HayGroup®

Commonwealth of Pennsylvania State Employees' Retirement System

2008 Actuarial Report

COMMONWEALTH OF PENNSYLVANIA

STATE EMPLOYEES' RETIREMENT SYSTEM

2008 ACTUARIAL REPORT

DEFINED BENEFIT PLAN

HAY GROUP
JUNE 3, 2009

Hay Group, Inc.
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4301 North Fairfax Drive
Arlington, VA 22203
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June 3, 2009

Mr. Leonard M. Knepp
Executive Director
State Employees' Retirement System
30 North Third Street
Suite 150
Harrisburg, PA 17101-1716

Dear Mr. Knepp:

The purpose of this letter is to certify the actuarial adequacy of the contributions being made by the Commonwealth 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, 2008 annual actuarial valuation.

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 for the fiscal year beginning July 1, 2009:

(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 remaining applicable amortization periods. The employer cost is determined as a percent of payroll. The total employer cost is the average contribution amount that needs to be received from the employer groups participating in the system. Some employer groups contribute a higher percent of pay, and some employer groups contribute a lower percent of pay depending on the benefits payable to their employees.

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 the past experience of SERS and reasonable expectations) and which in combination represent the best estimate of anticipated experience under the plan.

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

The actuarial valuation uses assumptions regarding future rates of investment return and rates of retirement, withdrawal, death, and disability among SERS members and their beneficiaries. With the exception of the investment return assumption, the current set of assumptions used in the December 31, 2008 actuarial valuation was adopted by the Board and was based on actual experience of SERS during the years 2001 through 2005. At its April 29, 2009 meeting, the Board lowered the annual investment return assumption from 8.5% to 8.0%. 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.

Apart from the statutory funding requirements set forth in the SERS Code, there are also separate accounting standards that SERS uses for financial reporting purposes. 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 scheduled payments since July 1, 2005 have been below the minimum amount required to meet the GASB minimum. This is a result of financing changes implemented by Act 2003-40 in December 2003. After June 30, 2012, provided that employer contributions are made in accordance with current law, we expect SERS contributions to exceed the GASB minimum.

Based upon the valuation results, it is our opinion that the Pennsylvania State Employees' Retirement System is in sound condition in accordance with generally accepted actuarial principles and procedures. The employer contribution has been below the GASB Statement No. 25 minimum since July 1, 2005 and will likely remain below the minimum through June 30, 2012. Thereafter, provided that employer contributions are made in accordance with current law, we expect SERS contributions to exceed the GASB minimum.

It should be noted that the SERS annual employer contribution requirement is expected to increase dramatically (from the current level of 4 percent of payroll to a level near 30 percent of payroll) beginning July 1, 2012 when credit for the pre-Act 9 surplus has been completely amortized (pursuant to the 10-year amortization schedule established under Act 2003-40). The SERS Board and staff are actively pursuing this issue with other concerned parties.

Respectfully submitted,
Hay Group

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State Employees' Retirement System

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State Employees' Retirement System
Valuation Highlights

	December 31, 2008 Valuation: i = 8.0%*	December 31, 2007 Valuation: i = 8.5%*
Summary of Contributions as a Percent of Total Compensation		
SERS Plan Contribution		
Normal Cost	9.51%	8.42%
Amortization of Liabilities	-5.88%	-9.57%
Contribution Before Act 2007-8 Minimum	3.63%	-1.15%
Total SERS Plan Contribution**	4.00%	4.00%
Benefits Completion Plan Contribution	0.01%	0.04%
Total Contribution	4.01%	4.04%

* Annual interest rate (i) assumption revised from 8.5% to 8.0% effective December 31, 2008
** Reflects the Act 2007-8 Minimum

Demographic Characteristics of the Population

	December 31, 2008	December 31, 2007
Active Participants***:		
Number	110,866	109,610
Average age	46.2	46.0
Average service	12.0	12.0
Average annualized compensation	$ 48,957	$ 48,345
Total annualized compensation	$ 5,427,667,000	$ 5,299,095,000
Funding payroll	$ 5,660,319,000	$ 5,529,069,000
Annuitants and Beneficiaries***:		
Number	108,146	107,130
Average age	68.3	68.2
Total annual pension	$ 1,908,350,821	$ 1,849,310,873
Inactive and Vested Participants***:		
Number	6,009	5,692

*** See Glossary at end of report for description of members included in these participant groups

Assets

	December 31, 2008	December 31, 2007
Market Value Assets	$ 22,789,120,240	$ 35,511,205,870
Actuarial Value of Assets	$ 30,635,620,922	$ 30,839,877,345
Funded Status (Market Assets)	66.2%	111.8%
Funded Status (Actuarial Assets)	89.0%	97.1%

State Employees' Retirement System

Employer Contribution Rate by Group
Fiscal Year 2009 - 2010

	SERS Plan	Benefits Completion Plan	Total
Class AA Members:			
Age 60 Retirement	3.14%	0.01%	3.15%
Age 50 Retirement	5.25%	0.01%	5.26%
Park Rangers	4.93%	0.01%	4.94%
Capitol Police	4.93%	0.01%	4.94%
Enforcement Officers	5.25%	0.01%	5.26%
Class A Members:			
Age 60 Retirement	2.51%	0.01%	2.52%
Age 50 Retirement	4.20%	0.01%	4.21%
Park Rangers	4.08%	0.01%	4.09%
Capitol Police	4.08%	0.01%	4.09%
State Police	11.31%	0.01%	11.32%
Enforcement Officers	4.20%	0.01%	4.21%
Class C Members:			
State Police	11.31%	0.01%	11.32%
Enforcement Officers	4.20%	0.01%	4.21%
Class D Members:			
D-3 Legislators	15.75%	0.01%	15.76%
D-4 Legislators	3.78%	0.01%	3.79%
Class E Members	3.98%	0.01%	3.99%

General Discussion

The liabilities and costs in this report were based upon actuarial assumptions adopted by the State Employees' Retirement Board and funding procedures specified in the State Employees’ Retirement System (SERS) code. With the exception of the investment return assumption, the current set of actuarial assumptions was adopted by the Board in 2006. In April of 2009, the Board adopted an annual investment return assumption of 8.0 percent to replace the 8.5 percent assumption used previously. The Board felt, in light of the significant economic developments since the prior valuation, that the 8.0 percent assumption was a more realistic expectation for the future.

The most important actuarial assumptions are the investment return, which is used as the basis for the valuation interest rate, and salary growth. 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 3.8 percent a year. Thus, the total average salary increase for an individual will generally be 7.1 percent a year. The investment return and the salary rate increase assumptions are based on an underlying inflation rate of 3.0 percent a year.

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. The employer contribution determined as of December 31, 2008 was 3.63 percent of payroll. However, Act 2007-8 set a floor on the contribution rate of 4 percent of payroll effective for fiscal years beginning July 1, 2007 and after. Therefore, the fiscal year 2009-2010 contribution rate will be 4 percent of payroll.

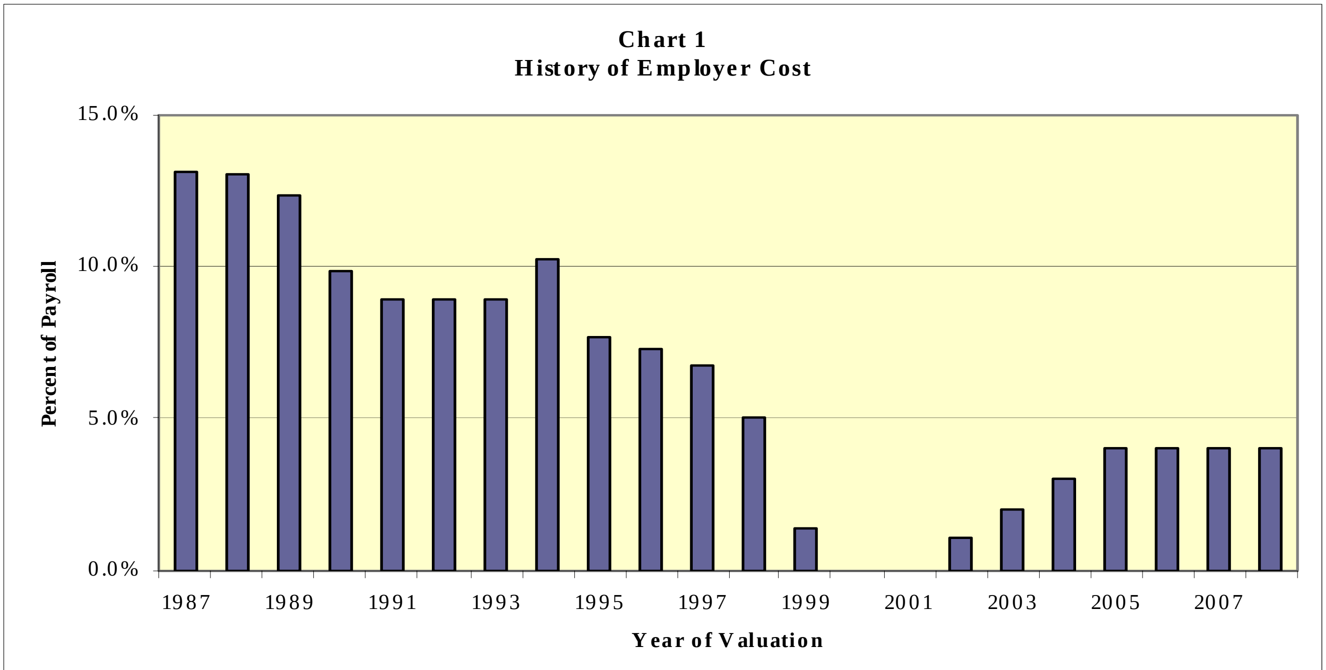
The SERS code requires that the Board conduct a study of the actuarial experience of the SERS plan every five years as a basis for setting the actuarial assumptions used in the valuation. A five year study was conducted and delivered to the Board for review and approval in March 2006. The Board approved the recommendations of the actuary and the new assumptions were first used in the December 31, 2005 valuation. As stated above, the Board adopted a revised interest rate assumption in 2009.

The funded ratio is the ratio of assets to the actuarial accrued liability. As a consequence of the global economic downturn, SERS experienced very unfavorable investment results during calendar 2008. Thus, SERS’ funded status, as measured by the funded ratio, declined significantly during 2008. The funded ratio based on market value of assets decreased from 111.8 percent to 66.2 percent in the last year. The funded ratio based on the actuarial value of assets decreased from 97.1 percent to 89.0 percent in the last year.

A separate and distinct Benefits Completion Plan (BCP) provides benefits to certain members whose SERS benefits are limited by IRC Section 415(b) maximum benefit limitations. The BCP employer contribution requirements for fiscal year 2009-2010, which were determined by a separate December 31, 2008 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 1987 through 2008. With some fluctuations, the general trend from 1987 through 2001 had been downward, with the rate declining from 13.09 percent in 1987 to zero in 2000 and 2001. The investment returns were below the actuarial assumption (then 8.5 percent) in 2000 through 2002. The changes to the amortizations under Act 2003-40 and subsequent investment gains would have kept the contributions from increasing if it had not been for legislated floors that caused the employer contributions to increase between 2002 and 2005.



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the rate of 4.00 percent will be the employer contribution for the fiscal year beginning July 1, 2009.

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 for All Urban Consumers (CPI-U) data. The nominal rate of salary growth is the percentage increase in general pay levels specified by the predominant collective bargaining agreement.

Table 1: Comparison of Annual Rates of Growth					
		Investment Return		Salary Growth	
Year	Inflation	Nominal	Real	Nominal	Real
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
2004	3.3	15.1	11.4	1.9	(1.4)
2005	3.4	14.5	10.7	3.0	(0.4)
2006	2.5	16.4	13.6	3.5	1.0
2007	4.1	17.2	12.6	2.8	(1.2)
2008	0.1	(28.7)	(28.8)	3.0	2.9
Average 1989-2008	**2.8%**	**9.0%**	**6.0%**	**3.2%**	**0.4%**

Comments on Schedules

Employer Contribution Rate

Schedules A and B summarize the development of the employer contribution rate before allocation by group. The employer contribution is equal to the sum of (1) the employer share of the normal cost and (2) amortization of the unfunded liability.

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 increased from 8.42 percent in 2007 to 9.51 percent in 2008 mainly due to the decrease in the interest rate assumption from 8.5 percent to 8.0 percent per year.

Portions of the unfunded liability are amortized over either 10 years or 30 years as required by the SERS law. The cost of the Act 2001-9 benefits and actuarial gains and losses since 2001 are being amortized over 30 years. The costs of supplemental annuities (COLAs) are being funded over 10 years. The surplus that existed as of December 31, 2001 is being amortized over ten years. The total unfunded liability as of December 31, 2008 was $3.80 billion. As of December 31, 2007, the total unfunded liability was $914 million.

Schedule B shows the allocation of the total unfunded liability by year into those liabilities being amortized over 10 years and those being amortized over 30 years. All amortization payments are level amounts over the applicable amortization period.

Although there is a total unfunded liability as of December 31, 2008 of $3.80 billion, the bottom-line annual amortization payment to fund this liability in the 2009-2010 fiscal year is a net credit, which serves to offset the employer normal cost. Although this net result may seem contradictory, it is appropriate and occurs because the large surplus of gains (negative unfunded liability) that existed on December 31, 2001 is being amortized over 10 years, whereas most of the remaining charge (positive unfunded liability) is being amortized over 30 year periods. The total net credit for amortization of the unfunded liability decreased from 9.57 percent of payroll in 2007 to 5.88 percent of payroll in 2008.

The employer contribution rate is equal to the total of the normal cost and the amortization of the unfunded liabilities but not less than 4 percent. The employer contribution rate calculated as a result, 4.00 percent of payroll in 2008, will be applied in the year beginning July 1, 2009.

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 3.14 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 2009/2010
(Excluding Benefits Completion Plan Contribution)

Class AA	
Age 60 benefit	3.14%
Age 50 benefit	5.25
Park Rangers	4.93
Capitol Police	4.93
Enforcement Officers	5.25
Class A	
Age 60 benefit	2.51
Age 50 benefit	4.20
Park Rangers	4.08
Capitol Police	4.08
State Police	11.31
Enforcement Officers	4.20
Class C	
State Police	11.31
Enforcement Officers	4.20
Class D	
D-3 Legislators	15.75
D-4 Legislators	3.78
Class E	3.98

The contribution rate for Class D-4 Legislators is 3.78 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 reduction in the contribution rate. This is the last year that the excess contribution made by the D-4 employer will continue to be used to offset the D-4 employer contribution requirements because the balance will be expended during the year.

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

Change in Employer Contribution Rate

Schedule E contains an analysis of the change in the employer contribution rate and unfunded liability from the 2007 to 2008 valuation.

The largest reduction in the unfunded liability and employer contribution rate was the gain from demographic experience. There were fewer retirements than expected and other differences between expected and actual retirement plan occurrences that resulted in a gain of $365 million, and therefore a decrease in employer cost of 0.69 percent of payroll.

The largest increase in the unfunded liability, $1.63 billion, resulted from the change in interest rate assumption from 8.5 percent to 8.0 percent per year. This led to an increase in employer cost of 3.77 percent of payroll. In addition to the change in the interest rate assumption, there was also a large loss from investment earnings during the year. The 20 percent reflection of investment gains and losses over the last five years resulted in a net loss of $1.09 billion, and therefore an increase in employer cost of 1.72 percent of payroll.

All other changes from last year to this year decreased the employer cost by 0.02 percent of salary.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet that compares the total assets and liabilities of $43.1 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.

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 2008, a transfer of $712.2 million was made from the State Accumulation Account to the Annuity Reserve Account to keep the latter account in balance. There were also transfers of $0.7 million and $57.1 million from the State Accumulation Account to the Enforcement Officers' Benefit Account and the State Police Benefit Account, respectively, to keep these accounts in balance. No other transfers were necessary.

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, 2008.

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.

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 2008-2009 employer contribution is lower than the ARC. GASB requires that the net unfunded liability be funded over a period of no more than 30 years. Because of the different funding periods for different portions of the unfunded liability, the net payments on the unfunded liability are actually negative, thus reducing the total employer contribution to less than the normal cost. We anticipate that the SERS contribution will be lower than the ARC through June 30, 2012. Thereafter, provided that employer contributions are made in accordance with current law, we expect SERS contributions to exceed the GASB minimum. Overall, the amortization schedules are reasonable and will assure the long-term financial soundness of SERS.

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 members, and
- Liability for service already rendered by the active members.

The schedule shows that from 1992 through 2003 the total actuarial accrued liability was fully covered by the assets. In 2004 the funded ratio dropped below 100 percent and it is currently at 89.0 percent. Absent unusual circumstances, retirement funds will be below 100 percent and gradually approach 100 percent funding as liabilities become fully amortized. The SERS retirement fund had exceeded 100 percent of liabilities as a result of the high level of investment returns between 1985 and 1999. This funded ratio dropped below 100 percent largely as a result of the low investment returns of 2000 to 2002 and 2008, the Act 2001-9 benefit increases, recent COLAs, and the amortization schedule. However, the current funding policy will eventually restore the funded ratio to 100 percent. The fund is on a sound actuarial basis even though the accrued liabilities are temporarily greater than the assets.

Plan Assets

Schedule J summarizes the development of the actuarial value of assets as of December 31, 2008. 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 annual rate of return (8.5 percent prior to 2009; 8.0 percent for 2009 and later). This smoothing method recognizes 20 percent of the 2008 asset loss of $13.6 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 1991 through 2008 with a projection through 2019. The first page of Schedule K shows new retirements, deaths of former employees, new survivors, and deaths of survivors during the year. The second and third pages of Schedule K show the projection of employer and employee contributions and a projection of the benefits and expenses.

The second and third pages of Schedule K show the projected employee and employer contributions in dollars and as a percentage of pay. We expect the employer contributions to increase sharply (to levels near 30 percent of payroll) beginning July 1, 2012 when credit for the pre-Act 9 surplus has been completely amortized (pursuant to the 10-year amortization schedule established under Act 2003-40).

The second page of the Schedule K projection assumes that there will be ad hoc COLAs in the future similar to those that have occurred in the past. The projection assumes supplemental annuity increases in 2009, 2013 and 2017, with funding beginning July 1 of the following year. The third page of the Schedule K projection assumes that there will be no future COLAs.

Participant Data

Sections I and II of Schedule L provide a distribution of the total of the active, inactive, and terminated vested participants as of December 31, 2008 by benefit class, sex, age, and length of service. Inactive participants include employees on furlough as well as employees with prior SERS service currently participating in the Pennsylvania Public School Employees’ Retirement System (PSERS). The table also shows the average annualized salary in 2008 by age group and sex. Section III of the schedule shows retired annuitants, disabled annuitants, survivors and beneficiaries receiving benefits 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. As appropriate, we have made certain adjustments to the SERS data, including the use of a minimum annual salary assumption of $20,000.

Section III of Schedule L shows the monthly annuities that were being paid as of December 31, 2008. Total benefits from the fund include lump sum payments and death benefits so these are much higher than the sum of annuities shown in Schedule L and in the highlights.

Plan Provisions

Schedule M contains a summary of the principal provisions of the plan. There were no significant changes in plan provisions in 2008.

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. Since the prior valuation, the annual interest rate assumption has been reduced from 8.5 percent to 8.0 percent (effective December 31, 2008).

Actuarial Methods

Schedule O explains the asset valuation and funding method used in the valuation, and the determination of the annual contribution. The asset valuation method spreads 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.

The Board contracted with Milliman to conduct an actuarial review of the actuarial methods, procedures and assumptions in 2005. Milliman found that the valuation was in compliance with all major aspects of the applicable actuarial standards. However, Milliman found a number of areas for changes to be considered by SERS and the actuary. All but one of these recommendations have been addressed. The remaining recommendation, which relates to the handling of multiple service employees, will be pursued in connection with the December 31, 2009 valuation.

Glossary

Schedule P defines certain terms used in this actuarial report.

State Employees' Retirement System
Unfunded Liability and Normal Cost as of December 31, 2008

I.	Present Value of Benefits:		
	A) Active and Inactive Participants		
	1) Superannuation and Withdrawal	$	23,363,341,089
	2) Disability		1,411,580,028
	3) Death		964,950,030
	4) Refunds		53,300,836
	5) Special Police and Enforcement Officer Benefits		712,799
	6) Subtotal	$	25,793,884,782
	B) Annuitants and Beneficiaries		17,305,971,146
	C) Total	$	43,099,855,928
II.	Present Value of Member and Employer Contributions:		
	A) Employer Portion of Normal Cost	$	5,410,870,381
	B) Member Contributions		3,251,589,434
	C) Total	$	8,662,459,815
III.	Actuarial Accrued Liability: (I) - (II)	$	34,437,396,113
IV.	Actuarial Value of Assets	$	30,635,620,922
V.	Unfunded Liability (III) - (IV)	$	3,801,775,191
VI.	Employer Normal Cost Rate		
	A) Normal Cost Rate for new active members to fund:		
	1) Superannuation and Withdrawal		13.48%
	2) Disability		1.32%
	3) Death		0.58%
	4) Refunds		0.38%
	5) Total		15.76%
	B) Member Contributions		6.25%
	C) Employer Normal Cost (A) - (B)		9.51%

State Employees' Retirement System
Employer Contribution Rate in Fiscal Year 2009 - 2010

	Funding Period Initial Years	From July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/08	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	$ 445,160,273	$ 172,737,105	3.05%
B) Act 2001-9 Benefits	30	2002	2,735,791,064	2,216,981,496	213,766,165	3.78%
C) Other Benefits as of 12/31/01	10	2002	(7,726,186,132)	(3,007,360,586)	(1,166,956,695)	-20.62%
D) Supplemental Annuities (2002 COLA)	10	2003	256,500,000	128,049,383	38,660,773	0.68%
E) Changes in 2002	30	2003	1,119,058,089	989,168,695	93,949,226	1.66%
F) Supplemental Annuities (2003 COLA)	10	2004	395,800,000	237,708,612	59,535,656	1.05%
G) Changes in 2003	30	2004	341,601,015	325,304,967	30,474,172	0.54%
H) Changes in 2004	30	2005	1,942,541,016	1,871,546,149	173,131,357	3.06%
I) Changes in 2005	30	2006	494,664,846	481,672,956	44,048,075	0.78%
J) Changes in 2006	30	2007	(341,521,725)	(335,788,859)	(30,385,166)	-0.54%
K) Changes in 2007	30	2008	(1,847,047,858)	(1,832,177,359)	(164,197,051)	-2.90%
L) Changes in 2008	30	2009	2,281,509,464	2,281,509,464	202,660,630	3.58%
Total				**$ 3,801,775,191**	**$ (332,575,753)**	**-5.88%**
II. Employer Normal Cost						**9.51%**
III. Total Employer Cost before Act 2007-8 minimum = (I) + (II)						**3.63%**
IV. Total Employer Cost (III), but not less than 4.00 percent as required by Act 2007-8						**4.00%**

* The payment is expressed as a percentage of the total projected payroll for active members in fiscal year 2009-2010 of $5,660,319,000. 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 2009-2010 Payroll (7)	Employer Contribution Amount (8)
Class AA - Age 60 Retirement	3.14%		1.0000		3.14%	$ 4,217,535,000	$ 132,430,599
Class A - Age 60 Retirement	3.14%		0.8000		2.51%	35,367,000	887,712
Class AA - Age 50 Retirement (Including Enforcement Officers)	3.14%	2.11%	1.0000		5.25%	879,901,000	46,194,803
Class A - Age 50 Retirement (Including Class A & Class C Enforcement Officers)	3.14%	2.11%	0.8000		4.20%	14,851,000	623,742
Class AA - Park Rangers & Capitol Police	3.14%	1.12%	1.0000	0.67%	4.93%	13,975,000	688,968
Class A - Park Rangers & Capitol Police	3.14%	1.12%	0.8000	0.67%	4.08%	100,000	4,080
State Police (Class A & Class C)	3.14%	2.11%	1.1395	5.33%	11.31%	356,253,000	40,292,214
Class D3	3.14%	2.11%	3.0000		15.75%	309,000	48,668
Class D4	3.14%	2.11%	1.2000	-2.53%	3.78%	18,028,000	681,458
Class E	3.14%		1.2677		3.98%	124,000,000	4,935,200
					Total***	$ 5,660,319,000	$ 226,787,443

* The multiplier adjustment 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 ($226,787,443) is approximately equal to the average employer contribution rate from Schedule B (4.00 percent) times the total projected payroll of $5,660,319,000. The Basic Contribution Rate of 3.14 percent was determined as the percentage needed to produce employer contribution amounts by employer group that sum to $226,787,443.

State Employees' Retirement System

State Police and Enforcement Officers Additional Annuity Rate

(Fiscal Year 2009 - 2010)

		State Police	Enforcement Officers
1)	Balance in Benefit Account as of December 31, 2008	$1,513,614,892	$42,840,673
2)	Present Value of Benefits for Annuitants and Beneficiaries	1,513,170,623	42,572,143
3)	Assets available for additional annuities for Active Members: (1) - (2)	444,269	268,530
4)	Present Value of additional annuities for Active Members	444,269	268,530
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, 2007 Valuation	8.42%	-9.57%	-1.15%
II.	Changes in the December 31, 2008 Valuation:			
	A) Change in Interest Rate Assumption from 8.5% to 8.0%	1.20%	2.57%	3.77%
	B) Loss from investment earnings		1.72%	1.72%
	C) Fewer than expected retirements and other demographic changes		-0.69%	-0.69%
	D) Pay increases different than assumptions		-0.23%	-0.23%
	E) Change in demographics of new entrants	-0.11%	0.10%	-0.01%
	F) Change in amortization due to change in payroll	0.00%	0.22%	0.22%
	G) Total Change	1.09%	3.69%	4.78%
III.	December 31, 2008 Valuation: (I) + (II.G)	9.51%	-5.88%	3.63%

Analysis of the Change in the Unfunded Liability

I.	December 31, 2007 Unfunded Liability	$ 914,093,452
II.	Expected Amortization Payment	(528,474,332)
III.	Expected Liability as of December 31, 2008 [((I) x 1.085) - (II)]	$ 1,520,265,727
IV.	Change in Liability Due to:	
	A) Change in Interest Rate Assumption from 8.5% to 8.0%	$ 1,634,988,412
	B) Loss from investment earnings	1,094,334,250
	C) Fewer than expected retirements and other demographic changes	(365,486,620)
	D) Pay increases different than assumptions	(144,912,881)
	E) Change in demographics of new entrants	62,586,303
	F) Total change	$ 2,281,509,464
V.	December 31, 2008 Unfunded Liability: (III) + (IV.F)	$ 3,801,775,191

State Employees' Retirement System
Actuarial Balance Sheet as of December 31, 2008

ASSETS

Present Assets:

Members Savings Account	$ 4,068,036,445
Annuity Reserve Account	15,750,228,380
State Police Benefit Account	1,513,614,892
Enforcement Officers Benefit Account	42,840,673
State Accumulation Account *	2,225,318,118
Supplemental Annuity Account	(810,918,268)
Total Present Assets (Market Value)	$ 22,789,120,240
Adjustment to Smooth Market Fluctuations	7,846,500,682
Total Present Assets (Actuarial Value)	$ 30,635,620,922

Present Value of Future Contributions

Members' Contributions (Employee)	$ 3,251,589,434
Normal Cost Contributions (Employer)	5,410,870,381
Accrued Liability Amortization (Employer)	2,990,856,923
Supplemental Annuity Amortizatioı (Employer)	810,918,268
Special State Police Contributions (Employer)	0
Special Enforcement Officer Contributions (Employer)	0
Total Future Contributions	$ 12,464,235,006
TOTAL ASSETS	$ 43,099,855,928

LIABILITIES

Present Value of Benefits Payable to Annuitants and Beneficiaries from:

Annuity Reserve Account	$ 15,750,228,380
State Police Benefit Account	1,513,170,623
Enforcement Officers Benefit Account	42,572,143
Total for Annuitants and Beneficiaries	$ 17,305,971,146

Present Value of Benefits to Active and Inactive Members from:

Members Savings Account and State Accumulation Account	
Superannuation and withdrawal	$ 23,363,341,089
Disability	1,411,580,028
Death	964,950,030
Refunds	53,300,836
Subtotal	$ 25,793,171,983
State Police Benefit Account	444,269
Enforcement Officers Benefit Account	268,530
Total Present Value of Benefits to Active and Inactive Members	$ 25,793,884,782
TOTAL LIABILITIES	$ 43,099,855,928

* Includes $3,630,483 in directed commissions.

State Employees' Retirement System
Required Transfers Within SERS Accounts

I. Annuity Reserve Account

Balance as reported by SERS	$	15,038,052,178
Transfer from State Accumulation Account		712,176,202
Transfer to Supplemental Annuity Account		-
December 31, 2008 balance after transfers	$	15,750,228,380

II. State Accumulation Account *

Balance as reported by SERS	$	2,995,316,284
Transfer to Enforcement Officers' Benefit Account		(731,935)
Transfer to State Police Benefit Account		(57,090,028)
Transfer to Annuity Reserve Account		(712,176,202)
December 31, 2008 balance after transfers	$	2,225,318,119

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	$	42,108,738
Transfer from State Accumulation Account		731,935
Transfer from Supplemental Annuity Account		-
December 31, 2008 balance after transfers	$	42,840,673

IV. State Police Benefit Account

Balance as reported by SERS	$	1,456,524,864
Transfer from State Accumulation Account		57,090,028
Transfer from Supplemental Annuity Account		-
December 31, 2008 balance after transfers	$	1,513,614,892

V. Supplemental Annuity Account

Balance as reported by SERS	$	(810,918,268)
Transfer from Annuity Reserve Account		-
Transfer to State Police Benefit Account		-
Transfer to Enforcement Officers' Benefit Account		-
December 31, 2008 balance after transfers	$	(810,918,268)

* Balance includes $3,630,483 in directed commissions.

State Employees' Retirement System
Accounting Disclosure Statements

I. Schedule of Funding Progress as of December 31, 2008

(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%
12/31/1995 *	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%
12/31/2000 *	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%
12/31/2004	26,900,027	27,999,026	1,099,000	96.1%	5,093,573	21.6%
12/31/2005 *	26,793,782	28,851,716	2,057,934	92.9%	5,138,377	40.1%
12/31/2006	28,148,834	30,364,997	2,216,163	92.7%	5,661,675	39.1%
12/31/2007	30,839,877	31,753,971	914,093	97.1%	5,529,069	16.5%
12/31/2008 **	30,635,621	34,437,396	3,801,775	89.0%	5,660,319	67.2%

* Revised economic and demographic assumptions due to experience review.

** Revised interest rate assumption from 8.5% to 8.0%.

II. Schedule of Employer Contributions as of December 31, 2008

(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%
2004	105,229	105,229	100.0%
2005	319,190	147,163	46.1%
2006	548,745	195,407	35.6%
2007	617,253	242,337	39.3%
2008	584,248	233,138	39.9%

Notes Pertaining to Governmental Accounting Standards Board Statement No. 25

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

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

Accounting Disclosure Statements (continued)

Valuation Date	December 31, 2008
Actuarial cost method	Variation of Entry-age Actuarial Cost Method
Amortization method	10-year or 30-year schedule with level payments
Remaining amortization period	3 to 30 years
Asset valuation method	5-year smooth market
Actuarial Assumptions	
Investment rate of return	8.0 percent (previously 8.5 percent)
Projected salary increases	Average increase of 7.1 percent (range: 4.9 to 20.2 percent)
Inflation	3.0 percent
Cost-of-living adjustments	None

The annual employer contribution as set forth in the SERS Code 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.

Apart from the statutory funding requirements set forth in the SERS Code, there is a separate accounting standard that defines an Annual Required Contribution (ARC) for financial reporting purposes. As long as the statutory annual employer contribution, as defined above, is at least equal to the minimum contribution reported under GASB Statement No. 25, the statutory annual employer contribution will be deemed to be the ARC. Should the statutory annual employer contribution be less than the minimum contribution reported under GASB, the GASB minimum will be the ARC.

Accounting Disclosure Statements (continued)

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 2003-40, GASB requires that the "equivalent single amortization period" for all portions combined should not exceed the maximum acceptable period. Under the Act 2003-40 amortization rules, the current contribution level results in an "equivalent single amortization period" in excess of the maximum acceptable period and thus an actual contribution less than the ARC.

The Board has 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.

Because of the different funding periods for different portions of the current unfunded liability, the net payments on the unfunded liability are actually negative thus reducing the total employer contribution to less than the normal cost. The employer contribution has been below the GASB Statement No. 25 minimum since July 1, 2005, and we anticipate that the SERS contribution will be lower than the ARC through June 30, 2012. Thereafter, provided that employer contributions are made in accordance with current law, we expect SERS contributions to exceed the GASB minimum.

State Employees' Retirement System
Solvency Test

	Actuarial Accrued Liabilities For								
	(1)	(2)	(3)						
Valuation Date	Active Member Contributions	Retirees & Beneficiaries	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
December 31, 2004	3,593,576	12,779,570	11,625,880	27,999,026	26,900,027	100.0	100.0	90.5	96.1
December 31, 2005	3,696,477	14,000,196	11,155,043	28,851,716	26,793,782	100.0	100.0	81.6	92.9
December 31, 2006	3,916,841	14,474,525	11,973,631	30,364,997	28,148,834	100.0	100.0	81.5	92.7
December 31, 2007	3,849,293	16,255,843	11,648,835	31,753,971	30,839,877	100.0	100.0	92.2	97.1
December 31, 2008	4,068,036	17,305,971	13,063,389	34,437,396	30,635,621	100.0	100.0	70.9	89.0

State Employees' Retirement System
Actuarial Value of Assets

I.	Development of 12/31/08 Expected Actuarial Value:		
	A)	Actuarial Value as of 12/31/07	$ 30,839,877,345
	B)	Contributions in 2008	569,970,285
	C)	Benefits and Expenses in 2008	(2,230,700,978)
	D)	Investment return at 8.5% to 12/31/08 on (A)	2,621,389,574
	E)	Investment return at 8.5% to 12/31/08 on (B) and (C): 8.5% x .5 x ((B) + (C))	(70,581,054)
	F)	Expected Actuarial Value as of 12/31/08: (A) + (B) + (C) + (D) + (E)	$ 31,729,955,172
II.	Previous Differences Not Yet Amortized:		
	A)	Unrecognized amount of 12/31/04 Difference: .2 x $1,296,989,107	$ 259,397,821
	B)	Unrecognized amount of 12/31/05 Difference: .4 x $1,400,566,981	560,226,792
	C)	Unrecognized amount of 12/31/06 Difference: .6 x $2,513,224,923	1,507,934,954
	D)	Unrecognized amount of 12/31/07 Difference: .8 x $2,929,711,196	2,343,768,957
	E)	Total	$ 4,671,328,524
III.	Gain or Loss from 2008		
	A)	Market Value of Assets on 12/31/08	$ 22,789,120,240
	B)	Expected Market Value II(E) + I(F)	36,401,283,696
	C)	Gain (loss) from 2008 Investments (A) - (B)	$ (13,612,163,456)
IV.	Development of Actuarial Value of Assets as of 12/31/08:		
	A)	20% of $1,296,989,107 (12/31/04 Difference):	$ 259,397,821
	B)	20% of $1,400,566,981 (12/31/05 Difference):	280,113,396
	C)	20% of $2,513,224,923 (12/31/06 Difference):	502,644,985
	D)	20% of $2,929,711,196 (12/31/07 Difference):	585,942,239
	E)	20% of ($13,612,163,456) (12/31/08 Difference):	(2,722,432,691)
	F)	Total Difference: (A) + (B) + (C) + (D) + (E)	$ (1,094,334,250)
	G)	Actuarial Value at 12/31/08: I(F) + IV(F)	$ 30,635,620,922

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

Projection of Annuitants and Employees
Actual Data Through 2008

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
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			89,869			8,858	98,727	108,405
2005			92,120			9,059	101,179	109,981
2006			92,879			9,181	102,060	110,972
2007			97,657			9,473	107,130	109,610
2008			98,492			9,654	108,146	110,866
2009	5,494	3,415	100,571	683	559	9,778	110,349	110,866
2010	5,515	3,450	102,636	690	606	9,862	112,498	110,866
2011	5,635	3,476	104,795	695	646	9,911	114,706	110,866
2012	5,621	3,495	106,921	699	679	9,931	116,852	110,866
2013	5,488	3,514	108,895	703	704	9,930	118,825	110,866
2014	5,329	3,540	110,684	708	725	9,913	120,597	110,866
2015	5,080	3,556	112,208	711	738	9,886	122,094	110,866
2016	4,926	3,575	113,559	715	747	9,854	123,413	110,866
2017	4,630	3,597	114,592	719	751	9,822	124,414	110,866
2018	4,356	3,620	115,328	724	753	9,793	125,121	110,866
2019	4,075	3,655	115,748	731	754	9,770	125,518	110,866

The retirement projections in Schedule K are based upon the current retirement assumptions used for the valuation.

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

Projection of Expected Contributions and Benefits - With Future COLAs
Actual Data Through 2008 (Dollars in Millions)

Year	Calendar Year Contributions (After 2008, Based Upon Blended Fiscal Projections) Employee	Calendar Year Contributions (After 2008, Based Upon Blended Fiscal Projections) Employer	Contributions as a Percent of Pay: Calendar Year Contributions (Employer Rates Based Upon Blended Fiscal Projections) Employee	Contributions as a Percent of Pay: Calendar Year Contributions (Employer Rates Based Upon Blended Fiscal Projections) Employer	Contributions as a Percent of Pay: Actual Projected Employer Rate (Fiscal Year Beginning July 1)	Calendar Year Benefits and Expenses
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	302	106				1,880
2005	306	147				1,966
2006	317	196				1,943
2007	334	242				2,361
2008	337	233				2,231
2009	337	224	6.0%	4.0%	4.0%	2,430
2010	347	359	6.0%	6.2%	8.5%	2,642
2011	358	588	6.0%	9.9%	11.3%	2,801
2012	370	1,291	6.0%	21.0%	30.7%	2,963
2013	382	2,047	6.0%	32.3%	33.8%	3,209
2014	395	2,279	6.0%	34.8%	35.8%	3,470
2015	408	2,407	6.0%	35.6%	35.3%	3,642
2016	421	2,452	6.0%	35.1%	34.8%	3,821
2017	435	2,489	6.0%	34.5%	34.1%	4,103
2018	449	2,652	6.0%	35.6%	37.0%	4,399
2019	464	2,818	6.0%	36.6%	36.2%	4,581

This projection is based upon these assumptions: projected investment return of 8.0 percent in 2009 & after; general pay increases of 3.3 percent; COLAs in 2009, 2013, and 2017 (with a 1-year delay in COLA funding). Note that employer contributions are expected to increase sharply after June 30, 2012 when credit for the pre-Act 9 surplus has been completely amortized.

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

Projection of Expected Contributions and Benefits - No Future COLAs Assumed
Actual Data Through 2008 (Dollars in Millions)

Year	Calendar Year Contributions (After 2008, Based Upon Blended Fiscal Projections) Employee	Calendar Year Contributions (After 2008, Based Upon Blended Fiscal Projections) Employer	Contributions as a Percent of Pay: Calendar Year Contributions (Employer Rates Based Upon Blended Fiscal Projections) Employee	Contributions as a Percent of Pay: Calendar Year Contributions (Employer Rates Based Upon Blended Fiscal Projections) Employer	Contributions as a Percent of Pay: Actual Projected Employer Rate (Fiscal Year Beginning July 1)	Calendar Year Benefits and Expenses
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	302	106				1,880
2005	306	147				1,966
2006	317	196				1,943
2007	334	242				2,361
2008	337	233				2,231
2009	337	224	6.0%	4.0%	4.0%	2,367
2010	347	284	6.0%	4.9%	5.9%	2,507
2011	358	436	6.0%	7.3%	8.8%	2,659
2012	370	1,139	6.0%	18.5%	28.3%	2,812
2013	382	1,894	6.0%	29.9%	31.4%	2,965
2014	395	2,026	6.0%	30.9%	30.4%	3,121
2015	408	2,050	6.0%	30.3%	30.2%	3,274
2016	421	2,094	6.0%	30.0%	29.8%	3,434
2017	435	2,131	6.0%	29.5%	29.3%	3,587
2018	449	2,163	6.0%	29.0%	28.7%	3,741
2019	464	2,191	6.0%	28.4%	28.2%	3,893

This projection is based upon these assumptions: a projected investment return of 8.0 percent in 2009 and after; general pay increases of 3.3 percent; no future COLAs. Note that employer contributions are expected to increase sharply after June 30, 2012 when credit for the pre-Act 9 surplus has been completely amortized.

SCHEDULE K
(Page 3 of 3)

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2008

Active Employees*

Males - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	29	0	0	0	0	0	0	29	$ 23,581
20-24	910	11	0	0	0	0	0	921	28,290
25-29	2,117	468	3	0	0	0	0	2,588	35,541
30-34	1,634	1,137	264	4	0	0	0	3,039	40,301
35-39	1,576	1,148	906	416	10	0	0	4,056	45,193
40-44	1,400	1,112	891	1,115	518	14	0	5,050	48,380
45-49	1,500	1,133	853	1,134	1,398	732	40	6,790	50,579
50-54	1,508	1,232	897	1,118	1,302	1,388	800	8,245	52,092
55-59	1,318	1,115	835	1,010	1,142	1,113	1,647	8,180	54,972
60-64	829	735	561	528	441	345	737	4,176	53,569
65+	334	309	251	179	104	79	251	1,507	57,591
Total	13,155	8,400	5,461	5,504	4,915	3,671	3,475	44,581	$ 49,391

Average Age 47.72
Average Service 12.61

Females - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	41	0	0	0	0	0	0	41	$ 22,858
20-24	1,089	18	0	0	0	0	0	1,107	27,037
25-29	2,320	570	20	0	0	0	0	2,910	33,053
30-34	1,793	1,173	333	32	0	0	0	3,331	37,733
35-39	1,674	1,178	771	519	46	0	0	4,188	40,024
40-44	1,705	1,083	725	942	668	60	0	5,183	42,374
45-49	1,830	1,320	851	1,017	1,068	985	100	7,171	44,523
50-54	1,660	1,301	939	1,163	1,030	1,232	1,182	8,507	46,796
55-59	1,192	1,046	783	1,028	1,106	915	1,336	7,406	48,040
60-64	507	546	465	445	411	294	353	3,021	46,131
65+	109	176	170	113	88	59	108	823	45,172
Total	13,920	8,411	5,057	5,259	4,417	3,545	3,079	43,688	$ 43,254

Average Age 46.43
Average Service 12.05

* 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 employees and inactive and vested participants.

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2008

Selected Hazardous Duty*

Males - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	1	0	0	0	0	0	0	1	$ 22,081
20-24	297	0	0	0	0	0	0	297	35,781
25-29	1,405	120	1	0	0	0	0	1,526	41,855
30-34	1,157	661	200	1	0	0	0	2,019	47,002
35-39	789	831	1,170	574	15	0	0	3,379	57,157
40-44	573	542	897	1,541	535	7	0	4,095	63,063
45-49	343	345	417	708	833	204	4	2,854	63,557
50-54	221	232	266	319	400	214	52	1,704	61,851
55-59	153	183	238	270	166	126	82	1,218	59,329
60-64	82	97	169	134	112	47	39	680	57,746
65+	16	13	26	18	8	5	8	94	62,997
Total	5,037	3,024	3,384	3,565	2,069	603	185	17,867	$ 57,370

Average Age 41.99
Average Service 11.13

Females - Full Years of Service to December 31, 2008

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	75	0	0	0	0	0	0	75	33,300
25-29	300	21	1	0	0	0	0	322	40,343
30-34	299	135	24	0	0	0	0	458	43,643
35-39	258	170	147	28	0	0	0	603	47,493
40-44	178	92	129	97	24	0	0	520	50,950
45-49	172	82	101	99	90	27	1	572	54,150
50-54	122	77	89	88	54	51	18	499	54,917
55-59	64	45	69	54	21	22	14	289	55,429
60-64	24	21	17	20	11	10	8	111	56,993
65+	4	1	9	8	5	2	1	30	56,805
Total	1,496	644	586	394	205	112	42	3,479	$ 49,737

Average Age 42.38
Average Service 8.55

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

SCHEDULE L
(Page 2 of 10)

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2008

Legislators

Males - Full Years of Service to December 31, 2008

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	5	0	0	0	0	0	0	5	78,315
30-34	3	2	1	0	0	0	0	6	78,315
35-39	9	6	2	0	0	0	0	17	79,607
40-44	8	3	4	0	0	0	0	15	80,093
45-49	11	9	10	4	1	0	1	36	82,779
50-54	10	8	7	8	5	5	0	43	82,792
55-59	5	7	6	4	1	3	6	32	81,794
60-64	3	3	1	2	5	4	7	25	83,354
65+	1	1	1	1	3	3	10	20	81,956
Total	55	39	32	19	15	15	24	199	$ 81,893

Average Age 52.19
Average Service 13.23

Females - Full Years of Service to December 31, 2008

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	1	0	0	0	0	0	0	1	78,315
35-39	2	0	0	0	0	0	0	2	78,315
40-44	0	0	1	1	0	0	0	2	83,808
45-49	2	1	1	2	1	0	0	7	83,695
50-54	1	1	1	1	1	0	0	5	81,642
55-59	3	0	0	0	0	0	0	3	78,315
60-64	0	1	2	5	0	0	0	8	78,315
65+	1	1	1	2	1	1	0	7	78,315
Total	10	4	6	11	3	1	0	35	$ 80,180

Average Age 55.06
Average Service 11.09

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2008

Judges And Magisterial District Judges

Males - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	0	0	0	0	0	0	0	0	$ -
20-24	0	0	0	0	0	0	0	0	-
25-29	1	0	0	0	0	0	0	1	82,759
30-34	2	2	1	0	0	0	0	5	78,778
35-39	4	3	1	0	0	0	0	8	79,051
40-44	19	9	7	3	0	0	0	38	100,971
45-49	18	22	8	8	3	0	0	59	101,683
50-54	34	37	26	23	12	3	1	136	113,170
55-59	33	40	23	59	26	23	7	211	110,865
60-64	14	30	29	45	39	23	10	190	128,654
65+	5	14	12	32	11	14	18	106	126,398
Total	130	157	107	170	91	63	36	754	$ 116,142

Average Age 56.83
Average Service 13.77

Females - Full Years of Service to December 31, 2008

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	78,746
35-39	4	6	1	0	0	0	0	11	78,788
40-44	10	12	3	3	0	0	0	28	101,184
45-49	16	12	3	5	1	0	0	37	108,530
50-54	15	20	15	5	8	2	0	65	126,046
55-59	7	9	13	18	11	3	2	63	128,327
60-64	1	2	10	12	11	3	1	40	130,209
65+	0	1	3	4	3	5	1	17	116,077
Total	55	62	48	47	34	13	4	263	$ 119,134

Average Age 53.12
Average Service 11.83

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2008

All Active Employees

Males - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	30	0	0	0	0	0	0	30	$ 23,531
20-24	1,207	11	0	0	0	0	0	1,218	30,116
25-29	3,528	588	4	0	0	0	0	4,120	37,943
30-34	2,796	1,802	466	5	0	0	0	5,069	43,053
35-39	2,378	1,988	2,079	990	25	0	0	7,460	50,727
40-44	2,000	1,666	1,799	2,659	1,053	21	0	9,198	55,186
45-49	1,872	1,509	1,288	1,854	2,235	936	45	9,739	54,811
50-54	1,773	1,509	1,196	1,468	1,719	1,610	853	10,128	54,684
55-59	1,509	1,345	1,102	1,343	1,335	1,265	1,742	9,641	56,835
60-64	928	865	760	709	597	419	793	5,071	57,090
65+	356	337	290	230	126	101	287	1,727	62,390
Total	18,377	11,620	8,984	9,258	7,090	4,352	3,720	63,401	$ 52,536

Average Age 46.23
Average Service 12.21

Females - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	41	0	0	0	0	0	0	41	$ 22,858
20-24	1,164	18	0	0	0	0	0	1,182	27,434
25-29	2,620	591	21	0	0	0	0	3,232	33,779
30-34	2,095	1,308	357	32	0	0	0	3,792	38,479
35-39	1,938	1,354	919	547	46	0	0	4,804	41,066
40-44	1,893	1,187	858	1,043	692	60	0	5,733	43,454
45-49	2,020	1,415	956	1,123	1,160	1,012	101	7,787	45,569
50-54	1,798	1,399	1,044	1,257	1,093	1,285	1,200	9,076	47,829
55-59	1,266	1,100	865	1,100	1,138	940	1,352	7,761	48,978
60-64	532	570	494	482	433	307	362	3,180	47,648
65+	114	179	183	127	97	67	110	877	47,209
Total	15,481	9,121	5,697	5,711	4,659	3,671	3,125	47,465	$ 44,176

Average Age 46.18
Average Service 11.79

State Employees' Retirement System
II. Age and Service Profile of Active Employees and Inactive and Vested Participants
As of December 31, 2008

Active Employees and Inactive and Vested Participants

Males - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	30	0	0	0	0	0	0	30
20-24	1,207	11	0	0	0	0	0	1,218
25-29	3,531	614	4	0	0	0	0	4,149
30-34	2,813	1,902	470	5	0	0	0	5,190
35-39	2,405	2,128	2,150	998	25	0	0	7,706
40-44	2,036	1,795	1,899	2,683	1060	21	0	9,494
45-49	1,917	1,615	1,390	1,916	2,257	950	45	10,090
50-54	1,839	1,627	1,290	1,532	1,750	1,630	869	10,537
55-59	1,627	1,437	1,206	1,383	1,376	1,297	1,788	10,114
60-64	1032	919	802	754	637	442	836	5,422
65+	405	366	311	253	139	108	299	1,881
Total	18,842	12,414	9,522	9,524	7,244	4,448	3,837	65,831

Average Age 46.39
Average Service 12.16

Females - Full Years of Service to December 31, 2008

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	41	0	0	0	0	0	0	41
20-24	1,164	18	0	0	0	0	0	1,182
25-29	2,631	619	21	0	0	0	0	3,271
30-34	2,123	1,440	363	34	0	0	0	3,960
35-39	1,992	1,553	982	563	47	0	0	5,137
40-44	1,949	1,346	974	1,081	703	60	0	6,113
45-49	2,111	1,585	1,074	1,174	1,169	1,022	101	8,236
50-54	1,954	1,590	1,230	1,346	1,125	1,298	1,220	9,763
55-59	1,587	1,303	1,018	1,178	1179	970	1,401	8,636
60-64	774	667	552	523	461	328	378	3,683
65+	176	212	201	146	100	73	114	1,022
Total	16,502	10,333	6,415	6,045	4,784	3,751	3,214	51,044

Average Age 46.51
Average Service 11.58

State Employees' Retirement System
III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2008

Superannuation Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	-	$ -	-	$ -	-	$ -
25-29	-	-	-	-	-	-
30-34	-	-	-	-	-	-
35-39	-	-	-	-	-	-
40-44	-	-	-	-	-	-
45-49	-	-	-	-	-	-
50-54	438	15,513,073	158	4,791,759	596	20,304,831
55-59	1,825	64,885,231	1,084	38,938,339	2,909	103,823,570
60-64	5,433	187,521,963	3,039	84,030,087	8,472	271,552,050
65-69	6,100	182,925,512	3,967	84,244,658	10,067	267,170,170
70-74	5,200	126,881,069	3,532	58,435,776	8,732	185,316,845
75-79	4,350	90,555,939	3,250	40,917,006	7,600	131,472,945
80-84	3,759	65,155,239	3,316	35,053,559	7,075	100,208,798
85-89	2,268	33,144,132	2,588	23,120,900	4,856	56,265,032
90 & over	974	11,980,617	1,540	12,137,723	2,514	24,118,341
Total	30,347	$ 778,562,775	22,474	$ 381,669,807	52,821	$ 1,160,232,583

Average Age	72.8
Average Annual Pension	$21,965

State Employees' Retirement System

III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2008

Early Retirement Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	-	$ -	-	$ -	-	$ -
25-29	27	19,372	44	23,798	71	43,169
30-34	149	145,089	199	183,928	348	329,016
35-39	352	720,617	324	550,199	676	1,270,815
40-44	532	2,445,123	512	1,216,313	1,044	3,661,436
45-49	932	12,343,891	942	4,429,600	1,874	16,773,491
50-54	1,507	24,014,471	2,033	19,711,932	3,540	43,726,403
55-59	3,340	62,910,330	4,311	61,880,061	7,651	124,790,391
60-64	5,546	127,581,767	3,903	62,408,490	9,449	189,990,256
65-69	3,265	59,490,634	2,112	26,285,166	5,377	85,775,799
70-74	1,798	25,638,015	1,509	14,473,182	3,307	40,111,197
75-79	1,479	21,120,067	1,200	11,173,856	2,679	32,293,923
80-84	623	8,205,827	727	5,712,487	1,350	13,918,314
85-89	213	2,708,472	326	2,593,209	539	5,301,681
90 & over	57	629,625	107	978,573	164	1,608,198
Total	19,820	$ 347,973,297	18,249	$ 211,620,793	38,069	$ 559,594,090

Average Age	61.8
Average Annual Pension	$14,699

State Employees' Retirement System

III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2008

Disabled Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	-	$ -	-	$ -	-	$ -
25-29	-	-	-	-	-	-
30-34	11	115,940	4	43,679	15	159,619
35-39	51	630,002	62	674,239	113	1,304,241
40-44	126	1,800,792	122	1,294,261	248	3,095,052
45-49	277	4,319,134	311	4,275,212	588	8,594,347
50-54	473	7,957,087	565	8,343,848	1,038	16,300,935
55-59	770	12,820,016	838	13,126,541	1,608	25,946,556
60-64	773	11,401,650	762	10,613,015	1,535	22,014,665
65-69	532	5,946,830	489	4,993,298	1,021	10,940,127
70-74	287	2,648,025	354	3,170,175	641	5,818,200
75-79	182	1,776,927	216	1,649,136	398	3,426,063
80-84	116	1,082,144	131	931,713	247	2,013,856
85-89	44	414,484	76	489,715	120	904,199
90 & over	7	64,353	23	151,770	30	216,123
Total	3,649	$ 50,977,382	3,953	$ 49,756,601	7,602	$ 100,733,983

Average Age	60.8
Average Annual Pension	$13,251

State Employees' Retirement System

III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2008

Beneficiaries and Survivor Annuitants

	Male		Female		Total	
Age	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	21	$ 196,071	18	$ 118,656	39	$ 314,726
25-29	11	103,311	9	132,387	20	235,698
30-34	16	285,173	14	147,485	30	432,658
35-39	24	358,082	27	286,080	51	644,162
40-44	20	161,454	54	560,553	74	722,006
45-49	29	233,228	113	972,491	142	1,205,719
50-54	66	434,243	249	2,456,395	315	2,890,638
55-59	93	797,239	470	5,117,595	563	5,914,834
60-64	110	901,433	712	8,887,725	822	9,789,158
65-69	107	1,088,514	827	10,814,878	934	11,903,392
70-74	99	782,663	1,001	10,847,004	1,100	11,629,667
75-79	106	908,416	1,242	11,851,278	1,348	12,759,694
80-84	122	899,395	1,611	13,090,213	1,733	13,989,608
85-89	70	404,898	1,325	8,755,574	1,395	9,160,471
90 & over	41	211,881	1,047	5,985,852	1,088	6,197,733
Total	935	$ 7,766,000	8,719	$ 80,024,165	9,654	$ 87,790,165

Average Age	75.0
Average Annual Pension	$9,094

State Employees' Retirement System

Benefit and Contribution Provisions as of December 31, 2008
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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 legislators 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 -	Magisterial District Judges who elect Class E-2.

Benefit and Contribution Provisions as of December 31, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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. If total service is less than 20 years, General Conditions apply.
State Police	Age 50. State Police are eligible for special unreduced benefits after 20 years of service, regardless of age; however, age 50 remains their superannuation age.

Class C

State Police	Age 50. State Police are eligible for special unreduced benefits after 20 years of service, regardless of age; however, age 50 remains their superannuation 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 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 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 full calendar year of compensation 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, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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.

Members who have 41 or more years of combined Class A and AA service are entitled to a supplemental benefit ranging from 2 percent of the single-life annuity for members with 41 years of service to 10 percent of the single-life annuity for members with 45 or more years of service.

The benefit for a member who works past age 70 is at least equal to a benefit that is the actuarial equivalent of the prior year's benefit. This determination is made each year after age 70.

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

In almost all cases, SERS benefits are limited to no more than 100 percent of compensation. Exceptions to this limit include Constitutional Officers who are eligible for Class D3 benefits and certain members eligible for actuarial increases due to retirement beyond age 70. For such members, the 100 percent of salary limit does not apply. Also, 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. Some of the benefits in excess of the limit are paid through the Benefits Completion Plan.

Benefit and Contribution Provisions as of December 31, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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. Benefits for Park Rangers and Capitol Police who have 20 years of service are reduced from age 50. Benefits for other members who have an age 50 superannuation age are reduced from age 50 irrespective of the amount of service they have.

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, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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 and are limited by appropriate IRS limitations.

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 beneficiary of a disabled member who did not elect an alternative option receives benefits determined under Option 1. Option 1 provides that the beneficiary will receive a benefit equal to the present value of the single-life annuity at retirement reduced by any payments received by the annuitant. The Option 1 benefit is provided to a disabled member without any reduction in the member's benefit.

A Supplemental Death Benefit is payable to a beneficiary of a member who had a retirement benefit limited by 100 percent of final compensation. The Supplemental Death Benefit is the present value of the difference between the retirement benefit payable to the member and the 100 percent of final compensation limit, subject to limits imposed by IRC Section 401(a)(9). If the benefit payable to the member is larger than the IRC Section 415(b) limit, the part of the benefit in excess of the IRC Section 415(b) limit of the Supplemental Death Benefit will be payable from the Benefits Completion Plan. The Supplemental Death Benefit 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.

Benefit and Contribution Provisions as of December 31, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

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.

Rate of Member Contribution

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

Class AA - 6.25 percent of total compensation

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.

Benefit and Contribution Provisions as of December 31, 2008 (continued)
(as embodied in Act 31 of 1974, and amended through Act 8 in June 2007)

Interest Credited on Member Contributions

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

Refund of Accumulated Member Contributions

On the death of a member not qualifying for death benefits, the accumulated member contributions and interest will be paid to the beneficiary. Any member terminating service when not eligible for another form of benefit is paid a refund of the accumulated contributions and interest. Other terminating members may elect to receive a lump sum payment of a portion of the present value of their benefit, not to exceed their accumulated contributions and interest. Their lump sum payment 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. Acts 2003-40 and 2007-8 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. With the exception of the annual investment return assumption, which was revised from 8.5% to 8.0% effective December 31, 2008, these assumptions were based upon a review of experience under SERS from 2001 through 2005. Schedule N contains an extract of the full set of rates used in the valuation. The full set of rates is in the Sixteenth Investigation of Actuarial Experience of the State Employees' Retirement System of the Commonwealth of Pennsylvania - March 15, 2006, which can be obtained from SERS. The rates are the probabilities that an event will occur in the year after the valuation and are all assumed to occur at the beginning of the year. For instance, the male retirement rate of 25.0 percent at age 60 means that 250 of every 1,000 employees age 60 and who are eligible for full benefits are expected to retire at the date of the valuation.

Interest Rate: 8.0 percent (previously 8.5 percent) compounded annually. The assumed interest rate of 8.0 percent is the investment return less investment and administrative expenses.

Mortality After Retirement:

Non-disabled Retirees, Beneficiaries and Survivors: The RP-2000 Healthy Annuitant Mortality Table projected to 2008.

Disability Retirees: The RP-2000 Disabled Retiree Mortality Table projected to 2008.

Spouse Age Difference: Females are assumed to be 2 years younger than males.

Assumptions for General Employees while Active Members

Employees who retired prior to July 1, 2007 were required to pay only 1 percent of final salary each year for retiree health benefits. Effective July 1, 2007, new retirees became subject to higher annual charges for retiree health benefits. As a result, we expected a substantial increase in the number of retirements in the first half of 2007. For purposes of the December 31, 2006 valuation, therefore, we assumed a higher rate of separation for full unreduced benefits (namely 50.0 percent instead of the usual 30.0 percent) for employees retiring under age 60 in 2007. Since retiree health benefit premium levels did not change during 2008, for purposes of the December 31, 2007 valuation, this special retirement assumption was removed and our usual rates of separation were assumed.

On June 30, 2008, the minimum service for eligibility for subsidized health benefits, if superannuated, increased from 15 to 20 years; however, employees who reached 15 years of service by June 30, 2008 remain eligible for subsidized health benefits even if they retire after June 30, 2008. Accordingly, we did not anticipate an increase in the separation rates for general employees with 15 to 19 years of service in 2008.

Actuarial Assumptions (continued)

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

Representative Rates of Separation for Eligibility for Full Unreduced Benefits		
Age	**Male**	**Female**
45 - 59	30.0%	30.0%
60 - 61	25.0	25.0
62	33.0	33.0
63 - 64	22.0	22.0
65	33.0	33.0
66 - 79	22.0	22.0
80	100.0%	100.0%

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

Representative Rates of Separation for Eligibility for Reduced Benefits				
	5 – 14 Years of Service		**15 or More Years of Service**	
Age	**Male**	**Female**	**Male**	**Female**
25	3.0%	3.9%	N/A	N/A
30	2.5	3.5	N/A	N/A
35	1.9	2.8	2.6%	2.7%
40	1.7	1.7	2.6	2.7
45	1.1	1.6	2.6	2.7
50	1.0	1.3	2.6	2.7
55	2.3	2.3	3.9	3.9

Actuarial Assumptions (continued)

Rates of Separation Due to Withdrawal
It is assumed that the benefit will be reduced from age 58 for general members (to factor 35 years of service before age 60) and from age 50 for members eligible for age 50 retirement.

Representative Rates of Separation Due to Withdrawal								
	Male				Female			
	Years of Service				Years of Service			
Age	0	5	9	14	0	5	9	14
20	11.9%	N/A	N/A	N/A	11.2%	N/A	N/A	N/A
25	11.6	2.0%	2.0%	N/A	10.2	2.7%	2.1%	N/A
30	11.1	2.0	1.5	1.5%	10.2	2.7	1.9	2.0%
35	10.9	1.8	1.0	1.1	10.2	2.2	1.4	1.6
40	10.9	1.3	1.0	1.1	10.0	2.2	0.9	0.6
45	10.5	1.3	0.5	0.6	9.8	2.0	0.9	0.6
50	10.2	1.1	0.5	0.6	9.8	2.0	0.5	0.6
55	10.2	1.5	1.5	1.5	9.8	1.7	1.4	1.6

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

Representative Rates of Separation Due to Death and Disability				
	Death		Disability	
Age	Male	Female	Male	Female
20	0.02%	0.02%	N/A	N/A
25	0.02	0.02	0.03%	0.07%
30	0.03	0.02	0.09	0.17
35	0.05	0.03	0.16	0.29
40	0.06	0.05	0.25	0.38
45	0.12	0.07	0.44	0.60
50	0.21	0.12	0.61	0.91
55	0.33	0.18	0.80	1.15
60	0.48	0.30	N/A	N/A

Actuarial Assumptions (continued)

For Special Benefit Classes if Different from General Employee Rates:

Rates of Separation Due to Withdrawal			
Years of Service	State Police/ Hazardous Duty	Legislators	Judicial Officers
0	5.6%	0.0%	0.0%
1	5.6	3.9	0.2
2	3.7	3.9	0.2
3 - 4	2.8	3.9	0.2
5	1.9	3.9	0.2
6	1.9	3.9	0.2
7 - 9	.9	3.9	0.2
10+	.9	3.9	0.2

Rates of Separation Due to Early Retirement at Any Age		
State Police/ Hazardous Duty	Legislators	Judicial Officers
0.9%	3.9%	0.2%

Representative Rates of Separation Due to Retirement other than State Police with 19 or More Years of Service			
Age	State Police/ Hazardous Duty	Legislators	Judicial Officers
50	7.2%	1.25%	N/A
55	7.2	1.9	2.3
60	7.2	2.5	2.3
65	71.8	3.8	2.3
70	34.5	5.0	100.0
75	34.5	6.3	N/A
80	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			
Years of Service	**Rate**	**Years of Service**	**Rate**
19*	4.0%	26-32	15.8%
20 – 23	1.0	33	29.7
24*	29.7	34-38	40.6
25	16.8	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.

<u>Years of Service Purchased by Eligible Members</u>

Service	Number of Years Purchased
0	0.4
1	0.3
2	0.2
3	0.1
4+	0.0

It is assumed that the member will elect to pay for the reduction through an actuarial debt and that all purchased service is a 2 percent accrual.

<u>Form of Payment</u>: Members are assumed to elect the maximum benefit 32 percent of the time, some form of joint and survivor annuity 27 percent of the time, and some form of guaranteed present value (including joint and survivor with a guaranteed present value) 41 percent of the time. Also, 84 percent of members are assumed to elect a full Option 4 withdrawal of contributions and interest.

<u>Career Salary Increases</u>

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 3.8 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)

Career Salary Scale for Members			
Completed Years of Service	Annual Increase	Completed Years of Service	Annual Increase
1	16.90%	14	2.80%
2	8.30%	15	2.70%
3	5.90%	16	2.60%
4	4.60%	17	2.50%
5	4.20%	18	2.40%
6	3.80%	19	2.30%
7	3.50%	20	2.20%
8	3.20%	21	2.10%
9	3.20%	22	2.00%
10	3.10%	23	1.90%
11	3.00%	24	1.80%
12	2.90%	25	1.70%
13	2.80%	26+	1.60%

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 remaining 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 2009/2010 is the total of (1) the employer normal cost percent and (2) the net amortization payment for fiscal year 2009/2010 divided by the projected payroll for the fiscal year. Under Act 2007-8, the total annual employer contribution rate for fiscal year 2009/2010 shall not be less than 4 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. With the exception of the annual investment return assumption, which was revised from 8.5% to 8.0% effective December 31, 2008, the assumptions used for the current valuation were based upon an evaluation of SERS experience from 2001 through 2005.

The investment return assumption is 8.0 percent (previously 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 3.8 percent a year. Therefore, the average total salary growth for an individual will generally be 7.1 (3.3 plus 3.8) percent a year. The investment return and the salary rate increase assumptions are based on an 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 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 with unreduced benefits at age 50, (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. Upon establishment of a benefit improvement it was determined 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 were 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 upon attaining 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 $1,314,670 as of December 31, 2008. The amount needed to produce a zero contribution rate in 2008 was greater than the interest earned on the excess contributions so the available fund decreased in 2008. These funds will be used to offset the D-4 employer contribution requirement for the 2009-2010 fiscal year; however, they will not be sufficient to cover the full requirement. Thus, the D-4 employer will have a reduced contribution requirement for 2009-2010 and thereafter, the full employer contribution rate will be required for legislators.

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.

VI. Determination of Present Value of Benefits for Inactive and Vested Members

The present value of benefits for inactive members not currently receiving benefits is determined using the same methods and procedures as for active members. They are valued using the final average pay and service as of separation and are assumed to begin receiving benefits in accordance with the active employee assumptions.

Glossary

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

Active Participants. Active members who are in a position covered by SERS and on payroll, on leave with pay, or on certain unpaid leave (e.g., military leave). Inactive members on leave without pay are also included as active participants if there is an expectation they will return to paid service.

Actuarial Accrued Liability. The portion of the actuarial present value of benefits 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.

Annuitants. Participants of SERS who are currently receiving benefits for reason of superannuation retirement, early retirement, deferred retirement, or disability retirement.

Beneficiaries. Spouses or other beneficiaries, survivors or alternate payees who are receiving benefits as a result of the death of an active member or annuitant or due to a divorce (based upon a domestic relations order).

Inactive and Vested Participants. In general, inactive and vested participants are former active members who are not expected to return to paid service in a position covered by SERS. Inactive and vested participants include employees on furlough as well as employees with prior SERS service currently participating in the Pennsylvania Public School Employees' Retirement System (PSERS). All inactive and vested participants are entitled to either a refund of accumulated deductions from SERS or a monthly benefit. Inactive and vested participants will eventually change statuses; for example, they may terminate non-vested and receive a refund of their

Glossary (continued)

accumulated deductions, they may retire and commence annuity payments, they may return to active membership, etc.

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 the actuarial value of assets.

SCHEDULE P
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