June 30, 2006 Actuarial Valuation Report



January 18, 2007

1550 Liberty Ridge Drive, Suite 200 Wayne, PA 19087-5572 Tet +1 610 687.5644 Fax +1 610 687.4236 www.milliman.com

Board of Trustees
Teachers' Pension and Annuity Fund of New Jersey
State of New Jersey
Department of the Treasury
Division of Pensions and Benefits, CN 295
Trenton, NJ 08625-0295

### Ladies and Gentlemen:

This report presents the results of the actuarial valuation of Teachers' Pension and Annuity Fund of New Jersey as of June 30, 2006. Section I contains highlights of the valuation including a general discussion and comments on the various schedules included in the report. The subsequent Sections contain schedules summarizing the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions.

### Purpose

The main purposes of this report are:

- to provide the annual state contribution in accordance with N.J. Statutes to be made in the Fiscal Year ending June 30, 2008 which represents the contribution for the valuation year beginning July 1, 2006;
- to determine the Annual Required Contribution in accordance with Governmental Accounting Standards Board Statements 25 and 27 for the Fiscal Year ending June 30, 2008 and,
- to review the experience under the plan for the valuation year ending June 30, 2006.

Milliman's work product was prepared exclusively for the use or benefit of the State of New Jersey Division of Pension and Benefits for a specific and limited purpose as listed above. It is a complex, technical analysis that assumes a high level of knowledge concerning the Teachers Pension and Annuity Fund's operations, and uses the Division's data, which Milliman has not audited. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work

Board of Trustees January 18, 2007 Page 2

product, but should engage qualified professionals for advice appropriate to its own specific needs.

### Data Reliance

In performing this analysis, we relied on census data, asset statements and other information provided by the State of New Jersey Division of Pensions and Benefits. We have not audited or verified the census data, asset statements or other information. To the extent any of these are inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

### Variability of Results

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

### <u>Certification</u>

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods adopted by the Board or mandated by statute, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

**Board of Trustees** January 18, 2007 Page 3

We are members of the American Academy of Actuaries and meet its Qualification Standard to render this actuarial opinion.

Respectfully submitted,

MILLIMAN, INC.

By: Scott Parter Scott F. Porter, F.S.A.

Member American Academy of Actuaries Member American Academy of Actuaries

William A. Reimert, F.S.A.

SFP:WAR:wat\JSY01-10 g:\corr07\jsy\val2006\_draft.obd

### **TABLE OF CONTENTS**

	<u>Page</u>
SECTION I - SUMMARY	1
SECTION II - ASSETS	23
SECTION III - LIABILITIES AND CONTRIBUTIONS	27
SECTION IV - ACTUARIAL BALANCE SHEET	35
SECTION V - ACCOUNTING INFORMATION	36
SECTION VI - CENSUS DATA	39
SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS	48
SECTION VIII - SUMMARY OF PRINCIPAL PLAN PROVISIONS	54
APPENDIX A - EARLY RETIREMENT INCENTIVE CONTRIBUTION SCHEDULE	- 62

### SECTION I - SUMMARY

### A. Summary of Principal Results

PARTICIPANT DATA	

		June 30, 2006 Valuation		June 30, 2005 Valuation	·	June 30, 2004 Valuation	Percentage Change	Percentage Change 2004 to 2005
Active Contributing Members								
Number		140,831		139,245		136,838	1.1 %	
Number of Veteran Members		1,338		1,522		1,719	(12.1)	(11.5)
Average Pay	<del>⊗</del>	62,130	<del>6/3</del>	60,723	₩.	58,819	2.3	
Total Payroll		8,749,789,809		8,455,402,150		8,048,606,703	3.5	5.1
Total Appropriation Payroll		8,748,623,186		8,454,072,109		8,047,272,269	3.5	
Avg. Member Accumulated Contributions		48,584		46,635		44,789	4.2	4.1
Total Member Accumulated Contributions		6,842,191,130		6,493,706,672		6,128,804,702	5.4	6.0
Active Non-Contributing Members								
Number		13,057		12,628		12,259	3.4 %	3.0 %
Number of Veteran Members		102		86		901	4	(7.5)
Average Pay	<del>6/3</del>	44,188	<del>6/3</del>	42,357	€⁄9	41,066	4.3	33.
Total Payroll		576,959,990		534,885,076		503,424,027	7.9	6.2
Avg. Member Accumulated Contributions		20,957		19,386		18,708	8.1	3.6
Total Member Accumulated Contributions		273,630,722		244,802,590		229,346,018	11.8	6.7

Section I - A Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes.

### SECTION I - SUMMARY

(continued)

PARTICIPANT DATA

### A. Summary of Principal Results (continued)

		TOTAL TOTAL		TITLE TO THE TOTAL			Ć.	<u>.</u>	
		0000		* C C C C C C C C C C C C C C C C C C C		000	Percentage	Percentage	
		June 30, 2006		June 30, 2005		June 30, 2004	Change	Change	
		Valuation	,	Valuation	•	Valuation	2005 to 2006	2004 to 2005	
Service Refirees, Including Domestic Relation		s Beneficiaries							
Number		62,212		59,301		56,100	4.9 %	5.7 %	
Average Annual Pension	↔	33,361	<del>6∕°)</del>	31,913	<b>6∕</b> 9	30,608	4.5	4.3	
Total Annual Pensions		2,075,424,405		1,892,492,477		1,717,126,891	9.7	10.2	
Average Retirement Age of New Retirees		59.9		59.4		59.6	0.8	(0.3)	
Average Annual Pension of New Retirees	<del>6/3</del>	43,768	S	42,185	↔	40,645	3.8	3.8	
Disabled Retirees									
Number		2,447		2,370		2,273	3.2 %	4.3 %	
Average Annual Pension	↔	23,427	€9	22,495	↔	21,805	4.1	3.2	
Total Annual Pensions		57,324,718		53,313,284		49,562,156	7.5	7.6	
Beneficiaries and Dependents									
Number		3,955		3,774		3,620	4.8 %	4.3 %	
Average Annual Pension	⇔	19,747	<del>69</del>	18,762	€/->	17,976	5.2	4	
Total Annual Pensions		78,099,815		70,806,308		65,074,906	10.3	8.8	
Terminated Vested Participants									
Number		853		903		925	(5.5) %	(2.4) %	
Average Annual Pension	€⁄3	11,304	ᢒ	10,590	69	10,050	6.7	5.4	
Total Annual Pensions		9,642,252		9,563,112		9,295,908	8.0	2.9	

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. MILLYMAN

Section I - A

### SECTION I - SUMMARY

(continued)

## A. Summary of Principal Results (continued)

# STATUTORY PENSION CONTRIBUTIONS WITH BUDGET ADJUSTMENTS

	> 14 1	June 30, 2006 Valuation (State's Fiscal Year 2008 Contributions)	June 30, 2005 Valuation (State's Fiscal Year 2007 Contributions)	S	June 30, 2004 Valuation (State's Fiscal Year 2006 Contributions)	Percentage Change 2005 to 2006	Percentage Change <u>2004 to 2005</u>
Normal Cost (1/60th formula) ** Excess Assets Available Normal Contribution	<del>\$9</del>	579,754,480 \$\frac{0}{2}\$ 579,754,480 *	560,691,960 0 560,691,960	<del>∜^</del> *	541,190,160 0 541,190,160	\$ 3.4 % 0.0 * 3.4 *	3.6 % 0.0 3.6
Additional Formula Normal Cost Benefit Enhancement Fund (BEF) Balance Additional Formula Contribution		97,622,687 0 97,622,687 *	94,763,359 0 94,763,359	*	91,356,864 (380,295,561) 0	3.0 %	3.7 % (100.0) N/A
Accrued Liability Contribution		* 608,769,939	500,685,252	*	374,702,121	* 21.6 %	33.6 %
Total Pension Contribution by Statute State Appropriation for Pension *** Amount Covered by BEF ****	<b>%</b>	1,286,147,106 * \$ (1,286,147,106)	<b>1,156,140,5</b> (663,402,2	71 * \$ 000)	915,892,281 * (67,275,588) (290,273,287) *	* 11.2 % 93.9 % * 0.0 %	26.2 % 886.1 % (100.0) %
Remaining Pension Contribution	S	S * 0	\$ 492,738,371 * \$	*	558,343,406 *	* (100.0) %	(11.7) %

These amounts should be increased for assumed interest at the rate of 8.25% per annum if payment is delayed beyond June 30, 2007, June 30, 2006 and June 30, 2005, respectively.

Section I - A

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. MILLYMAN

<sup>\*\*</sup> Excludes the non-contributory group life insurance term cost.

<sup>\*\*\*</sup> For the 2008 fiscal year, it is anticipated that 100% of the pension contribution will be appropriated.

<sup>\*\*\*\*</sup> For the 2006 fiscal year, represents the remaining balance in the Benefit Enhancement Fund.

### SECTION I - SUMMARY

(continued)

## A. Summary of Principal Results (continued)

## ANNUAL REQUIRED CONTRIBUTION PER GASB 25 AND 27

	June 30, 2006 Valuation (State's <u>Fiscal Year 2008)</u>	June 30, 2005 Valuation (State's Fiscal Year 2007)	June 30, 2004 Percentage Valuation (State's Change Fiscal Year 2006) 2005 to 2006	Percentage Change 2005 to 2006	Percentage Change 2004 to 2005
Normal Cost *	\$ 763,269,751	\$ 742,157,093	\$ 734,570,135	2.8 %	1.0 %
Amortization Payment **	669,066,355	557,842,519	353,350,469	% 6.61	57.9 %
Subtotal	1,432,336,106	1,299,999,612	1,087,920,604	10.2 %	19.5 %
Interest Adjustment ***	118,167,729	107,249,968	89,753,451	10.2 %	19.5 %
Annual Required Contribution	\$ 1,550,503,835	\$ 1,407,249,580	\$ 1,177,674,055	10.2 %	19.5 %

Reflects additional formula normal cost and full cost of pension adjustment benefits. For the 2007 and later fiscal years, includes an actuarial determination of the cost of the non-contributory and contributory group life insurance benefits. Prior years included a term cost for the non-contributory group life insurance benefits and did not reflect the contributory benefits.

Section I - A

<sup>\*\*</sup> Benefit Enhancement Fund is excluded from the actuarial accrued liabilities.

<sup>\*\*\*</sup> Additional one year of interest is included to reflect payment of contributions at end of fiscal year.

### SECTION I - SUMMARY

(continued)

## A. Summary of Principal Results (continued)

# TOTAL STATUTORY CONTRIBUTIONS (INCLUDING PRM AND ERI)

	June 30, 2006 Valuation (State's Fiscal Year 2008 Contributions)	Z S E O	June 30, 2005 Valuation (State's Fiscal Year 2007 Contributions)	<i>&gt;</i>	June 30, 2004 Valuation (State's Fiscal Year 2006 Contributions)		Percentage Change 2005 to 2006	Percentage Change 2004 to 2005	
Total Pension Contribution by Statute \$	1,286,147,106 * \$		1,156,140,571 * \$	Æ	915,892,281	*	11.2 %	26.2 %	
Est. Non-contributory Group Life Insurance (NCGI)	36,810,000		35,920,000 ***	*	26,950,775	* *	2.5 %	33.3 %	
Est. PostRetirement Medical (PRM) Premiums	676,260,000		661,640,000		555,344,002	*	2.2 %	19.1 %	
PRM Percent of Payroll Contribution ***	54,241,464 *	*	52,415,247 *	v	49,893,088	*	3.5 %	5.1 %	
Early Retirement Incentive (ERI-3)	1.184.353 *	*	1,138,800 *	٧	1.095,001	*	4.0 %	4.0 %	
Total State Contribution for Pension, NCGI PRM and ERI, excluding amounts covered by BEF	2,054,642,923	 •∕•	1,907,254,618	<b>∞</b>	1,549,175,147		7.7 %	23.1 %	
Total Certain State College Contribution (Included Above)	5,182,292		5,537,754		5,016,095	*	(6.4) %	10.4 %	

These amounts should be increased for assumed interest at the rate of 8.25% per annum if payment is delayed beyond June 30, 2007, 2006 and 2005, respectively.

Section I - A

Actual State contribution made to the PRM Fund, actual NCGI claims paid, and actual allocation of costs for certain State colleges for fiscal year 2006.

<sup>\*\*\*</sup> Actual amount appropriated for the 2007 fiscal year is \$32,602,000. Additional appropriations will be requested as needed. Amount shown reflects Milliman's

<sup>\*\*\*\*</sup> No State appropriation was made for the 2006 and 2007 fiscal years.

### SECTION I - SUMMARY

(continued)

### A. Summary of Principal Results (continued)

# LOCAL EMPLOYER CONTRIBUTIONS AND EMPLOYEE CONTRIBUTION REDUCTIONS

	June 30, 2006 Valuation	Jun	June 30, 2005 <u>Valuation</u>	<del>,</del>	June 30, 2004 <u>Valuation</u>	Percentage Change 2005 to 2006	Percentage Change 2004 to 2005
Employee Contribution Reduction for 2008, 2007 and 2006 calendar years, respectively	%0.0		0.0%		%0.0	% 0.0	% 0.0
Early Retirement Incentive Contributions payable April 1, 2008, April 1, 2007 and April 1, 2006, respectively	le April 1, 2008,						
ERI 1 - Local Employers \$	1,370,038	89	1,370,038	ક્ક	1,862,363	% 0.0	(26.4) %
ERI 2 - Local Employers	1,728,548		1,727,650		3,594,338	0.1 %	(51.9) %
ERI 4 - Local Employers *	3,822,965		3,460,643		948.817	10.5 %	264.7
Total	6,921,551	S	6,558,331	S	6,405,518	5.5 %	2.4 %
Terminal Funding Contribution payable April 1, 2008, April 1, 2007 and April 1, 2006, respectively	, 2008, April 1, 20	07 and	April 1, 2006	, resp	ectively		
Location #00200	0	S	118,630	S	0	N/A	N/A
Location #00535	0		0		0	N/A	N/A
Location #00845	0		2,393		0	A/Z	N/A
Location #00980	0		47,069		0	N/A	N/A
Location #02075	0		0		396,878	K/Z	N/A
Location #02083	0		0		125,514	N/A	N/A
Location #07012	0		64,103		0	N/A	N/A

<sup>\*</sup> ER14 contributions will be payable over 15 years beginning April 1, 2006 for members retired prior to June 30, 2004 and April 1, 2007 for members retired prior to June 30, 2006, contributions will commence April 1, 2008 and end on the same date as if the contributions began April 1, 2007.

Section I - A

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. MILLAMAN

### SECTION I - SUMMARY

(continued)

## A. Summary of Principal Results (continued)

	ASSETS AN	ASSETS AND LIABILITIES				Q
	June 30, 2006 Valuation	June 30, 2005 Valuation	vo	June 30, 2004 Valuation	Percentage Change 2005 to 2006	Percentage Change 2004 to 2005
Market Value of Pension Assets	\$ 31,495,000,296	\$ 29,610,249,605		\$ 28,618,463,144	6.4 %	3.5 %
Actuarial Value of Pension Assets	\$ 35,422,799,539	\$ 34,688,666,392		\$ 34,633,790,549	2.1 %	0.2 %
Actuarial Accrued Pension Liability	\$ 45,439,278,166	\$ 42,926,758,983		\$ 40,447,690,339	8.9 %	6.1 %
Unfunded Pension Liability Based on Market Value Based on Actuarial Value	\$ 13,944,277,870 \$ 10,016,478,627	\$ 13,316,509,378 \$ 8,238,092,591		\$ 11,829,227,195 \$ 5,813,899,790	4.7 % 21.6 %	12.6 % 41.7 %
Funded Ratio Based on Market Value Based on Actuarial Value	69.3 %		69.0 % 80.8 %	70.8 % 85.6 %	% 0.3 % % (2.8) %	(1.8) % (4.8) %

Section I - A

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes.

### SECTION I - SUMMARY (Continued)

### **B.** General Comments

This report summarizes the results of the actuarial valuation of the Teacher's Pension and Annuity Fund (TPAF) as of June 30, 2006.

### **GASB Annual Required Contribution**

Page 4 contains a Summary Exhibit on the Annual Required Contribution (ARC) per GASB 25 and 27. GASB 25 and 27 do not (1) exclude the Benefit Enhancement Fund from the Actuarial Value of Assets, (2) permit a portion of the normal cost to be paid by the BEF, (3) permit a phase-in of the pension adjustment normal cost or 4) allow the use of a term cost funding method for the non-contributory group life insurance. Furthermore, since the contributory group life insurance is provided through TPAF, an actuarial cost for these benefits is included in the ARC. Expected employee contributions of 0.4% of pay offset the normal cost portion of the contributory group life insurance. For the 2007 and later fiscal years, the ARC includes an actuarial determination of the cost of the non-contributory and contributory group life insurance. The ARC in prior years included the term cost for the non-contributory group life insurance. The ARC for the 2008 fiscal year is \$1,550.5 million as compared to the sum of the required statutory pension contribution of \$1,286.1 million and the estimated non-contributory group life insurance term cost of \$36.8 million for a total of \$1,322.9 million. according to GASB 43 has not been determined for the postretirement medical benefits.

### **Statutory Contributions**

The statutory contribution requirements are highlighted on Summary Exhibits shown on pages 3 (pension only) and 5 (pension, PRM and ERI). Included on these exhibits is our understanding of the effect of the fiscal year 2007 State budget resolution on contributions to the system for the 2007 and 2008 fiscal years. These exhibits are discussed in detail in the paragraphs below.

The required statutory pension contribution has increased to \$1,286.1 million for the State's fiscal year 2008 from \$1,156.1 million for the State's fiscal year 2007 (excluding ERI-3 and non-contributory group life insurance contributions), the excess assets remain at \$0 as of July 1, 2006 and the 2.0% member contribution reduction will not apply in 2008. (Effective January 1, 2004, the employee contribution rate returned to the 5.0% level and this level has remained in effect thereafter.) The primary reason for these changes is the adverse investment performance during the

### SECTION I - SUMMARY (continued)

### B. General Comments (continued)

three fiscal years ending June 30, 2003 and the lack of State contributions to the system for a period of years.

This valuation reflects our understanding of the effect of the fiscal year 2007 State budget resolution on contributions to the system for the 2007 and 2008 fiscal years as outlined below:

- For the 2007 fiscal year, the State has appropriated \$697.1 million to cover the non-contributory group life insurance claims (\$32.6 million) and the ERI-3 contribution (\$1.1 million) with the remaining amount (\$663.4 million) allocated toward the pension contribution of \$1,156.1 million during that year based on the actuarial mortality assumptions. For non-contributory group life insurance, we have estimated the amount of claims to be \$35.9 million during that year based on the actuarial mortality assumption. It is our understanding that additional appropriations will be requested if needed.
- An appropriation to cover the remaining portion of the 2007 fiscal year pension contribution (\$492.7 million) was not made. This increases the Unfunded Actuarial Accrued Liability as of July 1, 2006 by \$492.7 million resulting in an increase in the 2008 fiscal year Accrued Liability Contribution of \$29.9 million. The accumulated value of statutory pension contributions not appropriated by the State in fiscal years 2004 through 2007 equals \$1,972.2 million. The Unfunded Actuarial Accrued Liability as of July 1, 2006 is \$10,016.5 million.
- The payroll portion of the Post-Retirement Medical Contribution for the 2007 fiscal year (\$52.4 million) is not expected to be made. Therefore, we have not anticipated the PRM Fund to increase and the expected earnings on assets for fiscal year 2008 have been set to \$0.
- For the 2008 fiscal year, it is anticipated that 100% of the \$1,286.1 million statutory pension contribution will be appropriated by the State. In addition, it is anticipated that the State will appropriate amounts to cover the Post Retirement Medical premiums (PRM est. \$676.3 million), the non-contributory group life insurance claims (NCGI est. \$36.8 million) and the ERI-3 contribution (\$1.2 million). The payroll portion of the PRM contribution (\$54.2 million) is not anticipated to be appropriated. Therefore, it is anticipated that

### SECTION I - SUMMARY (continued)

### **B.** General Comments (continued)

the State will appropriate \$2,000.4 million or 97% of the total pension, PRM, NCGI and ERI contributions of \$2,054.6 million. In displaying the results of this actuarial valuation, we have <u>not</u> reduced the contribution otherwise due under statute to reflect the expectation that funds will not be appropriated.

As mandated by statute, only 20% of the difference between the expected actuarial value of assets and the market value is recognized in calculating the actuarial value of assets each year. Due to the significant drop in the equity markets since the market re-start as of 1999, the actuarial value of assets as of June 30, 2006 is 112% of market value. This is a reduction from the prior year's ratio of 117%. Section III(G) shows the impact of using the market value of assets to determine the statutory pension contribution.

The actuarial accrued liability figures reflect the full additional actuarial liability due to pension adjustment benefits for actives, retirees, terminated vested members and beneficiaries. For purposes of calculating employer contributions, the portion of the normal cost attributable to the pension adjustment benefits for active members is reflected separately and its cost is being phased-in over a period beginning with the March 31, 1987 valuation. The current valuation reflects a 53.62% phase-in of the pension adjustment normal cost for active members.

The actuarial accrued liability excludes the actuarial liability associated with the group life insurance benefits. The State will appropriate funds to cover the actual amount of the non-contributory group life insurance claims. The accrued liability shown for the post retirement medical benefits is the balance in the Post Retirement Medical Fund; an actuarially computed accrued liability was not calculated. The post retirement medical benefits are financed on a modified term cost basis. In this valuation, we provide estimates of these amounts.

This valuation also reflects members who retired prior to July 1, 2006 under ERI-4 pursuant to Chapters 128 and 129, P.L. 2003 for local employers. The additional actuarial liability as of July 1, 2006 due to this chapter for members retiring during the past plan year is \$4.9 million. Some employers have made estimated contributions toward this amount and any amounts not yet accounted for in the Plan's financial statements were added to the assets as a contribution receivable. This additional liability will be reflected in the amortization payment schedules beginning in fiscal year 2008.

### SECTION I - SUMMARY (continued)

### B. General Comments (continued)

As of July 1, 2006, the actuarial liabilities of the Fund exceeded the valuation assets. Thus there are no excess assets. If excess assets existed, 50% would be available for contribution reductions. Since there are no excess assets, no additional member contribution reductions will result from this valuation. Therefore, the member contribution rate will continue to be 5% for the 2008 calendar year.

The balance in the Benefit Enhancement Fund (BEF) as of July 1, 2006 is \$0. This fund was established to reduce the State's Additional Formula Contribution from Chapter 133, P.L. 2001. The Additional Formula Contribution equals \$97.6 million for the 2008 fiscal year. Since there are no excess assets as of July 1, 2006, so no contribution will be made to the BEF.

The net pension normal cost based on the 1/60 formula payable as of July 1, 2006 is \$535.6 million. This is \$17.6 million more than the comparable normal cost of \$518.0 million payable on July 1, 2005. This increase is due to the continued phase-in of the pension adjustments (\$3.4 million) and increases in payroll and the number of active participants (\$14.2 million).

The additional formula normal cost payable as of July 1, 2006 is \$90.2 million. This is \$2.7 million more that the additional formula normal cost of \$87.5 million payable on July 1, 2005. This increase is due to increases in payroll and the number of active participants.

The estimated Post Retirement Medical Contribution increased from the \$714.1 million shown in the prior valuation to \$730.5 million. This increase of \$16.4 million, or 2%, is primarily due to an increasing retired population offset by premium decreases for retirees greater than and less than 65. The premium rates decreased by approximately 2%.

TPAF experienced an actuarial loss, based on the actuarial assumptions adopted in the 2003 Experience Study, during the period July 1, 2005 - June 30, 2006 of \$(1,092.6) million, or 2.4% of the Actuarial Accrued Liability as of July 1, 2006. This loss combined with the reduced State appropriation relative to what was required by statute for the 2006 fiscal year, resulted in an increase in the unfunded accrued liability of \$1,778.4 million from \$8,238.1 as of July 1, 2005 to \$10,016.5 as of July 1, 2006 and an increase in the accrued liability contribution of \$108.1 million from \$500.7 million payable June 30, 2006 to \$608.8 million payable June 30, 2007. The

### SECTION I - SUMMARY (continued)

### B. General Comments (continued)

accrued liability contribution payable June 30, 2007 is based on a 30-year amortization at an interest rate of 8.25% with payments increasing by 4% per year. This methodology results in an amortization payment for the 2008 fiscal year that is less than the interest accrued on the unfunded liability.

The major factors contributing to this loss are summarized below and are compared to the experience for the prior two plan years.

		Gain/(Loss)	
		(Amounts in Millions)	
	June 30, 2006	June 30, 2005	June 30, 2004
Economic Factors:			
Investment Return	(981.9)	\$(1,269.6)	\$(1,503.8)
Salary Increases	158.6	(31.3)	162.9
Pension Adjustments (COLA)	(23.7)	84.5	222.6
Expenses	(10.8)	(14.6)	(9.2)
Demographic Factors:			
Active Members	(119.2)	7.4	(222.9)
New Entrants	(60.0)	(60.8)	(54.8)
Non-Contributing Members	(21.1)	(23.3)	(24.0)
Retirees and Beneficiaries	(34.5)	<u>(18.0</u> )	36.2
Total	(1,092.6)	\$(1,325.7)	\$(1,393.0)

Total pension assets (excluding PRMF) earned investment returns of approximately 10.30% on a market value basis and 5.35% on an actuarial value basis for the period ending June 30, 2006. The resulting loss to the plan of \$(981.9) million represents the shortfall in the actuarial value of assets relative to the 8.25% assumed investment return.

Salary increases for contributory members who were active on both July 1, 2005 and July 1, 2006 averaged 5.15% versus the average anticipated salary scale assumption of 5.45%. This produced an actuarial gain of \$158.6 million. Salaries for new entrants averaged \$43,639, which is significantly below the average salary of all contributory members of \$62,130. This resulted in the average salary of all contributory members increasing by only 2.3% over last year, with total contributory payroll growing by 3.5%.

### SECTION I - SUMMARY (continued)

### B. General Comments (continued)

For annuitants receiving benefits since 2003, the pension adjustments were based on a CPI increase of 3.18%, which is higher than the 3.0% actuarial assumption for CPI increases. This resulted in an actuarial loss of \$23.7 million.

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits

### <u>Assets</u>

Section II summarizes the System assets taken into account in the preparation of the actuarial valuation. Subsection A summarizes the market value of System assets as of June 30, 2006 and includes the present value of expected contributions from local employers for ERI and Terminal Funding retirements as of June 30, 2006.

Subsection B reconciles the development of the market value of pension and post retirement medical assets separately, starting from the market values as of June 30, 2005. Subsection C summarizes the development of the actuarial value of pension assets as of July 1, 2006. The exhibit reflects the growth in the pension assets based on the expected investment income at an assumed rate of 8.25% adjusted to reflect 20% of the difference between the market value of pension assets as of the valuation date and the expected actuarial value. The balance in the Post Retirement Medical Fund is added to the actuarial value of pension assets to obtain the actuarial value of total system assets.

Subsection D estimates the annual rate of return for the year ending June 30, 2006 on the actuarial value and the market value of pension assets. Subsection E summarizes the estimated annual rates of return for the five previous plan years. The 5-year compounded annual return on the actuarial value of assets and the market value of assets are 3.98% and 5.31%, respectively.

### Actuarial Liabilities and Contributions

Section III summarizes the actuarial liabilities and the development of the required State contribution for the plan year beginning July 1, 2006. The State is statutorily required to make three contributions, a Normal Cost Contribution, an Accrued Liability Contribution and an Additional Formula Normal Cost Contribution, which in general are determined under the Projected Unit Credit funding method. The Normal Cost and Additional Formula Normal Cost under the Projected Unit Credit funding method is defined as the present value of the benefits attributed to the current year. The Normal Cost reflects the phase-in of the cost of pension adjustment benefits. The Unfunded Accrued Liability (Surplus) is determined as the difference between the Actuarial Accrued Liability used to develop contributions and the Adjusted Actuarial Value of Assets (excludes the BEF and the liability for member reductions granted in previous valuations). The actuarial liabilities used to

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

develop contributions reflect the assumptions developed in the 2003 Experience Study and the economic assumptions prescribed by the Treasurer first reflected in the June 30, 2004 Actuarial Valuation.

Subsection A summarizes the development of the Actuarial Accrued Liability as of July 1, 2006 for all current members and indicates the portion of those present values attributable to active participants, retirees and beneficiaries, and terminated vested participants. These liabilities include the full liability for pension adjustment benefits for all members. The non-contributory lump sum death benefits payable from active service, terminated vested status and retiree status have been excluded from the Actuarial Accrued Liability as of July 1, 2006 since those benefits are funded on a term cost basis. Projected benefits based on compensation in excess of the 401(a)(17) compensation cap for a group of grandfathered employees for certain School Districts under Chapter 113, P.L. 1997 have been included in the determination of the Accrued Liability.

Subsection A also indicates the balance in the Post Retirement Medical Benefits Fund.

Subsection B summarizes the development of the pension Normal Cost under the 1/60 and 1/55 formulas payable July 1, 2006. The schedule shows the portion of the Normal Cost attributable to: (1) the basic allowances and (2) pension adjustment benefits for active members and (3) expected member contributions. The Normal Cost due to pension adjustments reflects the 53.62% phase-in of the pension adjustment benefits. The Normal Cost as of July 1, 2006 was developed based on the Projected Unit Credit Method. Projected benefits based on compensation in excess of the 401(a)(17) compensation cap for a group of grandfathered employees for certain School Districts under Chapter 113, P.L. 1997 have been included in the determination of the Normal Cost.

Subsection C summarizes the development of the Excess Valuation Assets which are \$0 as of July 1, 2006. The Excess Valuation Assets are determined by subtracting the Actuarial Accrued Liability for basic allowances and pension adjustment benefits, the Post Retirement Medical Premium Fund, the present value of the total projected normal cost in excess of the projected phased-in normal cost for pension adjustment benefits of active members and the BEF (prior to reduction

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

for the additional formula normal contribution for fiscal year 2008) from the Valuation Assets.

Subsection D shows the development of the Contribution Reductions from Excess Assets. The contribution reductions, if there were excess assets, would include member contribution reductions, the pension normal contribution based on the 1/60 formula and the BEF contribution. Since there are no Excess Assets as of June 30, 2006, there will be no 2008 calendar year member contribution reduction, no offset to the pension Normal Contribution based on the 1/60 formula and no BEF contribution based on the statutory method for determining the State contributions.

Subsection E summarizes the development of the BEF as of July 1, 2006 and the Additional Formula Normal Contribution. Chapter 133, P.L. 2001 established the BEF as of June 30, 1999. The BEF is \$0 as of June 30, 2006. The BEF is credited with excess assets not to exceed actual member contributions made to the system nor the present value of expected additional normal costs due to the formula change. Since the BEF is \$0, there is no offset to the additional formula normal cost.

Subsection F summarizes the development of the State's estimated fiscal year 2008 Total Required Contributions comprising four components: pension, noncontributory group life insurance, postretirement medical and ERI. The total pension contribution of \$1,286,147,106 equals the Normal Contribution of \$579,754,480 based on the 1/60 formula plus the Additional Formula Normal Contribution of \$97,622,687 plus the Accrued Liability Contribution of \$608,769,939. The noncontributory group life insurance contribution represents a one year term cost of lump sum death benefits payable during active service, terminated vested status and retiree status and is estimated to be \$36,810,000. The estimated Post Retirement Medical Contribution of \$730,501,464 comprises three pieces: (1) an estimated amount necessary to pay anticipated premiums for the State's 2008 fiscal year's benefits of \$676,260,000 less (2) the expected return on the Post Retirement Medical Benefits Fund assets of \$0 plus (3) 3/5% of the valuation year payroll of active members (fiscal year 2007 payroll) of \$54,241,464. The State's ERI-3 contribution is \$1,184,353. The Total Required Contribution for the State's fiscal year 2008 is estimated to be \$2,054,642,923. This is an estimate because the State will contribute the actual 2008 fiscal year non-contributory group life insurance

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

benefits and post retirement medical premiums; not the estimated amounts shown above.

Subsection G shows the Required Contribution (before and after the reduction due to Excess Valuation Assets and the BEF) as a percentage of appropriation payroll on two bases: (1) after reflecting the actual phase-in of the pension adjustment benefits – 23.48% and (2) as if the pension adjustment liabilities were fully phased-in and the Market Value of Assets were used to determined the Accrued Liability Contribution – 27.05%.

Subsection H shows the fiscal year 2008 Required Contribution based on the 1/60 formula, the Additional Formula Contribution, the Accrued Liability Contribution, the estimated non-contributory group life insurance contribution and the estimated Post Retirement Medical Contribution payable by the State and certain State Colleges after application of the excess assets and the BEF. The State's contribution is allocated between the Department of Higher Education, Department of Education, County Colleges, Charter Schools and other.

Subsection I shows the calculation of the total actuarial gain (loss). The general comments section outlines the areas where experience differed from that expected.

### **Actuarial Balance Sheet**

Section IV provides the actuarial balance sheet summarizing the assets and liabilities by Fund as of June 30, 2006. The assets credited to the various funds include the portion of the investment income allocated to each fund for the year and ending June 30, 2006. The liabilities presented are based on the actuarial accrued liabilities summarized in Section III without any phase-in adjustments.

The actuarial balance sheet indicates the following transfers should be made:

### (1) Retirement Reserve Fund

When a member retires, or when he dies and an allowance is payable to his beneficiary, the allowance including cost-of-living adjustments is paid from the Retirement Reserve Fund. The member's own contributions with interest are

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

transferred from the Annuity Savings Fund, and the balance of the reserve on the total allowance is transferred from the Contingent Reserve Fund. As of June 30, 2006, the Retirement Reserve Fund has present assets of \$22,680,957,719 including accrued interest. The liabilities of the fund amount to \$23,337,822,826 so that there is a deficit of \$656,865,107 in the fund as of the valuation date. It is recommended that the fund be put in balance as of June 30, 2006 by a transfer of assets from the Contingent Reserve Fund, and this transfer is shown in the balance sheet.

### (2) Pension Fund

The reserves held in the Pension Fund represent the reserves on retirement allowances payable to non-veteran members who retired prior to 1956. As of June 30, 2006, the Pension Fund has assets credited to it amounting to \$133,149 including accrued interest. The liabilities of the fund amount to \$127,349 so that there is a surplus of \$5,791 in the fund as of the valuation date. It is recommended that the fund be put in balance as of June 30, 2006 by a transfer of assets to the Contingent Reserve Fund, and this transfer is shown in the balance sheet.

### (3) Annuity Savings Fund and Contingent Reserve Fund

The Annuity Savings Fund, which is the fund to which members' contributions with interest are credited, has assets amounting to \$7,187,652,157 as of June 30, 2006 after accrued interest has been added. The Contingent Reserve Fund is the fund to which contributions made by the State and local employers to provide the benefits paid from retirement fund monies are credited. The assets creditable on an actuarial value basis to the Contingent Reserve Fund amount to \$4,593,948,770 as of June 30, 2006 after adjustment is made on account of accrued interest and the amounts transferable to the Retirement Reserve Fund and from the Pension Fund. If a market value basis was used, assets creditable to the Contingent Reserve Fund after transfers would amount to \$666,149,527.

If a member withdraws from active service before qualifying for retirement, the amount of his accumulated deductions is paid to him from the Annuity Savings Fund. If he dies before retirement and no survivorship benefit is payable, his

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

accumulated deductions are paid to his beneficiary from the Annuity Savings Fund. If he retires, or if he dies leaving a beneficiary eligible for a survivorship benefit, his accumulated deductions are transferred from the Annuity Savings Fund to the Retirement Reserve Fund, and the reserve on the allowance which is not provided by his own deductions is transferred from the Contingent Reserve Fund to the Retirement Reserve Fund. Any lump sum benefit payable upon the death of a member before or after retirement is paid by The Prudential Insurance Company of America.

### (4) Benefit Enhancement Fund

The reserves held in the BEF are used to fund the additional formula normal contributions. The BEF is credited with excess assets not to exceed actual member contributions made to the system nor the present value of the expected additional formula normal contributions. No additional excess assets will be credited to the BEF after the maximum amount is attained. If excess assets permit, monies are transferred from the Contingent Reserve Fund. As of June 30, 2006, the BEF has no assets.

### (5) Special Reserve Fund

The Special Reserve Fund is the fund to which any excess interest earnings are transferred and against which any losses from the sale of securities are charged. The maximum limit on the accumulations in this fund is set at one percent of the market value of the investments of the retirement fund; any amounts in excess of this limit are creditable to the Contingent Reserve Fund. The Special Reserve Fund is considered as an asset of the retirement fund. This fund has assets amounting to \$303,248,437 as of June 30, 2006, which is at the statutory limit.

### (6) Post Retirement Medical Benefits Fund

The Post Retirement Medical Benefits Fund is established to hold contributions in respect to future post retirement medical benefits. The fund has assets of \$2,492,303 as of June 30, 2006. These assets have been included as retirement system assets. The balance in the fund should increase by 3/5 of

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

1% of payroll. An offsetting liability equal to this fund balance has also been established.

### Accounting Information

Section V presents the accounting information required under Governmental Accounting Standards Statement No. 25 (GASB 25). Accounting information under GASB 43 for postretirement medical benefits is not included in this valuation. Schedule A outlines the development of the Annual Required Contribution (ARC). The ARC comprises the employer's normal cost plus a specified amortization of the unfunded actuarial accrued liability (UAAL). For 2007 and later fiscal years (the 2005 and subsequent valuations), an actuarial determination of the cost for noncontributory and contributory group life insurance benefits is included in the calculation since these benefits are paid from TPAF. Prior years included a term cost for the non-contributory group life insurance and excluded the contributory group life insurance. The ARC increased by \$78.3 million as a result of including the group life insurance benefit costs in the ARC to \$1,550.5 million. The amortization method selected for this system is a closed level percentage of projected payroll based on an assumed payroll growth rate of 4.0% for 30 years.

Schedule B shows the projection of the Estimated Net Pension Obligation (NPO) as of June 30, 2008. The NPO represents the cumulative difference between the Annual Pension Costs for the system and the contributions made. After the expected contribution of \$1,323.0 million which represents 100% of the pension contribution for the State's fiscal year 2008 plus the estimated non-contributory group life insurance claims for fiscal year 2008, the NPO as of June 30, 2008 is expected to be \$3,778.1 million.

Schedule C is the Schedule of Funding Progress. This schedule presents the Actuarial Accrued Liability, the Actuarial Value of Assets, the Unfunded Accrued Liability, the funded ratio (assets as a percentage of Actuarial Accrued Liability), and the Unfunded Accrued Liability as a percentage of covered payroll. Six years of historical information are shown in compliance with GASB 25.

Schedule D is the Schedule of Employer Contributions. This schedule presents the ARC for the fiscal year, the employer contributions made for that fiscal year and the percentage of the ARC those contributions represent. For the fiscal year ending This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

June 30, 2007 the employer contributions are 49.7% of the ARC and for the fiscal year ending June 30, 2008, the expected employer contributions are 85.3% of the ARC. Six years of historical information are shown in compliance with GASB 25. Schedule E presents the funding policy for the fiscal year. This disclosure includes the valuation date, the Actuarial Cost Method, the amortization period and method, the Asset Valuation Method, and certain key actuarial assumptions.

### Census Data

Section VI summarizes the census data provided by the Division of Pensions and Benefits and utilized in the preparation of the actuarial valuation. Subsection A provides a reconciliation of the current year participant counts from the prior valuation. Subsection B shows the appropriation count and salary information by group. Subsection C shows the number and annual retirement allowances with pension adjustments by beneficiary type. Subsection D shows information on members who retired since the last valuation split between those who retired with less than and more than 25 years of service. Subsections E and F present a profile of Contributory and Non-contributory members split by gender, summarized by 5-year age and service groupings. Subsection G provides a profile of terminated vested members, retired members, disabled members, and beneficiaries broken down into 5-year age categories. The census data represents the status of plan participants as of June 30, 2006.

In performing this analysis, we relied on census data, asset statements and other information provided by the State of New Jersey Division of Pension and Benefits. We have not audited or verified this census data, asset statements or other information. To the extent any of these are inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

### SECTION I - SUMMARY (continued)

### C. Discussion of Supporting Exhibits (continued)

### **Actuarial Assumptions and Methods**

Section VII summarizes the actuarial assumptions and methods utilized in the preparation of this actuarial valuation. Subsection A identifies the various assumptions. These assumptions are based on the assumptions developed in the Experience Study from July 1, 2000 to June 30, 2003 and the economic assumptions prescribed by the Treasurer first reflected in the June 30, 2004 Actuarial Valuation. Subsection B summarizes the actuarial valuation methodology set forth in Chapter 62, P.L. 1994 as modified by Chapters 115, P.L. 1997 and 133, P.L. 2001.

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

### Summary of Principal Plan Provisions

Section VIII summarizes the principal plan provisions as of the valuation date and denotes any changes from the previous valuation.

### Early Retirement Incentive Contribution Schedule

Appendix I presents the contribution schedule for the early retirement incentive programs (ERI-1, ERI-2, ERI-3 and ERI-4) by location for the 2008 fiscal year. It also provides the present value of the future contributions as of June 30, 2006. This list reflects locations who paid off their ERI liabilities through June 2006 as a result of Chapter 42, P.L. 2002.

### SECTION II - ASSETS

### A. Market Value of Assets as of June 30, 2006

1.	Assets		
	Cash	\$	4,783,607
	Investment Holdings		30,324,843,735
	Employers' Contributions Receivable - State		20,617,879
	Employers' Contributions Receivable - Local		58,096,334
	Employers' Contributions Receivable - Delayed Enrollments		371,794
	Employers' Contributions Receivable - Delayed Appropriations		2,783,989
	Members' Contributions Receivable		68,133,184
	Accrued Interest on Investments		101,193,081
	Accounts Receivable		1,881,479
	Loans Receivable		214,906,012
	Dividends Receivable		101,664,120
	Total	\$	30,899,275,214
2.	Liabilities		
	Pension Payroll Payable	\$	25,667,715
	Pension Adjustment Payroll Payable		4,405,305
	Withholdings Payable		24,569,122
	Death Benefits Payable		2,063,057
	Administration Expense Payable		990,430
	Accounts Payable - Other		11,195,302
	Total	\$	<u>68,890,931</u>
3.	Market Value of Assets as of June 30, 2006: (1) - (2)	\$	30,830,384,283
4,	State's FY 2007 and 2008 Receivable Contributions from Local Employe	rs	3,706,116
_			
5.	State's FY 2007 Receivable Contributions from State		663,402,200
6.	Adjusted Market Value of Assets as of June 30, 2006:		
	(3) + (4) + (5)	\$	31,497,492,599

Section II - A

### **SECTION II - ASSETS**

(continued)

### B. Reconciliation of Market Value of Assets from June 30, 2005 to June 30, 2006

		Pension		Post Retirement Medical
1. Market Value of Assets as of June 30, 2005	\$	29,610,249,605	\$	618,917
2				
2. Increases				
Member Contributions excluding transfers from	Δ.	4 C T C O T O D O	•	
Other Systems	\$	465,635,828	\$	0
Member Transfer Contributions		4,957,036		0
Other Employer Contributions including Transfers From Other Systems, Delayed Appropriations				
And Delayed Enrollments		6.011.050		0
		6,011,959		0
State and Local Appropriations		36,385,797		555,344,002
Investment Income	ф	2,960,033,310	•	59,788
Total	\$	3,473,023,930	\$	<u>555,403,790</u>
3. Decreases				
Withdrawal of Member Contributions and	\$	33,211,383	\$	0
Transfer Contributions				
Retirement Allowances		1,943,588,309		0
Pension Adjustment Benefits		241,242,066		0
Death Benefit Claims		26,950,775		0
Administrative Expense		10,389,022		0
Medical Benefits and Expenses		0		553,530,404
Total	\$	2,255,381,555	\$	553,530,404
	·		•	
4. Market Value of Assets as of June 30, 2006:	\$	30,827,891,980	\$	2,492,303
(1) + (2) - (3)				
5. FY 2007 and 2008 Receivable Contributions from				
Local Employers		3,706,116		0
6. FY 2007 Receivable Contributions from State		663,402,200		$\overline{0}$
7. Adjusted Market Value of Assets as of June 30, 2006	:			
(4) + (5) + (6)	\$	31,495,000,296	\$	<u>2,492,303</u>
				Section II P

### **SECTION II - ASSETS**

(continued)

### C. Development of Actuarial Value of Assets as of July 1, 2006

1. Actuarial Value of Pension Assets as of July 1, 2005	\$ 34,688,666,392
2. Net Cash Flow without Investment Income	(1,742,390,935)
3. Investment Income at Actuarially Assumed Rate @ 8.25%	2,791,365,577
4. Receivable Contributions from State and Local Employers	667,108,316
5. Expected Actuarial Value of Pension Assets: (1) + (2) + (3) + (4)	36,404,749,350
6. Adjusted Market Value of Pension Assets as of June 30, 2006	31,495,000,296
7. Excess Market Value over Expected Actuarial Value Assets: (6) - (5)	(4,909,749,054)
8. 20% mark-up to reflect growth in Market Value: 20% * (7)	(981,949,811)
9. Actuarial Value of Pension Assets as of July 1, 2006: (5) + (8)	\$ 35,422,799,539
10. Post Retirement Medical Assets as of July 1, 2006	2,492,303
11. Total Actuarial Value of Assets as of July 1, 2006: (9) + (10)	\$ 35,425,291,842
12. Pension Actuarial Value Ratio: (9) / (6)	112.5%

### **SECTION II - ASSETS**

(continued)

### D. Estimated Annual Rate of Return for year ending June 30, 2006

, c	Pension Actuarial Value	Pension Market Value
1. Value of Assets as of July 1, 2005	\$ 34,688,666,392 \$	29,610,249,605
2. Employee Contributions	476,604,823	476,604,823
3. State and Local Appropriations	36,385,797	36,385,797
4. Receivable Contributions from State and Locals	667,108,316	667,108,316
5. Benefit Payments and Expenses	2,255,381,555	2,255,381,555
6. Value of Assets as of June 30, 2006	35,422,799,539	31,495,000,296
7. Non-Investment Increment: (2) +(3) - (4)	(1,742,390,935)	(1,742,390,935)
8. Investment Increment: (6) - (1) - (4) - (7)	1,809,415,766	2,960,033,310
9. Time Weighted Value: (1) +.5 * (7)	33,817,470,925	28,739,054,138
10. Estimated Annual Rate of Return: (8) / (9)	5.35%	10.30%

### E. Estimated Historical Rates of Return

Plan Year Ending	Actuarial Value	Market Value	
June 30, 2006	5.35%	10.30%	
June 30, 2005	4.50%	8.84%	
June 30, 2004	4.32%	14.22%	
June 30, 2003	2.79%	2.97%	
June 30, 2002	2.98%	-8.25%	
5-Year Compounded Annual Rate of Return	3.98%	5.31%	

Section II - D&E

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

### A. Actuarial Accrued Liability as of July 1, 2006 - 1/55th Formula

1. Projected Benefits Payable to Beneficiaries and Retirees	
Service Retirees (Including ERI Benefits)	\$ 22,102,065,871
Disability Retirees	548,541,671
Beneficiaries	687,342,633
Total	\$ 23,337,950,175
2. Projected Benefits for Vested Terminated Members	91,161,923
3. Projected Benefits for Active Members	
Service Retirement	\$ 17,606,662,158
Ordinary Disability Retirement	295,528,107
Accidental Disability Retirement	21,388,315
Return of Members' Contributions - Death	100,615,869
Return of Members' Contributions - Withdrawal	101,244,726
Deferred Retirement	282,083,225
Pension Adjustment Benefits	3,193,913,306
Non-contributory Members	408,730,362
Total	\$ 22,010,166,068
4. Total Pension Accrued Liability: (1) + (2) + (3)	\$ 45,439,278,166
5. Post Retirement Medical Benefits Fund	2,492,303
6. Total Actuarial Accrued Liability used to develop contributions:	
(4) + (5)	\$ 45,441,770,469

Section III - A

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

(continued)

### B. Development of Normal Cost payable July 1, 2006

	,	1	/60th Formula	1/55th Formula
1.	Basic Allowances	\$	880,293,779	\$ 957,117,678
2.	Pension Adjustment Benefits for active members			
	a. Full Amount of Pension Adjustment Benefits		147,172,864	160,531,586
	b. Phase-in Percentage		53.62%	N/A
	c. Phased-in Amount of Pension Adjustment Benefits		78,914,090	N/A
3.		\$ 1	1,027,466,643 959,207,869	\$ 1,117,649,264 N/A
4.	Expected Member Contributions		423,637,911	423,637,911
5.	Net Pension Normal Cost			
	<ul><li>a. Full Amount of Net Pension Normal Cost: (3a) - (4)</li><li>b. Net Phased-in Amount of Pension Normal Cost</li></ul>	•)	603,828,732	694,011,353
	for Contribution Purposes: (3b) - (4)		535,569,958	N/A

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

(continued)

### C. Development of Excess Valuation Assets as of July 1, 2006

1. Valuation Assets	\$ 35,425,291,842
2. Actuarial Accrued Liability for Basic Allowances & Pension Adjustment Benefits	45,439,278,166
3. Post Retirement Medical Premium Fund	2,492,303
<ol> <li>Present Value of Total Projected Normal Cost in Excess of the Projected Phased-in Normal Cost for Pension Adjustment Benefits</li> </ol>	564,332,149
5. Benefit Enhancement Fund (prior to reduction for additional formula normal cost)	0
6. Excess Valuation Assets as of July 1, 2006:	
(1)-(2)-(3)-(4)-(5), not less than \$0	\$ 0
D. Development of Contribution Reductions from Excess Assets	
1. Excess Valuation Assets as of July 1, 2006	\$ 0
<ol> <li>Liability for Reduction in Employee Contributions by 2%</li> <li>For July 1, 2006 - December 31, 2006 (established in 2004 valuation)</li> </ol>	0
3. Liability for Reduction in Employee Contributions by 2% For Calander Year 2007 (established in 2005 valuation)	0
4. Excess Assets Available for Current Year Reductions: [(1)-(2)-(3)] x 50%, not less than \$0	0
<ol> <li>Liability for Reduction in Employee Contributions by 2%</li> <li>For Calander Year 2008</li> </ol>	0
6. Pension Normal Cost as of July 1, 2006 - 1/60th Formula	535,569,958
7. Net Normal Contribution as of July 1, 2006: (6) - [(4) - (5)], not less than \$0	535,569,958
8. Net Excess Assets as of July 1, 2006 prior to Benefit Enhancement Fund Contribution: (4) - (5) - (6), not less than \$0	\$ 0
$\chi$ some contribution. (1) = (5) = (5), not less than $\phi$ 0	U Section III - C & D

Section III - C & D

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

(continued)

### E. Development of Benefit Enhancement Fund and Additional Formula Contribution As of July 1, 2006

1.	Benefit Enhancement Fund as of July 1, 2005	\$ 0
2.	Accrued Interest	0
3.	Benefit Enhancement Fund as of July 1, 2006	0
4.	Additional Formula Normal Cost to be paid by Benefit Enhancement Fund a. Gross Normal Cost payable July 1, 2006 - 1/55th Formula b. Gross Normal Cost payable July 1, 2006 - 1/60th Formula c. Additional Formula Normal Cost: (a) - (b)	1,117,649,264 1,027,466,643 90,182,621
5.	Net Benefit Enhancement Fund Balance as of July 1, 2006 before Fiscal Year 2008 Contribution: (3) - (4c), not less than \$0	0
6.	State Additional Formula Contribution as of July 1, 2006: (4c) - (3), not less than \$0	90,182,621
7.	Estimated Fiscal Year 2008 Employee Contributions as of July 1, 2006	407,005,476
8.	Limit on Fiscal Year 2008 Contribution to Benefit Enhancement Fund a. Present Value of Future Normal Costs as of June 30, 2006 - 1/55th Formu b. Present Value of Future Normal Costs as of June 30, 2006 - 1/60th Formu c. Limit: (a) - (b) - (5)	11,280,250,267 10,352,534,170 927,716,097
9.	Excess Assets Available (D8)	0
10	D. Fiscal Year 2008 Allowable Contribution to Benefit Enhancement Fund: Lesser of (7), (8c), (9)	\$ 0

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

(continued)

### F. Development of State's Fiscal Year 2008 Required Contributions

1.	Net Pension Normal Contribution as of July 1, 2006: D(7)	\$ 535,569,958
2.	Net Pension Normal Contribution as of June 30, 2007	579,754,480
3,	Additional Formula Contribution as of July 1, 2006: E(6)	90,182,621
4.	Additional Formula Contribution as of June 30, 2007	97,622,687
5.	Accrued Liability Contribution  a. Actuarial Accrued Liability for Basic Allowances & Pension    Adjustment Benefits (excluding PRMF) \$ 45,439,278,166  b. Adjusted Actuarial Value of Assets    (excluding PRMF & BEF) \$ 35,422,799,539  c. Reserve for previously earned reductions    in Member Contributions \$ 0  d. Unfunded Pension Accrued Liability: (a) - (b) + (c) \$ 10,016,478,627  e. 30 - Year Amortization with 4% increasing payments of    Unfunded Pension Accrued Liability payable June 30, 2007	608,769,939
6.	Total Pension Contribution for State's Fiscal Year 2008: (2) + (4) + (5e)	\$ 1,286,147,106
	State's FY 2008 Est. Non-contributory Group Life Insurance Contribution	36,810,000
8.	State's Fiscal Year 2008 Estimated Post Retirement Medical Contribution  a. Anticipated Fiscal Year 2008 Premiums \$ 676,260,000  b. Expected Asset Return on Balance 0  c. 3/5% of Estimated FY 2007 Payroll 54,241,464  d. Subtotal: (a) - (b) + (c)	730,501,464
9.	State's Fiscal Year 2008 ERI-3 Contribution	1,184,353
10	O. Total State's Fiscal Year 2008 Contribution for Pension, Non-contributory Group Life, Post Retirement Medical, and ERI: (6) + (7) + (8d) + (9)	\$ 2,054,642,923

Section III - F

### **SECTION III - LIABILITIES AND CONTRIBUTIONS**

(continued)

### G. Required Contribution as a Percentage of Appropriation Payroll

	Prior to	Reflecting
	Reduction due	Reduction due
	to Benefit	to Benefit
	Enhancement	Enhancement
	Fund and	Fund and
	Excess Assets	Excess Assets
Basic Allowances Net of Member Contributions - 1/60th Formula	5.65%	5,65%
Active COLA (Phase-in percentage of 53.62%)-1/60th Formula	0.98%	0.98%
Additional Formula Normal Cost	1.12%	1.12%
Accrued Liability	<u>6.96%</u>	6,96%
Total Pension Contribution for State's Fiscal Year 2008	14.71%	14.71%
Estimated Non-contributory Group Life Insurance Benefits	0.42%	0.42%
Estimated Post Retirement Medical Benefits*	8.35%	8.35%
Total State's Fiscal Year 2008 Contribution for Pension,		
Non-contributory Group Life, and Post Retirement Medical	23.48%	23.48%
If COLA fully phased-in and Market Value of Assets used to determine	ne the Accrued	
Liability Contribution, total percentage of payroll would equal**:	27.05%	27.05%

<sup>\*</sup> Contributions are the estimated 2008 fiscal year's actual post retirement medical premiums less anticipated interest on PRM Fund plus the 3/5% of compensation additional state contribution.

<sup>\*\*</sup> Using the Market Value of Assets would result in an increase in the State's Fiscal Year 2008 contribution of 2.73% of payroll.

### SECTION III - LIABILITIES AND CONTRIBUTIONS

(continued)

H. Fiscal Year 2008 Required Contributions Payable by the State and Certain State Colleges

	After Application of Excess Assets & BEF	ess Assets & BEF		Estimated	
	Normal Contribution	Additional Formula	Accrued	Non-Contributory Group Life	Estimated Post Retirement
Group	(1/60 Formula)	Contribution	Contribution	Insurance	Medical Benefits
Certain State Colleges					
NJ Institute of Technology	\$7,916	\$1,333	\$8,312	\$503	\$252,049
Rowan University	44,369	7,471	46,590	2,817	802,143
New Jersey University	66,573	11,210	69,905	4,227	673,438
Kean University	74,093	12,476	77,801	4,704	670,860
William Patterson University	53,196	8,957	55,858	3,378	547,539
Montclair State U. (Group 4)	43,397	7,307	45,569	2,755	772,617
The College of NJ	24,843	4,183	26,086	1,577	639,453
Ramapo State College	0	0	0	0	9,004
Stockton State College	23,350	3,932	24,519	1,483	44,499
Montclair State U. (Group 6)	0	0	0	0	0
Total for Certain State Colleges	\$337,737	856,869	\$354,640	\$21,444	\$4,411,602
State Dept of Higher Education	0	C	C	C	c
Dept of Education	1 451 387	204 304	3007631	C#1 CO	0 3 0 5 0
County Colleges	763,580	77,547	020,420,1	76,77	100,505,507
Charter Schools	3 473 425	584.877	3 617.767	220,01	++/,000,1
	17 17 10 10 10 10 10 10 10 10 10 10 10 10 10	/ / D\$-F-0.7	10 me 1 +0 ec	066,022	してんずつ
Other	574,228,342	96,692,162	602,967,230	36,459,132	721,170,696
Total for State	\$579,416,743	897,565,818	\$608,415,299	\$36,788,556	\$726,089,862
Total for System	\$579,754,480	\$97,622,687	8608,769,939	\$36,810,000	\$730,501,464

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. This work product was prepared solely for the State of NJ and may not be appropriate for other purposes.

Section III - H

### **SECTION III - LIABILITIES AND CONTRIBUTION**

(continued)

### I. Analysis of Actual Experience for the Year Ended June 30, 2006

1. Unfunded Accrued Liability as of June 30, 2005	\$ 8,238,092,591
2. Gross Normal Cost as of June 30, 2005	1,084,573,623
3. Interest: ((1) + (2)) * 8.25%	769,119,963
4. Employee and Employer Contributions Made with Interest	1,172,800,017
5. Expected Unfunded Accrued Liability as of June 30, 2006: (1) + (2) + (3) - (4)	\$ 8,918,986,160
6. Increase in liability due to ERI-4	4,878,145
7. Expected Unfunded Accrued Liability after changes as of June 30, 2006: (5) + (6)	\$ 8,923,864,305
8. Actual Unfunded Accrued Liability as of June 30, 2006	10,016,478,627
9. Gain/(Loss): (7) - (8)	\$ (1,092,614,322)

## SECTION IV - ACTUARIAL BALANCE SHEET AS OF JUNE 30, 2006

\$23,337,822,826	127,349		22,010,166,068 <u>91,161,923</u> 22,101,327,991			2,492,303			\$45,441,770,469
Liabilities Payable from Retirement Reserve Fund Retirees, Disableds and Beneficiaries currently receiving benefits	Payable from Pension Fund Retirees, Disableds and Beneficiaries currently receiving benefits	Payable from Annuity Savings Fund	and Contingent Reserve Fund Active Members Term Vested Members			Post Retirement Medical Benefits Fund			Total Liabilities
\$22,680,957,719 656.865.107 23,337,822,826	133,140 (5,791) 127,349	7,187,652,157	5,250,808,086 (656,859,316) 4,593,948,770	0	$303,248,437$ $\frac{0}{303,248,437}$	2,492,303	\$35,425,291,842	10,016,478,627	\$45,441,770,469
Assets Retirement Reserve Fund (RRF) Credited to Fund w/ Distribution of Income Add/(deduct) reserve transferable from/(to) CRF Adjusted Total	Pension Fund (PF) Credited to Fund w/ Distribution of Income Add/(deduct) reserve transferable from/(to) CRF Adjusted Total	Annuity Savings Fund (ASF) w/ Distribution of Income	Contingent Reserve Fund (CRF) Credited to Fund w/ Distribution of Income Add/(Deduct) from/(to) RRF, PF & SRF Adjusted Total	Benefit Enhancement Fund (BEF)	Special Reserve Fund (SRF) Add/(deduct) reserve transferable from/(to) CRF Adjusted Total	Post Retirement Medical Benefits Fund	Total Actuarial Value of Assets as of June 30, 2006	Present Value of Prospective Contributions to the CRF and BEF for service accrued as of July 1, 2006	Total Assets

This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

Section IV

### SECTION V - GASB NO. 25 and 27 ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2008

### A. Development of Annual Required Contribution as of June 30, 2008

1.	<ul> <li>Actuarial Value of Assets as of July 1, 2006</li> <li>a. Actuarial Value of Pension Assets</li> <li>b. Post Retirement Medical Benefits Fund</li> <li>c. Market Value of Contributory Group Insurance Premium Fund</li> <li>d. Actuarial Value of Assets for GASB purposes: <ul> <li>(a) - (b) + (c)</li> </ul> </li> </ul>	\$35,425,291,842 2,492,303 <u>108,495,251</u>	\$35,531,294,790
2.	Actuarial Accrued Liability as of July 1, 2006  a. Actuarial Accrued Liability for pension benefits  b. Post Retirement Medical Benefits Fund  c. Non-contributory and Contributory Group Insurance Benefits  d. Accrued Liability for GASB purposes: (a) - (b) + (c)	\$45,441,770,469 2,492,303 1,100,590,487	46,539,868,653
3.	Unfunded Accrued Liability as of July 1, 2006: (2d) - (1d)		\$11,008,573,863
4.	Amortization Payment payable July 1, 2006		618,075,155
5.	<ul> <li>Net Normal Cost as of July 1, 2006</li> <li>a. Basic Allowances and pension adjustments (including full cost of pension adjustment benefits)</li> <li>b. Non-contributory and Contributory Group Insurance Benefits</li> <li>c. Expected Employee Contributions for pension benefits</li> <li>d. Expected Employee Contributions for Contributory Group Insurance Benefits</li> <li>e. Net Normal Cost as of July 1, 2006: (a) + (b) - (c) - (d)</li> </ul>	\$1,117,649,264 44,144,497 423,637,911 33,056,773	705,099,077
6.	Annual Required Contribution as of June 30, 2008  a. Annual Required Contribution as of July 1, 2006: (4) + (5e)  b. Interest to Expected Payment Date c. Annual Required Contribution: (a) + (b)	)	\$1,323,174,232 <u>227,329,603</u> \$1,550,503,835

Section V - A

# SECTION V - ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2008

(continued)

### B. Projection of Net Pension Obligation as of June 30, 2008

1. Estimated	1. Estimated Net Pension Obligation as of June 30, 2007	n as of June 30, 2007				\$3,475,016,435
<ul><li>2. Annual Pension Cost</li><li>a. Annual Required C</li><li>b. Interest on Net Per</li><li>c. Adjustment to ARC</li><li>d. Annual Pension C</li></ul>	Annual Pension Cost for Fiscal Year 2008 a. Annual Required Contribution b. Interest on Net Pension Obligation c. Adjustment to ARC d. Annual Pension Cost: (a) + (b) - (c)	r'ear 2008 ation b) - (c)			\$1,550,503,835 286,688,856 211,200,525	1,625,992,166
3. Expected F	Fiscal Year 2008 Contr	ributions (100% of pe	3. Expected Fiscal Year 2008 Contributions (100% of pension contribution plus est. NCGI)	est. NCGI)		1.322.957.106
4. Estimated	4. Estimated Net Pension Obligation as of June 30, 2008: (1) + (2d) - (3)	n as of June 30, 2008.	: (1) + (2d) - (3)			\$3,778,051,495
C. Schedule of	C. Schedule of Funding Progress (1) Actuarial Value	(2) Accrued	(3) Unfinded	(4) Funded	(5)	(6) Tinfinded Accused
Valuation $\frac{Year}{}$	of Assets for GASB Purposes	Liability for GASB Purposes	Accrued Liability (2) - (1)	Ratio (1)/(2)	Appropriation <u>Payroll</u>	Liability as a % of Payroll: (3) / (5)
2001	35,351,379,511	32,745,357,185	(2,606,022,326)	107.96%	6,948,381,383	-37.51%
2002	35,148,246,433	35,146,591,842	(1,654,591)	100.00%	7,348,993,141	-0.02%
2003	34,651,825,932	37,383,732,882	2,731,906,950	92.69%	7,702,854,159	35,47%
2004	34,633,790,549	40,447,690,339	5,813,899,790	85.63%	8,047,272,269	72.25%
2005	34,789,389,875	43,967,927,299	9,178,537,424	79.12%	8,454,072,109	108.57%
2006	35,531,294,790	46,539,868,653	11,008,573,863	76.35%	8,748,623,186	125.83%

This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.  $M \mid L \mid M \mid A \mid N$ 

Section V - B&C

### SECTION V - ACCOUNTING INFORMATION FOR STATE'S FISCAL YEAR 2008

(continued)

### D. Schedule of Employer Contributions

State's <u>Fiscal Year</u>	Annual Required <u>Contribution</u>	Employer Contributions	Percentage of ARC Contributed
2003	\$194,435,594	\$0	0.00%
2004	686,284,850	0	0.00%
2005	883,460,483	0	0.00%
2006	1,177,674,055	94,226,363	8.00%
2007	1,407,249,580	699,322,200	49.69%
2008	1,550,503,835	1,322,957,106	85.32%

### E. Funding Policy for State's Fiscal Year 2008

Valuation Date	July 1, 2006
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Percent, Closed
Payroll Growth Rate for Amortization	4.00%
Remaining Amortization Period	30 years
Asset Valuation Method	Actuarial Value
Actuarial Assumptions	
Investment Rate of Return	8.25%
Projected Salary Increases**	5.45%
Cost-of-Living Adjustments	60% of the assumed CPI
	at 3%

<sup>\*\*</sup> Variable scale, designed to average 5.45%

Section V - D&E

### SECTION VI - CENSUS DATA

<u>Total</u>	218,221	0	(3,520)	0	0	m	(1,615)	56	(14)	10,199	0	0	225	223.355
Domestic Relations <u>Beneficiaries</u>	358	ŧ	1	1	ı	,	ŧ	26	(14)	ì	‡	3	¥ §	400
Beneficiaries	3,774	i	ı	1	í	339	(187)	i	j	i	i	1	29	3.955
Disableds	2,370	1	•	ı	150	(10)	(99)	٠	t	t	ı	\$	rul	2,447
Retirees	58,943	1	ŧ	4,453	ì	(326)	(1,262)	ı	t	ŧ	ŧ	ŧ	মান	61.812
Deferred <u>Vested</u>	903	120	i	(158)	(1)	1	(5)	ł	ŧ	(9)	1	ì	1 8	853
Active NonContrib	12,628	(44)	(2,877)	(155)	(37)	₹	(29)	ı	ŧ	258	(1,813)	5,126	<b>4</b> ĝ	13,057
Active Contrib	139,245	(76)	(643)	(4,140)	(112)	1	(99)	,	1	9,947	1,813	(5.126)		140,831
A. Reconciliation with Prior Year	Members as of June 30, 2005	Terminated Vested	Terminated Non-Vested	Retired	Disabled	Died with Beneficiary	Died without Beneficiary	Payments Began	Payments Ceased	New Actives and Rehires	Changed to Contributing	Changed to Noncontributing	Data Corrections	Members as of June 30, 2006

This work product was prepared solely for the State of NJ and may not be appropriate for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.  $M \|L_{L}\|_{M} A N$ 

Section VI - A

### **SECTION VI - CENSUS DATA**

(continued)

### B. Appropriation Number and Salary by Group \*

Group	<u>Number</u>		<u>Salaries</u>
Department of Higher Education	0	\$	0
Department of Education	283		21,901,750
New Jersey Institute of Technology	1		119,453
State Colleges	50		4,624,717
County Colleges	43		3,977,613
Charter Schools	1,115		52,414,745
Other	139,326	<u>8,6</u>	665,584,908
Total	<u>140,818</u>	\$ <u>8.7</u>	748,623 <u>,186</u>

<sup>\*</sup> Excludes veterans hired prior to 1955 and Chapter 198 members

### **SECTION VI - CENSUS DATA**

(continued)

### C. Number and Annual Benefits Including Pension Adjustments of Retirees, Beneficiaries, and Dependents on Roll

Group	Number	Annual <u>Benefit</u>
Service and Early Retirements	62,212	\$ 2,075,424,405
Ordinary Disability Retirements	2,245	50,318,030
Accidental Disability Retirements	202	7,006,688
Ordinary Death Benefits	5	2,086
Accidental Death Benefits	3	64,534
Dependents of Deceased Beneficiaries	3,842	75,644,967
Dependents of Deceased Beneficiaries who elected to receive annuities certain instead of lump sum	<u>105</u>	2,388,228
Total	<u>68,614</u>	\$ 2,210,848,938

### **SECTION VI - CENSUS DATA**

(continued)

### D. New Retirees from Active Contributory Status

	Less than 25 years of service	At least 25 years of service	<u>Total</u>
Number of Retirements	295	3,813	4,108**
Total Annual Pension	6,029,315	173,769,280	179,798,595
Average Annual Pension	20,438	45,573	43,768
Average Age at Retirement	63.7	59.6	59.9
Average Service at Retirement	15.5	32.4	31.2

<sup>\*</sup> Members indicated as retired since last actuarial valuation.

<sup>\*\*</sup> Includes 1 and 22 members who retired under ERI-IV with less than and at least 25 years of service, respectively.

### SECTION VI - CENSUS DATA

(continued)

### E. Age, Service and Salary Profile of Active Contributing Participants

					Males			***************************************			Average
Age					ars of Servi						Annual
Group	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	25-29	<u>30-34</u>	<u>35-39</u>	<u>40+</u>	<u>Total</u>	Salary
15-19	0	0	0	0	0	0	0	0	0	0	\$0
20-24	448	0	0	0	0	0	0	0	0	448	41,628
25-29	3,148	785	2	0	0	0	0	0	0	3,935	44,158
30-34	1,545	2,728	274	0	0	0	0	0	0	4,547	50,053
35-39	995	1,818	1,498	156	1	0	0	0	0	4,468	58,240
40-44	661	850	857	788	160	1	0	0	0	3,317	64,108
45-49	564	670	539	526	809	268	0	0	0	3,376	69,559
50-54	514	560	487	458	653	1,446	645	i	0	4,764	77,243
55-59	498	422	390	415	448	799	2,121	1,036	1	6,130	84,564
60-64	239	220	183	152	189	206	341	983	219	2,732	87,268
65 & Up	53	<u>71</u>	<u>72</u>	<u>54</u>	<u>54</u>	<u>42</u>	32	<u>89</u>	<u>180</u>	<u>647</u>	85,872
Total	8,665	8,124	4,302	2,549	2,314	2,762	3,139	2,109	400	34,364	
		Avera	ge Age		44.7						
		Average :	Service	7773	14.5						
	Ave	erage Age a	it Entry	==:	30.3						
	Averag	ge Annual S	Salary		\$67,165						
					Females						Average
Age	w			Ye	Females ars of Servi	ce					Average Annual
Age <u>Group</u>	0-4	5-9	10-14	Ye 15-19	Females ars of Servi 20-24	ce 25-29	30-34	35-39	40+	<u>Total</u>	Average Annual <u>Salary</u>
	<u>0-4</u>	<u>5-9</u> 0	10-14 0		ars of Servi		<u>30-34</u> 0	<u>35-39</u> 0	40+	<u>Total</u>	Annual
<u>Group</u>				<u>15-19</u>	ars of Servi 20-24	25-29					Annual <u>Salary</u>
<u>Group</u> 15-19	1	0	0	15-19 0	ars of Servi 20-24 0	25-29 0	0	0	0	1	Annual Salary \$44,430
Group  15-19 20-24	1 2,303	0 2	0	15-19 0 0	ars of Servi <u>20-24</u> 0 0	25-29 0 0	0	0	0	1 2,305	Annual <u>Salary</u> \$44,430 41,196
Group  15-19 20-24 25-29	2,303 10,796	0 2 3,153	0 0 0	0 0 0	ars of Servi 20-24 0 0 0	25-29 0 0 0	0 0 0	0 0 0	0 0 0	2,305 13,949	Annual <u>Salary</u> \$44,430 41,196 44,135
Group  15-19 20-24 25-29 30-34	2,303 10,796 4,349	0 2 3,153 7,685	0 0 0 810	0 0 0 0 1	ars of Servi 20-24 0 0 0 0	25-29 0 0 0 0	0 0 0 0	0 0 0	0 0 0 0	2,305 13,949 12,845	Annual <u>Salary</u> \$44,430 41,196 44,135 48,183
Group  15-19 20-24 25-29 30-34 35-39	2,303 10,796 4,349 2,702	0 2 3,153 7,685 4,014	0 0 0 810 3,703	15-19 0 0 0 1 516	ars of Servi 20-24 0 0 0 0 0	25-29 0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	2,305 13,949 12,845 10,936	Annual Salary \$44,430 41,196 44,135 48,183 53,066
Group  15-19 20-24 25-29 30-34 35-39 40-44	1 2,303 10,796 4,349 2,702 2,409	0 2 3,153 7,685 4,014 2,495	0 0 810 3,703 1,679	15-19 0 0 0 1 516 2,589	ars of Servi 20-24 0 0 0 0 0 1 641	25-29 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	1 2,305 13,949 12,845 10,936 9,813	Annual Salary \$44,430 41,196 44,135 48,183 53,066 58,209
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49	1 2,303 10,796 4,349 2,702 2,409 2,435	0 2 3,153 7,685 4,014 2,495 3,075	0 0 810 3,703 1,679 1,803	0 0 0 1 516 2,589 2,011	0 0 0 0 0 1 641 2,681	25-29 0 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	1 2,305 13,949 12,845 10,936 9,813 12,682	Annual Salary \$44,430 41,196 44,135 48,183 53,066 58,209 61,258
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638	0 2 3,153 7,685 4,014 2,495 3,075 3,086	0 0 810 3,703 1,679 1,803 2,539	0 0 0 1 516 2,589 2,011 2,694	0 0 0 0 0 1 641 2,681 2,490	25-29 0 0 0 0 0 0 677 3,907	0 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	2,305 13,949 12,845 10,936 9,813 12,682 17,627	Annual Salary \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638 830 257	0 2 3,153 7,685 4,014 2,495 3,075 3,086 1,482 388	0 0 810 3,703 1,679 1,803 2,539 1,658 514	15-19 0 0 0 1 516 2,589 2,011 2,694 2,649 860	0 0 0 0 0 1 641 2,681 2,490 3,111 1,594	25-29 0 0 0 0 0 0 677 3,907 2,668 1,404	0 0 0 0 0 0 0 0 1,273 3,792 768	0 0 0 0 0 0 0 0 0 1,345	0 0 0 0 0 0 0 0 0	1 2,305 13,949 12,845 10,936 9,813 12,682 17,627 17,536 7,029	Annual Salary  \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853 74,377 77,052
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638 830	0 2 3,153 7,685 4,014 2,495 3,075 3,086 1,482	0 0 810 3,703 1,679 1,803 2,539 1,658	15-19 0 0 0 1 516 2,589 2,011 2,694 2,649	0 0 0 0 0 1 641 2,681 2,490 3,111	25-29 0 0 0 0 0 0 677 3,907 2,668	0 0 0 0 0 0 0 1,273 3,792	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 2,305 13,949 12,845 10,936 9,813 12,682 17,627 17,536	Annual Salary \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853 74,377
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65 & Up	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638 830 257 51	0 2 3,153 7,685 4,014 2,495 3,075 3,086 1,482 388 99 25,479	0 0 810 3,703 1,679 1,803 2,539 1,658 514 111	0 0 0 1 516 2,589 2,011 2,694 2,649 860 188	0 0 0 0 0 1 641 2,681 2,490 3,111 1,594 327	25-29 0 0 0 0 0 677 3,907 2,668 1,404 370	0 0 0 0 0 0 0 1,273 3,792 768 230	0 0 0 0 0 0 0 0 0 1,345 1,040 182	0 0 0 0 0 0 0 0 1 204 186	1 2,305 13,949 12,845 10,936 9,813 12,682 17,627 17,536 7,029 1,744	Annual Salary  \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853 74,377 77,052
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65 & Up	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638 830 257 51	0 2 3,153 7,685 4,014 2,495 3,075 3,086 1,482 388 99 25,479	0 0 810 3,703 1,679 1,803 2,539 1,658 514 111 12,817	15-19 0 0 0 1 516 2,589 2,011 2,694 2,649 860 188 11,508	0 0 0 0 0 1 641 2,681 2,490 3,111 1,594 327 10,845	25-29 0 0 0 0 0 677 3,907 2,668 1,404 370	0 0 0 0 0 0 0 1,273 3,792 768 230	0 0 0 0 0 0 0 0 0 1,345 1,040 182	0 0 0 0 0 0 0 0 1 204 186	1 2,305 13,949 12,845 10,936 9,813 12,682 17,627 17,536 7,029 1,744	Annual Salary  \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853 74,377 77,052
Group  15-19 20-24 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65 & Up	1 2,303 10,796 4,349 2,702 2,409 2,435 1,638 830 257 51 27,771	0 2 3,153 7,685 4,014 2,495 3,075 3,086 1,482 388 92 25,479	0 0 810 3,703 1,679 1,803 2,539 1,658 514 111 12,817 ge Age Service	15-19 0 0 0 1 516 2,589 2,011 2,694 2,649 860 188 11,508	0 0 0 0 1 641 2,681 2,490 3,111 1,594 327 10,845	25-29 0 0 0 0 0 677 3,907 2,668 1,404 370	0 0 0 0 0 0 0 1,273 3,792 768 230	0 0 0 0 0 0 0 0 0 1,345 1,040 182	0 0 0 0 0 0 0 0 1 204 186	1 2,305 13,949 12,845 10,936 9,813 12,682 17,627 17,536 7,029 1,744	Annual Salary  \$44,430 41,196 44,135 48,183 53,066 58,209 61,258 67,853 74,377 77,052

### SECTION VI - CENSUS DATA

(continued)

### F. Age, Service and Salary Profile of Non-Contributing Participants

					Males	····					Average
Age	****				ars of Servi						Annual
Group	0-4	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40+</u>	<u>Total</u>	Salary
15-19	0	0	0	0	0	0	0	0	0	0	\$0
20-24	12	0	0	0	0	0	0	0	0	12	43,585
25-29	280	12	0	0	0	0	0	0	0	292	42,020
30-34	213	78	3	0	0	0	0	0	0	294	42,747
35-39	173	68	51	1	0	0	0	0	0	293	46,432
40-44	128	43	57	10	3	0	0	0	0	241	48,858
45-49	105	23	56	25	7	0	0	0	0	216	48,507
50-54	113	26	93	46	17	7	1	0	0	303	50,387
55-59	108	21	120	59	32	6	7	0	0	353	47,103
60-64	80	10	28	24	23	5	2	7	0	179	46,568
65 & Up	<u>57</u>	<u>5</u>	4	10	<u>6</u>	4	<u>0</u>	1	1	<u>88</u>	35,784
Total	1,269	286	412	175	88	22	10	8	1	2,271	
		Averag	e Age	*****	44.9						
		Average S		1500	6.8						
	Ave	rage Age at	Entry	==	38.1						
	Avera	ige Annual	Salary	==	\$46,058						
					Females						Average
Age		····· / - / - · · · · · · · · · · · · ·		Ye	ars of Servi	ce					Annual
Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	<u>Total</u>	Salary
15-19	1	0	0	0	0	0	0	0	0	1	\$50,850
20-24	72	0	0	0	0	0	0	0	0	72	36,673
25-29	1,309	141	0								
30-34	1 2 1 2		57	0	0	0	0	0	0		41,063
35-39	1,312	1,190	57	0	0 0	0 0			0	1,450	41,063 44,130
33-37	649	1,190 590					0	0		1,450 2,559	44,130
40-44			57	0	0	0	0 0	0	0	1,450 2,559 1,848	44,130 45,824
	649	590	57 597	0 12	0	0 0	0 0 0	0 0 0	0 0 0	1,450 2,559 1,848 1,167	44,130 45,824 45,985
40-44	649 384	590 191	57 597 473	0 12 117	0 0 2	0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1,450 2,559 1,848 1,167 893	44,130 45,824 45,985 44,223
40-44 45-49	649 384 327	590 191 106	57 597 473 328	0 12 117 106	0 0 2 25	0 0 0 1	0 0 0 0	0 0 0 0	0 0 0 0	1,450 2,559 1,848 1,167 893 1,095	44,130 45,824 45,985 44,223 43,787
40-44 45-49 50-54	649 384 327 328	590 191 106 110	57 597 473 328 439	0 12 117 106 160	0 0 2 25 43	0 0 0 1 11	0 0 0 0 0 4 10	0 0 0 0 1	0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189	44,130 45,824 45,985 44,223 43,787 42,414
40-44 45-49 50-54 55-59	649 384 327 328 232 110	590 191 106 110 67 17	57 597 473 328 439 518 115	0 12 117 106 160 282 79	0 0 2 25 43 68 22	0 0 0 1 11 11 7	0 0 0 0 0 4 10 3	0 0 0 0 0 0 0 1 5	0 0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189 358	44,130 45,824 45,985 44,223 43,787 42,414 42,815
40-44 45-49 50-54 55-59 60-64	649 384 327 328 232	590 191 106 110 67	57 597 473 328 439 518	0 12 117 106 160 282	0 0 2 25 43 68	0 0 0 1 11	0 0 0 0 0 4 10	0 0 0 0 1	0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189	44,130 45,824 45,985 44,223 43,787 42,414
40-44 45-49 50-54 55-59 60-64 65 & Up	649 384 327 328 232 110 77	590 191 106 110 67 17 12	57 597 473 328 439 518 115 23 2,550	0 12 117 106 160 282 79 16	0 0 2 25 43 68 22 13	0 0 0 1 11 11 7 4	0 0 0 0 0 4 10 3 2	0 0 0 0 0 0 0 1 5 5	0 0 0 0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189 358 154	44,130 45,824 45,985 44,223 43,787 42,414 42,815
40-44 45-49 50-54 55-59 60-64 65 & Up	649 384 327 328 232 110 77	590 191 106 110 67 17 12 2,424	57 597 473 328 439 518 115 23 2,550 e Age	0 12 117 106 160 282 79 16 772	0 0 2 25 43 68 22 13 173	0 0 0 1 11 11 7 4	0 0 0 0 0 4 10 3 2	0 0 0 0 0 0 0 1 5 5	0 0 0 0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189 358 154	44,130 45,824 45,985 44,223 43,787 42,414 42,815
40-44 45-49 50-54 55-59 60-64 65 & Up	649 384 327 328 232 110 <u>77</u> 4,801	590 191 106 110 67 17 12 2,424	57 597 473 328 439 518 115 23 2,550 e Age ervice	0 12 117 106 160 282 79 <u>16</u> 772	0 0 2 25 43 68 22 13 173	0 0 0 1 11 11 7 4	0 0 0 0 0 4 10 3 2	0 0 0 0 0 0 0 1 5 5	0 0 0 0 0 0 0 0	1,450 2,559 1,848 1,167 893 1,095 1,189 358 154	44,130 45,824 45,985 44,223 43,787 42,414 42,815

### SECTION VI - CENSUS DATA

(continued)

### G. Age and Benefit Profiles

### Terminated Vested Participants

	Male Annual		]	Pemale		Total
				Annual		Annual
<u>Age</u>	Number	Pension	Number	Pension	<u>Number</u>	Pension
Under 35	0	\$0	1	\$7,884	1	\$7,884
35-39	0	0	8	79,632	8	79,632
40-44	6	71,112	17	184,224	23	255,336
45-49	10	120,612	24	296,196	34	416,808
50-54	23	239,340	115	1,213,320	138	1,452,660
55-59	106	1,073,640	407	4,674,096	513	5,747,736
60 & Up	<u>28</u>	307,380	<u>108</u>	1,374,816	136	<u>1,682,196</u>
Total	173	\$1,812,084	680	\$7,830,168	853	\$9,642,252
		Average A	ige =	56.1		
		Average Annual	Pension =	<b>\$11,304</b>		

### Service Retired Participants

		Male	I	remale		Total
		Annual		Annual		Annual
Age	<u>Number</u>	<u>Pension</u>	<u>Number</u>	Pension	Number	Pension
Under 50	3	\$95,729	22	\$334,095	25	\$429,824
50-54	131	4,515,852	383	11,555,972	514	16,071,824
55-59	2,315	98,552,680	4,253	166,056,646	6,568	264,609,326
60-64	5,322	228,333,035	8,553	306,622,246	13,875	534,955,281
65-69	4,343	181,326,034	7,497	250,872,015	11,840	432,198,049
70-74	3,852	150,899,572	5,929	183,654,082	9,781	334,553,654
75-79	3,272	115,038,354	5,345	142,819,090	8,617	257,857,444
80-84	1,901	55,519,302	3,666	77,688,196	5,567	133,207,498
85-89	879	20,174,222	2,356	42,252,581	3,235	62,426,803
90-94	331	6,947,979	1,195	19,798,588	1,526	26,746,567
95-99	73	1,732,631	507	9,022,397	580	10,755,028
100 & Up	<u>10</u>	<u> 198,868</u>	<u>74</u>	<u>1,414,239</u>	<u>84</u>	1,613,107
Total	22,432	\$863,334,258	39,780	\$1,212,090,147	62,212	\$2,075,424,405
		Average .	Age =	70.2		

### SECTION VI - CENSUS DATA

(continued)

### G. Age and Benefit Profiles (continued)

### **Disabled Retired Participants**

	N	fale	Fen	nale	Т	`otal
		Annual		Annual		Annual
Age	Number	<u>Pension</u>	<u>Number</u>	Pension	Number	Pension
Under 35	0	\$0	1	\$22,226	1	\$22,226
35-39	0	0	4	77,439	4	77,439
40-44	10	221,559	21	404,002	31	625,561
45-49	13	358,761	69	1,630,314	82	1,989,075
50-54	60	1,519,102	209	5,428,335	269	6,947,437
55-59	123	3,248,609	368	9,137,664	491	12,386,273
60-64	153	3,775,607	445	11,019,174	598	14,794,781
65-69	81	1,963,084	313	7,631,276	394	9,594,360
70-74	. 65	1,306,466	206	4,354,920	271	5,661,386
75~79	43	755,631	124	2,264,638	167	3,020,269
80-84	24	360,957	76	1,298,240	100	1,659,197
85 & Up	<u>8</u>	<u>145,395</u>	<u>31</u>	401,319	<u>39</u>	<u>546,714</u>
Total	580	\$13,655,171	1,867	\$43,669,547	2,447	\$57,324,718
		Average	Age =	63.3		
		Average Annua	al Pension =	\$23,427		



### SECTION VI - CENSUS DATA

(continued)

### G. Age and Benefit Profiles (continued)

### Beneficiaries and Dependents

	N	lale	I	Female		Total		
	······································	Annual		Annual		Annual		
Age	<u>Number</u>	Pension	Number	Pension	<u>Number</u>	Pension		
Under 25	8	\$86,911	6	\$77,108	14	\$164,019		
25-29	4	114,387	7	92,792	11	207,179		
30-34	3	43,457	4	76,376	7	119,833		
35-39	3	57,203	9	175,084	12	232,287		
40-44	8	131,206	9	146,387	17	277,593		
45-49	16	331,668	39	832,310	55	1,163,978		
50-54	41	781,720	57	1,090,194	98	1,871,914		
55-59	87	1,653,560	152	3,953,573	239	5,607,133		
60-64	100	2,171,186	245	6,289,236	345	8,460,422		
65-69	117	2,665,604	350	9,046,511	467	11,712,115		
70-74	93	1,847,793	445	11,123,025	538	12,970,818		
75-79	102	1,794,109	575	12,462,777	677	14,256,886		
80-84	92	1,202,921	520	8,846,666	612	10,049,587		
85-89	68	833,585	466	6,560,720	534	7,394,305		
90-94	25	271,898	230	2,568,438	255	2,840,336		
95-99	5	56,212	55	573,120	60	629,332		
100 & Up	2	<u>12,740</u>	<u>12</u>	<u>129,338</u>	<u>14</u>	142,078		
Total	774	14,056,160	3,181	64,043,655	3,955	78,099,815		
	· · · · · · · · · · · · · · · · · · ·	Average	Age	= 74.4				
Average Annual Pension = \$19,747								

### SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2006

### A. Actuarial Assumptions

<u>Interest</u>: 8.25% per annum, compounded annually (as prescribed by the State Treasurer).

CPI:

3.0% per annum, compounded annually (as prescribed by the State

Treasurer). The pension adjustment is 60% of the cumulative increase.

Future Payroll Growth: 4.0% per annum, compounded annually.

<u>Salary Scale</u>: Salary increases vary by years of employment averaging 5.45% (as prescribed by the State Treasurer). Schedule of rates are shown below.

Years of	Annual
Employment	<u>Rate</u>
0-3	5.70%
4-15	6.60
16	5.70
17-19	4.80
20	5.50
21-25	4.80
26-30	4.60
31+	4.40

### SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2006

### A. Actuarial Assumptions (Continued)

<u>Termination</u>: Withdrawal rates vary by age, years of employment and gender. Illustrative rates are shown below:

Less Than 10 Years of Employment

Years of				
Employment	<u>Male</u>	<u>Female</u>		
		<u>&lt;40</u>	<u>40+</u>	
0	8.29%	7.61%	7.61%	
1	6.36	6.58	6.58	
2	5.61	5.77	5.77	
3	4.18	6.68	3.60	
4	3.44	6.53	2.38	
5	2.90	6.15	1.84	
6	2.53	6.15	1.65	
7	2.19	5.86	1.65	
8	1.65	5.47	1.27	
9	1.45	4.35	1.08	

### More Than 10 Years of Employment

Annual Rates for Those Annual Rates for Receiving
With Deferred Annuity Benefits\* Return of Contributions

<u>Age</u>	Male	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	0.83%	2.28%	0.55%	0.76%
30	0.83	2.28	0.55	0.76
35	0.68	1.80	0.46	0.61
40	0.46	0.98	0.30	0.29
45	0.39	0.57	0.18	0.13
50	0.52	0.64	0.11	0.09
55	0.93	1.20	0.08	0.08

<sup>\*</sup>Members must have attained 10 years of service or 60 years of age in order to receive an annuity benefit.

### SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2006

### A. Actuarial Assumptions (Continued)

Retirement: Rates of retirement vary by age, gender and eligibility for an unreduced pension and post-retirement medical benefits (attainment of age 55 and 25 years of service). Illustrative rates are shown below.

Less than Age 55 or			<u>Attainme</u>	Attainment of Age 55 and 25 Years of Serv				
Le	ess thar	125	Fir	rst	After F	After First		
Yea	ars of Se	ervice	Eligi	bility	Eligib	Eligibility		
<u>Age</u>	<u>Male</u>	Female	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>		
<47	1.1%	1.3%	N/A	N/A	N/A	N/A		
48	1.4	1.5	N/A	N/A	N/A	N/A		
49	1.6	1.7	N/A	N/A	N/A	N/A		
50	1.9	2.0	N/A	N/A	N/A	N/A		
51	2.3	2.5	N/A	N/A	N/A	N/A		
52-54	2.8	3.0	N/A	N/A	N/A	N/A		
55	N/A	N/A	15.0%	16.0%	N/A	N/A		
56	N/A	N/A	18.0	19.0	12.0%	13.0%		
57	N/A	N/A	18.0	19.0	13.0	13.5		
58	N/A	N/A	20.0	20.0	14.0	14.0		
59	N/A	N/A	20.0	20.0	15.0	14.5		
60	12.0%	10.0%	22.0	32.0	21.0	20.0		
61	12.0	10.0	23.0	34.0	23.0	22.0		
62	12.0	10.0	40.0	48.0	36.0	32.0		
63	12.0	10.0	43.0	45.0	30.0	26.5		
64	12.0	10.0	43.0	45.0	30.0	26.5		
65	17.0	20.0	43.0	57.0	38.0	36.0		
66-70	18.0	16.0	50.0	50.0	30.0	30.0		
71+	20.0	20.0	50.0	50.0	30.0	30.0		

### SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2006

### A. Actuarial Assumptions (Continued)

<u>Post-retirement Mortality</u>: Rates of mortality vary by age, gender and type of retirement. A generational approach is applied using Scale AA to account for future mortality improvement for non-disabled annuitants. The base year is 2003. Illustrative rates for the base year and Scale AA are shown below:

	Service Re and Bene		<u>Scal</u>	<u>e AA</u>	Disability <u>Retirement</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
45	0.4158%	0.1565%	1.3%	1.6%	2.2570%	0.7450%	
50	0.5593	0.2447	1.8	1.7	2.8975	1.1535	
55	0.7210	0.3489	1.9	8.0	3.5442	1.6544	
60	1.0556	0.5617	1.6	0.6	4.2042	2.1839	
65	1.2047	0.7511	1.4	0.5	5.0174	2.8026	
70	1.9959	1.1942	1.5	0.6	6.2583	3.7635	
75	3.4828	1.9731	1.4	8.0	8.2067	5.2230	
80	6.1521	3.4266	1.0	0.7	10.9372	7.2312	
85	10.8381	7.2836	0.7	0.6	14.1603	10.0203	

Non-contributory Members: 30% are assumed to return to contributory status.

<u>Marriage</u>: Husbands are assumed to be 3 years older than wives. Among the active population, 80% of participants are assumed to be married. No children are assumed. Neither the percentage married nor the number of children assumptions are necessarily individually explicit, but they are considered reasonable, when viewed as a single combined assumption.

Form of Payment: Modified Cash Refund Annuity.

### SECTION VII - ACTUARIAL ASSUMPTIONS AND METHODS AS OF JUNE 30, 2006

### A. Actuarial Assumptions (Continued)

Post Retirement Medical: Projected 2007-2008 Per Retiree Benefit Costs (based on June 30, 2006 health plan distribution, 2007 estimated renewal rates provided by the Division, medical trends of 11% for less than 65 premiums and 5.5% for greater than 65 premiums, and the Social Security Standard premium for Medicare Part B trended at 13.0%):

Pre-Medicare: \$15,301.93 Medicare Eligible: \$9,294.71

### B. Actuarial Valuation Method

The Projected Unit Credit Method was used as required by Chapter 62, P.L. 1994 as modified by Chapters 115, P.L. 1997 and 133, P.L. 2001. Non-contributory life insurance benefits are funded on a term cost basis.

### C. Asset Valuation Method

A five year average of market value 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. Cash flows are based on an accrual accounting approach. This method is prescribed by statute. The market value of assets is used for the Postretirement Medical Fund and the Contributory Group Insurance Premium Fund for GASB purposes.

### D. Changes in Actuarial Assumptions

The per capita benefit costs for postretirement medical benefits have changed since the previous valuation. The costs were previously \$15,654.16 for pre-Medicare and \$9,497.56 for Medicare eligible.

### SECTION VIII – SUMMARY OF PRINCIPAL PLAN APROVISIONS AS OF JUNE 30, 2006

### 1. Type of Plan

The Plan is a contributory, defined benefit plan. Contributions by Members are 5% of compensation. If the Fund has excess assets, member contributions may be reduced by as much as 2%.

### 2. Effective Date

The Plan was established in 1919. It was reorganized and integrated with Social Security in 1955. Social Security integration was eliminated in 1966, i.e., reductions in retirement benefits based on Social Security benefits were eliminated.

### 3. Eligibility for Membership

Employees appointed to positions requiring certification as members of a regular teaching or professional staff of a public school system in New Jersey are required to enroll as a condition of employment. Employees of the Department of Education holding unclassified, professional and certificated titles are eligible for membership. Temporary or substitute employees are not eligible.

### 4. Definitions

- a. <u>Fiscal Year</u>: A Fiscal Year is a 12-month period beginning on July 1 and ending on June 30.
- b. <u>Credited Service</u>: A year of Credited Service for each year an employee is a Member of the Retirement System plus service, if any, covered by a prior service liability.
- c. <u>Final Compensation</u>: This is the average annual compensation for the three consecutive years of Creditable Service immediately preceding retirement or the highest three fiscal years of Membership Service.
- d. <u>Final Year Compensation</u>: This is the compensation upon which contributions by a Member to the Annuity Savings Fund are based in the last year of Membership Service.

### SECTION VIII – SUMMARY OF PRINCIPAL PLAN APROVISIONS AS OF JUNE 30, 2006

the rate of contribution in effect on June 30, 1946 applicable to his age at membership.

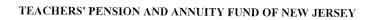
Prior to July 1, 1979 different contribution rates were established for men and women. Effective on that date members contribute at rates intermediate between the rates previously applicable to male and female members, computed to provide the same present value of future employee contributions at each entry age on the basis of the membership as constituted on the effective date.

### b. Local Employer Contributions

- (i) Early Retirement Incentive Contributions: The State and Local employers which elected to participate in the early retirement incentive programs authorized by Chapters 137, 229 and 231, P.L. 1991, Chapters 48, 138 and 163, P.L. 1993, Chapter 23, P.L. 2001 and Chapters 128 and 129, P.L. 2003 pay contributions to cover the additional liability for these programs over amortization periods chosen by the employer (15 years for Chapters 128 and 129) or the amortization period for the Unfunded Accrued Liability of the system (Chapter 23).
- (ii) <u>Chapter 113 Contributions</u>: Certain School Districts have elected to exempt a select group of employees from the compensation limit under IRC Section 401(a)(17) incorporated under Chapter 113. These school districts will pay the full cost of this exemption at a member's date of retirement.

### 17. Changes in Plan Provisions Since Prior Valuation

There have been no changes since the previous valuation.



### APPENDIX A - EARLY RETIREMENT INCENTIVE CONTRIBUTION SCHEDULE

Group	Numbe	T Location Name	ERI 1 Present Value June 30, 2006	ERI I Fiscal Year 2008 Payment	ERI 2 Present Value June 30, 2006	ERI 2 Fiscal Year 2008 Payment
3	981	NJ INST OF TECH	\$220,317	\$25,621	\$355,900	\$23,336
5	1001	ATLANTIC COMMUNITY COLLEGE	71,424	8,306	N/A	N/A
6	911	ALLAMUCHY BD OF ED	N/A	N/A	115,741	10,609
6	300	ASBURY PARK BD OF ED	3,578,290	416,124	N/A	N/A
6	969	ATLANTIC CO VOCATIONAL SCHOOLS	215,261	25,033	N/A	N/A
6	4014	BERLIN BORO BD OF ED	N/A	N/A	147,531	36,464
6	4015	BERLIN TWP BD OF ED	204,925	23,831	178,936	26,439
6	412	BOONTON TWP BD OF ED	139,555	16,229	N/A	N/A
6	774	BYRAM TWP BD OF ED	245,453	28,544	N/A	N/A
6	4017	CHESILHURST BORO BD OF ED	31,155	3,623	27,207	4,020
6		CLEMENTON BD OF ED	115,933	13,482	101,234	14,958
6	232	CRANBURY TWP BD OF ED	N/A	N/A	N/A	N/A
6		EAST WINDSOR REG SCHOOL DIST	N/A	N/A	223,191	32,978
6	6012	ESSEX CO EDUCATIONAL SERV COMM	213,945	24,880	N/A	N/A
6	329	FARMINGDALE BD OF ED	N/A	N/A	172,029	42,519
6		GLOUCESTER CITY BD OF ED	N/A	N/A	N/A	N/A
6		GREEN BROOK BD OF ED	325,983	37,909	N/A	N/A
6		GUTTENBERG BORO BD OF ED	175,327	20,389	N/A	N/A
6		HUDSON CO VOCATIONAL SCHOOL	N/A	N/A	777,459	71,263
6		IRVINGTON TWP BD OF ED	N/A	N/A	3,561,609	526,252
6		KEARNY TWP BD OF ED	N/A	N/A	N/A	N/A
6		LAKEHURST BORO BD OF ED	91,598	10,652	N/A	N/A
6		LAKELAND REGIONAL	823,527	95,769	N/A	N/A
6		LENAPE VALLEY REG H S DIST	N/A	N/A	N/A	N/A
6		LITTLE FERRY BD OF ED	N/A	N/A	N/A	N/A
6		MEDFORD TWP BD OF ED	N/A	N/A	N/A	N/A
6		MERCER CO SPECIAL SERVICES	407,184	47,352	N/A	N/A
6		MERCER CO VOCATIONAL SCHOOLS	N/A	N/A	329,905	81,540
6		MONMOUTH BEACH BD OF ED	111,659	12,985	N/A	N/A
6		MONMOUTH CO VOCATIONAL SCHOOLS	658,820	76,615	N/A	N/A
6		MT EPHRAIM BD OF ED	N/A	N/A	N/A	N/A
6		PEMBERTON TWP BD OF ED	\$2,259,601	\$262,772	N/A	N/A
6		PERTH AMBOY BD OF ED	N/A	N/A	\$1,591,197	\$393,283
6		PINE HILL BORO BD OF ED	\$296,394	\$34,468	\$153,922	\$22,743
6		PLEASANTVILLE BD OF ED	\$1,220,796	\$141,968	\$1,092,045	\$161,357
6		SALEM CO VOCATIONAL SCHOOL	\$40,017	\$15,292	N/A	N/A
6		SEASIDE HEIGHTS BD OF ED	N/A	N/A	\$9,900	\$2,447
6		SHILOH BOROUGH BD OF ED	\$12,176	\$1,416	N/A	N/A
6		VERNON TWP BD OF ED	N/A	N/A	N/A	N/A
6		WANAQUE BD OF ED	N/A	N/A	\$306,563	\$28,100
6		WEST NEW YORK TWP BD OF ED	N/A	N/A	\$2,730,046	\$250,240
6	934	WHITE TWP BD OF ED	\$230,267	\$26,778	N/A	N/A
		Grand total for Local Employers	\$11,689,607	\$1,370,038	\$11,874,415	\$1,728,548

Appendix I



### APPENDIX A - EARLY RETIREMENT INCENTIVE CONTRIBUTION SCHEDULE

(continued)

			ERI 3	ERI 3	ERI 4	ERI 4
C	. X7 L		Present Value	Fiscal Year	Present Value	Fiscal Year
Oroup	Numbe	Location Name	June 30, 2006	2008 Payment	June 30, 2006	2008 Payment
2	90400	EDUCATION DEPARTMENT	¢10.451.170	¢/72 414	27/4	
2		MARIE KATZENBACK SCH FOR DEAF	\$10,451,178	\$672,414	N/A	N/A
2	90207		\$1,859,853	\$119,660	N/A	N/A
		0111011011	\$440,046	\$28,312	N/A	N/A
3		NJ INST OF TECH	\$436,360	\$28,075	N/A	N/A
4	90411	NEW JERSEY UNIVERSITY	\$2,169,888	\$139,608	N/A	N/A
4		KEAN UNIVERSITY	\$1,134,973	\$73,023	N/A	N/A
4	90414	MONTCLAIR STATE UNIVERSITY	\$897,888	\$57,769	N/A	N/A
4	90410	ROWAN UNIVERSITY	\$368,065	\$23,681	N/A	N/A
4	90415	THE COLLEGE OF NEW JERSEY	\$230,780	\$14,848	N/A	N/A
4	90413	WILLIAM PATERSON UNIVERSITY	\$419,080	\$26,963	N/A	N/A
6	8010	BAYONNE BOARD OF ED	N/A	N/A	\$7,864,274	\$948,817
6	122	EWING TWP BD OF ED	N/A	N/A	N/A	N/A
6	110	HAMILTON TWP BD OF ED	N/A	N/A	N/A	N/A
6	8083	HARRISON TWP BD OF ED	N/A	N/A	\$1,741,248	\$202,492
6	335	HOWELL TWP BD OF ED	N/A	N/A	N/A	N/A
6	956	HUDSON CO VOCATIONAL SCHOOL	N/A	N/A	\$1,336,886	\$159,612
6	242	MILLTOWN BORO BD OF ED	N/A	N/A	(\$5,201)	N/A
6	620	PASSAIC BD OF ED	N/A	N/A	\$21,162,078	\$2,499,137
6	9034	STOCKTON BOROUGH BD OF ED	N/A	N/A	\$110,989	\$12,907
6	515	TOMS RIVER SCHOOL DIST	N/A	N/A	N/A	N/A
Grand total for State Locations and Local Employers		\$18,408,111	\$1,184,353	\$32,210,274	\$3,822,965	

Appendix I