

**THE STATE POLICE RETIREMENT SYSTEM
OF NEW JERSEY
ANNUAL REPORT
OF THE ACTUARY
PREPARED AS OF JULY 1, 2005**

DOC:V00555GL.DOC



January 27, 2006

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

Members of the Board:

The law governing the operation of the State Police Retirement System of New Jersey provides for annual actuarial valuations of the System. The results of the July 1, 2005 valuation are submitted in this report, which also includes a comparison with the preceding year's valuation.

The valuation shows the financial condition of the Plan as of July 1, 2005 and gives the basis for determining the required annual contribution for the plan year beginning July 1, 2005.

The valuation was prepared on the basis of the demographic assumptions that were determined from the July 1, 1999 – June 30, 2002 Experience Study and the economic assumptions which were approved by the Treasurer (these include an investment return rate of 8.25% per annum, assumed future salary increases of 5.45% per annum and a Cost-of-Living Adjustment assumption of 60% of the assumed CPI increase of 3.0% per annum). These are the same assumptions that were used for the July 1, 2004 actuarial valuation.

The valuation also reflects the potential effect of the Appropriation Act for fiscal year 2006 (approximately 30% of the contribution recommended for the July 1, 2004 valuation has been included as a receivable contribution for this valuation).

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

Respectfully submitted,

(Signed) JANET H. CRANNA

Janet H. Cranna
Principal, Consulting Actuary

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REPORT ON THE ANNUAL
VALUATION OF
THE STATE POLICE RETIREMENT SYSTEM
OF NEW JERSEY
PREPARED AS OF JULY 1, 2005

SECTION I - SUMMARY OF KEY RESULTS

The State Police Retirement System of New Jersey became effective July 1, 1965 under terms of Chapter 89 of the Laws of 1965. This report, prepared as of July 1, 2005, presents the results of the annual actuarial valuation of the Fund.

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

Valuation Date	July 1, 2005	July 1, 2004
Number of Members	2,844	2,684
Annual Compensation	\$ 241,813,372	\$ 223,552,154
Number of Pensioners and Beneficiaries	2,297	2,204
Total Annual Allowance	\$ 100,045,679	\$ 92,315,891
<u>Assets</u>		
Market Value of Assets	\$ 1,756,862,382*	\$ 1,687,272,805
Valuation Assets	\$ 1,935,384,732*	\$ 1,897,713,119
<u>Contribution Amounts</u>		
Normal Contribution	\$ 42,907,789	\$ 40,452,614
Accrued Liability Contribution	<u>8,501,547</u>	<u>3,135,874</u>
Total Contribution	\$ 51,409,336**	\$ 43,588,488 [#]

* Assets include a fiscal year 2006 receivable contribution of \$12,941,000 which is approximately 30% of the contribution recommended for the July 1, 2004 valuation (potential effect of the Appropriation Act for fiscal year 2006).

** The required contribution could be subject to reduction in accordance with the provisions of the Appropriation Act for fiscal year 2007.

The contribution requirement could be subject to reduction in accordance with the provisions of the Appropriation Act for fiscal year 2006.

The major benefit and contribution provisions of the statute as reflected in the valuation are summarized in Appendix A. There were no changes from the provisions used in the previous valuation. However, the valuation does reflect the potential effect of the Appropriation Act for fiscal year 2006 (approximately 30% of the contribution recommended for the July 1, 2004 valuation has been included as a receivable contribution for this valuation).

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

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

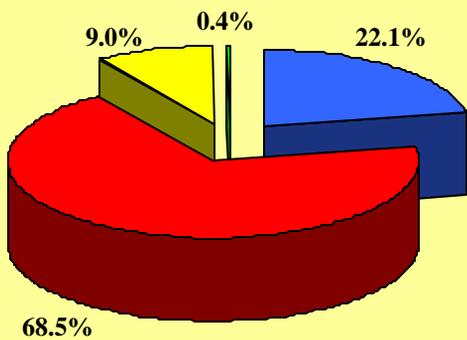
The valuation generates a balance sheet which summarizes in some detail the total present and prospective assets and liabilities of the Fund. A summary comparison of the balance sheets as of July 1, 2004 and July 1, 2005 is set forth in the following table. The allocation of assets among the various investment alternatives is shown in graphic form on page 5.

TABLE I
COMPARATIVE BALANCE SHEET

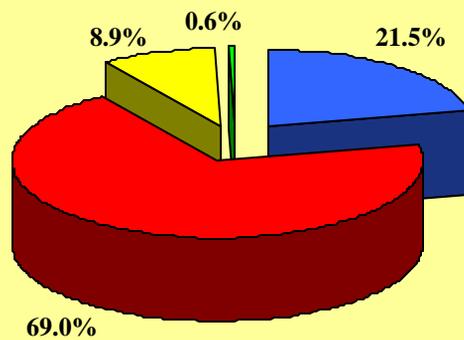
	2005	2004
<u>ASSETS</u>		
Actuarial Value of assets of Fund	\$ 1,935,384,732	\$ 1,897,713,119
Unfunded accrued liability/(surplus)	139,881,348	51,596,522
Total Assets	\$ 2,075,266,080	\$ 1,949,309,641
<u>LIABILITIES</u>		
Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund	\$ 1,209,833,316	\$ 1,117,321,901
Present value of benefits to present active members	865,432,764	831,987,740
Total Liabilities	\$ 2,075,266,080	\$ 1,949,309,641

THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

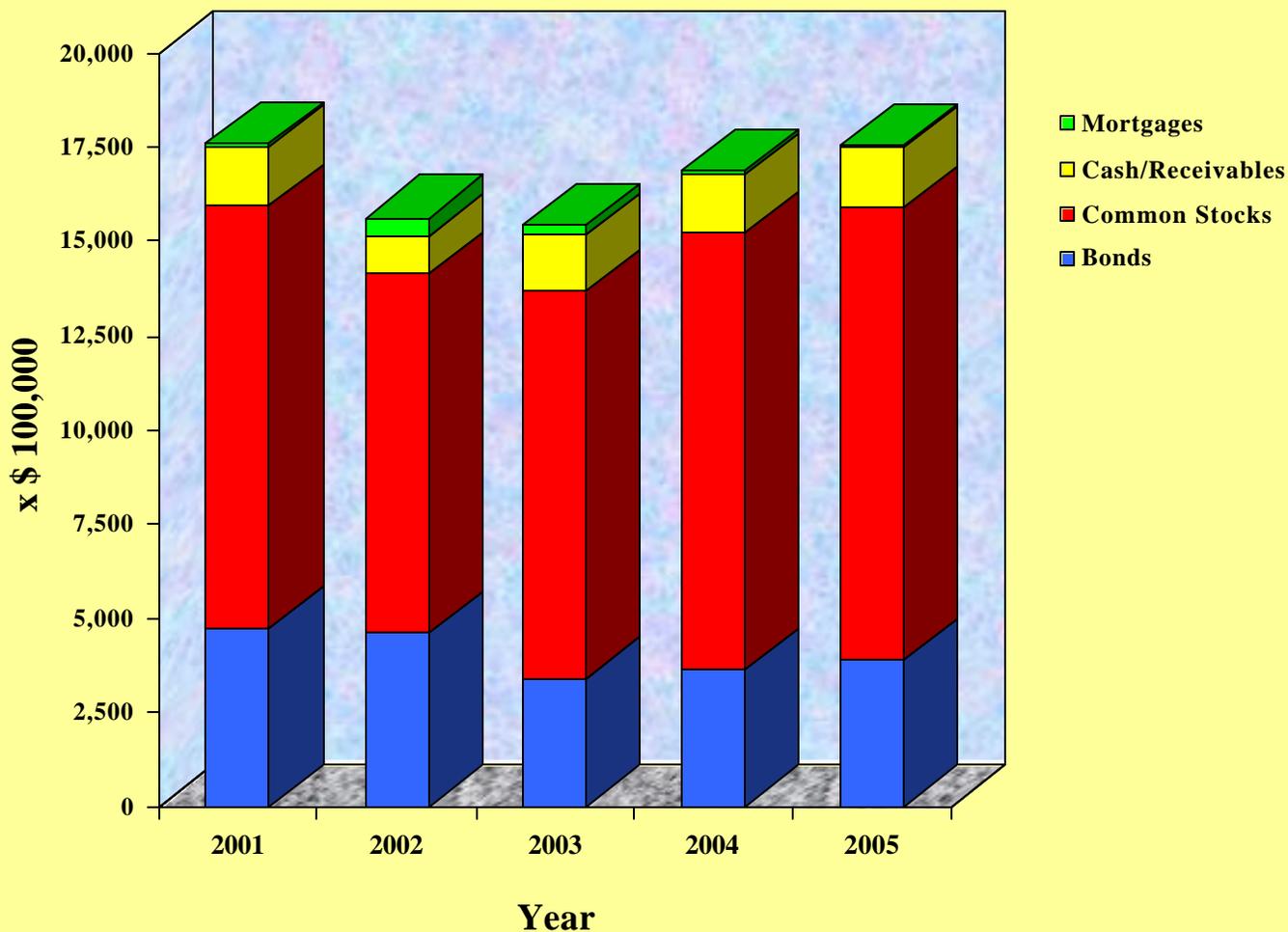
ASSET ALLOCATION MARKET VALUE



2005



2004



SECTION II - EMPLOYEE DATA

The data employed for the valuations were furnished to the actuary by the Division of Pensions and Benefits. The following summarizes and compares the Fund membership as of July 1, 2004 and July 1, 2005 by various categories.

ACTIVE MEMBERSHIP

Group	2005		2004	
	Number	Annual Compensation	Number	Annual Compensation
Men	2,737	\$ 232,778,942	2,582	\$ 215,248,769
Women	107	\$ 9,034,430	102	\$ 8,303,385

RETIRED MEMBERS AND BENEFICIARIES

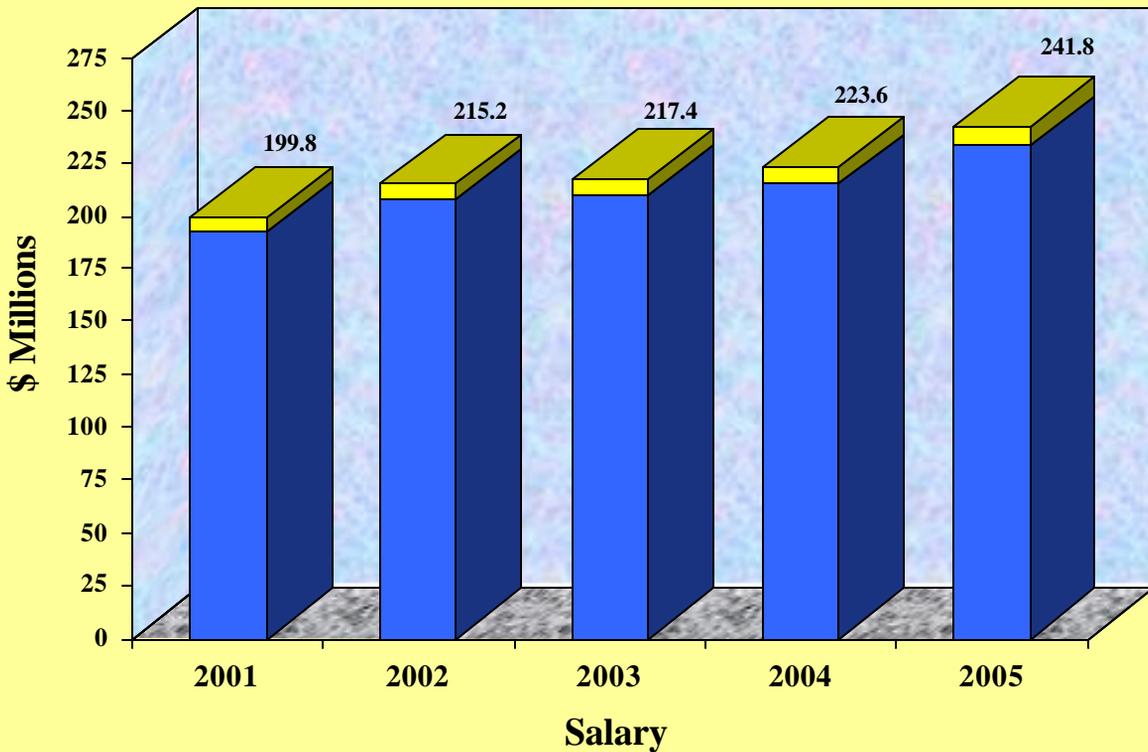
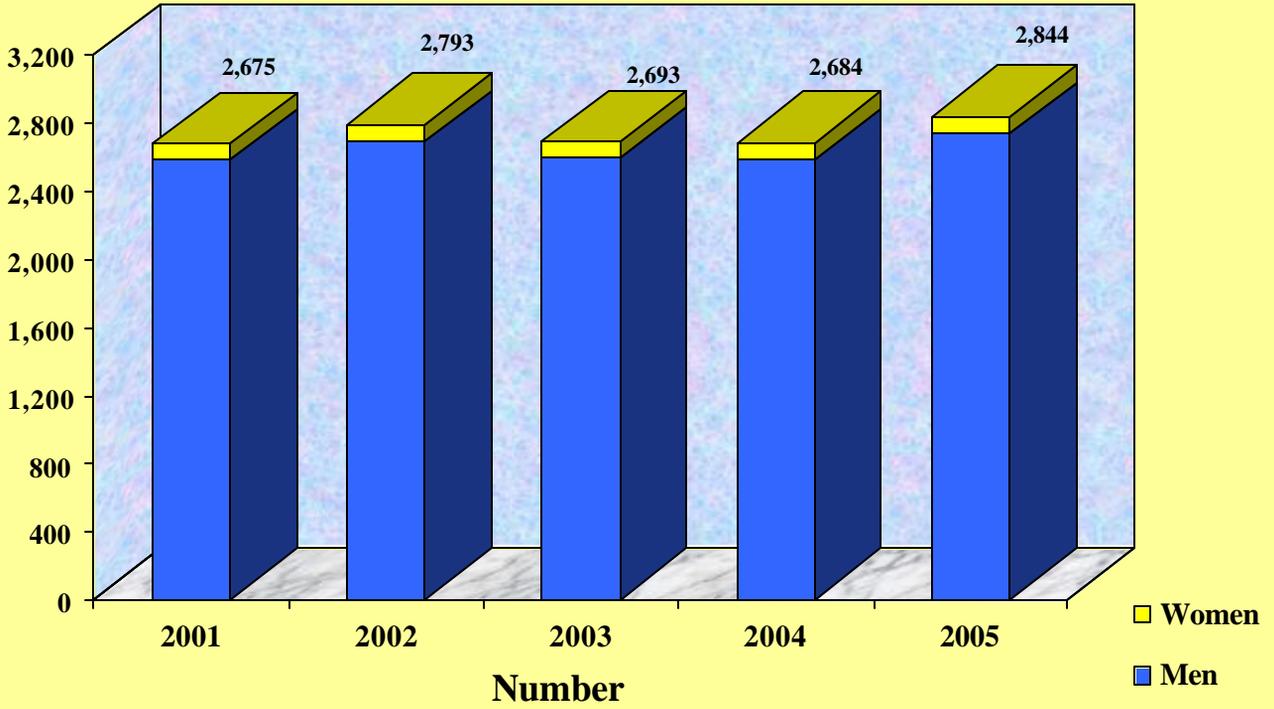
Group	2005		2004	
	Number	Annual Allowances	Number	Annual Allowances
Service Retirements	1,759	\$ 84,078,930	1,673	\$ 77,122,623
Ordinary Disability Retirements	111	\$ 2,859,217	111	\$ 2,817,136
Accidental Disability Retirements	96	\$ 4,001,705	89	\$ 3,668,850
Beneficiaries of Deceased Pensioners	254	\$ 6,749,337	251	\$ 6,355,229
Beneficiaries of Deceased Active Employees	77	\$ 2,356,490	80	\$ 2,352,053

Appendix C provides a detailed distribution between groups.

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

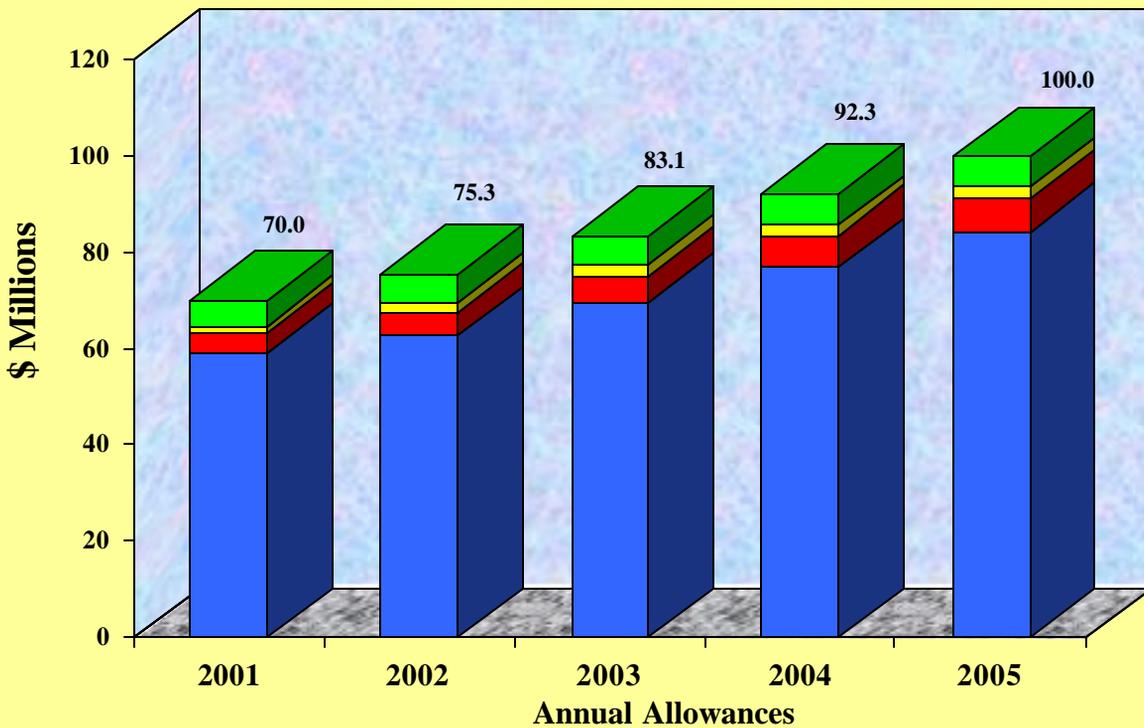
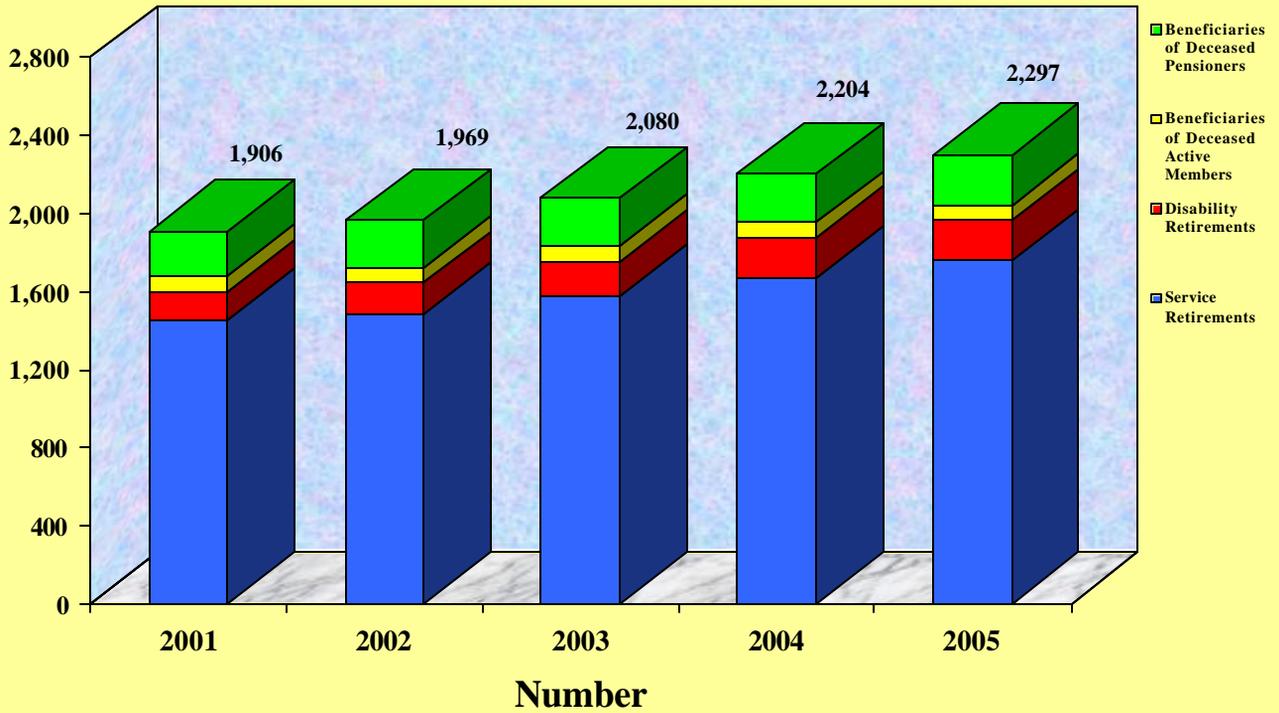
THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

SUMMARY OF ACTIVE PARTICIPATION



THE STATE POLICE RETIREMENT SYSTEM OF NEW JERSEY

SUMMARY OF RETIRED PARTICIPATION



SECTION III - ASSETS, LIABILITIES AND CONTRIBUTIONS**A. Market Value of Assets as of June 30, 2005**

1.	Assets		
a.	Cash	\$	(97,942)
b.	Investment Holdings		1,713,966,867
c.	Accrued Interest on Investments		5,065,622
d.	Members' Contributions Receivable		939,761
e.	Loans Receivable		28,672,973
f.	Interest Receivable on Loans		84,567
g.	Accounts Receivable		77,146
h.	Dividends Receivable		3,698,725
i.	Total	\$	1,752,407,719
2.	Liabilities		
a.	Pension Payroll Payable	\$	8,269,034
b.	Accounts Payable and Accrued Expense		217,303
c.	Total	\$	8,486,337
3.	Preliminary Market Value of Assets as of June 30, 2005: 1(i) - 2(c)	\$	1,743,921,382
4.	State Appropriations Receivable	\$	12,941,000*
5.	Market Value of Assets as of June 30, 2005: 3. + 4.	\$	1,756,862,382

* The amount shown as the fiscal year 2006 receivable contribution is approximately 30% of the contribution recommended for the July 1, 2004 valuation (potential effect of the Appropriation Act for fiscal year 2006).

B. Reconciliation of Market Value of Assets from June 30, 2004 to June 30, 2005

1.	Market Value of Assets as of June 30, 2004	\$	1,687,084,896
2.	Increases		
a.	Members' Contributions	\$	15,220,363
b.	State Appropriations		187,909
c.	Transfer from Other Systems		480,125
d.	Other		39
e.	Investment Income		140,386,758
f.	Total	\$	156,275,194
3.	Decreases		
a.	Withdrawal of Members	\$	78,730
b.	NCGI Premium Expense		927,128
c.	Administrative Expenses		490,228
d.	Benefit Payments		83,114,429
e.	COLA Benefit Payments		14,828,193
f.	Transfer Withdrawal Employer Benefit		0
g.	Adjustment – Members' Account Expense – Loans		0
h.	Total	\$	99,438,708
4.	Preliminary Market Value of Assets as of June 30, 2005 = 1. + 2.(f) - 3.(h)	\$	1,743,921,382
5.	State Appropriations Receivable	\$	12,941,000*
6.	Market Value of Assets as of June 30, 2005 = 4. + 5.	\$	1,756,862,382

* The amount shown as the fiscal year 2006 receivable contribution is approximately 30% of the contribution recommended for the July 1, 2004 valuation (potential effect of the Appropriation Act for fiscal year 2006).

C. Development of Actuarial Value of Assets as of July 1, 2005

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

1.	Actuarial Value of Assets as of July 1, 2004	\$	1,897,525,210
2.	Net Cash Flow (excluding investment income)		(83,550,272)
3.	Expected Investment Income at 8.25%		
	a. Interest on assets as of July 1, 2004	\$	156,545,830
	b. Interest on Net Cash Flow		(3,446,449)
	c. Total	\$	153,099,381
4.	Expected Actuarial Value of Assets as of July 1, 2005:		
	1. + 2. + 3(c)	\$	1,967,074,319
5.	20% of Difference from Preliminary Market Value of Assets		(44,630,587)
6.	Receivable Employer Contributions		12,941,000*
7.	Actuarial Value of Assets as of July 1, 2005 = 4. + 5. + 6.	\$	1,935,384,732

* The amount shown as the fiscal year 2006 receivable contribution is approximately 30% of the contribution recommended for the July 1, 2004 valuation (potential effect of the Appropriation Act for fiscal year 2006).

D. Present Value of Projected Benefits as of July 1, 2005

1.	Retirees and Beneficiaries		
	a. Service Retirements	\$	1,015,545,940
	b. Disability Retirements		94,170,621
	c. Beneficiaries		83,653,434
	d. Death Benefits		16,463,321
	e. Total	\$	1,209,833,316
2.	Terminated Vested Members	\$	0
3.	Contributing Active Participants		
	a. Service Retirement	\$	792,922,855
	b. Ordinary Disability		21,046,948
	c. Accidental Disability		18,129,393
	d. Ordinary Death		10,137,514
	e. Accidental Death		9,247,233
	f. Vested Termination		1,278,610
	g. Withdrawal Benefits		157,417
	h. Lump Sum Death Benefits*		8,725,040
	i. Total	\$	861,645,010
4.	Non-Contributing Active Participants	\$	3,787,754
5.	Total Present Value of Benefits = 1.(e) + 2. + 3.(i) + 4.	\$	2,075,266,080

*Excludes lump sum death benefits payable during active service.

E. Development of Excess Valuation Assets

Chapter 115, P.L. 1997 prescribes a procedure for determining the value of excess valuation assets. This law provides for a reduction in the normal contributions for the valuation periods ending June 30, 1996 and June 30, 1997 to the extent possible by the excess valuation assets and permitted the State Treasurer to reduce the normal contribution payable by the State for valuations after June 30, 1997 up to a specified portion of excess valuation assets (50% for the current valuation). The development of excess valuation assets is summarized as follows:

1.	Valuation Assets	\$	1,935,384,732
2.	Actuarial Accrued Liability		<u>2,075,266,080</u>
3.	Excess Valuation Assets = 1. - 2., not less than \$0	\$	0

F. Development of Normal Cost as of July 1, 2005

1.	Service Retirement	\$	48,064,260
2.	Ordinary Disability		1,958,931
3.	Accidental Disability		1,572,441
4.	Ordinary Death		927,257
5.	Accidental Death		1,101,215
6.	Vested Termination		138,614
7.	Withdrawal Benefits		56,701
8.	Lump Sum Death Benefits*		570,461
9.	Term Cost for Lump Sum Death Benefit During Active Service		<u>685,514</u>
10.	Total	\$	55,075,394

*Excludes lump sum death benefits payable during active service.

G. Development of State Contributions

1.	Present Value of Benefits	\$	2,075,266,080
2.	Actuarial Value of Assets		<u>1,935,384,732</u>
3.	Unfunded Actuarial Accrued Liability/(Surplus) = 1. - 2.	\$	139,881,348
4.	Amortization Period		30
5.	Amortization of Unfunded Actuarial Accrued Liability payable July 1, 2006	\$	8,501,547
6. (a)	Gross Normal Cost	\$	55,075,394
	(b) Expected Member Contributions		<u>15,437,714</u>
	(c) State Normal Cost = (a) - (b)	\$	39,637,680
	(d) State Normal Cost payable July 1, 2006 = (c) * 1.0825	\$	42,907,789
	(e) Excess Valuation Assets		<u>0</u>
	(f) State Net Normal Cost payable July 1, 2006 = (d) - (e)	\$	42,907,789
7.	Total Required Contribution as of July 1, 2006 = 5. + 6.(f)	\$	51,409,336*

*Contribution could be subject to reduction in accordance with the provisions of the Appropriation Act for fiscal year 2007.

SECTION IV - COMMENTS CONCERNING THE VALUATION

The variation in liabilities and contributions reflects the System's actual experience during the year. The System experienced a net actuarial loss during the year that ended June 30, 2005.

The loss is primarily due to an actual return on Fund assets less than that expected. For valuation purposes, an 8.25% per annum rate of return was assumed. The actual return on the Fund's actuarial value of assets was approximately 5.85% for the period from July 1, 2004 through June 30, 2005. There was also a net loss due to experience among the active and the retired participants.

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

A. Calculation of Actuarial Experience for the Year Ended June 30, 2005

1.	Unfunded Accrued Liability/(Surplus) as of July 1, 2004	\$ 51,596,522
2.	Gross Normal Cost as of July 1, 2004	51,598,646
3.	Interest on (1) and (2)	8,513,601
4.	Actual Members' Contributions Received	15,220,363
5.	Employers' Contributions (including receivable and transfers from other Funds)	13,421,164
6.	Interest on Contributions	<u>647,647</u>
7.	Expected Unfunded Accrued Liability/(Surplus) as of July 1, 2005 = (1) + (2) + (3) - (4) - (5) - (6)	\$ 82,419,595
8.	Actual Unfunded Accrued Liability as of July 1, 2005	<u>139,881,348</u>
9.	Actuarial (Gain)/Loss = (8) - (7)	\$ 57,461,753

B. Components of Actuarial Experience

1.	Investment (Gain)/Loss	\$ 44,630,587
2.	Other (Gain)/Loss, including mortality, cost of living adjustments less than expected, changes in employee data and salary increases greater than expected	<u>12,831,166</u>
3.	Total Actuarial (Gain)/Loss	\$ 57,461,753

SECTION V - ACCOUNTING INFORMATION

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

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

(A) Development of the Annual Required Contribution (ARC) as of June 30, 2007:

1.	Actuarial Value of Plan Assets as of June 30, 2005	
	(a) Valuation Assets as of June 30, 2005	\$ 1,935,384,732
	(b) Adjustment for Receivable Contributions included in (a)	<u>12,941,000</u>
	(c) Valuation Assets as of June 30, 2005 for GASB Disclosure = (a) - (b)	\$ 1,922,443,732

2.	Actuarial Accrued Liability as of June 30, 2005	\$	2,075,266,080
3.	Unfunded Actuarial Accrued Liability/(Surplus) as of June 30, 2005 = 2. - 1.	\$	152,822,348
4.	Amortization of Unfunded Actuarial Accrued Liability/(Surplus) over 30 years	\$	8,580,194
5.	(a) Gross Normal Cost as of June 30, 2005	\$	55,075,394
	(b) Expected Members' Contributions		<u>15,437,714</u>
	(c) Net Normal Cost as of June 30, 2005 = (a) - (b)	\$	39,637,680
6.	Annual Required Contribution as of June 30, 2007		
	(a) Annual Required Contribution as of June 30, 2005 = 4. + 5.(c)	\$	48,217,874
	(b) Interest Adjustment to June 30, 2007		<u>8,284,132</u>
	(c) Annual Required Contribution as of June 30, 2007 = (a) + (b)	\$	56,502,006

(B) Development of the Net Pension Obligation (NPO) as of June 30, 2007:

1.	Annual Required Contribution as of June 30, 2007	\$	56,502,006
2.	Interest on Net Pension Obligation		19,621,523
3.	Adjustment to Annual Required Contribution		<u>(14,454,960)</u>
4.	Annual Pension Cost = 1. + 2. + 3.	\$	61,668,569
5.	Expected Employer Contributions for Fiscal Year 2007	\$	51,409,336
6.	Net Pension Obligation at June 30, 2006	\$	237,836,641*
7.	Increase in Net Pension Obligation = 4. - 5.	\$	10,259,233
8.	Net Pension Obligation at June 30, 2007 = 6. + 7.	\$	248,095,874

* The June 30, 2006 Net Pension Obligation amount has been revised from the amount shown in the prior year's report to reflect the adjustment to the fiscal year 2006 receivable contribution.

(C) Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll $\frac{(b-a)}{c}$
6/30/00	\$ 1,752,423,441	\$ 1,512,909,805	\$ (239,513,636)	115.8%	\$ 188,466,237	(127.1)%
6/30/01	\$ 1,829,414,353	\$ 1,626,631,656	\$ (202,782,697)	112.5%	\$ 199,727,203	(101.5)%
6/30/02	\$ 1,853,684,177	\$ 1,739,427,739	\$ (114,256,438)	106.6%	\$ 215,161,126	(53.1)%
6/30/03	\$ 1,865,079,083	\$ 1,815,725,256	\$ (49,353,827)	102.7%	\$ 217,448,864	(22.7)%
6/30/04	\$ 1,897,525,210	\$ 1,949,309,641	\$ 51,784,431	97.3%	\$ 223,552,154	23.2%
6/30/05	\$ 1,922,443,732	\$ 2,075,266,080	\$ 152,822,348	92.6%	\$ 241,813,372	63.2%

(D) Schedule of Employer Contributions

Fiscal Year	Annual Required Contribution	Employer Contribution	Percentage Contributed
2002	\$ 24,990,652	\$ 0	0.0%
2003	\$ 29,449,164	\$ 0	0.0%
2004	\$ 37,600,821	\$ 0	0.0%
2005	\$ 37,943,519	\$ 187,909	0.5%
2006	\$ 47,196,900	\$ 12,941,000*	27.4%
2007	\$ 56,502,006	\$ 51,409,336**	91.0%

* The fiscal year 2006 required contribution of \$43,588,488 has been reduced to \$12,941,000 in anticipation of the provisions of the Appropriation Act for fiscal year 2006.

** The required contribution could be subject to reduction in accordance with the provisions of the Appropriation Act for fiscal year 2007.

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

Valuation Date	June 30, 2005
Actuarial Cost Method	Projected Unit Credit
Amortization Method	Level Dollar, closed
Remaining Amortization Period	30 years
Asset Valuation Method	Five-Year Average of Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.25%
Projected Salary Increase	5.45%
Cost of Living Adjustments	60% of the assumed CPI increase of 3.0%

SECTION VI - LEVEL OF FUNDING

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

<u>FASB 87 ABO Funded Ratios</u>		
Actuarial present value of accumulated benefits:	<u>June 30, 2005</u>	<u>June 30, 2004</u>
	Vested benefits	
Participants currently receiving payments	\$ 1,209,833,316	\$ 1,117,321,901
Other participants	527,358,725	510,376,813
	\$ 1,737,192,041	\$ 1,627,698,714
Non-vested benefits	285,695,280	324,463,910
Total	\$ 2,022,887,321	\$ 1,952,162,624
Assets at market value	\$ 1,756,862,382	\$ 1,687,272,805
Ratio of Assets to Total Present Value	86.8%	86.4%

As in the case of the Governmental Accounting Standard Board Statement No. 25, the actuarial present value of vested and non-vested accrued benefits was based on an interest rate of 8.25% for both 2005 and 2004.

APPENDIX A

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

Eligibility for Membership

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

1. Definitions

Plan Year	The 12-month period beginning on July 1 and ending on June 30.
Service	Service rendered while a member as described above.
Credited Service	A year is credited for each year of service as an officer or trooper in the State Police. Service with other State Retirement Systems is included in the calculation of the retirement benefit at the rate of 1% of final compensation for each year of service credit.
Compensation	Based on contractual salary, including maintenance allowance, received by the member in the last 12 months of credited service preceding retirement, termination or death. Compensation does not include individual salary adjustments granted primarily in anticipation of the retirement or for temporary or extracurricular duties beyond the ordinary work day. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code.)
Final Compensation	Average compensation received by member in last 12 months of credited service preceding retirement or death. Such term includes the value of the member's maintenance allowance for the same period.
Aggregate Contributions	The sum of all amounts deducted from the compensation of a member or contributed by him or on his behalf. For contribution purposes, compensation does not include overtime, bonuses, maintenance or any adjustments before retirement.
Adjusted Final Compensation	The amount of final compensation or final compensation as adjusted, as the case may be, increased by the same percentage increase which is applied in any adjustments of the compensation schedule of active members after the member's death and before the date on which the deceased member of the retirement system would have accrued 25 years of service under an assumption of continuous service, at which time that amount will become fixed. Adjustments to final compensation or adjusted final compensation

shall take effect at the same time as any adjustments in the compensation schedule of active members.

2. Benefits

Service Retirement

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

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

Vested Termination

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

Death Benefits

Before Retirement

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

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

Minimum benefit: Aggregate contributions.

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

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

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

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

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

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

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

Accidental Disability
Retirement

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

Loan Provision

Eligible if an active member of the State Police Retirement System with at least 3 years of contributory service. If eligible, a member may borrow an amount which is greater than \$50, but not more than 50% of aggregate contributions. The loan accrues interest at 4% per annum.

APPENDIX B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION INTEREST RATE: 8.25% per annum, compounded annually.

COLA: The COLA is 60% of the assumed CPI increase. CPI is assumed to increase at 3.0% per annum, compounded annually.

SALARY INCREASES: Salaries are assumed to increase by 5.45% per year.

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

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

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

<u>Age</u>	<u>Annual Rates of *</u>			
	<u>Ordinary Death</u>	<u>Accidental Death</u>	<u>Ordinary Disability</u>	<u>Accidental Disability</u>
25	0.0	0.4	0.6	0.3
30	0.7	0.5	0.9	0.4
35	0.5	0.5	1.2	0.5
40	0.8	0.5	1.8	0.7
45	1.0	0.6	3.1	1.3
50	2.5	0.9	5.4	2.2

*Per one thousand lives.

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

VALUATION METHOD: Projected Unit Credit Method. This method essentially funds the System's benefits accrued to the valuation date. Experience gains and losses are recognized in future accrued liability contributions.

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

HEALTH INSURANCE BENEFITS: Retiree Health Insurance benefits are funded by the State on a pay-as-you-go basis and are not included in the actuarial valuation.

DEATHS AFTER RETIREMENT: For Healthy Inactive Mortality the 1983 Group Annuity Mortality Table for males and females is used. Illustrative rates of mortality for retired members are shown below:

<u>Age</u>	<u>Retired Members</u>		<u>Lives Per Thousand Beneficiaries of Deceased Members</u>		<u>Disabled Males and Females</u>
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	
55	6.1	2.5	6.1	2.5	9.6
60	9.2	4.2	9.2	4.2	13.6
65	15.6	7.1	15.6	7.1	19.8
70	27.5	12.4	27.5	12.4	29.5
75	44.6	24.0	44.6	28.8	44.5
80	74.1	42.9	74.1	51.5	67.3
85	114.8	69.9	114.8	83.9	101.1
90	166.3	111.8	166.3	134.1	149.4

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

<u>Service</u>	<u>Lives Per 100</u>
20	2.0
21	0.5
22	0.0
23	0.0
24	0.0
with 25 years:	
(a) through age 42	25.0
(b) ages 43-54	20.0
greater than 25:	
(a) through age 47	5.0
(b) ages 48-52	15.0
(c) ages 53-54	22.0

APPENDIX C

TABULATIONS USED AS A BASIS FOR THE 2005 VALUATION

The following tables give a reconciliation of data from July 1, 2004 to June 30, 2005. Tables are also given showing active member number and salaries by age and length of service as of July 1, 2005 and showing the number and retirement allowances of beneficiaries classified by age as of July 1, 2005.

TABLE 1

RECONCILIATION OF DATA FROM JULY 1, 2004 TO JUNE 30, 2005

	Actives		Deferred Vested	Retirees			Beneficiaries	Dependents	Domestic Relations Beneficiaries		Total	
	Contrib.	Noncontrib.		Service	Special	Deferred			Disabled	Retirees		Disabilities
Members as of July 1, 2004	2,650	34	0	480	1,123	1	182	325	6	69	18	4,888
Changed to Contributing	4	(4)										
Changed to Noncontributing	(4)	4										
Terminated Vested		(6)										(6)
Terminated Non-Vested		(1)										(1)
Service Retirement	(4)			4								
Special Retirement	(98)				98							
New Disabled	(7)						7					
New Death	(2)	(1)		(17)	(10)		(2)	(14)				(46)
Payments Began										12	2	14
Payments Ceased									(1)	(4)		(5)
New Actives	278	1										279
Rehires												
New Beneficiaries								18				18
Data Corrections								(3)		3		
Members as of June 30, 2005	2,817	27	0	467	1,211	1	187	326	5	80	20	5,141

TABLE 2

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

AGE	SERVICE	1	5	10	15	20	25	30	35	TOTAL
20	Number Salary	7 412,903								7 412,903
25	Number Salary	201 11,940,241	90 5,914,369							291 17,854,610
30	Number Salary	122 7,299,806	282 19,568,510	13 1,037,423						417 27,905,739
35	Number Salary	48 2,889,609	213 15,987,438	231 20,139,464	36 3,164,180	4 398,781				532 42,579,472
40	Number Salary	1 61,753	34 2,621,640	138 12,237,949	296 26,905,001	325 31,082,264	3 328,912			797 73,237,519
45	Number Salary			18 1,581,737	91 8,237,205	291 28,309,610	134 14,213,850			534 52,342,402
50	Number Salary				13 1,154,636	83 8,079,868	148 15,796,427	22 2,449,796		266 27,480,727
TOTAL	Number Salary	379 22,604,312	619 44,091,957	400 34,996,573	436 39,461,022	703 67,870,523	285 30,339,189	22 2,449,796		2,844 241,813,372

TABLE 3

**THE NUMBER AND ANNUAL COMPENSATION OF
ACTIVE MEMBERS DISTRIBUTED BY AGE
AS OF JULY 1, 2005**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
22	4	\$ 235,944		
23	8	471,889	1	\$ 58,986
24	31	1,828,569	1	58,986
25	64	3,806,272	1	58,986
26	63	3,869,373	2	127,550
27	81	5,101,104	2	129,952
28	93	5,823,036	4	250,325
29	66	4,242,687	3	188,938
30	84	5,520,903	4	257,476
31	77	5,155,741	5	330,843
32	78	5,460,325	5	336,534
33	89	6,680,606	4	275,251
34	109	8,297,449	9	666,724
35	110	8,799,351	8	624,024
36	95	7,675,171	2	152,372
37	90	7,546,709	2	149,970
38	104	8,999,903	4	328,964
39	137	12,300,164	4	349,792
40	157	14,486,342	6	556,086
41	185	17,051,346	4	355,925
42	169	15,823,184	6	570,468
43	142	13,551,050	4	384,374
44	127	12,121,633	5	490,184
45	77	7,367,994	4	425,481
46	109	10,856,590	5	547,395
47	77	7,763,250	1	110,011
48	91	9,296,569	5	560,758
49	66	6,689,341	2	225,843
50	43	4,479,692	2	231,115
51	47	4,866,310	2	231,115
52	22	2,291,341		
53	16	1,650,693		
54	26	2,668,412		
TOTAL	2,737	\$ 232,778,942	107	\$ 9,034,430

Of the 2,844 active members included in the June 30, 2005 valuation data, 1,735 are vested and 1,109 have not yet completed the vesting service requirement.

TABLE 4

**THE NUMBER AND ANNUAL COMPENSATION OF
ACTIVE MEMBERS DISTRIBUTED BY SERVICE
AS OF JULY 1, 2005**

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	76	\$ 4,476,001	3	\$ 176,958
1	176	10,369,626	4	235,944
2	104	6,372,829	10	613,871
3	47	3,002,897	4	250,298
4	279	18,673,625	13	872,158
5	24	1,560,806	3	191,339
6	23	1,504,612		
7	125	9,627,067	6	449,598
8	110	8,966,391	6	482,824
9	15	1,125,196		
10	157	13,693,696	10	884,556
11	104	9,337,291	5	454,401
12	91	8,128,629		
13	6	499,972		
14	7	568,459		
15	12	990,417	1	78,117
16	68	6,221,451	2	184,892
17	206	18,524,902	3	291,928
18	271	25,130,433	4	373,125
19	249	23,615,427	7	665,184
20	114	11,149,692	3	284,672
21	54	5,355,760	2	176,253
22	75	7,519,501		
23	122	12,605,520	2	231,115
24	75	7,839,512	4	445,004
25	6	610,010	14	1,582,179
26	76	8,244,456		
27	39	4,221,461		
28	17	1,840,753	1	110,011
30	5	558,827		
31	3	320,273		
32	1	123,453		
TOTAL	2,737	\$ 232,778,942	107	\$ 9,034,430

Of the 2,844 active members included in the June 30, 2005 valuation data, 1,735 are vested and 1,109 have not yet completed the vesting service requirement.

TABLE 5

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

SERVICE RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
41	1	\$ 36,219		
43			2	\$ 70,607
44	1	54,731		
45			2	33,163
46	4	239,457	2	34,843
47	17	1,062,211	3	70,446
48	9	573,530	2	73,431
49	26	1,746,748	1	9,854
50	21	1,274,905	4	87,184
51	41	2,637,852	5	171,248
52	30	1,981,338	3	55,552
53	46	3,038,898	2	29,308
54	50	3,092,266	6	90,800
55	45	2,931,265	3	42,574
56	71	4,435,835	5	131,739
57	70	3,884,352	1	18,000
58	92	5,406,025	9	180,402
59	98	5,318,173	8	148,553
60	76	4,026,177	7	110,885
61	71	3,596,660	1	16,049
62	94	4,717,374	4	37,789
63	88	4,238,692		
64	92	4,278,188	3	48,777
65	62	2,887,685		
66	47	2,199,007	3	69,604
67	52	2,270,483	3	58,618
68	32	1,400,044		
69	31	1,225,974	1	2,600
70	26	1,110,463		
71	19	830,557	2	27,443
72	18	689,646	1	4,872
73	32	1,281,599		
74	37	1,436,477		
75	36	1,254,811		
76	29	1,013,189		
77	42	1,575,393		
78	33	996,620		
79	27	734,847	1	13,258
80	23	649,207		
81	24	663,321		
82	13	352,021		
83	10	250,646		
84	13	366,484		

TABLE 5

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

**SERVICE RETIREMENTS
(continued)**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
85	4	\$ 126,390		
86	7	191,811		
87	3	75,433		
88	3	86,227		
90	2	44,456		
91	1	25,670		
93	3	61,146		
95	2	45,219		
99	1	25,607		
TOTAL	1,675	\$ 82,441,331	84	\$ 1,637,599

TABLE 6

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

BENEFICIARIES OF DECEASED PENSIONERS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
19			1	\$ 14,180
47			1	36,795
48			1	37,326
53			2	68,294
54			1	48,935
55			1	33,213
57			2	69,568
58	1	\$ 8,826	7	274,776
59			3	91,731
60			3	94,704
61			2	87,326
62			5	145,733
63	1	37,163	6	255,443
64			3	86,416
65			8	242,428
66			4	134,141
67			10	317,758
68			4	109,427
69			4	120,989
70			3	93,019
71			6	161,713
72			10	301,943
73			16	417,072
74			11	254,841
75			11	286,307
76			11	298,781
77			13	304,814
78			8	226,471
79			11	269,646
80			6	137,131
81			8	206,773
82			8	189,561
83			7	185,364
84			10	218,753
85			7	164,805
86			7	133,421
87			10	216,152
88			2	38,497
89			3	47,516
90			6	101,684
91			3	48,260
92			2	35,091
94			1	17,582

TABLE 6

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

**BENEFICIARIES OF DECEASED PENSIONERS
(continued)**

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
95			2	\$ 36,477
96			1	19,654
98			1	22,837
TOTAL	2	\$ 45,989	252	\$ 6,703,348

TABLE 7

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

BENEFICIARIES OF DECEASED ACTIVE EMPLOYEES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
29			1	\$ 42,235
37			1	38,757
39			1	61,983
40			1	61,771
41			1	34,075
42			1	59,162
43			1	60,935
46			1	66,211
47			2	101,614
50			1	36,958
51			1	41,668
53			2	98,692
54			2	75,914
55			1	50,759
56			3	90,975
58			1	33,170
59			1	45,953
60			3	102,406
61			3	104,139
62			3	131,879
63			3	94,852
64			2	72,835
65			2	56,161
66			1	19,531
67			1	20,165
68			1	36,713
70			2	49,512
71			1	32,712
73			2	42,523
75			3	86,500
76			3	62,827
77			1	34,708
78			1	21,467
79			1	28,480
80			1	16,943
81			3	66,972
83			1	29,436
84			3	42,521
85			1	17,808
86			1	15,350
87			1	15,573
88			1	13,837
89			2	26,830

TABLE 7

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

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

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
90			1	\$ 13,567
91			1	11,745
93			1	17,923
94			1	18,350
98			1	11,604
TOTAL			74	\$ 2,316,701

TABLE 8

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF BENEFICIARIES DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

CHILDREN OF DECEASED ACTIVE EMPLOYEES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
13			1	\$ 11,915
15	1	\$ 15,959		
17			1	11,915
TOTAL	1	\$ 15,959	2	\$ 23,830

TABLE 9

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

ORDINARY DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
36	1	\$ 27,747		
37	4	111,351		
38	1	31,934		
39	6	185,602	1	\$ 10,392
40	4	102,206		
41	6	176,945	2	47,917
42	5	166,448	4	106,836
43	4	117,890	2	13,104
44	2	60,710	2	62,891
45	1	33,872	1	16,531
46	3	111,520	2	59,133
47	1	33,563		
48	2	71,773		
49	3	78,013	1	5,418
52	2	82,113		
53	3	127,769		
54	2	21,926	2	232
55	1	23,676	1	19,750
56	1	46,052		
57	1	22,027		
58	5	141,951	1	29,428
60	3	76,518		
61	2	46,330	2	21,336
62	2	44,704		
63	4	99,427	1	7,280
64	2	34,989		
65	5	108,141		
66	2	67,556		
67	4	84,019		
68	1	17,028		
77	2	34,760		
78	1	19,358		
79	1	15,811		
80	2	35,239		
TOTAL	89	\$ 2,458,969	22	\$ 400,248

TABLE 10

**THE NUMBER AND ANNUAL RETIREMENT
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED
BY AGE AS OF JULY 1, 2005**

ACCIDENTAL DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
33	1	\$ 48,278		
36	1	45,457		
37	2	96,407		
38	4	199,517	1	\$ 51,840
39	2	102,056	1	9,100
40	4	221,031	1	52,296
41	4	179,586	1	4,784
42	3	160,668	1	55,534
43	5	253,978		
44	6	246,163	3	31,331
45	5	255,805	2	49,602
46	1	55,036		
47	2	87,408	1	28,137
48	1	59,630	2	101,897
49	5	229,302		
50	1	58,108		
51	3	161,545		
53	3	135,249		
55	3	160,364	1	46,758
58	1	49,560		
59	2	39,871	1	11,160
60	1	67,466	1	18,547
61	3	95,806		
62	1	24,883		
63	5	143,007		
64	1	23,564		
65	2	69,047		
66	3	93,560		
67	1	40,724		
68	1	46,022		
74	1	25,657		
80	2	65,965		
TOTAL	80	\$ 3,540,720	16	\$ 460,985