COMMONWEALTH OF PENNSYLVANIA

STATE EMPLOYEES' RETIREMENT SYSTEM

2002 ACTUARIAL REPORT

HAY GROUP
APRIL 23, 2003

Hay Group. Inc.
Suite 500
4301 North Fairfax Drive
Arlington, VA 22203
USA

April 23, 2003

Mr. John Brosius
Executive Director
State Employees' Retirement System
30 North Third Street
Harrisburg, PA 17108-1147

HayGroup

Dear Mr. Brosius:

The purpose of this letter is to certify the actuarial adequacy of the contributions being made by the State of Pennsylvania and other participating agencies to the Pennsylvania State Employees' Retirement System (SERS), and to discuss the approach currently being taken toward meeting the financing objectives of the plan.

The results provided herein are based upon the December 31, 2002 actuarial valuation. The December 31, 2002 actuarial valuation recognizes the first stage of the two-stage cost-of-living increase that became effective in July of 2002 under Act 2002-38. The liability for the second stage of the cost-of-living increase, which is not effective until July of 2003, has been estimated and included for accounting disclosure purposes in Schedule H (Page 1 of 4) and Schedule I.

As provided under Act 2002-34, during March of 2003 the SERS Board established a new Benefits Completion Plan (or "415(m) Plan") in accordance with IRC Section 415(m). This new plan, separate and distinct from the SERS plan and trust, provides benefits to members whose post-July 1, 2001 SERS benefits are limited by IRC Section 415(b) maximum benefit limitations. A separate December 31, 2002 actuarial valuation was performed for this 415(m) Plan to determine employer contribution requirements for fiscal year 2003-2004. The resulting 415(m) Plan contribution rate has been included in the Valuation Highlights herein and added to the contribution rates for the SERS plan to determine overall total 2003-2004 employer contribution requirements.

The funding objective of the SERS plan is set forth in the SERS code. The annual employer contribution is equal to the sum of the following:

(1) The employer share of the normal cost.

(2) The amortization of the unfunded liabilities as of December 31, 2001 over a ten-year period beginning July 1, 2002 and ending on June 30, 2012.

(3) The amortization of changes in liability after 2001 over ten-year periods beginning with the July first following the effective date of the change. Changes include actuarial gains and losses and plan amendments.

The amortization payments are level amounts over each ten-year period. The employer cost is determined as a percent of payroll, and the employer contributes that percent of the payroll of all covered members during each fiscal year.

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All costs and liabilities have been determined in conformance with generally accepted actuarial principles and procedures in accordance with the principles of practice prescribed by the American Academy of Actuaries. The calculations were performed on the basis of actuarial assumptions and methods, which are internally consistent, and reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent the best estimate of anticipated experience under the plan.

The actuarial valuation is based on financial and participant data, which is prepared by SERS staff. The data are reviewed for internal and year-to-year consistency as well as general reasonableness prior to their use in the actuarial valuation.

The actuarial valuation uses assumptions regarding future rates of investment return and rates of retirement, withdrawal, death, and disability among SERS members and their beneficiaries. The current set of assumptions used in the December 31, 2002 actuarial valuation was adopted by the Board and was based on actual experience of SERS during the years 1996 through 2000.

The actuarial value of assets is developed by recognizing the difference between the expected actuarial value of assets and the market value of assets over a five-year period.

Government Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans* establishes the range of funding methods for the Unfunded Actuarial Accrued Liability. The SERS payments are within the range established under GASB #25.

Based upon the valuation results, it is our opinion that the Pennsylvania State Employees' Retirement System continues in sound condition in accordance with generally accepted actuarial principles and procedures.

Respectfully submitted,
Hay Group

By ________________________________	By ________________________________
Edwin C. Hustead, F.S.A.	Brent M. Mowery, F.S.A.
Member American Academy of Actuaries	Member American Academy of Actuaries
Enrolled Actuary No. 02-1499	Enrolled Actuary No. 02-3885

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State Employees' Retirement System
Valuation Highlights

		December 31, 2002 Valuation		December 31, 2001 Valuation
Summary of Contributions as a Percent of Total Compensation				
SERS Plan Contribution				
Normal Cost		8.43%		8.64%
Amortization of Liabilities		-7.39%		-12.03%
Total SERS Plan Contribution		1.04%		-3.39%
415(m) Plan Contribution		0.03%		N/A
Total Contribution		1.07%		-3.39%
Demographic Characteristics of the Population				
Active Participants:				
Number		111,059		109,716
Average age		46.1		46.0
Average service		13.5		13.7
Average annualized compensation	$	43,631	$	42,172
Total annualized compensation	$	4,845,615,000	$	4,626,943,000
Funding payroll	$	5,093,454,000	$	4,872,375,000
Annuitants and Beneficiaries:				
Number		91,228		89,217
Average age		68.7		68.8
Total annual pension	$	1,169,299,912	$	1,035,957,692
Inactive Participants:				
Number		5,216		4,877
Assets				
Market Value Assets	$	20,879,558,637	$	24,706,063,446
Actuarial Value of Assets	$	27,497,464,261	$	27,505,493,986

State Employees' Retirement System

Employer Contribution Rate by Group
Fiscal Year 2003-2004

	SERS Plan	415(m) Plan	Total
Class AA Members:			
Age 60 Retirement	0.47%	0.03%	0.50%
Age 50 Retirement	1.40%	0.03%	1.43%
Park Rangers	2.12%	0.03%	2.15%
Capitol Police	2.12%	0.03%	2.15%
Enforcement Officers	1.40%	0.03%	1.43%
Class A Members:			
Age 60 Retirement	0.38%	0.03%	0.41%
Age 50 Retirement	1.12%	0.03%	1.15%
Park Rangers	1.86%	0.03%	1.89%
Capitol Police	1.86%	0.03%	1.89%
State Police	8.42%	0.03%	8.45%
Enforcement Officers	1.12%	0.03%	1.15%
Class C Members:			
State Police	8.42%	0.03%	8.45%
Enforcement Officers	1.12%	0.03%	1.15%
Class D Members:			
D-3 Legislators	4.20%	0.03%	4.23%
D-4 Legislators	0.00%	0.03%	0.03%
Class E Members	0.60%	0.03%	0.63%

General Discussion

The liabilities and costs in this report were based on actuarial assumptions adopted by the State Employees' Retirement Board in 2001 and funding procedures specified in the State Employees' Retirement System (SERS) code. The most important actuarial assumptions are the investment return and salary growth. The investment return assumption is 8.5 percent per year. Salary growth is the total of assumed increases in salary rates and career salary growth. It is assumed that the salary rates will increase at 3.3 percent a year and that career salary growth will average an additional 3.5 percent a year. The total average salary increase for an individual will be 6.8 percent a year. The investment return and the salary rate increase assumptions are based on an underlying inflation rate of 3.0 percent a year.

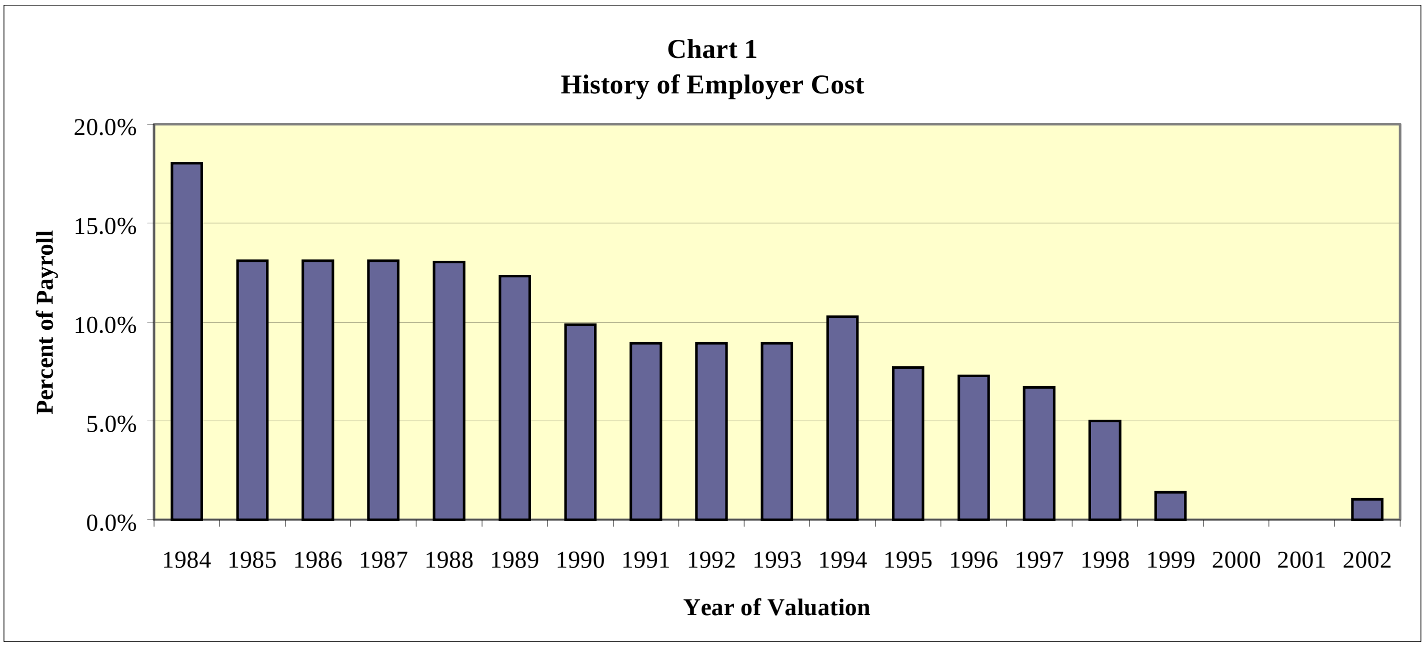
Although this valuation is not directly impacted, it should be noted that during March of 2003 the SERS Board established a new Benefits Completion Plan (or "415(m) Plan") in accordance with IRC Section 415(m). This new plan, separate and distinct from the SERS plan and trust, provides benefits to members whose post-July 1, 2001 SERS benefits are limited by IRC Section 415(b) maximum benefit limitations. A separate December 31, 2002 actuarial valuation was performed for this 415(m) Plan to determine employer contribution requirements for fiscal year 2003-2004. The resulting 415(m) Plan contribution rate has been included in the Valuation Highlights herein; however, the costs and liabilities for this new plan are not otherwise included in this valuation or the schedules of this report.

The SERS plan employer contribution is determined as the total of the normal cost plus the amortization of the unfunded liability. This unfunded liability is negative so the net amortization of the unfunded liability reduces the normal cost. For the past two valuations (as of December 31, 2000 and December 31, 2001), the net amortization credit was greater than the normal cost, resulting in a zero basic employer contribution for most employees. For this valuation, the net amortization credit is less than the normal cost. Thus, all employers now have a basic employer contribution requirement.

Act 2002-38 established a two-stage cost-of-living increase whereby: (i) annuitants who retired on or before July 1, 1990 began to receive an additional annuity beginning in July 2002, and (ii) annuitants who retired after July 1, 1990 but on or before July 1, 2002 will begin to receive an additional annuity in July 2003. Since funding for the first stage will begin on July 1, 2003, that cost-of-living increase has been included in this valuation. Funding for the second stage will begin on July 1, 2004; therefore, that cost-of-living increase, for most purposes, has not been included in this valuation. The liability for the second stage of the cost-of-living increase has been estimated and included for accounting disclosure purposes in Schedule H (Page 1 of 4) and Schedule I. The second stage of the cost-of-living increase will be fully reflected in the next (December 31, 2003) valuation.

History of the Employer Contribution Rate

Chart 1 shows the history of the employer contribution rate from 1984 through 2002. With some fluctuations, the general trend has been downward with the rate declining from 18.03 percent in 1984 to zero in 2000 and 2001, and now up to 1.04 percent in 2002. The primary reasons for the downward trend were (i) the excess of the actual investment return over the assumed valuation investment return over most of the last twenty years, and (ii) the reduction in cost reflected in the changes in assumptions adopted every five years. The change from two years (2000 and 2001) of zero cost to this year's 1.04 percent has occurred primarily as a result of the less favorable investment experience of the past few years. The average annual compounded investment return in the last three years has been –5.7 percent as compared to an assumed annual return of +8.5 percent.



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the rate of 1.04 percent will be the employer contribution for fiscal year beginning July 1, 2003.

History of Inflation, Investment Return and Salary Growth

Table 1 below shows the rate of inflation, the nominal and real investment return based on the market value of assets, and the nominal and real salary growth for the past twenty years. The nominal rates are the actual investment rate and salary growth. The real rates are the nominal rates adjusted by removing inflation. The inflation rates shown are based on the Consumer Price Index (CPI-U) data.

Table 1

Comparison of Annual Rates of Growth

		Investment Return		Salary Growth	
Year	**Inflation**	**Nominal**	**Real**	**Nominal**	**Real**
1983	3.8	13.0	8.9	0.0	(3.7)
1984	3.9	9.4	5.2	5.1	1.1
1985	3.8	23.1	18.6	3.6	(0.2)
1986	1.1	15.2	13.9	3.5	2.4
1987	4.4	3.3	(1.1)	3.4	(1.0)
1988	4.4	12.8	8.0	5.0	0.6
1989	4.6	17.8	12.6	6.0	1.3
1990	6.1	1.0	(4.8)	5.0	(1.0)
1991	3.1	22.6	19.0	1.0	(2.0)
1992	2.9	7.4	4.4	2.1	(0.8)
1993	2.7	13.2	10.2	5.1	2.3
1994	2.7	(1.1)	(3.7)	3.9	1.2
1995	2.5	25.5	22.4	3.8	1.2
1996	3.3	15.9	12.2	2.0	(1.3)
1997	1.7	18.0	16.0	3.0	1.3
1998	1.6	16.3	14.5	3.0	1.4
1999	2.7	19.9	16.8	3.0	0.3
2000	3.4	2.2	(1.1)	3.0	(0.4)
2001	1.6	(7.9)	(9.3)	3.3	1.7
2002	2.4	(10.9)	(13.0)	3.5	1.1
Average 1983-2002	**3.1%**	**10.4%**	**7.0%**	**3.4%**	**0.3%**

Comments on Schedules

Employer Contribution Rate

Schedules A and B summarize the development of the employer contribution rate before allocation by group.

The normal cost is the level percentage of compensation needed to fund the liability for any prospective benefits earned by new active members over the period of their actual service. The normal cost calculation uses data for all active members in Class AA (60) who had not yet completed one year of credited service. The employer share of the normal cost decreased from 8.64 percent in 2001 to 8.43 percent in 2002.

The unfunded liability that existed on December 31, 2001 is being funded over 10 years from July 1, 2002. Changes in the unfunded liability will be amortized over 10 years from the July 1 following the effective date of the change. Changes can result from changes in actuarial assumptions, new legislation, or gains or losses because actual experience differs from the actuarial assumptions. Assets exceeded liabilities as of December 31, 2002 with a surplus (negative unfunded liability) of $2.21 billion. The surplus was $3.85 billion as of December 31, 2001. The reduction in the surplus of $1.64 billion was primarily attributable to investment losses over the last five years.

Schedule B shows the allocation of the unfunded liability between the liability that existed on December 31, 2001 and the change in liability during 2002. Each of these liabilities is further allocated between (i) the liability attributable to supplemental annuities (cost-of-living allowances) and (ii) the liability attributable to all other benefits. All amounts are being amortized over ten years in level dollar payments.

The negative unfunded liability as of December 31, 2002 is a temporary surplus that will gradually be recognized as an offset to future employer normal costs. The total credit for amortization of the surplus decreased from 12.03 percent of payroll in 2001 to 7.39 percent of payroll in 2002.

The employer contribution rate is equal to the total of the normal cost and the amortization of the unfunded liabilities but not less than zero. The employer contribution rate calculated as a result was zero in 2001 and 1.04 percent of payroll in 2002.

Employer Contribution Rates by Group

Schedule C summarizes the development of the employer contribution rate for each group of members with different benefits. The Class AA(60) rate is used to determine the basic contribution rate because the majority of new members enter that class. The basic employer contribution rate for Class AA benefits is 0.47 percent of salary.

The employer contribution rate for each class is a function of the Class AA(60) rate. Three adjustments are made for the Class rates. The first is to add the cost of earlier full retirement conditions if applicable. The second is to multiply by the ratio of (1) the annual accrual rate applicable to the Class to (2) the annual accrual rate of 2.5 percent for Class AA(60). Third, the Park Rangers, Capitol Police and State Police Officers are also charged the amount necessary to fund the past service cost of benefit improvements that were effective in prior years. These charges are explained in Schedule O. The complete schedule of contributions by group is shown in Table 2.

Table 2
Employer Contribution Rate by Group
Fiscal Year 2003/2004
(excluding 415(m) Plan rate)

Class AA	
Age 60 benefit	0.47%
Age 50 benefit	1.40
Park Rangers	2.12
Capitol Police	2.12
Enforcement Officers	1.40
Class A	
Age 60 benefit	0.38
Age 50 benefit	1.12
Park Rangers	1.86
Capitol Police	1.86
State Police	8.42
Enforcement Officers	1.12
Class C	
State Police	8.42
Enforcement Officers	1.12
Class D	
D-3 Legislators	4.20
D-4 Legislators	0.00
Class E	0.60

The contribution rate for Class D-4 Legislators is 0.0 percent of payroll. In conjunction with the passage of Act 2001-9, the D-4 employer contributed a lump sum amount which was more than sufficient to fund the additional cost of the higher accrual rate and the retirement at age 50. Therefore, the past service liability for Class D-4 Legislators is $0, and the past liability adjustment has been set to produce a contribution rate of zero. The excess contribution made by the D-4 employer will continue to be used to offset future D-4 employer contribution requirements.

Schedule D shows the development of the contribution rates for additional annuities for certain State Police and Enforcement Officers. These members receive an additional annuity that is equal to the accumulated member contributions and interest at retirement determined as if the members were at least age 60 at retirement. These benefits have been fully funded by past contributions so no future contribution is required.

Change in Employer Contribution Rate

Schedule E contains an analysis of the change in the employer contribution rate and unfunded liability from the 2001 to 2002 valuation. The significant losses as a result of actual annual investment returns less than the expected 8.5 percent in 2000, 2001 and 2002 were partially offset by recognition of investment gains from 1998 and 1999. The result was a net loss which amounted to a 3.60 percent of payroll increase in employer cost. The next most significant source of change was the Act 2002-38 cost-of-living increase effective in 2002, which increased employer cost by 0.77 percent of pay.

There were two other sources of change that, in combination, increased the employer cost by 0.59 percent of pay. One was the effect of pay increases being slightly greater than expected. The second was the change in unfunded liability amortization due to the higher payroll (whereby the level dollar annual amortization payments for past liabilities expressed as a percent of payroll change each year as the payroll changes). Other differences between actual experience and actuarial assumptions increased the cost by 0.09 percent of payroll.

There were three sources of change that, in combination, reduced the employer cost by 0.62 percent of salary. One was the change in the demographics of new entrants between 2001 and 2002. The second was the receipt of contributions in excess of the required zero percent. The amount needed to fully fund SERS in 2002 was negative. Since the actual contribution for employers was either zero or positive, there was a gain to the fund. The third reduction resulted from the combined effect of five different adjustments to the actuarial methods and assumptions, as described in the following paragraph.

As part of the December 31, 2002 valuation, five changes in actuarial methods and assumptions were made that resulted in a total reduction in employer cost of 0.16 percent of pay. The change with the largest effect was to modify the assumptions for the amount of service remaining to be purchased. This amount changed substantially as a result of modifications in the requirements to purchase service, so we reviewed recent information and made appropriate adjustments. A second change was to refine the salary increase assumptions. A third change was to incorporate improved data on the split of service before and after 1983. A review of the program and the data showed two corrections were needed to the valuation process. These were to extend the withdrawal assumptions for judges and to correct data on retirees entitled to guaranteed payments.

The analysis of changes in the unfunded liability generally parallels the effect of changes in the unfunded liability component of the employer contribution rate. The largest changes in unfunded liability were (i) the increase of $1.20 billion attributable to net investment losses over the last five years and (ii) the increase of $0.26 billion attributable to the cost-of-living increase effective in 2002.

The change in demographics of new entrants and gain from contributions decreased the unfunded liability. Pay increases greater than expected and the change in actuarial methods and assumptions increased the unfunded liability. Other differences resulted in a net increase in the unfunded liability.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet that compares the total assets and liabilities of $33.2 billion. The assets include current assets and the present value of future contributions. The liabilities include the present value of all benefits to current active and retired members.

Transfers were made from the Supplemental Annuity Account to the Annuity Reserve Account, the State Police Benefit Account, and the Enforcement Officers' Benefit Account for the supplemental annuity that was effective in July of 2002. The total transferred from the Supplemental Annuity Account was $256.5 million, which is the amount of liability established for amortization in Schedule B. Transfers for the supplemental annuity which will become effective in July of 2003 will be determined in connection with the next (December 31, 2003) actuarial valuation.

Each year the account balances in the three benefit payment accounts are compared to the actuarial liabilities developed in the valuation. If needed, transfers are made to bring the accounts into balance with the liabilities. The accounts go out of balance during the year as a result of differences between actual experience and the reserves set for retirees. In 2002, a transfer of $129.5 million was made from the Annuity Reserve Account to the State Accumulation Account to keep the latter account in balance.

The details of these transfers are shown in Schedule G.

Accounting Disclosure Statements

Schedule H is a statement of disclosure to report the information required by the Governmental Accounting Standards Board (GASB) Statement No. 25. Page 1 of Schedule H shows the funding progress from December 31, 1992 through December 31, 2002. The actuarial value of the assets is greater than the actuarial accrued liability as it has been since the December 31, 1992 actuarial valuation. As a result, the unfunded actuarial accrued liability (UAAL) is negative. For disclosure purposes, the accrued liabilities as of December 31, 2002 as shown in Schedule H differ from the accrued liabilities shown elsewhere in this report in that they include a liability of approximately $364,800,000 for the second stage of the Act 38 COLA.

Page 2 of Schedule H shows that the actual contribution to the system has been consistent with the Annual Required Contribution (ARC). The ARC is the actual contribution unless the contribution rates differed from the actuarial calculation. In those cases, the ARC is the amount that would have been paid based on the contribution rate calculated in the valuation.

Valuations are performed on December 31 of each year and the results are presented to the Board as a basis for determining the employer contribution rate for the year beginning July 1 after the valuation date. The Board has adopted the rate from the valuation unless information available after the valuation supported an adjustment to the valuation rate.

During 2001 and 2002, actual contributions exceeded the ARC. For the period July 1, 2001 through December 31, 2002, the ARC was set at zero. However, the System required payment from special classes for past liabilities due to retroactive benefit enhancements. Collection of those amounts resulted in the actual contributions exceeding the ARC.

Schedule I shows the results of the solvency test. A short-term solvency test is one means of checking a pension system's progress under its funding program. In this solvency test, the SERS assets are compared with the actuarial accrued liabilities. The liabilities are classified into the following categories:

- Liability for active member contributions in the Fund,
- Liability for future benefits to present retired lives, and
- Liability for service already rendered by the active members.

The schedule shows that the total actuarial accrued liability is fully covered by the assets as it has been since December 31, 1992. The accrued liabilities as of December 31, 2002 as shown in Schedule I are the same as those shown for disclosure purposes in Schedule H, that is, inclusive of approximately $364,800,000 for the second stage of the Act 38 COLA.

Plan Assets

Schedule J summarizes the development of the actuarial value of assets as of December 31, 2002. The assets are based on the financial statements prepared by SERS. The asset valuation method smoothes out year-to-year fluctuations in the market value. The approach gradually recognizes, over a 5-year period, the differences between total investment return and the actuarial assumed rate of return (8.5 percent in 2002). This smoothing method recognizes 20 percent of the 2002 asset loss of $5.0 billion this year, with the remainder to be recognized over the next four years.

Projection

Schedule K shows the number of members, contributions, and benefits from 1990 through 2002 with a projection through 2013. The first half of Schedule K shows new retirements, deaths from former employees, new survivors, and deaths from survivors during the year. The second half of Schedule K shows the projection of employer and employee contributions and a projection of the benefits and expenses.

Participant Data

Section I of Schedule L provides a distribution of the active and inactive participants as of December 31, 2002 by benefit class, sex, age, and length of service. It also shows the average annualized salary in 2002 by age group and sex. Section II of the schedule shows the retired participants and beneficiaries by age, sex, and benefit amounts.

Although we have made tests to check for reasonableness and consistency, we have not independently audited the data, which were submitted by SERS.

Plan Provisions

Schedule M contains a summary of the principal provisions of the plan. The only significant change in plan benefits since December 31, 2001 was the cost-of-living increase under Act 2002-38.

Actuarial Assumptions

Schedule N summarizes the actuarial assumptions used for the valuation. The two types of assumptions are the economic assumptions, such as the investment return and salary growth assumptions, and demographic assumptions, such as the assumed rate of mortality and retirement. These assumptions are the same as in the 2001 valuation.

Actuarial Methods

Schedule O explains the asset valuation and funding method used in the valuation, and the determination of the annual contribution. The asset valuation method amortizes investment gains and losses over five years. The funding method provides for reasonable levels of contribution that will fund the cost of future benefits with a credit for amortization of the excess of assets over liabilities. Schedule O also explains how the individual class rates are determined. The final section of Schedule O discusses the plan provisions that are not valued.

Definitions

Schedule P defines certain technical terms used in the valuation.

State Employees' Retirement System
Unfunded Liability and Normal Cost as of December 31, 2002

I.	Present Value of Benefits:			
	1) Active and Inactive Participants			
		a)	Superannuation and Withdrawal	$ 21,093,077,496
		b)	Disability	1,047,835,089
		c)	Death	1,265,634,335
		d)	Refunds	34,549,262
		e)	Special Police and Enforcement Officer Benefits	9,304,030
		f)	Subtotal	$ 23,450,400,212
	2)		Annuitants and Beneficiaries	9,764,869,482
	3)		Total	$ 33,215,269,694
II.	Present Value of Member and Employer Contributions:			
	1)		Employer Portion of Normal Cost	$ 4,439,113,223
	2)		Member Contributions	3,490,567,430
	3)		Total	$ 7,929,680,653
III.	Actuarial Accrued Liability: (I) - (II)			$ 25,285,589,041
IV.	Actuarial Value of Assets			$ 27,497,464,261
V.	Unfunded Liability (III) - (IV)			$ (2,211,875,220)
VI.	Employer Normal Cost Rate			
	1) Normal Cost Rate for new active members to fund:			
		a)	Superannuation and Withdrawal	12.54%
		b)	Disability	0.98%
		c)	Death	0.74%
		d)	Refunds	0.42%
		e)	Total	14.68%
	2) Member Deductions			6.25%
	3) Employer Normal Cost (1) - (2)			8.43%

State Employees' Retirement System

Employer Contribution Rate in Fiscal Year 2003 - 2004

	Funding Period 10 Years from July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/02	Annual Payment Amount	Payment as a Percent of Payroll *
I. Amortization of Liability (Asset) For:					
1) Supplemental Annuities as of 12/31/01	2002	$1,143,657,729	$ 1,066,565,109	$ 174,303,527	3.42%
2) Other Benefits as of 12/31/01	2002	(4,990,395,068)	(4,653,998,418)	(760,580,231)	-14.93%
3) Supplemental Annuities (2002 COLA)	2003	256,500,000	256,500,000	39,092,863	0.77%
4) Changes in 2002	2003	1,119,058,089	1,119,058,089	170,554,324	3.35%
Total			**$(2,211,875,220)**	**$ (376,629,517)**	**-7.39%**
II. Employer Normal Cost					**8.43%**
III. Total Employer Cost (I) + (II)					**1.04%**

* The payment is expressed as a percentage of the total projected payroll for active members in fiscal year 2003-2004 of $5,093,454,000. Percentages may not add due to rounding.

State Employees' Retirement System
Employer Contribution Rate by Group
(excluding 415(m) Plan rate)

Employer Group (1)	Basic Contribution Rate (2)	Age 50 Retirement Adjustment (3)	Multiplier Adjustment* (4)	Past Liability Adjustment (5)	Adjusted Contribution Rate** (6)	Projected 2003-2004 Payroll (7)	Employer Contribution Amount (8)
Class AA - Age 60 Retirement	0.47%		1.0000		0.47%	$ 3,942,594,000	18,530,192
Class A - Age 60 Retirement	0.47%		0.8000		0.38%	43,018,000	163,468
Class AA - Age 50 Retirement (Including Enforcement Officers)	0.47%	0.93%	1.0000		1.40%	695,303,000	$ 9,734,242
Class A - Age 50 Retirement (Including Enforcement Officers)	0.47%	0.93%	0.8000		1.12%	15,271,000	171,035
Class AA - Park Rangers & Capitol Police	0.47%	0.84%	1.0000	0.81%	2.12%	11,473,000	243,228
Class A - Park Rangers & Capitol Police	0.47%	0.84%	0.8000	0.81%	1.86%	38,000	707
State Police (Class A & Class C)	0.47%	0.93%	1.1395	6.82%	8.42%	278,715,000	23,467,803
Class D3	0.47%	0.93%	3.0000		4.20%	460,000	19,320
Class D4	0.47%	0.93%	1.2000	-1.68%	0.00%	15,000,000	-
Class E	0.47%		1.2677		0.60%	91,582,000	549,492
					Total***	$ 5,093,454,000	$ 52,879,487

* The multiplier adjustment at column 4 is the adjustment for the employer group contribution rate. Because the majority of SERS members are covered under Class AA(60), the 2.5 percent accrual rate for that Class is used to determine the basic contribution rate. Column (4) is the ratio of the class contribution rate to 2.5 percent.

** The adjusted contribution rate is [(2) + (3)] times (4) + (5).

*** The total employer contribution ($52,879,487) is approximately equal to the average employer contribution rate from Schedule B (1.04 percent) times the total projected payroll of $5,093,454,000. The Basic Contribution Rate of 0.47 percent was determined as the percentage needed to produce employer contribution amounts by employer group that sum to $52,879,487.

State Employees' Retirement System
State Police and Enforcement Officers Additional Annuity Rate
(Fiscal Year 2003 - 2004)

		State Police	Enforcement Officers
1)	Balance in Benefit Account as of December 31, 2002	$1,133,884,172	$30,182,350
2)	Present Value of Benefits for Annuitants and Beneficiaries	1,119,978,976	28,232,009
3)	Assets available for additional annuities for Active Members: (1) - (2)	13,905,196	1,950,341
4)	Present Value of additional annuities for Active Members	8,034,729	1,269,301
5)	Present Value of Future Contribution to fund additional annuities: (4) - (3); not less than zero	-	-
6)	Present Value of Future Compensation for eligible Active Members	*	*
7)	Contribution Rate as a percentage of payroll payable January 1: (5) / (6)	0.00%	0.00%

* Not calculated because additional annuity is fully funded.

State Employees' Retirement System
Analysis of the Change in Employer Contribution Rate

		Normal Cost	Unfunded Liability	Total
I.	December 31, 2001 Valuation	8.64%	-12.03%	-3.39%
II.	Changes in the December 31, 2002 Valuation:			
	1) Loss from investment earnings		3.60%	3.60%
	2) Change in demographics of new entrants	0.03%	-0.05%	-0.02%
	3) Pay increase greater than assumptions		0.07%	0.07%
	4) Change in actuarial methods and assumptions	-0.24%	0.08%	-0.16%
	5) Gain from contributions		-0.44%	-0.44%
	6) Act 2002-38 cost-of-living adjustment		0.77%	0.77%
	7) Change in amortization due to higher payroll		0.52%	0.52%
	8) Other differences between actual experience and actuarial assumptions		0.09%	0.09%
	9) Total Change	-0.21%	4.64%	4.43%
III.	December 31, 2002 Valuation: (I) + (II.9)	8.43%	-7.39%	1.04%

Analysis of the Change in the Unfunded Liability

I.	December 31, 2001 Unfunded Liability	$ (3,846,737,339)
II.	Expected Amortization Payment	(586,276,704)
III.	Expected Liability as of December 31, 2002 [((I) x 1.085) - (II)]	$ (3,587,433,309)
IV.	Change in Liability Due to:	
	1) Loss from investment earnings	$ 1,204,242,279
	2) Change in demographics of new entrants	(15,797,556)
	3) Pay increase greater than assumptions	23,957,188
	4) Change in actuarial methods and assumptions	27,505,504
	5) Gain from contributions	(148,463,188)
	6) Act 2002-38 cost-of-living adjustment	256,500,000
	7) Other differences between actual experience and actuarial assumptions	27,613,861
	8) Total change	$ 1,375,558,089
V.	December 31, 2002 Unfunded Liability: (III) + (IV. 8)	$ (2,211,875,220)

State Employees' Retirement System

Actuarial Balance Sheet as of December 31, 2002

ASSETS

Present Assets:	
Members Savings Account	$ 3,498,671,636
Annuity Reserve Account	8,616,658,497
State Police Benefit Account	1,133,884,172
Enforcement Officers Benefit Account	30,182,350
State Accumulation Account *	8,923,227,091
Supplemental Annuity Account	(1,323,065,109)
Total Present Assets (Market Value)	$ 20,879,558,637
Adjustment to Smooth Market Fluctuations	6,617,905,624
Total Present Assets (Actuarial Value)	$ 27,497,464,261
Present Value of Future Contributions	
Members' Contributions (Employee)	$ 3,490,567,430
Normal Cost Contributions (Employer)	4,439,113,223
Accrued Liability Amortization (Employer)	(3,534,940,329)
Supplemental Annuity Amortization (Employer)	1,323,065,109
Special State Police Contributions (Employer)	0
Special Enforcement Officer Contributions (Employer)	0
Total Future Contributions	$ 5,717,805,433
TOTAL ASSETS	$ 33,215,269,694

LIABILITIES

Present Value of Benefits Payable to Annuitants and Beneficiaries from:	
Annuity Reserve Account	$ 8,616,658,497
State Police Benefit Account	1,119,978,976
Enforcement Officers Benefit Account	28,232,009
Total for Annuitants and Beneficiaries	$ 9,764,869,482
Present Value of Benefits to Active and Inactive Members from:	
Members Savings Account and State Accumulation Account	
Superannuation and withdrawal	$ 21,093,077,496
Disability	1,047,835,089
Death	1,265,634,335
Refunds	34,549,262
Subtotal	$ 23,441,096,182
State Police Benefit Account	8,034,729
Enforcement Officers Benefit Account	1,269,301
Total Present Value of Benefits to Active and Inactive Members	$ 23,450,400,212
TOTAL LIABILITIES	$ 33,215,269,694

* Includes $2,078,447 in directed commissions.

State Employees' Retirement System
Required Transfers Within SERS Accounts

I. Annuity Reserve Account

Balance as reported by SERS	$ 8,510,412,093
Transfer to State Accumulation Account	(129,495,295)
Transfer from Supplemental Annuity Account	235,741,699
December 31, 2002 balance after transfers	$ 8,616,658,497

II. State Accumulation Account *

Balance as reported by SERS	$ 8,793,731,795
Transfer from Annuity Reserve Account	129,495,295
December 31, 2002 balance after transfers	$ 8,923,227,090

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	$ 29,294,425
Transfer from Supplemental Annuity Account	887,925
December 31, 2002 balance after transfers	$ 30,182,350

IV. State Police Benefit Account

Balance as reported by SERS	$ 1,114,013,796
Transfer from Supplemental Annuity Account	19,870,376
December 31, 2002 balance after transfers	$ 1,133,884,172

V. Supplemental Annuity Account

Balance as reported by SERS	$ (1,066,565,109)
Transfer to Annuity Reserve Account	(235,741,699)
Transfer to State Police Benefit Account	(19,870,376)
Transfer to Enforcement Officers' Benefit Account	(887,925)
December 31, 2002 balance after transfers	$ (1,323,065,109)

* Balance includes $2,078,447 in directed commissions.

State Employees' Retirement System
Accounting Disclosure Statements

I. Schedule of Funding Progress as of December 31, 2002

(Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Funded Ratio (a) / (b)	Covered Payroll (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll ((b-a)/c)
12/31/1992	11,769,388	11,488,414	(280,974)	102.4%	3,533,428	-8.0%
12/31/1993	13,060,613	12,213,736	(846,877)	106.9%	3,731,515	-22.7%
12/31/1994	13,991,485	13,742,056	(249,429)	101.8%	3,990,440	-6.3%
12/31/95 *	15,510,309	15,067,205	(443,104)	102.9%	4,021,605	-11.0%
12/31/1996	16,841,069	15,936,616	(904,453)	105.7%	4,163,683	-21.7%
12/31/1997	18,565,136	17,288,413	(1,276,723)	107.4%	4,219,034	-30.3%
12/31/1998	20,670,711	18,357,899	(2,312,812)	112.6%	4,446,147	-52.0%
12/31/1999	23,624,267	19,091,840	(4,532,427)	123.7%	4,519,112	-100.3%
12/31/00 *	26,094,306	19,702,278	(6,392,028)	132.4%	4,769,180	-134.0%
12/31/2001	27,505,494	23,658,757	(3,846,737)	116.3%	4,872,375	-78.9%
12/31/2002	27,497,464	25,650,389**	(1,847,075)**	107.2%	5,093,454	-36.3%

* Revised economic and demographic assumptions due to experience review.

** For accounting disclosure purposes, these accrued liabilities (as well as the accrued liabilities in Schedule I on page 23), include a liability of approximately $364,800,000 for the second stage of the Act 38 COLA which becomes payable in July 2003 and for which funding begins July 1, 2004. The accrued liabilities appearing elsewhere in this report do not include this liability.

II. Schedule of Employer Contributions as of December 31, 2002

(Dollars in Thousands)

Calendar Year	Annual Required Contribution	Actual Contribution	Percentage Contributed
1992	319,093	319,093	100.0%
1993	310,089	304,122	98.1%
1994	342,158	342,927	100.2%
1995	376,692	384,506	102.1%
1996	373,903	373,903	100.0%
1997	324,093	324,093	100.0%
1998	310,501	310,501	100.0%
1999	269,869	269,869	100.0%
2000	168,002	168,002	100.0%
2001	52,104	76,709	147.2%
2002	22,906	50,831	221.9%

Notes to Governmental Accounting Standards Board Statement No. 25

The actual contribution amounts in the above table include the employer share of regular contributions, the employer share of purchased service and contributions for employee service under the Public School Employees' Retirement System.

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

Accounting Disclosure Statements (continued)

Valuation Date	December 31, 2002
Actuarial cost method	Variation of Entry-age Actuarial Cost Method
Amortization method	10 year schedule with level payments
Remaining amortization period	9 to 10 years
Asset valuation method	5-year smooth market
Actuarial Assumptions	
Investment rate of return	8.5 percent
Projected salary increases	Average increase of 6.8 percent (range: 5.16 to 8.98 percent)
Inflation	3.0 percent
Cost-of-living adjustments	None

The Annual Required Contribution (ARC) is equal to the sum of the following:

The employer share of the normal cost.

The amortization of the unfunded liabilities as of December 31, 2001 over a ten-year period ending on June 30, 2012.

The amortization of changes in liability after 2001 over ten-year periods typically beginning with the July first following the effective date of the change in liability. Changes include actuarial gains and losses and plan amendments.

Valuations are performed on December 31 of each year and the results are presented to the Board as a basis for determining the employer contribution rate for the year beginning July 1 after the valuation date. The Board has adopted the rate from the valuation unless information available after the valuation supports an adjustment to the valuation rate.

The Board adopted the valuation rate as the contribution rate since 1995. The Board adopted slightly different rates in 1993 and 1994 based on information available after the valuation was performed. In 1993, the valuation rate of 9.27 percent was lowered to 8.92 percent because it was determined that the payroll reported for the valuation was unusually high and that future payrolls were expected to be relatively lower. In 1994, the valuation rate of 8.53 percent was increased to 8.92 percent to allow for the extension of the early retirement window and acceleration of the longevity pay scales.

Accounting Disclosure Statements (continued)

During 2001 and 2002, actual contributions exceeded the ARC. For the period July 1, 2001 through December 31, 2002, the ARC was set at zero. However, contributions were made by employers of some special class employees for the cost of additional benefits including payment of past liabilities for retroactive benefit enhancements. Collection of those amounts resulted in the actual contributions exceeding the ARC.

The actuary agreed with the actions taken by the Board that resulted in some difference between the ARC and the actual contribution. The table above shows the ARC based on the actuarial valuation. The effect of the adjustments in 1993 and 1994 extended over three calendar years so the 1993 through 1995 actual contributions are different from the ARCs in those years. The actual contributions were also higher than the ARC in 2001 and 2002.

All of the amortization payments are based on a 10-year schedule of contributions which remain level during the amortization period. The employer cost is determined as a percent of payroll, and the employer contributes that percent of the payroll of all covered members during each fiscal year.

GASB #25 establishes the range of funding methods for the Unfunded Actuarial Accrued Liability. The payments for SERS are within the range of funding specifications under GASB #25.

State Employees' Retirement System
Solvency Test

Valuation Date	Actuarial Accrued Liabilities For: (1) Active Member Contributions	(2) Retirees & Beneficiaries	(3) Active Members (Employer Financed Portion)	Total Actuarial Accrued Liability (AAL)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Assets (1)	(2)	(3)	Funded Ratio
	(Amounts in Thousands)								
December 31, 1992	$ 1,994,567	$ 4,621,318	$ 4,872,529	$ 11,488,414	$11,769,388	100.0%	100.0%	100.0%	102.4%
December 31, 1993	2,170,593	4,806,907	5,236,236	12,213,736	13,060,613	100.0	100.0	100.0	106.9
December 31, 1994	2,352,731	5,039,221	6,350,104	13,742,056	13,991,485	100.0	100.0	100.0	101.8
December 31, 1995	2,499,485	5,649,454	6,918,265	15,067,205	15,510,309	100.0	100.0	100.0	102.9
December 31, 1996	2,646,630	6,027,333	7,262,653	15,936,616	16,841,069	100.0	100.0	100.0	105.7
December 31, 1997	2,748,177	6,951,411	7,588,825	17,288,413	18,565,136	100.0	100.0	100.0	107.4
December 31, 1998	2,904,232	7,200,000	8,253,666	18,357,899	20,670,711	100.0	100.0	100.0	112.6
December 31, 1999	2,989,489	7,779,993	8,322,358	19,091,840	23,624,267	100.0	100.0	100.0	123.7
December 31, 2000	3,182,776	8,148,876	8,370,626	19,702,278	26,094,306	100.0	100.0	100.0	132.4
December 31, 2001	3,344,107	8,684,734	11,629,915	23,658,757	27,505,494	100.0	100.0	100.0	116.3
December 31, 2002	3,498,672	10,129,669*	12,022,048	25,650,389*	27,497,464	100.0	100.0	100.0	107.2

* For accounting disclosure purposes, these accrued liabilities (as well as the accrued liabilities in Schedule H on page 19), include a liability of approximately $364,800,000 for the second stage of the Act 38 COLA which becomes payable in July 2003 and for which funding begins July 1, 2004. The accrued liabilities appearing elsewhere in this report do not include this liability.

State Employees' Retirement System
Actuarial Value of Assets

I.	Development of 12/31/02 Expected Actuarial Value:		
	1)	Actuarial Value as of 12/31/01	$ 27,505,493,986
	2)	Contributions in 2002	355,064,349
	3)	Benefits and Expenses in 2002	(1,450,272,440)
	4)	Investment return at 8.5% to 12/31/02 on (1)	2,337,966,989
	5)	Investment return at 8.5% to 12/31/02 on (2) and (3) .5 x ((2) + (3))	(46,546,344)
	6)	Expected Actuarial Value as of 12/31/02: (1) + (2) + (3) + (4) + (5)	$ 28,701,706,540
II.	Previous Differences Not Yet Amortized:		
	1)	Unrecognized amount of 12/31/98 Difference: .2 x $1,805,107,670	$ 361,021,534
	2)	Unrecognized amount of 12/31/99 Difference: .4 x $2,988,135,569	1,195,254,228
	3)	Unrecognized amount of 12/31/00 Difference: .6 x ($1,388,417,592)	(833,050,555)
	4)	Unrecognized amount of 12/31/01 Difference: .8 x ($4,403,319,681)	(3,522,655,745)
	5)	Total	$ (2,799,430,538)
III.	Gain or Loss from 2002		
	1)	Market Value of Assets on 12/31/02	$ 20,879,558,637
	2)	Expected Market Value II(5) + I(6)	25,902,276,002
	3)	Gain (loss) from 2002 Investments (1) - (2)	$ (5,022,717,365)
IV.	Development of Actuarial Value of Assets as of 12/31/02:		
	1)	20% of $1,805,107,670 (12/31/98 Difference):	$ 361,021,534
	2)	20% of $2,988,135,569 (12/31/99 Difference):	597,627,114
	3)	20% of ($1,388,417,592) (12/31/00 Difference):	(277,683,518)
	4)	20% of ($4,403,319,681) (12/31/01 Difference):	(880,663,936)
	5)	20% of ($5,022,717,365) (12/31/02 Difference):	(1,004,543,473)
	6)	Total Difference: (1) + (2) + (3) + (4) + (5)	$ (1,204,242,279)
	7)	Actuarial Value at 12/31/02: I(6) + IV(6)	$ 27,497,464,261

State Employees' Retirement System
Projection of Population, Benefits, and Contributions

Projection of Annuitants and Employees
Actual Data Through 2002

Calendar Year	New Retirements During the Year	Deaths During the Year	Former Employees (EOY)	New Survivors During the Year	Deaths During the Year	Survivors (EOY)	Total Retired and Survivor Lives	Active Employees
1990			68,156			6,066	74,222	111,248
1991			69,908			6,332	76,240	105,731
1992			73,897			6,595	80,492	109,609
1993			73,894			6,796	80,690	111,962
1994			73,780			7,055	80,835	114,120
1995			74,110			7,094	81,204	112,637
1996			75,609			7,477	83,086	110,922
1997			77,667			7,790	85,457	108,684
1998			78,017			7,817	85,834	108,893
1999			80,095			7,948	88,043	108,035
2000			80,289			8,103	88,392	109,469
2001			80,911			8,306	89,217	109,716
2002			82,805			8,423	91,228	111,059
2003	4,746	3,110	84,441	622	461	8,584	93,025	111,059
2004	4,686	3,095	86,032	619	477	8,726	94,758	111,059
2005	4,770	3,118	87,684	624	517	8,833	96,517	111,059
2006	4,879	3,137	89,426	627	553	8,907	98,333	111,059
2007	5,101	3,157	91,370	631	584	8,954	100,324	111,059
2008	5,124	3,175	93,319	635	611	8,978	102,297	111,059
2009	5,061	3,188	95,192	638	632	8,984	104,176	111,059
2010	4,877	3,207	96,862	641	651	8,974	105,836	111,059
2011	4,682	3,227	98,317	645	666	8,953	107,270	111,059
2012	4,488	3,246	99,559	649	677	8,925	108,484	111,059
2013	4,268	3,267	100,560	653	685	8,893	109,453	111,059

State Employees' Retirement System
Projection of Population, Benefits, and Contributions

Projection of Expected Contributions and Benefits
Actual Data Through 2002
(Dollars in Millions)

	Contributions		Contributions as a Percent of Pay		Benefits and
Calendar Year	Employee	Employer	Employee	Employer	Expenses
1990	$ 175	$ 418			$ 607
1991	183	381			664
1992	187	319			851
1993	190	304			781
1994	193	343			812
1995	202	385			894
1996	210	374			943
1997	213	324			1,037
1998	222	311			1,080
1999	224	270			1,248
2000	232	168			1,198
2001	240	77			1,266
2002	304	51			1,450
2003	314	41	6.3%	0.8%	1,610
2004	324	214	6.3%	4.1%	1,747
2005	335	566	6.3%	10.6%	1,883
2006	346	926	6.3%	16.8%	2,080
2007	358	1,276	6.3%	22.4%	2,306
2008	369	1,488	6.3%	25.2%	2,484
2009	382	1,543	6.3%	25.3%	2,668
2010	394	1,584	6.3%	25.2%	2,927
2011	407	1,716	6.3%	26.4%	3,207
2012	421	1,845	6.3%	27.5%	3,421
2013	434	1,866	6.3%	26.9%	3,640

The projection includes the supplemental annuity increase in 2003 and is based upon the following assumptions: a projected investment return of 8.5 percent; general pay increases of 3.3 percent; and supplemental annuity increases in 2006 and 2010.

SCHEDULE K
(Page 2 of 2)

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2002

Active Employees*

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	23	0	0	0	0	0	0	23	$ 20,564
20-24	661	5	0	0	0	0	0	666	25,084
25-29	1,485	309	5	0	0	0	0	1,799	30,797
30-34	1,603	1,098	471	15	0	0	0	3,187	35,666
35-39	1,427	1,041	1,243	543	28	0	0	4,282	39,216
40-44	1,424	1,033	1,367	1,430	950	39	0	6,243	42,040
45-49	1,430	1,085	1,304	1,406	1,665	1,116	102	8,108	44,741
50-54	1,251	975	1,167	1,166	1,501	2,094	1,761	9,915	48,997
55-59	897	741	884	828	845	1,279	2,525	7,999	51,828
60-64	426	407	483	385	300	302	912	3,215	52,824
65+	206	195	241	139	92	81	295	1,249	52,377
Total	10,833	6,889	7,165	5,912	5,381	4,911	5,595	46,686	$ 45,303

Average Age 47.64

Average Service 14.67

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	33	0	0	0	0	0	0	33	$ 21,279
20-24	995	31	0	0	0	0	0	1,026	24,887
25-29	1,681	421	39	0	0	0	0	2,141	29,196
30-34	1,628	1,000	667	68	0	0	0	3,363	32,293
35-39	1,462	879	1,131	748	75	0	0	4,295	34,610
40-44	1,631	1,001	1,169	1,125	1,221	114	0	6,261	37,443
45-49	1,524	1,054	1,355	1,158	1,481	1,611	329	8,512	40,364
50-54	1,181	831	1,233	1,122	1,232	1,534	1,818	8,951	42,451
55-59	657	595	875	925	934	878	1,147	6,011	42,361
60-64	275	300	459	371	338	305	307	2,355	41,337
65+	93	101	195	136	103	64	126	818	38,700
Total	11,160	6,213	7,123	5,653	5,384	4,506	3,727	43,766	$ 38,560

Average Age 46.15

Average Service 13.76

* The following three pages contain information on members in special categories. These include selected hazardous duty members, legislators, judges and district justices. The above information is for all other active members. Page five of Schedule L is the total of all active categories. Page six is the total of all active and inactive employees.

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2002

Selected Hazardous Duty*

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	1	0	0	0	0	0	0	1	$ 25,563
20-24	165	0	0	0	0	0	0	165	29,000
25-29	972	120	0	0	0	0	0	1,092	34,741
30-34	1,148	1,569	449	4	0	0	0	3,170	45,499
35-39	715	1,160	1,400	287	2	0	0	3,564	50,035
40-44	446	504	654	773	225	4	0	2,606	51,676
45-49	313	359	382	506	471	125	5	2,161	52,967
50-54	257	360	352	367	285	267	92	1,980	52,213
55-59	153	238	253	288	150	112	213	1,407	52,532
60-64	29	87	106	79	38	25	28	392	50,482
65+	4	18	19	19	12	3	10	85	53,987
Total	4,203	4,415	3,615	2,323	1,183	536	348	16,623	$ 49,095

Average Age 41.55
Average Service 10.44

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	33	0	0	0	0	0	0	33	28,620
25-29	196	19	0	0	0	0	0	215	34,088
30-34	242	154	23	0	0	0	0	419	38,969
35-39	152	135	90	17	0	0	0	394	41,720
40-44	136	112	89	99	28	1	0	465	45,631
45-49	121	110	108	77	93	24	1	534	47,609
50-54	52	85	75	56	46	44	13	371	51,490
55-59	22	32	53	39	23	20	8	197	51,495
60-64	6	19	30	14	11	7	6	93	53,768
65+	1	3	8	5	2	1	2	22	59,382
Total	961	669	476	307	203	97	30	2,743	$ 44,927

Average Age 42.61
Average Service 9.27

* Enforcement officers, correction officers, psychiatric security aides, and officers of the Pennsylvania State Police and the Delaware River Port Authority

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2002

Legislators

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	0	0	0	0	0	0	0	0	-
25-29	3	0	0	0	0	0	0	3	64,638
30-34	5	1	0	0	0	0	0	6	64,638
35-39	7	4	1	0	0	0	0	12	64,638
40-44	11	7	9	2	3	0	0	32	65,222
45-49	8	6	11	5	6	0	0	36	66,948
50-54	8	6	7	1	13	4	1	40	66,571
55-59	4	0	6	8	7	5	1	31	66,669
60-64	1	2	4	2	4	2	6	21	69,880
65+	1	2	4	3	7	6	9	32	66,273
Total	48	28	42	21	40	17	17	213	$ 66,537

Average Age 52.28
Average Service 14.29

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	0	0	0	0	0	0	0	0	-
25-29	0	0	0	0	0	0	0	0	-
30-34	3	0	0	0	0	0	0	3	64,638
35-39	0	0	0	0	0	0	0	0	-
40-44	0	3	2	0	0	0	0	5	64,638
45-49	2	0	0	1	1	0	0	4	64,638
50-54	0	1	1	1	0	0	0	3	64,638
55-59	1	5	4	0	0	0	0	10	64,638
60-64	2	2	0	2	0	0	0	6	66,149
65+	0	0	4	0	0	0	1	5	66,451
Total	8	11	11	4	1	0	1	36	$ 65,142

Average Age 54.47
Average Service 10.31

Judges And District Justices

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	0	0	0	0	0	0	0	0	-
25-29	2	0	0	0	0	0	0	2	60,031
30-34	4	2	0	0	0	0	0	6	59,912
35-39	10	6	2	0	0	0	0	18	66,782
40-44	22	18	3	7	0	0	0	50	69,876
45-49	31	35	23	18	4	1	0	112	86,339
50-54	37	37	38	31	24	11	2	180	83,800
55-59	15	36	48	40	31	12	6	188	95,259
60-64	12	21	21	33	20	11	12	130	90,525
65+	5	6	17	14	13	9	6	70	99,786
Total	138	161	152	143	92	44	26	756	$ 88,084

Average Age 54.43
Average Service 12.69

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	0	0	0	0	0	0	0	0	-
25-29	1	0	0	0	0	0	0	1	60,031
30-34	7	0	0	0	0	0	0	7	59,896
35-39	4	5	1	0	0	0	0	10	65,747
40-44	14	4	5	2	1	0	0	26	78,624
45-49	18	17	10	9	1	0	0	55	92,023
50-54	7	15	14	14	5	2	0	57	94,799
55-59	2	10	9	14	4	0	0	39	93,838
60-64	0	4	6	9	5	2	0	26	76,619
65+	1	4	5	1	2	1	1	15	82,450
Total	54	59	50	49	18	5	1	236	$ 87,010

Average Age 51.26
Average Service 10.48

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2002

All Active Employees

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	24	0	0	0	0	0	0	24	$ 20,772
20-24	826	5	0	0	0	0	0	831	25,861
25-29	2,462	429	5	0	0	0	0	2,896	32,339
30-34	2,760	2,670	920	19	0	0	0	6,369	40,610
35-39	2,159	2,211	2,646	830	30	0	0	7,876	44,214
40-44	1,903	1,562	2,033	2,212	1,178	43	0	8,931	45,091
45-49	1,782	1,485	1,720	1,935	2,146	1,242	107	10,417	46,971
50-54	1,553	1,378	1,564	1,565	1,823	2,376	1,856	12,115	50,098
55-59	1,069	1,015	1,191	1,164	1,033	1,408	2,745	9,625	52,827
60-64	468	517	614	499	362	340	958	3,758	53,979
65+	216	221	281	175	124	99	320	1,436	55,093
Total	15,222	11,493	10,974	8,399	6,696	5,508	5,986	64,278	$ 46,857

Average Age 46.16
Average Service 13.55

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	33	0	0	0	0	0	0	33	$ 21,279
20-24	1,028	31	0	0	0	0	0	1,059	25,003
25-29	1,878	440	39	0	0	0	0	2,357	29,655
30-34	1,880	1,154	690	68	0	0	0	3,792	33,107
35-39	1,618	1,019	1,222	765	75	0	0	4,699	35,273
40-44	1,781	1,120	1,265	1,226	1,250	115	0	6,757	38,185
45-49	1,665	1,181	1,473	1,245	1,576	1,635	330	9,105	41,111
50-54	1,240	932	1,323	1,193	1,283	1,580	1,831	9,382	43,133
55-59	682	642	941	978	961	898	1,155	6,257	43,005
60-64	283	325	495	396	354	314	313	2,480	42,234
65+	95	108	212	142	107	66	130	860	40,153
Total	12,183	6,952	7,660	6,013	5,606	4,608	3,759	46,781	$ 39,198

Average Age 45.98
Average Service 13.48

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2002

Active And Inactive Employees

Males - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	24	0	0	0	0	0	0	24
20-24	827	5	0	0	0	0	0	832
25-29	2,468	443	5	0	0	0	0	2,916
30-34	2,781	2,718	928	19	0	0	0	6,446
35-39	2,187	2,258	2,706	838	30	0	0	8,019
40-44	1,935	1,614	2,114	2,239	1,184	44	0	9,130
45-49	1,829	1,553	1,809	1,983	2,172	1,254	107	10,707
50-54	1,704	1,437	1,666	1,633	1,878	2,414	1,892	12,624
55-59	1,213	1,047	1,276	1,218	1,066	1,452	2,825	10,097
60-64	552	549	653	551	390	367	1,026	4,088
65+	245	239	302	198	133	107	350	1,574
Total	15,765	11,863	11,459	8,679	6,853	5,638	6,200	66,457

Average Age 46.35
Average Service 13.52

Females - Full Years of Service to December 31, 2002

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	33	0	0	0	0	0	0	33
20-24	1,028	31	0	0	0	0	0	1,059
25-29	1,890	455	39	0	0	0	0	2,384
30-34	1,919	1,214	716	68	0	0	0	3,917
35-39	1,657	1,083	1,312	777	75	0	0	4,904
40-44	1,854	1,192	1,371	1,260	1,257	118	0	7,052
45-49	1,807	1,292	1,632	1,313	1,598	1,652	332	9,626
50-54	1,531	1,072	1,461	1,271	1,324	1,606	1,857	10,122
55-59	953	744	1,043	1,029	995	935	1,193	6,892
60-64	399	383	542	450	390	347	346	2,857
65+	126	130	227	163	118	71	137	972
Total	13,197	7,596	8,343	6,331	5,757	4,729	3,865	49,818

Average Age 46.28
Average Service 13.24

State Employees' Retirement System
II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2002

Superannuation Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
50-54	296	$ 8,430,275	75	$ 1,855,815	371	$ 10,286,091
55-59	1,196	40,457,096	293	7,850,994	1,489	48,308,090
60-64	3,267	93,480,871	1,988	38,579,971	5,255	132,060,842
65-69	4,853	100,949,709	3,172	44,769,177	8,025	145,718,885
					-	
70-74	5,046	88,352,857	3,640	39,905,973	8,686	128,258,829
75-79	5,174	80,063,548	4,205	41,102,597	9,379	121,166,145
80-84	3,680	46,902,287	3,654	30,420,493	7,334	77,322,780
85-89	1,987	22,616,773	2,290	18,125,941	4,277	40,742,713
90 & over	799	9,157,219	1,225	10,433,290	2,024	19,590,509
Total	26,298	$ 490,410,635	20,542	$ 233,044,250	46,840	$ 723,454,885

Average Age	74.2
Average Annual Pension	$15,445

State Employees' Retirement System

II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2002

Early Retirement Annuitants

Age	Male Number	Male Annual Pension	Female Number	Female Annual Pension	Total Number	Total Annual Pension
under 25	-	$ -	-	$ -	-	$ -
25-29	6	3,741	10	6,429	16	10,170
30-34	58	80,139	69	65,828	127	145,967
35-39	178	356,496	242	326,232	420	682,728
40-44	425	1,270,611	664	1,399,943	1,089	2,670,554
45-49	811	4,045,469	1,492	4,524,981	2,303	8,570,450
50-54	2,069	20,785,346	2,621	15,840,807	4,690	36,626,153
55-59	4,025	70,402,178	2,500	24,804,364	6,525	95,206,542
60-64	3,182	54,174,040	2,107	24,441,216	5,289	78,615,256
65-69	1,948	25,930,819	1,586	14,082,555	3,534	40,013,374
70-74	1,666	22,904,722	1,369	12,232,740	3,035	35,137,462
75-79	768	9,339,460	877	6,749,250	1,645	16,088,710
80-84	299	3,528,685	417	3,326,714	716	6,855,399
85-89	103	1,140,104	152	1,368,582	255	2,508,686
90 & over	35	312,759	55	501,223	90	813,982
Total	15,573	$ 214,274,569	14,161	$ 109,670,862	29,734	$ 323,945,431

Average Age	60.1
Average Annual Pension	$10,895

State Employees' Retirement System
II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2002

Disabled Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
under 25	-	$ -	-	$ -	-	$ -
25-29	1	10,034	1	10,769	2	20,803
30-34	10	86,898	17	140,642	27	227,540
35-39	55	554,811	40	336,322	95	891,133
40-44	127	1,359,142	181	1,876,892	308	3,236,034
45-49	248	2,874,746	360	4,040,888	608	6,915,633
50-54	517	6,599,787	578	7,027,549	1,095	13,627,335
55-59	580	7,315,187	571	6,791,658	1,151	14,106,845
60-64	513	5,601,207	448	4,318,540	961	9,919,747
65-69	345	3,172,875	406	3,388,492	751	6,561,367
70-74	276	2,620,836	273	2,105,780	549	4,726,615
75-79	182	1,689,626	187	1,306,905	369	2,996,532
80-84	89	765,952	137	891,261	226	1,657,213
85-89	29	225,832	43	294,914	72	520,746
90 & over	3	16,911	14	68,079	17	84,990
Total	2,975	$ 32,893,843	3,256	$ 32,598,691	6,231	$ 65,492,534

Average Age	59.8
Average Annual Pension	$10,511

State Employees' Retirement System

II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2002

Beneficiaries and Survivor Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	15	$ 51,828	6	$ 50,619	21	$ 102,447
25-29	4	53,318	10	75,163	14	128,481
30-34	10	102,099	17	239,406	27	341,505
35-39	11	46,721	21	260,335	32	307,056
40-44	21	130,910	35	276,858	56	407,767
45-49	39	268,277	95	682,917	134	951,194
50-54	47	184,717	216	1,887,783	263	2,072,500
55-59	66	436,341	327	3,070,606	393	3,506,947
60-64	67	361,215	468	4,853,850	535	5,215,065
65-69	82	547,352	628	5,579,029	710	6,126,380
70-74	116	917,322	953	7,849,726	1,069	8,767,049
75-79	117	675,481	1,472	9,753,770	1,589	10,429,251
80-84	79	546,051	1,503	8,227,105	1,582	8,773,157
85-89	54	215,147	1,186	5,615,403	1,240	5,830,550
90 & over	14	57,789	744	3,389,924	758	3,447,712
Total	742	$ 4,594,569	7,681	$ 51,812,493	8,423	$ 56,407,061

Average Age	75.4
Average Annual Pension	$6,697

State Employees' Retirement System
Benefit and Contribution Provisions as of December 31, 2002
(as embodied in Act 31, approved March 1, 1974, and amended through Act 38 in April 2002)

The State Employees' Retirement System makes provision for retirement, disability, and death benefits for all State employees, except those specifically excluded under Section 5301 of the State Code, and certain other eligible groups. The major provisions are summarized as follows:

Eligible Employees

Class AA - All eligible employees hired after June 30, 2001, except State Police Officers, members of the judiciary and legislators, and employees hired before July 1, 2001 who elected Class AA by December 31, 2001.

Class A - State Police Officers hired on or after March 1, 1974, members of the judiciary who have not elected Class E-1 or E-2, legislators elected before July 1, 2001 who have not elected Class AA or Class D-4 and Class A employees hired before July 1, 2001 who remained in Class A.

Class C - Liquor Law enforcement officers and other officers and certain employees of the State Police who have been members and employees continuously since prior to March 1, 1974.

Class D-3 - Legislators who have been members and employees continuously since prior to March 1, 1974.

Class D-4 - Legislators coming into service after June 30, 2001 who elect to be SERS members, and legislators who elected Class D-4 before July 1, 2001.

Class E-1 - Judges who elect Class E-1.

Class E-2 - District Justices who elect Class E-2.

Age and Service Requirements for Superannuation (full formula benefits)

Class AA & Class A

General Conditions	Age 60 with three years of service; or 35 or more years of credited service, regardless of age.
Legislators and certain enforcement officers	Age 50 with three years of service.
Park Rangers & Capitol Police	Age 50 with 20 years of Park Ranger or Capitol Police service.
State Police	Age 50; or 20 years of service, regardless of age.

Class C

State Police	Age 50; or 20 years of service, regardless of age.
Other Hazardous Duty	Age 50 with three years of service.
Class D-3 & Class D-4	Age 50 with three years of service.
Class E-1 & Class E-2	Age 60 with three years of service; or 35 or more years of credited service, regardless of age.

Formula for Superannuation Annuity

The standard single-life annuity applicable to members of Class AA is equal to 2.5 percent of the high 3-year final average salary ("F.A.S.") of the member multiplied by the years and fractions of credited service.

The standard single-life annuity applicable to members of Class A and Class C is equal to 2 percent of the high 3-year final average salary ("F.A.S.") of the member multiplied by the years and fractions of credited service.

The applicable single-life annuity for Class C State Police and Class A State Police is 50 percent of highest annual salary if the member has over 20 but less than 25 years of service. With more than 25 years of service the benefit is 75 percent of highest annual salary.

The benefit accrual rates for other classes of members are as follows:

Class	Benefit Accrual Rate
D-3	7.5 percent
D-4	3.0 percent
E-1	4.0 percent for each of the first 10 years of judicial service, dropping to 3.0 percent for each subsequent year of judicial service.
E-2	3.0 percent for each year of judicial service.

There are two conditions under which long-service members or members retiring at advanced ages may receive larger benefits than those described above. First, members who have 41 or more years of combined Class A and AA service are entitled to a supplemental benefit. Second, there is a late retirement increase (or actuarial increase) provision whereby benefits for eligible members who work beyond their 70th birthday are guaranteed to be at least actuarially equivalent to the preceding year's benefits.

In addition to the standard single-life annuity as determined above, a member of Class C receives a "member's annuity" actuarially equivalent to the regular accumulated member contributions and interest at retirement but not less than such annuity determined as if the member was age 60 at retirement.

In addition to the above benefits, a member who has elected Social Security Integration Coverage is entitled to a single-life annuity of 2 percent of the members' "Average Non-Covered Salary" for each year of Social Security Integration (SSI) coverage. All Class E members can elect SSI coverage. Other members must have elected SSI coverage before March, 1974. "Average Non-Covered Salary" is the average annual salary received while covered by the Retirement System since January 1, 1956 in excess of the maximum covered wages under Social Security.

Limitations on Annuity

The annuity paid to a member shall not exceed the member's highest salary during any period of twelve consecutive months of creditable service; however, late retirement increase benefits, if any, are not subject to this limitation.

The amount of annual retirement benefit a member may receive shall not exceed the dollar limit specified under Section 415 (b) of the Internal Revenue Code. However, members will not receive a lower benefit than they would have been entitled to receive had Act 2001-9 not been enacted.

Age and Service Requirements for Disability Retirement

A member is eligible for disability retirement if the member is unable to perform his or her current job and has at least 5 years of service. An officer of the State Police or enforcement officer does not have a service requirement.

Formula for Disability Benefit

The disability benefit is equal to the benefit calculated as for full retirement, based on years of credited service at disability, if the result is greater than or equal to 33-1/3 percent of F.A.S. at time of disability. If the benefit so calculated is less than 33-1/3 percent of F.A.S., the disability benefit is equal to the smaller of:

(a) the benefit calculated as for full retirement based on service projected to retirement date, or

(b) 33-1/3 percent of F.A.S. at time of disability.

For service connected disabilities, the disability benefit payable will be increased, as needed, so that the sum of the plan benefit and the benefits paid or payable under the Workers' Compensation Act, The Pennsylvania Occupational Disease Act, and the Social Security Act equals 70 percent of F.A.S.

Eligibility for Vested Benefit

A member is eligible for a vested benefit after 5 years of service.

Vested Benefit

The vested benefit is equal to the benefit calculated as for retirement, based on years of credited service at the time of leaving the plan. The former member can receive the full benefit beginning at retirement age, or an actuarially reduced early retirement benefit beginning at any date after separation but before retirement. The early retirement benefit is reduced from the earlier of age 60, or the age at which the member would have 35 years of credited service.

Eligibility for Death Benefit Prior to Retirement

A member is eligible if the member (1) is under retirement age with 5 years of credited service or (2) has attained retirement age with 3 years of credited service.

Amount of Death Benefit Prior to Retirement

An eligible beneficiary receives the full present value of the benefits to which the member would have been entitled had the member retired the day before he or she died, assuming the member had elected Option 1 if no other option had been elected. This death benefit includes the present value associated with benefits, if any, to which the member may not have been entitled because they exceeded the member's highest consecutive twelve months of salary.

Death Benefits After Retirement

A member who elects the single-life annuity is entitled to a refund of the unpaid balance of the member accumulated contributions and interest at the time of retirement. A member may elect one of several optional reduced pensions in lieu of the single-life annuity to provide additional death benefit protection. The optional forms of benefit are actuarially equivalent to the single life benefit using 4.0 percent interest per annum, and the actuarial equivalence factors described below.

The survivor of a member whose benefit was limited to the member's highest salary will be paid a death benefit equal to the present value of the benefit in excess of the highest salary. This payment is in addition to any death benefit that may be paid as a result of the optional election.

The "Extra Piece"

The retirement code provides for an "extra piece" to be added to the annual benefit if the member's accumulated deductions, excluding any Class C deductions, exceed one-half of the actuarially equivalent value of the annual benefit. The extra piece is equal to the difference between the total accumulated deductions and one-half of the actuarially equivalent value of the annual benefit.

Cost-of-Living Allowances (COLAs)

Supplemental annuities applying cost-of-living increases to the benefits of annuitants have been instituted from time to time. The last cost-of-living increase was applicable to annuitants who retired on or before July 1, 1990 and became effective in July of 2002 pursuant to Act 2002-38. Act 2002-38 also called for cost-of-living increases for annuitants who retired after July 1, 1990 to become effective in July of 2003. Since funding for the second stage of this COLA begins July 1, 2004, that increase is only included in this valuation for accounting disclosure purposes in Schedule H (Page 1 of 4) and Schedule I.

Rate of Member Contribution

(i) Regular member contributions, excluding Social Security Integration contributions

Class AA -	6.25 percent of total salary
Class A -	5.00 percent
Class C -	5.00 percent
Class D-3 -	18.75 percent
Class D-4 -	7.50 percent
Class E-1 -	10.00 percent during the first 10 years of judicial service and 7.50 percent thereafter.
Class E-2 -	7.50 percent

(ii) Additional contribution for Social Security Integration Credit

Any member who elects the Social Security Integration Credit pays 5.00 percent of any salary in excess of the amount of salary covered by Social Security during the year for which contributions are being made. A member electing to end additional contributions is ineligible to make future contributions or accrue future benefits.

(iii) Waiver of contributions

Members may elect to waive future contributions if their maximum single life annuity exceeds 110 percent of their highest calendar year compensation.

Interest Credited on Member Contributions

A rate of 4 percent, stipulated as the statutory rate of interest, has been credited on the member contributions since the inception of the system.

Refund of Accumulated Member Contributions

On the death of a member not qualifying for death benefits, the accumulated member contributions and interest are paid to the beneficiary; also, any member terminating service when not eligible for another form of benefit is paid a refund of the accumulated contributions and interest; any other terminating member may elect the refund of accumulated contributions and interest in lieu of a retirement allowance.

Employer Contributions

The employer pays the balance of the cost in excess of the members' contributions with payment schedules determined by law. Under Act 2002-38, effective July 1, 2004, the total employer contribution rate shall never be less than 1 percent of the active member payroll. See Section III of Schedule O.

Actuarial Equivalence

The actuarial table used to determined optional and early retirement benefits for members who entered service after August 1983 is the 1983 Group Annuity Mortality (1983GAM) Unisex table.

Members who entered service before August 1983 receive the better of benefits based on the 1983 GAM table or a variation of the 1971 Group Annuity Mortality (1971GAM) male table. The 1971 GAM table that applies in determining the benefits for members who entered service before August 1983 is:

For service before August, 1983:

Males (members or survivors) – 1971 GAM for males
Females (members or survivors) – 1971 GAM for males, set back 6 years

For service after August, 1983:

Members (male or female) – 1971 GAM for males, set back 6 years
Survivors (male or female) – 1971 GAM for males

Actuarial Assumptions

Schedule N shows the actuarial assumptions used for the valuation. The assumptions were based on a review of experience under SERS from 1996 through 2000. Schedule N contains an extract of the full set of rates used in the valuation. The full set of rates is in the Fifteenth Investigation of Actuarial Experience of the State Employees' Retirement System of the Commonwealth of Pennsylvania, which can be obtained from SERS. The rates are the probabilities that an event will occur in the year after the valuation. For instance, the male retirement rate of 22.0 percent at age 60 means that 220 of every 1,000 employees age 60 and eligible for full benefits are expected to retire before they reach age 61.

Interest Rate: 8.5 percent compounded annually

Mortality After Retirement:

Non-disabled Retirees, Beneficiaries and Survivors: The 1983 Group Annuity Mortality table for males and females.

Disability Retirees: The Federal Civil Service Retirement System disabled annuitant mortality table adjusted to equal the overall SERS disabled annuitant mortality with a margin for future improvement in mortality.

Assumptions for General Employees while Active Members

Rates of Separation for Eligibility for Full Unreduced Benefits:
(35 years of service under age 60; 3 years of service over age 60)

Rates of Separation for Eligibility for Full Unreduced Benefits			
	Age	Male	Female
AGE	51 – 61	22.0%	22.0%
	62	33.0	33.0
	63 – 64	22.0	22.0
	65	34.0	34.0
	66	27.0	27.0
	67 – 79	20.0	20.0
	80	100.0%	100.0%

Actuarial Assumptions (continued)

Rates of Separation for Eligibility for Reduced Benefits
(only apply to members not eligible for full unreduced benefits)

Rates of Separation for Eligibility for Reduced Benefits					
	5 – 14 Years of Service			15 or More Years of Service	
	Male		Female	Male	Female
AGE	20-24	4.0%	4.0%	NA	NA
	25-29	4.0	4.0	NA	NA
	30-34	3.0	4.0	3.0%	4.0%
	35-39	2.0	3.0	2.0	2.0
	40-44	2.0	1.0	2.0	2.0
	45-49	1.0	1.0	2.0	2.0
	50-54	1.0	1.0	2.0	2.0
	55-59	3.0	3.0	3.0	3.0

Rates of Separation Due to Withdrawal
(only apply to members not eligible for full retirement)

Rates of Separation Due to Withdrawal									
	Years of Service					Years of Service			
	Male					Female			
		0	5	9	14+	0	5	9	14+
AGE	20-24	9.6%	0.5%	0.0%	0.0%	9.5%	2.2%	0.5%	0.0%
	25-29	9.4	0.0	0.0	0.0	8.7	1.7	0.5	0.0
	30-34	9.0	1.0	0.0	0.0	8.7	1.7	0.0	0.0
	35-39	8.8	1.7	0.0	0.0	8.7	1.7	0.0	0.0
	40-44	8.8	0.6	0.0	0.0	8.5	3.7	0.8	0.0
	45-49	8.5	1.6	0.0	0.0	8.3	3.2	0.8	0.0
	50-54	8.3	1.3	0.0	0.0	8.3	3.2	0.0	0.0
	55-59	8.3	0.0	0.0	0.0	8.3	0.5	0.0	0.0

Actuarial Assumptions (continued)

Rates of Separation Due to Death and Disability
(Disability rates only apply to members not eligible for full retirement)

Rates of Separation Due to Death and Disability					
		Death		Disability	
		Male	Female	Male	Female
AGE	20-24	0.03%	0.02%	0.03%	0.06%
	25-29	0.03	0.02	0.03	0.06
	30-34	0.04	0.03	0.08	0.15
	35-39	0.06	0.04	0.15	0.25
	40-44	0.08	0.06	0.23	0.33
	45-49	0.15	0.09	0.41	0.52
	50-54	0.27	0.14	0.57	0.78
	55-59	0.42	0.22	0.75	0.99
	60-64	0.62	0.36	N/A	N/A

For Special Benefit Classes if Different from General Employee Rates:

Rates of Separation Due to Withdrawal:

Rates of Separation Due to Withdrawal				
		State Police/ Hazardous Duty	Legislators	Judicial Officers
Years Of Service	0	6.0%	0.0%	0.0%
	1	5.5	3.0	0.8
	2	4.0	3.0	0.8
	3-4	3.0	3.0	0.8
	5	2.0	3.0	0.8
	6	2.0	3.0	0.8
	7-9	1.0	3.0	0.8
	10+	1.0	3.0	1.1

Actuarial Assumptions (continued)

Rates of Separation Due to Early Retirement:

Rates of Separation Due to Early Retirement			
	State Police/ Hazardous Duty	Legislators	Judicial Officers
ANY AGE	1.0%	3.0%	1.0%

Rates of Separation Due to Retirement Other Than State Police with 20 or More Years of Service:

Rates of Separation Due to Retirement other than State Police with 20 or more years of Service				
		State Police/ Hazardous Duty	Legislators	Judicial Officers
AGE	50-54	5.0%	2.0%	N/A
	55-59	5.0	3.0	N/A
	60-64	5.0	4.0	2.0
	65-69	50.0	6.0	2.0
	70-74	24.0	8.0	100.0
	75-79	24.0	10.0	N/A
	80-84	100.0	100.0	N/A

Actuarial Assumptions (continued)

Rates of Separation Due to Retirement for State Police with 20 or More Years of Service:

Rates of Separation due to Retirement for State Police with 20 or More Years of Service			
Years of Service	**Rate**	**Years of Service**	**Rate**
20	4.0%	27-33	16.0%
21 – 24	1.0	34	30.0
25	30.0	35	41.0
26	17.0		

Years of Service Purchased by Eligible Members:

Purchase of Service			
Age	**Number of Years to Purchase**	**Age**	**Number of Years to Purchase**
20 – 24	0.992	40 – 44	0.962
25 – 29	0.991	45 – 49	0.944
30 – 34	0.979	50 – 54	0.873
35 – 39	0.968	55 – 59	0.756

Career Salary Increases

The salary scale shown below includes average increases in the employee salary due to promotions and longevity growth. The average career salary growth is 3.5 percent per year. In addition, it is assumed that the salary schedules will increase by 3.3 percent a year. The scale below does not include the assumed 3.3 percent general salary increase.

This table does not apply to members in Classes D and E. It is assumed that only the general salary increase (3.3 percent each year) would apply to members in these classes.

Actuarial Assumptions (continued)

Career Salary Scale for Members:

Career Salary Scale for Members			
Age	**Annual Increase**	**Age**	**Annual Increase**
20 – 29	5.5%	44	3.6%
30	5.3%	45	3.5%
31	5.2%	46	3.4%
32	5.0%	47	3.2%
33	4.9%	48	3.1%
34	4.8%	49	3.0%
35	4.6%	50	2.8%
36	4.5%	51	2.6%
37	4.4%	52	2.5%
38	4.2%	53	2.4%
39	4.1%	54	2.2%
40	4.0%	55	2.1%
41	3.9%	56	2.0%
42	3.8%	57-58	1.9%
43	3.7%	59-60	1.8%

Actuarial Methods

I. Asset Valuation

The actuarial value of assets is developed by recognizing the difference between the expected actuarial value of assets and the market value of assets over a five-year period. The expected actuarial value is last year's actuarial value brought forward to reflect actual contributions, benefit payments and expenses, and assumed investment income. Each year 20 percent of the difference between this expected value and the market value is recognized in determining the current actuarial value of assets with the remaining 80 percent to be recognized over the next four years.

II. Funding Method

The State Employees' Retirement System funding policy provides for employer contributions at actuarially determined rates that will amortize liabilities over a ten year period beginning with the first fiscal year after the measurement of the liability. The net liability as of December 31, 2001 is being funded over a ten year period ending June 30, 2012. Changes in liability after 2001 are being funded over ten-year periods beginning with the July 1st following the effective date of the change. This policy assures that the SERS is appropriately funded and also that the fund will accumulate sufficient assets to pay benefits when they are due. The policy is set by the State Employees' Retirement Board in conformance with specific legal requirements as to the method of funding.

A variation of the Entry-Age Actuarial Cost Method is used to determine the liabilities and costs related to all SERS benefits including retirement, withdrawal, death and disability benefits. The significant difference between the method used for SERS and the typical Entry-Age Actuarial Cost Method is that the normal cost is based on the benefits and contributions for new employees rather than for all current employees from their date of entry. The SERS variation should produce approximately the same results as the typical method over the long run.

III. Determination of the Annual Contribution

The annual employer contribution is equal to the sum of the following:

1) The employer share of the normal cost.

2) The amortization of the unfunded liabilities as of December 31, 2001 over a ten-year period ending on June 30, 2012.

3) The amortization of changes in liability after 2001 over ten-year periods beginning with the July 1st following the effective date of the change. Changes include actuarial gains and losses and plan amendments.

Actuarial Methods (Continued)

The amortization payments are based on a schedule of payments that remain fixed over a 10-year period. The employer cost is determined as a percent of payroll, and the employer contributes that percent of the payroll of all covered members during each fiscal year. The employer cost for fiscal year 2003/2004 is the total of (1) the employer normal cost percent and (2) the amortization payment for fiscal year 2003/2004 divided by the projected payroll for the fiscal year. Under Act 2002-38, effective July 1, 2004, the total employer contribution rate shall never be less than 1 percent of the active member payroll.

The assumptions used in determining the actuarial cost are stated in Schedule N, and the employer cost, as a percent of payroll, is determined in Schedules A and B. The assumptions used for the current valuation were based upon an evaluation of SERS experience from 1996 through 2000.

The investment return assumption is 8.5 percent per year. Salary growth is the total of assumed increases in salary rates and career salary growth. It is assumed that the total payroll will increase at 3.3 percent a year. The employee career salary growth (promotion and longevity growth) will average 3.5 percent a year. Therefore, the average total salary growth for an individual will be 6.8 (3.3 plus 3.5) percent a year. The investment return and the salary rate increase assumptions are based on assumed underlying inflation of 3.0 percent a year.

All costs and liabilities have been determined in conformance with generally accepted actuarial principles and procedures in accordance with the principles of practice prescribed by the Actuarial Standards Board of the American Academy of Actuaries. The calculations were performed on the basis of actuarial assumptions and methods, which are internally consistent, and reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent the best estimate of anticipated experience under the plan.

IV. Allocation of the Annual Contribution Among Employer Groups

The annual contribution (total employer cost) is expressed as a percentage of the total projected payroll for active members. This amount is reflected on Schedule B, line III. and is referred to as the total employer cost. The total employer cost is the average contribution amount that needs to be received by the employer groups participating in the system. Therefore, some employer groups contribute a higher percent of pay, and some employer groups contribute a lower percent of pay.

Schedule C develops the contribution rate for each of the employer groups. The allocation method used to determine the employer rate takes into consideration the cost of additional benefits for special classes of members. For example, the contribution rate for Class E members takes into consideration the additional accrual rate those members receive at retirement. The Basic Contribution Rate (column 2 on Schedule C) is determined as the percentage needed to produce employer contribution amounts by class that, when added together, equal the total employer contribution.

Actuarial Methods (Continued)

The following is an explanation of the elements of Schedule C.

Column (1) is the employer group.

Column (2) is the Basic Contribution Rate. The Basic Contribution Rate is the amount needed to fund the benefits for Class AA(60) members. Because the majority of SERS members are covered under Class AA(60) the 2.5 percent accrual rate for that Class is used to determine the basic contribution rate.

Column (3) is the additional cost for members who are eligible to retire before reaching age 60, (or 35 years of service if earlier). The age 50 normal cost is determined for two groups of members: members who can retire at age 50 if they have 3 years of service, and members who can retire at age 50 once they obtain 20 service credits. Park Rangers and Capitol Police fall into the latter category. The additional cost for members who can retire at age 50 if they have 3 years of service is larger than the additional cost for members who can retire at age 50 if they have 20 years of service.

Column (4) is the multiplier adjustment to the basic benefit, which is applicable to members in classes that receive a larger, or smaller, percent accrual rate than the accrual rate for Class AA members. The normal cost is determined for members who would receive the standard 2.5 percent single-life annuity set by Act 9 (Class AA). For example, members in Class D-3 receive an annuity equal to 3.75 times the standard single-life annuity. The multiplier adjustment (Column (4)) for Class D-3 is 3.0, which is the ratio of 3.75 to the 1.25 multiplier for Class AA. The multiplier adjustment for members who receive a smaller accrual rate will be less than 1.00 (members in Class A).

Column (5) is the past-service liability component for certain employee groups. These employee groups were granted benefit improvements that were retroactive at the date of passage, and therefore cover all credited service for the class. The stipulation of each benefit improvement was that the employers of the individual employee group, not the Commonwealth, would fund the benefit improvement.

At implementation of the new benefit provision, a liability is established for the members who are eligible for the new benefit provisions, and a schedule is determined to pay off the increase in liability. For example, Park Rangers and Capitol Police Officers where formerly covered under the age 60 retirement provisions. Effective with the valuation at December 31, 1992, Park Rangers and Capitol Police Officers became eligible to retire at age 50 if they have 20 years of service. At that valuation, a liability was established that would fund the increase in benefits.

Actuarial Methods (Continued)

The liability for the increase in benefits for past service is paid off in equal installments by the employers of the member group. Each year, the annual contribution as a percent of payroll is determined as the annual payment divided by the funding payroll for the group. The outstanding balance is carried forward with interest each year.

The following table shows the payment schedule for the two groups of employees who have a past service liability.

Amortization Schedule for Past Liabilities		
Employer Group	**Payment**	**Last Payment (fiscal year beginning)**
State Police	$19,004,493	July 2029
Park Rangers / Capitol Police	$93,603	July 2027

In conjunction with the passage of Act 9, the D-4 employer contributed a lump sum amount which was more than sufficient to fund the additional cost of the higher accrual rate and the retirement at age 50. Therefore, the past service liability for Class D-4 Legislators is $0, and the past liability adjustment has been set to produce a contribution rate of zero. The remaining excess contribution made by the D-4 employer was equal to $3,890,972 as of December 31, 2002. These funds will continue to be used to offset future D-4 employer contribution requirements.

Column (6) is the adjusted contribution rate, and is equal to column (2) plus column (3), multiplied by column (4). Column (5) is added.

Column (7) is the projected payroll for the class of employees. The projected payroll is for the fiscal year to which the contribution rate is applicable.

Column (8) is the dollar amount of the employer group contribution. Except when the basic employer contribution rate is zero, the sum of the dollar amounts for each group is (approximately) equal to the total employer contribution (as a percent of payroll) multiplied by the total projected payroll for the active members.

Actuarial Methods (Continued)

V. Plan Provisions Not Valued

The cost effect of two plan provisions was not included in this valuation because the effect of the provisions is minimal. These are the limit on the amount of retirement benefit imposed by Section 5702(c) (100 percent limit) and the supplemental death benefit payable when the retirement benefit is limited by Section 5702(c).

These two provisions are not valued because they only apply to very few SERS members. Since by definition the liability for the supplemental death benefit is lower than the reduction in liability for the 100 percent limit, the net effect of not including these provisions in the actuarial valuation is a minimal overstatement in the total employer cost.

As stated previously, the second stage of the two-stage cost-of-living increase established under Act 2002-38 becomes effective in July of 2003 and funding for it will not begin until July 1, 2004. Therefore, the additional liability for this upcoming increase has, for most purposes, been excluded from this valuation. However, for accounting disclosure purposes, the additional liability was estimated to be approximately $364,800,000 and included in Schedule H (Page 1 of 4) and Schedule I. The second stage of the cost-of-living increase will be fully reflected in the next (December 31, 2003) actuarial valuation.

State Employees' Retirement System

Definition of Technical Terms

Accrued Service. Service credited under the system, which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The portion of the actuarial present value of benefits which is not provided for by the actuarial present value of future normal costs. Also referred to as Past Service Liability.

Actuarial Assumptions. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, investment income and salary growth. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the actuarial present value of future benefits between future normal costs and the actuarial accrued liability.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting projected future payments at assumed rates of interest and probabilities of payment.

Amortization. Paying off an amount with periodic payments of interest and principal -- as opposed to paying off with a lump sum payment.

Normal Cost. The portion of the actuarial present value of future benefits that is allocated to the current year by the actuarial cost method.

Unfunded Actuarial Accrued Liability. The difference between actuarial accrued liability and valuation assets.