State Police Retirement Benefits Trust
State of Rhode Island

ACTUARIAL VALUATION

June 30, 2005

GRS
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June 14, 2006

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, 2005

This is the June 30, 2005 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, 2005 actuarial valuation will be applicable for the year beginning July 1, 2007 and ending June 30, 2008.

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, 24 years as of June 30, 2005). 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 75.8% to 79.0%. The employer contribution rate decreased from 31.78% to 31.00%. An analysis of the changes in the employer contribution rate appears on Table 10a.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2005. There were no 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 approved by the Board on August 11, 2004. 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, calculated contribution rates and funding periods. The actuarial calculations are intended to provide information for rational decision making.

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, 2005. 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, 2005.

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. All three are 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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Senior Consultant

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Item	Valuation Date: June 30, 2005	Valuation Date: June 30, 2004
Membership		
• Number of		
- Active members	181	148
- Retirees and beneficiaries	2	1
- Inactive members	1	1
- Total	184	150
• Payroll for benefits	$ 13,225,400	$ 11,421,880
Contribution rates		
• Member	8.75%	8.75%
• State	31.00%	31.78%
Assets		
• Market value	$ 30,457,966	$ 24,495,990
• Actuarial value	29,616,896	24,767,014
• Return on market value	10.2%	18.0%
• Return on actuarial value	5.9%	4.2%
• Employer contribution	$ 2,614,503	$ 2,224,191
• Ratio of actuarial value to market value	97.2%	101.1%
Actuarial Information		
• Employer normal cost %	25.96%	25.74%
• Unfunded actuarial accrued liability (UAAL)	$ 7,894,096	$ 7,922,160
• Amortization rate	5.04%	6.04%
• Funding period	24 years	25 years
• GASB funded ratio	79.0%	75.8%
Projected employer contribution		
• Fiscal year ending June 30,	2008	2007
• Projected payroll for contributions	$ 11,282,795	$ 9,695,510
• Projected employer contribution	3,497,666	3,081,233

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, 2007.

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 as a percent of pay. The amortization rate is the unfunded actuarial liability amortized over 24 years as a level percent of pay.

The decrease in the employer contribution rate, from 31.78% to 31.00%, was principally due to actual salary increases being less than expected and the addition of a class of new members which added to the amount of payroll available to amortize the UAAL. This was partially offset by the continued recognition of another 20% of the actuarial asset losses from fiscal years 2001 through 2003.

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.

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—73% of assets at market value are held in equities—and Table 9 shows a historical summary of the return rates. As can be seen, the net market value rate of return was 10.2% for the year ended June 30, 2005, and the return on an actuarial asset value basis was 5.9%.

The average annual return based on the market value of assets over the last ten years (July 1, 1995 – June 30, 2005) was 7.66%. 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 8.85%.

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, 2005. 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 figures were reported for each member, one used for computing benefits and one for contribution purposes. There is one service retiree and one disabled retiree as of June 30, 2005.

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

Since the prior valuation, total number of active members increased from 148 to 181, a 22.3% increase. Total compensation used for benefits increased from $11.4 million to $13.2 million, a 15.8% increase. However, average compensation used in benefit calculations decreased from $77,175 to $73,069, or 5.3%.

The total payroll shown on the statistical tables is the amount that was supplied by the System's staff. This is based on the salary used for determining benefits which includes 400 hours of overtime and other adjustments. For the liability calculations, reported pays were adjusted in accordance with the actuarial assumptions to reflect one year's salary increase. 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 Normal 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 August 11, 2004. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERSRI.

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 24 years remaining as of June 30, 2005. 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, 2005	June 30, 2004
1.	Compensation for prior fiscal year supplied by ERSRI		
	(a) Total pay (used for benefits)	$ 13,225,400	$ 11,421,880
	(b) Base pay (used for contributions)	9,896,730	8,578,377
2.	Base compensation projected to next fiscal year	10,481,911	9,007,296
3.	Actuarial accrued liability	37,510,992	32,689,173
4.	Actuarial value of assets	29,616,896	24,767,014
5.	Unfunded actuarial accrued liability (UAAL) (3 - 4)	7,894,096	7,922,160
6.	Remaining amortization period at valuation date	24	25
7.	Contribution effective for fiscal year ending:	June 30, 2008	June 30, 2007
8.	Base pay projected for two-year delay	11,282,795	9,695,510
9.	Amortization of UAAL	568,252	586,025
10.	Normal cost		
	(a) Total normal cost rate	34.71%	34.49%
	(b) Employee contribution rate	8.75%	8.75%
	(c) Employer normal cost rate (a - b)	25.96%	25.74%
11.	Employer contribution rate as percent of payroll		
	(a) Employer normal cost rate	25.96%	25.74%
	(b) Amortization payments (9 / 8)	5.04%	6.04%
	(c) Total (a + b)	31.00%	31.78%
12.	Estimated employer contribution amount (8 * 11(c))	$ 3,497,666	$ 3,081,233

Actuarial Present Value of Future Benefits

			June 30, 2005 (1)	June 30, 2004 (2)
1.	Active members			
	a.	Service retirement benefits	$ 64,223,253	$ 55,206,576
	b.	Deferred termination benefits	-	-
	c.	Refunds	38,612	29,725
	d.	Pre-retirement death benefits	1,083,876	957,376
	e.	Non-occupational disability retirement benefits	978,103	877,715
	f.	Occupational disability retirement benefits	5,654,448	4,860,491
	h.	Total	$ 71,978,292	$ 61,931,883
2.	Retired members			
	a.	Service retirements	$ 813,140	$ 807,774
	b.	Disability retirements	814,333	-
	c.	Beneficiaries	-	-
	d.	Post-retirement death benefits	-	-
	e.	Total	$ 1,627,473	$ 807,774
3.	Inactive members		$ 23,869	$ 23,869
4.	Total actuarial present value of future benefits		$ 73,629,634	$ 62,763,526
5.	Determination of actuarial accrued liability			
	a.	Total actuarial present value of future benefits	$ 73,629,634	$ 62,763,526
	b.	Less present value of future normal costs	(36,118,642)	(30,074,353)
	c.	Actuarial accrued liability (a + b)	$ 37,510,992	$ 32,689,173

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%

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

Valuation date	June 30, 2005
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage, closed
Remaining amortization period	24 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return *	8.25%
Projected salary increase *	5.00% to 15.00%
* 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, 2005	June 30, 2004
(1)	(2)	(3)
1. Cash and cash equivalents	$ 261,238	$ 218,178
2. Receivables:		
a. Employer and member contributions	$ 27,547	$ -
b. Transfers receivable	-	-
c. Miscellaneous	-	-
d. Total receivables	$ 27,547	$ -
3. Investments		
a. Pooled trust	$ 30,170,794	$ 24,272,810
b. Plan specific investments	-	-
c. Total	$ 30,170,794	$ 24,272,810
4. Invested securities lending collateral	$ 4,575,730	$ 3,175,436
5. Property and equipment (net of depreciation)	$ 30,132	$ 31,364
6. Total assets	$ 35,065,441	$ 27,697,788
7. Liabilities		
a. Benefits payable	$ -	$ -
b. Securities lending liability	4,575,730	3,175,436
c. Accounts and vouchers payable	31,745	26,362
d. Total liabilities	$ 4,607,475	$ 3,201,798
8. Total market value of assets available for benefits Total (Item 6 - Item 7)	$ 30,457,966	$ 24,495,990

Reconciliation of Plan Net Assets

		June 30, 2005	June 30, 2004
1.	Market value of assets as of beginning of year	$ 24,495,990	$ 18,112,268
2.	Contributions		
	a. Members	$ 792,410	$ 727,018
	b. State	2,614,503	2,224,191
	c. Service purchases	-	-
	d. Miscellaneous revenue	-	-
	e. Total	$ 3,406,913	$ 2,951,209
3.	Investment earnings, net of investment expenses	$ 2,708,821	$ 3,528,560
4.	Expenditures for the year		
	a. Benefit payments	$ (111,260)	$ (69,279)
	b. Cost-of-living adjustments	(3,000)	(750)
	c. Death benefits	-	-
	d. Social security supplements	-	-
	e. Supplemental pensions	-	-
	f. Refunds	-	(10,895)
	g. Administrative expenses	(39,498)	(15,123)
	h. Total expenditures	$ (153,758)	$ (96,047)
5.	Transfers and other adjustments	$ -	$ -
6.	Market value of assets at end of year	$ 30,457,966	$ 24,495,990

Development of Actuarial Value of Assets

			Year Ending June 30, 2005
1.	Market value of assets at beginning of year		$ 24,495,990
2.	Net new investments		
	a.	Contributions	$ 3,406,913
	b.	Benefits paid	(114,260)
	c.	Refunds	0
	d.	Subtotal	3,292,653
3.	Market value of assets at end of year		$ 30,457,966
4.	Net earnings (3-1-2)		$ 2,669,323
5.	Assumed investment return rate		8.25%
6.	Expected return		$ 2,156,741
7.	Excess return (4-6)		$ 512,582
8.	Excess return on assets as of 06/30/2005:		

Period End (1)	Excess Return (2)	Percent Deferred (3)	Deferred Amount (4)
June 30, 2002	(2,338,304)	20%	(467,661)
June 30, 2003	(604,503)	40%	(241,801)
June 30, 2004	1,900,776	60%	1,140,466
June 30, 2005	512,582	80%	410,066
			$ 841,070

9.	Actuarial value of assets as of 06/30/2005 (Item 3 - Item 8)	$ 29,616,896
10.	Ratio of Actuarial Value of Assets to Market Value	97.2%

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

Item (1)	June 30, 2005 (2)	June 30, 2004 (3)
Cash & cash equivalents	3.6%	1.9%
U.S. government & agency securities	14.3%	14.3%
Corporate bonds & notes	8.7%	9.3%
Foreign bonds	0.7%	0.5%
U.S. equity securities	44.8%	54.2%
Foreign equity securities	21.6%	14.1%
Real estate, venture capital, other	6.4%	5.7%
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%

Analysis of Change in Employer Cost

		Basis	Employer Cost
1.		Employer contribution rates from prior valuation	31.78%
2.		Impact of changes, gains and losses	
	a.	Non-salary liability experience (gain)/loss	0.90%
	b.	Salary (gain)/loss	(1.49%)
	c.	Total payroll growth (gain)/loss	(0.66%)
	d.	Investment experience (gain)/loss	0.47%
	e.	Changes in assumptions	0.00%
	f.	Changes in plan provisions	0.00%
	g.	Total	(0.78%)
3.		Employer contribution rates from current valuation	31.00%

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%

Membership Data (State Police)

	June 30, 2005 (1)	June 30, 2004 (2)
1. Active members		
a. Number	181	148
b. Number vested	0	0
c. Total payroll supplied by State (for benefits)	$ 13,225,400	$ 11,421,880
d. Average salary	$ 73,069	$ 77,175
e. Average age	36.9	37.6
f Average service	8.6	9.5
2. Inactive members		
a. Number	1	1
3. Service retirees		
a. Number	1	1
b. Total annual benefits	$ 72,279	$ 70,779
c. Average annual benefit	72,279	70,779
d. Average age	66.6	65.6
4. Disabled retirees		
a. Number	1	0
b. Total annual benefits	$ 59,154	$ -
c. Average annual benefit	59,154	N/A
d. Average age	38.2	N/A
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

Valuation as of June 30,	Active Members: Number	Active Members: Percent Increase	Covered Payroll: Amount	Covered Payroll: Percent Increase	Average Salary: Amount	Average Salary: 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

Distribution of Active Members by Age and by Years of Service
As of 06/30/2005

	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	6	0	0	0	0	0	0	0	0	0	0	0	6
	$54,619	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$54,619
25-29	7	0	0	0	0	2	0	0	0	0	0	0	9
	$54,619	$0	$0	$0	$0	$69,714	$0	$0	$0	$0	$0	$0	$57,973
30-34	15	0	0	0	0	16	2	0	0	0	0	0	33
	$54,990	$0	$0	$0	$0	$70,935	$77,399	$0	$0	$0	$0	$0	$64,079
35-39	5	0	0	0	0	26	46	0	0	0	0	0	77
	$54,619	$0	$0	$0	$0	$71,927	$79,881	$0	$0	$0	$0	$0	$75,555
40-44	1	0	0	0	0	7	36	0	0	0	0	0	44
	$54,619	$0	$0	$0	$0	$71,708	$80,711	$0	$0	$0	$0	$0	$78,686
45-49	0	0	0	0	0	3	9	0	0	0	0	0	12
	$0	$0	$0	$0	$0	$72,174	$84,992	$0	$0	$0	$0	$0	$81,787
50-54	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
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	34	0	0	0	0	54	93	0	0	0	0	0	181
	$54,783	$0	$0	$0	$0	$71,536	$80,643	$0	$0	$0	$0	$0	$73,069

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 Normal 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 liability.

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 8.25 percent), of each participant's expected benefit payable at retirement or death is determined, based on his age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants 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 payable from the Plan on account of the present group of participants and beneficiaries.

2. The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his anticipated covered service, would be required in addition to the contributions of the participant to meet the cost of all benefits payable on his behalf.

4. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result as a level percentage of payroll over the remainder of a closed 30 year period from June 30, 1999.

The contribution rate determined by this valuation will not be effective until two years later, and the determination of the rate reflects this deferral. It is assumed that there will be no change in the employer normal cost rate due to the deferral, and it is assumed that payments are, on average, 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: Salaries are assumed to increase at the rates shown below. These rates include an inflationary increase of 3.00%, a general increase of 2.00%, and a service-related increase as shown below:

Years of Service	Service-related Component	Total Annual Rate of Increase Including 3.00% Inflation Component and 2.00% Genera Increase Rate
(1)	(2)	(3)
0	10.00%	15.00%
1	3.50	8.50
2	2.00	7.00
3	1.00	6.00
4 or more	0.00	5.00

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 3.75% per year. This assumption includes no allowance for future membership growth.

B. Demographic Assumptions

1. 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. 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
(1)	(2)
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 25 years of service, or if earlier, after reaching age 50 and completing 21 years of service.

C. <u>Other Assumptions</u>

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. <u>Participant Data</u>

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 Plan (SPRBP) 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 Plan 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 Plan 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.