STATE POLICE RETIREMENT BENEFITS TRUST
STATE OF RHODE ISLAND

ACTUARIAL VALUATION REPORT

AS OF JUNE 30, 2007

GRS
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June 11, 2008

Retirement Board
40 Fountain Street, First Floor
Providence, RI 02903-1854

Dear Members of the Board:

Subject: Actuarial Valuation of SPRBT as of June 30, 2007

This is the June 30, 2007 actuarial valuation of the State Police Retirement Benefits Trust (SPRBT). This report describes the current actuarial condition of the SPRBT, determines the recommended employer contribution rate, and analyzes changes in the contribution rate. Valuations are prepared annually, as of June 30, the last day of the SPRBT plan year. Benefits for state police officers hired before July 1, 1987 are funded by the state from general assets, on a pay-as-you-go basis, and are not included in this valuation.

Under Rhode Island General Laws, the employer contribution rate for state police is certified annually by the State of Rhode Island Retirement Board. This rate is determined actuarially, based on the plan provisions in effect as of the valuation date and the actuarial assumptions and methods adopted by the Board or set by statute. The Board's current policy is that the contribution rate determined by a given actuarial valuation becomes effective two years after the valuation date. For example, the rate determined by the June 30, 2007 actuarial valuation will be applicable for the year beginning July 1, 2009 and ending June 30, 2010.

Financing objectives and funding policy

The actuarial cost method and the amortization periods are set by statute. Contribution rates and liabilities are computed using the Entry Age actuarial cost method. The employer contribution rate is the sum of two pieces: the employer normal cost rate and the amortization rate. The normal cost rate is determined as a percent of pay. The employer normal cost rate is the difference between this and the member contribution rate. The amortization rate is determined as a level percent of pay. It is the amount required to amortize the unfunded actuarial accrued liability over a closed period (30 years as of June 30, 1999, 22 years as of June 30, 2007). The amortization rate is adjusted for the two-year deferral in contribution rates.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100%. The funded ratio, as can be seen on Table 3, increased from 86.0% to 90.2%. The employer contribution rate decreased from 30.06% to 29.72%. An analysis of the changes in the employer contribution rate appears on Table 10a. An analysis of the changes in the unfunded actuarial accrued liability appears on Table 10c.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2007. There were no material changes adopted since the previous actuarial valuation. The benefit provisions are summarized in Appendix B.

Assumptions and methods

All assumptions and methods are described in Appendix A and are unchanged from the last valuation. The actuarial assumptions were last changed as a result of the experience study approved by the Board on June 13, 2007. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of SPRBT.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities and the calculated contribution rates.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in GASB 25.

Data

The System's staff supplied data for active, inactive, and retired members as of June 30, 2007. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. The System's staff also supplied asset data as of June 30, 2007.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Rhode Island state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental

Accounting Standards Board. The undersigned are independent actuaries. Both are Enrolled Actuaries, Members of the Society of Actuaries and Members of the American Academy of Actuaries. They both meet the Qualification Standards of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems.

Sincerely,
Gabriel, Roeder, Smith & Company

Joseph P. Newton, FSA, MAAA
Consultant

J. Christian Conradi, ASA, MAAA
Senior Consultant

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Item	Valuation Date: June 30, 2007	Valuation Date: June 30, 2006
Membership		
• Number of		
- Active members	179	179
- Retirees and beneficiaries	3	3
- Inactive members	2	2
- Total	184	184
• Payroll for benefits	$ 15,836,354	$ 13,474,588
Contribution rates		
• Member	8.75%	8.75%
• State	29.72%	30.06%
Assets		
• Market value	$ 50,445,259	$ 38,131,989
• Actuarial value	45,996,910	36,314,689
• Return on market value	18.1%	11.6%
• Return on actuarial value	12.2%	8.8%
• Employer contribution	$ 4,038,828	$ 3,174,903
• Ratio of actuarial value to market value	91.2%	95.2%
Actuarial Information		
• Employer normal cost %	27.00%	26.65%
• Unfunded actuarial accrued liability (UAAL)	$ 5,006,583	$ 5,901,453
• Amortization rate	2.72%	3.41%
• Funding period	22 years	23 years
• GASB funded ratio	90.2%	86.0%
Projected employer contribution		
• Fiscal year ending June 30,	2010	2009
• Projected payroll for contributions	$ 12,984,954	$ 11,717,316
• Projected employer contribution	3,859,128	3,522,225

Contribution Rates

The employer contribution rate for SPRBT is determined actuarially. The rate determined in this valuation becomes effective two years after the valuation date, in this case as of July 1, 2009.

The rate consists of two pieces: the employer's normal cost rate and the amortization rate. The normal cost rate is the Entry Age normal cost expressed as a percent of pay. The amortization rate is the contribution required to amortize the unfunded actuarial liability (UAAL) over 22 years as a level percent of pay.

The decrease in the employer contribution rate, from 30.06% to 29.72%, was principally due to (a) the recognition of deferred asset gain from prior valuations, offset by (b) the actual salary increases being greater than expected.

An analysis of the changes in the employer contribution rate appears on Table 10a and a history of the employer contribution rates appears on Table 10b. Table 10c shows a reconciliation of the UAAL.

Financial Data and Experience

Assets for SPRBT are held in trust and are commingled with those of several other plans and programs—including the Employees' Retirement System of Rhode Island—for investment purposes. The State Treasurer is responsible for setting the asset allocation policy and for investing the funds.

Table 5 shows the net plan assets for SPRBT. Table 6 shows a reconciliation of the assets between the previous valuation and this valuation. Table 7 shows the development of the actuarial value of assets. Table 8 shows the distribution of investments by category—72% of assets at market value are held in equities, including real estate and private equity—and Table 9 shows a historical summary of the return rates. As can be seen, the net market value rate of return was 18.1% for the year ended June 30, 2007, and the return on the actuarial value of assets was 12.2%.

The average annual return based on the market value of assets over the last ten years (July 1, 1997 – June 30, 2007) was 7.37%. This is less than the current 8.25% annual investment return assumption. The average annual return based on the actuarial value of assets over the same period was 7.72%.

All returns above are net of both investment and administrative expenses, so may differ from other information provided by the General Treasurer's office or the investment managers and advisors.

The System's staff provided all of the financial information used in this report.

Member Data

The System's staff supplied member data as of June 30, 2007. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall. Information provided for active members includes: name, identification number, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, date of last contribution, and accumulated member contributions without interest. Two salary rates were reported for each member as of July 1, 2007, one used for computing benefits and one for contribution purposes. For retired members, data includes: name, an identification number, sex, date of birth, date of retirement, amount of benefit (original, COLA, gross), a code indicating the option elected and the type of retiree (service retiree, disabled retiree, beneficiary), and if applicable, the joint pensioner's date of birth and sex.

Table 11 and Table 12 show information and statistics about the members. Table 13 shows the distribution of active members by age and service.

The total number of active members is 179, the same as last year. Total compensation used for benefits increased from $13.5 million to $15.8 million, a 17.5% increase. The average compensation used in benefit calculations increased from $75,277 to $88,471, or 17.5%.

The total payroll shown on the statistical tables is the amount that is used for determining benefits, and includes 400 hours of overtime and other adjustments. For purposes of determining the contribution rates, the dollar costs were divided by the total pay used for contributions, as required. Table 1 shows the pay that is used to determine contribution rates.

Benefit Provisions

Appendix B includes a summary of the benefit provisions for SPRBT. There were no changes in the benefit provisions since the preceding valuation.

There are no ancillary benefits—e.g., cost of living benefits—that are currently provided by a source independent of SPRBT but that might be deemed an SPRBT liability if continued beyond the availability of funding by the current funding source.

Actuarial Methods and Assumptions

Appendix A includes a summary of the actuarial assumptions and methods used in this valuation. Costs are determined using the Entry Age actuarial cost method; this method was adopted effective June 30, 1999.

The method used to determine the actuarial value of assets is a five-year smoothed market method. This technique is further described in Section III of Appendix A. The development of the actuarial value of assets utilizing this method is shown on Table 7.

All assumptions and methods are described in Appendix A and are unchanged from the last valuation. The actuarial assumptions were approved by the Board on June 13, 2007. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of SPRBT.

GASB 25 and Funding Progress

Accounting requirements for SPRBT are set by Governmental Accounting Standards Board Statement No. 25 (GASB 25). Table 3 shows a historical summary of the funded ratios and other information for SPRBT. Tables 4 shows other information needed in connection with disclosure under GASB 25.

GASB 25 requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed. The ARC must be calculated in accordance with certain parameters. In particular, it must include a payment to amortize the unfunded actuarial accrued liability. This amortization payment must be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level amount, or it may be computed as an amount that increases with payroll. However, if payments are computed on a level percent of payroll approach, the payroll growth assumption may not anticipate future membership growth.

For SPRBT, the calculated contribution rate shown in Table 1 is the ARC. The amortization period was established as 30 years as of June 30, 1999, and there are 22 years remaining as of June 30, 2007. The period and amortization method comply with the requirements of GASB 25. The payroll growth rate used in the amortization calculations does not include any allowance for membership growth.

Development of Contribution Rate (State Police)

		June 30, 2007	June 30, 2006
		(1)	(2)
1.	Base Pay from prior fiscal year supplied by ERSRI	11,240,766	10,145,550
2.	Compensation projected to next fiscal year		
	(a) Total pay (used for benefits)	$ 15,836,354	13,474,588
	(b) Base pay (used for contributions)	11,890,711	10,729,898
3.	Actuarial accrued liability	51,003,493	42,216,142
4.	Actuarial value of assets	45,996,910	36,314,689
5.	Unfunded actuarial accrued liability (UAAL) (3 - 4)	5,006,583	5,901,453
6.	Remaining amortization period at valuation date	22	23
7.	Contribution effective for fiscal year ending:	June 30, 2010	June 30, 2009
8.	Base pay projected for two-year delay	12,984,954	11,717,316
9.	Amortization of UAAL	352,862	399,803
10.	Normal cost		
	(a) Total normal cost rate	35.75%	35.40%
	(b) Employee contribution rate	8.75%	8.75%
	(c) Employer normal cost rate (a - b)	27.00%	26.65%
11.	Employer contribution rate as percent of payroll		
	(a) Employer normal cost rate	27.00%	26.65%
	(b) Amortization payments (9 / 8)	2.72%	3.41%
	(c) Total (a + b)	29.72%	30.06%
12.	Estimated employer contribution amount (8 * 11(c))	$ 3,859,128	$ 3,522,225

Actuarial Present Value of Future Benefits

		June 30, 2007 (1)	June 30, 2006 (2)
1.	Active members		
a.	Service retirement benefits	$ 77,782,468	$ 67,941,285
b.	Deferred termination benefits	-	-
c.	Refunds	29,350	29,647
d.	Pre-retirement death benefits	901,422	831,422
e.	Non-occupational disability retirement benefits	1,369,498	1,260,098
f.	Occupational disability retirement benefits	7,295,179	6,844,119
h.	Total	$ 87,377,917	$ 76,906,571
2.	Retired members		
a.	Service retirements	$ 809,999	$ 812,036
b.	Disability retirements	1,430,338	1,381,988
c.	Beneficiaries	-	-
d.	Post-retirement death benefits	-	-
e.	Total	$ 2,240,337	$ 2,194,024
3.	Inactive members	$ 41,327	$ 65,013
4.	Total actuarial present value of future benefits	$ 89,659,581	$ 79,165,608
5.	Determination of actuarial accrued liability		
a.	Total actuarial present value of future benefits	$ 89,659,581	$ 79,165,608
b.	Less present value of future normal costs	(38,656,088)	(36,949,466)
c.	Actuarial accrued liability (a + b)	$ 51,003,493	$ 42,216,142

Schedule of Funding Progress
(As required by GASB #25)

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL) (3)-(2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
June 30, 1999	8,480,657	10,841,544	2,360,887	78.2%	7,502,433	31.5%
June 30, 2000	11,336,596	13,917,343	2,580,747	81.5%	8,916,914	28.9%
June 30, 2001	14,386,064	16,649,820	2,263,756	86.4%	9,139,418	24.8%
June 30, 2002	17,770,149	23,527,125	5,756,976	75.5%	10,933,360	52.7%
June 30, 2003	20,966,294	28,443,717	7,477,423	73.7%	11,286,365	66.3%
June 30, 2004	24,767,014	32,689,173	7,922,160	75.8%	11,421,880	69.4%
June 30, 2005	29,616,896	37,510,992	7,894,096	79.0%	13,225,400	59.7%
June 30, 2006	36,314,689	42,216,142	5,901,453	86.0%	13,474,588	43.8%
June 30, 2007	45,996,910	51,003,493	5,006,583	90.2%	15,836,354	31.6%

Notes to Required Supplementary Information
(as required by GASB #25)

Valuation date	June 30, 2007
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage, closed
Remaining amortization period	22 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return *	8.25%
Projected salary increase *	4.50% to 8.75%
* Includes inflation at:	3.00%
Cost of living adjustment	Level dollar ($1,500 per annum)

Plan Net Assets
(Assets at Market or Fair Value)

Item	June 30, 2007	June 30, 2006
(1)	(2)	(3)
1. Cash and cash equivalents	$ 513,481	$ 456,182
2. Receivables:		
a. Employer and member contributions	$ -	$ -
b. Transfers receivable	-	-
c. Miscellaneous	-	10,965
d. Total receivables	$ -	$ 10,965
3. Investments		
a. Pooled trust	$ 49,939,134	$ 37,780,844
b. Plan specific investments	-	-
c. Total	$ 49,939,134	$ 37,780,844
4. Invested securities lending collateral	$ 7,881,530	$ 7,274,705
5. Property and equipment (net of depreciation)	$ 21,639	$ 25,685
6. Total assets	$ 58,355,784	$ 45,548,381
7. Liabilities		
a. Due to other plans	$ -	$ 116,318
b. Securities lending liability	7,881,530	7,274,705
c. Accounts and vouchers payable	28,995	25,369
d. Total liabilities	$ 7,910,525	$ 7,416,392
8. Total market value of assets available for benefits Total (Item 6 - Item 7)	$ 50,445,259	$ 38,131,989

Reconciliation of Plan Net Assets

		June 30, 2007	June 30, 2006
1.	Market value of assets as of beginning of year	$ 38,131,989	$ 30,457,966
2.	Contributions		
	a. Members	$ 1,111,947	$ 886,140
	b. State	4,038,828	3,174,903
	c. Service purchases	-	-
	d. Miscellaneous revenue	-	-
	e. Total	$ 5,150,775	$ 4,061,043
3.	Investment earnings, net of investment expenses	$ 7,393,142	$ 3,778,371
4.	Expenditures for the year		
	a. Benefit payments	$ (170,725)	$ (144,723)
	b. Cost-of-living adjustments	(6,000)	(4,375)
	c. Death benefits	-	-
	d. Social security supplements	-	-
	e. Supplemental pensions	-	-
	f. Refunds	(23,869)	-
	g. Administrative expenses	(30,053)	(16,293)
	h. Total expenditures	$ (230,647)	$ (165,391)
5.	Transfers and other adjustments	$ -	$ -
6.	Market value of assets at end of year	$ 50,445,259	$ 38,131,989

Development of Actuarial Value of Assets

				Year Ending June 30, 2007
1.	Market value of assets at beginning of year			$ 38,131,989
2.	Net new investments			
	a. Contributions			$ 5,150,775
	b. Benefits paid			(176,725)
	c. Refunds			(23,869)
	d. Subtotal			4,950,181
3.	Market value of assets at end of year			$ 50,445,259
4.	Net earnings (3-1-2)			$ 7,363,089
5.	Assumed investment return rate			8.25%
6.	Expected return			$ 3,350,084
7.	Excess return (4-6)			$ 4,013,005

8. Excess return on assets as of 06/30/2007:

Period End (1)	Excess Return (2)	Percent Deferred (3)	Deferred Amount (4)
June 30, 2003	(604,503)	0%	$ -
June 30, 2004	1,900,776	20%	380,155
June 30, 2005	512,582	40%	205,033
June 30, 2006	1,087,928	60%	652,757
June 30, 2007	4,013,005	80%	3,210,404
			$ 4,448,349

9.	Actuarial value of assets as of 06/30/2007 (Item 3 - Item 8)	$ 45,996,910
10.	Ratio of Actuarial Value of Assets to Market Value	91.2%

Distribution of Assets at Market Value
(Percentage of Total Investments)

Item (1)	June 30, 2007 (2)	June 30, 2006 (3)
Cash & cash equivalents	6.6%	2.3%
U.S. government & agency securities	12.5%	14.5%
Corporate bonds & notes	8.9%	8.7%
Foreign bonds	0.0%	0.5%
U.S. equity securities	41.6%	40.8%
Foreign equity securities	19.9%	22.7%
Real estate, venture capital, other	10.5%	10.5%
Total investments	100.0%	100.0%

History of Investment Return Rates

Year Ending June 30 of	Market	Actuarial
(1)	(2)	(3)
1995	17.0%	10.2%
1996	13.7%	13.7%
1997	19.1%	19.1%
1998	16.1%	16.5%
1999	10.1%	14.7%
2000	9.1%	8.8%
2001	(11.0%)	4.9%
2002	(8.4%)	0.9%
2003	4.5%	1.5%
2004	18.0%	4.2%
2005	10.2%	5.9%
2006	11.6%	8.8%
2007	18.1%	12.2%
Average Returns:		
Last 5 Years	12.36%	6.46%
Last 10 Years	7.37%	7.72%

Analysis of Change in Employer Cost

Basis			Employer Cost
1.	Employer contribution rates from prior valuation		30.06%
2.	Impact of changes, gains and losses		
	a.	Non-salary liability experience (gain)/loss	0.16%
	b.	Salary (gain)/loss	0.74%
	c.	Total payroll growth (gain)/loss	(0.25%)
	d.	Investment experience (gain)/loss	(0.99%)
	e.	Changes in assumptions	0.00%
	f.	Changes in plan provisions	0.00%
	g.	Total	(0.34%)
3.	Employer contribution rates from current valuation		29.72%

History of Employer Contribution Rates

Valuation Date as of June 30,	Effective for Fiscal Year Ending June 30,	Employer Contribution Rate
(1)	(2)	(3)
1998	2001	25.89%
1999	2002	27.67%
2000	2003	27.48%
2001	2004	26.77%
2002	2005	28.87%
2003	2006	31.35%
2004	2007	31.78%
2005	2008	31.00%
2006	2009	30.06%
2007	2010	29.72%

Analysis of Change in UAAL

Basis	June 30, 2007
(1)	(2)
1. UAAL as of June 30, 2006	$ 5,901
2. Impact of changes, gains and losses	
a. Interest at 8.25% for one year	487
b. Expected amortization payments	(574)
c. Investment experience (gain)/loss	(1,532)
d. Salary (gain)/loss	1,078
e. Non-salary liability experience (gain)/loss	(353)
f. Changes in assumptions	-
g. Changes in plan provisions	-
i. Total	$ (894)
3. UAAL as of June 30, 2007	$ 5,007

Note: All dollar figures are shown in thousands.

Membership Data (State Police)

		June 30, 2007 (1)	June 30, 2006 (2)
1.	Active members		
	a. Number	179	179
	b. Number vested	0	0
	c. Total payroll supplied by State (for benefits)	$ 15,836,354	$ 13,474,588
	d. Average salary	$ 88,471	$ 75,277
	e. Average age	38.9	37.9
	f Average service	10.6	9.6
2.	Inactive members		
	a. Number	2	2
3.	Service retirees		
	a. Number	1	1
	b. Total annual benefits	$ 75,279	$ 73,779
	c. Average annual benefit	75,279	73,779
	d. Average age	68.6	67.6
4.	Disabled retirees		
	a. Number	2	2
	b. Total annual benefits	$ 99,579	$ 95,911
	c. Average annual benefit	49,790	47,956
	d. Average age	40.9	39.9
5.	Beneficiaries and spouses		
	a. Number	0	0
	b. Total annual benefits	$ -	$ -
	c. Average annual benefit	N/A	N/A
	d. Average age	N/A	N/A

Historical Summary of Active Member Data

	Active Members		Covered Payroll*		Average Salary*			
Valuation as of June 30,	Number	Percent Increase	Amount	Percent Increase	Amount	Percent Increase	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1996	97	---	$4,948,746	---	$51,018	---	31.1	3.8
1997	96	(1.0%)	$5,370,985	8.5%	$55,948	9.7%	32.2	4.8
1998	130	35.4%	$7,211,874	34.3%	$55,476	(0.8%)	32.3	4.4
1999	130	0.0%	$7,502,433	4.0%	$57,711	4.0%	33.3	5.4
2000	152	16.9%	$8,916,914	18.9%	$58,664	1.7%	33.7	5.5
2001	151	(0.7%)	$9,139,418	2.5%	$60,526	3.2%	34.7	6.6
2002	150	(0.7%)	$10,933,360	19.6%	$72,889	20.4%	35.5	7.5
2003	150	0.0%	$11,286,365	3.2%	$75,242	3.2%	36.6	8.4
2004	148	(1.3%)	$11,421,880	1.2%	$77,175	2.6%	37.6	9.5
2005	181	22.3%	$13,225,400	15.8%	$73,069	(5.3%)	36.9	8.6
2006	179	(1.1%)	$13,474,588	1.9%	$75,277	3.0%	37.9	9.6
2007	179	0.0%	$15,836,354	17.5%	$88,471	17.5%	38.9	10.6

*Based on salary used for benefits

Distribution of Active Members by Age and by Years of Service
As of 06/30/2007

	Years of Credited Service												
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Attained Age	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 25	0	0	2	0	0	0	0	0	0	0	0	0	2
	$0	$0	$70,547	$0	$0	$0	$0	$0	$0	$0	$0	$0	$70,547
25-29	0	0	10	0	0	0	0	0	0	0	0	0	10
	$0	$0	$70,547	$0	$0	$0	$0	$0	$0	$0	$0	$0	$70,547
30-34	0	0	11	0	0	9	0	0	0	0	0	0	20
	$0	$0	$71,181	$0	$0	$83,863	$0	$0	$0	$0	$0	$0	$76,888
35-39	0	0	10	0	0	22	21	5	0	0	0	0	58
	$0	$0	$71,594	$0	$0	$84,891	$90,858	$103,481	$0	$0	$0	$0	$86,362
40-44	0	0	1	0	0	18	26	16	0	0	0	0	61
	$0	$0	$70,547	$0	$0	$85,536	$93,530	$104,995	$0	$0	$0	$0	$93,801
45-49	0	0	0	0	0	4	14	8	0	0	0	0	26
	$0	$0	$0	$0	$0	$84,372	$93,337	$108,354	$0	$0	$0	$0	$96,578
50-54	0	0	0	0	0	0	1	1	0	0	0	0	2
	$0	$0	$0	$0	$0	$0	$96,768	$113,374	$0	$0	$0	$0	$105,071
55-59	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
60-64	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
65 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total	0	0	34	0	0	53	62	30	0	0	0	0	179
	$0	$0	$71,060	$0	$0	$84,897	$92,633	$105,917	$0	$0	$0	$0	$88,471

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial accrued liability (UAAL).

1. First, the actuarial present value of future benefits is determined by discounting the projected benefits for each member back to the valuation date using the assumed investment return rate as the discount rate. For active members, the projected benefits are based on the member's age, service, sex and compensation, and based on the actuarial assumptions. The calculations take into account the probability of the member's death, disability, or termination of employment prior to becoming eligible for a retirement benefit, as well as the possibility of the member will remain in service and receive a service retirement benefit. Future salary increases are anticipated. The present value of the expected benefits payable to all active members is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits. Liabilities for future members are not included.

2. The employer contributions required to support the benefits are determined as a level percentage of salary, and consist of a normal contribution and an amortization contribution.

3. The normal contribution is determined using the Entry Age method. Under this method, a calculation is made to determine the rate of contribution which, if applied to the compensation of each new member during the entire period of anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. The salary-weighted average of these rates is the normal cost rate.

4. The employer normal cost rate is equal to (i) the normal cost rate, minus (ii) the member contribution rate.

5. The actuarial accrued liability is equal to the present value of all benefits less the present value of future normal costs. The unfunded actuarial accrued liability

(UAAL) is then determined as (i) the actuarial accrued liability, minus (ii) the actuarial value of assets.

6. The amortization contribution rate is the level percentage of payroll required to reduce the UAAL to zero over the remaining amortization period. The UAAL is being amortized over the remainder of a closed 30-year period from June 30, 1999. The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The determination of the contribution rate reflects this deferral. The unfunded actuarial accrued liability (UAAL) and covered payroll are projected forward for two years, and we then determine the amortization charge required to amortize the UAAL over the remaining amortization period from that point. In projecting the UAAL, we increase the UAAL for interest at the assumed rate and we decrease it for the amortization payments. The amortization payments for these two years are determined by subtracting the current employer normal cost from the known contribution rates for these years, based on the two prior actuarial valuations. Contributions are assumed to be made monthly throughout the year.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 8.25% per year, compounded annually, composed of an assumed 3.00% inflation rate and a 5.25% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: Salary increase rate: The sum of (i) a 4.50% wage inflation assumption (composed of a 3.00% price inflation assumption and a 1.50% additional general increase), and (ii) a service-related component as shown below:

Years of Service	Service-Related Component	Total Increase
0	4.25%	8.75%
1	4.00	8.50
2	4.00	8.50
3	8.00	12.50
4	5.00	9.50
5	3.25	7.75
6	1.25	5.75
7	1.25	5.75
8	1.00	5.50
9	1.00	5.50
10-14	0.75	5.25
15-19	0.50	5.00
20-24	0.25	4.75
25&up	0.00	4.50

Salary increases are assumed to occur once a year, on July 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded frozen liability, payroll is assumed to increase 4.50% per year. This assumption includes no allowance for future membership growth.

B. Demographic Assumptions

1. Post-termination mortality rates

   a. Healthy males – Based on the 1994 Group Annuity Mortality Table for males. Rates are set forward one year.

   b. Healthy females - Based on the 1994 Group Annuity Mortality Table for females.

   c. Disabled males – 65% of the PBGC Table Va for disabled males eligible for Social Security disability benefits

   d. Disabled females – 100% of the PBGC Table VIa for disabled females eligible for Social Security disability benefits.

2. Pre-retirement mortality: 65% of the post-termination mortality rates. 15% of active member deaths are occupational.

3. Disability rates – Rates are applied, with 75% of disabilities considered occupational, and assumes no recoveries once disabled:

Age	Rate
20	0.12%
25	0.17
30	0.22
35	0.29
40	0.44
45	0.72
50	1.21

4. Termination rates - None

5. Retirement rates – State police are assumed to retire after completion of 20 years of service, in accordance with the probabilities shown below. 100% are assumed to retire at age 60 and completion of 20 years of service if still active.

State Police	
Service	Ret. Rate
20	25.0%
21	15.0%
22	10.0%
23	20.0%
24	30.0%
25	100.0%

C. Other Assumptions

1. Percent married: 85% of employees are assumed to be married.

2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

3. No surviving spouse will remarry and there will be no children's benefit.

4. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.

V. Participant Data

Participant data was supplied in electronic files for active and retired members. The data for an active members included birthdate, sex, service, salary and employee contribution account balance. We were also supplied with a separate file showing both the salary for contribution purposes and the salary for benefit purposes. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Summary of Benefit Provisions

1. Effective Date and Authority: The State Police Retirement Benefits Trust (SPRBT) became effective on July 1, 1989 for state police officers originally hired on or after July 1, 1987. Benefits are described in Rhode Island General Laws, Title 42, Chapter 28.

2. Plan Year: A twelve-month period ending June 30th.

3. Administration: The State Police Retirement Benefits Trust is administered by the State of Rhode Island Retirement Board. However, the State Treasurer is responsible for the investment of the trust assets, including the establishment of the asset allocation policy. Assets are commingled for investment purposes with those of the Employees' Retirement System of Rhode Island and various other plans and programs.

4. Type of Plan: The State Police Retirement Benefits Trust is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a single-employer plan.

5. Eligibility: All state police officers, and the Superintendent of State Police, hired on or after July 1, 1987, participate in this plan. Benefits for state police officers hired before July 1, 1987 are being paid by the state from the general assets of the state, on a pay-as-you-go basis. Eligible employees become members at their date of employment.

6. Salary for Contribution Purposes: Salary includes the member's base earnings plus any payments under a regular longevity or incentive plan. Salary excludes overtime, unused sick and vacation leave, severance pay, and other extraordinary compensation. Certain amounts that are excluded from taxable wages, such as amounts sheltered under a Section 125 plan or amounts picked up by the employer under IRC Section 414(h), are not excluded from salary.

7. Employee Contributions: State police officers contribute 8.75% of their salary per year. The state "picks up" the members' contributions for its employees under the provisions of Internal Revenue Code (IRC) Section 414(h).

8. Employer Contributions: The state contributes an actuarially determined percentage of the member's annual salary. Contributions determined in a given actuarial valuation go into effect two years after the actuarial valuation.

9. Service: Employees receive credit for service while a member. In addition, a member may purchase credit for certain periods by making an additional contribution to purchase the additional service. Special rules and limits govern the purchase of additional service and the contribution required.

10. Final Salary (Salary for Benefit Purposes): Benefits are determined using a different, more expansive, definition of salary than is used for determining member and employer contributions. Final Salary includes base pay, longevity increases, 400 hours of overtime pay, holiday pay and the member's clothing allowance. For members who work more than 25 years, the Final Salary shall not be more than the Final Salary in the 25th year. In determining monthly benefits, Final Salary is expressed as a monthly amount.

11. Retirement

    a. Eligibility: All members are eligible for retirement at any age after completion of 20 years of service. (The Superintendent of State Police may retire on or after age 60 if he has credit for 10 years of service.)

    b. Monthly Benefit: 50% of Final Salary, plus 3% of Final Salary for each year of service in excess of 20. (The Superintendent of State Police receives a benefit of 50% of Final Salary.) The maximum benefit is 65% of FAC.

    c. Payment Form: Benefits are paid as a monthly life annuity. There are no optional forms of payment available.

    d. Death benefit: After the death of a retired member, if the member was married, a benefit will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40, and benefits stop upon the spouse's death or remarriage.

12. Disability Retirement

    a. Eligibility: A member is eligible provided he/she has credit for at least ten years of service or if the disability is work-related.

    b. Ordinary Disability Benefit: 2.00% of Final Salary for each year of service, but not less than 25% of Final Salary.

    c. Occupational Disability Benefit: 75% of Final Salary.

    d. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity. The same provisions that apply upon the death of a retired member apply upon the death of a disabled member.

13. Refunds

    a. Eligibility: All members leaving covered employment prior to eligibility for other benefits.

    b. Benefit: A lump-sum payment equal to the sum of his/her employee contributions. No interest is credited on these contributions.

14. Death Benefit of Active Members

    a. Eligibility: Death must have occurred from a service-related cause, or the member must have 10 or more years of service.

    b. Ordinary Benefit: After the death of an active member, if the member was married, a benefit will be paid to the spouse equal to 2.00% of the member's Final Salary for each year of service. There is a minimum benefit of 25% of Final Salary. Benefits are increased one-third for each dependent child. The maximum benefit is 50% of Final Salary. Benefits may not begin before the spouse is age 40 without a dependent child, and benefits stop upon the spouse's death or remarriage.

c. Duty-related Death Benefit: 75% of Final Salary, paid to the spouse or other dependent relative. Benefits cease when the spouse or other relatives die or are no longer dependent.

15. Post-retirement Benefit Increase: Members receive an increase of $1,500 per year ($125.00 per month) beginning on the January 1 next following the third anniversary date of the retirement, and in every year thereafter. The increase applies to service retirement, disability retirement and death benefits. This increase is not tied in any way to actual increases in the cost of living.