HayGroup®

Commonwealth of Pennsylvania State Employees' Retirement System

2009 Actuarial Report

COMMONWEALTH OF PENNSYLVANIA

STATE EMPLOYEES' RETIREMENT SYSTEM

2009 ACTUARIAL REPORT

DEFINED BENEFIT PLAN

HAY GROUP

JUNE 9, 2010

Hay Group, Inc.
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USA

June 9, 2010

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, 2009 annual actuarial valuation.

The funding objective of the plan is set forth in the State Employees' Retirement Code (SERC). The annual employer contribution is equal to the sum of the following for the fiscal year beginning July 1, 2010:

(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 retirement covered compensation. 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 compensation, and some employer groups contribute a lower percent of compensation 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.

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

The actuarial valuation uses assumptions regarding future rates of investment return and rates of retirement, withdrawal, death, and disability among SERS members and their beneficiaries. With the exception of the investment return assumption, the current set of assumptions used in the December 31, 2009 actuarial valuation was adopted by the State Employees' Retirement Board (the Board) and was based on actual experience of SERS during the years 2001 through 2005. In April of 2009, the Board lowered the annual investment return assumption from 8.5% to 8.0% for use in the December 31, 2008 actuarial valuation, and this 8.0% assumption was again used in the December 31, 2009 actuarial 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.

Apart from the statutory funding requirements set forth in the SERC, 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 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 5.64 percent of compensation to a level near 27 percent of compensation) 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 State Employees' Retirement Board and staff are actively engaging this issue.

Respectfully submitted,
Hay Group, Inc.

By ______________________________
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State Employees' Retirement System

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State Employees' Retirement System
Valuation Highlights

	December 31, 2009 Valuation	December 31, 2008 Valuation
Summary of Employer Contributions as a Percent of Total Compensation		
SERS Plan Contribution		
Normal Cost	9.53%	9.51%
Amortization of Liabilities	-3.89%	-5.88%
Contribution Before Act 2007-8 Minimum	5.64%	3.63%
Total SERS Plan Contribution*	5.64%	4.00%
Benefits Completion Plan Contribution	0.01%	0.01%
Total Contribution	5.65%	4.01%

* After Act 2007-8 Minimum

Demographic Characteristics of the Population

	December 31, 2009 Valuation	December 31, 2008 Valuation
Active Participants**:		
Number	110,107	110,866
Average age	46.5	46.2
Average service	12.2	12.0
Average annualized compensation	$ 50,813	$ 48,957
Total annualized compensation	$ 5,594,867,000	$ 5,427,667,000
Funding payroll	$ 5,935,988,000	$ 5,660,319,000
Annuitants and Beneficiaries**:		
Number	109,639	108,146
Average age	68.5	68.3
Total annual pension	$ 1,987,987,717	$ 1,908,350,821
Inactive and Vested Participants**:		
Number	6,190	6,009

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

Assets

	December 31, 2009 Valuation	December 31, 2008 Valuation
Market Value Assets	$ 24,654,710,857	$ 22,789,120,240
Actuarial Value of Assets	$ 30,204,693,112	$ 30,635,620,922
Funded Status (Market Assets)	68.9%	66.2%
Funded Status (Actuarial Assets)	84.4%	89.0%

State Employees' Retirement System

Employer Contribution Rate by Group
Fiscal Year 2010 - 2011

	SERS Plan	Benefits Completion Plan	Total
Class AA Members:			
Age 60 Retirement	4.74%	0.01%	4.75%
Age 50 Retirement	6.99%	0.01%	7.00%
Park Rangers	6.60%	0.01%	6.61%
Capitol Police	6.60%	0.01%	6.61%
Enforcement Officers	6.99%	0.01%	7.00%
Class A Members:			
Age 60 Retirement	3.79%	0.01%	3.80%
Age 50 Retirement	5.59%	0.01%	5.60%
Park Rangers	5.40%	0.01%	5.41%
Capitol Police	5.40%	0.01%	5.41%
State Police	12.75%	0.01%	12.76%
Enforcement Officers	5.59%	0.01%	5.60%
Class C Members:			
State Police	12.75%	0.01%	12.76%
Enforcement Officers	5.59%	0.01%	5.60%
Class D Members:			
D-3 Legislators	20.97%	0.01%	20.98%
D-4 Legislators	8.39%	0.01%	8.40%
Class E Members	6.01%	0.01%	6.02%

General Discussion

The liabilities and costs in this report were based upon actuarial assumptions adopted by the State Employees' Retirement Board (the Board) and funding procedures specified in the SERC. 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, effective December 31, 2008, to replace the 8.5 percent assumption used previously. The Board concluded, based on the advice of the actuary, that the 8.0 percent assumption was a more realistic expectation for the future. This 8.0 percent assumption was again used in the December 31, 2009 actuarial valuation.

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 covered compensation 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 SERC. The employer contribution determined as of December 31, 2009 was 5.64 percent of compensation.

The SERC 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.

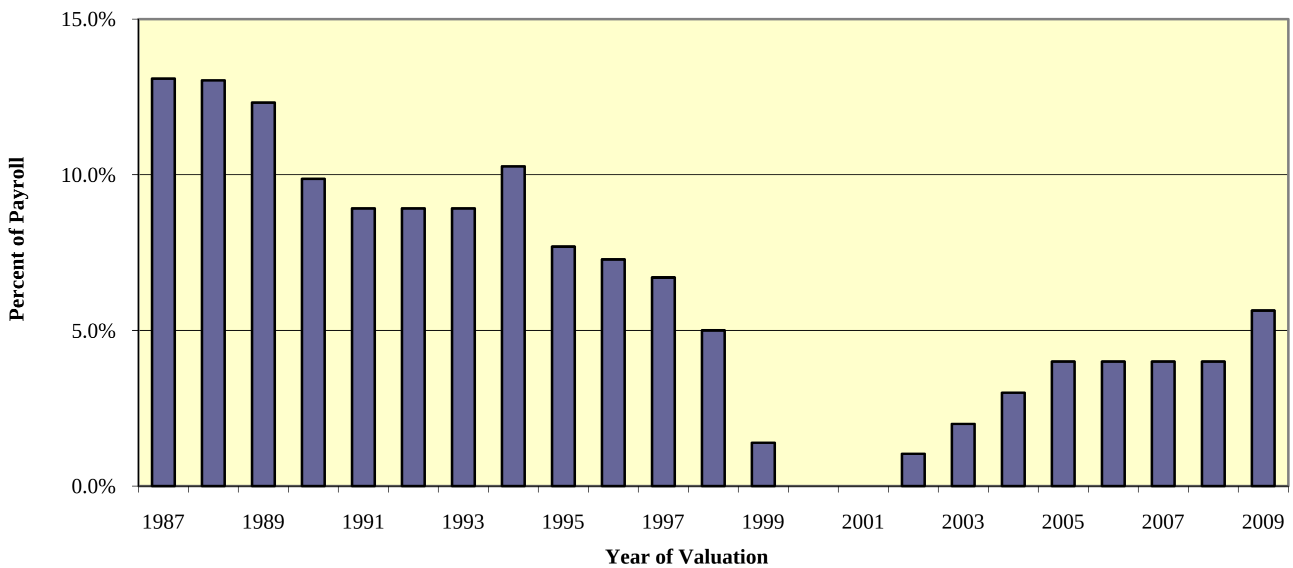
The funded ratio is the ratio of assets to the actuarial accrued liability. As a consequence of the global economic downturn, SERS experienced very unfavorable investment results during calendar 2008. Thus, SERS’ funded status, as measured by the funded ratio, declined significantly during 2008, to a level of 66.2 percent based on market value and 89.0 percent based on actuarial value of plan assets as of December 31, 2008. As a result of more favorable investment results during calendar year 2009, the funded ratio based on market value of assets increased slightly from 66.2 percent to 68.9 percent; however, the funded ratio based on the actuarial value of assets (which recognizes investment losses over a five-year period) decreased from 89.0 percent to 84.4 percent.

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 2010-2011, which were determined by a separate December 31, 2009 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 2009. 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.

Chart 1
History of Employer Cost



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the rate of 5.64 percent of covered compensation will be the employer contribution for the fiscal year beginning July 1, 2010.

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

Year	Inflation	Investment Return		Salary Growth	
		Nominal	Real	Nominal	Real
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
2009	2.7	9.1	6.2	3.0	0.3
Average 1990-2009	**2.7%**	**8.6%**	**5.7%**	**3.0%**	**0.3%**

Comments on Schedules

Employer Contribution Rate

Schedules A and B summarize the development of the employer contribution rate before allocation by group. The 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 9.51 percent in 2008 to 9.53 percent in 2009.

Portions of the unfunded liability are amortized over either 10 years or 30 years as required by the SERC. 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, 2009 was $5.59 billion. As of December 31, 2008, the total unfunded liability was $3.80 billion.

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, 2009 of $5.59 billion, the bottom-line annual amortization payment to fund this liability in the 2010-2011 fiscal year is a net credit, which serves to offset the employer normal cost. Although this net result may seem contradictory, it is accurate 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 5.88 percent of compensation in 2008 to 3.89 percent of compensation in 2009.

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, 5.64 percent of compensation in 2009, will be applied in the year beginning July 1, 2010.

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 base contribution rate because the majority of new members enter that class. The base employer contribution rate for Class AA benefits is 4.74 percent of compensation.

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 2010/2011
(Excluding Benefits Completion Plan Contribution)

Class AA	
Age 60 benefit	4.74%
Age 50 benefit	6.99
Park Rangers	6.60
Capitol Police	6.60
Enforcement Officers	6.99
Class A	
Age 60 benefit	3.79
Age 50 benefit	5.59
Park Rangers	5.40
Capitol Police	5.40
State Police	12.75
Enforcement Officers	5.59
Class C	
State Police	12.75
Enforcement Officers	5.59
Class D	
D-3 Legislators	20.97
D-4 Legislators	8.39
Class E	6.01

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 2008 to 2009 valuation.

The largest increase in the unfunded liability, $1.12 billion, resulted primarily from recognition (under the five-year asset smoothing method) of another 20 percent of the large investment loss from 2008, which more than offset the 20 percent recognition of investment gains from the other four years of the five-year smoothing period. This net loss of $1.12 billion resulted in an increase in the employer cost of 1.67 percent of compensation.

Another increase in the unfunded liability, $85 million, resulted from compensation increases somewhat in excess of the increase levels expected. This loss resulted in an increase in the employer cost of 0.13 percent of compensation.

The largest reduction in the unfunded liability was the gain from demographic experience. There were fewer retirements than expected and other differences between expected and actual demographic occurrences that resulted in a gain of $37 million, and therefore a decrease in employer cost of 0.07 percent of compensation.

All other changes from last year to this year increased the employer cost by 0.28 percent of compensation.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet that compares the total assets and liabilities of $44.6 billion. The assets include current assets and the present value of future contributions. The liabilities include the present value of all benefits to current active and retired members.

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 2009, a transfer of $222.3 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 $0.2 million and $22.8 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, 2009.

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 2009-2010 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 employer 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 if met 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 participant contributions in the Fund,
- Liability for future benefits to present annuitants and beneficiaries, and
- Liability for service already rendered by the active participants.

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 84.4 percent. Absent unusual circumstances, retirement funds for defined benefit plans will be below 100 percent and gradually approach 100 percent funding as liabilities become fully amortized. The State Employees' Retirement Fund had exceeded 100 percent of liabilities as a result of the high level of investment returns between 1985 and 1999. The 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.

The current funding policy will eventually restore the funded ratio to 100 percent provided that contributions are made as provided in current law. SERS is being funded in accordance with generally accepted actuarial principles and procedures 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, 2009. 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 2009 asset gain of $1.2 billion this year, with the remainder to be recognized over the next four years.

Projection

Schedule K shows the number of participants, contributions, and benefits from 1991 through 2009 with a projection through 2020. The first page of Schedule K shows new annuitants, annuitant deaths, new beneficiaries, and beneficiary deaths 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 compensation. We expect the employer contributions to increase sharply (to levels near 27 percent of covered compensation) 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 2010, 2014 and 2018, 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, 2009 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 2009 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, 2009. 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 2009.

Actuarial Assumptions

Schedule N summarizes the actuarial assumptions used for the valuation. The two types of assumptions are economic assumptions, such as the investment return and salary growth assumptions, and demographic assumptions, such as the assumed rates of mortality and retirement. Effective December 31, 2008, the annual interest rate assumption was reduced from 8.5 percent to 8.0 percent. The 8.0 percent assumption was also used in the December 31, 2009 actuarial valuation.

Actuarial Methods

Schedule O explains the asset valuation and funding method used in the valuation, and the determination of the annual contribution. The asset valuation method 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 and the final recommendation is in the process of being addressed. SERS obtained data on multiple service employees and is in the process of a review and update of its data. Hay Group will use the updated data to modify the processes used to value multiple service employees.

Glossary

Schedule P defines certain terms used in this actuarial report.

State Employees' Retirement System
Unfunded Liability and Normal Cost as of December 31, 2009

I.	Present Value of Benefits:		
	A) Active and Inactive Participants		
	1) Superannuation and Withdrawal	$	24,195,511,975
	2) Disability		1,427,484,496
	3) Death		995,287,007
	4) Refunds		51,278,349
	5) Special Police and Enforcement Officer Benefits		318,936
	6) Subtotal	$	26,669,880,763
	B) Annuitants and Beneficiaries		17,962,740,760
	C) Total	$	44,632,621,523
II.	Present Value of Member and Employer Contributions:		
	A) Employer Portion of Normal Cost	$	5,526,141,651
	B) Member Contributions		3,309,463,236
	C) Total	$	8,835,604,887
III.	Actuarial Accrued Liability: (I) - (II)	$	35,797,016,636
IV.	Actuarial Value of Assets	$	30,204,693,112
V.	Unfunded Liability (III) - (IV)	$	5,592,323,524
VI.	Employer Normal Cost Rate		
	A) Total Normal Cost Rate for new active members to fund:		
	1) Superannuation and Withdrawal		13.55%
	2) Disability		1.26%
	3) Death		0.60%
	4) Refunds		0.37%
	5) Total		15.78%
	B) Member Contribution Rate		6.25%
	C) Employer Normal Cost Rate (A) - (B)		9.53%

State Employees' Retirement System
Employer Contribution Rate in Fiscal Year 2010 - 2011

	Funding Period Initial Years	Funding Period From July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/09	Annual Payment Amount	Payment as a Percent of Compensation*
I. Amortization of Liability (Asset) For:						
A) Supplemental Annuities as of 12/31/01	10	2002	$1,143,657,729	$ 308,035,990	$ 172,737,105	2.91%
B) Act 2001-9 Benefits	30	2002	2,735,791,064	2,180,573,851	213,766,165	3.60%
C) Other Benefits as of 12/31/01	10	2002	(7,726,186,132)	(2,080,992,738)	(1,166,956,695)	-19.66%
D) Supplemental Annuities (2002 COLA)	10	2003	256,500,000	99,632,561	38,660,773	0.65%
E) Changes in 2002	30	2003	1,119,058,089	974,352,965	93,949,226	1.58%
F) Supplemental Annuities (2003 COLA)	10	2004	395,800,000	197,189,645	59,535,656	1.00%
G) Changes in 2003	30	2004	341,601,015	320,855,192	30,474,172	0.51%
H) Changes in 2004	30	2005	1,942,541,016	1,848,138,484	173,131,357	2.92%
I) Changes in 2005	30	2006	494,664,846	476,158,717	44,048,075	0.74%
J) Changes in 2006	30	2007	(341,521,725)	(332,266,802)	(30,385,166)	-0.51%
K) Changes in 2007	30	2008	(1,847,047,858)	(1,814,554,497)	(164,197,051)	-2.77%
L) Changes in 2008	30	2009	2,281,509,464	2,261,369,591	202,660,630	3.41%
M) Changes in 2009	30	2010	1,153,830,565	1,153,830,565	102,491,808	1.73%
Total				**$ 5,592,323,524**	**$ (230,083,945)**	**-3.89%**
II. Employer Normal Cost						**9.53%**
III. Total Employer Cost before Act 2007-8 minimum = (I) + (II)						**5.64%**
IV. Total Employer Cost (III), but not less than 4.00 percent as required by Act 2007-8						**5.64%**

* The payment is expressed as a percentage of the total projected covered compensation for active members in fiscal year 2010-2011 of $5,935,988,000. Percentages may not add due to rounding.

State Employees' Retirement System
Employer Contribution Rate by Group
(excluding Benefits Completion Plan rate)

Employer Group (1)	Base Contribution Rate (2)	Age 50 Retirement Adjustment (3)	Multiplier Adjustment* (4)	Past Liability Adjustment (5)	Adjusted Contribution Rate** (6)	Projected 2010-2011 Compensation (7)	Employer Contribution Amount (8)
Class AA - Age 60 Retirement	4.74%		1.0000		4.74%	$ 4,407,622,000	$ 208,921,283
Class A - Age 60 Retirement	4.74%		0.8000		3.79%	35,611,000	1,349,657
Class AA - Age 50 Retirement (Including Enforcement Officers)	4.74%	2.25%	1.0000		6.99%	936,839,000	65,485,046
Class A - Age 50 Retirement (Including Class A & Class C Enforcement Officers)	4.74%	2.25%	0.8000		5.59%	15,141,000	846,382
Class AA - Park Rangers & Capitol Police	4.74%	1.24%	1.0000	0.62%	6.60%	14,427,000	952,182
Class A - Park Rangers & Capitol Police	4.74%	1.24%	0.8000	0.62%	5.40%	117,000	6,318
State Police (Class A & Class C)	4.74%	2.25%	1.1395	4.78%	12.75%	381,173,000	48,599,558
Class D3	4.74%	2.25%	3.0000		20.97%	315,000	66,056
Class D4	4.74%	2.25%	1.2000		8.39%	19,302,000	1,619,438
Class E	4.74%		1.2677		6.01%	125,441,000	7,539,004
					Total***	$ 5,935,988,000	$ 335,384,923

* 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 base 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 ($335,384,923) is approximately equal to the average employer contribution rate from Schedule B (5.64 percent) times the total projected covered compensation of $5,935,988,000. The base contribution rate of 4.74 percent was determined as the percentage needed to produce employer contribution amounts by employer group that sum to $335,384,923.

State Employees' Retirement System

<u>State Police and Enforcement Officers Additional Annuity Rate</u>

(Fiscal Year 2010 - 2011)

		State Police	Enforcement Officers
1)	Balance in Benefit Account as of December 31, 2009	$1,569,341,894	$42,299,441
2)	Present Value of Benefits for Annuitants and Beneficiaries	1,569,117,140	42,205,259
3)	Assets available for additional annuities for Active Members: (1) - (2)	224,754	94,182
4)	Present Value of additional annuities for Active Members	224,754	94,182
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, 2008 Valuation	9.51%	-5.88%	3.63%
II.	Changes in the December 31, 2009 Valuation:			
	A) Loss from investment earnings		1.67%	1.67%
	B) Pay increases different than assumptions		0.13%	0.13%
	C) Fewer than expected retirements and other demographic changes		-0.07%	-0.07%
	D) Change in demographics of new entrants	0.02%	-0.02%	0.00%
	E) Change in amortization due to change in payroll	0.00%	0.28%	0.28%
	F) Total Change	0.02%	1.99%	2.01%
III.	December 31, 2009 Valuation: (I) + (II.F)	9.53%	-3.89%	5.64%

Analysis of the Change in the Unfunded Liability

I.	December 31, 2008 Unfunded Liability	$ 3,801,775,191
II.	Expected Amortization Payment	(332,575,753)
III.	Expected Liability as of December 31, 2009 [((I) x 1.080) - (II)]	$ 4,438,492,959
IV.	Change in Liability Due to:	
	A) Loss from investment earnings	$ 1,118,035,482
	B) Pay increases different than assumptions	84,681,278
	C) Fewer than expected retirements and other demographic changes	(37,288,836)
	D) Change in demographics of new entrants	(11,597,359)
	E) Total change	$ 1,153,830,565
V.	December 31, 2009 Unfunded Liability: (III) + (IV.E)	$ 5,592,323,524

State Employees' Retirement System
Actuarial Balance Sheet as of December 31, 2009

ASSETS

Present Assets:	
Members' Savings Account	$ 4,280,679,768
Annuity Reserve Account	16,351,418,361
State Police Benefit Account	1,569,341,894
Enforcement Officers' Benefit Account	42,299,441
State Accumulation Account *	3,015,829,589
Supplemental Annuity Account	(604,858,196)
Total Present Assets (Market Value)	$ 24,654,710,857
Adjustment to Smooth Market Fluctuations	5,549,982,255
Total Present Assets (Actuarial Value)	$ 30,204,693,112
Present Value of Future Contributions	
Members' Contributions (Employee)	$ 3,309,463,236
Normal Cost Contributions (Employer)	5,526,141,651
Accrued Liability Amortization (Employer)	4,987,465,328
Supplemental Annuity Amortizatior (Employer)	604,858,196
Special State Police Contributions (Employer)	0
Special Enforcement Officer Contributions (Employer)	0
Total Future Contributions	$ 14,427,928,411
TOTAL ASSETS	$ 44,632,621,523

* Includes $3,725,077 in directed commissions.

LIABILITIES

Present Value of Benefits Payable to Annuitants and Beneficiaries from:	
Annuity Reserve Account	$ 16,351,418,361
State Police Benefit Account	1,569,117,140
Enforcement Officers' Benefit Account	42,205,259
Total for Annuitants and Beneficiaries	$ 17,962,740,760
Present Value of Benefits to Active and Inactive Members from:	
Members' Savings Account and State Accumulation Account	
Superannuation and withdrawal	$ 24,195,511,975
Disability	1,427,484,496
Death	995,287,007
Refunds	51,278,349
Subtotal	$ 26,669,561,827
State Police Benefit Account	224,754
Enforcement Officers' Benefit Account	94,182
Total Present Value of Benefits to Active and Inactive Members	$ 26,669,880,763
TOTAL LIABILITIES	$ 44,632,621,523

State Employees' Retirement System
Required Transfers Within SERS Accounts

I. Annuity Reserve Account

Balance as reported by SERS	$	16,129,137,437
Transfer from State Accumulation Account		222,280,924
Transfer to Supplemental Annuity Account		-
December 31, 2009 balance after transfers	$	16,351,418,361

II. State Accumulation Account *

Balance as reported by SERS	$	3,261,104,141
Transfer to Enforcement Officers' Benefit Account		(222,978)
Transfer to State Police Benefit Account		(22,770,650)
Transfer to Annuity Reserve Account		(222,280,924)
December 31, 2009 balance after transfers	$	3,015,829,589

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	$	42,076,463
Transfer from State Accumulation Account		222,978
Transfer from Supplemental Annuity Account		-
December 31, 2009 balance after transfers	$	42,299,441

IV. State Police Benefit Account

Balance as reported by SERS	$	1,546,571,244
Transfer from State Accumulation Account		22,770,650
Transfer from Supplemental Annuity Account		-
December 31, 2009 balance after transfers	$	1,569,341,894

V. Supplemental Annuity Account

Balance as reported by SERS	$	(604,858,195)
Transfer from Annuity Reserve Account		-
Transfer to State Police Benefit Account		-
Transfer to Enforcement Officers' Benefit Account		-
December 31, 2009 balance after transfers	$	(604,858,195)

* Balance includes $3,725,077 in directed commissions.

State Employees' Retirement System
Accounting Disclosure Statements

I. Schedule of Funding Progress as of December 31, 2009

(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 Compensation (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Compensation ((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%
12/31/2009	30,204,693	35,797,017	5,592,324	84.4%	5,935,988	94.2%

* Revised economic and demographic assumptions due to experience review.

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

State Employees' Retirement System
Accounting Disclosure Statements (Continued)

II. Schedule of Employer Contributions as of December 31, 2009
(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%
2009	643,861	251,870	39.1%

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, 2009
Actuarial cost method	Variation of Entry-age Actuarial Cost Method
Amortization method	10-year or 30-year schedule with level payments
Remaining amortization period	2 to 30 years
Asset valuation method	5-year smooth market
Actuarial Assumptions	
Investment rate of return	8.0 percent
Projected compensation 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 SERC 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 or as part of the valuation supports an adjustment to the valuation rate.

Apart from the statutory funding requirements set forth in the SERC, 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 covered compensation reported for the valuation was unusually high and that future covered compensation was 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 members 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 covered compensation, and the employer contributes that percent of the compensation 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

Valuation Date	Actuarial Accrued Liabilities For: (1) Active Participant Contributions	(2) Annuitants and Beneficiaries	(3) Active Participants (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
December 31, 2009	4,280,680	17,962,741	13,553,596	35,797,017	30,204,693	100.0	100.0	58.7	84.4

State Employees' Retirement System
Actuarial Value of Assets

I.	Development of 12/31/09 Expected Actuarial Value:		
	A) Actuarial Value as of 12/31/08	$	30,635,620,922
	B) Contributions in 2009		600,674,223
	C) Benefits and Expenses in 2009		(2,296,579,994)
	D) Investment return at 8.0% to 12/31/09 on (A)		2,450,849,674
	E) Investment return at 8.0% to 12/31/09 on (B) and (C): 8.0% x .5 x ((B) + (C))		(67,836,231)
	F) Expected Actuarial Value as of 12/31/09: (A) + (B) + (C) + (D) + (E)	$	31,322,728,594
II.	Previous Differences Not Yet Amortized:		
	A) Unrecognized amount of 12/31/05 Difference: .2 x $1,400,566,981	$	280,113,396
	B) Unrecognized amount of 12/31/06 Difference: .4 x $2,513,224,923		1,005,289,969
	C) Unrecognized amount of 12/31/07 Difference: .6 x $2,929,711,196		1,757,826,718
	D) Unrecognized amount of 12/31/08 Difference: .8 x ($13,612,163,456)		(10,889,730,765)
	E) Total	$	(7,846,500,682)
III.	Gain or Loss from 2009		
	A) Market Value of Assets on 12/31/09	$	24,654,710,857
	B) Expected Market Value II(E) + I(F)		23,476,227,912
	C) Gain (loss) from 2009 Investments (A) - (B)	$	1,178,482,945
IV.	Development of Actuarial Value of Assets as of 12/31/09:		
	A) 20% of $1,400,566,981 (12/31/05 Difference):	$	280,113,396
	B) 20% of $2,513,224,923 (12/31/06 Difference):		502,644,985
	C) 20% of $2,929,711,196 (12/31/07 Difference):		585,942,239
	D) 20% of ($13,612,163,456) (12/31/08 Difference):		(2,722,432,691)
	E) 20% of $1,178,482,945 (12/31/09 Difference):		235,696,589
	F) Total Difference: (A) + (B) + (C) + (D) + (E)	$	(1,118,035,482)
	G) Actuarial Value at 12/31/09: I(F) + IV(F)	$	30,204,693,112

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

Projection of Annuitants, Beneficiaries and Active Participants
Actual Data Through 2009

Calendar Year	New Annuitants During the Year	Annuitant Deaths During the Year	Total Annuitants (End of Year)	New Beneficiaries During the Year	Beneficiary Deaths During the Year	Total Beneficiaries (End of Year)	Total Annuitants and Beneficiaries	Active Participants
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			99,776			9,863	109,639	110,107
2010	5,794	3,380	102,190	676	549	9,990	112,180	110,107
2011	5,751	3,424	104,517	685	596	10,079	114,596	110,107
2012	5,794	3,455	106,856	691	637	10,133	116,989	110,107
2013	5,728	3,483	109,101	697	671	10,159	119,260	110,107
2014	5,539	3,509	111,131	702	697	10,164	121,295	110,107
2015	5,346	3,538	112,939	708	718	10,154	123,093	110,107
2016	5,171	3,563	114,547	713	733	10,134	124,681	110,107
2017	4,856	3,589	115,814	718	742	10,110	125,924	110,107
2018	4,563	3,614	116,763	723	747	10,086	126,849	110,107
2019	4,275	3,646	117,392	729	750	10,065	127,457	110,107
2020	3,996	3,686	117,702	737	752	10,050	127,752	110,107

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 2009 (Dollars in Millions)

	Calendar Year Contributions (After 2009, Based Upon Blended Fiscal Projections)		Contributions as a Percent of Pay: Calendar Year Contributions (Employer Rates Based Upon Blended Fiscal Projections)		Contributions as a Percent of Pay: Actual Projected Employer Rate (Fiscal Year Beginning July 1)	Calendar Year Benefits and Expenses
Year	Employee	Employer	Employee	Employer		
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	349	252				2,297
2010	362	280	6.2%	4.8%	5.6%	2,501
2011	376	487	6.2%	8.1%	10.5%	2,723
2012	389	1,234	6.2%	19.8%	29.1%	2,888
2013	402	1,954	6.2%	30.3%	31.6%	3,056
2014	415	2,048	6.2%	30.8%	30.0%	3,311
2015	429	2,153	6.2%	31.3%	32.7%	3,581
2016	443	2,300	6.2%	32.4%	32.1%	3,764
2017	457	2,334	6.2%	31.8%	31.5%	3,942
2018	472	2,364	6.2%	31.2%	30.9%	4,234
2019	488	2,528	6.2%	32.3%	33.7%	4,539
2020	504	2,698	6.2%	33.4%	33.0%	4,724

This projection is based upon these assumptions: projected investment return of 8.0 percent in 2010 and after; general pay increases of 3.3 percent; COLAs in 2010, 2014, and 2018 (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 2009 (Dollars in Millions)

Year	Calendar Year Contributions (After 2009, Based Upon Blended Fiscal Projections) Employee	Calendar Year Contributions (After 2009, 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	349	252				2,297
2010	362	280	6.2%	4.8%	5.6%	2,436
2011	376	411	6.2%	6.8%	8.0%	2,583
2012	389	1,079	6.2%	17.3%	26.7%	2,739
2013	402	1,799	6.2%	27.9%	29.2%	2,898
2014	415	1,893	6.2%	28.5%	27.7%	3,055
2015	429	1,895	6.2%	27.6%	27.5%	3,215
2016	443	1,936	6.2%	27.3%	27.1%	3,379
2017	457	1,970	6.2%	26.9%	26.6%	3,536
2018	472	2,000	6.2%	26.4%	26.2%	3,694
2019	488	2,028	6.2%	25.9%	25.7%	3,850
2020	504	2,057	6.2%	25.5%	25.2%	4,005

This projection is based upon these assumptions: a projected investment return of 8.0 percent in 2010 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.

State Employees' Retirement System

I. Age, Service and Salary Profile of Active Participants as of December 31, 2009

Active Participants*

Males - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	8	0	0	0	0	0	0	8	$ 24,972
20-24	842	8	0	0	0	0	0	850	28,974
25-29	2,012	522	4	0	0	0	0	2,538	36,324
30-34	1,636	1,227	258	5	0	0	0	3,126	42,066
35-39	1,405	1,164	921	339	12	0	0	3,841	46,498
40-44	1,393	1,103	921	1,086	478	12	0	4,993	49,977
45-49	1,421	1,143	849	1,035	1,369	622	58	6,497	52,500
50-54	1,380	1,244	905	1,045	1,336	1,339	759	8,008	53,995
55-59	1,246	1,202	860	998	1,139	1,102	1,623	8,170	56,535
60-64	847	803	605	575	490	386	776	4,482	55,437
65+	356	349	249	199	118	88	256	1,615	57,966
Total	12,546	8,765	5,572	5,282	4,942	3,549	3,472	44,128	$ 51,081

Average Age 47.97

Average Service 12.67

Females - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	28	0	0	0	0	0	0	28	$ 24,041
20-24	973	18	0	0	0	0	0	991	27,554
25-29	2,122	613	21	0	0	0	0	2,756	33,830
30-34	1,678	1,299	371	25	0	0	0	3,373	39,466
35-39	1,530	1,156	779	469	47	0	0	3,981	41,788
40-44	1,554	1,185	761	871	694	45	0	5,110	44,031
45-49	1,749	1,320	864	929	1,051	888	97	6,898	46,109
50-54	1,478	1,385	919	1,080	1,056	1,131	1,086	8,135	48,430
55-59	1,164	1,138	859	1,016	1,115	980	1,439	7,711	49,908
60-64	521	638	470	471	485	311	434	3,330	48,653
65+	115	193	181	142	106	58	116	911	47,077
Total	12,912	8,945	5,225	5,003	4,554	3,413	3,172	43,224	$ 45,055

Average Age 46.79

Average Service 12.25

* 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 participants and inactive and vested participants.

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2009

Selected Hazardous Duty*

Males - Full Years of Service to December 31, 2009

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	214	1	0	0	0	0	0	215	38,546
25-29	1,433	114	2	0	0	0	0	1,549	44,537
30-34	1,125	690	166	4	0	0	0	1,985	49,340
35-39	703	815	1,049	437	16	0	0	3,020	58,065
40-44	542	579	899	1,615	595	8	0	4,238	65,395
45-49	336	419	394	801	924	237	0	3,111	65,886
50-54	200	232	281	297	437	279	63	1,789	64,030
55-59	156	185	214	270	177	122	77	1,201	60,976
60-64	83	101	167	169	121	59	47	747	59,570
65+	17	24	26	26	10	7	13	123	63,788
Total	4,809	3,160	3,198	3,619	2,280	712	200	17,978	$ 59,674

Average Age 42.39
Average Service 11.51

Females - Full Years of Service to December 31, 2009

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	59	0	0	0	0	0	0	59	37,750
25-29	304	23	0	0	0	0	0	327	41,787
30-34	285	159	27	1	0	0	0	472	45,314
35-39	238	178	126	34	4	0	0	580	49,099
40-44	173	104	134	114	20	0	0	545	52,315
45-49	159	100	104	107	79	24	1	574	54,602
50-54	103	90	78	79	64	50	17	481	57,143
55-59	66	59	67	76	27	24	25	344	57,885
60-64	19	24	24	23	14	14	10	128	59,632
65+	4	4	6	6	6	2	0	28	55,620
Total	1,410	741	566	440	214	114	53	3,538	$ 51,498

Average Age 42.68
Average Service 8.84

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

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2009

Legislators*

Males - Full Years of Service to December 31, 2009

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	4	2	1	0	0	0	0	7	78,315
35-39	9	5	2	0	0	0	0	16	79,059
40-44	12	5	2	1	0	0	0	20	78,864
45-49	7	9	9	6	1	0	0	32	81,992
50-54	12	8	7	6	2	6	1	42	83,684
55-59	4	9	4	7	1	4	3	32	80,669
60-64	6	0	3	4	5	4	7	29	81,851
65+	1	4	0	2	3	4	13	27	83,315
Total	60	42	28	26	12	18	24	210	$ 81,548

Average Age 52.55
Average Service 13.43

Females - Full Years of Service to December 31, 2009

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	1	0	0	0	0	0	0	1	78,315
40-44	2	0	1	1	0	0	0	4	81,061
45-49	2	1	0	3	1	0	0	7	83,695
50-54	1	1	1	1	0	0	0	4	78,315
55-59	1	1	0	0	1	0	0	3	83,860
60-64	1	1	0	7	0	0	0	9	78,315
65+	1	1	1	2	1	1	0	7	78,315
Total	10	5	3	14	3	1	0	36	$ 80,128

Average Age 55.72
Average Service 11.78

*Legislators are not required to join the retirement system, therefore the total participant count may not add to 253.

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2009

Judges And Magisterial District Judges

Males - Full Years of Service to December 31, 2009

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	85,050
30-34	2	1	1	0	0	0	0	4	80,962
35-39	7	2	1	0	0	0	0	10	89,175
40-44	20	6	8	2	0	0	0	36	98,899
45-49	17	14	15	7	3	0	0	56	102,493
50-54	33	25	31	18	11	3	0	121	115,290
55-59	40	27	38	52	30	18	6	211	114,884
60-64	18	22	41	41	44	21	9	196	127,516
65+	9	8	15	29	13	14	13	101	129,603
Total	147	105	150	149	101	56	28	736	$ 118,036

Average Age 56.99
Average Service 13.73

Females - Full Years of Service to December 31, 2009

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	80,927
35-39	5	5	1	0	0	0	0	11	80,993
40-44	5	7	6	3	0	0	0	21	100,056
45-49	19	7	5	4	1	0	0	36	114,499
50-54	14	13	20	8	3	1	0	59	126,968
55-59	7	10	16	16	15	3	3	70	132,557
60-64	3	3	8	10	12	3	1	40	129,934
65+	0	1	4	4	5	3	1	18	117,468
Total	55	46	60	45	36	10	5	257	$ 122,015

Average Age 53.63
Average Service 12.30

State Employees' Retirement System
I. Age, Service and Salary Profile of Active Participants as of December 31, 2009

All Active Participants

Males - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	8	0	0	0	0	0	0	8	$ 24,972
20-24	1,056	9	0	0	0	0	0	1,065	30,907
25-29	3,451	636	6	0	0	0	0	4,093	39,495
30-34	2,767	1,920	426	9	0	0	0	5,122	44,965
35-39	2,124	1,986	1,973	776	28	0	0	6,887	51,708
40-44	1,967	1,693	1,830	2,704	1,073	20	0	9,287	57,265
45-49	1,781	1,585	1,267	1,849	2,297	859	58	9,696	57,181
50-54	1,625	1,509	1,224	1,366	1,786	1,627	823	9,960	56,668
55-59	1,446	1,423	1,116	1,327	1,347	1,246	1,709	9,614	58,451
60-64	954	926	816	789	660	470	839	5,454	58,734
65+	383	385	290	256	144	113	295	1,866	62,594
Total	17,562	12,072	8,948	9,076	7,335	4,335	3,724	63,052	$ 54,414

Average Age 46.50
Average Service 12.35

Females - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total	Average Salary
Less than 20	28	0	0	0	0	0	0	28	$ 24,041
20-24	1,032	18	0	0	0	0	0	1,050	28,127
25-29	2,426	636	21	0	0	0	0	3,083	34,674
30-34	1,966	1,458	398	26	0	0	0	3,848	40,215
35-39	1,774	1,339	906	503	51	0	0	4,573	42,817
40-44	1,734	1,296	902	989	714	45	0	5,680	45,059
45-49	1,929	1,428	973	1,043	1,132	912	98	7,515	47,121
50-54	1,596	1,489	1,018	1,168	1,123	1,182	1,103	8,679	49,460
55-59	1,238	1,208	942	1,108	1,158	1,007	1,467	8,128	50,969
60-64	544	666	502	511	511	328	445	3,507	50,057
65+	120	199	192	154	118	64	117	964	48,866
Total	14,387	9,737	5,854	5,502	4,807	3,538	3,230	47,055	$ 45,987

Average Age 46.52
Average Service 12.00

State Employees' Retirement System
II. Age and Service Profile of Active Participants and Inactive and Vested Participants
As of December 31, 2009

Active Participants and Inactive and Vested Participants

Males - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	8	0	0	0	0	0	0	8
20-24	1,062	9	0	0	0	0	0	1,071
25-29	3,469	657	6	0	0	0	0	4,132
30-34	2,787	2,016	430	10	0	0	0	5,243
35-39	2,151	2,141	2,027	783	28	0	0	7,130
40-44	2,003	1,848	1,931	2,740	1,078	20	0	9,620
45-49	1,832	1,728	1,368	1,907	2,317	862	58	10,072
50-54	1,691	1,621	1,327	1,433	1,814	1,651	834	10,371
55-59	1,557	1,548	1,227	1,376	1,379	1,272	1,753	10,112
60-64	1,064	979	874	826	688	487	885	5,803
65+	439	419	310	279	160	119	308	2,034
Total	18,063	12,966	9,500	9,354	7,464	4,411	3,838	65,596

Average Age 46.66
Average Service 12.28

Females - Full Years of Service to December 31, 2009

Age Group	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
Less than 20	28	0	0	0	0	0	0	28
20-24	1,037	18	0	0	0	0	0	1,055
25-29	2,447	660	21	0	0	0	0	3,128
30-34	2,003	1,598	403	27	0	0	0	4,031
35-39	1,830	1,549	960	517	51	0	0	4,907
40-44	1,806	1,480	1,015	1,030	721	45	0	6,097
45-49	2,033	1,609	1,104	1,093	1,147	916	98	8,000
50-54	1,737	1,693	1,199	1,252	1,150	1,200	1,121	9,352
55-59	1,526	1,429	1,110	1,189	1,195	1,031	1,496	8,976
60-64	795	768	564	540	538	343	468	4,016
65+	186	233	207	170	126	68	121	1,111
Total	15,428	11,037	6,583	5,818	4,928	3,603	3,304	50,701

Average Age 46.83
Average Service 11.74

State Employees' Retirement System
III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2009

Superannuation Annuitants

	Male		Female		Total	
Age	Number	Annual Annuity	Number	Annual Annuity	Number	Annual Annuity
Under 25	-	$ -	-	$ -	-	$ -
25-29	-	-	-	-	-	-
30-34	-	-	-	-	-	-
35-39	-	-	-	-	-	-
40-44	-	-	-	-	-	-
45-49	-	-	-	-	-	-
50-54	411	14,757,246	145	4,388,222	556	19,145,469
55-59	1,654	59,248,209	1,095	39,830,387	2,749	99,078,596
60-64	5,823	201,022,904	3,224	90,577,896	9,047	291,600,800
65-69	6,217	189,508,225	4,028	89,792,809	10,245	279,301,034
70-74	5,256	136,592,451	3,559	61,874,884	8,815	198,467,336
75-79	4,343	93,908,933	3,234	43,104,962	7,577	137,013,895
80-84	3,690	66,914,686	3,167	35,144,604	6,857	102,059,290
85-89	2,338	36,260,788	2,600	24,148,181	4,938	60,408,969
90 & over	1,059	13,569,303	1,635	13,055,319	2,694	26,624,622
Total	30,791	$ 811,782,746	22,687	$ 401,917,265	53,478	$ 1,213,700,011

Average Age	72.8
Average Annual Annuity	$22,695

State Employees' Retirement System
III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2009

Early Retirement Annuitants

	Male		Female		Total	
Age	Number	Annual Annuity	Number	Annual Annuity	Number	Annual Annuity
Under 25	-	$ -	-	$ -	-	$ -
25-29	18	11,950	45	23,625	63	35,575
30-34	150	147,266	177	147,219	327	294,484
35-39	336	676,455	353	560,133	689	1,236,588
40-44	565	2,578,787	519	1,257,070	1,084	3,835,857
45-49	922	13,125,204	916	4,625,618	1,838	17,750,822
50-54	1,490	25,110,507	1,778	15,687,772	3,268	40,798,279
55-59	2,957	55,119,127	4,169	60,312,762	7,126	115,431,889
60-64	5,649	128,947,032	4,309	69,641,920	9,958	198,588,952
65-69	3,519	68,500,034	2,227	29,542,686	5,746	98,042,720
70-74	1,911	28,645,800	1,573	15,840,768	3,484	44,486,568
75-79	1,524	21,765,875	1,261	11,811,712	2,785	33,577,587
80-84	715	9,764,186	746	6,087,937	1,461	15,852,123
85-89	231	2,970,322	374	2,875,845	605	5,846,167
90 & over	66	752,858	124	1,086,019	190	1,838,877
Total	20,053	$ 358,115,403	18,571	$ 219,501,086	38,624	$ 577,616,489

Average Age	62.2
Average Annual Annuity	$14,955

State Employees' Retirement System
III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2009

Disabled Annuitants

	Male		Female		Total	
Age	Number	Annual Annuity	Number	Annual Annuity	Number	Annual Annuity
Under 25	-	$ -	-	$ -	-	$ -
25-29	1	10,215	-	-	1	10,215
30-34	11	129,256	7	81,153	18	210,409
35-39	49	607,041	49	530,320	98	1,137,360
40-44	120	1,720,379	114	1,254,082	234	2,974,461
45-49	272	4,368,336	289	3,884,170	561	8,252,505
50-54	458	7,927,459	547	8,248,513	1,005	16,175,972
55-59	719	11,912,233	857	13,358,680	1,576	25,270,913
60-64	827	12,684,758	809	11,666,355	1,636	24,351,112
65-69	562	6,525,468	511	5,387,318	1,073	11,912,786
70-74	297	2,842,857	352	3,215,382	649	6,058,240
75-79	178	1,638,471	234	1,828,817	412	3,467,288
80-84	123	1,204,031	137	1,015,460	260	2,219,491
85-89	46	436,620	73	480,369	119	916,990
90 & over	7	46,237	25	157,557	32	203,794
Total	3,670	$ 52,053,361	4,004	$ 51,108,175	7,674	$ 103,161,536

Average Age	61.1
Average Annual Annuity	$13,443

State Employees' Retirement System
III. Age and Benefit Profile of Annuitants and Beneficiaries as of December 31, 2009

Beneficiaries and Survivor Annuitants

	Male		Female		Total	
Age	Number	Annual Annuity	Number	Annual Annuity	Number	Annual Annuity
Under 25	22	$ 158,052	15	$ 75,084	37	$ 233,136
25-29	7	142,231	11	158,334	18	300,565
30-34	19	243,647	14	229,433	33	473,080
35-39	19	341,868	26	262,779	45	604,646
40-44	27	237,841	52	461,259	79	699,100
45-49	30	262,816	113	874,073	143	1,136,889
50-54	60	377,485	249	2,649,416	309	3,026,902
55-59	99	878,846	492	5,250,748	591	6,129,594
60-64	119	1,021,230	770	9,719,028	889	10,740,258
65-69	121	1,262,765	869	11,752,550	990	13,015,314
70-74	106	836,893	1,018	11,663,271	1,124	12,500,164
75-79	118	1,042,801	1,221	12,357,613	1,339	13,400,414
80-84	119	953,880	1,609	13,380,176	1,728	14,334,057
85-89	76	501,097	1,339	9,623,920	1,415	10,125,017
90 & over	39	203,455	1,084	6,587,091	1,123	6,790,546
Total	981	$ 8,464,906	8,882	$ 85,044,776	9,863	$ 93,509,681

Average Age	74.9
Average Annual Annuity	$9,481

Benefit and Contribution Provisions as of December 31, 2009
(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 SERC, 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 and became members 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, 2009 (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 credited service; or 35 or more years of credited service, regardless of age.
Legislators and certain enforcement officers	Age 50 with three years of credited service.
Park Rangers & Capitol Police	Age 50 with 20 years of Park Ranger or Capitol Police credited service. If total credited 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 credited 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 credited service, regardless of age; however, age 50 remains their superannuation age.
Other Hazardous Duty	Age 50 with three years of credited service.
Class D-3 & Class D-4	Age 50 with three years of credited service.
Class E-1 & Class E-2	Age 60 with three years of credited service; or 35 or more years of credited service, regardless of age.

Formula for Superannuation Annuity

The standard single-life annuity applicable to members of Class AA is equal to 2.5 percent of the high 3-year final average salary (FAS) 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, 2009 (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 standard single-life annuity for members with 41 years of service to 10 percent of the standard 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. Benefits in excess of the limit are paid through the Benefits Completion Plan.

Benefit and Contribution Provisions as of December 31, 2009 (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 FAS at time of disability. If the benefit so calculated is less than 33-1/3 percent of FAS, 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 FAS 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 FAS.

Eligibility for Vested Benefit

A member has a vested entitlement to an annuity after 5 years of credited 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 withdrawal annuity beginning at any date after separation but before retirement. The withdrawal annuity 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 credited 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 credited 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, 2009 (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 maximum single-life annuity is entitled to a refund of the unpaid balance of the accumulated member contributions and interest at the time of retirement. A member may elect one of several optional reduced pensions in lieu of the maximum single-life annuity to provide additional death benefit protection. The optional forms of benefit are actuarially equivalent to the maximum 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 maximum 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 SERC 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, 2009 (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 on an annual basis if their maximum single life annuity exceeds 110 percent of their highest calendar year compensation.

Benefit and Contribution Provisions as of December 31, 2009 (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, 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. Upon application, a 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 under Option 4 as part of the members' option. 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 have significantly affected 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

This schedule 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 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, a substantial increase in the number of retirements was expected in the first half of 2007. For purposes of the December 31, 2006 valuation, therefore, the actuary 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, the actuary 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 credited service under age 60; 3 years of credited 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 Credited Service		**15 or More Years of Credited 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 Credited Service				Years of Credited 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 Credited 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 Credited 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.

Years of Service Purchased by Eligible Members

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.

Form of Payment: 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.

Career Salary Increases

The career salary scale shown on the following page includes average increases in the employee salary due to promotions and longevity growth. The average career salary growth is 3.8 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			
Years of Credited Service	**Annual Increase**	**Years of Credited 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 compensation, and the employer contributes that percent of the compensation of all covered members during each fiscal year. The employer cost for fiscal year 2010/2011 is the total of (1) the employer normal cost percent and (2) the net amortization payment for fiscal year 2010/2011 divided by the projected covered compensation for the fiscal year. Under Act 2007-8, the total annual employer contribution rate for fiscal year 2010/2011 shall not be less than 4 percent of the active member compensation.

The assumptions used in determining the actuarial cost are stated in Schedule N, and the employer cost, as a percent of covered compensation, 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 annual investment return assumption is 8.0 percent. 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 employer contribution (total employer cost) is expressed as a percentage of the total projected covered compensation 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 from the employer groups participating in the system. Therefore, some employer groups contribute a higher percent of compensation, and some employer groups contribute a lower percent of compensation.

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 Base 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 Base Contribution Rate. The Base 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 base contribution rate.

Column (3) is the additional cost for members who are eligible to retire with unreduced benefits at age 50. 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 credited 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 credited service is larger than the additional cost for members who can retire at age 50 if they have 20 years of credited 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

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

Column (7) is the projected compensation for the class of employees. The projected compensation 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 base 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 covered compensation) multiplied by the total projected covered compensation for the active members.

Actuarial Methods (continued)

V. Plan Provisions Not Valued

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

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

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 compensation 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 and other payment recipients. 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).

Funding Payroll. The contribution determinations for the funding of SERS are based on a fiscal year running from July 1 to June 30. The Total Annualized Compensation is adjusted to an appropriate fiscal year Funding Payroll using the salary scale assumption and expected turnover and replacement estimates.

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

Glossary (continued)

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

Total Annualized Compensation. The Total Annualized Compensation is a snapshot of compensation on December 31. For full-time employees, it is equal to the compensation during the calendar year ending December 31. For part-time employees, compensation is annualized using the current rate of compensation times the appropriate number of pay periods.

Total 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.