


Commonwealth of Pennsylvania State Employees' Retirement System

2003 Actuarial Report

HayGroup®

COMMONWEALTH OF PENNSYLVANIA

STATE EMPLOYEES' RETIREMENT SYSTEM

2003 ACTUARIAL REPORT

HAY GROUP
APRIL 21, 2004

Hay Group, Inc.

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4301 North Fairfax Drive
Arlington, VA 22203
USA

April 21, 2004

HayGroup

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

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, 2003 actuarial valuation. The December 31, 2003 actuarial valuation recognizes the significant changes in funding of the retirement system provided for by Act 2003-40, which was enacted in December 2003. The December 31, 2003 actuarial valuation also recognizes the second stage of the retiree cost-of-living increase that became effective in July of 2003 under Act 2002-38.

The funding objective of the plan is set forth in the SERS code. The annual employer contribution is equal to the sum of the following, but not less than 2.00 percent of payroll, for the fiscal year beginning July 1, 2004:

(1) The employer share of the normal cost.
(2) The amortization of the December 31, 2001 liability for Act 2001-9 benefits over a 30-year period beginning July 1, 2002 and ending on June 30, 2032.
(3) The amortization of the remaining unfunded liabilities as of December 31, 2001 over a ten-year period beginning July 1, 2002 and ending on June 30, 2012.
(4) The amortization of all unfunded liabilities due to supplemental annuities (COLAs) after 2001, or other legislated benefit improvements after June 30, 2003, over ten-year periods beginning with the July first following the effective date of the change.
(5) The amortization of changes in liability due to actual experience differing from assumed experience after December 31, 2001 over 30-year periods beginning with the July first following the actuarial valuation determining such changes.

The amortization payments are level amounts over the applicable 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.

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.

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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, 2003 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.

Governmental Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans* establishes a range of actuarial cost and amortization methods for the Unfunded Actuarial Accrued Liability. The payments for SERS are within the range specified 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 ______________________
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State Employees' Retirement System
Valuation Highlights

		December 31, 2003 Valuation		December 31, 2002 Valuation

Summary of Contributions as a Percent of Total Compensation

	December 31, 2003 Valuation	December 31, 2002 Valuation
SERS Plan Contribution		
Normal Cost	8.32%	8.43%
Amortization of Liabilities	-11.12%	-7.39%
Contribution Before Act 2003-40 Minimum	-2.80%	N/A
Total SERS Plan Contribution	2.00% *	1.04%
Benefits Completion Plan Contribution	0.03%	0.03%
Total Contribution	2.03%	1.07%

* Act 2003-40 Minimum

Demographic Characteristics of the Population

		December 31, 2003 Valuation		December 31, 2002 Valuation
Active Participants:				
Number		109,018		111,059
Average age		46.2		46.1
Average service		13.4		13.5
Average annualized compensation	$	44,519	$	43,631
Total annualized compensation	$	4,853,372,000	$	4,845,615,000
Funding payroll	$	4,965,360,000	$	5,093,454,000
Annuitants and Beneficiaries:				
Number		94,412		91,228
Average age		68.6		68.7
Total annual pension	$	1,337,439,856	$	1,169,299,912
Inactive Participants:				
Number		5,741		5,216

Assets

		December 31, 2003 Valuation		December 31, 2002 Valuation
Market Value Assets	$	24,535,226,382	$	20,879,558,637
Actuarial Value of Assets	$	27,465,614,945	$	27,497,464,261

State Employees' Retirement System

Employer Contribution Rate by Group
Fiscal Year 2004 - 2005

	SERS Plan	Benefits Completion Plan	Total
Class AA Members:			
Age 60 Retirement	1.40%	0.03%	1.43%
Age 50 Retirement	2.44%	0.03%	2.47%
Park Rangers	3.20%	0.03%	3.23%
Capitol Police	3.20%	0.03%	3.23%
Enforcement Officers	2.44%	0.03%	2.47%
Class A Members:			
Age 60 Retirement	1.12%	0.03%	1.15%
Age 50 Retirement	1.95%	0.03%	1.98%
Park Rangers	2.73%	0.03%	2.76%
Capitol Police	2.73%	0.03%	2.76%
State Police	9.70%	0.03%	9.73%
Enforcement Officers	1.95%	0.03%	1.98%
Class C Members:			
State Police	9.70%	0.03%	9.73%
Enforcement Officers	1.95%	0.03%	1.98%
Class D Members:			
D-3 Legislators	7.32%	0.03%	7.35%
D-4 Legislators	0.00%	0.03%	0.03%
Class E Members	1.77%	0.03%	1.80%

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 generally assumed that the salary rates will increase at 3.3 percent a year due to general salary schedule increases and that career salary growth (promotion and longevity growth) will average an additional 3.5 percent a year. Thus, the total average salary increase for an individual will generally be 6.8 percent a year. These assumed salary increases were modified, however, in this valuation to reflect negotiated increases through June 30, 2007. The investment return and the salary rate increase assumptions are based on an underlying inflation rate of 3.0 percent a year.

This valuation includes the impact of Act 2003-40 (Act 40), which made two significant changes in the SERS funding rules. First, instead of amortizing the liability for Act 2001-9 benefits and post-December 31, 2001 actuarial experience gains and losses over ten years, as originally prescribed by Act 2001-9, Act 40 changed the amortization period for funding these liabilities to 30 years. Second, Act 40 established minimum annual employer contribution levels of 2 percent of payroll, 3 percent of payroll and 4 percent of payroll for the fiscal years beginning July 1, 2004, July 1, 2005 and July 1, 2006, respectively.

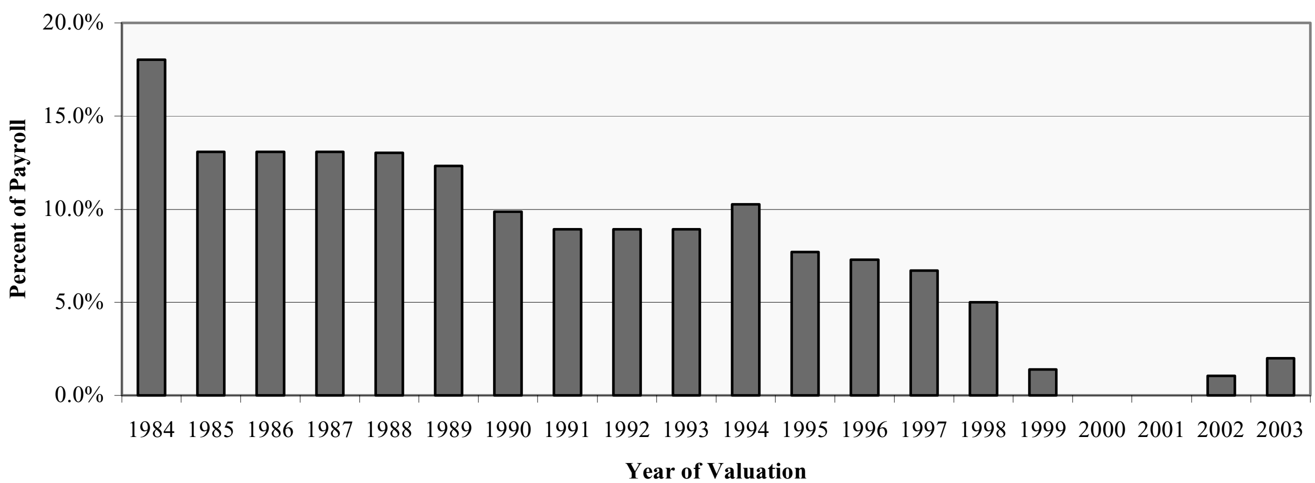
The SERS plan employer contribution is determined as a percent of payroll that is the total of (1) the employer normal cost percent and (2) the net amortization of the unfunded liability, but not less than any applicable minimum contribution prescribed by the SERS code. As of December 31, 2003, the net amortization credit is greater than the normal cost. This would have resulted in a zero employer contribution requirement for fiscal year 2004-2005 for most employees; however, under Act 2003-40, as noted above, the employer contribution for the fiscal year beginning July 1, 2004 shall not be less than 2.00 percent of payroll.

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 began to receive an additional annuity in July 2003. Funding for the first stage began on July 1, 2003, thus the resulting liability was first included in last year's actuarial valuation. Funding for the second stage will begin on July 1, 2004; therefore, the applicable liability has now been included in this valuation.

It should be noted that, separate and distinct from the SERS plan and trust, there is a Benefits Completion Plan (BCP), which provides benefits to members whose post-July 1, 2001 SERS benefits are limited by IRC Section 415(b) maximum benefit limitations. The BCP employer contribution requirements for fiscal year 2004-2005, which were determined by a separate December 31, 2003 actuarial valuation, are presented in the Valuation Highlights herein. Otherwise, BCP costs and liabilities are not included in the schedules of this report.

History of the Employer Contribution Rate

Chart 1 shows the history of the employer contribution rate from 1984 through 2003. With some fluctuations, the general trend from 1984 through 2001 has been downward, with the rate declining from 18.03 percent in 1984 to zero in 2000 and 2001. Since 2001, that trend has reversed, with the contribution rate rising to 1.04 percent in 2002 and 2.00 percent in 2003. The primary reasons for the 1984-2001 downward trend were (i) the excess of the actual investment return over the assumed valuation investment return over most of those 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 2002's 1.04 percent occurred primarily as a result of the less favorable investment experience during 2000-2002. Under Act 40, the change in amortization periods for funding would have resulted in zero cost for 2003; however, the Act 40 minimum employer contribution of 2 percent of payroll applied instead.



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the rate of 2.00 percent will be the employer contribution for fiscal year beginning July 1, 2004.

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**
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
2003	1.9	24.3	22.0	2.0	0.1
Average 1984-2003	**3.0%**	**10.9%**	**7.6%**	**3.5%**	**0.5%**

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 8.43 percent in 2002 to 8.32 percent in 2003.

As a result of Act 40, the liability for Act 2001-9 benefits, which was previously being funded over 10 years, is now being funded over 30 years. Otherwise, the unfunded liability that existed on December 31, 2001 is still being funded over 10 years from July 1, 2002. Also as a result of Act 40, annual changes in liability due to actual experience differing from assumed experience after December 31, 2001, previously funded over 10 years, are now being amortized over 30 years from the July 1 following the actuarial valuation that determined the change. Assets exceeded liabilities as of December 31, 2003 with a surplus (negative unfunded liability) of $1.29 billion. The surplus was $2.21 billion as of December 31, 2002. The reduction in the surplus of $0.92 billion was primarily attributable to investment losses over the last five years.

Schedule B shows the allocation of the total unfunded liability into those liabilities being amortized over 10 years and those being amortized over 30 years as a result of Act 40. The liabilities subject to 10-year amortization are further allocated into (i) the liabilities attributable to supplemental annuities (cost-of-living allowances) and (ii) the liability attributable to all other benefits. All amortization payments are level amounts over the applicable amortization period.

The negative unfunded liability as of December 31, 2003 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 increased from 7.39 percent of payroll in 2002 to 11.12 percent of payroll in 2003, primarily because of the change in amortization periods under Act 40.

The employer contribution rate is equal to the total of the normal cost and the amortization of the unfunded liabilities, but, for 2003, not less than 2.00 percent of payroll. The employer contribution rate calculated as a result was 1.04 percent of payroll in 2002 and 2.00 percent of payroll in 2003.

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 1.40 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 2004/2005
(excluding Benefits Completion Plan rate)

Class AA	
Age 60 benefit	1.40%
Age 50 benefit	2.44
Park Rangers	3.20
Capitol Police	3.20
Enforcement Officers	2.44
Class A	
Age 60 benefit	1.12
Age 50 benefit	1.95
Park Rangers	2.73
Capitol Police	2.73
State Police	9.70
Enforcement Officers	1.95
Class C	
State Police	9.70
Enforcement Officers	1.95
Class D	
D-3 Legislators	7.32
D-4 Legislators	0.00
Class E	1.77

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 until the balance is expended.

<u>Schedule D</u> 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. It was necessary to transfer some of the reserves from the State Accumulation Account as of December 31, 2003 to bring the State Police Benefit Account into balance. This type of transfer is necessary because funds had been previously transferred from the State Police Benefit Account to the State Accumulation Account.

Change in Employer Contribution Rate

<u>Schedule E</u> contains an analysis of the change in the employer contribution rate and unfunded liability from the 2002 to 2003 valuation. The change in the amortization periods applicable to different portions of the unfunded liability, under Act 40, resulted in a decrease in employer cost of 6.46 percent of payroll. 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 1999 and 2003. The result was a net loss which amounted to a 3.18 percent of payroll increase in employer cost. The next two most significant sources of change were the effect of the negotiated pay increases, which decreased employer cost by 1.48 percent of pay, and the Act 2002-38 cost-of-living increase effective in 2003, which increased employer cost by 1.21 percent of pay.

There were three sources of change that, in combination, reduced the employer cost by 0.77 percent of salary. One was the change in the demographics of new entrants between 2002 and 2003. The second reduction was a result of the actual 2003 payroll increase being below expectations. The third reduction resulted from the change in unfunded liability amortization due to the lower payroll (whereby the level dollar annual amortization payments for past liabilities expressed as a percent of payroll change each year as the payroll changes).

As part of the December 31, 2003 valuation, one change in actuarial method and assumptions was made. The need for this change resulted from a review of the valuation program and data, which showed that a correction was needed to the valuation process. This was to extend the Fraternal Order of Police (FOP) award of 50 percent of final pay to 19 years of service and to extend the 75 percent of final pay to 24 years of service. In effect, when State Police have 19 or 24 years of service at the beginning of the plan year, they are likely to retire during the year, but after attaining the respective 20 and 25-year thresholds. This change increased the contribution rate by 0.29 percent of salary. Differences between actual experience and actuarial assumptions during 2003 resulted in a net increase in contribution of 0.19 percent of salary.

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 $1.03 billion attributable to net investment losses over the last five years, (ii) the increase of $0.40 billion attributable to the cost-of-living increase effective in 2003 and (iii) the decrease of $0.72 billion attributable to the negotiated pay increases.

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

The change in amortization periods did not affect the unfunded liability but only the periods over which the unfunded liability was amortized.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet that compares the total assets and liabilities of $33.6 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 State Police Benefit Account and the Enforcement Officers' Benefit Account for the supplemental annuity that was effective in July of 2003. SERS made the entire transfer for the 2003 COLA to the Annuity Reserve Account so money had to be reallocated to the State Police Benefit Account and the Enforcement Officers' Benefit Account to cover the cost of the COLA for those retirees.

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 2003, a transfer of $190.9 million was made to the Annuity Reserve Account from the State Accumulation Account to keep the former 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, 2003. 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.

Page 2 of Schedule H shows a comparison of the actual contributions to the system over recent years to the Annual Required Contribution (ARC) as defined by GASB Statement No. 25.

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, 2002 and 2003, actual contributions exceeded the ARC. For the period July 1, 2001 through June 30, 2003, the ARC was set at zero. However, the Board 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 for all or part of calendar years 2001, 2002 and 2003.

GASB Statement No. 25 defines the ARC to be equal to the employer normal cost plus an amount to amortize the unfunded actuarial accrued liability over an acceptable amortization period. The 2004-2005 employer contribution requirement is greater than the ARC. However, under the Act 40 amortization rules, it is possible that some future annual employer cost could result in an unfunded actuarial liability amortization period in excess of the maximum acceptable period and thus an actual contribution less than 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.

Plan Assets

Schedule J summarizes the development of the actuarial value of assets as of December 31, 2003. 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 2003). This smoothing method recognizes 20 percent of the 2003 asset gain of $2.7 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 2003 with a projection through 2014. 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.

The retirement projections in Schedule K are based upon the current retirement assumptions used for the valuation and do not reflect the greater numbers of retirements anticipated in 2004-2008 as a result of Act 2001-9 and the recently bargained medical program changes.

Participant Data

Section I of Schedule L provides a distribution of the active and inactive participants as of December 31, 2003 by benefit class, sex, age, and length of service. It also shows the average annualized salary in 2003 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. Other than Act 2003-40, there have been no significant changes in plan provisions since December 31, 2002.

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 those used in the 2002 valuation with the exception that for the 2003 valuation, assumed salary increases were modified, as appropriate, to reflect negotiated increases through June 30, 2007.

Actuarial Methods

Schedule O explains the asset valuation and funding method used in the valuation, and the determination of the annual contribution, reflecting the changes brought about by Act 2003-40. 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, 2003

I.	Present Value of Benefits:		
	A) Active and Inactive Participants		
	1) Superannuation and Withdrawal	$	20,046,568,364
	2) Disability		978,849,769
	3) Death		1,188,442,699
	4) Refunds		35,217,455
	5) Special Police and Enforcement Officer Benefits		7,337,110
	6) Subtotal	$	22,256,415,397
	B) Annuitants and Beneficiaries		11,296,519,629
	C) Total	$	33,552,935,026
II.	Present Value of Member and Employer Contributions:		
	A) Employer Portion of Normal Cost	$	4,113,960,954
	B) Member Contributions		3,259,213,209
	C) Total	$	7,373,174,163
III.	Actuarial Accrued Liability: (I) - (II)	$	26,179,760,863
IV.	Actuarial Value of Assets	$	27,465,614,945
V.	Unfunded Liability (III) - (IV)	$	(1,285,854,082)
VI.	Employer Normal Cost Rate		
	A) Normal Cost Rate for new active members to fund:		
	1) Superannuation and Withdrawal		12.48%
	2) Disability		0.92%
	3) Death		0.75%
	4) Refunds		0.42%
	5) Total		14.57%
	B) Member Deductions		6.25%
	C) Employer Normal Cost (A) - (B)		8.32%

SCHEDULE A

State Employees' Retirement System
Employer Contribution Rate in Fiscal Year 2004 - 2005

	Funding Period Initial Years	From July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/03	Annual Payment Amount	Payment as a Percent of Payroll *
I. Amortization of Liability (Asset) For:						
A) Supplemental Annuities as of 12/31/01	10	2002	$ 1,143,657,729	$ 982,919,616	$ 174,303,527	3.51%
B) Act 2001-9 Benefits	30	2002	2,735,791,064	2,351,282,767	222,524,490	4.48%
C) Other Benefits as of 12/31/01	10	2002	(7,726,186,132)	(6,640,290,819)	(1,177,538,922)	-23.72%
D) Supplemental Annuities (2002 COLA)	10	2003	256,500,000	239,209,637	39,092,863	0.79%
E) Changes in 2002	30	2003	1,119,058,089	1,043,623,702	97,898,155	1.97%
F) Supplemental Annuities (2003 COLA)	10	2004	395,800,000	395,800,000	60,323,412	1.21%
G) Changes in 2003	30	2004	341,601,015	341,601,015	31,786,301	0.64%
Total				**$(1,285,854,082)**	**$ (551,610,174)**	**-11.12%**
II. Employer Normal Cost						**8.32%**
III. Total Employer Cost before Act 2003-40 minimum = (I) + (II)						**-2.80%**
IV. Total Employer Cost (III), but not less than 2.00 percent as required by Act 2003-40						**2.00%**

* The payment is expressed as a percentage of the total projected payroll for active members in fiscal year 2004-2005 of $4,965,360,000. Percentages may not add due to rounding.

State Employees' Retirement System
Employer Contribution Rate by Group
(excluding Benefits Completion 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 2004-2005 Payroll (7)	Employer Contribution Amount (8)
Class AA - Age 60 Retirement	1.40%		1.0000		1.40%	$ 3,846,610,000	$ 53,852,540
Class A - Age 60 Retirement	1.40%		0.8000		1.12%	39,996,000	447,955
Class AA - Age 50 Retirement (Including Enforcement Officers)	1.40%	1.04%	1.0000		2.44%	674,053,000	16,446,893
Class A - Age 50 Retirement (Including Enforcement Officers)	1.40%	1.04%	0.8000		1.95%	14,515,000	283,043
Class AA - Park Rangers & Capitol Police	1.40%	0.93%	1.0000	0.87%	3.20%	10,699,000	342,368
Class A - Park Rangers & Capitol Police	1.40%	0.93%	0.8000	0.87%	2.73%	38,000	1,037
State Police (Class A & Class C)	1.40%	1.04%	1.1395	6.92%	9.70%	274,741,000	26,649,877
Class D3	1.40%	1.04%	3.0000		7.32%	392,000	28,694
Class D4	1.40%	1.04%	1.2000	-2.93%	0.00%	15,266,000	-
Class E	1.40%		1.2677		1.77%	89,050,000	1,576,185
					Total***	$ 4,965,360,000	$ 99,628,593

* 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 ($99,628,593) is approximately equal to the average employer contribution rate from Schedule B (2.00 percent) times the total projected payroll of $4,965,360,000. The Basic Contribution Rate of 1.40 percent was determined as the percentage needed to produce employer contribution amounts by employer group that sum to $99,628,593.

State Employees' Retirement System
State Police and Enforcement Officers Additional Annuity Rate
(Fiscal Year 2004 - 2005)

		State Police	Enforcement Officers
1)	Balance in Benefit Account as of December 31, 2003	$1,211,282,677	$37,503,874
2)	Present Value of Benefits for Annuitants and Beneficiaries	1,204,844,718	34,186,936
3)	Assets available for additional annuities for Active Members: (1) - (2)	6,437,959	3,316,938
4)	Present Value of additional annuities for Active Members	6,437,959	899,151
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, 2002 Valuation	8.43%	-7.39%	1.04%
II.	Changes in the December 31, 2003 Valuation:			
	A) Change in amortization periods under Act 2003-40		-6.46%	-6.46%
	B) Loss from investment earnings		3.18%	3.18%
	C) Change in salary increase assumptions	-0.13%	-1.35%	-1.48%
	D) Act 2002-38 cost-of-living adjustment		1.21%	1.21%
	E) Pay increase different than assumptions		-0.56%	-0.56%
	F) Change in actuarial methods and assumptions		0.29%	0.29%
	G) Change in amortization due to change in payroll		-0.20%	-0.20%
	H) Other differences between actual experience and actuarial assumptions		0.19%	0.19%
	I) Change in demographics of new entrants	0.02%	-0.03%	-0.01%
	J) Total Change	-0.11%	-3.73%	-3.84%
III.	December 31, 2003 Valuation: (I) + (II.J)	8.32%	-11.12%	-2.80%

Analysis of the Change in the Unfunded Liability

I.	December 31, 2002 Unfunded Liability	$	(2,211,875,220)
II.	Expected Amortization Payment		(376,629,517)
III.	Expected Liability as of December 31, 2003 [((I) x 1.085) - (II)]	$	(2,023,255,097)
IV.	Change in Liability Due to:		
	A) Loss from investment earnings	$	1,034,700,501
	B) Change in salary increase assumptions		(721,493,669)
	C) Act 2002-38 cost-of-living adjustment		395,800,000
	D) Pay increase different than assumptions		(182,235,744)
	E) Change in actuarial methods and assumptions		157,128,603
	F) Other differences between actual experience and actuarial assumptions		63,390,653
	G) Change in demographics of new entrants		(9,889,329)
	H) Total change	$	737,401,015
V.	December 31, 2003 Unfunded Liability: (III) + (IV. H)	$	(1,285,854,082)

State Employees' Retirement System
Actuarial Balance Sheet as of December 31, 2003

ASSETS

Present Assets:	
Members Savings Account	$ 3,588,663,630
Annuity Reserve Account	10,057,487,975
State Police Benefit Account	1,211,282,677
Enforcement Officers Benefit Account	37,503,874
State Accumulation Account *	11,258,217,479
Supplemental Annuity Account	(1,617,929,253)
Total Present Assets (Market Value)	$ 24,535,226,382
Adjustment to Smooth Market Fluctuations	2,930,388,563
Total Present Assets (Actuarial Value)	$ 27,465,614,945
Present Value of Future Contributions	
Members' Contributions (Employee)	$ 3,259,213,209
Normal Cost Contributions (Employer)	4,113,960,954
Accrued Liability Amortization (Employer)	(2,903,783,335)
Supplemental Annuity Amortization (Employer)	1,617,929,253
Special State Police Contributions (Employer)	0
Special Enforcement Officer Contributions (Employer)	0
Total Future Contributions	$ 6,087,320,081
TOTAL ASSETS	$ 33,552,935,026

* Includes $1,877,153 in directed commissions.

LIABILITIES

Present Value of Benefits Payable to Annuitants and Beneficiaries from:	
Annuity Reserve Account	$ 10,057,487,975
State Police Benefit Account	1,204,844,718
Enforcement Officers Benefit Account	34,186,936
Total for Annuitants and Beneficiaries	$ 11,296,519,629
Present Value of Benefits to Active and Inactive Members from:	
Members Savings Account and State Accumulation Account	
Superannuation and withdrawal	$ 20,046,568,364
Disability	978,849,769
Death	1,188,442,699
Refunds	35,217,455
Subtotal	$ 22,249,078,287
State Police Benefit Account	6,437,959
Enforcement Officers Benefit Account	899,151
Total Present Value of Benefits to Active and Inactive Members	$ 22,256,415,397
TOTAL LIABILITIES	$ 33,552,935,026

State Employees' Retirement System
Required Transfers Within SERS Accounts

I. Annuity Reserve Account

Balance as reported by SERS	$ 9,935,594,755
Transfer from State Accumulation Account	190,923,347
Transfer to Supplemental Annuity Account	(69,030,127)
December 31, 2003 balance after transfers	$10,057,487,975

II. State Accumulation Account *

Balance as reported by SERS	$11,460,022,018
Transfer to State Police Benefit Account	(10,881,192)
Transfer to Annuity Reserve Account	(190,923,347)
December 31, 2003 balance after transfers	$11,258,217,479

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	$ 36,480,668
Transfer from Supplemental Annuity Account	1,023,206
December 31, 2003 balance after transfers	$ 37,503,874

IV. State Police Benefit Account

Balance as reported by SERS	$ 1,132,394,564
Transfer from State Accumulation Account	10,881,192
Transfer from Supplemental Annuity Account	68,006,921
December 31, 2003 balance after transfers	$ 1,211,282,677

V. Supplemental Annuity Account

Balance as reported by SERS	$ (1,617,929,253)
Transfer from Annuity Reserve Account	69,030,127
Transfer to State Police Benefit Account	(68,006,921)
Transfer to Enforcement Officers' Benefit Account	(1,023,206)
December 31, 2003 balance after transfers	$ (1,617,929,253)

* Balance includes $1,877,153 in directed commissions.

State Employees' Retirement System
Accounting Disclosure Statements

I. Schedule of Funding Progress as of December 31, 2003
(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%
12/31/2003	27,465,615	26,179,761	(1,285,854)	104.9%	4,965,360	-25.9%

* 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 (i) which became payable in July 2003 and (ii) for which funding begins July 1, 2004. The December 31, 2002 accrued liabilities appearing elsewhere in this report do not include this liability.

State Employees' Retirement System
Accounting Disclosure Statements (Continued)

II. Schedule of Employer Contributions as of December 31, 2003
(Dollars in Thousands)

Calendar Year	Annual Required Contribution (ARC)	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%
2003	55,079	67,947	123.4%

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.

State Employees' Retirement System

Accounting Disclosure Statements (continued)

Valuation Date	December 31, 2003
Actuarial cost method	Variation of Entry-age Actuarial Cost Method
Amortization method	10-year or 30-year schedule with level payments
Remaining amortization period	8 to 30 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 employer contribution is equal to the sum of the following:

(1) The employer share of the normal cost.
(2) The amortization of the December 31, 2001 liability for Act 2001-9 benefits over a 30-year period beginning July 1, 2002 and ending on June 30, 2032.
(3) The amortization of the remaining unfunded liabilities as of December 31, 2001 over a ten-year period beginning July 1, 2002 and ending on June 30, 2012.
(4) The amortization of all unfunded liabilities due to supplemental annuities (COLAs) after 2001, or other legislated benefit improvements after June 30, 2003, over ten-year periods beginning with the July first following the effective date of the change.
(5) The amortization of changes in liability due to actual experience differing from assumed experience after December 31, 2001 over 30-year periods beginning with the July first following the actuarial valuation determining such changes.

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.

As long as the annual employer contribution, as defined above, is at least equal to the minimum contribution required under GASB Statement No. 25, the annual employer contribution will be deemed to be the Annual Required Contribution (ARC). Should the annual employer contribution be less than the minimum contribution required under GASB, the GASB minimum will be the ARC.

Accounting Disclosure Statements (continued)

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.

The actuary agreed with the actions taken by the Board that resulted in some difference between the ARC and the actual contribution. The table presented on page 20 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.

During 2001, 2002, and 2003, actual contributions exceeded the ARC. For the period July 1, 2001 through June 30, 2003, 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 for all or part of calendar years 2001, 2002 and 2003.

All amortization payments are currently based upon a 10-year or 30-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 Statement No. 25 defines the ARC to be equal to the employer normal cost plus an amount to amortize the unfunded actuarial accrued liability. The Statement prescribes the maximum acceptable period over which the total unfunded actuarial liability should be amortized. When portions of the unfunded actuarial liability are amortized over different periods, as they now are under Act 40, GASB requires that the "equivalent single amortization period" for all portions combined should not exceed the maximum acceptable period. The 2004-2005 employer contribution requirement is greater than the ARC. However, under the Act 40 amortization rules, it is possible that some future annual employer cost could result in an "equivalent single amortization period" in excess of the maximum acceptable period and thus an actual contribution less than the ARC.

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
December 31, 2003	3,588,664	11,296,520	11,294,578	26,179,761	27,465,615	100.0	100.0	100.0	104.9

* 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 (i) which became payable in July 2003 and (ii) for which funding begins July 1, 2004. The December 31, 2002 accrued liabilities appearing elsewhere in this report do not include this liability.

State Employees' Retirement System
Actuarial Value of Assets

I.	Development of 12/31/03 Expected Actuarial Value:		
	A)	Actuarial Value as of 12/31/02	$ 27,497,464,261
	B)	Contributions in 2003	375,960,138
	C)	Benefits and Expenses in 2003	(1,655,992,059)
	D)	Investment return at 8.5% to 12/31/03 on (A)	2,337,284,462
	E)	Investment return at 8.5% to 12/31/03 on (B) and (C) .5 x ((B) + (C))	(54,401,357)
	F)	Expected Actuarial Value as of 12/31/03: (A) + (B) + (C) + (D) + (E)	$ 28,500,315,446
II.	Previous Differences Not Yet Amortized:		
	A)	Unrecognized amount of 12/31/99 Difference: .2 x $2,988,135,569	$ 597,627,114
	B)	Unrecognized amount of 12/31/00 Difference: .4 x ($1,388,417,592)	(555,367,037)
	C)	Unrecognized amount of 12/31/01 Difference: .6 x ($4,403,319,681)	(2,641,991,809)
	D)	Unrecognized amount of 12/31/02 Difference: .8 x ($5,022,717,365)	(4,018,173,892)
	E)	Total	$ (6,617,905,624)
III.	Gain or Loss from 2003		
	A)	Market Value of Assets on 12/31/03	$ 24,535,226,382
	B)	Expected Market Value II(E) + I(F)	21,882,409,822
	C)	Gain (loss) from 2003 Investments (A) - (B)	$ 2,652,816,560
IV.	Development of Actuarial Value of Assets as of 12/31/03:		
	A)	20% of $2,988,135,569 (12/31/99 Difference):	$ 597,627,114
	B)	20% of ($1,388,417,592) (12/31/00 Difference):	(277,683,518)
	C)	20% of ($4,403,319,681) (12/31/01 Difference):	(880,663,936)
	D)	20% of ($5,022,717,365) (12/31/02 Difference):	(1,004,543,473)
	E)	20% of $2,652,816,560 (12/31/03 Difference):	530,563,312
	F)	Total Difference: (A) + (B) + (C) + (D) + (E)	$ (1,034,700,501)
	G)	Actuarial Value at 12/31/03: I(F) + IV(F)	$ 27,465,614,945

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

Projection of Annuitants and Employees
Actual Data Through 2003

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			85,808			8,604	94,412	109,018
2004	4,610	3,184	87,234	637	470	8,771	96,005	109,018
2005	4,638	3,163	88,709	633	488	8,916	97,625	109,018
2006	4,781	3,183	90,307	637	529	9,024	99,331	109,018
2007	5,020	3,203	92,124	641	565	9,100	101,224	109,018
2008	5,117	3,219	94,022	644	596	9,148	103,170	109,018
2009	5,126	3,239	95,909	648	623	9,173	105,082	109,018
2010	4,971	3,250	97,630	650	643	9,180	106,810	109,018
2011	4,800	3,270	99,160	654	662	9,172	108,332	109,018
2012	4,621	3,289	100,492	658	676	9,154	109,646	109,018
2013	4,408	3,308	101,592	662	686	9,130	110,722	109,018
2014	4,180	3,329	102,443	666	693	9,103	111,546	109,018

The retirement projections above are based upon the same SERS retirement assumptions as used for determining employer costs for this December 31, 2003 valuation (which are also the same assumptions as used for the preceding three valuations). These projections and assumptions have not been adjusted to reflect the greater numbers of retirements anticipated in 2004 through 2008 as a result of Act 2001-9 and the recently bargained medical program changes. Use of the same retirement assumptions as used in the past is appropriate since adjusting those assumptions (i) would not have affected 2004-2005 costs, given that the Act 40 2.00 percent minimum was controlling, and (ii) would not result in any significant differences in the cumulative projected retirements over the next ten years.

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

Projection of Expected Contributions and Benefits
Actual Data Through 2003
(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	308	68			1,656
2004	311	76	6.2%	1.5%	1,753
2005	308	124	6.2%	2.5%	1,882
2006	313	177	6.2%	3.5%	2,079
2007	323	271	6.2%	5.2%	2,304
2008	334	325	6.2%	6.0%	2,484
2009	345	320	6.2%	5.7%	2,673
2010	357	340	6.2%	5.9%	2,936
2011	368	460	6.2%	7.7%	3,220
2012	380	1,076	6.2%	17.5%	3,438
2013	393	1,583	6.2%	24.9%	3,662
2014	406	1,551	6.2%	23.6%	3,995

The projection is based upon the following assumptions: a projected investment return of 8.5 percent in 2004 and after; general pay increases of 3.3 percent adjusted for negotiated increases; and supplemental annuity increases in 2006 and 2010.

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2003

Active Employees*

Males - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	26	0	0	0	0	0	0	26	$ 20,830
20-24	728	6	0	0	0	0	0	734	24,770
25-29	1,580	294	4	0	0	0	0	1,878	31,742
30-34	1,548	1,034	461	10	0	0	0	3,053	36,565
35-39	1,436	1,000	1,242	514	13	0	0	4,205	40,488
40-44	1,445	971	1,273	1,467	787	45	0	5,988	43,327
45-49	1,522	997	1,258	1,445	1,581	957	83	7,843	45,340
50-54	1,425	929	1,147	1,318	1,374	1,915	1,593	9,701	49,454
55-59	1,054	704	950	913	856	1,229	2,494	8,200	52,503
60-64	479	376	497	352	285	248	778	3,015	53,836
65+	216	195	261	126	87	78	275	1,238	52,697
Total	11,459	6,506	7,093	6,145	4,983	4,472	5,223	45,881	$ 46,056

Average Age 47.62
Average Service 14.29

Females - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	34	0	0	0	0	0	0	34	$ 21,036
20-24	908	27	0	0	0	0	0	935	24,747
25-29	1,773	427	36	0	0	0	0	2,236	30,038
30-34	1,613	935	613	49	0	0	0	3,210	33,052
35-39	1,457	838	1,073	724	60	0	0	4,152	35,582
40-44	1,607	947	1,140	1,139	1,090	109	0	6,032	38,207
45-49	1,619	1,016	1,312	1,161	1,381	1,386	236	8,111	40,963
50-54	1,251	838	1,200	1,228	1,195	1,474	1,877	9,063	43,354
55-59	767	615	886	985	913	887	1,233	6,286	43,404
60-64	283	293	446	341	313	234	274	2,184	42,119
65+	100	104	186	126	77	60	118	771	40,261
Total	11,412	6,040	6,892	5,753	5,029	4,150	3,738	43,014	$ 39,437

Average Age 46.27
Average Service 13.62

* 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, 2003

Selected Hazardous Duty*

Males - Full Years of Service to December 31, 2003

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	107	0	0	0	0	0	0	107	31,527
25-29	817	164	0	0	0	0	0	981	36,183
30-34	1,009	1,256	489	3	0	0	0	2,757	45,301
35-39	674	1,013	1,690	330	4	0	0	3,711	51,007
40-44	417	467	804	852	249	6	0	2,795	52,608
45-49	279	316	392	516	498	166	1	2,168	54,261
50-54	236	276	387	317	280	263	67	1,826	53,184
55-59	157	221	297	321	175	127	208	1,506	53,307
60-64	28	73	104	76	39	22	24	366	51,697
65+	5	14	25	15	13	5	9	86	53,069
Total	3,729	3,800	4,188	2,430	1,258	589	309	16,303	$ 50,212

Average Age 41.90
Average Service 10.96

Females - Full Years of Service to December 31, 2003

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	22	0	0	0	0	0	0	22	29,909
25-29	165	20	0	0	0	0	0	185	34,872
30-34	212	161	27	0	0	0	0	400	40,148
35-39	124	137	99	18	0	0	0	378	43,141
40-44	103	112	95	85	31	1	0	427	46,739
45-49	93	109	123	70	91	28	3	517	49,620
50-54	56	80	81	50	40	44	14	365	51,923
55-59	24	24	65	46	27	16	9	211	53,796
60-64	4	11	35	10	5	6	5	76	54,679
65+	1	1	8	7	3	3	2	25	63,144
Total	804	655	533	286	197	98	33	2,606	$ 46,479

Average Age 42.99
Average Service 9.76

* 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, 2003

Legislators

Males - Full Years of Service to December 31, 2003

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	2	0	0	0	0	0	3	66,204
30-34	5	2	0	0	0	0	0	7	66,204
35-39	2	5	1	0	0	0	0	8	66,204
40-44	9	11	6	2	0	1	0	29	66,204
45-49	7	8	10	8	7	0	0	40	68,074
50-54	8	8	6	3	6	10	1	42	69,533
55-59	4	1	5	9	6	6	2	33	68,583
60-64	0	2	3	2	3	6	6	22	71,800
65+	1	2	4	5	6	6	7	31	69,487
Total	37	41	35	29	28	29	16	215	$ 68,613

Average Age 52.78
Average Service 14.93

Females - Full Years of Service to December 31, 2003

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	2	0	0	0	0	0	0	2	66,204
35-39	0	1	0	0	0	0	0	1	66,204
40-44	0	1	2	0	0	0	0	3	66,204
45-49	1	2	1	1	0	0	0	5	66,204
50-54	0	0	0	0	2	0	0	2	66,204
55-59	1	4	6	0	0	0	0	11	66,204
60-64	2	2	1	0	1	0	0	6	67,751
65+	0	0	1	4	0	0	1	6	68,547
Total	6	10	11	5	3	0	1	36	$ 66,852

Average Age 55.47
Average Service 11.31

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2003

Judges And District Justices

Males - Full Years of Service to December 31, 2003

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	61,472
30-34	2	1	0	0	0	0	0	3	61,472
35-39	8	5	4	0	0	0	0	17	68,844
40-44	17	7	7	3	0	0	0	34	72,653
45-49	26	27	23	13	2	1	0	92	86,791
50-54	32	24	57	30	23	10	2	178	84,603
55-59	24	27	51	44	28	13	5	192	97,613
60-64	10	12	40	26	22	15	11	136	92,633
65+	5	10	12	12	19	8	8	74	100,727
Total	126	113	194	128	94	47	26	728	$ 90,365

Average Age 54.99
Average Service 13.37

Females - Full Years of Service to December 31, 2003

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	4	1	0	0	0	0	0	5	61,472
35-39	8	2	3	0	0	0	0	13	70,989
40-44	12	4	6	1	0	0	0	23	77,819
45-49	15	15	6	9	2	0	0	47	96,033
50-54	8	13	20	13	4	3	0	61	99,549
55-59	1	11	13	13	5	1	1	45	95,125
60-64	0	4	6	5	7	1	1	24	79,911
65+	0	2	7	3	4	1	0	17	85,414
Total	48	52	61	44	22	6	2	235	$ 90,454

Average Age 51.79
Average Service 11.08

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2003

All Active Employees

Males - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	26	0	0	0	0	0	0	26	$ 20,830
20-24	835	6	0	0	0	0	0	841	25,630
25-29	2,400	460	4	0	0	0	0	2,864	33,320
30-34	2,564	2,293	950	13	0	0	0	5,820	40,752
35-39	2,120	2,023	2,937	844	17	0	0	7,941	45,491
40-44	1,888	1,456	2,090	2,324	1,036	52	0	8,846	46,447
45-49	1,834	1,348	1,683	1,982	2,088	1,124	84	10,143	47,713
50-54	1,701	1,237	1,597	1,668	1,683	2,198	1,663	11,747	50,638
55-59	1,239	953	1,303	1,287	1,065	1,375	2,709	9,931	53,551
60-64	517	463	644	456	349	291	819	3,539	55,218
65+	227	221	302	158	125	97	299	1,429	55,570
Total	15,351	10,460	11,510	8,732	6,363	5,137	5,574	63,127	$ 47,717

Average Age 46.25
Average Service 13.42

Females - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	34	0	0	0	0	0	0	34	$ 21,036
20-24	930	27	0	0	0	0	0	957	24,865
25-29	1,938	447	36	0	0	0	0	2,421	30,407
30-34	1,831	1,097	640	49	0	0	0	3,617	33,894
35-39	1,589	978	1,175	742	60	0	0	4,544	36,319
40-44	1,722	1,064	1,243	1,225	1,121	110	0	6,485	38,922
45-49	1,728	1,142	1,442	1,241	1,474	1,414	239	8,680	41,792
50-54	1,315	931	1,301	1,291	1,241	1,521	1,891	9,491	44,049
55-59	793	654	970	1,044	945	904	1,243	6,553	44,132
60-64	289	310	488	356	326	241	280	2,290	42,999
65+	101	107	202	140	84	64	121	819	42,104
Total	12,270	6,757	7,497	6,088	5,251	4,254	3,774	45,891	$ 40,120

Average Age 46.12
Average Service 13.39

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2003

Active And Inactive Employees

Males - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	26	0	0	0	0	0	0	26
20-24	836	7	0	0	0	0	0	843
25-29	2,405	470	4	0	0	0	0	2,879
30-34	2,583	2,357	962	13	0	0	0	5,915
35-39	2,151	2,091	2,986	849	17	0	0	8,094
40-44	1,918	1,514	2,165	2,358	1,047	53	0	9,055
45-49	1,886	1,418	1,777	2,027	2,107	1,141	84	10,440
50-54	1,831	1,304	1,698	1,734	1,727	2,243	1,706	12,243
55-59	1,426	1,013	1,388	1,356	1,107	1,423	2,812	10,525
60-64	587	488	688	502	395	314	876	3,850
65+	258	242	328	187	142	105	328	1,590
Total	15,907	10,904	11,996	9,026	6,542	5,279	5,806	65,460

Average Age 46.46
Average Service 13.40

Females - Full Years of Service to December 31, 2003

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	34	0	0	0	0	0	0	34
20-24	930	27	0	0	0	0	0	957
25-29	1,951	467	36	0	0	0	0	2,454
30-34	1,864	1,175	663	50	0	0	0	3,752
35-39	1,629	1,060	1,256	758	60	0	0	4,763
40-44	1,805	1,168	1,350	1,260	1,130	112	0	6,825
45-49	1,864	1,267	1,600	1,310	1,494	1,424	246	9,205
50-54	1,641	1,109	1,457	1,382	1,277	1,547	1,925	10,338
55-59	1,158	791	1,086	1,111	977	936	1,303	7,362
60-64	430	357	546	394	349	278	306	2,660
65+	143	136	215	158	91	68	138	949
Total	13,449	7,557	8,209	6,423	5,378	4,365	3,918	49,299

Average Age 46.46
Average Service 13.10

State Employees' Retirement System
II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2003

Superannuation Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
50-54	317	$ 9,345,313	102	$ 2,791,319	419	$ 12,136,632
55-59	1,502	53,992,217	465	14,797,375	1,967	68,789,591
60-64	3,782	118,385,356	2,299	49,798,334	6,081	168,183,689
65-69	4,991	115,961,356	3,299	52,407,729	8,290	168,369,084
70-74	4,964	98,159,791	3,522	43,396,880	8,486	141,556,671
75-79	5,003	82,433,690	4,014	41,846,177	9,017	124,279,867
80-84	3,787	51,456,066	3,724	32,333,940	7,511	83,790,006
85-89	1,907	21,590,788	2,336	18,278,029	4,243	39,868,817
90 & over	858	10,121,083	1,304	11,140,147	2,162	21,261,230
Total	27,111	$ 561,445,658	21,065	$ 266,789,930	48,176	$ 828,235,588

Average Age	73.9
Average Annual Pension	$17,192

State Employees' Retirement System

II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2003

Early Retirement Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
under 25	-	$ -	-	$ -	-	$ -
25-29	8	4,703	18	11,599	26	16,302
30-34	72	97,870	83	89,249	155	187,119
35-39	203	421,011	250	348,837	453	769,848
40-44	451	1,571,656	609	1,507,430	1,060	3,079,086
45-49	792	4,965,712	1,349	5,220,833	2,141	10,186,546
50-54	1,909	20,164,759	2,772	19,551,527	4,681	39,716,286
55-59	4,198	79,989,871	2,847	32,062,575	7,045	112,052,446
60-64	3,519	67,294,424	2,225	28,297,960	5,744	95,592,384
65-69	2,044	29,144,284	1,656	16,135,919	3,700	45,280,203
70-74	1,753	24,515,324	1,389	12,797,654	3,142	37,312,977
75-79	872	11,055,607	927	7,249,355	1,799	18,304,962
80-84	347	4,141,594	487	3,780,715	834	7,922,309
85-89	98	1,078,493	174	1,579,461	272	2,657,954
90 & over	37	374,280	57	535,717	94	909,998
Total	16,303	$ 244,819,588	14,843	$ 129,168,831	31,146	$ 373,988,419

Average Age	60.4
Average Annual Pension	$12,008

State Employees' Retirement System

II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2003

Disabled Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
under 25	-	$ -	-	$ -	-	$ -
25-29	-	-	-	-	-	-
30-34	11	116,245	19	176,729	30	292,974
35-39	50	569,881	44	393,770	94	963,651
40-44	126	1,517,289	165	1,861,905	291	3,379,194
45-49	240	2,970,613	361	4,527,314	601	7,497,927
50-54	531	7,562,859	601	8,041,881	1,132	15,604,740
55-59	645	9,028,636	629	8,543,183	1,274	17,571,820
60-64	560	6,624,610	489	5,102,367	1,049	11,726,977
65-69	346	3,296,237	408	3,660,024	754	6,956,260
70-74	272	2,661,988	274	2,115,876	546	4,777,864
75-79	186	1,754,991	195	1,416,687	381	3,171,677
80-84	92	783,684	139	909,370	231	1,693,054
85-89	35	299,539	49	327,241	84	626,780
90 & over	5	26,628	14	75,977	19	102,605
Total	3,099	$ 37,213,200	3,387	$ 37,152,322	6,486	$ 74,365,522

Average Age	59.9
Average Annual Pension	$11,466

State Employees' Retirement System

II. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2003

Beneficiaries and Survivor Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	19	$ 178,282	7	$ 49,393	26	$ 227,674
25-29	6	120,523	9	73,225	15	193,748
30-34	14	279,490	11	116,321	25	395,811
35-39	12	67,419	21	244,104	33	311,523
40-44	19	143,785	41	331,104	60	474,890
45-49	44	256,001	90	696,523	134	952,524
50-54	53	330,601	219	1,780,658	272	2,111,259
55-59	74	496,919	361	3,554,323	435	4,051,243
60-64	71	511,702	507	5,744,483	578	6,256,185
65-69	88	636,396	651	5,974,871	739	6,611,267
70-74	121	957,905	945	8,169,123	1,066	9,127,028
75-79	116	711,857	1,444	10,267,629	1,560	10,979,486
80-84	80	451,227	1,508	8,650,602	1,588	9,101,829
85-89	63	335,810	1,215	6,086,375	1,278	6,422,185
90 & over	21	76,979	774	3,556,697	795	3,633,676
Total	801	$ 5,554,897	7,803	$ 55,295,430	8,604	$ 60,850,327

Average Age	75.3
Average Annual Pension	$7,072

State Employees' Retirement System

Benefit and Contribution Provisions as of December 31, 2003
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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 the 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 the highest annual salary.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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 70^{th} 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.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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 superannuation age with 5 years of credited service or (2) has attained superannuation age with 3 years of credited service.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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 a two-stage increase under Act 2002-38. The first stage was applicable to annuitants who retired on or before July 1, 1990, and it became effective in July of 2002. The second stage provided cost-of-living increases to annuitants who retired after July 1, 1990 but prior to July 2, 2002, and it became effective in July of 2003. Funding for the first stage of the COLA began July 1, 2003, therefore it was included in the December 31, 2002 valuation liabilities and costs. Funding for the second stage begins July 1, 2004, therefore it is reflected for the first time in the December 31, 2003 valuation.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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.

Benefit and Contribution Provisions as of December 31, 2003 (continued)
(as embodied in Act 31 of 1974, and amended through Act 40 in December 2003)

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 a refund of accumulated contributions and interest, which results in a decrease to the annuity benefit otherwise payable.

Employer Contributions

The employer pays the balance of the cost in excess of the members' contributions with payment schedules determined by law. Act 2003-40 made changes to the SERS funding rules which significantly affect the required employer contributions. See Section III of Schedule O for the details.

Actuarial Equivalence

The actuarial table used to determine 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. The assumed interest rate of 8.5 percent is the investment return less investment and administrative expenses.

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%

SCHEDULE N
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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 19 or More Years of Service:

Rates of Separation Due to Retirement other than State Police with 19 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 19* or More Years of Service:

Rates of Separation due to Retirement for State Police with 19 or More Years of Service			
Years of Service	**Rate**	**Years of Service**	**Rate**
19*	4.0%	26-32	16.0%
20 – 23	1.0	33	30.0
24*	30.0	34-38	41.0
25	17.0	39+	100.0

* State Police with 19 and 24 years of service at the beginning of the year are assumed to retire at the point they reach 20 and 25 years respectively during the year and to receive the FOP award.

Note: The assumptions above do not take into account the mandatory retirement age of 60 for State Police. This has little effect on the December 31, 2003 valuation liabilities and no bottom-line 2004-2005 employer cost impact, since the Act 40 minimum employer cost is controlling.

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 career salary scale shown on the following page 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 on the following page does not include the assumed 3.3 percent general salary increase.

Actuarial Assumptions (continued)

Assumed future salary increases were modified in the December 31, 2003 valuation with respect to Class AA and Class A employees (other than members of the judiciary, legislators and select others) who are subject to the age 60/35 years of service superannuation requirements, to reflect negotiated increases applicable to such employees through June 30, 2007, as summarized below:

Valuation Assumptions for Negotiated Salary Increases				
Fiscal Year Beginning July 1	General	Assumed Longevity	Average Promotion	Total
2003	0.0%	0.0%	1.7%	1.7%
2004	0.0%	1.8%	1.7%	3.5%
2005	3.0%	0.0%	1.7%	4.7%
2006	3.5%	3.6%	1.7%	8.8%

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%

The above scale 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 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 or 30-year period beginning with the July first following the measurement of the liability. See Section III below for details regarding the specific liabilities subject to amortization and the applicable amortization periods. 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 December 31, 2001 liability for Act 2001-9 benefits over a 30-year period beginning July 1, 2002 and ending on June 30, 2032.
(3) The amortization of the remaining unfunded liabilities as of December 31, 2001 over a ten-year period beginning July 1, 2002 and ending on June 30, 2012.
(4) The amortization of all unfunded liabilities due to supplemental annuities (COLAs) after 2001, or other legislated benefit improvements after June 30, 2003, over ten-year periods beginning with the July first following the effective date of the change.
(5) The amortization of changes in liability due to actual experience differing from assumed experience after December 31, 2001 over 30-year periods beginning with the July first following the actuarial valuation determining such changes.

Actuarial Methods (Continued)

The amortization payments are level amounts over the applicable 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. The employer cost for fiscal year 2004/2005 is the total of (1) the employer normal cost percent and (2) the net amortization payment for fiscal year 2004/2005 divided by the projected payroll for the fiscal year. Under Act 2003-40, the total annual employer contribution rate for fiscal year 2004/2005 shall not be less than 2 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 generally assumed that the total payroll will increase at 3.3 percent a year and that employee career salary growth (promotion and longevity growth) will average an additional 3.5 percent a year. Therefore, the average total salary growth for an individual will generally be 6.8 (3.3 plus 3.5) percent a year. These assumed salary increases were modified, however, in this valuation to reflect negotiated increases through June 30, 2007. 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 IV. 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.

Actuarial Methods (Continued)

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.

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).

Actuarial Methods (Continued)

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.

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 contributions made by the D-4 employer, plus interest, was equal to $4,019,564 as of December 31, 2003. The amount needed to produce a zero contribution rate in 2003 was less than the interest earned on the excess contributions so the available fund increased in 2003. These funds will continue to be used to offset future D-4 employer contribution requirements, until the balance is expended.

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

Actuarial Methods (Continued)

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.

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.

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.