

**South Carolina Police Officers
Retirement System (PORS)**

ACTUARIAL VALUATION

July 1, 2002

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May 15, 2003

State Budget and Control Board
South Carolina Retirement System
P.O. Box 11960
Columbia, SC 29211-1960

Subject: July 1, 2002 Actuarial Valuation for PORS

This is the July 1, 2002 actuarial valuation for the South Carolina Police Officers Retirement System (PORS).

Basic Contribution Requirements

Our valuation finds the PORS in good actuarial condition. The current plan benefits are adequately funded by the current contribution levels which consist of employee contributions of 6.5% of pay and employer contributions of 10.30% of pay for Class II members.

The 10.30% employer contribution rate is the sum of an 8.43% rate for the employer's share of the normal cost contributions, and a 1.87% rate used to amortize the unfunded liability. (These are the rates for Class II members.) The calculated funding period is now 15 years. This is the theoretical length of time that will be required to amortize the unfunded liability, based on the current amortization rate and the current benefit structure. Based on the previous actuarial valuation, the funded liability was expected to be eliminated in 10 years. Most of this increase in the amortization period is due to the 1.3% cost-of-living adjustment made effective July 1, 2002, and to the actuarial investment losses.

We have also determined that the Group Life Insurance employer contribution of 0.20% and the accidental death benefit employer contribution of 0.20% are both reasonable and will adequately fund the expected benefit payments. The separate funds for these benefits have built sufficient reserves.

Changes in System Benefits, Actuarial Assumptions and Methods

This actuarial valuation reflects the current provisions of the System as outlined on Table X. The principal benefit provisions have remained the same since the last actuarial valuation, although the earnings limitation for reemployed retirees was eliminated.

The actuarial assumptions and methods are outlined in Table IX. These assumption and methods have remained the same as those used in the July 1, 2001 valuation.

Valuation Data

This valuation was based on 23,963 active members with a payroll of \$757.4 million. This represents a decrease in the number of active members of about 3.5% and an increase of 0.0% in covered payroll since the previous year's valuation.

The number of people receiving benefits increased since the last valuation by 10.6%. The annual benefits being paid increased by about 14.4%. This takes into account the 1.3% COLA that was effective July 1, 2002.

Valuation Assets

The market value of the PORS assets as of July 1, 2002 was \$2.24 billion. The comparable figure one year before was \$2.20 billion. The market value rate of investment return on assets for the 2000-2002 year was 0.76%, net of administrative and investment expenses.

For purposes of the actuarial valuation, we are using an actuarial value of assets that each year recognizes 20% of the difference between the expected actuarial value (based on the 7.25% investment return assumption) and actual market value. This actuarial value as of July 1, 2002 was \$2.35 billion as compared to \$2.20 billion the previous year. The estimated rate of return on an actuarial value basis was 6.0%. Note that the actuarial value is now larger than the market value. The actuarial value of assets is 105.1% of market value. The difference will be recognized over the next few years, and this will result in a longer amortization period, in the absence of offsetting actuarial gains.

Unfunded Liability and Experience Factors

After recognizing the actuarial value of assets, the unfunded liability as of July 1, 2002 was \$176.8 million. There was an increase in unfunded liability of \$50.5 million. The factors causing the increase (in millions) are:

Required amortization payment	\$ (5.0)
1.3% COLA	12.7
Asset experience	28.7
Salary experience	(3.7)
Other experience	<u>17.8</u>
Net change	\$ 50.5

The loss categorized as "Other experience" appears mainly to be due to the large number of retirements. We understand some of the sponsoring employers offered retirement incentives during the last year.

Governmental Accounting Standards Board (GASB) Calculations

Our report includes information that is required by GASB. The System's funded ratio has decreased slightly since the previous valuation. As of the last valuation the funded ratio was 94.6%, while the current value is 93.0%. In addition, the unfunded liability as a percentage of covered payroll has increased from 16.7% to 23.3%. Both of these effects were principally due to the 1.3% cost-of-living adjustment, effective as of July 1, 2002, the actuarial investment loss, and the liability (retirement) losses.

Census Data and System Assets

The Retirement System staff provided the asset information and the member data for retired, active and inactive participants as of June 30, 2002. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

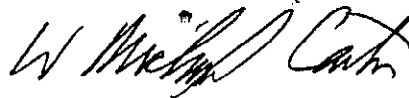
Conclusions

In our opinion, the information contained in this actuarial report fairly represents the actuarial condition of the South Carolina Police Officers Retirement System.

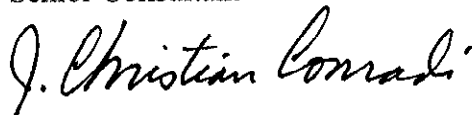
We look forward to reviewing this report with the State Budget and Control Board and the Director and staff of the Retirement System.

Sincerely,

Gabriel, Roeder, Smith & Company



W. Michael Carter, FSA
Senior Consultant



J. Christian Conradi, ASA
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Enclosure

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	<u>Page No.</u>
Executive Summary	1
Table I Summary of Actuarial Valuation Results	2
Table II Determination and Amortization of Unfunded Liability	3
Table III Development of Actuarial Value of Assets	4
Table IV Accounting Information	5
Table V Valuation Balance Sheet	6
Table VI Number and Annual Retirement Allowances of Benefit Recipients	7
Table VII Distribution of Active Members by Attained Age Groups And Service Groups	8
Table VIII Distribution of Participants Receiving Benefits	9
Table IX Summary of Actuarial Assumptions and Methods	10
Table X Summary of Principal Plan Provisions	13

EXECUTIVE SUMMARY

Item	2002	2001
Membership <ul style="list-style-type: none"> • Number of <ul style="list-style-type: none"> – Active Members – Retirees and Beneficiaries – Inactive Members – Total • Payroll 	23,963 7,706 <u>8,675</u> 40,344 \$757 million	24,821 6,970 <u>7,980</u> 39,771 \$757 million
Statutory contribution rate <ul style="list-style-type: none"> • Member • Employer (including group life and ADB) 	6.50% 10.70%	6.50% 10.70%
Assets <ul style="list-style-type: none"> • Market value • Actuarial value • Return on market value • Return on actuarial value • Ratio of actuarial to market value 	\$2.24 billion 2.35 billion 0.8% 6.0% 105.1%	\$2.20 billion 2.20 billion 7.2% 7.3% 100.0%
Actuarial Information <ul style="list-style-type: none"> • Employer normal cost % • Unfunded actuarial accrued liability (UAAL) • Funded ratio • Funding period 	8.43% \$177 million 93.0% 15 years	8.43% \$126 million 94.6% 10 years
Gains/(Losses) <ul style="list-style-type: none"> • Asset experience • Salary experience • Other liability experience • COLA • Benefit changes • Assumption/method changes • Total 	\$(28.7) million 3.7 million (17.8) million (12.7) million 0.0 million N/A (55.5) million	\$0.0 million (5.3) million (9.3) million (32.1) million 0.0 million N/A \$(46.7) million

SUMMARY OF ACTUARIAL VALUATION RESULTS

	<u>July 1, 2002</u>	<u>July 1, 2001</u>
1. <u>Number of Active Members and Compensation</u>		
a. Total number of active members	23,963	24,821
b. Total compensation	\$ 757,393	\$ 757,335
2. <u>Number of Persons Receiving Benefits and Benefits</u>		
a. Total number receiving benefits	7,706	6,970
b. Total amount of benefits	\$ 117,134	\$ 102,395
3. <u>Trust Fund Assets</u>		
a. Market value	\$ 2,236,350	\$ 2,197,795
b. Actuarial value	\$ 2,351,100	\$ 2,197,982
4. <u>Unfunded Actuarial Accrued Liability (UAAL)</u>	\$ 176,776	\$ 126,275
5. <u>Remaining Liquidation Period (Years)</u>	15	10
6. <u>Required Contribution as a Percent of Compensation</u>		
a. Normal cost contribution	8.43%	8.43%
b. UAAL contribution	1.87%	1.87%
c. Pre-retirement death contribution	0.20%	0.20%
d. Accidental death contribution	0.20%	0.20%
e. Total	10.70%	10.70%

All dollar amounts in thousands

DETERMINATION AND AMORTIZATION OF UNFUNDED LIABILITY

	<u>July 1, 2002</u>	<u>July 1, 2001</u>
1. <u>Actuarial Present Value of Future Benefits</u>		
a. Present retired members and beneficiaries	\$ 1,136,998	\$ 977,769
b. Present active and inactive members	<u>2,413,079</u>	<u>2,368,561</u>
c. Total Actuarial Present Value	\$ 3,550,077	\$ 3,346,330
2. <u>Present Value of Future Normal Contributions</u>		
a. Employee at 6.50%	\$ 445,031	\$ 444,975
b. Employer at 8.43%	<u>577,170</u>	<u>577,098</u>
c. Total Future Normal Contributions	\$ 1,022,201	\$ 1,022,073
3. <u>Actuarial Accrued Liability = 1.c. – 2.c.</u>	\$ 2,527,876	\$ 2,324,257
4. <u>Current Actuarial Value of Assets</u>	\$ 2,351,100	\$ 2,197,982
5. <u>Unfunded Actuarial Accrued Liability = 3. – 4.</u>	\$ 176,776	\$ 126,275
6. <u>Unfunded Accrued Liability Rate</u>	1.87%	1.87%
7. <u>Unfunded Accrued Liability Liquidation Period</u>	15 years	10 years

All dollar amounts in thousands

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

	<u>July 1, 2002</u>
1. <u>Actuarial Value of Assets on July 1, 2001</u>	\$ 2,197,982
2. <u>2001/2002 Net Cash Flow</u>	
a. Contributions	144,200
b. Disbursements	<u>(122,533)</u>
c. Net Cash Flow	\$ 21,667
3. <u>Expected Investment Return</u>	\$ 160,139
[1. x .0725] + [2.c. x .03625]	
4. <u>Expected Actuarial Value of Assets on July 1, 2002</u>	
(1. + 2.c. + 3.)	\$ 2,379,788
5. <u>Market Value of Assets on July 1, 2002</u>	\$ 2,236,350
6. <u>Excess of Market Value over Expected Actuarial Value</u>	
(5. – 4.)	\$ (143,438)
7. <u>20% Adjustment towards Market</u>	
(.20 x 6.)	\$ (28,688)
8. <u>Actuarial Value of Assets on July 1, 2002</u>	
(4. + 7.)	<u>\$ 2,351,100</u>

All dollar amounts in thousands

Asset figures exclude amounts held for Group Life Insurance Fund and Accidental Death Fund

ACCOUNTING INFORMATION

1. Number of Active and Retired Members as of July 1, 2002

Group	Number
Retiree and Beneficiaries Currently Receiving Benefits	7,706
Terminated Employees Entitled to Benefits But not yet Receiving Benefits	8,675
Active Members	<u>23,963</u>
Total	<u>40,344</u>

2. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll	UAAL as a % of Covered Payroll (c / e)
	(a)	(b)	(c)	(d)	(e)	(f)
7/1/02	\$2,351,100	\$2,527,876	\$176,776	93.0%	757,393	23.3%
7/1/01	2,197,982	2,324,257	126,275	94.6%	757,335	16.7%
7/1/00	2,008,554	2,095,991	87,437	95.8%	716,749	12.2%
7/1/99	1,844,517	1,898,237	53,720	97.2%	638,086	8.4%
7/1/98	1,684,641	1,733,578	48,937	97.2%	606,426	8.1%
7/1/97	1,512,390	1,570,816	58,426	96.3%	562,553	10.4%

All dollar amounts in thousands

3. Assumptions and Methods

Valuation date	July 1, 2002
Actuarial cost method	Entry Age Normal
Amortization method	Level percent open
Remaining amortization period	15 years
Asset valuation method	5 year smoothed market
Actuarial assumptions	
Investment rate of return*	7.25%
Projected salary increases*	5.25% - 9.00%
*Including inflation at	3.75%
Cost-of-living adjustments	None

VALUATION BALANCE SHEET

	<u>July 1, 2002</u>	<u>July 1, 2001</u>
1. <u>Assets</u>		
a. <u>Current Assets (Actuarial Value)</u>		
i) Employee Annuity Savings Fund	\$ 492,178	\$ 464,217
ii) Employer Annuity Accumulation Fund	<u>1,858,922</u>	<u>1,733,765</u>
iii) Total Current Assets	\$ 2,351,100	\$ 2,197,982
b. <u>Future Member Contributions to Employee Annuity Savings Fund</u>	\$ 445,031	\$ 444,975
c. <u>Prospective Contributions to Employer Annuity Accumulation Fund</u>		
i) Normal Contributions	\$ 577,170	\$ 577,098
ii) Accrued Liability Contributions	<u>176,776</u>	<u>126,275</u>
iii) Total Prospective Employer Contributions	\$ 753,946	\$ 703,373
d. <u>Total Assets</u>	<u>\$ 3,550,077</u>	<u>\$ 3,346,330</u>
2. <u>Liabilities</u>		
a. <u>Employee Annuity Savings Fund</u>		
i) Past Member Contributions	\$ 492,178	\$ 464,217
ii) Future Member Contributions	<u>445,031</u>	<u>444,975</u>
iii) Total Contributions to Employee Annuity Savings Fund	\$ 937,209	\$ 909,192
b. <u>Employer Annuity Accumulation Fund</u>		
i) Benefits Currently in Payment	\$ 1,136,998	\$ 977,769
ii) Benefits to be Paid to Current Active Members	<u>1,475,870</u>	<u>1,459,369</u>
iii) Total Benefits Payable from Employer Annuity Accumulation Fund	\$ 2,612,868	\$ 2,437,138
c. <u>Total Liabilities</u>	<u>\$ 3,550,077</u>	<u>\$ 3,346,330</u>

All dollar amounts in thousands

NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF
 BENEFIT RECIPIENTS AS OF JULY 1, 2002

	Number	Annual Retirement Allowances
1. <u>Service Retirement</u>		
Life Annuity	2,718	\$38,471,061
100% J & S	268	3,313,195
100 % Pop-Up	398	5,182,779
50% J & S	229	4,621,102
50% Pop-Up	555	11,314,149
Level Income	<u>1,440</u>	<u>27,621,335</u>
	5,608	\$90,523,621
2. <u>Disability Retirement</u>		
Life Annuity	949	\$15,017,297
100% J & S	75	786,117
100 % Pop-Up	56	621,615
50% J & S	49	648,487
50% Pop-Up	<u>74</u>	<u>1,293,839</u>
	1,203	\$18,367,355
3. <u>Beneficiaries of Deceased Retired Members and Active Members</u>		
Total	895	\$8,243,199
4. <u>Grand Total</u>	7,706	\$117,134,175

DISTRIBUTION OF ACTIVE MEMBERS BY AGE GROUPS AND SERVICE GROUPS AS OF JULY 1, 2002

Age Group	Years of Service										Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up				
Under 25	1,526	11	-	-	-	-	-	-	-	1,537	
	\$22,949	\$27,056	-	-	-	-	-	-	-	\$22,978	
25 - 29	2,938	808	5	-	-	-	-	-	-	3,751	
	\$26,138	\$29,889	\$34,490	-	-	-	-	-	-	\$26,957	
30 - 34	2,065	1,828	582	11	-	-	-	-	-	4,486	
	\$26,386	\$31,607	\$35,336	\$40,856	-	-	-	-	-	\$29,710	
35 - 39	1,225	1,013	1,183	524	8	-	-	-	-	3,953	
	\$26,220	\$30,912	\$36,028	\$38,980	\$47,125	-	-	-	-	\$32,091	
40 - 44	1,018	709	675	787	254	1	-	-	-	3,444	
	\$27,190	\$31,305	\$35,020	\$39,763	\$45,801	\$42,526	-	-	-	\$33,822	
45 - 49	814	616	491	464	358	129	1	-	-	2,873	
	\$29,040	\$31,467	\$35,904	\$39,832	\$44,992	\$50,615	\$62,140	-	-	\$35,444	
50 - 54	584	460	446	309	195	154	33	-	-	2,181	
	\$30,496	\$32,224	\$35,869	\$37,992	\$41,865	\$52,047	\$56,974	-	-	\$35,960	
55 - 59	358	248	260	175	59	69	38	-	-	1,207	
	\$30,846	\$34,610	\$35,535	\$41,650	\$44,374	\$47,045	\$59,107	-	-	\$36,673	
60 - 64	103	104	95	68	17	15	17	-	-	419	
	\$32,603	\$34,198	\$37,593	\$38,006	\$38,893	\$50,023	\$61,625	-	-	\$37,064	
65 & Up	32	31	20	15	6	2	6	-	-	112	
	\$32,819	\$35,586	\$43,496	\$39,988	\$40,378	\$53,833	\$52,499	-	-	\$38,286	
Total	10,663	5,828	3,757	2,353	897	370	95	23,963			
	\$26,540	\$31,432	\$35,748	\$39,466	\$44,373	\$50,517	\$58,431	\$31,607			
	Average Age			Prior Year		Current Year					
	Average Service			38.67 years		38.93 years					
	Average Pay			7.68 years		7.99 years					
	Percent Female			\$30,512		\$31,607					
				26.0%		25.2%					

DISTRIBUTION OF PARTICIPANTS RECEIVING BENEFITS

1. **Service Retirement**

<u>Current Age Group</u>	<u>Number</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
(1)	(2)	(3)	(4)
Under 50	282	\$ 5,579,158	\$19,784
50 – 54	636	14,717,221	23,140
55 – 59	1,038	20,085,326	19,350
60 – 64	1,095	16,708,023	15,258
65 – 69	1,069	14,113,080	13,202
70 – 74	739	9,456,682	12,797
75 – 79	411	5,759,404	14,013
80 & Over	338	4,104,727	12,144
Total	5,608	\$90,523,621	\$16,142

2. **Disability Retirement**

<u>Current Age Group</u>	<u>Number</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
(1)	(2)	(3)	(4)
Under 50	490	\$ 8,547,658	\$17,444
50 – 54	260	3,852,406	14,817
55 – 59	223	2,950,819	13,232
60 – 64	107	1,430,568	13,370
65 – 69	55	812,982	14,781
70 – 74	32	382,362	11,949
75 – 79	23	273,144	11,876
80 & Over	13	117,416	9,032
Total	1,203	\$18,367,355	\$15,268

3. **Beneficiaries**

<u>Current Age Group</u>	<u>Number</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
(1)	(2)	(3)	(4)
Under 50	115	\$ 979,938	\$ 8,521
50 – 54	63	562,521	8,929
55 – 59	81	882,284	10,892
60 – 64	92	853,526	9,277
65 – 69	109	1,160,431	10,646
70 – 74	137	1,348,925	9,846
75 – 79	115	1,021,616	8,884
80 & Over	183	1,433,958	7,836
Total	895	\$8,243,199	\$ 9,210

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

1. Interest to be Earned by Fund

7.25% per annum, compounded annually, composed of an assumed 3.75% inflation rate and a 3.50% real rate of return.

2. Salary Increases

Salary increases are assumed in accordance with the following representative rates:

<u>Age</u>	<u>Annual Increases</u>	<u>Age</u>	<u>Annual Increases</u>
20	9.00%	45	5.25%
25	8.00%	50	5.25%
30	6.85%	55	5.25%
35	6.10%	60 & Up	5.25%
40	5.75%		

3. Decrement Rates

The following are representative values of the assumed annual rates of withdrawal, inservice mortality, disability and service retirement

<u>Age</u>	<u>Annual Rate of</u>				
	<u>Service Retirement *</u>	<u>Mortality</u>	<u>Disability</u>	<u>Withdrawal</u>	
				<u>Years of Service</u>	
				<u>0 – 4</u>	<u>5 or More</u>
20		0.05%	0.10%	13.00%	7.00%
25		0.07%	0.12%	12.00%	7.00%
30		0.08%	0.16%	11.00%	4.25%
35		0.10%	0.30%	10.00%	4.00%
40		0.14%	0.40%	9.50%	2.90%
45	10.00%	0.20%	0.60%	9.00%	2.80%
50	10.00%	0.32%	0.75%	8.00%	2.00%
55	10.00%	0.50%			
60	15.00%	0.71%			
64	25.00%	1.02%			

*Plus an additional 15% in year when first become eligible for unreduced service retirement.

In addition, 25% of disabilities are assumed to be duty related, and 5% of pre-retirement deaths are assumed to be accidental.

4. **Mortality After Retirement**

For healthy retirees and beneficiaries, the 1983 Group Annuity Mortality Table rates set forward two years. A separate table of mortality rates is used for disabled retirees. The following are sample rates for the retirees and beneficiaries:

Age	Healthy		Disabled	
	Male	Female	Male	Female
50	0.48%	0.19%	2.46%	2.46%
55	0.71%	0.31%	2.80%	2.80%
60	1.11%	0.52%	3.32%	3.32%
65	1.98%	0.87%	4.17%	4.17%
70	3.34%	1.62%	5.48%	5.48%
75	5.48%	3.07%	7.52%	7.52%
80	8.93%	5.27%	10.65%	10.65%
85	13.39%	8.39%	15.36%	15.36%

5. **Marriage Assumption**

100% of all active members are assumed to be married, with female spouses being 4 years younger.

6. **Asset Valuation Method**

Actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed investment rate of return. The amount recognized each year is 20% of the difference between market and expected actuarial value. The actuarial value of assets is limited to a range between 80% and 120% of market value.

7. **Cost Methods**

a. **Normal Retirement, Termination, Death and Disability Benefits**

Projected benefit method with level percentage entry age normal cost. Gains and losses are reflected in the period remaining to liquidate the unfunded actuarial accrued liability.

b. Group Life Insurance Benefit and Accidental Death Benefits

One-year term cost method.

8. Unused Annual Leave

To account for the effect of unused annual leave on Annual Final Compensation, liabilities for active members are increased 4.00%.

9. Cost-of-Living Increases

None assumed.

10. Administrative and Investment Expenses

The investment return assumption represents the expected return net of all administrative and investment expenses.

11. Payroll Growth Rate

5.25% per annum.

12. Adoption Date

The current actuarial assumptions were adopted by the State Budget and Control Board on March 9, 1999.

13. Changes from Prior Valuation

None.

SUMMARY OF PRINCIPAL PLAN PROVISIONS

1. **Effective Date**

July 1, 1962.

2. **Eligibility Requirements**

All police officers or firefighters who work at least 1,600 hours as a police officer or firefighter and whose compensation is at least \$2,000 during the fiscal year.

3. **Creditable Service**

Creditable service means service during which contributions have been made. This is counted in years, months, and days.

There are a number of different types of services that may be purchased by an employee under special rules, such as military service.

4. **Average Final Compensation**

The total of the highest 12 consecutive quarters of compensation earned divided by 3. Denoted AFC. Compensation generally includes gross salary or wages, overtime, sick pay, wage deferrals, and termination pay for unused annual leave. The unused annual leave is added to the sum of the highest 12 consecutive quarters prior to dividing by 3. For members who joined the system on or after January 1, 1997, compensation for benefit and contribution purposes is limited. The 2002 limit is \$200,000, and this limit will be increased in the future as cost-of-living increases occur.

5. **Normal Retirement**

- a. **Eligibility** Attainment of age 55 and the completion of 5 years of creditable service or completion of 25 years of creditable service.
- b. **Benefit** 2.14% of AFC times creditable service (Class II).

6. **Disability Retirement**

- a. **Eligibility** Disability prior to normal retirement age with at least 5 years of creditable service. The service requirement is waived for job related disability.

- b. Benefit Benefit equal to the amount of retirement benefit that would have been payable assuming continued employment at age 55 and AFC at date of disability.

7. **Death Benefits**

a. Death prior to age 55

- i) Prior to completion of 15 years of creditable service

Refund of employee contributions with interest plus Group Life Insurance in a lump sum equal to annual compensation. Group life Insurance only payable to those with at least 1 year of creditable service, unless death is job related, and employer participates.

- ii) After completion of 15 years of creditable service

Same as above, however, instead of the refund of employee contributions with interest, the beneficiary may elect to receive an annuity equal to the amount that would have been payable had the member retired the day before death under elected payment to commence at age 55 under Option B described below.

b. Death after age 55

Same as Item a(ii) above.

8. **Accidental Death Benefit**

If death occurs and is duty related, then a monthly annuity equal to 50% of the member's compensation at the time of death is paid to the statutory beneficiary until the beneficiary's death.

9. **Member Contribution**

6.5% of compensation

10. **Vested Benefit Upon Termination**

- a. Eligibility 100% vesting upon completion of 5 years of creditable service and refund benefit declined.

- b. Benefit Accrued service retirement benefit as of date of termination payable as of age 55.

11. **Refund Benefit**

- a. **Eligibility** All nonvested members, and at members election, vested members.
- b. **Benefit** Return of employee contributions plus interest.

12. **Optional Forms of Retirement Income**

- Option A** Monthly life annuity with guaranteed return of employee contributions plus interest. (This is the normal form of payment.)
- Option B** Monthly life annuity with 100% of reduced benefit continued to beneficiary upon death, with revert to maximum option if beneficiary predeceases retiree.
- Option C** Monthly life annuity with 50% of reduced benefit continued to beneficiary upon death, with revert to maximum option if beneficiary predeceases retiree.

Options B and C are actuarially reduced.

13. **Cost of Living Adjustment**

Granted upon approval of State Budget and Control Board if funding objectives are met. The amount is the increase in the calendar year CPI not in excess of 4%.

14. **Changes from Prior Valuation**

None.