

COMMONWEALTH OF PENNSYLVANIA
STATE EMPLOYEES' RETIREMENT SYSTEM

1995 Actuarial Report

Hay/Huggins Company
June 3, 1996

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June 3, 1996

Hay/Huggins
Company

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

Dear Mr. Brosius:


This report presents the results of our actuarial valuation of the Pennsylvania State Employees' Retirement System (SERS) as of December 31, 1995. Highlights of the valuation are presented on page 1, followed by a general discussion and comments on the various schedules included in the report. These schedules summarize the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions.

The main purposes of this report are:

- to indicate the pension contribution rates which will be the basis for the Fiscal Year 1996-97 appropriation request;
- to disclose the financial condition of the Plan;
- to provide information relating to the disclosure and reporting requirements of Statement No. 5 of the Governmental Accounting Standards Board.

To the best of our knowledge, this report is complete and accurate and all costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which, in the aggregate, are reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent our best estimate of anticipated experience under the plan.

Respectfully submitted,
HAY/HUGGINS COMPANY, INC.

By 
EDWIN C. HUSTEAD, F.S.A.
Member American Academy of Actuaries
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HayGroup

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STATE EMPLOYEES' RETIREMENT SYSTEM

VALUATION HIGHLIGHTS

	<u>December 31, 1995</u>	<u>December 31, 1994</u>
	<u>Valuation</u>	<u>Valuation</u>
• Summary of Contributions: (Percent of Members' Compensation)		
Normal Cost	8.49%	10.73%
Amortization of Liabilities	(0.80)	(0.46)
Total	7.69%	10.27%
Contribution Rates for:		
Class A Members:		
Age 60 Superannuation	6.60%	9.03%
Age 50 Superannuation	8.47	11.32
Park Rangers	9.57	12.44
Capitol Police	9.57	12.44
State Police	23.48	27.59
Class C Members:		
State Police	23.48	27.59
Enforcement Officers	8.47	11.32
Class D Members	31.76	42.45
Class E Members	12.35	16.39
• Market Value Assets	\$ 16,394,714,823	\$ 13,330,273,487
• Projected Benefit Obligation	\$ 14,747,113,109	\$ 13,171,871,241
• Active Participants:		
Number	112,637	114,120
Average annualized compensation	\$ 34,268	\$ 32,960
Total annualized compensation	\$ 3,859,844,716	\$ 3,761,447,006
• Annuitants and Beneficiaries:		
Number	81,204	80,835
Total annual pension	\$ 703,568,068	\$ 669,870,011
• Inactive Participants:		
Number	\$ 3,724	\$ 4,455

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General Discussion

The liabilities and costs in this report were based on actuarial assumptions adopted by the State Employees' Retirement Board in 1996 and funding procedures specified in the Pennsylvania State Employees' Retirement System (SERS) code. The most important actuarial assumptions are the investment return and salary growth. The investment return assumption is 8.5 percent per year. Salary growth is the total of assumed increases in salary rates and career salary growth. It is assumed that the salary rates will increase at 3.3 percent a year and that career salary growth will average 3.5 percent a year. The total average salary increase for an individual will be 6.8 percent a year. The investment return and the salary rate increase assumptions are based on an underlying inflation rate of 3.0 percent a year.

This is the first valuation following the latest, 1991 through 1995, study of the actuarial experience of SERS. The Board reviewed this study and agreed with the actuary's recommended changes in the actuarial assumptions to reflect the results of the experience study. Almost all of the assumptions were changed. The most significant structural change was to move to a flat assumed rate of return of 8.5 percent based on an experienced average return of 13.5 percent in the last five years and investment advisors expectations of returns of 8.9 percent in the future. The 1994 valuation had been based on an investment rate assumed to be 9.9 percent through 2000 and then dropping in stages to 6.0 percent after 2015. The Board decided to move to a more conventional single rate investment return assumption, adopting a rate that is within the standard range used in the public sector for plans with similar asset allocation strategies. The change to the flat rate of 8.5 percent reduced the employer cost by almost 1 percent of payroll.

The assumption change with the greatest cost impact was the reduction in the annual salary rate growth assumption. The rate was decreased from 4.0 to 3.3 percent based on an assumed 3.0 percent inflation rate and real salary growth of .3 percent in the last five years. This change reduced the employer cost by over 1.5 percent of payroll. The largest increase in cost resulted from the change in the demographic assumptions which increased the employer cost by almost 1 percent of payroll. The primary reason for the increase was to move from the GAM-71 to the GAM-83 mortality table for current and future employees to reflect continuing mortality improvement. The GAM-71 table continues to apply for current retirees. The GAM-71 and GAM-83 tables are standard mortality tables published by the Society of Actuaries.

The Board agreed with the actuary that it would be prudent to fund for the 30 year retirement benefit as if it were a permanent feature of the retirement system. Actuarial and accounting practice is to recognize a temporary feature of a retirement plan as permanent if it has been extended a number of years and there is no evidence that the extensions will not be made routinely. A variation of the current window was first opened in 1985 and has been extended since then through a series of plan changes. The window is currently scheduled to be closed on June 30, 1997 but the pattern of past extensions has made it prudent to fund for the window as though it were a permanent feature of the system. The recognition of the 30 year window as a benefit

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increased the cost by .75 percent of payroll. If the current 30 year retirement benefit is not extended, the long-term cost of the system will be reduced.

The net result of all changes was to reduce the employer cost from 10.27 percent to 7.69 percent of payroll.

History of the Employer Contribution Rate

The chart on page 5 shows the history of the employer contribution rate from 1980 through 1995. With some fluctuations, the general trend has been downward with the rate declining from 18.02 percent in 1980 to 7.69 percent in 1995.

The rate increased in 1980 due to the adoption of the 1976-1980 actuarial experience results but has been substantially lowered as a result of each of the three experience studies since 1980. The results of the 1981 to 1985 experience study, adopted in the December 31, 1985 valuation, decreased the employer contribution rate from 18.03 to 13.09 percent of payroll. Adoption of the results of the 1986 to 1990 study, in the December 1990 valuation, resulted in a drop in the employer contribution from 12.32 to 9.87 percent of salary. The rate fluctuated after 1991 and was at 10.27 percent in 1994. The adoption of the results of the 1991 through 1995 study resulted in a reduction in the rate to 7.69 percent of salary.

The primary reason for the drop in the employer contribution has been the investment earnings of the retirement fund. The high rate of investment earnings, when compared to the actuarial assumptions, has a two-fold effect on the employer contribution rate. First, the recognition of earnings in excess of the actuarial assumptions in any year decreases the employer contribution rate in that year. Second, a history of rates higher than the actuarial assumptions permits the Board to increase the expected investment return in the future.

The table on page 4 shows the rate of inflation, the nominal and real investment return, and the nominal and real salary growth for the past fifteen years. The nominal rates are the actual investment rate and salary growth. The real rates are the nominal rates adjusted by removing inflation. The overall nominal rate of return is 12.8 percent compared to the actuarial investment return assumption of 9.9 percent in the past, and 8.5 percent in the future.

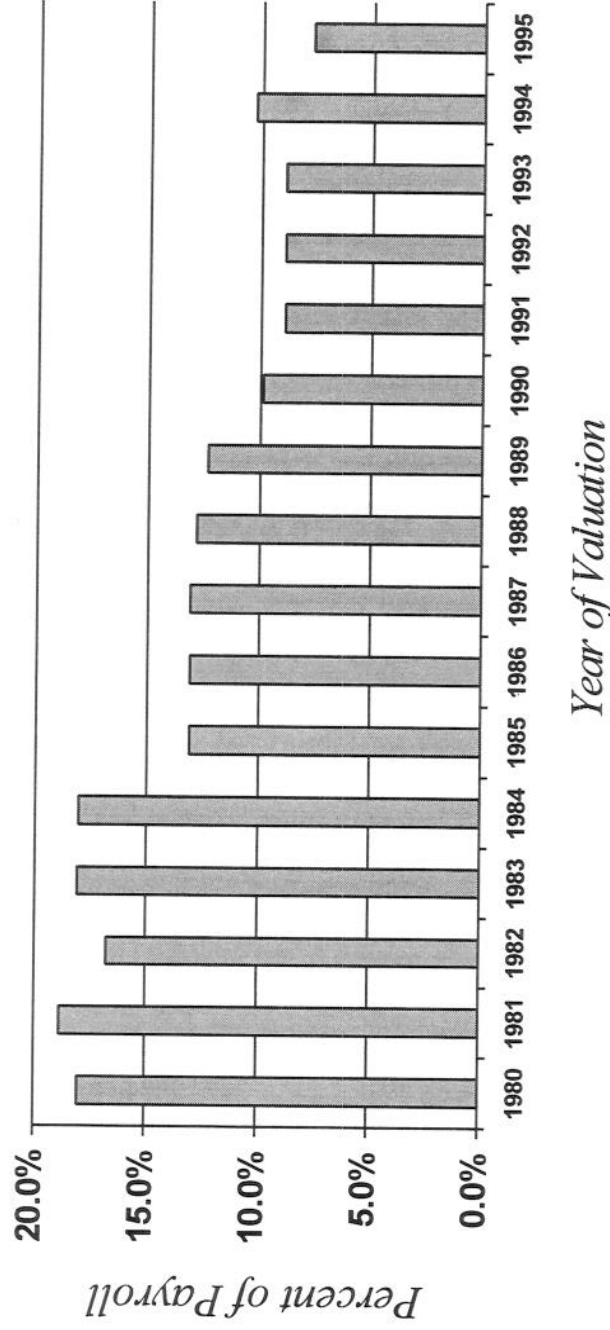
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Comparison of Annual Rates of Growth

Year	Inflation	Investment Return		Salary Growth	
		Nominal	Real	Nominal	Real
1981	8.9%	0.9%	(7.4%)	8.0%	(0.8%)
1982	3.8	27.8	23.1	8.0	4.0
1983	3.8	13.0	8.9	0.0	(3.7)
1984	3.9	9.4	5.2	5.1	1.1
1985	3.8	23.1	18.6	3.6	(0.2)
1986	1.1	15.2	13.9	3.5	2.4
1987	4.4	3.3	(1.1)	3.4	(1.0)
1988	4.4	12.8	8.0	5.0	0.6
1989	4.6	17.8	12.6	6.0	1.3
1990	6.1	1.0	(4.8)	5.0	(1.0)
1991	3.1	22.6	19.0	1.0	(2.0)
1992	2.9	7.4	4.4	2.1	(0.8)
1993	2.7	13.2	10.2	5.1	2.3
1994	2.7	(1.1)	(3.7)	3.9	1.2
1995	3.0	25.3	21.7	3.8	0.8
Overall	4.0%	12.8%	8.6%	4.2%	0.3%

Pennsylvania State Employees' Retirement System

Total Employer Cost



The total employer cost is the actual contribution rate during the succeeding fiscal year. For instance, the 1995 rate of 7.69 percent will be the employer contribution for fiscal year 1996/97. In some years the contribution rate was adjusted for events occurring after the valuation date.

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COMMENTS ON SCHEDULES

Employer Contribution Rate

Schedules A and B summarize the development of the Employer Contribution Rate before allocation by group.

The normal cost is the level percentage of compensation 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 who had not yet completed one year of credited service. The employer share of the normal cost dropped from 10.27 percent in 1994 to 8.49 percent in 1995. The change in the actuarial assumptions for the 1995 valuation reduced the normal cost more than the liabilities for current active and retired members. This is a result of the fact that the increased long term rate of return (6.0 to 8.5 percent) had a greater impact on the funding of future benefits of new employes than on the funding of future benefits of current employes and retired members. Conversely, the reduction in the short term rate of return (9.9 to 8.5 percent) had a greater impact on the funding of benefits for current active and retired members than on new active members.

The unfunded liability that existed on December 31, 1990 is being funded over 20 years from July 1, 1991. Unfunded liability increases (decreases) due to changes in assumptions, changes in legislation, or gains or losses because actual experience differs from the actuarial assumptions, will typically be amortized over 20 years from the July 1 following the effective date of the change. Increases in the unfunded liability due to supplemental annuities are amortized over 20 years from the effective date of the benefit increase, unless otherwise stipulated by law.

Schedule B shows a reduction in the unfunded liability of \$174,000,000 in 1995. The primary reasons for the reduction were the changes in the assumed salary growth, the high rate of return on the fund in 1995 and the lower than expected number and payroll of the active members. These reductions were partially offset by changes in other actuarial assumptions and recognition of the 30 year retirement window. The Board decided that it would be prudent to fund for the 30 year retirement benefit as if it were a permanent feature of the retirement system. If the current 30 year retirement benefit is not extended the long-term cost of the system will be reduced.

The total negative unfunded liability is a temporary surplus that will gradually be recognized as an offset to future employer normal costs. The total credit for amortization of the surplus increased from 0.46 to 0.80 percent of payroll.

The Employer Contribution Rate is comprised of the Normal Cost and the amortization of the unfunded liabilities. The Employer Contribution Rate calculated as a result of the December 31, 1995 actuarial valuation is 7.69 percent compared to a rate of 10.27 percent based on the 1994 valuation.

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Employer Contribution Rates by Group

Schedule C summarizes the development of the rate for the cost of additional benefits for each group of members with different benefits. The basic employer contribution rate for general benefits is 6.60 percent of salary. There is an additional employer contribution required to pay for the added liability for members entitled to full benefits at age 50; and for those entitled to an annual benefit rate that is greater than the basic 2 percent rate. The Park Rangers, Capitol Police, State Police Officers, and the Class E members are charged the amount necessary to fund the past service cost of benefit improvements that were effective in prior years. The effect of the adjustments is to produce an aggregate employer contribution rate that is equal to the required rate of 7.69 percent of total payroll. The complete schedule of contributions by group is shown below:

Class A with age 60 benefit	6.60%
Class A with age 50 benefit	8.47
Class A Park Rangers	9.57
Class A Capitol Police	9.57
Class A State Police	23.48
Class C State Police	23.48
Class C Enforcement Officers	8.47
Class D	31.76
Class E	<u>12.35</u>
Total Overall Cost	7.69%

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 1994 to 1995 valuation. The largest reduction in cost was 1.56 percent resulting from the reduction in the general salary scale assumption from 4.0 to 3.3 percent per year. Other major reductions in the rate resulted from the recognition of past investment gains and changes in the assumed future investment return. There were smaller but significant reductions resulting from lower than expected salaries, reduction in membership and other experience differences.

These reductions were partially offset by increases in the employer contribution resulting from changes in demographic assumptions, primarily the change from the GAM-71 to GAM-83 mortality table for active employees, and funding for the 30 year retirement provision as a permanent

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benefit. The net result of all changes was to reduce the Employer Contribution Rate from 10.27 percent to 7.69 percent of payroll.

The changes had a much greater impact on the normal cost than on the unfunded liabilities. This is because the increase in the long-term rate of return (6.0 to 8.5 percent) had a greater impact on the cost of benefits for new members than for current active members and retired members. Conversely, the reduction in the short-term rate of return (9.9 to 8.5 percent) had a greater impact on the funding of benefits for current active and retired members than on new active members.

The reduction of 2.24 percent in the normal cost was over 85 percent of the reduction of 2.58 percent in the total employer cost. The \$187 million reduction in the unfunded liability was approximately one percent of the total 15.1 billion Actuarial Accrued Liability.

Actuarial Balance Sheet and Account Balance Transfers

Schedule F contains the actuarial balance sheet that compares the total assets and liabilities of \$21.4 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 it is necessary to compare the account balance in the benefit payment accounts, the Annuity Reserve Account, the State Police Benefit Account, and the Enforcement Officers' Benefit Account with the actuarial liability of the accounts and make the necessary transfer 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 1995, the accounts were also affected by the change in the assumed investment return. The change increased the retirement liabilities because the new investment return of 8.5 percent was lower than the prior investment return of 9.9 or 9.0 percent that operated over most of the future lifetime of the annuitants.

An amount of \$520,440,716 was transferred from the State Accumulation Account to the Annuity Reserve Account to match the total liabilities in the latter account. A transfer of \$1,921,168 was necessary from the State Accumulation Account to the Enforcement Officers' Benefit Account. An amount of \$41,238,067 was transferred from the Supplemental Annuity Account to the Annuity Reserve Account because of the increase in the liability for supplemental annuities attributable to the change in the assumed investment return. These transfer amounts are shown on Schedule G.

Accounting Disclosure Statements

Schedule H provides information required by the Governmental Accounting Standards Board (GASB) and information on the accumulated plan benefits as defined by the Financial Accounting Standards Board (FASB).

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The GASB liability for projected benefits (the Projected Benefit Obligation) is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of participant service to December 31, 1995. The liability was determined to be \$14.7 billion. The market value of assets was 111.2 percent of the Projected Benefit Obligation. The GASB liability assumes salaries will increase in the future. The GASB liability was projected using the actuarial assumptions shown in Schedule N including an investment return assumption of 8.5 percent a year.

The FASB liability does not include the effect of assumed future salary increases and is calculated at a lower interest rate (7.25 percent) than the GASB liability. The FASB actuarial present value of accumulated plan benefits was determined to be \$12.6 billion and the ratio of market value of assets to accumulated plan benefits was 130.3 percent. The value increased from \$11.4 billion in 1994 to \$12.6 billion in 1995. The increase was attributable to the change in actuarial assumptions, interest rate, and increase in benefits due to passage of time.

The FASB liabilities shown on page 2 of Schedule H are calculated using an interest rate of 7.25 percent. The assumption of 7.25 percent is in the range of the latest (April 1996) rates for 30-Year Treasury Bonds (6.79 percent) and AAA Seasoned Issue Corporate Bonds as reported by Moody's Investment Service (7.50 percent). The 1994 investment return rate assumption was 7.75 percent.

The funded ratios increased in 1995 primarily as a result of the 25.3 percent rate of return on assets. If the plan would have terminated on December 31, 1995, the market value of assets would have exceeded the liabilities for benefits already earned by \$3.8 billion dollars, even using the conservative FASB interest rate.

The investment return assumption used for GASB liability calculations is the long term rate of return assumption for the plan, and, as with SERS, is generally equal to the actuary's assumed rate of return. The FASB liability is calculated as if the plan were to terminate on the date of the valuation. In the case of a plan shut-down, the assets would be invested in the current market, and therefore, the investment return assumption used reflects the current market rates of fixed-income bonds.

Plan Assets

Schedule I summarizes the development of the actuarial value of assets as of December 31, 1995. The assets are based on the unaudited financial statements prepared by SERS. The asset valuation method will smooth out year-to-year fluctuations in the market value. The approach gradually recognizes, over a 5 year period, the differences between total investment returns and the assumed rate of return. The assumed rate of return was 9.9 percent during 1995, since the change to 8.5 percent was effective at the end of 1995. This smoothing method recognizes 20 percent of the 1995 asset gain of \$2.0 billion this year, with the remainder to be recognized over the next four years.

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Projection

Schedule J displays a six year history and an eleven year projection of the annuitants and active employees, and the contributions and benefit payments.

Participant Data

Section I of Schedule K provides a distribution of the active and inactive participants as of December 31, 1995 by benefit class, sex, age, and length of service. It also shows the average annualized salary in 1995 by age group and sex. Section II of the schedule shows the retired participants and beneficiaries by age, sex, and benefit amounts.

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

For purposes of the demographic tables for the active employees, the definition of hire date was changed since the December 31, 1994 valuation. In the December 31, 1994 valuation, hire date was defined as (January 1, 1995) minus (credited service). For this valuation, hire date is the actual date in the data for the employee. The change of definition of hire date had no effect on the liabilities of the active employees. However, the demographic tables between the two reports are not comparable.

Plan Provisions

Schedule L contains a summary of the principal provisions of the plan. There was no major change in plan provisions in 1995 but the actuarial method was changed to fund the system as though the 30 year retirement window was a permanent feature of the system.

Actuarial Assumptions

Schedule M summarizes the actuarial assumptions used for the valuation. The actuarial assumptions were changed to reflect the experience of the SERS during 1991 through 1995.

Funding Methods

Schedule N explains the funding methods used in the valuation. The asset valuation method amortizes investment gains and losses over five years. The funding and contribution policy provides for reasonable levels of contribution that will fund the cost of future retirement credits with a credit for amortization of the excess of assets over liabilities. The section explains the calculation of the liabilities required for the accountant reports.

Definitions

Schedule O defines certain technical terms used in the valuation.

STATE EMPLOYEES' RETIREMENT SYSTEM

UNFUNDED LIABILITY AND NORMAL COST DECEMBER 31, 1995

I.	Present Value of Benefits:	
1)	Active and Inactive Participants	
a)	Superannuation and Withdrawal.....	\$ 14,196,870,258
b)	Disability.....	739,061,097
c)	Death.....	791,093,972
d)	Refunds.....	41,231,478
e)	Special Police and Enforcement Officer Benefits.....	31,011,121
2)	Annuitants and Beneficiaries.....	<u>5,649,454,260</u>
3)	Total.....	\$ 21,448,722,186
II.	Present Value of Member and Employer Contributions:	
1)	Employer portion of Normal Cost.....	\$ 3,972,371,442
2)	Member Contributions.....	2,409,145,657
3)	Special Police and Enforcement Officer Contributions.....	<u>0</u>
4)	Total.....	\$ 6,381,517,099
III.	Actuarial Accrued Liability: (I) - (II).....	\$ 15,067,205,087
IV.	Adjusted Actuarial Value of Assets.....	\$ 15,510,309,420
V.	Unfunded Liability (III) - (IV).....	\$ (443,104,333)
VI.	Employer Normal Cost Rate	
1)	Normal Cost Rate for new active members to fund:	
a)	Superannuation and Withdrawal.....	11.70%
b)	Disability.....	0.84
c)	Death.....	0.64
d)	Refunds.....	<u>0.31</u>
e)	Total.....	13.49%
2)	Member Deductions.....	5.00%
3)	Employer Normal Cost (1)-(2).....	8.49%

SCHEDULE A

STATE EMPLOYEES RETIREMENT SYSTEM

TOTAL EMPLOYER CONTRIBUTION RATE IN FISCAL YEAR 1996-97

I. Amortization of:	Funding Period 20 Years from July 1	Initial Amount of Liability	Outstanding Balance as of 12/31/95	Annual Payment to Fund Amount	Annual Payment to Fund Percent*
1) Liability for Supplemental Annuities	1991	\$ 405,641,841	\$ 460,536,633	\$ 41,489,413	1.03%
2) Liability for Other Benefits	1991	461,468,532	523,918,260	47,199,418	1.17%
3) Liability (Asset) for Changes in 1991	1992	(735,926,889)	(831,033,260)	(71,249,540)	(1.77)%
4) Liability (Asset) for Changes in 1992	1993	(428,770,084)	(479,164,980)	(39,246,544)	(0.98)%
5) Liability (Asset) for Changes in 1993	1994	(556,924,446)	(613,085,014)	(48,134,555)	(1.20)%
6) Liability for Changes in 1994	1995	392,912,465	425,889,961	32,148,219	0.80%
7) Liability for Supplemental Annuities (1994 COLA)	1995	224,936,857	243,816,010	18,404,403	0.46%
8) Liability (Asset) for Changes in 1995	1996	(173,981,943)	<u>(173,981,943)</u>	<u>(12,660,598)</u>	<u>(0.31)%</u>
9) Total Liability Payment Sum of (1) through (7)			\$ (443,104,333)	\$ (32,049,784)	(0.80)%
II. Employer Normal Cost					8.49%
III. Total Employer Cost (I) + (II)					7.69%

*The payment is expressed as a percentage of the projected total payroll for active members in fiscal year 1996-97 of \$4,021,604,600

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EMPLOYER CONTRIBUTION RATE BY GROUP

	Class A (Age 60 Super- annuation)	Class A (Age 50 Super- annuation)	Class A Park Rangers & Capitol Police	Class A State Police	Class C State Police	Class C Enforcement Officers	Class D	Class E
1) Basic Contribution Rate	6.60%	6.60%	6.60%	6.60%	6.60%	6.60%	6.60%	6.60%
2) Age 50 Superannuation	-	1.87%	1.63%	1.87%	1.87%	1.87%	1.87%	-
3) Multiplier Adjustment	1.00	1.00	1.00	1.558	1.558	1.00	3.75	1.6582
4) Past Liability	-	-	1.34%	10.28%	10.28%	-	-	1.41%
5) Class C Additional Annuities	-	-	-	0.00	0.00	0.00	-	-
6) Adjusted Contribution Rates: [(1) + (2)] x 3 + 4 + 5	6.60%	8.47%	9.57%	23.48%	23.48%	8.47%	31.76%	12.35%
7) Projected 1995/96 Payroll (Dollars in thousands)	3,320,996.0	\$437,601.0	\$6,986.0	\$147,441.0	\$37,397.0	\$2,673.0	\$787.0	\$67,724.0
8) Employer Contribution Amount (Dollars in thousands)	\$ 219,186.0	\$ 37,065.0	\$ 669.0	\$ 34,619.0	\$ 8,781.0	\$ 226.0	\$ 250.0	\$ 8,364.0

Notes: The total employer contribution (\$309,141,000) is the average employer contribution rate from Schedule B (7.69 percent) times the total projected payroll (\$4,021,605,000). The Basic Contribution Rate (6.60 percent) was determined as the percentage needed to produce employer contribution amounts by class that sum to \$309,141,000. The resulting total contribution amount may differ slightly because of rounding.

SCHEDULE C

STATE EMPLOYEES' RETIREMENT SYSTEM

STATE POLICE AND ENFORCEMENT OFFICERS - ADDITIONAL ANNUITY RATE
(Fiscal Year 1996-97)

	<u>State Police</u>	<u>Enforcement Officers</u>
1) Balance in Benefit Account as of December 31, 1995	\$959,132,352	\$19,411,680
2) Present Value of Benefits for Annuitants and Beneficiaries.....	789,590,856	17,149,812
3) Assets available for additional annuities for Active Members: (1) - (2).....	169,541,496	2,261,868
4) Present Value of additional annuities for Active Members	28,749,253	2,261,868
5) Present Value of Future Contribution to fund additional annuities: (4) - (3)	0	0
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.

SCHEDULE D

STATE EMPLOYEES' RETIREMENT SYSTEM

ANALYSIS OF CHANGE IN EMPLOYER CONTRIBUTION RATE

	Normal <u>Cost</u>	Unfunded <u>Liabilities</u>	<u>Total</u>
I. December 31, 1994 Valuation	10.73%	(0.46)%	10.27%
II. Changes - 12/31/95 Valuation:			
1) Reduced salary scale	(0.80)%	(0.76)%	(1.56)%
2) Change in demographic assumptions	0.37	0.56	0.93
3) Change in investment assumptions	(1.40)	0.44	(0.96)
4) 30 and out funding	0.11	0.64	0.75
5) Gain from investment earnings		(0.75)	(0.75)
6) Reduced membership		(0.18)	(0.18)
7) Lower than expected salaries		(0.55)	(0.55)
8) Other differences between actual experience and actuarial assumptions	(0.52)	0.26	(0.26)
9) Total Change	(2.24)%	(0.34)%	(2.58)%
III. December 31, 1995 Valuation:			
(I) + (II)	8.49%	(0.80)%	7.69%

ANALYSIS OF CHANGE IN UNFUNDED LIABILITY

I. December 31, 1994 Unfunded Liability	\$ (249,428,967)
II. Expected Amortization Payment	(18,465,892)
III. Expected Liability as of December 31, 1995 [(I) x 1.099] - (II)	(255,656,543)
IV. Change in Liability Due to:	
1) Reduced salary scale	(420,013,167)
2) Change in demographic assumption	309,483,387
3) Change in investment assumptions	243,165,518
4) 30 and out funding	353,695,299
5) Gain from investment earnings	(414,601,557)
6) Reduced membership	(99,476,803)
7) Lower than expected salaries	(303,956,898)
8) Other differences between actual experience and actuarial assumptions	144,256,431
9) Total Change	\$(187,447,790)
V. December 31, 1995 Unfunded Liability: (III) + (IV)	\$ (443,104,333)

SCHEDULE E

STATE EMPLOYEES' RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 1995

ASSETS

LIABILITIES

<u>Present Assets:</u>		<u>Present Value of Benefits Payable to Annuitants and Beneficiaries from:</u>	
Members' Savings Account	\$ 2,499,485,419	Annuity Reserve Account	\$ 4,842,713,592
Annuity Reserve Account	4,842,713,592	State Police Benefit Account	789,590,856
State Police Benefit Account	959,132,352	Enforcement Officers Benefit Account	<u>17,149,812</u>
Enforcement Officers Benefit Account	19,411,680	Total for Annuitants and Beneficiaries	\$ 5,649,454,260
State Accumulation Account	8,778,324,423		
Supplemental Annuity Account	<u>(704,352,643)</u>		
Total Present Assets (Market Value)	\$16,394,714,823		
Adjustment to Smooth Market Fluctuations	(891,240,511)		
Adjustments for Contributions Payable in the Fiscal year	6,835,108		
Total Present Assets (Actuarial Value)	\$15,510,309,420		
<u>Present Value of Future Contributions</u>		<u>Member Savings Account and State Accumulation Account</u>	
Members' Contributions (Employe)	\$ 2,409,145,657	Superannuation and withdrawal	\$ 14,196,870,258
Normal Cost Contributions (Employer)	3,972,371,442	Disability	739,061,097
Accrued Liability Amortization (Employer)	(1,147,456,976)	Death	791,093,972
Supplemental Annuity Amortization (Employer)	704,352,643	Refunds	<u>41,231,478</u>
Special State Police Contributions (Employer)	0	Subtotal	\$15,768,256,805
Special Enforcement Officer Contributions (Employer)	<u>0</u>	State Police Benefit Account	28,749,253
Total Future Contributions	\$ 5,938,412,766	Enforcement Officers Benefit Account	<u>2,261,868</u>
TOTAL ASSETS	<u>\$21,448,722,186</u>	Total	\$15,799,267,926
		TOTAL LIABILITIES	<u>\$21,448,722,186</u>

STATE EMPLOYEES' RETIREMENT SYSTEM

REQUIRED TRANSFERS WITHIN SERS ACCOUNTS

I. Annuity Reserve Account

Balance as reported by SERS	\$ 4,281,034,809
Transfer from State Accumulation Account.....	520,440,716
Transfer from Supplemental Annuity Account.....	<u>41,238,067</u>
December 31, 1995 balance after transfers.....	\$ 4,842,713,592

II. State Accumulation Account

Balance as reported by SERS	\$ 9,300,686,307
Transfer to Annuity Reserve Account	(520,440,716)
Transfer to Enforcement Officer Account.....	<u>(1,921,168)</u>
December 31, 1995 balance after transfers.....	\$ 8,778,324,423

III. Enforcement Officers' Benefit Account

Balance as reported by SERS	\$ 17,490,512
Transfer from State Accumulation Account.....	<u>1,921,168</u>
December 31, 1995 balance after transfers.....	\$ 19,411,680

IV. Supplemental Annuity Account

Balance as reported by SERS	\$ (663,114,576)
Transfer to Annuity Reserve Account	<u>(41,238,067)</u>
December 31, 1995 balance after transfer	\$ (704,352,643)

SCHEDULE G

STATE EMPLOYES' RETIREMENT SYSTEM

ACCOUNTING DISCLOSURE STATEMENTS

I. FUNDING STATUS OF PROJECTED BENEFIT OBLIGATION AS OF DECEMBER 31, 1995

	<u>Number of</u> <u>Members</u>	
1) Projected benefit obligation		
a) Retirees and beneficiaries		
1. Superannuation retirements	46,621	\$3,455,084,120
2. Early retirements	22,800	1,671,812,055
3. Disabled	4,689	287,071,004
4. Beneficiaries	<u>7,094</u>	<u>235,487,081</u>
5. Total	81,204	\$5,649,454,260
b) Inactive participants	3,724	\$ 65,631,620
c) Active members		
1. Employe contributions and interest		\$2,468,148,080
2. Employer-financed liability - vested	67,594	6,004,866,381
3. Employer-financed liability - nonvested	<u>45,043</u>	<u>559,012,768</u>
4. Total	112,637	\$9,032,027,229
d) Total obligation for all members	197,565	\$14,747,113,109
2) Market value of assets available for benefits		\$16,394,714,823
3) Unfunded projected benefit obligation		\$(1,647,601,714)
4) Assets as a percent of projected benefit obligation		111.2%

The amount shown above as the projected benefit obligation (PBO) is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of employe service to December 31, 1995. The PBO was calculated in conformance with the requirements of Statement No. 5 of the Governmental Accounting Standards Board (GASB) - "Disclosure of Pension Information by Public Employes' Retirement Systems and State and Local Governmental Employers." The investment return assumption is 8.50 percent. The calculation assumes salaries will increase as stated in Schedule N. No post-retirement increases are assumed.

SCHEDULE H
(Page 1 of 2)

STATE EMPLOYES' RETIREMENT SYSTEM

ACCOUNTING DISCLOSURE STATEMENTS

II. FUNDING STATUS OF ACCUMULATED PLAN BENEFITS AS OF DECEMBER 31, 1995

1)	Actuarial Present Value of Accumulated Plan Benefits	
a)	Vested	
	1. Active participants.....	\$ 6,109,424,744
	2. Inactive	74,341,527
	3. Superannuation Retirements	3,735,578,017
	4. Early Retirements.....	1,843,681,737
	5. Disabled.....	314,155,521
	6. Beneficiaries.....	<u>254,539,235</u>
	7. Total Vested.....	\$12,331,720,781
b)	Non-vested	\$ 254,196,201
c)	Total Accumulated Plan Benefits.....	\$12,585,916,982
2)	Market Value of Assets.....	\$16,394,714,823
3)	Ratio of market value of assets to actuarial present value of accumulated benefits	
a)	Vested Benefits	132.9%
b)	Total Accumulated Benefits.....	130.3%
4)	Changes in Accumulated Plan Benefits	
a)	Value as of December 31, 1994	\$11,405,985,145
b)	Changes during year	
	1. Due to passage of time and other causes	\$ 522,142,809
	2. Due to change in interest rate.....	300,740,015
	3. Due to change in actuarial assumptions	357,049,013
	4. Total change	\$ 1,179,931,837
c)	Value as of December 31, 1995	\$12,585,916,982

The amount shown above as the present value of accumulated plan benefits is a standardized disclosure measure of the present value of pension benefits estimated to be payable in the future as a result of employee service to December 31, 1995. This measure assumes that salaries will not increase in the future. The investment return assumption is 7.25 percent.

SCHEDULE H
(Page 2 of 2)

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUE OF ASSETS

I.	Development of 12/31/95 Expected Actuarial Value:	
1)	Actuarial Value as of 12/31/94	\$14,023,690,651
2)	Contributions in 1995	586,050,453
3)	Benefits and Expenses in 1995	(893,971,626)
4)	Interest @ 9.9% to 12/31/95 on (1)	1,388,345,374
5)	Interest @ 9.9% to 12/31/95 on .5 x ((2) + (3)).....	<u>(15,242,098)</u>
6)	Expected Actuarial Value as of 12/31/95: (1) + (2) + (3) + (4) + (5)	\$15,088,872,754
II.	Previous Differences Not Yet Amortized:	
1)	Unrecognized amount of 12/31/91 Difference: .2 x \$1,245,070,096.....	249,014,019
2)	Unrecognized amount of 12/31/92 Difference: .4 x \$(177,551,390)	(71,020,556)
3)	Unrecognized amount of 12/31/93 Difference: .6 x \$381,972,531	229,183,519
4)	Unrecognized amount of 12/31/94 Difference: .8 x \$(1,375,742,682)	<u>(1,100,594,146)</u>
5)	Total	\$ (693,417,164)
III.	Gain or Loss from 1995	
1)	Market Value of Assets on 12/31/95	\$16,394,714,823
2)	Expected Market Value II(5) + I(6)	<u>14,395,455,590</u>
3)	Gain (loss) from 1995 Investments (1) - (2)	\$ 1,999,259,233
IV.	Development of Actuarial Value of Assets as of 12/31/95:	
1)	20% of \$1,245,070,096 (12/31/91 Difference):	249,014,018
2)	20% of \$(177,551,390) (12/31/92 Difference):.....	(35,510,278)
3)	20% of \$381,972,531 (12/31/93 Difference):	76,394,506
4)	20% of \$(1,375,742,682) (12/31/94 Difference):.....	(275,148,536)
5)	20% of \$1,999,259,233 (12/31/95 Difference):	399,851,847
6)	Total Difference: (1) + (2) + (3) + (4) + (5)	\$ <u>414,601,557</u>
7)	Actuarial Value at 12/31/95: I(6) + IV(6)	\$15,503,474,312

SCHEDULE I

(Page 1 of 2)

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUE OF ASSETS

V.	Adjustments to Actuarial Value of Assets For Transactions Before 7/1/96:	
	1) Employer Total Cost Payable 1/1/96 Through 6/30/96	\$ 169,358,795
	2) Employer Normal Cost Payable 1/1/96 Through 6/30/96	<u>(162,523,687)</u>
	3) Total Adjustments	\$ 6,835,108
VI.	Adjusted Actuarial Value of Assets (IV) + (V)	\$15,510,309,420

STATE EMPLOYEES' RETIREMENT SYSTEM

PROJECTION OF POPULATION, BENEFITS, AND CONTRIBUTIONS

Projection of Annuitants and Employees

<u>Year Ending</u> <u>December 31</u>	<u>Annuitants</u>		<u>Total</u>	<u>Active</u> <u>Employees</u>
	<u>Former</u> <u>Employees</u>	<u>Survivors</u>		
1990 Actual	68,156	6,066	74,222	111,248
1991 Actual	69,908	6,332	76,240	105,731
1992 Actual	73,897	6,595	80,492	109,609
1993 Actual	73,894	6,796	80,690	111,962
1994 Actual	73,780	7,055	80,835	114,120
1995 Actual	74,110	7,094	81,204	112,637
1996	74,169	7,378	81,547	112,637
1997	74,228	7,646	81,874	112,637
1998	74,287	7,897	82,184	112,637
1999	74,347	8,128	82,475	112,637
2000	74,407	8,336	82,743	112,637
2001	74,467	8,519	82,986	112,637
2002	74,528	8,676	83,204	112,637
2003	74,589	8,804	83,393	112,637
2004	74,650	8,903	83,553	112,637
2005	74,711	8,971	83,682	112,637
2006	74,773	9,007	83,780	112,637

STATE EMPLOYEES' RETIREMENT SYSTEM

PROJECTION OF POPULATION, BENEFITS, AND CONTRIBUTIONS

Projection of Expected Contributions and Benefits

(Millions of Dollars)

<u>Calendar Year</u>	<u>Contribution</u>		<u>Benefits/ Expenses</u>
	<u>Employee</u>	<u>Employer</u>	
1990 Actual	175	418	607
1991 Actual	183	381	664
1992 Actual	187	318	851
1993 Actual	190	312	781
1994 Actual	193	343	812
1995 Actual	202	385	894
1996	208	349	889
1997	214	301	937
1998	220	294	1,013
1999	227	287	1,096
2000	234	283	1,153
2001	242	287	1,214
2002	250	296	1,277
2003	258	306	1,343
2004	267	316	1,452
2005	276	338	1,569
2006	285	361	1,695

The projection is based upon the following assumptions: a projected investment return of 8.5 percent; general pay increases of 3.3 percent; and supplemental annuity increases in 1999 and 2004.

STATE EMPLOYES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

ACTIVE EMPLOYES*

Age	<u>Males - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	8	0	0	0	0	0	0	8	\$ 20,000
20-24	403	93	0	0	0	0	0	496	22,024
25-29	1,511	901	117	0	0	0	0	2,529	25,809
30-34	1,128	1,770	966	256	0	0	0	4,120	29,322
35-39	1,048	1,880	1,594	1,341	257	0	0	6,120	31,772
40-44	1,086	2,029	1,276	1,669	1,787	714	0	8,561	34,435
45-49	1,307	1,437	1,331	1,640	2,246	2,638	319	10,918	37,811
50-54	603	961	773	808	1,265	2,262	1,138	7,810	40,307
55-59	430	631	675	454	771	1,423	1,133	5,517	40,695
60-64	282	432	405	322	290	635	624	2,990	40,701
65+	<u>99</u>	<u>218</u>	<u>159</u>	<u>144</u>	<u>109</u>	<u>132</u>	<u>259</u>	<u>1,120</u>	<u>42,747</u>
Total	<u>7,905</u>	<u>10,352</u>	<u>7,296</u>	<u>6,634</u>	<u>6,725</u>	<u>7,804</u>	<u>3,473</u>	<u>50,189</u>	<u>\$36,026</u>

Average age..... 45.73

Average service..... 15.15

Age	<u>Females - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	34	0	0	0	0	0	0	34	\$ 20,000
20-24	655	212	0	0	0	0	0	867	21,211
25-29	1,261	1,360	270	0	0	0	0	2,891	23,961
30-34	1,035	1,410	1,263	502	0	0	0	4,210	26,941
35-39	832	2,124	1,242	1,436	624	0	0	6,258	28,973
40-44	906	1,933	1,228	1,550	2,021	1,372	0	9,010	31,120
45-49	831	1,558	1,173	1,416	1,497	2,002	571	9,048	31,905
50-54	490	914	955	1,035	889	896	866	6,045	32,270
55-59	256	732	579	748	704	645	759	4,423	32,486
60-64	60	367	277	504	308	285	419	2,220	32,288
65+	<u>21</u>	<u>100</u>	<u>97</u>	<u>122</u>	<u>100</u>	<u>128</u>	<u>158</u>	<u>726</u>	<u>32,213</u>
Total	<u>6,381</u>	<u>10,710</u>	<u>7,084</u>	<u>7,313</u>	<u>6,143</u>	<u>5,328</u>	<u>2,773</u>	<u>45,732</u>	<u>\$30,306</u>

Average age 44.25

Average service..... 14.56

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

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

SELECTED HAZARDOUS DUTY*

Age	Males - Full Years of Service to December 31, 1995							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	3	0	0	0	0	0	0	3	\$20,121
20-24	248	2	0	0	0	0	0	250	24,752
25-29	1,548	789	0	0	0	0	0	2,337	31,314
30-34	866	1,259	407	5	0	0	0	2,537	35,511
35-39	392	579	715	298	12	0	0	1,996	39,048
40-44	336	396	379	534	157	14	0	1,816	40,083
45-49	371	471	393	276	441	527	7	2,486	42,145
50-54	181	250	189	115	144	311	116	1,306	43,030
55-59	78	139	136	62	55	86	90	646	41,070
60-64	19	67	70	36	26	18	36	272	40,397
65+	5	5	18	7	4	0	8	47	41,038
Total	<u>4,047</u>	<u>3,957</u>	<u>2,307</u>	<u>1,333</u>	<u>839</u>	<u>956</u>	<u>257</u>	<u>13,696</u>	<u>\$38,016</u>

Average age..... 39.56
Average service..... 10.12

Age	Females - Full Years of Service to December 31, 1995							Total	Average Salary
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	36	1	0	0	0	0	0	37	27,357
25-29	157	56	0	0	0	0	0	213	29,694
30-34	111	109	38	1	0	0	0	259	32,472
35-39	118	91	86	47	5	0	0	347	36,405
40-44	106	103	75	55	20	8	0	367	35,736
45-49	90	64	71	17	42	28	2	314	37,522
50-54	36	38	34	22	15	13	9	167	39,094
55-59	24	14	26	9	16	11	12	112	39,207
60-64	4	9	9	7	4	2	7	42	41,423
65+	0	2	3	2	1	1	0	9	39,091
Total	<u>682</u>	<u>487</u>	<u>342</u>	<u>160</u>	<u>103</u>	<u>63</u>	<u>30</u>	<u>1,867</u>	<u>\$35,505</u>

Average age 40.80
Average service..... 8.88

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

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

STATE EMPLOYES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

LEGISLATORS

Age	<u>Males - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	9	1	0	0	0	0	0	10	55,800
35-39	4	8	4	5	0	0	0	21	55,800
40-44	11	8	6	6	2	0	0	33	56,078
45-49	8	13	5	14	5	4	0	49	56,449
50-54	3	7	7	15	5	2	0	39	57,014
55-59	3	1	6	6	3	1	1	21	57,144
60-64	3	1	3	2	4	1	2	16	56,998
65+	<u>1</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>6</u>	<u>2</u>	<u>8</u>	<u>26</u>	<u>56,122</u>
Total	<u>42</u>	<u>41</u>	<u>33</u>	<u>53</u>	<u>25</u>	<u>10</u>	<u>11</u>	<u>215</u>	<u>\$56,470</u>

Average age 50.23

Average service 13.66

Age	<u>Females - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	1	0	0	0	0	0	0	1	55,800
35-39	1	1	0	0	0	0	0	2	55,800
40-44	1	0	1	3	0	0	0	5	55,800
45-49	2	2	0	0	0	0	0	4	55,800
50-54	3	2	0	0	0	0	0	5	55,800
55-59	3	0	2	0	1	0	0	6	55,800
60-64	0	3	0	0	0	0	0	3	55,800
65+	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>55,800</u>
Total	<u>12</u>	<u>8</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>29</u>	<u>\$55,800</u>

Average age 51.66

Average service 9.07

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

STATE EMPLOYES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

JUDGES AND DISTRICT JUSTICES

Age	<u>Males - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	2	0	0	0	0	0	0	2	51,500
30-34	5	3	0	0	0	0	0	8	51,500
35-39	12	13	3	0	0	0	0	28	54,354
40-44	26	39	19	14	4	0	0	102	62,343
45-49	28	57	23	23	9	2	1	143	72,239
50-54	20	40	28	20	11	12	9	140	73,310
55-59	11	32	15	30	14	17	8	127	71,892
60-64	3	12	6	26	13	18	11	89	82,611
65+	<u>1</u>	<u>11</u>	<u>8</u>	<u>19</u>	<u>18</u>	<u>10</u>	<u>20</u>	<u>87</u>	<u>85,545</u>
Total	<u>108</u>	<u>207</u>	<u>102</u>	<u>132</u>	<u>69</u>	<u>59</u>	<u>49</u>	<u>726</u>	<u>\$72,885</u>

Average age 52.83
Average service 13.70

Age	<u>Females - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	0	0	0	0	0	0	0	0	\$ 0
20-24	0	0	0	0	0	0	0	0	0
25-29	1	0	0	0	0	0	0	1	51,500
30-34	6	2	0	0	0	0	0	8	51,023
35-39	7	3	5	1	0	0	0	16	54,048
40-44	11	20	3	4	1	0	0	39	74,808
45-49	6	19	9	2	2	3	0	41	70,524
50-54	1	11	5	4	0	0	1	22	72,155
55-59	2	8	4	6	5	2	0	27	60,332
60-64	3	2	4	5	4	1	0	19	55,284
65+	<u>1</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>10</u>	<u>68,450</u>
Total	<u>38</u>	<u>66</u>	<u>34</u>	<u>25</u>	<u>12</u>	<u>7</u>	<u>1</u>	<u>183</u>	<u>\$66,037</u>

Average age 48.93
Average service 10.20

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

STATE EMPLOYEES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

ALL ACTIVE EMPLOYEES

Age	<u>Males - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	11	0	0	0	0	0	0	11	\$20,033
20-24	651	95	0	0	0	0	0	746	22,938
25-29	3,061	1,690	117	0	0	0	0	4,868	28,462
30-34	2,008	3,033	1,373	261	0	0	0	6,675	31,740
35-39	1,456	2,480	2,316	1,644	269	0	0	8,165	33,690
40-44	1,459	2,472	1,680	2,223	1,950	728	0	10,512	35,750
45-49	1,714	1,978	1,752	1,953	2,701	3,171	327	13,596	39,032
50-54	807	1,258	997	958	1,425	2,587	1,263	9,295	41,257
55-59	522	803	832	552	843	1,527	1,232	6,311	41,416
60-64	307	512	484	386	333	672	673	3,367	41,861
65+	<u>106</u>	<u>236</u>	<u>187</u>	<u>175</u>	<u>137</u>	<u>144</u>	<u>295</u>	<u>1,280</u>	<u>45,864</u>
Total	<u>12,102</u>	<u>14,557</u>	<u>9,738</u>	<u>8,152</u>	<u>7,658</u>	<u>8,829</u>	<u>3,790</u>	<u>64,826</u>	<u>\$36,927</u>

Average age 44.52
Average service 14.06

Age	<u>Females - Full Years of Service to December 31, 1995</u>							Total	Average Salary
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
less than 20	34	0	0	0	0	0	0	34	\$20,000
20-24	691	213	0	0	0	0	0	904	21,463
25-29	1,419	1,416	270	0	0	0	0	3,105	24,363
30-34	1,153	1,521	1,301	503	0	0	0	4,478	27,310
35-39	958	2,219	1,333	1,484	629	0	0	6,623	29,431
40-44	1,024	2,056	1,307	1,612	2,042	1,380	0	9,421	31,494
45-49	929	1,643	1,253	1,435	1,541	2,033	573	9,407	32,271
50-54	530	965	994	1,061	904	909	876	6,239	32,612
55-59	285	754	611	763	726	658	771	4,568	32,846
60-64	67	381	290	516	316	288	426	2,284	32,678
65+	<u>23</u>	<u>103</u>	<u>105</u>	<u>127</u>	<u>101</u>	<u>130</u>	<u>159</u>	<u>748</u>	<u>32,875</u>
Total	<u>7,113</u>	<u>11,271</u>	<u>7,464</u>	<u>7,501</u>	<u>6,259</u>	<u>5,398</u>	<u>2,805</u>	<u>47,811</u>	<u>\$30,661</u>

Average age 44.14
Average service 14.32

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

SCHEDULE K
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STATE EMPLOYES' RETIREMENT SYSTEM

I. AGE, SERVICE AND SALARY PROFILE OF ACTIVE PARTICIPANTS DECEMBER 31, 1995

ACTIVE AND INACTIVE EMPLOYEES

Age	Males - Full Years of Service to December 31, 1995							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
less than 20	11	0	0	0	0	0	0	11
20-24	651	95	0	0	0	0	0	746
25-29	3,065	1,696	117	0	0	0	0	4,878
30-34	2,015	3,040	1,389	266	0	0	0	6,710
35-39	1,463	2,492	2,336	1,680	274	0	0	8,245
40-44	1,469	2,483	1,734	2,273	2,005	745	0	10,709
45-49	1,725	1,986	1,792	2,019	2,766	3,272	345	13,905
50-54	825	1,269	1,016	989	1,454	2,662	1,359	9,574
55-59	525	838	855	555	878	1,592	1,405	6,648
60-64	311	539	513	424	367	732	824	3,710
65+	<u>109</u>	<u>246</u>	<u>203</u>	<u>187</u>	<u>155</u>	<u>165</u>	<u>381</u>	<u>1,446</u>
Total	<u>12,169</u>	<u>14,684</u>	<u>9,955</u>	<u>8,393</u>	<u>7,899</u>	<u>9,168</u>	<u>4,314</u>	<u>66,582</u>

Average age 44.76
Average service 14.31

Age	Females - Full Years of Service to December 31, 1995							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
less than 20	34	0	0	0	0	0	0	34
20-24	692	214	0	0	0	0	0	906
25-29	1,422	1,425	271	0	0	0	0	3,118
30-34	1,159	1,526	1,315	514	0	0	0	4,514
35-39	958	2,226	1,375	1,552	657	0	0	6,768
40-44	1,030	2,097	1,341	1,699	2,160	1,433	0	9,760
45-49	948	1,687	1,298	1,494	1,621	2,150	606	9,804
50-54	536	977	1,022	1,086	933	1,001	1,016	6,571
55-59	287	761	618	808	770	711	925	4,880
60-64	68	413	309	548	346	317	530	2,531
65+	<u>25</u>	<u>111</u>	<u>114</u>	<u>137</u>	<u>114</u>	<u>146</u>	<u>246</u>	<u>893</u>
Total	<u>7,159</u>	<u>11,437</u>	<u>7,663</u>	<u>7,838</u>	<u>6,601</u>	<u>5,758</u>	<u>3,323</u>	<u>49,779</u>

Average age 44.61
Average service 14.46

* For purposes of the demographic tables for active employees, the definition of hire date has been changed. Therefore, the demographic tables in the December 31, 1994 report are not comparable.

STATE EMPLOYEES' RETIREMENT SYSTEM

II. AGE AND BENEFIT PROFILE OF ANNUITANTS AND BENEFICIARIES DECEMBER 31, 1995

SUPERANNUATION ANNUITANTS

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>Total</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
50-54	289	\$ 9,083,166	10	\$ 121,311	299	\$ 9,204,477
55-59	829	23,531,771	105	1,892,581	934	25,424,352
60-64	2,323	45,114,382	1,424	16,439,343	3,747	61,553,725
65-69	5,475	74,037,998	3,948	35,356,197	9,423	109,394,195
70-74	6,364	72,692,470	4,904	36,101,389	11,268	108,793,859
75-79	4,987	41,888,293	4,466	27,251,364	9,453	69,139,657
80-84	3,457	25,639,138	3,363	18,974,345	6,820	44,613,483
85-89	1,647	11,272,852	1,754	9,800,357	3,401	21,073,209
90 & Over	<u>584</u>	<u>4,088,581</u>	<u>692</u>	<u>3,654,166</u>	<u>1,276</u>	<u>7,742,747</u>
Total	<u>25,955</u>	<u>\$307,348,651</u>	<u>20,666</u>	<u>\$149,591,053</u>	<u>46,621</u>	<u>\$456,939,704</u>

Average Age 73.9

Average Pension \$9,801

EARLY RETIREMENT ANNUITANTS

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>Total</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
30-34	24	\$ 25,088	81	\$ 87,426	105	\$ 112,514
35-39	165	196,684	458	557,822	623	754,506
40-44	619	969,442	1,452	1,963,077	2,071	2,932,519
45-49	1,887	14,145,171	1,606	3,149,369	3,493	17,294,540
50-54	2,314	30,452,501	1,146	5,228,153	3,460	35,680,654
55-59	1,902	22,218,639	1,386	10,438,770	3,288	32,657,409
60-64	2,236	29,812,584	1,674	14,189,494	3,910	44,002,078
65 & Over	<u>2,931</u>	<u>27,278,464</u>	<u>2,919</u>	<u>17,982,499</u>	<u>5,850</u>	<u>45,260,963</u>
Total	<u>12,078</u>	<u>\$125,098,573</u>	<u>10,722</u>	<u>\$53,596,610</u>	<u>22,800</u>	<u>\$178,695,183</u>

Average Age 57.3

Average Pension \$7,838

SCHEDULE K

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STATE EMPLOYEES' RETIREMENT SYSTEM

II. AGE AND BENEFIT PROFILE OF ANNUITANTS AND BENEFICIARIES DECEMBER 31, 1995

DISABLED ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
30-34	15	\$ 115,937	14	\$ 98,369	29	\$ 214,306
35-39	41	314,432	73	553,913	114	868,345
40-44	131	1,028,093	208	1,589,638	339	2,617,731
45-49	313	2,696,439	258	2,188,444	571	4,884,883
50-54	343	3,124,143	264	2,104,092	607	5,228,235
55-59	338	3,031,621	319	2,565,802	657	5,597,423
60-64	397	3,131,917	356	2,537,501	753	5,669,418
65 & Over	<u>796</u>	<u>5,167,037</u>	<u>823</u>	<u>4,120,038</u>	<u>1,619</u>	<u>9,287,075</u>
Total	<u>2,374</u>	<u>\$18,609,619</u>	<u>2,315</u>	<u>\$15,757,797</u>	<u>4,689</u>	<u>\$34,367,416</u>
Average Age		59.4				
Average Pension		\$7,329				

BENEFICIARIES AND SURVIVOR ANNUITANTS

Age	Male		Female		Total	
	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
Under 25	7	\$ 35,475	5	\$ 25,530	12	\$ 61,005
25-29	1	3,307	7	43,376	8	46,683
30-34	8	75,345	11	47,277	19	122,622
35-39	18	62,776	14	95,316	32	158,092
40-44	16	100,914	29	117,447	45	278,361
45-49	24	72,818	70	346,086	94	418,904
50-54	29	90,641	111	724,840	140	815,481
55-59	38	140,307	217	1,565,772	255	1,706,079
60-64	37	155,164	341	2,501,952	378	2,657,116
65-69	45	265,782	694	4,078,983	739	4,344,765
70-74	116	755,780	1,125	5,584,992	1,241	6,340,772
75-79	79	361,852	1,409	5,870,990	1,488	6,232,842
80-84	59	218,061	1,346	5,372,999	1,405	5,591,060
85-89	17	58,202	813	3,273,388	830	3,331,590
90 & Over	<u>4</u>	<u>16,570</u>	<u>404</u>	<u>1,443,823</u>	<u>408</u>	<u>1,460,393</u>
Total	<u>498</u>	<u>\$2,412,994</u>	<u>6,596</u>	<u>\$31,152,771</u>	<u>7,094</u>	<u>\$33,565,765</u>
Average Age		75.1				
Average Pension		\$4,732				

SCHEDULE K
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STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995 (as embodied in Act 31, approved March 1, 1974)

The State Employees' Retirement System of Pennsylvania makes provision for retirement, disability, and death benefits for all State employees and certain other eligible groups. The major provisions may be summarized as follows:

Eligibility Employees

- Class A - All regular State employees as well as employees of certain Commissions and Authorities and all employees of state-owned educational institutions and the Pennsylvania State University (unless such employees have joined the Public School Employees' Retirement System of Pennsylvania or TIAA-CREF). All employees who become members (or who rejoin the Retirement System) on and after March 1, 1974 except Judges and District Justices.
- Class C - Liquor Law enforcement officers and other officers and certain employees of the Pennsylvania State Police who have been members and employees continuously since prior to March 1, 1974.
- Class D-3 - Members of the General Assembly who have been members and employees continuously since prior to March 1, 1974.
- Class E-1 - Judges.
- Class E-2 - District Justices.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995
(as embodied in Act 31, approved March 1, 1974)

Age and Service Requirements for Superannuation Retirement (full formula benefits)

<u>Class A</u> -	Age 60, with three years of service, except for members of the General Assembly, enforcement officers, correction officers, psychiatric security aides, and officers of the Delaware River Port Authority; for whom the requirement is age 50 with three years of service. Members of Class A with 35 or more years of credited service are entitled to full formula benefits regardless of age. State Police Officers can retire on full benefits after age 50 or with 20 years of service. Capitol Police and Park Rangers can retire on full benefits at age 50 with 20 years of Capitol Police or Park Ranger service.
<u>Classes C</u>	Age 50.
<u>Class D-3</u>	Age 50.
<u>Class E-1</u>	Age 60.
<u>Class E-2</u>	Age 60.

Formula for Superannuation Retirement Annuity

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

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

STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995
(as embodied in Act 31, approved March 1, 1974)

The annuity for other classes of members is obtained by multiplying the standard single-life annuity by a class multiplier as follows:

<u>Class</u>	<u>Multiplier</u>	
D-3	3.75	
E-1	2.0	for each of the first 10 years of judicial service dropping to 1.5 for each subsequent year of judicial service.
E-2	1.5	for each year of judicial service.

NOTE: There are conditions under which long-service members or members retiring at advanced ages may receive somewhat larger benefits than those described above. Further, benefit limitations exist for most members of Class D-3.

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 his "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.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995
(as embodied in Act 31, approved March 1, 1974)

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 Liquor Law enforcement officer does not have a service requirement.

Formula for Disability Benefit

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

- (a) the benefit calculated as for superannuation retirement based on service projected to superannuation date, or
- (b) 33-1/3 percent of F.A.S. at time of disability.

Eligibility for Vested Benefit

A member is eligible for a vested benefit after 10 years of service, except for members of Class D-3 who are eligible after 6 years of Class D-3 service.

Vested Benefit

The vested benefit is equal to the benefit calculated as for superannuation, based on years of credited service at the time of leaving the plan. The former member can receive the full benefit beginning at superannuation age, or an actuarially reduced early retirement benefit beginning at the date of separation.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995

(as embodied in Act 31, approved March 1, 1974)

Eligibility for Death Benefit Prior to Retirement

A member is eligible if the member is (1) under superannuation age with 10 years of credited service, except for a member of Class D-3 who is eligible after 6 years of Class D-3 service, or (2) upon attainment of superannuation age with 3 years of credited service.

Amount of Death Benefit Prior to Retirement

An eligible beneficiary receives the full reserve 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.

Temporary Early Retirement Benefit

A temporary early retirement incentive was provided for under Act 1994 - 29. The early retirement incentive was retroactive to July 1, 1993, and will continue on until June 30, 1997. During this period of time, a member who has 30 or more years of service may retire at any age and receive full unreduced benefits. Beginning with the December 31, 1995 valuations, the Board agreed with the actuary that it would be prudent to fund for the 30 year retirement benefit as if it were a permanent feature of the retirement system. If the current 30 year retirement benefit is not extended the long-term cost of the system will be reduced.

Death Benefits After Retirement

A member may elect one of several optional reduced pensions in lieu of the single-life annuity provided by the formula. However, if the member elects the single-life annuity, there is a provision for a modified cash refund without actuarial reduction of the unpaid balance of the member accumulated contributions and interest at time of retirement.

Supplemental Allowances

Any superannuation or disability annuitant is entitled to a supplemental allowance sufficient to build the amount of the total single-life allowance, including any cost-of-living supplements, up to the rate of \$84.50 for each year of credited service. An annuitant who retired early is entitled to the supplemental allowance upon attaining superannuation age.

SCHEDULE L
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STATE EMPLOYES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995
(as embodied in Act 31, approved March 1, 1974)

Supplemental annuities applying cost-of-living increases to the benefits of annuitants have been instituted from time to time. The most recent of these became effective as of July 1, 1994.

Rate of Member Contribution

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

Class A - 5.00% of total salary

For other classes of members, the class of service multiplier is applied to the 5% rate to produce the following:

Class C - 5.00%

Class D-3 - 18.75%

Class E-1 - 10.00% during the first 10 years of judicial service and 7.5% thereafter.

Class E-2 - 7.50%

(ii) Additional contribution for Social Security Integration Credit

Any member who elects Social Security Integration Credit pays 5 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.

STATE EMPLOYEES' RETIREMENT SYSTEM

BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1995 **(as embodied in Act 31, approved March 1, 1974)**

Interest Credited on Member Contributions

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

Refund of Accumulated Member Contributions

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

Employer Contributions

The employer pays the balance of the cost in excess of the members' contributions with payment schedules determined by law. The employer contribution is the employer share of the normal cost plus the amount needed to amortize the December 31, 1990 accrued and supplemental liabilities over a twenty-year period ending with June 30, 2011. Changes in cost after 1990 are typically amortized over new twenty-year periods beginning with the July first following the effective date of the change.

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

Schedule M shows the actuarial assumptions used for the valuation. The assumptions were based on a review of experience under SERS from 1991 through 1995. Schedule M contains an extract of the full set of rates used in the valuation. The full set of rates is in the evaluation report which can be obtained from SERS. The rates are the probabilities that an event will occur in the year after the valuation. For instance, the male superannuation rate of .170 at age 60 means that 170 of every 1,000 employes age 60 and eligible for full benefits are expected to retire before they reach age 61.

Interest Rate: 8.5 percent compounded annually

Mortality After Retirement:

Current Retirees, Beneficiaries and Survivors: The mortality table used for current male retirees is the 1971 Group Annuity Mortality Table for males. The mortality table used for current female retirees is the 1971 Group Annuity Mortality Table for males setback 6 years. The same tables are used for current beneficiaries and survivors.

Current Active Employes: The table used for current active employes to project mortality after retirement (superannuation or early retirement) is the 1983 Group Annuity Mortality Table for males and females.

Disability Allowances: The disability table is the Federal Civil Service Disability Mortality table adjusted to provide a margin of 20 percent below current SERS disability mortality.

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR ACTIVE GENERAL EMPLOYEES:

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

<u>Age</u>	<u>Male</u>	<u>Female</u>
50-58	.130	.030
59	.130	.130
60	.170	.260
61	.190	.210
62	.510	.430
63	.260	.280
64	.260	.280
65	.510	.500
66	.340	.350
67	.260	.330
68-79	.240	.240
80	1.000	1.000

Rates of Separation for Eligibility for Reduced Benefits:*

<u>Age</u>	<u>Male</u>	<u>Female</u>
30	.010	.010
35	.010	.010
40	.010	.010
45	.010	.010
50	.011	.010
55	.016	.010

* Early retirement rates only apply to members not eligible for full unreduced benefits.

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR ACTIVE GENERAL EMPLOYEES:

Rates of Separation Due to Withdrawal:*

					<u>Male</u>						<u>Female</u>						
					<u>Years of Service</u>									<u>Years of Service</u>			
<u>Age</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>9+</u>	<u>Age</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>9+</u>	<u>Age</u>	<u>0</u>	<u>1</u>	<u>5</u>	<u>9+</u>			
20	.1204	.0840	.0350	.0048	20	.0951	.0507	.0588	.0098	20	.0951	.0507	.0588	.0098			
25	.1204	.0840	.0378	.0048	25	.1057	.0910	.0588	.0098	25	.1057	.0910	.0588	.0098			
30	.0905	.0748	.0375	.0048	30	.1059	.1012	.0575	.0098	30	.1059	.1012	.0575	.0098			
35	.0870	.0523	.0315	.0048	30	.0890	.0731	.0449	.0078	30	.0890	.0731	.0449	.0078			
40	.0767	.0449	.0263	.0037	40	.0752	.0490	.0341	.0061	40	.0752	.0490	.0341	.0061			
45	.0725	.0557	.0205	.0034	45	.0640	.0441	.0306	.0051	45	.0640	.0441	.0306	.0051			
50	.0707	.0358	.0152	.0032	50	.0775	.0435	.0273	.0060	50	.0775	.0435	.0273	.0060			
55	.0599	.0301	.0133	.0030	55	.0645	.0565	.0256	.0056	55	.0645	.0565	.0256	.0056			

FOR ALL ACTIVE EMPLOYEES:

Rates of Separation Due to Death and Disability:

<u>Age</u>	<u>Death</u>		<u>Disability*</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0005	.0004	25	.0003 .0005
30	.0006	.0004	30	.0007 .0013
35	.0007	.0005	35	.0014 .0020
40	.0010	.0008	40	.0021 .0029
45	.0017	.0009	45	.0038 .0046
50	.0026	.0017	50	.0053 .0069
55	.0044	.0028	55	.0070 .0087
60	.0068	.0032	60	.0080 .0102

* Separation due to withdrawal and disability retirement rates only apply to members not eligible for superannuation retirement.

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR SPECIAL BENEFIT CLASSES:

Rates of Separation Due to Withdrawal:

<u>Years of Service</u>	<u>State Police/ Hazardous Duty</u>	<u>Legislators</u>	<u>Judicial Officers</u>
0	.0400	.0000	.0400
1	.0300	.0300	.0300
2-3	.0200	.0300	.0200
4-6	.0100	.0300	.0100
7-8	.0050	.0300	.0100
9+	.0006	.0020	.0020

Rates of Separation Due to Early Retirement:

	<u>State Police/ Hazardous Duty</u>	<u>Legislators</u>	<u>Judicial Officers</u>
Any Age	.0050	.0260	.0220

Rates of Separation Due to Superannuation Retirement:

<u>Age</u>	<u>Hazardous Duty*</u>	<u>Legislators</u>	<u>Judicial Officers</u>
50	.075	.050	N/A
55	.130	.050	N/A
60	.350	.060	.010
65	.650	.100	.060
70	.300	.100	.900
75	.300	.100	.900
80	1.000	1.000	1.000

* Includes State Police with less than 20 years of service.

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

FOR SPECIAL BENEFIT CLASSES:

State Police 20 or More Years of Service:

<u>Service</u>	
20	.040
21	.060
22	.080
23	.100
24	.200
25	.200
26	.210
27	.220
28	.230
29	.240
30	.250
31	.260
32	.270
33	.280
34	.290
35	.300

STATE EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

Career Salary Increases

The internal salary scale includes all actions that affect an individual's career. These are increases from promotions to a higher step.

Up until January 1993, employees under the Governor's jurisdiction hired after July 1, 1988 were subject to different longevity increases than employees hired before July 1, 1988. In 1993, the Commonwealth introduced a new pay scale for those groups which became effective January 1, 1994. The new pay scale compressed the previous scale of 35 steps to 20 steps. The new scale provides longevity increases for members who have at least one year of service. The previous career salary scale delayed the longevity increase to new hires for a period of seven years. Most of the employees are under the Governor's jurisdiction.

The previous method of applying different salary schedules to different populations was appropriate when different groups of employees received different increases. The analysis of salary experience for 1991 through 1995 showed that when promotion and longevity increases are combined there is very little difference between the tables. The internal salary scale shown applies one table to the entire population.

Most important for the actuarial valuation is the fact that all employees will receive at least a longevity increase of approximately 2.20 percent each year, except for the few employees at the highest step.

No internal salary scale is used for members in Classes D and E. It is assumed that these members would receive the general salary increase which is 3.3 percent each year.

STATE EMPLOYES' RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS (Continued)

Career Salary Scale for Members

Age	Annual Increase
20	5.5%
21	5.5
22	5.5
23	5.5
24	5.5
25	5.5
26	5.5
27	5.5
28	5.5
29	5.5
30	5.3
31	5.2
32	5.0
33	4.9
34	4.8
35	4.6
36	4.5
37	4.4
38	4.2
39	4.1
40	4.0
41	3.9
42	3.8
43	3.7
44	3.6
45	3.5
46	3.4
47	3.2
48	3.1
49	3.0
50	2.8
51	2.6
52	2.5
53	2.4
54	2.2
55	2.1
56	2.0
57	1.9
58	1.9
59	1.8
60	1.8

STATE EMPLOYES' RETIREMENT SYSTEM

I. ASSET VALUATION METHOD

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.

The adjustments and the resulting actuarial assets are shown in Schedule I. The assets are further adjusted to account for the remaining employer contributions in fiscal year 1995/96 (through June 30, 1996). This adjustment is made because the 1995 valuation results will not be reflected in employer contributions until July 1, 1996. The assets are increased by employer contributions payable through June 30, 1996. This adjustment includes any employer contributions due and payable as of the valuation date. The assets are then reduced by the employer normal cost payable through June 30, 1996.

II. FUNDING AND CONTRIBUTION POLICY

The Pennsylvania State Employees' Retirement System funding policy provides for periodic employer contributions at actuarially determined rates that will amortize the liabilities by June 30, 2016. 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 superannuation, 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.

STATE EMPLOYEES' RETIREMENT SYSTEM

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

- (1) The employer share of the normal cost.
- (2) The amortization of the unfunded liabilities as of December 31, 1990 over a twenty-year period ending on June 30, 2011.
- (3) The amortization of changes in liability after 1990 over twenty-year periods typically beginning with the July first following the effective date of the change. Changes include actuarial gains and losses and plan amendments.

All of the amortization payments are based on a schedule of contributions that increase five percent a year. The employer cost is determined as a percent of payroll, and the employer contributes that percent of the payroll of all covered members during each fiscal year. The employer cost is the total of (1) the employer normal cost percent and (2) the amortization payment for fiscal year 1996/97 divided by the projected payroll for the fiscal year.

The assumptions used in determining the actuarial cost are stated in Schedule M, and the employer cost, as a percent of payroll, is determined in Schedules A and B. The assumptions used for the current valuation were adopted after a review of the evaluation of experience under SERS from 1991 through 1995.

The investment return assumption is 8.5 percent per year. Salary growth is the total of assumed increases in salary rates and career salary growth. It is assumed that the salary rates will increase at 3.3 percent a year and that career salary growth will average 3.5 percent a year. The total average salary growth for an individual will be 6.8 percent a year. The investment return and the salary rate increase assumptions are based on assumed underlying inflation of 3 percent a year.

STATE EMPLOYEES' RETIREMENT SYSTEM

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. The calculations were performed on the basis of actuarial assumptions and methods which are internally consistent and reasonable (taking into account past experience under the SERS and reasonable expectations) and which in combination represent the best estimate of anticipated experience under the plan.

III. DISCLOSURE ASSUMPTIONS

The Projected Benefit Obligation (PBO) is the present value of accumulated plan benefits based on past service and projected salary. The PBO was calculated using the withdrawal, death and retirement assumptions set forth in Schedule M. The Board adopted the rates shown in Schedule M based on the results of the 1991-1995 evaluation of the experience.

The career salary for the PBO growth was set equal to the salary growth shown in Schedule M including the assumptions that the salary rates would increase by 3.3 percent per year, compounded annually. The rate of interest was 8.5 percent per year, compounded annually. The 1994 investment return rate assumption was 9.25 percent. At that time, the rate of 9.25 percent was approximately equal to the assumed investment return rates averaged over the period during which past obligations to current employees and annuitants would have been paid.

The result of the use of the above salary scales and interest rate is to determine a PBO that is the best estimate of the actual obligations of the fund using the procedures established by the Governmental Accounting Standards Board.

The present value of accumulated plan benefits is the liability based on past service but without projection of a salary increase. This value was determined using the assumptions from Schedule M and an interest rate of 7.25 percent for this 1995 report. The 1995 report uses an assumption of 7.25 percent which is in the range of the latest (April 1996) rates for 30-Year Treasury Bonds (6.79 percent) and AAA Seasoned Issue Corporate Bonds as reported by Moody's Investment Service (7.50 percent). The 1994 investment return rate assumption was 7.75 percent.

Both disclosure values were determined using the demographic assumptions based on the 1991 to 1995 evaluation of experience.

STATE EMPLOYES' RETIREMENT SYSTEM

DEFINITIONS OF TECHNICAL TERMS

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

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

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

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

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

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

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

Projected Benefit Obligation. The present value of pension benefits estimated to be payable in the future as a result of employe service to the date of the valuation. The projection includes expected increases in salary.

Unfunded Actuarial Accrued Liabilities. The difference between actuarial accrued liabilities and valuation assets.