Lives Per 1,000						
Age	Service Pensioners	Disability Pensioners	Widows				
50	6.2	12.8	2.2				
55	9.9	17.4	3.3				
60	15.6	24.5	5.5				
65	23.9	35.7	9.6				
70	30.3	53.2	16.5				
75	49.1	80.2	32.4				
80	81.5	121.1	56.1				
85	126.3	182.0	89.2				

MARRIAGE: Males are assumed to be 4 years older than females, no assumption was made as to children.

For those participants with listed beneficiaries, the beneficiary allowance was assumed to be the greater of twice the amount contained in the record or the minimum of 4,500yr. (The information contained in the record has not been updated for the change from 25% to 50% payment to the survivor.)

For those participants without listed beneficiaries, 65% were assumed to be married and the beneficiary amount was assumed to be the minimum benefit payable (\$4,500/yr.).

Actuarial Method: The unfunded accrued liability was measured as of June 30, 1990 and the accrued liability contribution rate was then determined such that the unfunded accrued liability was to be amortized over a period of 9 years with contributions expected to remain constant.

> In determining the unfunded accrued liability and the contribution rate, the actuarial value of assets as of June 30, 1990 was based upon 100% of the market value of system assets. For subsequent actuarial valuations, the actuarial value of assets is adjusted to reflect actual contributions and benefit payments, an assumed rate of return on the previous year's assets and current year's cash flow at an annual rate of 2.00% with an adjustment to reflect 20% of the difference between the resulting value and the actual market value of System assets.

> In developing the unfunded accrued liability contribution rate as of June 30, 1991 and subsequent years, the contribution rate is adjusted to amortize any gains or losses over the remainder of the 9-year period. (Without additional guidance, we have assumed that the unfunded accrued liability determined as of June 30, 2007 will be amortized over 1 year.)

#### APPENDIX C

#### TABULATIONS USED AS A BASIS FOR THE 2007 VALUATION

The following tables give the number and retirement allowances of beneficiaries classified by age as of July 1, 2007.

#### TABLE 1

# THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED BY AGE AS OF JULY 1, 2007

#### SERVICE RETIREMENTS

	I	MEN		WOMEN			
AGE	NUMBER	1	AMOUNT	NUMBER	AMO	UNT	
85	1	\$	44,740				
87	1		32,757				
88	2		51,834				
89	7		100,996				
90	6		120,668				
91	7		60,080				
92	14		195,231				
93	10		100,485				
94	7		64,524	1	\$	8,527	
95	5		59,459				
96	3		30,879				
97	4		16,577				
98	1		11,919				
100	2		16,252				
101	1		7,415				
105	1		4,345				
TOTAL	72	\$	918,161	1	\$	8,527	

#### TABLE 2

### THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED BY AGE AS OF JULY 1, 2007

#### ORDINARY DISABILITY RETIREMENTS

	I	MEN		V	WOMEN	
AGE	NUMBER	A	MOUNT	NUMBER	AMOUNT	
87	1	\$	3,065			
89	1		2,892			
91	1		5,377			
93	1		5,852			
95	1		1,533			
TOTAL	5	\$	18,719			

#### TABLE 3

# THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED BY AGE AS OF JULY 1, 2007

#### ACCIDENTAL DISABILITY RETIREMENTS

MEN				WOMEN		
AGE	NUMBER	A	MOUNT	NUMBER	AMOUNT	
91	1	\$	5,950			
TOTAL	1	\$	5,950			

**TABLE 4** 

### THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES DISTRIBUTED BY AGE AS OF JULY 1, 2007

#### **ACTIVE MEMBERS' DEATH BENEFITS**

TABLE 5

# THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES DISTRIBUTED BY AGE AS OF JULY 1, 2007

#### RETIRED MEMBERS' DEATH BENEFITS

	N	MEN			WOMEN			
AGE	NUMBER	AMOUNT		NUMBER	AM	IOUNT		
47				1	\$	3,168		
53	1	\$	3,575			2.050		
54	4		1.670	1		2,070		
59	1		1,670	1		4.500		
60 64				1 2		4,500		
64 67				1		3,515		
68				$\frac{1}{2}$		4,500 1,859		
69	1		1,350	1		4,500		
71	1		1,550	3		13,500		
72	1		450	2		5,795		
72 74	1		430	2		19,688		
7 <del>4</del> 75				$\overset{2}{2}$		9,000		
75 76				3		19,816		
70 77				4		22,526		
78	1		1,923	3		31,615		
79	1		1,723	5		35,182		
80				6		54,969		
81				5		38,082		
82				7		55,981		
83				10		74,353		
84				12		98,074		
85				23		133,584		
86				21		162,872		
87				25		188,550		
88				31		225,066		
89				32		221,088		
90				37		251,163		
91				37		255,621		
92				33		213,453		
93				26		158,497		
94				24		127,792		
95				10		56,721		
96				18		100,290		
97				10		59,347		
98				14		74,432		
99				3		16,027		
100						27,857		
101				5 2		9,540		
102				2		9,314		
TOTAL	5	\$	8,968	426	\$	2,793,907		