ACTUARIAL VALUATION

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

AT JUNE 30, 2006

A MILLIMAN GLOBAL FIRM



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November 3, 2006

State of Connecticut State Employees Retirement Commission 55 Elm Street Hartford, CT 06106

Re: Connecticut State Employees Retirement System June 30, 2006 Actuarial Valuation

Members of the Commission:

At your request, we have made an actuarial valuation of the Connecticut State Employees Retirement System (SERS) as of June 30, 2006. The results of the valuation are contained in the following report.

Section I contains an Executive Summary in which we present the principal results of this valuation. Details regarding SERS assets, liabilities, and costs are found in Sections II, III, and IV, respectively. Section V contains the disclosure information required by GASB #25. The Appendices contain information regarding SERS membership, an outline of the benefit provisions, a description of the actuarial methods and assumptions employed in this valuation, and details on the Actuarial Surplus as of June 30, 2006.

As developed in Section IV, the actuarially determined contribution for the fiscal year beginning July 1, 2007 is \$716,944,264. For the fiscal year beginning July 1, 2008, the actuarially determined contribution is \$753,698,039.

Respectfully submitted,

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Althea A. Schwartz, F.S.A. Principal and Consulting Actuary

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Rebecca A. Sielman, F.S.A. Principal and Consulting Actuary

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Section I

**EXECUTIVE SUMMARY** 

We have performed a full actuarial valuation of the Connecticut State Employees Retirement System as of June 30, 2006 to determine the contributions for the Fiscal Years beginning July 1, 2007 and July 1, 2008. The results of this valuation, along with supporting data, are set forth in the following report. Appendix B describes the principal provisions of the System upon which the valuation is based.

Milliman's work product was prepared exclusively for the System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses the System's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

In preparing this report, we relied without audit on employee census data and financial information as of the valuation date, furnished by the State of Connecticut. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

The calculations reported herein have been made on a basis consistent with our understanding of the Connecticut General Statutes with guidance from the Retirement Commission. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices based on the actuarial methods and assumptions adopted by the System. Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. Actual experience will not conform exactly to the assumptions made for this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

This report may not be used for purposes other than those listed on the following page without Milliman's prior written consent. If this report is distributed to other parties, we request that it be copied in its entirety, including this section.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

MILLIMAN INC.

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Althea A. Schwartz, F.S.A. Principal and Consulting Actuary

November 3, 2006

Rebecca A. Sielman, F.S.A. Principal and Consulting Actuary

### **PURPOSE OF REPORT**

This report presents the results of the June 30, 2006 actuarial valuation of the Connecticut State Employees Retirement System (SERS). The primary purposes for performing the valuation are:

- to determine the Employer contribution for the Fiscal Year beginning July 1, 2007;
- to determine the Employer contribution for the Fiscal Year beginning July 1, 2008;
- to disclose asset and liability measures as of June 30, 2006; and
- to analyze and report on trends in SERS contributions, assets and liabilities over the past several years.

#### ORGANIZATION OF THE EXECUTIVE SUMMARY

Starting with the June 30, 1998 valuation, complete actuarial valuations are performed only every other year. Membership and asset information was collected as of July 1, 2005 and has been shown where appropriate in this report for informational purposes.

The executive summary contains the following information:

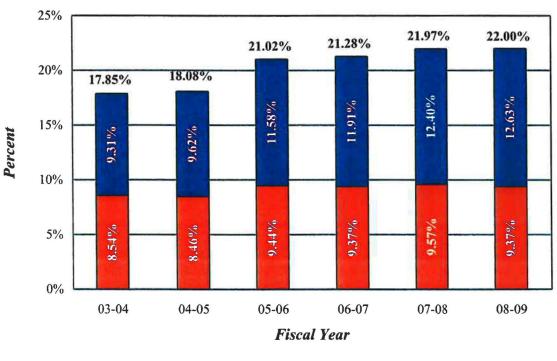
- Major Findings... shows graphically, key results for several years.
- Discussion of Results... highlights the major events influencing this valuation.
- *Principal Results...* Contains a summary of comparative statistics for the current and prior valuations.

#### PLAN CHANGES REFLECTED

This valuation reflects the reclassification of judicial marshals as hazardous duty employees. 769 judicial marshals were reported to us as of June 30, 2006. The reclassification increased the Unfunded Actuarial Liability by \$13.3 million.

### **MAJOR FINDINGS**

The major findings of this valuation are summarized and compared in the following charts:

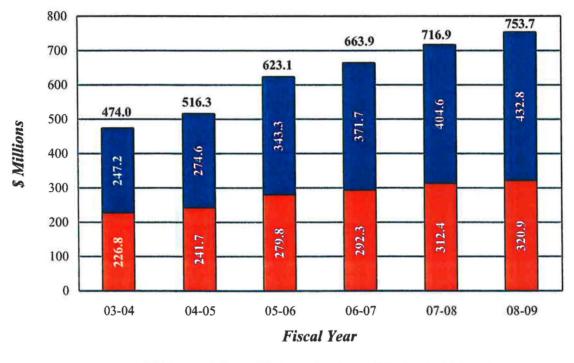


#### **Employer Contribution Rate**

**Normal Cost Amortization of Unfunded Liability** 

The bar graph depicts the Employer's contribution rates. The normal cost rates have grown due to the aging of the membership and the return to active service in Tiers I and II for a number of former members. The amortization payment continues to grow due to the growth in the Unfunded Actuarial Liability.

### **MAJOR FINDINGS**

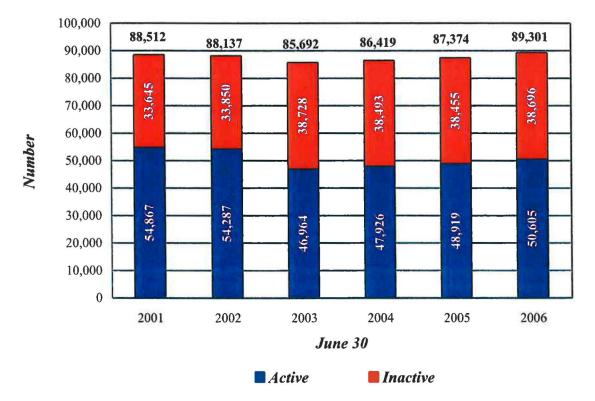


#### **Employer** Contribution

**Normal Cost Amortization of Unfunded Liability** 

The dollar amount of the Employer's contribution equals the contribution rate shown on the prior table multiplied by the projected payroll. The Normal Cost contribution has remained relatively steady with increases reflecting payroll growth. The amortization component has grown considerably reflecting the growth in the System's Unfunded Actuarial Liability.

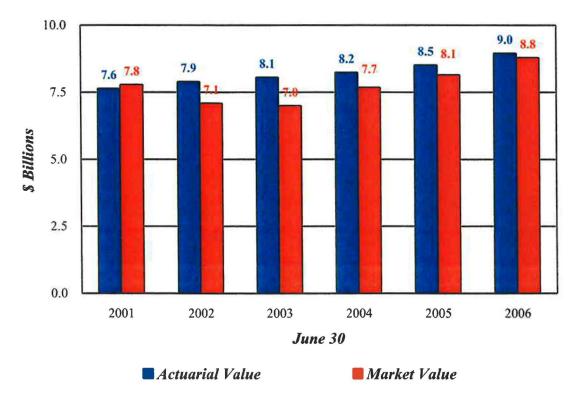
### **MAJOR FINDINGS**



#### Membership

The total number of members has remained relatively steady over the period shown above. However, the composition of the membership has changed significantly. For the years from 2000 through 2002, 62% of the membership was active; now, as a result of the 2003 ERIP, many more members are retired and only 57% of the membership is active. Between 2005 and 2006, the active membership grew by 1,686 members.

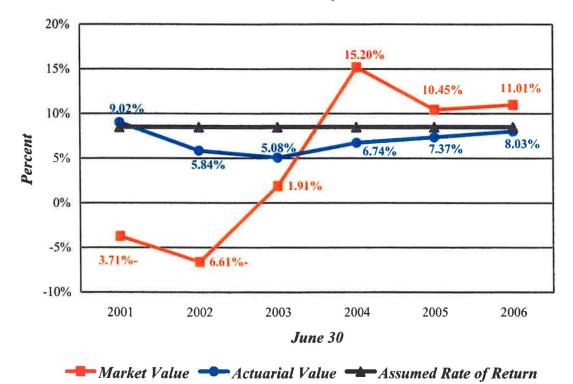
#### **MAJOR FINDINGS**



SERS Assets

FY06 was the third good year in a row. The market value grew from \$8.1 billion to \$8.8 billion. This is continued good news after 3 years of sub-par performance. Contributions during the past year were \$678 million; benefit payments totaled \$919 million. The actuarial value grew from \$8.5 billion to \$9.0 billion.

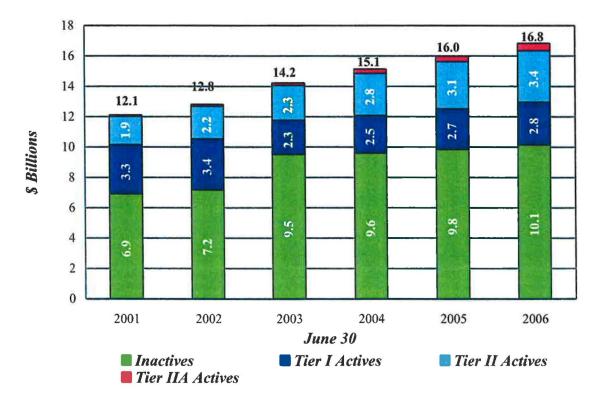
**MAJOR FINDINGS** 



#### **Historical Rates of Return**

This graph shows the historical rates of return on a market value basis, the impact of 'smoothing' (the rates shown on an actuarial value basis), and the 'benchmark' (our 8.50% assumed rate of return). During FY06, the rate of return on a Market Value basis was 11.01%. The corresponding rate of return on an Actuarial Value basis was 8.03%, reflecting the gradual recognition of losses in prior years. This graph demonstrates that our smoothing technique works well in dampening market volatility.

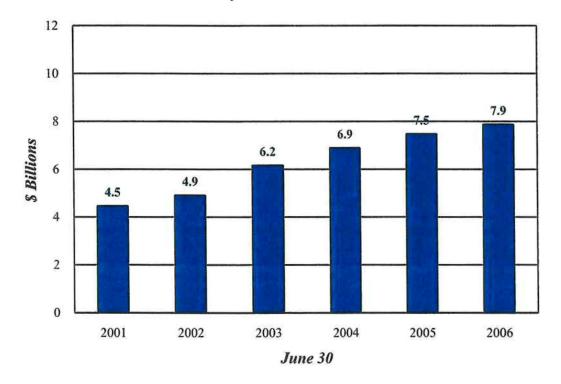
#### **MAJOR FINDINGS**



#### **Actuarial Liabilities**

This graph shows the Actuarial Liability by group. The 2003 Early Retirement Incentive Program caused a noticeable shift of Actuarial Liability from Active to Inactive. The inactive liability increased slightly from last year, as did the active liability for all Tiers. During the past year, we observed that more members in Tiers I and II remained employed (instead of retiring) than anticipated by our actuarial assumptions.

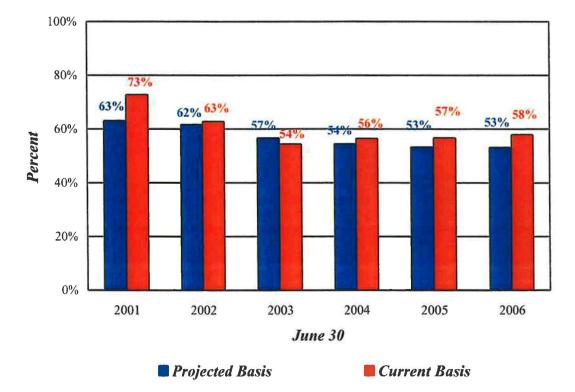
#### **MAJOR FINDINGS**



### **Unfunded Liabilities**

Unfunded actuarial liabilities have increased as expected with this valuation. We expect some increase as a normal outgrowth of the method of paying off this liability: a number of years of increase followed by a gradual decline.

### **MAJOR FINDINGS**



### **Funded** Ratios

The System's Funded Ratio tracks the relationship between the System's assets and liabilities. The Employer's contribution is based on projected liabilities (the Actuarial Liability) and smoothed assets (the Actuarial Value of Assets); the **Funded Ratio - Projected Basis** tracks these amounts.

The **Funded Ratio - Current Basis** looks at the SERS liability for benefits already earned (the Present Value of Accrued Benefits) compared to the assets currently available (the Market Value of Assets). This ratio indicates the System's ability to fund current benefits.

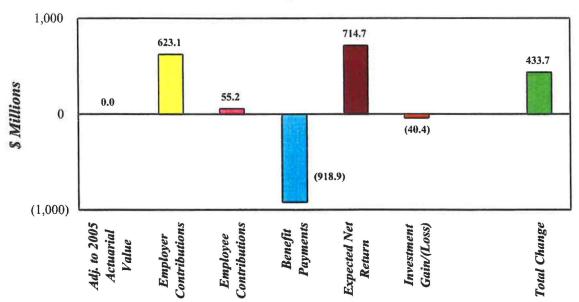
#### **DISCUSSION OF RESULTS**

In this section of the Executive Summary, we will discuss the significant events impacting the June 30, 2006 actuarial valuation.

#### I. Investment Experience

The investment performance was strong during the past year. The actual return was 11.01% on a market value basis compared to 10.45% for the prior fiscal year. On a smoothed actuarial basis, the rate was 8.03% compared to 7.37% for the prior valuation, reflecting delayed recognition of market gains from the last three years and market losses from the three prior years. The assumed rate is 8.50%.

Between July 1, 2005 and June 30, 2006, the actuarial value of assets (measured on a five year smoothing basis) increased by \$433.7 million. This change was attributable to the following:



Change in Assets

The expected net return on investments of \$714.7 million shown above is based on an assumed rate of return of 8.50%. However, the recognized investment earnings of \$674.3 million over the year was slightly lower than this target, resulting in an actuarial loss of \$40.4 million. More details on SERS assets are presented in Section II of this report.

### **DISCUSSION OF RESULTS**

#### II. Membership

System membership has changed modestly over the past year:

	Active Members	Inactive Members	Total Members
Count on June 30, 2005	48,919	38,455	87,374
Left System	(1,931)	(1,211)	(3,142)
Terminated Vested	(57)	57	0
Retired	(625)	625	0
Disabled	(263)	263	0
Died w/beneficiary	(6)	6	0
Rehired	28	(28)	0
New	4,540	529	5,069
Count on June 30, 2006	50,605	38,696	89,301

As expected, we have seen a shift in the active population from the closed Tier I and Tier II groups, with new employees entering the new Tier IIA group:

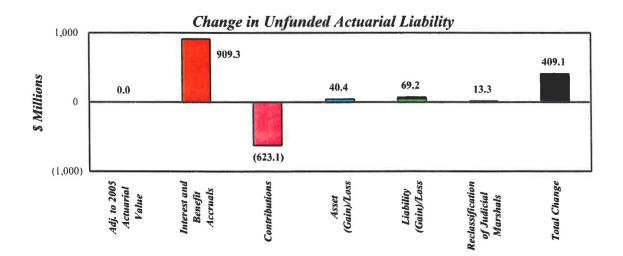
	Tier I	Tier II	Tier IIA	Total
Count on June 30, 2004	8,404	25,126	14,396	47,926
percentage of total	18%	52%	30%	
Count on June 30, 2005	8,225	24,452	16,242	48,919
percentage of total	17%	50%	33%	
Count on June 30, 2006	7,930	23,918	18,757	50,605
percentage of total	16%	47%	37%	

More information on SERS membership can be found in Appendix A.

#### DISCUSSION OF RESULTS

#### **III.** Unfunded Actuarial Liability

The unfunded actuarial liability is the shortfall between SERS projected liabilities and assets. Since July 1, 2005, the unfunded actuarial liability increased from \$7.5 billion to \$7.9 billion. Each year the unfunded liability increases because of interest and expected benefit accruals and decreases by contributions made to the fund. Asset and liability gains and losses also impact the unfunded liability, as do plan changes and experience. The following chart shows the development of the unfunded actuarial liability from 2005 to 2006:



The liability loss of \$69.2 million over the past year is very small (0.4%) when compared to the total SERS liability of \$16,830.3 million. It is attributable to the difference between actual and expected experience with respect to the number of retirements, employment terminations, disabilities and deaths. Salary increases and new employees also contribute to experience gains and losses. During FY06, the liability loss was a combination of small factors, including fewer than expected terminations and retirements from the active membership.

### **DISCUSSION OF RESULTS**

### V. SERS Contributions

The primary purpose of our actuarial valuation is to take the asset and membership information discussed on the previous pages, apply our actuarial methods and assumptions, and determine a contribution amount that will continue the System on a sound funding basis. The resulting contributions for the two fiscal years in the coming biennial budget cycle are:

	Fiscal Year	
	<b>July 1, 2007</b>	July 1, 2008
(\$ millions)	to June 30, 2008	to June 30, 2009
Employer Normal Cost	\$312.4	\$320.9
Net Amortization Payment Towards Unfunded Actuarial Liability	404.6	432.8
Total Employer Cost	716.9	753.7
Total Employer Cost as a Percent of Payroll	21.97%	22.00%

More details on the development of the contributions can be found in Section IV.

PRINCIPAL RESULTS		Interim	
	June 30, 2004	June 30, 2005	June 30, 2006
SERS Membership			
Active Membership			
Number of Active Members	47,926	48,919	50,605
Payroll (\$millions)	\$2,816.7	\$2,980.1	\$3,107.9
Average Pay	58,772	60,919	61,415
Inactive Membership			
Number of Inactive Members	38,493	38,455	38,696
Annual Retired Members' Benefits (\$ millions)	\$880.8	\$906.2	\$942.1
Average Annual Retired Members' Benefits	23,967	24,689	25,486
Assets and Liabilities (\$ millions)	-		
Assets			
Market Value	\$7,677.2	\$8,146.3	\$8,789.6
Actuarial Value	8,238.3	8,517.7	8,951.4
Liabilities			
Active Members	5,536.9	6,150.3	6,692.3
Inactive Members	9,591.6	9,837.3	10,138.1
Total Actuarial Liability	15,128.5	15,987.5	16,830.3
Unfunded Actuarial Liability	6,890.3	7,469.9	7,879.0
Employer Contributions	-		
First fiscal year in budget cycle	FY 2005-06		FY 2007-08
Normal Cost	\$279,753,428		\$312,360,768
Amortization Payment of Unfunded Liability	343,309,320		404,583,496
Total Employer Contribution	623,062,748		716,944,264
Total Contribution as a Percent of Payroll	21.02%		21.97%
Second fiscal year in budget cycle	FY 2006-07		FY 2008-09
Normal Cost	\$292,275,360		\$320,915,187
Amortization Payment of Unfunded Liability	371,650,991		432,782,852
Total Employer Contribution	663,926,351		753,698,039
Total Contribution as a Percent of Payroll	21.28%		22.00%

SECTION II

SERS ASSETS

i.

# TABLE II-1

# Market Value of Assets Summary of Fund Transactions

	July 1, 2004	July 1, 2005
	June 30, 2005*	June 30, 2006
Market Value as of July 1	\$7,677,392,663	\$8,146,304,073
Contributions		
State	403,316,568	507,264,748
Federal	115,452,253	115,797,984
Employee	51,718,795	55,234,913
Total	570,487,616	678,297,645
Investment Income Net of Expenses		
Interest & Dividends	329,827,411	310,758,041
Realized Gains	1,948,218	14,036,602
Change in Unrealized Gains	454,670,655	559,564,232
Expenses	(460,441)	(403,382)
Total	785,985,843	883,955,493
Disbursements		
Benefit Payments	882,375,233	913,030,578
Employee Refunds	5,186,816	5,882,788
Total	887,562,049	918,913,366
Market Value as of June 30	8,146,304,073	8,789,643,845
Approximate Net Rate of Return	10.45%	11.01%

\* 2004-05 figures revised by \$1,704 subsequent to 2005 valuation.

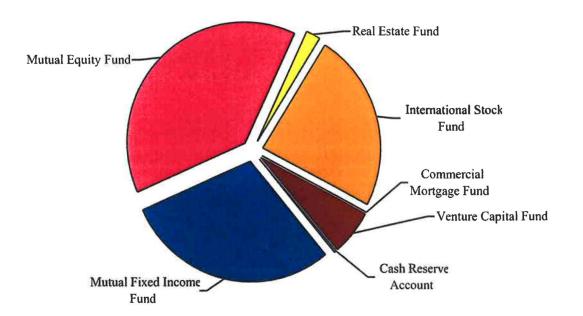
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### TABLE II-2

# Market Value of Assets Breakdown on June 30, 2006

The following is the Market Value of the State Employees Retirement Fund assets as reported to us by the Retirement Division:

	Amount	% of Total
Cash	(\$11,180,117)	-0.13%
Accrued Interest	0	0.00%
Investments:		
Cash Reserve Account	35,236,986	0.40%
Mutual Fixed Income Fund	2,562,634,452	29.16%
Mutual Equity Fund	3,400,100,450	38.68%
Real Estate Fund	161,671,844	1.84%
International Stock Fund	2,091,621,670	23.80%
Commercial Mortgage Fund	6,992,887	0.08%
Venture Capital Fund	542,565,673	6.17%
Total Market Value as of June 30, 2006	8,789,643,845	100.00%



## TABLE II-3

### **Revised 2004-2005 Development of Actuarial Value of Assets**

	Market Value	Actuarial Value
1. Value on July 1, 2004	\$7,677,392,663	\$8,239,417,808
2. Contributions during 2004-05	570,487,616	570,487,616
3. Benefit Payments during 2004-05	887,562,049	887,562,049
4. Expected Income on (1) through (3)*	640,407,474	688,179,612
5. Expected Value on June 30, 2005: (1) + (2) - (3) + (4)	8,000,725,704	8,610,522,987
6. Market Value on June 30, 2005	8,146,304,073	N/A
7. Market - Actuarial Value on June 30, 2005	N/A	(464,218,914)
8. Preliminary Actuarial Value: (5) + 20% of (7)	N/A	8,517,679,204
<ul> <li>9. Final Value on June 30, 2005:</li> <li>(8) within +/- 20% of Market Value</li> </ul>		8,517,679,204

\* Interest on benefits and contributions is credited on a monthly basis.

### TABLE II-4

## 2005-2006 Development of Actuarial Value of Assets

	Market Value	Actuarial Value
1. Value on July 1, 2005	\$8,146,304,073	\$8,517,679,204
2. Contributions during 2005-06	678,297,645	678,297,645
3. Benefit Payments during 2005-06	918,913,366	918,913,366
4. Expected Income on (1) through (3)*	683,199,812	714,766,698
5. Expected Value on June 30, 2006: (1) + (2) - (3) + (4)	8,588,888,164	8,991,830,181
6. Market Value on June 30, 2006	8,789,643,845	N/A
7. Market - Actuarial Value on June 30, 2006	N/A	(202,186,336)
8. Preliminary Actuarial Value: (5) + 20% of (7)	N/A	8,951,392,914
<ul> <li>9. Final Value on June 30, 2006:</li> <li>(8) within +/- 20% of Market Value</li> </ul>		8,951,392,914

\* Interest on benefits and contributions is credited on a monthly basis.

# TABLE II-5

## **Development of Asset Gain/(Loss)**

-	Market Value	Actuarial Value
1. Value on July 1, 2005	\$8,146,304,073	\$8,517,679,204
2. Contributions during 2005-06	678,297,645	678,297,645
3. Benefit Payments during 2005-06	918,913,366	918,913,366
4. Expected Income on (1) through (3)*	683,199,812	714,766,698
5. Expected Value on June 30, 2006: (1) + (2) - (3) + (4)	8,588,888,164	8,991,830,181
6. Actual Value on June 30, 2006	8,789,643,845	8,951,392,914
7. Actual Income	883,955,493	674,329,431
8. Asset Gain/(Loss): (7) - (4)	200,755,681	(40,437,267)
9. Approximate Rate of Return as of June 30, 2006	11.01%	8.03%
10. Approximate Rate of Return as of June 30, 2005	10.45%	7.37%
11. Change	0.56%	0.66%

\* Interest on benefits and contributions is credited on a monthly basis.

### TABLE II-6

### Projection of Assets to Next Two Fiscal Years

	Market Value	Actuarial Value
1. Value on June 30, 2006	\$8,789,643,845	\$8,951,392,914
2. Expected Contributions during 2006-07	719,604,357	719,604,357
3. Expected Benefit Payments during 2006-07	969,139,036	969,139,036
4. Expected Income on (1) through (3)*	737,541,338	751,290,009
<ul> <li>5. Expected Value on June 30, 2007:</li> <li>(1) + (2) - (3) + (4)</li> </ul>	9,277,650,504	9,453,148,244
6. Market - Actuarial Value on June 30, 2007	N/A	(175,497,740)
7. Preliminary Actuarial Value: $(5) + 20\%$ of $(6)$	N/A	9,418,048,696
<ul><li>8. Final Value on June 30, 2007:</li><li>(7) within +/- 20% of Market Value</li></ul>	9,277,650,504	9,418,048,696
9. Expected Contributions during 2007-08	777,423,376	777,423,376
10. Expected Benefit Payments during 2007-08	1,016,344,279	1,016,344,279
11. Expected Income on (8) through (10)*	779,429,315	791,363,161
<ul><li>12. Expected Value on June 30, 2008:</li><li>(8)+(9)-(10)+(11)</li></ul>	9,818,158,916	9,970,490,954
13. Market - Actuarial Value on June 30, 2008	N/A	(152,332,038)
14. Preliminary Actuarial Value: (12) + 20% of (13)	N/A	9,940,024,546
<ul><li>15. Final Value on June 30, 2008:</li><li>(14) within +/- 20% of Market Value</li></ul>	9,818,158,916	9,940,024,546

\* Interest on benefits and contributions is credited on a monthly basis.

SECTION III

SERS LIABILITIES

# TABLE III-1

### SERS Liabilities on Valuation Date

	June 30, 2004	June 30, 2005	June 30, 2006
Tier I Actives			- Horri
Hazardous Duty	\$251,928,889	\$245,045,100	\$236,048,803
Plan B	2,130,582,344	2,332,697,761	2,473,717,978
Plan C	98,687,446	105,519,280	109,499,519
Total	2,481,198,679	2,683,262,141	2,819,266,300
Tier II Actives			
Hazardous Duty	1,217,383,750	1,346,710,132	1,459,958,342
All Others	1,570,061,334	1,763,261,178	1,937,755,972
Total	2,787,445,084	3,109,971,310	3,397,714,314
Tier IIA Actives			
Hazardous Duty	104,714,816	135,338,680	203,091,947
All Others	163,543,862	221,686,969	272,209,082
Total	268,258,678	357,025,649	475,301,029
Total Actives	5,536,902,441	6,150,259,100	6,692,281,643
Retirees			
Pre-1980	358,855,480	335,059,010	296,591,435
1980-1997 Fixed COLA	5,404,795,189	5,380,973,170	5,305,933,086
1997+ Variable COLA	3,646,211,236	3,924,728,024	4,328,861,181
Total	9,409,861,905	9,640,760,204	9,931,385,702
Deferred Vesteds	181,737,771	196,527,357	206,681,823
Total Actuarial Liability	15,128,502,117	15,987,546,661	16,830,349,168

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# TABLE III-2

Projection of Liabilities to Next Two Fiscal Years

	June 30, 2007	June 30, 2008
Tier I Actives		
Hazardous Duty	\$193,332,420	\$159,167,710
Plan B	2,448,205,839	2,435,261,943
Plan C	99,795,125	96,606,044
Total	2,741,333,384	2,691,035,697
Tier II Actives		
Hazardous Duty	1,583,101,237	1,677,260,319
All Others	2,012,021,984	2,096,431,767
Total	3,595,123,221	3,773,692,086
Tier IIA Actives		
Hazardous Duty	255,844,758	321,254,331
All Others	336,921,537	414,325,503
Total	592,766,295	735,579,834
Total Actives	6,929,222,900	7,200,307,617
Retirees		
Pre-1980	263,396,961	241,129,004
1980-1997 Fixed COLA	5,191,166,815	5,066,198,230
1997+ Variable COLA	4,956,591,904	5,652,820,207
Total	10,411,155,680	10,960,147,441
Deferred Vesteds	220,662,704	234,101,678
Total Actuarial Liability	17,561,041,284	18,394,556,736

SECTION IV

19

SERS CONTRIBUTIONS

.

# TABLE IV-1

# Projected Unit Credit Normal Cost on Valuation Date (Net of Employee Contributions)

	June 30, 2005	June 30, 2006
ormal Cost in Dollars		
Tier I Hazardous Duty	\$6,166,002	\$5,727,101
Tier I Plan B	70,102,328	71,798,910
Tier I Plan C	2,304,831	2,347,244
Tier II Hazardous Duty	69,792,790	71,964,021
Tier II All Others	101,277,504	105,457,222
Tier IIA Hazardous Duty	14,328,082	19,388,923
Tier IIA All Others	23,269,627	27,091,810
Total	287,241,164	303,775,231
Normal Cost as a Percent of Payroll		
Tier I Hazardous Duty	15.92%	15.74%
Tier I Plan B	12.55%	12.91%
Tier I Plan C	9.70%	9.90%
Tier II Hazardous Duty	16.66%	17.29%
Tier II All Others	8.75%	9.01%
Tier IIA Hazardous Duty	8.08%	8.27%
Tier IIA All Others	3.84%	4.04%
Total	9.64%	9.77%

# TABLE IV-2

### **Projection of Normal Cost to Next Two Fiscal Years**

	June 30, 2007	June 30, 2008
Normal Cost in Dollars		
Tier I Hazardous Duty	\$4,651,074	\$3,764,405
Tier I Plan B	70,377,033	68,170,619
Tier I Plan C	2,239,043	2,131,868
Tier II Hazardous Duty	73,688,915	74,626,941
Tier II All Others	104,932,709	104,216,220
Tier IIA Hazardous Duty	23,439,448	28,062,707
Tier IIA All Others	33,032,546	39,942,427
Total	312,360,768	320,915,187
Normal Cost as a Percent of Payroll		
Tier I Hazardous Duty	15.81%	15.66%
Tier I Plan B	13.39%	13.65%
Tier I Plan C	10.74%	11.01%
Tier II Hazardous Duty	17.64%	18.03%
Tier II All Others	9.27%	9.46%
Tier IIA Hazardous Duty	8.55%	8.80%
Tier IIA All Others	3.83%	3.81%
Total	9.57%	9.37%

## TABLE IV-3

### Projected Unit Credit Total Costs For Fiscal Year 2007-08

1.	Actuarial Liability as of June 30, 2007	\$17,561,041,284
2.	Actuarial Value of Assets as of June 30, 2007	9,418,048,696
3.	Unfunded Actuarial Liability as of June 30, 2007: (1) - (2)	8,142,992,588
4.	Amortization Period	25 Years
5.	Amortization Payment Towards Unfunded Actuarial Liability	490,600,066
6.	SEBAC IV Asset Adjustment Amortization Payment	(35,655,556)
7.	SEBAC V Asset Adjustment Amortization Payment	(50,361,014)
8.	Net Amortization Payment: $(5) + (6) + (7)$	404,583,496
9.	Employer Normal Cost (Net of Employee Contributions)	312,360,768
10.	Total Employer Cost for Fiscal Year 2007-08: (8) + (9)	716,944,264
11.	Projected Payroll	3,263,020,515
12.	Total Employer Cost Percent: (10) / (11)	21.97%

This report was prepared solely for the System for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

# TABLE IV-4

### Projected Unit Credit Total Costs For Fiscal Year 2008-09

1.	Actuarial Liability as of June 30, 2008	\$18,394,556,736
2.	Actuarial Value of Assets as of June 30, 2008	9,940,024,546
3.	Unfunded Actuarial Liability as of June 30, 2008: (1) - (2)	8,454,532,190
4.	Amortization Period	24 Years
5.	Amortization Payment Towards Unfunded Actuarial Liability	523,100,250
6.	SEBAC IV Asset Adjustment Amortization Payment	(37,438,334)
7.	SEBAC V Asset Adjustment Amortization Payment	(52,879,064)
8.	Net Amortization Payment: $(5) + (6) + (7)$	432,782,852
9.	Employer Normal Cost	320,915,187
10.	Total Employer Cost for Fiscal Year 2008-09: (8) + (9)	753,698,039
11.	Projected Payroll	3,425,837,352
12.	Total Employer Cost Percent: (10) / (11)	22.00%

SECTION V

GASB INFORMATION

# TABLE V-1

# Statement of Plan Net Assets

	June 30, 2005	June 30, 2006
Cash	\$ (29,015,593.86)	\$ (11,180,116.41)
Accrued Interest	0.00	0.00
Cash Reserve Account	188,183,013.31	35,236,985.99
Mutual Fixed Income Fund	2,409,205,361.97	2,562,634,452.34
Mutual Equity Fund	3,132,797,948.76	3,400,100,450.23
Real Estate Fund	153,803,454.96	161,671,843.62
International Stock Fund	1,730,172,441.01	2,091,621,669.65
Commercial Mortgage Fund	7,812,593.17	6,992,887.22
Venture Capital Fund	553,344,853.62	542,565,672.71
Total Assets	8,146,304,072.94	8,789,643,845.35
Liabilities	0.00	0.00
Net assets held in trust for pension benefits	8,146,304,072.94	8,789,643,845.35

# TABLE V-2

Statement of Changes in Plan Net Assets

	July 1, 2004	July 1, 2005
	to	to
	June 30, 2005*	June 30, 2006
Additions		
Contributions		
State	\$403,316,568	\$507,264,748
Federal	115,452,253	115,797,984
Employee	51,718,795	55,234,913
Total Net Contributions	570,487,616	678,297,645
Net Investment Income		
Interest & Dividends	329,827,411	310,758,041
Net Appreciation/(Depreciation)	456,618,873	573,600,834
Expenses	(460,441)	(403,382)
Total Investment Income	785,985,843	883,955,493
Total Additions	1,356,473,459	1,562,253,138
Deductions		
Benefit Payments	882,375,233	913,030,578
Employee Refunds	5,186,816	5,882,788
Total Deductions	887,562,049	918,913,366
Net Increase	468,911,410	643,339,772
Net assets held in trust for pension benefits		
Beginning of year	7,677,392,663	8,146,304,073
End of year	8,146,304,073	8,789,643,845

\* 2004-05 figures revised by \$1,704 subsequent to 2005 valuation.

#### TABLE V-3

## Schedule of Funding Progress

	(1)	(2)	(3)	(4)	(5)	(6) UAAL as a
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) (2) - (1)	Funded Ratio (1) / (2)	Covered Payroll	Percentage of Covered Payroll [(2) - (1)] / (5)
June 30, 1991	\$3,207,958,056	\$5,982,687,195	\$2,774,729,139	53.62%	\$1,956,585,318	141.81%
June 30, 1992	3,425,886,181	6,668,685,334	3,242,799,153	51.37%	1,931,381,254	167.90%
June 30, 1993	3,696,176,885	7,189,740,494	3,493,563,609	51.41%	2,144,793,466	162.89%
June 30, 1994	3,944,521,448	7,329,181,184	3,384,659,736	53.82%	2,155,860,555	157.00%
June 30, 1995	4,209,235,826	7,838,210,805	3,628,974,979	53.70%	2,325,787,000	156.03%
June 30, 1996	4,604,227,717	8,138,610,053	3,534,382,336	56.57%	2,385,532,750	148.16%
June 30, 1997	5,130,967,057	8,833,202,804	3,702,235,747	58.09%	2,225,185,096	166.38%
June 30, 1998	5,669,865,527	9,592,407,736	3,922,542,209	59.11%	2,338,957,445	167.70%
June 30, 2000	7,196,039,538	11,512,154,892	4,316,115,354	62.51%	2,651,892,121	162.76%
June 30, 2001	7,638,853,783	12,105,366,407	4,466,512,624	63.10%	2,784,495,788	160.41%
June 30, 2002	7,893,683,977	12,806,115,474	4,912,431,497	61.64%	2,852,165,564	172.24%
June 30, 2003	8,058,586,633	14,223,786,404	6,165,199,771	56.66%	2,654,252,370	232.28%
June 30, 2004 June 30, 2005	8,038,580,033 8,238,417,808 8,517,679,204	15,128,502,117 15,987,546,661	6,890,084,309 7,469,867,457	54.46% 53.28%	2,654,252,370 2,816,729,277 2,980,104,277	232.28% 244.61% 250.66%
June 30, 2006	8,951,392,914	16,830,349,168	7,878,956,254	53.19%	3,107,928,232	253.51%

No values are shown above for June 30, 1999 since an actuarial valuation was not performed as of that date.

# TABLE V-4

## Schedule of Employer Contributions

Fiscal Year Ending June 30	Annual Required Contribution	Actual Contribution	Percent Funded	
1001	\$200.01C.000	¢0(2,010,007	(( )))	
1991	\$398,016,908	\$263,818,607	66.28%	
1992	431,236,846	250,324,285	58.05%	
1993	444,243,379	290,827,685	65.47%	
1994	310,206,351	310,206,351	100.00%	
1995	351,773,796	290,801,000	82.67%	
1996	335,111,972	335,111,971	100.00%	
1997	349,230,712	348,920,134	99.91%	
1998	334,846,361	334,513,820	99.90%	
1999	315,561,785	315,561,785	100.00%	
2000	342,760,331	342,760,330	100.00%	
2001	354,208,031	375,623,183	106.05%	
2002	415,492,599	415,492,599	100.00%	
2003	425,902,474	421,451,731	98.95%	
2004	473,998,112	470,332,944	99.23%	
2005	547,855,620	518,768,821	94.69%	
2006	623,062,748	623,062,732	100.00%	

#### TABLE V-5

# Summary of Membership

	June 30, 2004	June 30, 2005	June 30, 2006
Current Employees with Vested Benefits			
Tier I, Hazardous Duty	499	449	399
Tier I, Plan B	7,293	7,154	6,948
Tier I, Plan C	351	340	331
Tier II, Hazardous Duty	6,207	5,988	5,763
Tier II, Other	18,111	17,648	17,320
Tier IIA, Hazardous Duty	1,155	1,400	2,272
Tier IIA, Other	4,659	5,227	5,791
Total	38,275	38,206	38,824
Current Employees Not Yet Vested			
Tier I, Hazardous Duty	12	13	13
Tier I, Plan B	235	254	223
Tier I, Plan C	14	15	16
Tier II, Hazardous Duty	103	92	81
Tier II, Other	705	724	754
Tier IIA, Hazardous Duty	1,672	1,838	2,144
Tier IIA, Other	6,910	7,777	8,550
Total	9,651	10,713	11,781
Total Current Employees	47,926	48,919	50,605
Former Employees Currently Receiving B	Senefits		
Retired Pre-1980	4,111	3,748	3,338
Retired 1980-1997, Fixed COLA	22,688	22,140	21,681
Retired 1997+, Variable COLA	9,950	10,817	11,945
Total	36,749	36,705	36,964
Former Employees Entitled to			
Future Benefits	1,744	1,750	1,732
Total Former Employees	38,493	38,455	38,696
Total Members	86,419	87,374	89,301

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

#### TABLE A-1

#### Summary of Active Membership Data

We received data on a total of 50,688 eligible active members for our June 30, 2006 valuation. Of the active records submitted to us, 83 (0.2%) were rejected due to missing or invalid dates of birth and/or hire. Cost calculations were not revised to reflect these records. The following analysis compares this data with prior years' data.

	June 30, 2004	June 30, 2005	June 30, 2006
Total Employees	47,926	48,919	50,605
Total Earnings (\$ millions)	\$2,816.7	\$2,980.1	\$3,107.9
Average Earnings	58,772	60,919	61,415

Earnings figures as of July 1 are actual amounts paid during the previous July 1 to June 30 period; new entrant earnings are annualized.

These figures are broken down by Plan on the following page.

# TABLE A-2a

# Detail of Active Membership Data by Plan

	June 30, 2004	June 30, 2005	June 30, 2006
Number of Members			
Tier I Hazardous Duty	511	462	412
Tier I Plan B	7,528	7,408	7,171
Tier I Plan C	365	355	347
Tier II Hazardous Duty	6,310	6,080	5,844
Tier II Others	18,816	18,372	18,074
Tier IIA Hazardous Duty	2,827	3,238	4,416
Tier IIA Others	11,569	13,004	14,341
Total	47,926	48,919	50,605
Total Annual Compensation (\$ Millions)			
Tier I Hazardous Duty	\$41.1	\$38.7	\$36.4
Tier I Plan B	542.8	558.4	556.3
Tier I Plan C	23.4	23.8	23.7
Tier II Hazardous Duty	416.9	419.0	416.2
Tier II Others	1,127.7	1,157.2	1,169.9
Tier IIA Hazardous Duty	153.3	177.4	234.3
Tier IIA Others	511.5	605.6	671.0
Total	2,816.7	2,980.1	3,107.9
Average Compensation			
Tier I Hazardous Duty	\$80,344	\$83,846	\$88,322
Tier I Plan B	72,106	75,376	77,581
Tier I Plan C	64,167	66,944	68,327
Tier II Hazardous Duty	66,075	68,911	71,214
Tier II Others	59,932	62,985	64,730
Tier IIA Hazardous Duty	54,218	54,797	53,068
Tier IIA Others	44,217	46,573	46,792
Total	58,772	60,919	61,415

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# TABLE A-2b

## Detail of Active Membership Data by Plan

	June 30, 2004	June 30, 2005	June 30, 2006
1verage Age			
Tier I Hazardous Duty	49.7	50.6	51.6
Tier I Plan B	51.2	52.2	53.0
Tier I Plan C	53.3	54.2	55.1
Tier II Hazardous Duty	42.8	43.7	44.4
Tier II Others	46.7	47.6	48.5
Tier IIA Hazardous Duty	35.9	36.5	38.3
Tier IIA Others	40.4	41.0	41.1
Total	44.8	45.4	45.7
Average Service			
Tier I Hazardous Duty	22.8	23.5	24.6
Tier I Plan B	24.7	25.6	26.4
Tier I Plan C	25.5	26.3	27.0
Tier II Hazardous Duty	13.0	13.9	14.7
Tier II Others	13.9	14.8	15.6
Tier IIA Hazardous Duty	3.8	4.2	4.7
Tier IIA Others	3.4	3.8	4.0
Total	12.5	12.9	12.9

# TABLE A-3

# Summary of Inactive Membership Data

	June 30, 2004	June 30, 2005	June 30, 2006
Retired Pre-1980			
Number	4,111	3,748	3,338
Total Annual Benefits (\$ 000s)	\$56,582	\$53,088	\$48,543
Average Annual Benefit	13,764	14,164	14,543
Retired 1980-1997, Fixed COLA			
Number	22,688	22,140	21,681
Total Annual Benefits (\$ 000s)	\$536,741	\$540,750	\$545,358
Average Annual Benefit	23,657	24,424	25,154
Retired 1997+, Variable COLA			
Number	9,950	10,817	11,945
Total Annual Benefits (\$ 000s)	\$287,448	\$312,388	\$348,152
Average Annual Benefit	28,889	28,879	29,146
Total Retired Members			
Number	36,749	36,705	36,964
Total Annual Benefits (\$ 000s)	\$880,771	\$906,226	\$942,054
Average Annual Benefit	23,967	24,689	25,486
Terminated Vested Members			
Number	1,744	1,750	1,732
Total Annual Benefits (\$ 000s)	\$23,197	\$24,357	\$25,079
Average Annual Benefit	13,301	13,918	14,480

## TABLE A-4

	Active Members	Deferred Vested Members	Retired Members	Disabled Members	Beneficiaries	Total Members
Count as of July 1, 2005	48,919	1,750	30,057	3,067	3,581	87,374
		-,		-,	- ,	
Changed status within System						
to active status	28	(22)	(4)	0	(2)	0
to deferred vested status	(57)	57	0	0	0	0
to retired status	(625)	(104)	736	(1)	(6)	0
to disabled status	(263)	(3)	0	269	(3)	0
to beneficiary status	(6)	0	(15)	(3)	24	0
Left System	(1,931)	(13)	(944)	(98)	(156)	(3,142)
Entered System	4,540	67	111	76	275	5,069
Count as of June 30, 2006	50,605	1,732	29,941	3,310	3,713	89,301

**Reconciliation of Changes in Membership** 

#### TABLE A-5

## Analysis of Active Members by Age and Service - Tier I Hazardous Duty

Number of Members										
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	1	0	0	4	12	2	0	0	0	19
45 to 49	1	2	3	6	86	33	2	0	0	133
50 to 54	4	0	4	7	55	75	18	0	0	163
55 to 59	2	3	2	5	11	20	18	5	0	66
60 to 64	0	0	5	1	2	9	5	2	0	24
65 & Up	0	0	0	0	2	3	1	0	1	7
Totals	8	5	14	23	168	142	44	7	1	412

	Average Salaries									
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	68,598	0	0	83,091	91,084	78,418	0	0	0	86,884
45 to 49	15,679	61,560	73,086	69,274	91,970	80,666	65,195	0	0	86,282
50 to 54	68,130	0	90,130	93,230	86,617	91,599	96,103	0	0	89,873
55 to 59	169,081	75,834	61,035	84,774	95,240	89,684	83,351	114,220	0	91,278
60 to 64	0	0	70,522	83,738	60,952	84,685	104,809	42,220	0	80,371
65 & Up	0	0	0	0	75,686	110,440	86,987	0	90,220	94,271
Totals	86,870	70,124	75,319	82,966	89,805	88,563	90,263	93,649	90,220	88,322

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#### TABLE A-6

### Analysis of Active Members by Age and Service - Tier I Plan B

Number of Members												
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years		
Under 20	0	0	0	0	0	0	0	0	0	0		
20 to 24	0	0	0	0	0	0	0	0	0	0		
25 to 29	0	0	0	0	0	0	0	0	0	0		
30 to 34	0	0	0	0	0	0	0	0	0	0		
35 to 39	0	0	0	0	0	0	0	0	0	0		
40 to 44	5	6	8	6	198	35	0	0	0	258		
45 to 49	38	30	40	36	637	830	27	0	0	1,638		
50 to 54	37	57	71	87	492	1,489	592	31	0	2,856		
55 to 59	17	22	41	39	279	620	470	103	3	1,594		
60 to 64	2	8	10	16	105	187	138	100	12	578		
65 & Up	1	0	3	3	37	67	31	64	41	247		
Totals	100	123	173	187	1,748	3,228	1,258	298	56	7,171		

				A	verage Salaries	,				
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	53,733	49,416	62,805	73,075	62,430	61,106	0	0	0	62,039
45 to 49	59,855	58,799	67,294	71,281	72,734	66,296	66,398	0	0	68,649
50 to 54	59,415	69,859	65,716	70,546	76,489	77,549	75,487	77,918	0	76,047
55 to 59	67,725	81,816	75,056	76,093	76,994	87,209	87,678	81,391	79,299	84,301
60 to 64	61,788	96,159	69,926	101,670	72,491	82,920	96,751	110,453	95,886	89,765
65 & Up	77,152	0	102,777	79,665	79,387	88,367	100,455	112,291	113,283	98,898
Totals	60,936	70,014	69,046	74,735	73,430	76,869	82,795	97,419	107,734	77,581

# TABLE A-7

## Analysis of Active Members by Age and Service - Tier I Plan C

				Nu	mber of Membe	rs				
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	7	2	0	0	0	9
45 to 49	1	2	1	0	14	35	1	0	0	54
50 to 54	6	2	0	3	18	71	25	2	0	127
55 to 59	2	1	0	1	15	36	16	12	0	83
60 to 64	1	1	1	1	6	17	8	5	1	41
65 & Up	0	1	1	1	5	7	7	8	3	33
Totals	10	7	3	6	65	168	57	27	4	347

Average Salaries												
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years		
Under 20	0	0	0	0	0	0	0	0	0	0		
20 to 24	0	0	0	0	0	0	0	0	0	0		
25 to 29	0	0	0	0	0	0	0	0	0	0		
30 to 34	0	0	0	0	0	0	0	0	0	0		
35 to 39	0	0	0	0	0	0	0	0	0	0		
40 to 44	0	0	0	0	69,810	65,777	0	0	0	68,914		
45 to 49	49,700	73,993	76,102	0	62,138	64,096	73,036	0	0	64,348		
50 to 54	100,115	67,044	0	63,724	73,371	63,302	65,156	56,913	0	65,150		
55 to 59	56,511	48,104	0	75,781	65,684	70,644	64,499	55,674	0	66,079		
60 to 64	43,121	82,209	46,400	220,392	69,426	68,341	80,837	94,489	39,591	77,152		
65 & Up	0	119,020	93,899	47,058	75,535	71,579	66,133	80,096	102,774	77,295		
Totals	80,653	75,915	72,134	89,067	68,596	65,925	67,431	70,190	86,979	68,327		

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### TABLE A-8

## Analysis of Active Members by Age and Service - Tier II Hazardous Duty

				Nu	mber of Membe	rs				
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	2	5	0	0	0	0	0	0	0	7
30 to 34	9	98	148	0	0	0	0	0	0	255
35 to 39	19	148	908	301	6	0	0	0	0	1,382
40 to 44	26	87	667	858	126	0	0	0	0	1,764
45 to 49	11	47	407	464	160	2	0	0	0	1,091
50 to 54	7	41	264	256	92	10	2	0	0	672
55 to 59	5	31	146	184	59	0	0	1	0	426
60 to 64	2	10	72	77	33	0	0	3	0	197
65 & Up	0	7	22	16	5	0	0	0	0	50
Totals	81	474	2,634	2,156	481	12	2	4	0	5,844

Average Salaries											
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years	
Under 20	0	0	0	0	0	0	0	0	0	0	
20 to 24	0	0	0	0	0	0	0	0	0	0	
25 to 29	32,061	52,321	0	0	0	0	0	0	0	46,532	
30 to 34	65,700	60,581	65,712	0	0	0	0	0	0	63,739	
35 to 39	68,585	64,643	68,366	71,842	72,054	0	0	0	0	68,743	
40 to 44	61,446	65,629	67,031	77,396	84,438	0	0	0	0	73,164	
45 to 49	69,550	67,033	66,795	73,423	83,686	79,416	0	0	0	72,152	
50 to 54	57,454	66,513	66,858	74,068	81,378	77,645	100,661	0	0	71,735	
55 to 59	82,315	71,486	70,222	73,997	82,367	0	0	147,455	0	73,950	
60 to 64	56,626	69,607	67,500	72,334	72,502	0	0	102,083	0	70,750	
65 & Up	0	27,835	69,857	67,522	70,998	0	0	0	0	63,341	
Totals	64,792	64,261	67,577	74,826	82,235	77,940	100,661	113,426	0	71,214	

## TABLE A-9

# Analysis of Active Members by Age and Service - Tier II All Others

Number of Members											
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years	
Under 20	0	0	0	0	0	0	0	0	0	0	
20 to 24	0	0	0	0	0	0	0	0	0	0	
25 to 29	13	12	2	0	0	0	0	0	0	27	
30 to 34	38	132	180	4	0	0	0	0	0	354	
35 to 39	109	310	1,087	598	46	0	0	0	0	2,150	
40 to 44	152	279	1,036	1,791	731	2	0	0	0	3,991	
45 to 49	140	236	905	1,511	955	17	0	0	0	3,764	
50 to 54	136	239	816	1,243	788	29	10	0	0	3,261	
55 to 59	115	176	671	967	611	23	28	17	0	2,608	
60 to 64	50	94	396	537	307	16	5	13	0	1,418	
65 & Up	29	50	162	156	94	6	2	2	0	501	
Totals	782	1,528	5,255	6,807	3,532	93	45	32	0	18,074	

Average Salaries												
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years		
Under 20	0	0	0	0	0	0	0	0	0	0		
20 to 24	0	0	0	0	0	0	0	0	0	0		
25 to 29	43,894	45,213	45,123	0	0	0	0	0	0	44,571		
30 to 34	53,997	56,980	57,429	47,799	0	0	0	0	0	56,784		
35 to 39	52,690	60,280	63,861	57,217	56,591	0	0	0	0	60,775		
40 to 44	51,716	62,001	64,162	65,655	65,155	60,740	0	0	0	64,387		
45 to 49	51,305	59,957	63,617	66,454	70,994	72,071	0	0	0	65,978		
50 to 54	47,208	59,249	66,031	66,530	72,189	87,011	70,264	0	0	66,626		
55 to 59	41,160	58,911	65,382	66,356	73,794	73,479	87,468	73,442	0	66,570		
60 to 64	36,481	50,491	63,750	66,987	70,703	84,589	96,190	78,356	0	65,124		
65 & Up	18,135	51,120	55,424	67,230	65,682	67,250	36,511	108,280	0	58,714		
Totals	47,203	58,920	63,914	65,481	70,182	78,677	82,349	77,616	0	64,730		

#### TABLE A-10

#### Analysis of Active Members by Age and Service - Tier IIA Hazardous Duty

				Nu	mber of Membe	rs				
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	1	0	0	0	0	0	0	0	0	1
20 to 24	89	0	0	0	0	0	0	0	0	89
25 to 29	546	139	0	0	0	0	0	0	0	685
30 to 34	500	577	7	0	0	0	0	0	0	1,084
35 to 39	375	583	7	0	0	0	0	0	0	965
40 to 44	268	310	3	0	1	0	0	0	0	582
45 to 49	189	219	2	1	0	1	0	0	0	412
50 to 54	93	135	2	0	1	0	0	0	0	231
55 to 59	53	104	1	0	0	0	0	0	0	158
60 to 64	30	87	1	0	0	0	0	0	0	118
65 & Up	12	79	0	0	0	0	0	0	0	91
Totals	2,156	2,233	23	1	2	1	0	0	0	4,416

				A	verage Salaries	•				
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years
Under 20	34,711	0	0	0	0	0	0	0	0	34,711
20 to 24	34,696	0	0	0	0	0	0	0	0	34,696
25 to 29	45,813	53,511	0	0	0	0	0	0	0	47,375
30 to 34	49,944	57,407	60,214	0	0	0	0	0	0	53,983
35 to 39	49,111	57,653	70,119	0	0	0	0	0	0	54,424
40 to 44	53,769	55,304	66,642	0	39,778	0	0	. 0	0	54,629
45 to 49	58,221	57,969	116,637	40,642	0	74,484	0	0	0	58,368
50 to 54	55,076	55,485	67,255	0	71,436	0	0	0	0	55,491
55 to 59	57,219	55,972	59,464	0	0	0	0	0	0	56,412
60 to 64	59,248	47,596	63,684	0	0	0	0	0	0	50,695
65 & Up	67,455	42,695	0	0	0	0	0	0	0	45,960
Totals	49,945	55,906	69,704	40,642	55,607	74,484	0	0	0	53,068

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# **TABLE A-11**

### Analysis of Active Members by Age and Service - Tier IIA All Others

Number of Members												
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years		
Under 20	124	0	0	0	0	0	0	0	0	124		
20 to 24	684	11	0	0	0	0	0	0	0	695		
25 to 29	1,362	257	4	0	0	0	0	0	0	1,623		
30 to 34	1,231	942	7	0	0	0	0	0	0	2,180		
35 to 39	1,194	964	3	4	0	0	0	0	0	2,165		
40 to 44	1,130	914	9	4	1	0	0	0	0	2,058		
45 to 49	1,025	883	7	2	1	0	0	0	0	1,918		
50 to 54	872	687	5	1	2	0	0	0	0	1,567		
55 to 59	644	557	14	0	2	0	0	0	0	1,217		
60 to 64	270	278	6	2	0	1	0	0	0	557		
65 & Up	127	109	1	0	0	0	0	0	0	237		
Totals	8,663	5,602	56	13	6	1	0	0	0	14,341		

Average Salaries											
Age   Service	0 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	All Years	
Under 20	8,697	0	0	0	0	0	0	0	0	8,697	
20 to 24	19,765	26,740	0	0	0	0	0	0	0	19,876	
25 to 29	39,568	45,413	41,378	0	0	0	0	0	0	40,498	
30 to 34	44,002	55,455	53,695	0	0	0	0	0	0	48,982	
35 to 39	44,496	53,710	57,413	52,278	0	0	0	0	0	48,631	
40 to 44	46,708	53,859	46,083	38,941	71,163	0	0	0	0	49,878	
45 to 49	44,743	55,768	53,530	19,868	38,357	0	0	0	0	49,821	
50 to 54	47,194	58,622	59,908	61,560	56,522	0	0	0	0	52,266	
55 to 59	44,696	57,902	75,194	0	24,123	0	0	0	0	51,057	
60 to 64	40,664	57,743	53,935	66,295	0	17,677	0	0	0	49,382	
65 & Up	27,076	46,609	90,486	0	0	0	0	0	0	36,327	
Totals	41,415	55,000	58,383	46,058	45,135	17,677	0	0	0	46,792	

#### TABLE A-12

	Number of Members					Average Benefit Paid in FY06				
		Service	Non-Service	Hazardous			Service	Non-Service	Hazardous	
Current	Service	Connected	Connected	Duty		Service	Connected	Connected	Duty	
Age	Retirement	Disability	Disability	Retirement	Other	Retirement	Disability	Disability	Retirement	Other
Under 40	0	88	12	0	146	0	26,492	23,785	0	15,467
40 to 44	0	143	69	80	62	0	24,917	23,542	39,024	13,232
45 to 49	1	213	158	278	98	26,656	26,137	25,010	40,788	18,564
50 to 54	5	207	219	488	156	27,310	24,238	26,056	45,160	21,809
55 to 59	2,315	234	318	591	843	36,914	23,533	27,980	45,347	15,070
60 to 64	3,836	227	275	543	1,017	34,018	22,551	26,357	47,232	15,267
65 to 69	4,053	175	195	354	942	29,447	20,786	21,858	42,492	12,904
70 to 74	4,014	126	161	288	904	26,796	16,434	19,434	37,837	12,505
75 to 79	3,978	89	104	171	792	24,115	13,521	14,706	34,410	12,671
80 to 84	3,270	40	58	108	725	20,486	10,780	11,859	30,497	13,723
85 to 89	1,915	17	33	29	507	17,798	10,007	12,178	26,710	11,973
90 to 94	777	6	10	4	202	15,497	15,366	15,204	18,535	11,483
95 and up	222	0	6	2	65	14,363	0	9,434	32,221	12,575
Totals	24,386	1,565	1,618	2,936	6,459	26,870	22,179	23,444	42,567	13,808

## Analysis of Retired Members and Beneficiaries by Current Age

APPENDIX **B** 

SUMMARY OF PLAN PROVISIONS

This summary of plan provisions is based on our understanding of the benefits as described by the Connecticut General Statutes, summary plan descriptions, and the Connecticut State Employees Retirement System. It is intended only to describe the essential features of the plan. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

#### 1. <u>Membership</u>

<u>*Tier I [Sec. 5-160]:*</u> Each state employee appointed to classified service shall become a member on the first day of the pay period following permanent appointment.

Each officer elected by the people and each appointee of such officer exempt from classified service may elect to become a member, effective on the first day of the pay period following receipt of such election.

Each other state employee exempt from classified service shall become a member on the first day of the pay period following six months of employment.

Except as noted below, employees hired prior to July 1, 1984 could elect (no later than January 2, 1984) to be covered under either Plan B or Plan C. Employees under contracts with Union Independent and CSEA unions hired prior to October 1, 1982 had until October 1, 1984 to make such election.

<u>*Tier II [Sec. 5-192e]:*</u> Tier II consists of employees first joining the retirement system on or after July 1, 1984 plus employees hired between July 1, 1982 and January 1, 1984 who elected Tier II. Each state employee becomes a member on the first day of employment.

<u>*Tier IIA*</u>: Tier IIA consists of employees first joining the retirement system on or after July 1, 1997.

#### 2. Normal Retirement Eligibility

Tier I - Hazardous Duty [Sec. 5-173]: 20 years of credited service.

<u>*Tier I - Plans B and C [Sec. 5-162]:*</u> The earliest of age 55 with 25 years of service, age 65 with 10 years of service, or age 70 with 5 years of service.

<u>*Tier II [Sec. 5-1921] and Tier IIA:*</u> The earliest of age 62 with 10 years of vesting service (effective July 1, 1992), age 60 with 25 years of vesting service, age 70 with 5 years of vesting service, or age 62 with 5 years of actual state service for terminations on or after July 1, 1997. Hazardous duty members may retire after 20 years.

#### 3. Normal Retirement Benefit

<u>Final Average Earnings</u>: The average salary of the three highest paid years of service. Commencing January 1, 1986, no one year's earnings can be greater than 130% of the average of the preceding two years in calculating the Final Average Earnings.

<u>*Tier I - Hazardous Duty [Sec. 5-173]:*</u> 50% of Final Average Earnings plus 2% for each year of service in excess of 20.

<u>Tier I Plan B [Sec. 5-162]</u>: Same as Plan C up to age 65; thereafter 1% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,800 times years of service. At age 70, greater of 1.25% of Final Average Earnings up to \$4,800 plus 2.5% of Final Average Earnings in excess of \$4,800 times years of service (maximum 20 years) or 1.0% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,800 plus 2% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,80

<u>*Tier I Plan C [Sec. 5-162]:*</u> 2% of Final Average Earnings times years of service. At age 70, greater of 2.5% of Final Average Earnings time years of service (maximum 20 years) or 2.0% of Final Average Earnings times years of service. Minimum benefit with 25 years is \$833.34 per month.

<u>Tier II Hazardous Duty Members [Sec. 5-192n] and Tier IIA</u>: 2.5% of Final Average Earnings times up to 20 years of service plus 2% of Final Average Earnings times years of service in excess of 20 years, if any. Minimum benefit with 25 years is \$360 per month.

<u>Tier II All Other [Sec. 5-1921] and Tier IIA</u>:  $1\frac{1}{3}\%$  of Final Average Earnings plus  $\frac{1}{2}\%$  of Final Average Earnings in excess of the year's breakpoint\*, times up to 35 years of service from October 1, 1982 plus  $1\frac{5}{8}\%$  of Final Average Earnings times years of service in excess of 35 years, if any. Minimum benefit with 25 years is \$360 per month.

\* \$10,700 increased by 6% each year after 1982, rounded to the nearest \$100, but not greater than Social Security Covered Compensation.

#### 4. <u>Early Retirement</u>

Tier I - Hazardous Duty: None.

<u>*Tier I [Sec. 5-162]:*</u> Age 55 with 10 years of service; benefit is Normal Retirement Benefit reduced for retirement prior to age 65 with less than 25 years of service.

<u>*Tier II [Sec. 5-192m] and Tier IIA:*</u> Age 55 with 10 years of vesting service; benefit is Normal Retirement Benefit reduced ¼% (effective July 1, 1991) for each month prior to age 60 if at least 25 years of service or age 62 if at least 10 but less than 25 years of service. Minimum benefit with 25 years of service is \$360 per month.

#### 5. Deferred Retirement

<u>*Tier I [Sec. 5-162]:*</u> May be deferred but not beyond age 70.

<u>*Tier II [Sec. 5-1921] and Tier IIA:*</u> May be deferred but not beyond age 70. Benefit is based on salary and service to actual retirement.

#### 6. Vesting

*Tier I [Sec. 5-166]:* Ten years of service; benefit is payable at Normal Retirement Age or an early retirement benefit is payable at age 55; in addition employees are always fully vested in their own contributions (after January 1, 1983, Tier I contributions with 5% interest from January 1, 1982).

#### Tier I - Hazardous Duty [Sec. 5-173(f)]: As above.

<u>*Tier II [Sec. 5-1920] and Tier IIA:*</u> Effective July 1, 1997, 5 years of actual state service, 10 years of vesting service, or age 70 with 5 years of service; benefit is payable at Normal Retirement Age or an early retirement benefit is payable at age 55. In addition employees are always fully vested in their own contributions with 5% interest.

#### 7. <u>Member Contributions</u>

<u> Tier I - Hazardous Duty [Sec. 5-161]</u>	4% of earnings up to the Social Security Taxable Wage Base plus 5% of earnings above that level.
<u> Tier I - Plan B [Sec. 5-161]</u>	2% of earnings up to the Social Security Taxable Wage Base plus 5% of earnings above that level.
<u> Tier I - Plan C [Sec. 5-161]</u>	5% of earnings.
Tier II - All Other [Sec. 5-192u]	None.
Tier II - Hazardous Duty [Sec. 5-192u]	4% of earnings.
<u> Tier IIA – All other</u>	2% of earnings.
Tier IIA – Hazardous Duty	5% of earnings.

#### 8. <u>Cost of Living</u>

[Sec. 5-162b, 5-162d]: Annual adjustment each July 1 of up to 5% for retirements prior to July 1, 1980; 3% for retirements after July 1, 1980. For members (or beneficiaries) not covered by Social Security and age 62 and over, the maximum increase is 6%. If an actuarial surplus (as defined in the law) exists, the Commission may further increase retired benefits.

For employees retiring after June 30, 1999, the annual adjustment will be 60% of the increase in the CPI up to 6% and 75% of the increase in the CPI over 6%. This adjustment will be no less than 2.5% and no greater than 6%. Employees retiring between July 1, 1997 and June 30, 1999 made an irrevocable choice between this formula and a fixed 3% annual adjustment.

<u>*Tier IIA:*</u> An employee must have at least ten years of actual state service or directly make the transition into retirement in order to be eligible for annual adjustments.

#### 9. Death Benefits

<u>*Tier I - State Police [Sec. 5-146]:*</u> Survivor benefits to spouse of \$670 per month plus \$300 to a surviving dependent child (or \$700 to surviving dependent children).

<u>Tier I [Sec. 5-165a]</u>: If eligible for early or normal retirement, spouse benefit is equal to 50% of the average of the Life Benefit and the 50% Joint & Survivor Benefit the member would have received. If not eligible to retire but 25 years of service, the same benefit calculated as though age 55 using service and earnings at death.

[Sec. 5-168]: If not eligible for retirement, return of contributions (after October 1, 1982, Tier I, with interest from January 1, 1982 at 5%).

<u>*Tier II [Sec. 5-192r] and Tier IIA:*</u> If eligible for early or normal retirement, spouse benefit is equal to 50% of the member's benefit under a 50% Joint & Survivor Annuity. If not eligible to retire but 25 years of service, the same benefit calculated as though age 55 using service and earnings at death. If not eligible for retirement, return of contributions with 5% interest.

<u>Tiers I [Sec. 5-144], II [Sec. 5-192t] and IIA</u>: If death is due to employment, a spouse with dependent children under 18 will be paid \$100,000 in 10 annual installments while living and not remarried; also \$50 per month per child under age 18. If no children under age 18, spouse [or dependent parent(s), if no spouse] will be paid \$50,000 in not less than 10 annual installments.

#### 10. Disability Benefits

<u>*Tier I [Sec. 5-142, 5-169, 5-173]:*</u> For non-service disabilities occurring prior to age 60 with at least 5 years of service, benefit is 3% of Final Average Earnings times years of service; maximum benefit is  $1^2/_3\%$  of Final Average Earnings times years of service projected to age 65. If disability occurs prior to age 60 and is due to service, benefit is  $1^2/_3\%$  of Salary times years of service projected to age 65 (maximum 30 years) and is payable regardless of length of service. Exception: State Police benefit is equal to the normal retirement benefit if more than 20 years of service. State Police receive an additional benefit of \$360 per month plus \$300 to spouse plus \$300 to a surviving dependent child (or \$700 to surviving dependent children).

If in-service disability occurs after the member is eligible for a non-service disability, the member receives the greater of the in-service and non-service disability benefits.

<u>Tier II [5-192p] and Tier IIA</u>: Prior to age 65 and due to service or with at least 10 years of service, benefit is  $1\frac{1}{3}$ % of Final Average Earnings plus  $\frac{1}{2}$ % of Final Average Earnings in excess of the year's breakpoint, times service projected to age 65 (maximum 30 years) or service to Date of Disability if greater.

<u>*Tier I, II, and IIA:*</u> Maximum disability benefit is the lesser of 100% of salary less Workers Compensation, Social Security and non-rehabilitation earnings, or 80% of salary less Workers Compensation and Social Security. Social Security is primary plus family.

Minimum disability benefit including Workers Compensation and Social Security is 60% of salary.

### 11. Optional Forms of Payment

50% or 100% Joint and Survivor (Normal Form if married at least 12 months). Ten years certain and life. Twenty years certain and life. Life (Normal Form if not married at least 12 months).

#### 12. <u>Part-Time Employment</u>

[Sec. 5-162g & Sec. 5-192k]: Service is treated as if full-time for eligibility. If member is consistently part-time for all periods, service is treated as if full-time. If member has a varying schedule or some part-time and some full-time service, service and salary are proportionately adjusted.

<u>Appendix C</u>

**ACTUARIAL METHOD AND ASSUMPTIONS** 

#### A. Funding Method

The actuarial valuation method used is the *Projected Unit Credit Cost Method*. Recommended annual contributions until the actuarial liability is completely funded will consist of two pieces: Normal Cost plus a payment towards the Unfunded Actuarial Liability.

The *Actuarial Liability* is determined directly as the present value of benefits accrued to date, where the accrued benefits for each Member is the pro-rata portion (based on service to date) of the *projected* benefit payable at death, disability, retirement or termination. The Normal Cost is then similarly determined as the present value of the portion of the *projected* benefit attributable to the current year.

The Actuarial Value of Assets is determined by first projecting the Actuarial Value forward from the beginning of the prior fiscal year based on the actual cash flow during the fiscal year and the assumed interest rate. The difference between this expected actuarial value and the actual market value is recognized over a five year period, subject to the Actuarial Value remaining within +/- 20% of the Market Value.

The Unfunded Actuarial Liability is the Actuarial Liability less the Actuarial Value of Assets.

# B. Actuarial Assumptions

Interest Rate	8.50%	
Payroll Growth Rate	5.00%	
Salary Scale	<u>Years of Service</u> 0 1 2 3 4 5 10 15 20 25	Rate         15.00         15.00         10.00         7.00         6.50         6.00         5.50         4.25         4.25         4.25         4.25
COLA	<u>Group</u> Pre July 1, 1980 Retirees 1980 – 1997 Retirees Post July 1, 1997 Retirees	<u>Rate</u> 3.75 3.00 2.75
Taxable Wage Base Growth	3.50%	
Healthy Mortality	1994 Group Annuity Mortality	Table.
		sumed to be married with an average average age 12; female spouses are ager than male spouses.
	20% of pre-retirement deaths a	re assumed to be service related.
	State Police are assumed to employees.	comprise 50% of Tier I Hazardous
Disabled Mortality	80% of PBGC Disabled Mortal	ity with Soc. Security for Males
	60% of PBGC Disabled Mortal	ity with Soc. Security for Females

Turnover

Ten year select and ultimate rates as shown below for non-hazardous employees; the same table with rates multiplied by a factor of 40% for hazardous employees.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	)+
20 40 30 20 15 5 5	<u> </u>
	.0
25 30 20 10 8 5 5	.0
	.2
	.0
	.6
	.0
	.2
	.0
60 25 20 10 8 5 0	.0
Age <u>First Year Eligible</u> <u>All Other A</u>	<u>zes</u>
Thru 44 25 15	
\$6-592520\$45-482520\$49-531020\$54-551025\$6-591040	
<b>1</b> 49-53 10 20	
<b>E</b> 54-55 10 25	
<b>H</b> 56-59 10 40	
60-69 25 40	
70 100 100	
First Year Eligible All Other A	<u>zes</u>
Reduced Unreduced	
<u>Age</u> <u>Benefits</u> <u>Benefits</u> *	
55 17.5 15.0 12.5	
56-60 15.0 15.0 12.5	
Same         61         25.0         25.0         15.0           62         40.0         30.0         30.0           63         35.0         35.0         25.0	
<b>6</b> 2 40.0 30.0 30.0	
<b>6</b> 3 35.0 35.0 25.0	
<b>3</b> 05 55.0 25.0 25.0	
E         03         35.0         35.0         25.0           E         64         45.0         45.0         25.0	
64         45.0         45.0         25.0           65         65.0         65.0         40.0	
04 43.0 43.0 23.0	

\* These rates also apply for Tier I Plan B and Tier I Plan C members upon attainment of age 60 with at least 10 years of service.

Retirement

Disability	In-service Hazardous - 0.11% a	at all ages				
·	All Others - 0.03%	at all ages				
	Non-service 25% of United Auto	Workers Disability	y Table			
	To take into account State Police offsets for Workers Compensati rehabilitation earnings, the follow benefits (as a percent of salary) are v	on, social securi wing minimum a	ty, and non			
	Tier I State Police All other members	<u>Minimum</u> 60% 40%	<u>Maximum</u> 80% 60%			
Member Data Processing	Service for active members is base reported to us and is adjusted to a service that are reported to us. For p and retirement eligibility, we have r (which applies to actual state se requirement (which applies to vestin	reflect any periods purposes of Tier II a reflected the five yearvice) rather than	s of purchase and IIA vestin ear requiremen			
	Active members who are on a leave of absence or out on Workers Compensation are not reported to us. We have not included an additional liability for such members who may have accrued benefits and may resume employment in the future.					
	Terminated vested members are rep- an application for benefits to the R included an additional liability for with a vested benefit who may apply	etirement Division r members who h	. We have no ave terminate			
	For terminated vested members for whom a benefit was not provi we have estimated benefits based on their date of hire and termina and the average salaries of active members in the prior valuation.					
	For retired Tier I Plan B members supplied with the current benefit an will be reduced on average by \$750	nount; we assume				
	Beneficiaries of retired members r	eceiving continger				

APPENDIX D

**ACTUARIAL SURPLUS TEST** 

2

## CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM ACTUARIAL SURPLUS TEST AS OF JUNE 30, 2006

#### <u>APPENDIX D</u>

#### Actuarial Surplus Test as of June 30, 2006

Section 5-162(h) of the General Statutes of Connecticut provides that the Retirement Commission may grant additional cost of living adjustments for retired employees if an actuarial surplus exists. An actuarial surplus is deemed to exist if three criteria are met:

*I. Investment Income:* The actual rate of return for the Fiscal Year ending on the determination date must exceed the actuarial interest rate assumption.

Market Value of Assets on June 30, 2005 (A)	\$8,146,304,073
Market Value of Assets on June 30, 2006 (B)	8,789,643,845
Investment Income for FY 2005-06 (I)	883,955,493
Actual Rate of Return for FY 2005-06: 2I / (A + B - I)	11.01%
Actuarial Interest Rate Assumption	8.50%

Actual return of 11.01% is more than assumed 8.50%, so the first criterion is met.

#### II. Assets Versus Liabilities: Market value of assets must exceed 50% of specified

Market Value of Assets on June 30, 2006	\$8,789,643,845
Specified Liabilities on June 30, 2006	
Liability for Retired Members	9,931,385,702
Liability for Terminated Vested Members	206,681,823
Active Member Contributions with Interest	632,550,021
Total	10,770,617,546
50% of Specified Liabilities	5,385,308,773

Market Value exceeds 50% of specified liabilities, so the second criterion is met.

*III. Unfunded Liability:* Actual unfunded liability must be less than the projected unfunded liability five years from the determination date.

Actual Unfunded Liability on June 30, 2006	\$7,878,956,254
Projected Unfunded Liability on June 30, 2011 (see page D-2)	2,917,539,000

Actual Unfunded Liability is not less than Projected Unfunded Liability so the third criterion is not met and there is no actuarial surplus.

## CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM ACTUARIAL SURPLUS TEST AS OF JUNE 30, 2006

#### <u>APPENDIX D</u>

#### Actuarial Surplus Test as of June 30, 2006 - Projection of Unfunded Liability

Section 5-162-h(b)(2) of the General Statutes of Connecticut specifies the means of calculating the Projected Unfunded Liability used in the third criterion of the Actuarial Surplus Test. The projection reflects the actual unfunded liability as of December 31, 1983 adjusted for changes in actuarial assumptions and cost methods through the determination date. No provision is made in the Statute for reflecting the impact of plan changes. The projection below reflects the following changes: data correction (June 30, 1987); change in actuarial assumptions (June 30, 1987); change in actuarial cost method (June 30, 1988); change in actuarial assumptions - interest rate only (June 30, 1989); change in actuarial cost method - amortization period only (June 30, 1992); change in actuarial assumptions (June 30, 1993); change in actuarial cost method - level percent amortization (June 30, 1997); change in actuarial methods and assumptions (June 30, 2000); change in actuarial assumptions (June 30, 2004).

	(\$000) June 30		(\$000) June 30		(\$000) June 30
Year	Unfunded Liability	Year	Unfunded Liability	Year	Unfunded Liability
1097	Φ <u>Ω</u> 504 550	2002	¢2 2 C0 590	2017	\$2 AE1 895
1987	\$2,524,556	2002	\$2,360,589	2017	\$3,051,885
1988	1,954,257	2003	2,429,273	2018	3,036,354
1989	1,432,333	2004	2,502,591	2019	3,005,755
1990	1,939,758	2005	2,569,504	2020	2,958,121
1991	1,930,524	2006	2,634,814	2021	2,891,282
1992	1,920,505	2007	2,698,021	2022	2,802,848
1993	1,794,192	2008	2,758,563	2023	2,690,187
1994	1,787,586	2009	2,815,812	2024	2,550,405
1995	1,780,419	2010	2,869,064	2025	2,380,319
1996	1,772,643	2011	2,917,539	2026	2,176,432
1997	1,764,205	2012	2,960,364	2027	1,934,904
1998	1,835,087	2013	2,996,571	2028	1,651,520
1999	1,907,249	2014	3,025,084	2029	1,321,656
2000	2,222,296	2015	3,044,712	2030	940,241
2001	2,291,494	2016	3,054,133	2031	501,719
				2032	0