GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

STATE POLICE RETIREMENT BENEFITS TRUST
STATE OF RHODE ISLAND

ACTUARIAL VALUATION REPORT

AS OF JUNE 30, 2010

GRS

Gabriel Roeder Smith & Company
Consultants & Actuaries

5605 N. MacArthur Blvd.
Suite 870
Irving, TX 75038-2631

469.524.0000 phone
469.524.0003 fax
www.gabrielroeder.com

May 30, 2011

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, 2010

This is the June 30, 2010 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, 2010 actuarial valuation will be applicable for the year beginning July 1, 2012 and ending June 30, 2013.

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 normal 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, 19 years as of June 30, 2010). 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 in Table 3 of this report, decreased from 79.8% to 69.7% between the valuations. The funded ratio is defined as the actuarial value of assets divided by the actuarial accrued liability. If the market value of assets were used, rather than the actuarial value, the funded ratio would be 59.9%. The employer contribution rate increased from 25.39% to 36.12% for fiscal year 2013. The majority of the change in funded ratio and contribution rate is attributable to the recent adoption of updated actuarial assumptions that are used to perform the actuarial valuation. An analysis of the changes in the employer contribution rate appears in Table 10a. An analysis of the changes in the unfunded actuarial accrued liability appears in Table 10c.

Additional information regarding these assumptions changes is provided further below and in the body of this report.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on June 30, 2010. There were no material changes adopted since the previous actuarial valuation. The benefit provisions are summarized in Appendix B of this report.

Assumptions and methods

There were several changes to the assumptions and methods since the last actuarial valuation. Assumptions such as the annual investment return, mortality tables, payroll growth rate, and salary increase rates were modified based on an experience study presented in April 2011 and adopted by the Board. Most significantly, the investment return assumption was decreased from 8.25% to 7.50%, and the mortality assumption was modified for continual future increases in life expectancy. 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, 2010. 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, 2010.

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 are Enrolled Actuaries, Members of the American Academy of Actuaries. They all 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

J. Christian Conradi

J. Christian Conradi, ASA, MAAA, EA
Senior Consultant

Joseph P. Newton, FSA, MAAA, EA
Senior Consultant

Mark R. Randall

Mark R. Randall, MAAA, EA
Executive Vice President

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Item	Valuation Date: June 30, 2010		June 30, 2009
	After Assumption Changes	Before Assumption Changes	Disclosed in Prior Year's Report
Membership			
• Number of			
- Active members	211	211	176
- Retirees and beneficiaries	4	4	4
- Inactive members	3	3	2
- Total	218	218	182
• Payroll for benefits	$ 19,715,070	$ 19,715,070	$ 17,096,202
Contribution rates			
• Member	8.75%	8.75%	8.75%
• State	36.12%	25.39%	25.39%
Assets			
• Market value	$ 56,464,727	$ 56,464,727	$ 45,747,494
• Actuarial value	65,760,284	65,760,284	60,232,045
• Return on market value	12.8%	12.8%	-19.1%
• Return on actuarial value	1.6%	1.6%	2.0%
• Employer contribution	$ 3,590,615	$ 3,590,615	$ 3,340,746
• Ratio of actuarial value to market value	116.5%	116.5%	131.7%
Actuarial Information			
• Employer normal cost %	21.11%	16.97%	17.14%
• Unfunded actuarial accrued liability (UAAL)	$ 28,540,018	$ 17,339,647	$ 15,247,960
• Amortization rate	15.01%	8.42%	8.25%
• Funding period	19 years	19 years	20 years
• GASB funded ratio	69.7%	79.1%	79.8%
Projected employer contribution			
• Fiscal year ending June 30,	2013	2013	2012
• Projected payroll for contributions	$ 16,602,444	$ 16,762,466	$ 14,445,921
• Projected employer contribution	5,996,803	4,255,990	3,667,819

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, 2012.

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 accrued liability (UAAL) over 19 years as a level percent of pay.

The employer contribution rate increased from 25.39% of payroll to 36.12% principally due to the changes in actuarial assumptions that were made as a result of an experience study that was completed in April 2011.

An analysis of the changes in the employer contribution rate appears in Table 10a of this report and a history of the employer contribution rates appears in 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— almost 65% 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 12.8% for the year ended June 30, 2010, and the return on the actuarial value of assets was 1.6%.

The average annual return based on the market value of assets over the last ten years (July 1, 2000 – June 30, 2010) was 2.29%. This is less than the current 7.50% annual investment return assumption. The average annual return based on the actuarial value of assets over the same period was 5.03%.

All returns above are net of both investment and administrative expenses, and therefore, 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, 2010. 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, 2010, 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 211, which is an increase in 35 active members compared to this time last year. Total compensation used for determining benefits increased from $17.096 million to $19.715 million, a 15.3% increase. In relation, the total compensation used to develop the contribution rate increased from $13.229 million to $15.350 million, a 16.0% increase.

Since the last valuation, there have been the following changes in membership:

- 1 member terminated non-vested
- 36 new members joined the State Police

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 of this report 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 in Table 7.

Discussion of the Experience Study

Between the June 30, 2009 actuarial valuation and this report, GRS performed an actuarial assumption review, at the request of the Retirement Board, and recommended updated assumptions and methods to be used for the June 30, 2010 SPRBT valuation. The experience study was performed for the period June 30, 2004 to June 30, 2010. The study examined the assumptions used for expected investment rate, inflation rate, retirement, mortality, termination, disability, salary increases, payroll growth, and other miscellaneous assumptions.

GRS's recommended changes for SPRBT included:

1. Decrease the annual investment rate of return (net of expenses) from 8.25% to 7.50%, in line with assumption made for ERSRI.

2. Decrease the salary increase assumption from 4.50% to 4.00%, in line with the wage inflation assumption made for ERSRI.

3. Decrease the payroll growth assumption from 4.50% to 4.00% to be consistent with the change above. This assumption does not include any allowance for future membership growth.

4. Modify the post-termination mortality assumption, for retirees in line with the mortality assumptions made for state employees of ERSRI.

All of the changes recommended by GRS were based on an experience study presented in April 2011, and adopted by the Retirement Board. 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 of this report 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 19 years remaining as of June 30, 2010. 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, 2010		June 30, 2009
		After Assumption Changes	Before Assumption Changes	Disclosed in Prior Year's Report
		(1)	(2)	(3)
1.	Base Pay from prior fiscal year supplied by ERSRI	14,504,975	14,504,975	12,857,148
2.	Compensation projected to next fiscal year			
	(a) Total pay (used for benefits)	$ 19,715,070	$ 19,715,070	17,096,202
	(b) Base pay (used for contributions)	15,349,892	15,349,892	13,228,563
3.	Actuarial accrued liability	94,300,302	83,099,931	75,480,005
4.	Actuarial value of assets	65,760,284	65,760,284	60,232,045
5.	Unfunded actuarial accrued liability (UAAL) (3 - 4)	28,540,018	17,339,647	15,247,960
6.	Remaining amortization period at valuation date	19	19	20
7.	Contribution effective for fiscal year ending:	June 30, 2013	June 30, 2013	June 30, 2012
8.	Base pay projected for two-year delay	16,602,444	16,762,466	14,445,921
9.	Amortization of UAAL	2,492,321	1,411,837	1,191,108
10.	Normal cost			
	(a) Total normal cost rate	29.86%	25.72%	25.89%
	(b) Employee contribution rate	8.75%	8.75%	8.75%
	(c) Employer normal cost rate (a - b)	21.11%	16.97%	17.14%
11.	Employer contribution rate as percent of payroll			
	(a) Employer normal cost rate	21.11%	16.97%	17.14%
	(b) Amortization payments (9 / 8)	15.01%	8.42%	8.25%
	(c) Total (a + b)	36.12%	25.39%	25.39%
12.	Estimated employer contribution amount (8 * 11(c))	$ 5,996,803	$ 4,255,990	$ 3,667,819

Actuarial Present Value of Future Benefits

		June 30, 2010		June 30, 2009
		After Assumption Changes	Before Assumption Changes	Disclosed in Prior Year's Report
		(1)	(2)	(3)
1.	Active members			
	a. Service retirement benefits	$ 118,607,478	$ 102,885,698	$ 90,027,741
	b. Deferred termination benefits	-	-	-
	c. Refunds	149,616	149,195	134,672
	d. Pre-retirement death benefits	1,019,640	1,048,958	899,225
	e. Disability retirement benefits	9,464,212	8,325,695	7,007,935
	f. Total	$ 129,240,946	$ 112,409,546	$ 98,069,573
2.	Retired members			
	a. Service retirements	$ 869,535	$ 797,803	$ 802,909
	b. Disability retirements	2,652,056	2,389,520	2,352,728
	c. Beneficiaries	-	-	-
	d. Post-retirement death benefits	-	-	-
	e. Total	$ 3,521,591	$ 3,187,323	$ 3,155,637
3.	Inactive members	$ 108,018	$ 108,018	$ 105,584
4.	Total actuarial present value of future benefits	$ 132,870,555	$ 115,704,887	$ 101,330,794
5.	Determination of actuarial accrued liability			
	a. Total actuarial present value of future benefits	$ 132,870,555	$ 115,704,887	$ 101,330,794
	b. Less present value of future normal costs	(38,570,253)	(32,604,956)	(25,850,789)
	c. Actuarial accrued liability (a + b)	$ 94,300,302	$ 83,099,931	$ 75,480,005

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 [1]	45,996,910	60,427,947	14,431,037	76.1%	15,836,354	91.1%
June 30, 2008	54,927,390	69,029,513	14,102,123	79.6%	16,698,764	84.5%
June 30, 2009	60,232,045	75,480,005	15,247,960	79.8%	17,096,202	89.2%
June 30, 2010	65,760,284	94,300,302	28,540,018	69.7%	19,715,070	144.8%

[1] Restated for Article 22 (2008).

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

Valuation date	June 30, 2010
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage, closed
Remaining amortization period	19 years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return *	7.50%
Projected salary increase *	4.00% to 12.00%
* Includes inflation at:	2.75%
Cost of living adjustment	Level dollar ($1,500 per annum)

Plan Net Assets
(Assets at Market or Fair Value)

Item	June 30, 2010	June 30, 2009
(1)	(2)	(3)
1. Cash and cash equivalents	$ 780,742	$ 63,182
2. Receivables:		
a. Employer and member contributions	$ 1,826	$ 911,804
b. Transfers receivable	-	-
c. Miscellaneous	-	-
d. Total receivables	$ 1,826	$ 911,804
3. Investments		
a. Pooled trust	$ 55,688,729	$ 44,771,977
b. Plan specific investments	-	-
c. Total	$ 55,688,729	$ 44,771,977
4. Invested securities lending collateral	$ -	$ -
5. Property and equipment (net of depreciation)	$ 9,499	$ 13,546
6. Total assets	$ 56,480,796	$ 45,760,509
7. Liabilities		
a. Other post-employment benefit liability, net	$ 752	$ 348
b. Securities lending liability	-	-
c. Other reserves and payables	15,317	12,667
d. Total liabilities	$ 16,069	$ 13,015
8. Total market value of assets available for benefits Total (Item 6 - Item 7)	$ 56,464,727	$ 45,747,494

Reconciliation of Plan Net Assets

		June 30, 2010	June 30, 2009
1.	Market value of assets as of beginning of year		
	a. Market value of assets as of beginning of year	$ 45,747,494	$ 51,883,909
	b. Adjustment for market value of assets	-	-
	c. Adjusted market value of assets as of beginning of year	$ 45,747,494	$ 51,883,909
2.	Contributions		
	a. Members	$ 1,218,394	$ 1,122,991
	b. State	3,590,615	3,340,746
	c. Service purchases	267	-
	d. Miscellaneous revenue	-	-
	e. Total	$ 4,809,276	$ 4,463,737
3.	Investment earnings, net of investment expenses	$ 6,201,903	$ (10,272,571)
4.	Expenditures for the year		
	a. Benefit payments	$ (234,504)	$ (234,504)
	b. Cost-of-living adjustments	(17,250)	(12,750)
	c. Death benefits	-	-
	d. Social security supplements	-	-
	e. Supplemental pensions	-	-
	f. Refunds	-	(36,241)
	g. Administrative expenses	(42,192)	(44,086)
	h. Total expenditures	$ (293,946)	$ (327,581)
5.	Transfers and other adjustments	$ -	$ -
6.	Market value of assets at end of year	$ 56,464,727	$ 45,747,494

Development of Actuarial Value of Assets

			Year Ending June 30, 2010
1.	Market value of assets at beginning of year	$	45,747,494
2.	Net new investments		
	a. Contributions	$	4,809,276
	b. Benefits paid		(251,754)
	c. Refunds		0
	d. Subtotal		4,557,522
3.	Market value of assets at end of year	$	56,464,727
4.	Net earnings (3-1-2)	$	6,159,711
5.	Assumed investment return rate		8.25%
6.	Expected return	$	3,962,166
7.	Excess return (4-6)	$	2,197,545

8. Excess return on assets as of 06/30/2010:

Period End (1)	Excess Return (2)	Percent Deferred (3)		Deferred Amount (4)
June 30, 2006	1,087,928	0%	$	0
June 30, 2007	4,013,005	20%		802,601
June 30, 2008	(7,486,214)	40%		(2,994,486)
June 30, 2009	(14,769,514)	60%		(8,861,708)
June 30, 2010	2,197,545	80%		1,758,036
			$	(9,295,557)

9.	Actuarial value of assets as of 06/30/2010 (Item 3 - Item 8)	$	65,760,284
10.	Ratio of Actuarial Value of Assets to Market Value		116.5%

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

Item (1)	June 30, 2010 (2)	June 30, 2009 (3)
Cash & cash equivalents	11.1%	4.6%
U.S. government & agency securities	14.3%	15.8%
Corporate bonds & notes	11.0%	8.5%
Foreign bonds	0.0%	0.0%
U.S. equity securities	33.6%	39.1%
Foreign equity securities	16.7%	18.4%
Real estate, venture capital, other	13.3%	13.6%
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%
2008	-5.9%	9.0%
2009	-19.1%	2.0%
2010	12.8%	1.6%
Average Returns:		
Last 5 Years	2.50%	6.63%
Last 10 Years	2.29%	5.03%
Since 1995	6.58%	8.23%

Analysis of Change in Employer Cost

		Basis	Employer Cost
1.	Employer contribution rates from prior valuation		25.39%
2.	Impact of changes, gains and losses		
	a.	Non-salary liability experience (gain)/loss	-0.10%
	b.	Salary (gain)/loss	-1.43%
	c.	Total payroll growth (gain)/loss	-0.81%
	d.	Investment experience (gain)/loss	2.34%
	e.	Changes in assumptions	10.73%
	f.	Changes in plan provisions	0.00%
	g.	Total	10.73%
3.	Employer contribution rates from current valuation		36.12%

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	26.03%[1]
2007	2010	26.03%[1]
2008	2011	24.58%
2009	2012	25.39%
2010	2013	36.12%

[1] Revised pursuant to Article 22 (2008).

Analysis of Change in UAAL

Basis	June 30, 2010
(1)	(2)
1. UAAL as of June 30, 2009	$ 15,248
2. Impact of changes, gains and losses	
a. Interest at 8.25% for one year	1,258
b. Expected amortization payments	(1,220)
c. Investment experience (gain)/loss	4,186
d. Salary (gain)/loss	(2,302)
e. Non-salary liability experience (gain)/loss	169
f. Changes in assumptions	11,200
g. Changes in plan provisions	0
i. Total	$ 13,292
3. UAAL as of June 30, 2010	$ 28,540

Note: All dollar figures are shown in thousands.

Membership Data (State Police)

			June 30, 2010 (1)	June 30, 2009 (2)
1.	Active members			
	a.	Number	211	176
	b.	Number vested	5	0
	c.	Total payroll supplied by State (for benefits)	$ 19,715,070	$ 17,096,202
	d.	Average salary	$ 93,436	$ 97,138
	e.	Average age	39.5	40.9
	f	Average service	11.5	12.6
2.	Inactive members			
	a.	Number	3	2
3.	Service retirees			
	a.	Number	1	1
	b.	Total annual benefits	$ 79,779	$ 78,279
	c.	Average annual benefit	79,779	78,279
	d.	Average age	71.6	70.6
4.	Disabled retirees			
	a.	Number	3	3
	b.	Total annual benefits	$ 174,225	$ 171,225
	c.	Average annual benefit	58,075	57,075
	d.	Average age	44.4	43.4
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		Covered Payroll*		Average Salary*			
	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
2008	177	-1.1%	$16,698,764	5.4%	$94,343	6.6%	39.9	11.6
2009	176	-0.6%	$17,096,202	2.4%	$97,138	3.0%	40.9	12.6
2010	211	19.9%	$19,715,070	15.3%	$93,436	-3.8%	39.5	11.5

*Based on salary used for benefits

Distribution of Active Members by Age and by Years of Service
As of 06/30/2010

	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	9	0	0	0	0	0	0	0	0	0	0	0	9
	$67,155	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$67,155
25-29	19	0	0	0	0	6	0	0	0	0	0	0	25
	$67,155	$0	$0	$0	$0	$82,258	$0	$0	$0	$0	$0	$0	$70,780
30-34	7	0	0	0	0	7	2	0	0	0	0	0	16
	$67,867	$0	$0	$0	$0	$82,258	$87,058	$0	$0	$0	$0	$0	$76,562
35-39	0	0	0	0	0	15	15	1	0	0	0	0	31
	$0	$0	$0	$0	$0	$82,970	$89,204	$105,758	$0	$0	$0	$0	$86,722
40-44	0	0	0	0	0	5	26	42	3	0	0	0	76
	$0	$0	$0	$0	$0	$82,646	$90,136	$107,893	$127,077	$0	$0	$0	$100,915
45-49	0	0	0	0	0	1	6	34	1	0	0	0	42
	$0	$0	$0	$0	$0	$82,258	$90,205	$109,310	$121,537	$0	$0	$0	$106,227
50-54	0	0	0	0	0	0	3	8	1	0	0	0	12
	$0	$0	$0	$0	$0	$0	$88,710	$115,717	$104,890	$0	$0	$0	$108,063
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	35	0	0	0	0	34	52	85	5	0	0	0	211
	$67,298	$0	$0	$0	$0	$82,629	$89,674	$109,171	$121,532	$0	$0	$0	$93,436

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 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 required contribution is determined using the entry age normal cost 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. This calculation reflects the plan provisions that apply to members hired after July 1, 2007, i.e., the Article 22 provisions, even for members hired before that date. That is, the normal cost is the cost of a replacement employee. 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: 7.50% per year, compounded annually, composed of an assumed 2.75% inflation rate and a 4.75% net real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.

2. Salary increase rate: The sum of (i) a 4.00% wage inflation assumption (composed of a 2.75% price inflation assumption and a 1.25% additional general increase), and (ii) a service-related component as shown below:

Years of Service	Service-Related Component	Total Increase
0	4.25%	8.25%
1	4.00	8.00
2	4.00	8.00
3	8.00	12.00
4	5.00	9.00
5	3.25	7.25
6	1.25	5.25
7	1.25	5.25
8	1.00	5.00
9	1.00	5.00
10-14	0.75	4.75
15-19	0.50	4.50
20-24	0.25	4.25
25&up	0.00	4.00

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 4.00% per year. This assumption includes no allowance for future membership growth.

B. <u>Demographic Assumptions</u>

1. Post-termination mortality rates

   a. Healthy males – 115% of RP-2000 Combined Healthy for Males with White Collar adjustments, projected with Scale AA from 2000.

   b. Healthy females - 95% of RP-2000 Combined Healthy for Females with White Collar adjustments, projected with Scale AA from 2000.

   c. Disabled males – 60% of the PBGC Table Va for disabled males eligible for Social Security disability benefits

   d. Disabled females – 60% of the PBGC Table VIa for disabled females eligible for Social Security disability benefits.

2. Pre-retirement mortality: 75% of the RP-2000 Combined tables with white-collar adjustment for males and females. 15% of active member deaths are occupational.

3. Disability rates – Rates are applied, with 75% of disabilities considered work related, and no recoveries assumed 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

   Disabilities that are not work-related are assumed to result in a refund. The disability rates for non work-related causes stop once the member is eligible for retirement.

4. Termination rates - None

5. Retirement rates – State police are assumed to retire after completion of 20 years of service if employed before July 1, 2007 or after completion of 25 years of service if hired on or after July 1, 2007, in accordance with the probabilities as shown below. For members hired before July 1, 2007, 100% are assumed to retire at age 60 and completion of 20 years of service if still active. For members hired on or after July 1, 2007, 100% are assumed to retire at age 60 and completion of 25 years of service if still active.

State Police Employed Before July 1, 2007	
Service	Ret. Rate
20	25.0%
21	15.0%
22	10.0%
23	20.0%
24	30.0%
25	100.0%

State Police Employed On or After July 1, 2007	
Service	Ret. Rate
25	35.0%
26	25.0%
27	20.0%
28	30.0%
29	40.0%
30	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. Investment and 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:
        (i) For members hired before July 1, 2007: Eligible for retirement at any age after completion of 20 years of service.
        (ii) For members hired on or after July 1, 2007: Eligible for retirement at any age after completion of 25 years of service.
        (iii) The Superintendent of State Police: May retire on or after age 60 if he has credit for 10 years of service.

    b. Monthly Benefit:
        (i) For members hired before July 1, 2007: 50% of Final Salary, plus 3% of Final Salary for each year of service in excess of 20. After earning 25 years of service, a member's benefit will be 65% of Final Salary, which is the maximum benefit allowable under the plan.
        (ii) For members hired on or after July 1, 2007: 50% of Final Salary, plus 3% of Final Salary for each year of service in excess of 25. After earning 30 years of service, a member's benefit will be 65% of Final Salary, which is the maximum benefit under the plan.
        (iii) The Superintendent of State Police: Receives a minimum benefit of 50% of Final Salary. The member also earns an additional 3% of Final Salary for each year of service

in excess of 25. The member's maximum benefit is 65% of Final Salary.

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. <u>Disability Retirement</u>

a. Eligibility: A member is eligible if the disability is work-related. (Non work-related disabilities result in a refund.)

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

c. 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. <u>Refunds</u>

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.

Glossary

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or ***Funding Method:*** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

Actuarial Gain or ***Actuarial Loss:*** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)

b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and

c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

Actuarial Value of Assets or ***Valuation Assets:*** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Annual Required Contribution (ARC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment.

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.

Funding Period or ***Amortization Period:*** The term "Funding Period" is used it two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 25 and ***GASB 27***: Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.