

ACTUARIAL VALUATION
CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM

AT JUNE 30, 1995

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL VALUATION**

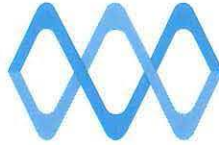
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November 14, 1995

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

Re: Connecticut State Employees Retirement System

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, 1995. 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 #5. 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, details on the Actuarial Surplus as of June 30, 1995, and Entry Age Normal Results.

As developed in Section IV, the actuarially determined contribution for the fiscal year beginning July 1, 1996, including Federal reimbursements, is \$542,780,936. In accordance with the provisions of collectively negotiated agreements (SEBAC III and the Memorandum of Agreement), \$193,550,224 of this amount will not be paid. The negotiated contribution is \$349,230,712.

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November 14, 1995
Connecticut State Employees Retirement System
Page 2

In our opinion, this report fairly presents the financial and actuarial position of the Connecticut State Employees Retirement System at June 30, 1995. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices set forth by the American Academy of Actuaries.

Respectfully submitted,

MILLIMAN & ROBERTSON, INC.

A handwritten signature in cursive script that reads "Althea Schwartz".

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

SECTION I

EXECUTIVE SUMMARY

SECTION I

EXECUTIVE SUMMARY

PURPOSE OF REPORT

This report presents the results of the June 30, 1995 actuarial valuation of the Connecticut State Employees Retirement System (SERS). The primary purposes for performing the valuation are:

- ✓ to determine the contributions to be paid by the Employer for the Fiscal Year beginning July 1, 1996
- ✓ to disclose asset and liability measures as of June 30, 1995, and
- ✓ to analyze and report on trends in SERS contributions, assets, and liabilities over the past several years.

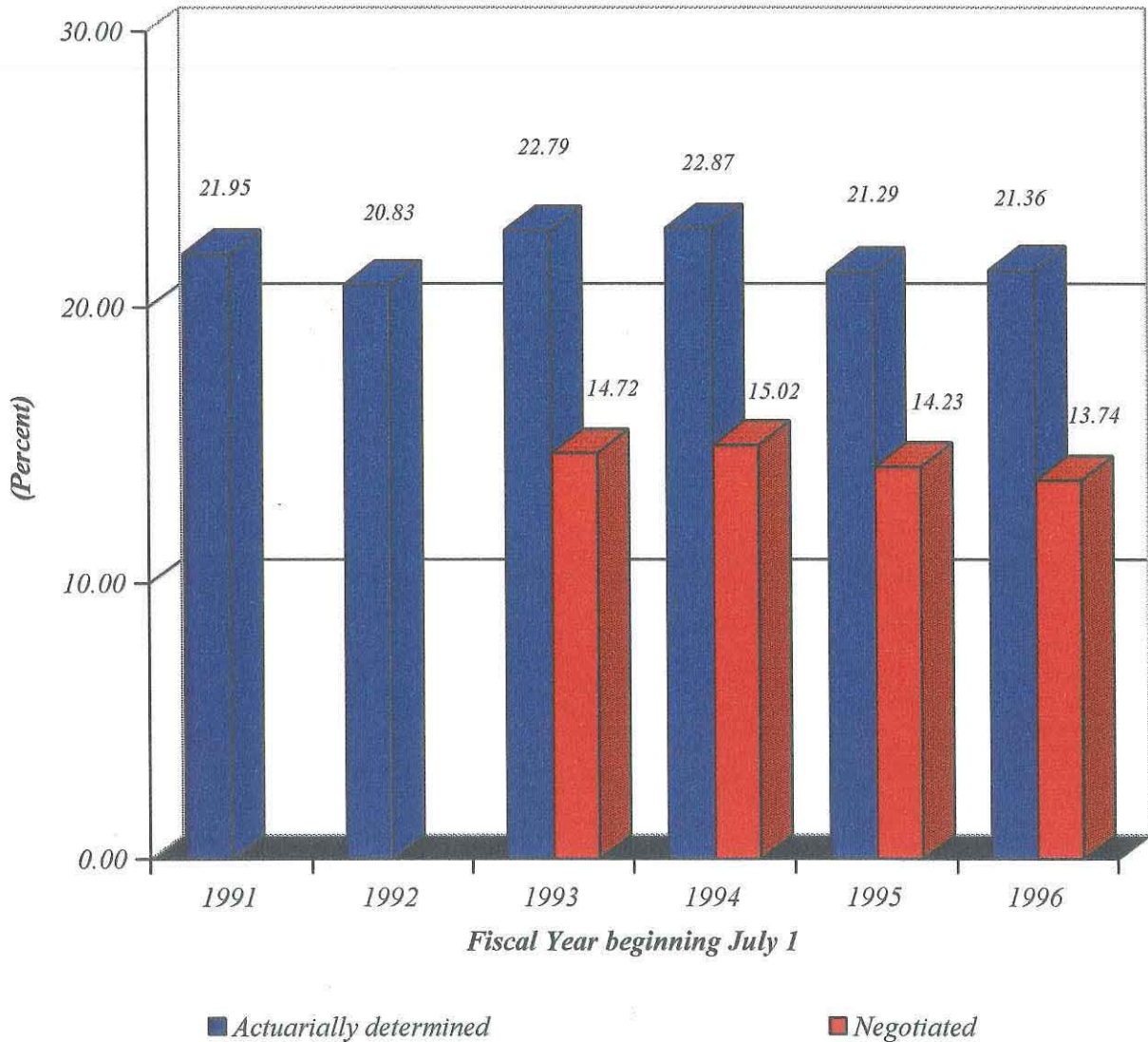
ORGANIZATION OF THE EXECUTIVE SUMMARY

- *Major Findings...* shows graphically, key results for each of the last six actuarial valuations.
- *SERS Experience July 1, 1994 to June 30, 1995...* highlights the major events influencing this valuation.
- *SERS Contribution...* compares this year's contribution to last year's and analyzes the change.
- *Principal Results...* contains a summary of comparative statistics for the June 30, 1994 and the June 30, 1995 valuations.

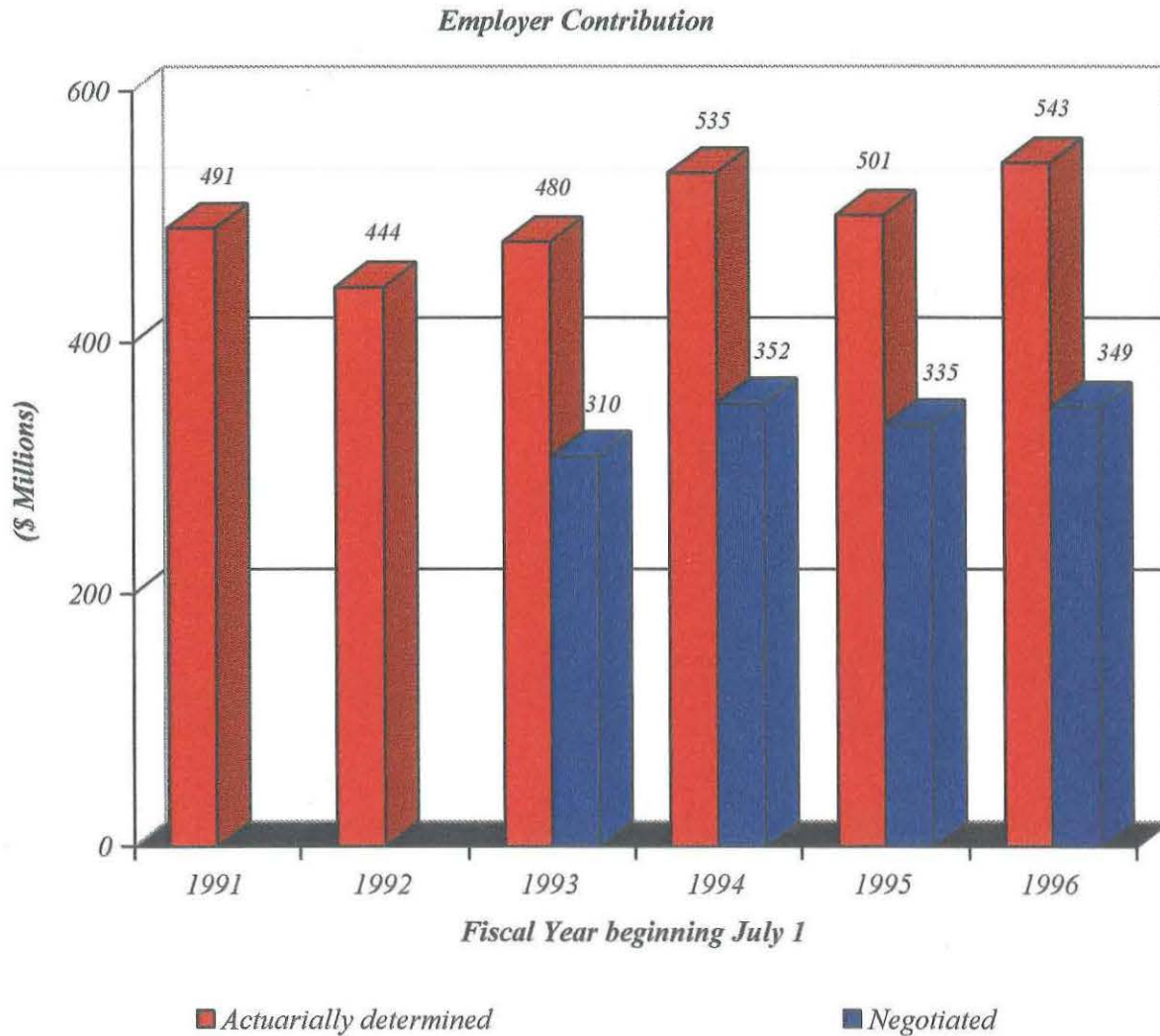
MAJOR FINDINGS

The major findings of the 1995 valuation are summarized and compared in the following charts:

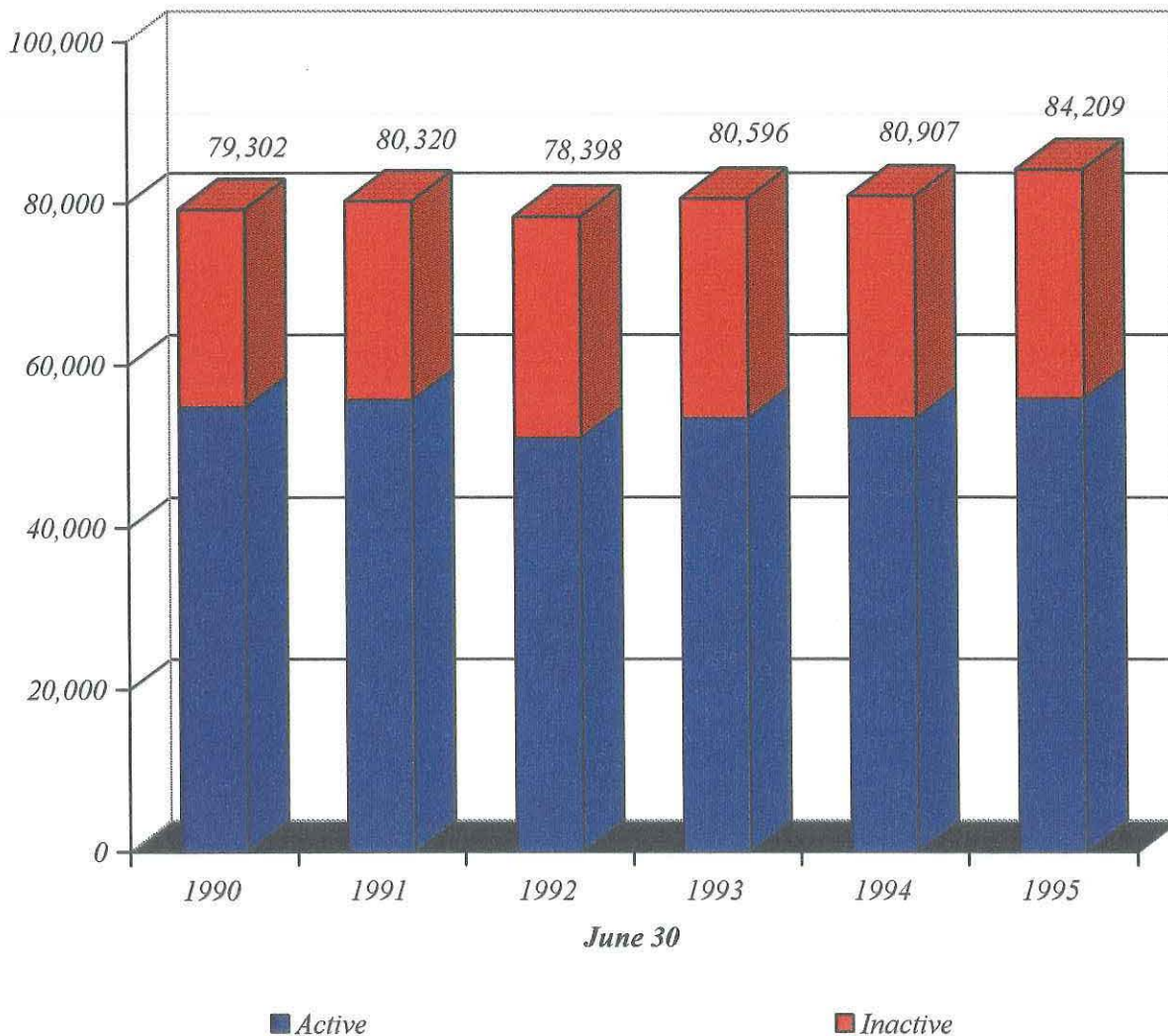
Employer Contribution Rate



The bar graph depicts the actuarially determined Employer's contribution rate and, since 1993, the rate reflecting negotiated changes. As actuarially determined, the Employer's contribution rate has been relatively level. For 1996, the negotiated rate is lower than for prior years due to a reduction in the unfunded liability payment per the Memorandum of Agreement.

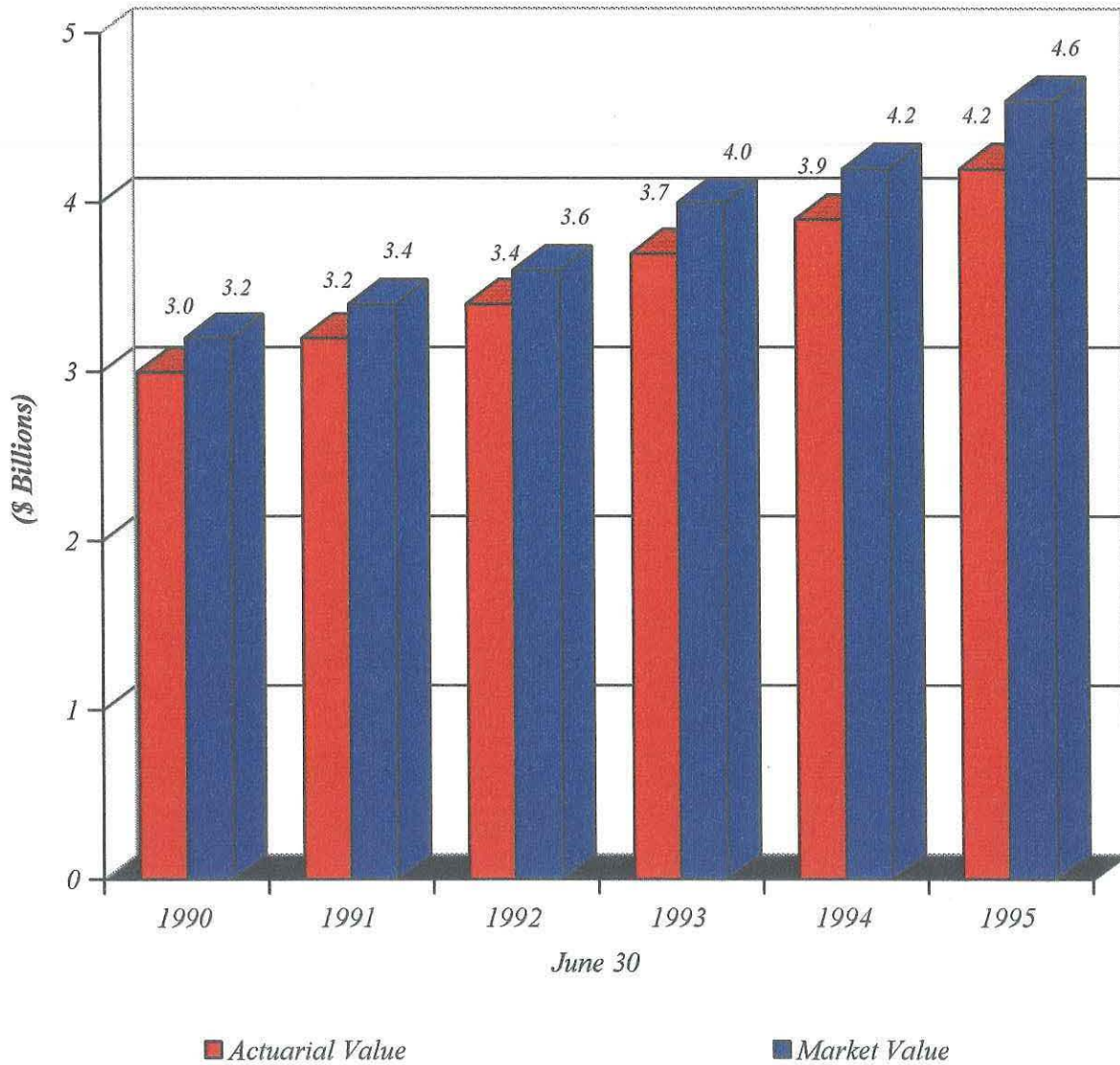


The dollar amount of the Employer's contribution equals the contribution rate shown on the prior table times the projected payroll. For 1996, the actuarially determined dollar amount went up primarily due to growth in membership. The negotiated contribution amount represents the normal cost payment plus a specified past service payment.

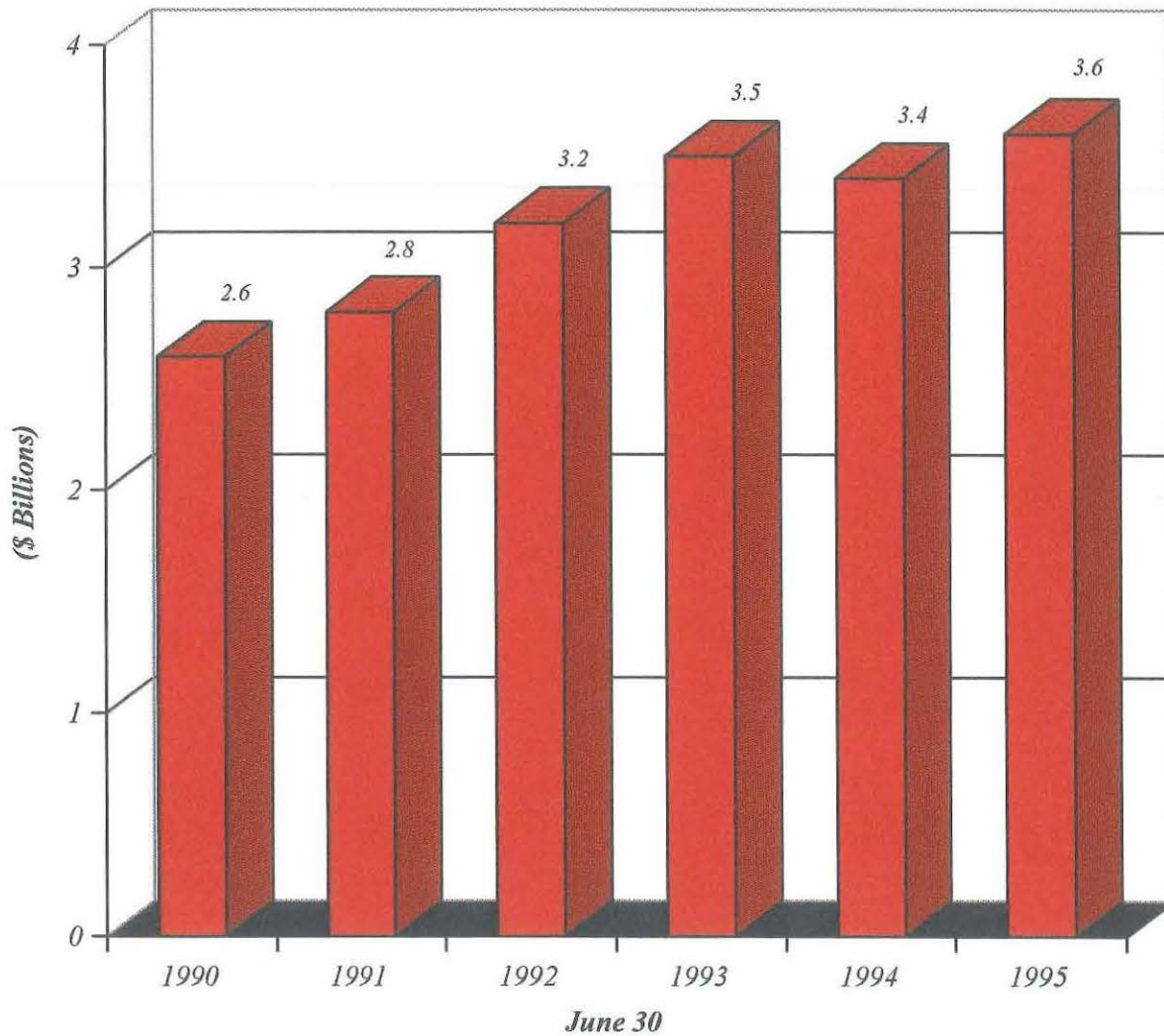
Membership

SERS membership has grown 4% (3,302 more members than last year). The active membership is now approaching the levels before the 1989 ERIP, with the hazardous duty group having the largest growth in membership on a percentage basis. The inactive membership is 3% higher than last year.

SERS Assets



The SERS's assets have grown as expected in recent years due to investment results and positive cashflow. The rate of return on a Market Value basis for the past year exceeded 13%.

Unfunded Liabilities

Unfunded actuarial liabilities have increased again this valuation after a slight drop last year. The negotiated contribution was not large enough to offset the growth in the liabilities due to interest and benefit accruals.

SERS EXPERIENCE JULY 1, 1994 TO JUNE 30, 1995

Overall, SERS experience was somewhat unfavorable during the valuation period. The normal cost as a percent of pay increased from 8.36% to 8.45%. The pay base also increased as a result of new members and pay increases, bringing the normal cost up 9%, from \$197 million for FY 95-96 to \$215 million for FY 96-97.

The unfunded actuarial liability, the shortfall between SERS assets and liabilities, increased this year from \$3.4 billion to \$3.6 billion. The reasons are discussed on page 9 of this report.

The following circumstances also contributed to the results shown in this report:

- Agreements negotiated between the State of Connecticut and the State Employees Bargaining Agent Coalition included provisions with funding implications:
 - ◆ The past service contribution for FY 96-97 is set at \$152 million instead of the actuarially determined amount of \$327.9 million.
 - ◆ The Memorandum of Agreement further reduces the negotiated past service payment. Per the Agreement, the difference of \$415,486,702 between the market value of assets and the actuarial value as of June 30, 1995 is amortized on a level percent of pay basis over 36 years. The resulting amount, \$17.6 million, reduces the negotiated past service payment from \$152 million to \$134.4 million.
- The negotiated contribution for FY 94-95 was \$351,773,796. The appropriated amount for the same period was \$290,801,000, resulting in a contribution shortfall of \$60,972,796.
- The investment performance was strong during the past year. The actual return was 13.1% on a market value basis compared to 4.5% for the prior valuation. On a smoothed actuarial basis, the rate was 8.4% compared to 7.4% for the prior valuation. The assumed rate is 8.5%.
- System membership has grown 4% over the past year. The total membership is 84,209 versus 80,907 last year. More than half of the 2,471 net new active participants are new Tier II Hazardous Duty members. More information on SERS membership can be found in Appendix A.

Comparison of Results

The following pages detail the impact of the factors discussed above on SERS Assets and Unfunded Liabilities.

Assets

Between June 30, 1994 and June 30, 1995, the actuarial value of assets (measured on a five year smoothing basis) increased by \$264.7 million. This change was attributable to the following:

| | <u>(\$ million)</u> |
|--|---------------------|
| Actuarial Value of Assets, 7/1/94 | \$3,944.5 |
| Change in Assets | |
| • Employer and Member Contributions | 326.3 |
| • Benefits Paid | (391.1) |
| • Expected Total Net Return on Investments | 332.8 |
| • Investment Gain/(Loss) | (3.3) |
| Total Changes | 264.7 |
| Actuarial Value of Assets, 7/1/95 | \$4,209.2 |

The expected total return on investments shown above is based on an assumed rate of return of 8.5%. However, the actual investment earnings of \$329.5 million (an effective rate of 8.42% on the actuarial value of assets), results in a small actuarial loss of \$3.3 million. More details on SERS assets are presented in Section II of this report.

Unfunded Liabilities

During the past year, the unfunded actuarial liability increased from \$3.4 billion to \$3.6 billion. Each year the unfunded liability is increased because of interest and expected benefit accruals and is decreased by contributions made to the fund. Asset and liability gains and losses also impact the unfunded liability.

The following table shows the development of the unfunded actuarial liability from 1994 to 1995:

| | <u>(\$ million)</u> |
|--|---------------------|
| Unfunded Actuarial Liability, 7/1/94 | \$3,384.7 |
| Source of Change in Unfunded Liability | |
| · Interest and Expected Benefit Accruals | 517.4 |
| · Expected Contribution with Interest for FY 94-95 | (555.9) |
| · Negotiated Contribution Shortfall with Interest for FY 94-95 | 190.6 |
| · Appropriated Contribution Shortfall with Interest for FY 94-95 | 63.3 |
| · Asset Loss | 3.3 |
| · Liability Loss | <u>25.6</u> |
| Total Changes | 244.3 |
| Unfunded Actuarial Liability, 7/1/95 | \$3,629.0 |

The liability loss of \$25.6 million is small (0.3%) when compared to the total SERS liability of \$7,838.2 million. It is attributable to the difference between actual and expected experience with respect to the number of retirements, employment terminations, disabilities, deaths, salary increases, and new employees. We have made a detailed analysis of the experience to determine the particular amount each component contributed to the total liability loss. The results are discussed on the following page.

Unfunded Liabilities - Components of the Liability Gain/(Loss)**Active Decrements****\$13.8 million**

The System experienced a net gain of \$13.8 million from active decrements. The gains and losses that fall under this heading represent the impact on the liability of members who were active employees last year but are not this year. Members leaving the System fall into four categories - terminations, retirements, deaths, and disabilities. This gain is primarily attributable to almost 1,000 more members leaving the System than predicted by the actuarial assumptions.

Other Active Sources of Gain/(Loss)**\$(61.6 million)**

The loss from other active sources was \$61.6 million. The breakdown of the liability gain/(loss) included in this category are:

| | <u>Gain/(Loss)</u> |
|---|--------------------|
| • Changes in the data, purchases and movement between the plans | 1.3 million |
| • Salary increases less than expected | 13.5 million |
| • Liability for new members who have credit for prior service | (77.4) million |
| • Active members who have returned from inactive service | 1.0 million |

Inactive Sources of Gain/(Loss)**\$22.2 million**

The net gain to the System from inactive sources was \$22.2 million. This inactive gain is a result of offsetting events:

- Gains occurred because the cost of living adjustment was less than expected and there were data changes that had a favorable impact on the System.
- Losses occurred because there were many new retirees or beneficiaries who could not be identified in our data for the prior valuation as either actives or inactive. These members were either out on Workers Compensation last year and have now retired from state service or are beneficiaries who could not be matched with a deceased participant due to inadequate identification numbers. The losses for this group are offset in part by gains for inactive members who have died.

SERS CONTRIBUTIONS

SERS contributions projected to the Fiscal Year beginning July 1, 1996 are \$349.2 million. The table below compares the prior year's contribution to this year's and identifies the components of change.

| | <u>(\$ Million)</u> |
|---|---------------------|
| Contribution Actuarially Determined for FY 1995-96 | \$501.1 |
| · 1994-95 Appropriations Shortfall | 5.9 |
| · 1995-96 Negotiated Contribution Shortfall | 14.9 |
| · Increase due to Payroll Growth and Changes in Membership Profile | 18.2 |
| · Asset Losses for 1994-95 | 0.3 |
| · Liability Losses for 1994-95 | 2.4 |
| Contribution before Negotiated Adjustments for FY 1996-97 | 542.8 |
| · Negotiated Adjustment to Past Service Cost | (176.0) |
| · Memorandum of Agreement Adjustment to Past Service Cost | (17.6) |
| Contribution for FY 1996-97 | \$349.2 |

Actuarial Surplus

There is no actuarial surplus as defined in Section 5-162h(b) of the Statute. The details of the test are shown in Appendix D.

In concluding this executive summary, we present on the following page comparative statistics and actuarial information on both the June 30, 1994 and June 30, 1995 valuations.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
PRINCIPAL RESULTS**

| | <i>June 30, 1994</i> | <i>June 30, 1995</i> | <i>% Chg</i> |
|--|----------------------------|----------------------------|--------------|
| SERS Membership | | | |
| 1. Active Membership | | | |
| - Number of Participants | 53,502 | 55,973 | 4.62 |
| - Payroll | \$2,155,860,555 | \$2,325,786,999 | 7.88 |
| - Average Pay | \$40,295 | \$41,552 | 3.12 |
| 2. Inactive Membership | | | |
| - Number of Vested | | | |
| Deferred Members | 654 | 666 | 1.83 |
| - Number of Retired Members | 26,751 | 27,570 | 3.06 |
| - Annual Retired Members | | | |
| Benefits | \$373,087,478 | \$395,878,744 | 6.11 |
| - Average Annual Retired | | | |
| Member Benefit | \$13,946 | \$14,359 | 2.95 |
| Assets and Liabilities | | | |
| 1. Assets | | | |
| - Market Value | 4,150,379,946 | 4,624,722,528 | 11.43 |
| - Actuarial Value | 3,944,521,448 | 4,209,235,826 | 6.71 |
| 2. Liabilities | | | |
| - Retired and Deferred Vested | 4,078,578,808 | 4,299,645,231 | 5.42 |
| - Active Members | 3,250,602,376 | 3,538,565,574 | 8.86 |
| - Total Liability | 7,329,181,184 | 7,838,210,805 | 6.95 |
| - Unfunded Liability | 3,384,659,736 | 3,628,974,979 | 7.22 |
| Employer Contributions | | | |
| 1. Contributions as a Percent of Projected Payroll | | | |
| - Normal Cost | 8.36% | 8.45% | 1.08 |
| - Unfunded Liability | 5.87% ^(a) | 5.29% ^(b) | (9.88) |
| - Total Contribution % | 14.23% | 13.74% | (3.44) |
| 2. Contribution Dollars Projected to the following FY | | | |
| - Normal Cost | \$196,711,972 | \$214,843,727 | 9.22 |
| - Unfunded Liability | 138,400,000 ^(a) | 134,386,985 ^(b) | (2.90) |
| - Total Employer Contribution | 335,111,972 | 349,230,712 | 4.21 |

(a) Reflects negotiated agreement to fund \$138,400,000 in Past Service Cost, including ERIP.

(b) Reflects negotiated agreement to fund \$152,000,000 in Past Service Cost, including ERIP, less \$17,613,015 per Memorandum of Agreement

SECTION II

SERS ASSETS

SECTION II

SERS ASSETS

In this section we present the values assigned to the assets held by SERS. These assets are valued on two different bases: the actuarial value and the market value.

Actuarial Value of Assets

For purposes of determining ongoing costs, the recognition of gains and losses are spread over five years. The resulting value is called the actuarial value of assets and is further adjusted as necessary so that the final actuarial value is within 20% (plus or minus) of the market value of assets.

Market Value of Assets

For certain accounting statement purposes, SERS assets are valued at current market rates. These values represent the "snapshot" or "cash-out" value of SERS assets as of the valuation date. In addition, the market value of assets provides a reference point to compare to current accrued liabilities.

The following tables present information regarding the actuarial and market values of SERS assets as of June 30, 1995.

| <u><i>Table</i></u> | <u><i>Contents</i></u> |
|---------------------|---|
| II-1 | Market Value - Summary of Fund Transactions |
| II-2 | Market Value - Breakdown on June 30, 1995 |
| II-3 | Actuarial Value of Assets |
| II-4 | Development of Asset Gain/Loss |
| II-5 | Historical Summary (Actuarial and Market) |

TABLE II-1

*Market Value of Assets
Summary of Fund Transactions*

| | | |
|------------------------------------|--------------------|-----------------|
| Market Value as of July 1, 1994 | | \$4,150,379,946 |
| <u>Contributions</u> | | |
| State | \$206,663,000 | |
| Federal | 84,138,000 | |
| Employee | <u>35,522,628</u> | |
| | | \$ 326,323,628 |
| <u>Investment Income</u> | | |
| Interest and Dividends | \$187,788,816 | |
| Realized Gains | 4,672,238 | |
| Change in Unrealized Gains | <u>346,880,314</u> | |
| | | \$ 539,341,368 |
| <u>Disbursements</u> | | |
| Benefit Payments | \$388,887,756 | |
| Employee Refunds | 2,263,166 | |
| Expenses | <u>171,492*</u> | |
| | | \$ 391,322,414 |
| Market Value as of June 30, 1995 | | \$4,624,722,528 |
| Rate of Return as of June 30, 1995 | | 13.10% |
| Rate of Return as of June 30, 1994 | | <u>4.51%</u> |
| Change | | Up 8.59% |

TABLE II-2

*Market Value of Assets
Breakdown on June 30, 1995*

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

| | <u>Amount</u> | <u>% of Total</u> |
|--|-------------------|-------------------|
| Cash | \$ (6,173,129) | -0.13% |
| Accrued Interest | 0 | 0.00% |
| Investments: | | |
| Cash Reserve Account | 227,717,986 | 4.92% |
| Mutual Fixed Income Fund | 881,438,390 | 19.06% |
| Mutual Equity Fund | 1,773,008,987 | 38.34% |
| Residential Mortgage Fund | 18,987,018 | 0.41% |
| Real Estate Fund | 407,930,535 | 8.82% |
| International Stock Fund | 727,284,571 | 15.73% |
| International Bond Fund | 291,595,671 | 6.31% |
| Commercial Mortgage Fund | 177,218,563 | 3.83% |
| Venture Capital Fund | 85,512,738 | 1.85% |
| Connecticut Programs Fund | <u>40,201,198</u> | <u>0.87%</u> |
| Total Market Value of Assets as of June 30, 1995 | \$4,624,722,528 | 100.00% |

TABLE II-3

Actuarial Value of Assets

| <u>Ending</u> | <u>Realized Gains/Losses</u> | <u>Change in Unrealized Gains/Losses</u> | <u>Total Gains/Losses</u> |
|---------------|----------------------------------|--|-------------------------------|
| 6-30-95 | \$ 4,672,238 | \$346,880,314 | \$351,552,552 |
| 6-30-94 | 10,676,524 | 620,866 | 11,297,390 |
| 6-30-93 | 24,188,054 | 236,815,252 | 261,003,306 |
| 6-30-92 | 42,882,763 | 72,441,760 | 115,324,523 |

Actuarial Value of Assets as of June 30, 1995 is derived as follows:

| | | | |
|----|--|-------------|-----------------|
| 1. | Market Value of Assets as of June 30, 1995: | | \$4,624,722,528 |
| 2. | Five-Year Gains and Losses Not Yet Recognized: | | |
| | 80% of FY 95 | 281,242,041 | |
| | 60% of FY 94 | 6,778,434 | |
| | 40% of FY 93 | 104,401,322 | |
| | 20% of FY 92 | 23,064,905 | |
| | | | \$415,486,702 |
| 3. | 20% of (1) | | 924,944,506 |
| 4. | Actuarial Value of Assets as of June 30, 1995: (1)-(2), within (1) +/- (3) | | \$4,209,235,826 |
| 5. | Market Value of Assets | | \$4,624,722,528 |
| 6. | Memorandum of Agreement Adjustment Base: (5)-(4) | | \$415,486,702 |
| 7. | Rate of Return as of June 30, 1995 | | 8.42% |
| 8. | Rate of Return as of June 30, 1994 | | 7.39% |
| 9. | Change | | Up 1.03% |

TABLE II-4

Development of Asset Gain/Loss

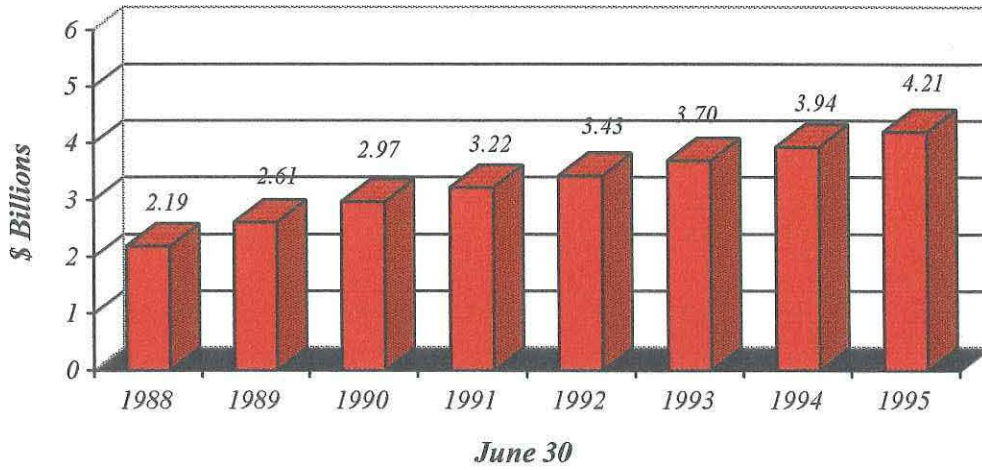
| | <u>Market Value of Assets</u> | <u>Actuarial Value of Assets</u> |
|---|---------------------------------------|--|
| 1. Value of Assets as of July 1, 1994 | \$4,150,379,946 | \$3,944,521,448 |
| 2. Contributions | 326,323,628 | 326,323,628 |
| 3. Benefit Payments and Refunds paid during 1994-95 | 391,150,922 | 391,150,922 |
| 4. Expected Net Investment Income at 8½% on (1) through (3) | 350,293,899 | 332,795,927 |
| 5. Actual Investment Income | 539,169,876 | 329,541,672 |
| 6. Expected Value of Assets as of June 30, 1995: (1)+(2)-(3)+(4) | 4,435,846,551 | 4,212,490,081 |
| 7. Actual Value of Assets as of June 30, 1995: (1)+(2)-(3)+(5) | 4,624,722,528 | 4,209,235,826 |
| 8. Asset Gain/(Loss): (7)-(6) | 188,875,977 | (3,254,255) |
| 9. Approximate Effective Yield Represented by Actual Investment Income | 13.10% | 8.42% |

Note: The rate shown here is a rough estimate of the return on plan assets used in the valuation. It assumes all transactions occur in the middle of the period. This rate may therefore not be the same as the yield earned on the plan's invested assets.

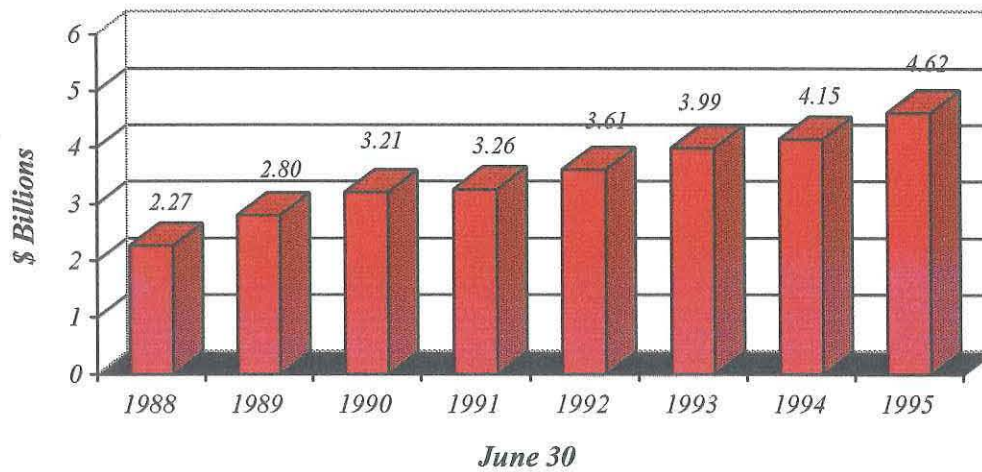
TABLE II-5

Historical Summary of System Assets

Actuarial Value



Market Value



SECTION III

SERS LIABILITIES

SECTION III

SERS LIABILITIES

In this section we present values assigned to the liabilities of SERS and then compare these liabilities to SERS assets.

The actuarial funding method used to determine SERS costs is based on the Projected Unit Credit method. This method is also used to determine the Projected Benefit Obligation (PBO) required by the Government Accounting Standards (GASB). A more detailed description of this method can be found in Appendix C.

The tables in this section present SERS liabilities as follows:

| <i><u>Table</u></i> | <i><u>Contents</u></i> |
|---------------------|--|
| III-1 | SERS Liabilities |
| III-2 | Active Liabilities by Tier and Plan |
| III-3 | Historical Summary of Unfunded Actuarial Liabilities |

*TABLE III-1**SERS Liabilities*

| | <u>June 30, 1994</u> | <u>June 30, 1995</u> |
|--|------------------------|------------------------|
| 1. Liability for Retired Members | \$4,045,626,976 | \$4,259,436,367 |
| 2. Liability for Deferred Vested Members | <u>32,951,832</u> | <u>40,208,864</u> |
| 3. Total Inactive Liability | \$4,078,578,808 | \$4,299,645,231 |
| 4. Active Members Actuarial Liability | <u>3,250,602,376</u> | <u>3,538,565,574</u> |
| 5. Total SERS Actuarial Liability | <u>\$7,329,181,184</u> | <u>\$7,838,210,805</u> |
| 6. Actuarial Value of Assets | 3,944,521,448 | 4,209,235,826 |
| 7. Total SERS Unfunded Actuarial Liability | <u>\$3,384,659,736</u> | <u>\$3,628,974,979</u> |

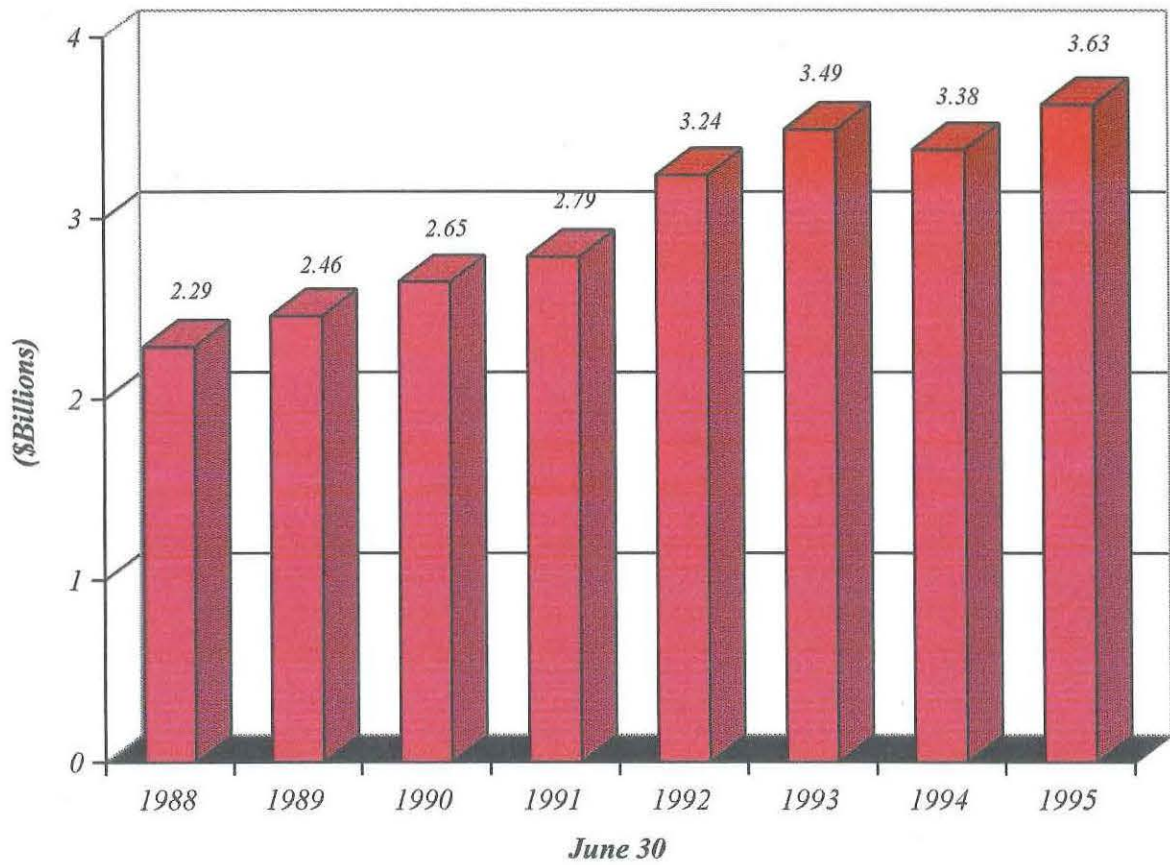
TABLE III-2*Active Liabilities by Tier and Plan*

| | <i>ACTUARIAL LIABILITY</i> | |
|--------------------------------|----------------------------|----------------------|
| | <i>June 30, 1994</i> | <i>June 30, 1995</i> |
| <hr/> TIER I <hr/> | | |
| Hazardous Duty | \$ 407,704,392 | \$ 416,460,701 |
| Plan B | 2,096,007,655 | 2,225,891,582 |
| Plan C | <u>170,016,203</u> | <u>164,221,428</u> |
| Total | \$2,673,728,250 | \$2,806,573,711 |
| <hr/> TIER II <hr/> | | |
| Hazardous Duty | \$ 196,238,302 | \$ 260,974,143 |
| All Others | <u>380,635,824</u> | <u>471,017,720</u> |
| Total | \$ 576,874,126 | \$ 731,991,863 |
| <hr/> GRAND TOTAL <hr/> | \$3,250,602,376 | \$3,538,565,574 |

TABLE III-3

*Historical Summary of
Unfunded Actuarial Liabilities*

Unfunded Actuarial Liability



SECTION IV

SERS CONTRIBUTIONS

SECTION IV

SERS CONTRIBUTIONS

In this section we present the contributions required of the Employer in the upcoming fiscal year. Due to the timing of both the actuarial valuation process and the Employer's budget cycle, valuation results each June 30 must be projected to the following fiscal year in order to determine the Employer's required contribution.

In the following pages we present information on SERS contributions as follows:

| <u><i>Table</i></u> | <u><i>Contents</i></u> |
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| IV-1 | Projected Unit Credit Normal Cost Projections |
| IV-2 | Projected Unit Credit Unfunded Liability |
| IV-3 | Projected Unit Credit Total Costs |
| IV-4 | Comparison of Normal Cost Rates |

SECTION IV

SERS CONTRIBUTIONS

TABLE IV-1

Projected Unit Credit Normal Cost Projections

| | <i>07-01-95 NORMAL COST</i> | <i>07-01-95 EARNINGS</i> | <i>NORMAL COST %</i> | <i>07-01-96 PROJECTED EARNINGS</i> | <i>07-01-96 PROJECTED NORMAL COST</i> |
|----------------------------|---------------------------------|------------------------------|----------------------|--|---|
| <hr/> <i>TIER I</i> <hr/> | | | | | |
| Hazardous Duty | \$ 18,127,793 | \$ 106,282,244 | 17.0563% | \$ 109,895,841 | \$ 18,744,164 |
| Plan B | 88,334,193 | 873,518,299 | 10.1125% | 903,217,921 | 91,337,912 |
| Plan C | <u>5,364,587</u> | <u>56,084,412</u> | 9.5652% | <u>57,991,282</u> | <u>5,546,982</u> |
| Total | \$111,826,573 | \$1,035,884,955 | | \$1,071,105,044 | \$ 115,629,058 |
| <hr/> <i>TIER II</i> <hr/> | | | | | |
| Hazardous Duty | \$ 28,885,364 | \$ 300,224,868 | 9.6212% | 335,508,326 | \$ 32,279,927 |
| All Others | <u>58,381,601</u> | <u>989,677,176</u> | 5.8991% | <u>1,134,660,228</u> | <u>66,934,742</u> |
| Total | \$ 87,266,965 | \$1,289,902,045 | 6.77 | \$1,470,168,554 | \$ 99,214,669 |

SERS Normal Cost Projected to July 1, 1996: \$214,843,727
 SERS Projected Earnings at July 1, 1996: \$2,541,273,598
 SERS Projected Normal Cost % at July 1, 1996: 8.45%

TABLE IV-2*Projected Unit Credit Unfunded Liability*

| | | |
|-----|--|-----------------|
| 1. | Unfunded Actuarial Liability as of July 1, 1995 | \$3,628,974,979 |
| 2. | One Year's Interest at 8½% | 308,462,873 |
| 3. | Employer Normal Cost (FY 1995-96) | 196,711,972 |
| 4. | Employee Normal Cost (Expected Employee Contributions) | 38,837,133 |
| 5. | Interest on Total Normal Cost [(3)+(4)] | 9,041,552 |
| 6. | State Payments | (250,973,972) |
| 7. | Expected Federal Payments | (84,138,000) |
| 8. | Expected Employee Contributions | (38,837,133) |
| 9. | Interest on Total Contributions [(6)+(7)+(8)] | (14,354,036) |
| 10. | Unfunded Actuarial Liability as of July 1, 1996 | \$3,793,725,368 |

TABLE IV-3*Projected Unit Credit Total Costs*

| | | |
|-----|--|-----------------|
| 1. | Unfunded Actuarial Liability as of July 1, 1996 | \$3,793,725,368 |
| 2. | Amortization Period | 36 Years |
| 3. | Amortization Payment | 327,937,209 |
| 4. | Employer Normal Cost | 214,843,727 |
| 5. | Total Employer Cost for Fiscal Year beginning July 1, 1996: (3)+(4) | \$ 542,780,936 |
| 6. | Projected Payroll | 2,541,273,598 |
| 7. | Total Employer Cost %: (5)/(6) | 21.36% |
| 8. | Negotiated Amortization Payment | 152,000,000 |
| 9. | Memorandum of Agreement Adjustment | 17,613,015 |
| 10. | Total Negotiated Contribution: (4)+(8)-(9) | \$349,230,712 |
| 11. | Negotiated Employer Cost %: (10)/(6) | 13.74% |

TABLE IV-4*Comparison of Normal Cost Rates*

| | VALUATION DATE | |
|--------------------|----------------|--------------|
| | JULY 1, 1994 | JULY 1, 1995 |
| TIER I | | |
| Hazardous Duty | 16.58% | 17.06% |
| Plan B | 9.81% | 10.11% |
| Plan C | 9.68% | 9.57% |
| Total | 10.51% | 10.80% |
| TIER II | | |
| Hazardous Duty | 9.43% | 9.62% |
| All Others | 5.75% | 5.90% |
| Total | 6.53% | 6.75% |
| GRAND TOTAL | 8.36% | 8.45% |

SECTION V

GASB #5 ACCOUNTING INFORMATION

SECTION V

GASB #5 INFORMATION

Government Accounting Standards Board Statement No. 5, "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Government Employers", requires that SERS disclose certain information on an annual basis regarding the funding of SERS. In this section we present this information. Additional information regarding SERS Assets, a Summary of Plan Provisions and the Actuarial Method and Assumptions can be found in Section II and Appendices B and C, respectively.

The following tables present the information required for compliance with GASB #5:

| <u><i>Table</i></u> | <u><i>Contents</i></u> |
|---------------------|---|
| V-1 | Summary of Membership |
| V-2 | Standardized Measures |
| V-3 | Historical Contribution Information |
| V-4 | Historical Analysis of Funding Progress |

Background Information

The Connecticut State Employee Retirement System was created by the State of Connecticut to provide defined benefit pensions to its employees. SERS is described in Chapter 66, State Employees Retirement Act, in Sections 5-152 to 5-192 to Title 5 of the General Statutes of Connecticut.

The Employer's funding policy has been to contribute each year an amount equal to the normal cost plus an amount representing amortization of the unfunded actuarial liability over thirty years (ending June 30, 2022), less amounts reimbursed by the Federal Government. Per SEBAC II Agreement, as of June 30, 1992, the unfunded actuarial liability will be amortized over forty years (ending June 30, 2032). Per negotiations the past service payment is at a specified amount for FY 93-94, FY 94-95, FY 95-96 and FY 96-97 instead of the amortized amount discussed above. The actuarial assumptions used to calculate the figures reported herein are the same as those used to calculate the contribution level.

TABLE V-1*Summary Of Membership*

| | <u>June 30, 1994</u> | <u>June 30, 1995</u> |
|--|----------------------|----------------------|
| Current employees: | | |
| <u>Vested:</u> | | |
| Hazardous Duty | 2,178 | 2,557 |
| Plan B | 17,020 | 16,531 |
| Plan C | 1,342 | 1,214 |
| Tier II | <u>3,404</u> | <u>5,837</u> |
| Total | 23,944 | 26,139 |
| <u>Not yet vested:</u> | | |
| Hazardous Duty | 5,644 | 6,540 |
| Plan B | 786 | 572 |
| Plan C | 45 | 35 |
| Tier II | <u>23,083</u> | <u>22,687</u> |
| Total | 29,558 | 29,834 |
| Total current employees | 53,502 | 55,973 |
| Retirees and beneficiaries currently receiving benefits: | 26,751 | 27,570 |
| Terminated employees entitled to benefits but not yet receiving them: | 654 | 666 |
| Total Members | <u>80,907</u> | <u>84,209</u> |

TABLE V-2*Standardized Measures*

| | <u>June 30, 1994</u> | <u>June 30, 1995</u> |
|---|----------------------------|----------------------------|
| <i>Pension Benefit Obligation</i> | | |
| Retired Members | \$4,045,626,976 | \$4,259,436,367 |
| Terminated Vested Members | 32,951,832 | 40,208,864 |
| Active Members | | |
| Accumulated employee contributions with interest | 334,066,488 | 363,656,581 |
| Employer-financed vested portion | 2,462,341,453 | 2,701,057,842 |
| Employer-financed non-vested portion | <u>454,194,435</u> | <u>473,851,151</u> |
| Total | \$3,250,602,376 | \$3,538,565,574 |
| <i>Total SERS Obligation</i> | <u>\$7,329,181,184</u> | <u>\$7,838,210,805</u> |
| <i>Market Value of Assets</i> | <u>4,150,379,946</u> | <u>4,624,722,528</u> |
| <i>Unfunded Pension Benefit Obligation</i> | \$3,178,801,238 | \$3,213,488,277 |

TABLE V-3

Historical Contribution Information

| | <u>FISCAL YEAR</u> <u>1989-1990</u> | <u>FISCAL YEAR</u> <u>1990-1991</u> | <u>FISCAL YEAR</u> <u>1991-1992</u> | <u>FISCAL YEAR</u> <u>1992-1993</u> | <u>FISCAL YEAR</u> <u>1993-1994</u> | <u>FISCAL YEAR</u> <u>1994-1995</u> | <u>FISCAL YEAR</u> <u>1995-1996</u> | <u>FISCAL YEAR</u> <u>1996-1997</u> |
|---|--|--|--|--|--|--|--|--|
| Employer Normal Cost | \$137,531,541 | \$ 179,549,626 | \$ 180,005,022 | \$ 191,019,008 | \$ 188,906,351 | \$ 221,273,796 | \$ 196,711,972 | \$ 214,843,727 |
| Past Service Cost | <u>258,836,930</u> | <u>218,467,282</u> | <u>251,231,824^(b)</u> | <u>256,780,845^(b)</u> | <u>121,300,000^(c)</u> | <u>130,500,000^(c)</u> | <u>138,400,000^(c)</u> | <u>134,386,985^(c)</u> |
| Total Employer Cost | \$396,368,471 | \$398,016,908 ^(a) | \$ 431,236,846 | \$ 447,799,853 | \$ 310,206,351 | \$ 351,773,796 | \$ 335,111,972 | \$ 349,230,712 |
| Total Employer Cost as a percent of payroll | 23.07% | 20.77% | 21.95% | 20.70% | 14.72% | 15.02% | 14.23% | 13.74% |
| Employee Contributions | \$ 29,198,019 | \$ 33,809,953 | \$ 33,169,806 | \$ 32,916,991 | \$ 35,753,968 | \$ 35,522,628 | N/A | N/A |
| Employer Contributions | <u>288,368,471</u> | <u>263,818,607</u> | <u>250,324,285</u> | <u>290,827,685</u> | <u>310,206,351</u> | <u>290,801,000</u> | <u>N/A</u> | <u>N/A</u> |
| Total Contributions | \$317,566,490 | \$297,628,560 | \$283,494,091 | \$323,744,676 | \$345,960,319 | \$326,323,628 | N/A | N/A |

debit 341,377
to state
of federal
contributions
of 53,003,216

- (a) Includes an additional contribution of \$10,241,000 (\$3,381,000 Normal Cost + \$6,860,000 Past Service Cost) needed to fund benefit improvements resulting from negotiations with the State Employees Bargaining Agent Coalition.
- (b) Includes \$11,858,652 payment of Retirement Incentive Bonus.
- (c) Negotiated Past Service Cost.

TABLE V-4

*Historical Analysis of Funding Progress
(millions)*

| <i>FISCAL YEAR</i> | <i>(1) NETASSETS AVAILABLE FOR BENEFITS*</i> | <i>(2) PENSION BENEFIT OBLIGATION</i> | <i>(3) PERCENTAGE FUNDED (1)/(2)</i> | <i>(4) UNFUNDED OBLIGATION (2)-(1)</i> | <i>(5) ANNUAL COVERED PAYROLL</i> | <i>(6) UNFUNDED OBLIGATION % OF PAY (4)/(5)</i> |
|------------------------|--|---|--|--|---|---|
| 1988 - 1989 | \$2,273.2 | \$4,550.7 | 50.0% | \$2,277.5 | \$1,583.0 | 143.9% |
| 1989 - 1990 | 2,798.9 | 5,071.5 | 55.2% | 2,272.6 | 1,759.5 | 129.2% |
| 1990 - 1991 | 3,212.8 | 5,624.7 | 57.1% | 2,411.9 | 1,802.8 | 133.8% |
| 1991 - 1992 | 3,361.6 | 6,009.7 | 55.9% | 2,648.1 | 1,983.6 | 133.5% |
| 1992 - 1993 | 3,606.0 | 6,668.7 | 54.1% | 3,062.7 | 1,931.4 | 158.6% |
| 1993 - 1994 | 3,995.0 | 7,189.7 | 55.6% | 3,194.8 | 2,144.8 | 149.0% |
| 1994 - 1995 | 4,150.4 | 7,329.2 | 56.6% | 3,178.8 | 2,155.9 | 147.4% |
| 1995 - 1996 | 4,624.7 | 7,838.2 | 59.0% | 3,213.5 | 2,325.8 | 138.2% |

* Market Value

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

| <u>Table</u> | <u>Contents</u> |
|--------------|--|
| A-1 | Summary of Active Membership Data |
| A-2 | Detail of Active Membership Data by Plan |
| A-3 | Summary of Inactive Membership Data |
| A-4 | Analysis by Age and Service - Tier I - Hazardous Duty |
| A-5 | Analysis by Age and Service - Tier I - Plan B |
| A-6 | Analysis by Age and Service - Tier I - Plan C |
| A-7 | Analysis by Age and Service - Tier II - Hazardous Duty |
| A-8 | Analysis by Age and Service - Tier II - All Others |
| A-9 | Analysis of Retired Members by Retirement Year |
| A-10 | Analysis of Retired Members by Current Age |

TABLE A-1*Summary of Active Membership Data*

We received data on a total of 56,208 eligible active members, including employees of State Aided Institutions. Of the active records submitted to us, 235 (.42%) 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 the July 1, 1994 data (see Table A-4 for distribution by age and service).

| | <i>7/1/94</i> | <i>7/1/95</i> | <i>Change</i> | <i>Percent Change</i> |
|---------------------------|---------------|---------------|---------------|---------------------------|
| Total Employees | 53,502 | 55,973 | 2,471 | 4.6% |
| Total Earnings (millions) | \$2,155.9 | \$2,325.8 | \$169.9 | 7.9% |
| Average Earnings | \$40,295 | \$41,552 | \$1,257 | 3.1% |

Earnings figures as of July 1 are actual amounts paid during the previous July 1 to June 30 period, adjusted for anticipated increases and merit adjustments through the end of FY 95-96; new entrant earnings are annualized.

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

TABLE A-2

Detail of Active Membership Data by Plan

| | 7/1/94 | 7/1/95 | Percent Change |
|---|---------------|---------------|----------------|
| Number of Members | | | |
| Tier I Hazardous Duty | 1,967 | 1,891 | - 3.9% |
| Tier I Plan B | 17,806 | 17,103 | - 3.9% |
| Tier I Plan C | 1,387 | 1,249 | - 9.9% |
| Tier II Hazardous Duty | 5,855 | 7,206 | +23.1% |
| Tier II Others | <u>26,487</u> | <u>28,524</u> | + 7.7% |
| Total | 53,502 | 55,973 | + 4.6% |
| Total Annual Compensation (Millions) | | | |
| Tier I Hazardous Duty | 108.5 | 106.3 | -2.0% |
| Tier I Plan B | 877.6 | 873.5 | -0.5% |
| Tier I Plan C | 60.7 | 56.1 | -7.6% |
| Tier II Hazardous Duty | 239.6 | 300.2 | +25.3% |
| Tier II Others | <u>869.4</u> | <u>989.7</u> | +13.8% |
| Total | 2,155.9 | 2,325.8 | +7.9% |
| Average Compensation | | | |
| Tier I Hazardous Duty | 55,178 | 56,204 | +1.9% |
| Tier I Plan B | 49,288 | 51,074 | +3.6% |
| Tier I Plan C | 43,728 | 44,903 | +2.7% |
| Tier II Hazardous Duty | 40,930 | 41,663 | +1.8% |
| Tier II Others | 32,824 | 34,696 | +5.7% |
| Total | 40,295 | 41,552 | +3.1% |
| Average Age | | | |
| Tier I Hazardous Duty | 43.5 | 44.0 | + 1.1% |
| Tier I Plan B | 47.1 | 47.6 | + 1.1% |
| Tier I Plan C | 52.6 | 52.2 | - 0.8% |
| Tier II Hazardous Duty | 34.7 | 35.3 | + 1.7% |
| Tier II Others | 39.5 | 40.0 | + 1.3% |
| Total | 42.0 | 42.1 | + 0.2% |
| Average Service | | | |
| Tier I Hazardous Duty | 16.0 | 16.5 | +3.1% |
| Tier I Plan B | 18.0 | 18.8 | +4.4% |
| Tier I Plan C | 18.3 | 19.1 | +4.4% |
| Tier II Hazardous Duty | 3.9 | 3.9 | +0.0% |
| Tier II Others | 5.8 | 6.2 | +6.9% |
| Total | 10.4 | 10.5 | +1.0% |

TABLE A-3*Summary of Inactive Membership Data*

| | <i>7/1/94</i> | <i>7/1/95</i> | <i>Percent Change</i> |
|-----------------------------------|---------------|---------------|---------------------------|
| <i>Retirees and Beneficiaries</i> | | | |
| Number | 26,751 | 27,570 | 3.1% |
| Total Annual Benefit (000s) | \$373,087 | \$395,879 | 6.1% |
| Average Annual Benefit | 13,947 | 14,359 | 3.0% |
| <i>Terminated Vested</i> | | | |
| Number | 654 | 666 | 1.8% |

TABLE A-4

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

| Age | Years of Service | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|-------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 2 | 5 | 57 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 35 to 39 | 5 | 24 | 272 | 121 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 427 |
| 40 to 44 | 14 | 15 | 166 | 291 | 124 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 611 |
| 45 to 49 | 10 | 14 | 80 | 134 | 152 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 447 |
| 50 to 54 | 4 | 5 | 35 | 52 | 56 | 44 | 11 | 0 | 0 | 0 | 0 | 0 | 207 |
| 55 to 59 | 1 | 5 | 23 | 20 | 18 | 6 | 9 | 3 | 0 | 0 | 0 | 0 | 85 |
| 60 to 64 | 0 | 3 | 7 | 19 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 37 |
| 65 & Up | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Totals | 36 | 71 | 643 | 646 | 363 | 108 | 21 | 3 | 0 | 0 | 0 | 0 | 1,891 |

| Age | Average Salaries | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 50,682 | 48,489 | 50,683 | 58,459 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51,193 |
| 35 to 39 | 49,673 | 53,553 | 52,791 | 55,660 | 52,676 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53,609 |
| 40 to 44 | 50,169 | 47,182 | 53,284 | 58,279 | 62,266 | 49,509 | 0 | 0 | 0 | 0 | 0 | 0 | 57,259 |
| 45 to 49 | 46,103 | 49,647 | 51,639 | 55,289 | 63,024 | 59,555 | 0 | 0 | 0 | 0 | 0 | 0 | 57,428 |
| 50 to 54 | 38,313 | 49,017 | 49,547 | 56,314 | 58,339 | 63,028 | 65,447 | 0 | 0 | 0 | 0 | 0 | 57,106 |
| 55 to 59 | 31,780 | 53,047 | 55,857 | 54,648 | 52,864 | 65,692 | 76,446 | 61,804 | 0 | 0 | 0 | 0 | 57,574 |
| 60 to 64 | 0 | 49,684 | 49,791 | 52,812 | 66,712 | 0 | 63,472 | 0 | 0 | 0 | 0 | 0 | 54,905 |
| 65 & Up | 0 | 0 | 60,836 | 52,336 | 66,569 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58,012 |
| Totals | 47,171 | 50,562 | 52,526 | 56,711 | 61,477 | 61,217 | 70,067 | 61,804 | 0 | 0 | 0 | 0 | 56,204 |

TABLE A-5

Analysis by Age and Service - Plan B - Active Members

| Age | Years of Service | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 30 to 34 | 14 | 11 | 411 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 536 |
| 35 to 39 | 47 | 56 | 974 | 1,209 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,339 |
| 40 to 44 | 68 | 96 | 731 | 1,797 | 784 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 3,543 |
| 45 to 49 | 56 | 74 | 587 | 1,302 | 1,144 | 671 | 52 | 0 | 0 | 0 | 0 | 0 | 3,886 |
| 50 to 54 | 37 | 62 | 469 | 919 | 729 | 885 | 470 | 41 | 0 | 0 | 0 | 0 | 3,612 |
| 55 to 59 | 11 | 19 | 271 | 531 | 339 | 400 | 245 | 73 | 2 | 0 | 0 | 0 | 1,891 |
| 60 to 64 | 5 | 10 | 145 | 289 | 173 | 157 | 102 | 49 | 9 | 1 | 0 | 0 | 940 |
| 65 & Up | 2 | 5 | 57 | 98 | 66 | 65 | 28 | 21 | 11 | 2 | 0 | 0 | 355 |
| Totals | 240 | 333 | 3,646 | 6,245 | 3,288 | 2,245 | 897 | 184 | 22 | 3 | 0 | 0 | 17,103 |

| Age | Average Salaries | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 42,435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,435 |
| 30 to 34 | 29,887 | 34,416 | 37,309 | 35,951 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36,802 |
| 35 to 39 | 35,541 | 39,463 | 43,723 | 41,659 | 42,535 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42,363 |
| 40 to 44 | 36,851 | 43,229 | 47,648 | 49,280 | 49,342 | 46,791 | 0 | 0 | 0 | 0 | 0 | 0 | 48,507 |
| 45 to 49 | 52,198 | 46,813 | 48,858 | 51,802 | 57,281 | 54,118 | 50,170 | 0 | 0 | 0 | 0 | 0 | 53,259 |
| 50 to 54 | 46,806 | 46,596 | 47,114 | 49,615 | 55,183 | 62,293 | 56,212 | 48,779 | 0 | 0 | 0 | 0 | 54,289 |
| 55 to 59 | 40,366 | 53,265 | 44,454 | 49,262 | 53,566 | 67,208 | 67,416 | 66,039 | 44,564 | 0 | 0 | 0 | 56,124 |
| 60 to 64 | 47,950 | 39,577 | 44,380 | 47,896 | 58,174 | 61,731 | 75,053 | 74,180 | 58,674 | 46,627 | 0 | 0 | 55,886 |
| 65 & Up | 54,732 | 54,126 | 39,274 | 49,030 | 63,205 | 72,333 | 71,625 | 85,590 | 73,850 | 85,646 | 0 | 0 | 59,390 |
| Totals | 42,658 | 44,354 | 45,060 | 48,097 | 54,468 | 60,514 | 61,545 | 66,592 | 64,980 | 72,639 | 0 | 0 | 51,074 |

TABLE A-6

Analysis by Age and Service - Plan C - Active Members

| Age | Years of Service | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|-------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 0 | 0 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 35 to 39 | 2 | 3 | 36 | 48 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 93 |
| 40 to 44 | 2 | 4 | 30 | 100 | 35 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 178 |
| 45 to 49 | 3 | 4 | 35 | 58 | 63 | 39 | 2 | 0 | 0 | 0 | 0 | 0 | 204 |
| 50 to 54 | 4 | 2 | 37 | 77 | 60 | 56 | 10 | 0 | 0 | 0 | 0 | 0 | 246 |
| 55 to 59 | 2 | 4 | 39 | 79 | 48 | 28 | 14 | 1 | 0 | 0 | 0 | 0 | 215 |
| 60 to 64 | 2 | 2 | 31 | 76 | 45 | 23 | 7 | 8 | 3 | 0 | 0 | 0 | 197 |
| 65 & Up | 0 | 1 | 11 | 29 | 22 | 21 | 8 | 2 | 3 | 2 | 2 | 2 | 101 |
| Totals | 15 | 20 | 229 | 472 | 277 | 174 | 41 | 11 | 6 | 2 | 2 | 2 | 1,249 |

| Age | Average Salaries | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 0 | 0 | 42,691 | 38,192 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41,191 |
| 35 to 39 | 33,503 | 22,440 | 40,439 | 40,189 | 35,281 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39,358 |
| 40 to 44 | 35,492 | 36,012 | 41,419 | 43,430 | 43,175 | 37,070 | 0 | 0 | 0 | 0 | 0 | 0 | 42,535 |
| 45 to 49 | 27,194 | 62,970 | 43,867 | 43,895 | 45,229 | 42,441 | 45,752 | 0 | 0 | 0 | 0 | 0 | 44,171 |
| 50 to 54 | 28,150 | 32,847 | 42,171 | 44,853 | 52,187 | 48,394 | 37,487 | 0 | 0 | 0 | 0 | 0 | 46,376 |
| 55 to 59 | 39,441 | 33,444 | 36,830 | 40,784 | 48,943 | 44,497 | 61,838 | 34,331 | 0 | 0 | 0 | 0 | 43,564 |
| 60 to 64 | 89,458 | 32,072 | 44,253 | 42,240 | 49,614 | 59,073 | 52,890 | 57,819 | 66,198 | 0 | 0 | 0 | 47,959 |
| 65 & Up | 0 | 36,043 | 34,174 | 50,627 | 42,482 | 64,514 | 55,573 | 29,506 | 50,308 | 62,372 | 26,435 | 0 | 49,521 |
| Totals | 39,331 | 38,145 | 41,070 | 43,142 | 47,471 | 49,334 | 52,364 | 50,536 | 58,253 | 62,372 | 26,435 | 0 | 44,903 |

TABLE A-7

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

| Age | Years of Service | | | | | | | | | | | All Years |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | |
| Under 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 20 to 24 | 340 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 352 |
| 25 to 29 | 1,154 | 562 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,732 |
| 30 to 34 | 768 | 1,016 | 196 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,983 |
| 35 to 39 | 488 | 552 | 194 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,242 |
| 40 to 44 | 332 | 288 | 127 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 764 |
| 45 to 49 | 240 | 236 | 96 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 577 |
| 50 to 54 | 121 | 124 | 45 | 3 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 301 |
| 55 to 59 | 55 | 72 | 28 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156 |
| 60 to 64 | 18 | 40 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 65 & Up | 6 | 9 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| Totals | 3,523 | 2,911 | 724 | 36 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 7,206 |

| Age | Average Salaries | | | | | | | | | | | All Years |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | |
| Under 20 | 16,673 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16,673 |
| 20 to 24 | 32,578 | 34,321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32,637 |
| 25 to 29 | 36,911 | 42,775 | 45,464 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38,893 |
| 30 to 34 | 37,883 | 46,168 | 49,101 | 44,424 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43,247 |
| 35 to 39 | 39,583 | 45,349 | 48,256 | 41,879 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43,515 |
| 40 to 44 | 38,600 | 45,405 | 49,380 | 45,483 | 58,986 | 0 | 0 | 0 | 0 | 0 | 0 | 43,128 |
| 45 to 49 | 37,018 | 44,897 | 46,742 | 36,374 | 56,274 | 0 | 0 | 0 | 0 | 0 | 0 | 41,956 |
| 50 to 54 | 37,394 | 44,926 | 47,363 | 47,224 | 38,734 | 49,549 | 39,762 | 0 | 0 | 0 | 0 | 42,307 |
| 55 to 59 | 41,467 | 47,414 | 44,579 | 38,702 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44,753 |
| 60 to 64 | 51,296 | 46,488 | 49,416 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48,291 |
| 65 & Up | 39,832 | 41,590 | 58,971 | 46,068 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46,055 |
| Totals | 37,402 | 45,098 | 48,336 | 44,093 | 53,308 | 49,549 | 39,762 | 0 | 0 | 0 | 0 | 41,663 |

TABLE A-8

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

| Age | Years of Service | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 |
| 20 to 24 | 857 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 908 |
| 25 to 29 | 2,077 | 1,515 | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,712 |
| 30 to 34 | 1,735 | 2,863 | 984 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,599 |
| 35 to 39 | 1,362 | 2,261 | 1,082 | 49 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,756 |
| 40 to 44 | 1,223 | 1,880 | 924 | 46 | 21 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 4,102 |
| 45 to 49 | 1,112 | 1,645 | 858 | 53 | 47 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 3,755 |
| 50 to 54 | 712 | 1,219 | 589 | 31 | 24 | 20 | 3 | 0 | 0 | 0 | 0 | 0 | 2,598 |
| 55 to 59 | 384 | 758 | 376 | 22 | 11 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 1,563 |
| 60 to 64 | 213 | 448 | 246 | 20 | 6 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 941 |
| 65 & Up | 107 | 229 | 132 | 10 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 482 |
| Totals | 9,890 | 12,869 | 5,311 | 248 | 113 | 86 | 6 | 1 | 0 | 0 | 0 | 0 | 28,524 |

| Age | Average Salaries | | | | | | | | | | | All Years | |
|----------|------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-----------|--------|
| | Under 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 & Up | | |
| Under 20 | 3,962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,962 |
| 20 to 24 | 18,228 | 22,362 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,460 |
| 25 to 29 | 27,894 | 32,000 | 34,314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29,778 |
| 30 to 34 | 30,809 | 36,948 | 38,414 | 23,460 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35,262 |
| 35 to 39 | 28,902 | 37,482 | 42,019 | 32,444 | 25,425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36,000 |
| 40 to 44 | 31,007 | 38,562 | 42,760 | 39,237 | 40,568 | 43,020 | 0 | 0 | 0 | 0 | 0 | 0 | 37,282 |
| 45 to 49 | 29,399 | 38,208 | 43,543 | 40,145 | 52,831 | 52,929 | 0 | 0 | 0 | 0 | 0 | 0 | 37,186 |
| 50 to 54 | 30,559 | 37,247 | 40,777 | 62,233 | 46,726 | 54,986 | 53,896 | 0 | 0 | 0 | 0 | 0 | 36,756 |
| 55 to 59 | 32,310 | 36,703 | 39,973 | 36,263 | 52,442 | 49,138 | 2,594 | 0 | 0 | 0 | 0 | 0 | 36,581 |
| 60 to 64 | 30,063 | 34,423 | 40,100 | 33,325 | 38,953 | 43,769 | 40,679 | 0 | 0 | 0 | 0 | 0 | 34,999 |
| 65 & Up | 23,187 | 32,964 | 35,140 | 36,179 | 11,051 | 50,581 | 0 | 38,713 | 0 | 0 | 0 | 0 | 31,414 |
| Totals | 28,359 | 36,653 | 41,010 | 39,018 | 47,256 | 51,334 | 40,940 | 38,713 | 0 | 0 | 0 | 0 | 34,696 |

TABLE A-9
Analysis of Retired Members and Beneficiaries by Retirement Year

| Retirement Year | NUMBER | | | | | AVERAGE BENEFITS | | | | |
|--------------------|-----------------------|------------------------------------|--|---------------------------------|--------------|-----------------------|------------------------------------|--|---------------------------------|-----------|
| | Service Retirement | Service Connected Disability | Non-Service Connected Disability | Hazardous Duty Retirement | Other | Service Retirement | Service Connected Disability | Non-Service Connected Disability | Hazardous Duty Retirement | Other |
| pre 1966 | 332 | 39 | 54 | 13 | 164 | 8,428.85 | 5,900.80 | 6,157.51 | 9,168.05 | 6,690.72 |
| 1967 | 71 | 3 | 10 | 0 | 21 | 6,999.57 | 4,818.07 | 7,891.70 | 0.00 | 6,887.85 |
| 1968 | 111 | 10 | 6 | 0 | 20 | 8,566.15 | 7,415.25 | 6,044.53 | 0.00 | 6,405.81 |
| 1969 | 171 | 11 | 14 | 1 | 39 | 8,824.26 | 8,030.49 | 8,344.35 | 14,271.24 | 8,198.10 |
| 1970 | 178 | 8 | 34 | 2 | 41 | 10,286.75 | 8,332.89 | 8,503.22 | 11,936.21 | 8,314.72 |
| 1971 | 259 | 13 | 43 | 6 | 51 | 11,625.00 | 9,038.04 | 8,069.71 | 14,279.30 | 8,705.67 |
| 1972 | 340 | 19 | 43 | 15 | 80 | 11,600.88 | 9,583.58 | 9,476.87 | 14,981.49 | 8,878.40 |
| 1973 | 403 | 23 | 47 | 21 | 76 | 11,551.94 | 11,284.88 | 9,754.55 | 16,901.65 | 8,546.07 |
| 1974 | 346 | 18 | 24 | 17 | 112 | 10,617.06 | 10,099.69 | 9,278.36 | 20,004.01 | 9,125.44 |
| 1975 | 584 | 40 | 42 | 17 | 109 | 11,331.01 | 10,720.20 | 8,921.54 | 19,518.96 | 8,153.33 |
| 1976 | 644 | 12 | 35 | 18 | 98 | 10,312.66 | 9,792.93 | 8,947.14 | 18,324.82 | 7,606.90 |
| 1977 | 512 | 9 | 21 | 11 | 88 | 9,783.11 | 8,204.78 | 8,631.90 | 17,758.35 | 7,319.91 |
| 1978 | 603 | 7 | 30 | 20 | 80 | 9,394.85 | 8,636.05 | 7,189.58 | 19,425.17 | 6,510.80 |
| 1979 | 1,158 | 10 | 32 | 40 | 100 | 10,015.81 | 10,626.75 | 7,668.23 | 19,464.75 | 6,522.29 |
| 1980 | 744 | 16 | 28 | 25 | 102 | 8,825.66 | 7,161.59 | 6,431.42 | 18,601.92 | 6,582.88 |
| 1981 | 607 | 23 | 23 | 48 | 62 | 9,634.83 | 8,799.71 | 6,822.04 | 17,540.04 | 8,886.48 |
| 1982 | 520 | 14 | 19 | 32 | 58 | 9,978.63 | 10,442.83 | 9,188.12 | 19,242.01 | 8,176.80 |
| 1983 | 555 | 13 | 32 | 39 | 86 | 11,608.16 | 11,120.61 | 9,877.11 | 20,366.60 | 8,464.24 |
| 1984 | 705 | 34 | 30 | 55 | 115 | 12,013.10 | 10,886.30 | 10,701.60 | 20,568.26 | 8,712.72 |
| 1985 | 807 | 31 | 32 | 64 | 141 | 12,934.15 | 10,928.65 | 12,373.34 | 22,363.18 | 9,712.43 |
| 1986 | 902 | 43 | 37 | 49 | 174 | 14,806.50 | 10,734.11 | 13,282.75 | 26,202.88 | 8,037.87 |
| 1987 | 887 | 33 | 42 | 76 | 209 | 15,425.71 | 12,956.29 | 11,084.64 | 25,282.87 | 9,106.54 |
| 1988 | 1,045 | 45 | 34 | 94 | 191 | 16,270.29 | 14,005.92 | 10,601.22 | 26,023.42 | 9,899.64 |
| 1989 | 3,009 | 51 | 29 | 253 | 373 | 16,827.63 | 14,674.91 | 12,675.20 | 30,215.74 | 12,170.41 |
| 1990 | 245 | 11 | 13 | 88 | 183 | 15,395.18 | 14,443.83 | 11,401.79 | 28,516.48 | 10,676.56 |
| 1991 | 555 | 11 | 37 | 85 | 235 | 19,411.47 | 15,484.57 | 16,913.71 | 30,273.59 | 13,170.44 |
| 1992 | 2,590 | 15 | 29 | 250 | 220 | 23,088.13 | 13,291.24 | 19,075.96 | 33,375.23 | 12,421.85 |
| 1993 | 305 | 11 | 33 | 79 | 180 | 10,866.64 | 21,941.91 | 14,879.29 | 27,115.36 | 11,048.76 |
| 1994 | 725 | 13 | 34 | 146 | 193 | 16,337.33 | 18,117.58 | 18,864.62 | 28,397.15 | 11,397.35 |
| 1995 | 769 | 0 | 14 | 104 | 132 | 16,755.21 | 0.00 | 27,411.43 | 30,795.00 | 12,819.40 |
| Totals | 20,682 | 586 | 901 | 1,668 | 3,733 | | | | | |

TABLE A-10

Analysis of Retired Members and Beneficiaries by Current Age

| Current Age | NUMBER | | | | | AVERAGE BENEFIT | | | | |
|---------------------|--------------------|------------------------------|----------------------------------|---------------------------|--------------|--------------------|------------------------------|----------------------------------|---------------------------|--------------|
| | Service Retirement | Service Connected Disability | Non-Service Connected Disability | Hazardous Duty Retirement | Other | Service Retirement | Service Connected Disability | Non-Service Connected Disability | Hazardous Duty Retirement | Other |
| Less than 40 | 2 | 15 | 10 | 0 | 140 | 11,145 | 10,589 | 10,062 | 0 | 11,224 |
| 40 to 44 | 0 | 28 | 25 | 43 | 88 | 0 | 13,262 | 12,235 | 25,675 | 16,657 |
| 45 to 49 | 1 | 54 | 50 | 232 | 150 | 19,214 | 14,791 | 18,541 | 29,916 | 16,090 |
| 50 to 54 | 7 | 79 | 71 | 326 | 196 | 26,310 | 14,920 | 16,703 | 31,210 | 16,027 |
| 55 to 59 | 1,426 | 89 | 111 | 318 | 539 | 23,079 | 13,539 | 13,710 | 28,639 | 10,557 |
| 60 to 64 | 2,752 | 101 | 133 | 288 | 660 | 19,855 | 10,509 | 11,980 | 26,355 | 9,595 |
| 65 to 69 | 4,527 | 80 | 150 | 232 | 556 | 15,732 | 8,888 | 8,413 | 23,013 | 8,102 |
| 70 to 74 | 4,550 | 62 | 126 | 143 | 473 | 13,375 | 7,328 | 7,901 | 20,527 | 8,269 |
| 75 to 79 | 3,517 | 38 | 96 | 58 | 396 | 11,192 | 8,002 | 7,639 | 17,900 | 7,908 |
| 80 to 84 | 2,290 | 24 | 67 | 19 | 263 | 10,209 | 8,666 | 8,895 | 16,587 | 8,146 |
| 85 to 89 | 1,120 | 12 | 42 | 8 | 168 | 10,252 | 9,057 | 8,083 | 16,048 | 8,398 |
| 90 to 94 | 382 | 4 | 18 | 1 | 76 | 9,555 | 7,835 | 6,542 | 7,062 | 7,818 |
| 95 to 99 | 98 | 0 | 2 | 0 | 17 | 6,618 | 0 | 7,010 | 0 | 5,959 |
| 100 and over | 10 | 0 | 0 | 0 | 11 | 4,158 | 0 | 0 | 0 | 7,939 |
| Final Totals | 20,682 | 586 | 901 | 1,668 | 3,733 | 14,429 | 11,248 | 10,758 | 26,786 | 9,777 |

APPENDIX B

SUMMARY OF PLAN PROVISIONS

APPENDIX B

SUMMARY OF PLAN PROVISIONS

**CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM**

Established September 1, 1939

1. Membership

Tier I [Sec. 5-160]: 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 January 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.

Tier II [Sec. 5-192e]: Tier II consists of employees first joining the retirement system on or after January 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.

2. Normal Retirement Eligibility

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

Tier I - Plans B and C [Sec. 5-162]: Age 55 and 25 years of service, age 60 and 10 years of service, or age 70.

Tier II [Sec. 5-192l]: Age 62 and 10 years of service (effective July 1, 1992) or age 60 and 25 years of service or age 70 and 5 years of service, except hazardous duty members may retire after 20 years.

3. Normal Retirement Benefit

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

Tier I Plan B [Sec. 5-162]: 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, reduced for retirement prior to age 65 with less than 25 years. Minimum benefit with 25 years, \$300 per month.

Tier I Plan C [Sec. 5-162]: 2% of Final Average Earnings times years of service, reduced for retirement prior to age 65 with less than 25 years. Minimum with 25 years, \$300 per month.

Tier II Hazardous Duty Members [Sec. 5-192n]: 2½% 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 with 25 years, \$300 per month (or less if retirement before July 1, 1987).

Tier II All Other [Sec. 5-192l]: 1% of Final Average Earnings plus ½% of Final Average Earnings in excess of the year's breakpoint*, times up to 35 years of service from October 1, 1982 plus 1% of Final Average Earnings times years of service in excess of 35 years, if any. Minimum with 25 years, \$300 per month (or less if retirement before July 1, 1987).

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

4. Early Retirement

Tier I - Hazardous Duty: None.

Tier I [Sec. 5-162]: Age 55 and 10 years of service; Normal Retirement Benefit reduced actuarially for retirement prior to age 60.

Tier II [Sec. 5-192m]: Age 55 and 10 years of service; Normal Retirement Benefit reduced ¼% (effective July 1, 1991) for each month prior to age 65; Minimum benefit with 25 years, \$300 per month (or less if retirement prior to July 1, 1987).

5. Deferred Retirement

Tier I [Sec. 5-162]: May be deferred but not beyond age 70.

Tier II [Sec. 5-192l]: 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; actuarially reduced benefit 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.

Tier II [Sec. 5-192o]: Ten years of service or age 70 and 5 years; benefit payable at Normal Retirement Age or early retirement benefit payable at age 55; minimum benefit with 25 years, payable after age 55, \$300 per month (or less if retirement before July 1, 1987).

7. Member Contributions

Tier I - Hazardous Duty [Sec. 5-161]: 4% of earnings up to Social Security Taxable Wage Base plus 5% above that level.

Tier I - Plan B [Sec. 5-161]: 2% of earnings up to Social Security Taxable Wage Base plus 5% above that level.

Tier I - Plan C [Sec. 5-161]: 5% of earnings.

Tier II - All Other [Sec. 5-192u]: None.

Tier II - Hazardous Duty [Sec. 5-192u]: 4% of earnings

8. Cost of Living

[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.

9. Death Benefits

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

Tier I [Sec. 5-165a]: If eligible for early or normal retirement, spouse benefit equal to 50% of average of Life Benefit and 50% J&S benefit member would have received. If not eligible to retire but 25 years, 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%).

Tier II [Sec. 5-192r]: If eligible for early or normal retirement, spouse benefit equal to 50% of member's benefit under a 50% J&S. If not eligible to retire but 25 years, same benefit calculated as though age 55 using service and earnings at death.

[Sec. 5-192t]: If death is due to employment, a spouse with dependent children under 18 will be paid \$7,500 in not less than 60 installments while living and not remarried; also \$20 per month per child under 18. If no children under 18, spouse [or dependent parent(s), if no spouse] will be paid \$4,000 in not less than 60 installments.

10. Disability Benefits

Tier I [Sec. 5-142, 5-169, 5-173]: For non-service disabilities occurring prior to age 60 and after 5 years of service, benefit equals 3% times base salary times years of service (Maximum 1_% times service to 65). If disability occurs prior to age 60 and is due to service, benefit equals 1_% of salary times service projected to 65 (maximum 30 years) and is payable regardless of length of service. Exception: State Police benefit is accrued 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).

Maximum disability benefit is lesser of: 100% of salary less Workers Compensation and Social Security and less non-rehabilitation earnings, or 80% of salary less Workers Compensation and Social Security. Social Security is primary plus family.

Tier II [5-192p]: Prior to age 65 and due to service or after 10 years of service, benefit is 1% of final average earnings, plus ½% of excess earnings times service projected to 65 (maximum 30 years of service to Date of Disability if greater than 30 years). Same maximum as Tier I.

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

11. Optional Forms of Payment

Tier I [Sec. 5-165]: 50% Qualified Joint and Survivor (Normal Form if married at least 12 months).

Tier II [Sec. 5-192q]: 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. Part-Time Employment

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

APPENDIX C

ACTUARIAL METHOD AND ASSUMPTIONS

APPENDIX C

ACTUARIAL METHOD AND ASSUMPTIONS

A. Funding Method

1. The actuarial valuation method used is the Projected Unit Credit Cost Method. Recommended annual contributions until the accrued liability is completely funded will consist of two pieces: Normal Cost plus a payment towards the Unfunded Accrued Liability.
 - a. The Accrued 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.
 - b. The Normal Cost is then similarly determined as the present value of the portion of the projected benefit attributable to the current year.
2. The Unfunded Accrued Liability is the Accrued Liability less Actuarial Value of Assets.
3. Since the valuation was done as of June 30, 1994, costs have been projected to July 1, 1995 in order to correspond to the fiscal year as follows:
 - a. Normal Costs were determined as a percentage of earnings, by Tier, as of July 1, 1994. Earnings were projected to July 1, 1995, separately for each Tier because of the shifting Tier populations, and the projected earnings were then multiplied by each Tier's normal cost factor.
 - b. The Unfunded Accrued Liability was determined as of June 30, 1994, and brought forward to June 30, 1995 by adding the Normal Cost plus interest and subtracting expected State and Federal contributions, also with interest. This amount was amortized over the 37 years specified in the SEBAC Agreement.
 - c. Normal Cost and Past Service Amortization payments were adjusted to reflect payment in twelve equal installments at the end of each month.

B. Actuarial Assumptions

Mortality: 1983 Group Annuity Mortality Table.

Service connected deaths are assumed to comprise 20% of total Death for Hazardous Duty employees and 0% for all other employees.

Investment Return:

Salary Scale: Varies by service as follows:

| <u>Years</u> | <u>Rate</u> |
|--------------|-------------|
| 0 | 14.00 |
| 1 | 12.00 |
| 2 | 10.00 |
| 3 | 9.00 |
| 4 | 8.20 |
| 5 | 7.50 |
| 10 | 5.45 |
| 15 | 4.45 |
| 20 | 3.75 |
| 25 | 3.25 |

Disability:

***Annual Rate of Disability
(Per 1,000 Lives)***

| <u>Age</u> | <u>Hazardous Duty</u> | <u>All Others</u> |
|------------|-----------------------|-------------------|
| 20 | .90 | .38 |
| 25 | 1.02 | .43 |
| 30 | 1.16 | .49 |
| 35 | 1.45 | .61 |
| 40 | 2.04 | .85 |
| 45 | 3.35 | 1.40 |
| 50 | 6.11 | 2.55 |
| 55 | 11.10 | 4.63 |
| 60 | 17.30 | 7.21 |

Service connected disabilities are assumed to comprise 50% of total Disability for Hazardous Duty employees and 20% for all other employees.

B. Actuarial Assumptions (cont'd)***Social Security Wage******Base Increases:***

6½% compounded annually.

Retirement Ages:***Hazardous Duty Employees***

| <u>Age</u> | <u>First Year Eligible</u> | <u>Thereafter</u> |
|------------|--------------------------------|-------------------|
| 47 | 40% | 30% |
| 50 | 40 | 30 |
| 55 | 60 | 30 |
| 60 | 80 | 50 |
| 62 | 100 | 100 |
| 65 | 100 | 100 |
| 70 | 100 | 100 |

Non Hazardous Duty Employees

| <u>Age</u> | <u>First Year Eligible</u> | <u>Thereafter</u> |
|------------|--------------------------------|-------------------|
| 47 | 0% | 0% |
| 50 | 0 | 0 |
| 55 | 20 | 0 |
| 60 | 20 | 15 |
| 62 | 40 | 40 |
| 65 | 80 | 60 |
| 70 | 100 | 100 |

B. Actuarial Assumptions (cont'd)***Turnover:***

Three year select and ultimate rates as shown below for non-hazardous duty males; the same table with rates increased by a factor of 10% for females and decreased by a factor of 60% of hazardous duty employees.

| <u>Age</u> | <u>Years of Participation</u> | | | |
|------------|-------------------------------|----------|----------|-----------|
| | <u>0</u> | <u>1</u> | <u>2</u> | <u>3+</u> |
| 20 | 30 | 30 | 20 | 10 |
| 25 | 17 | 15 | 10 | 8 |
| 30 | 15 | 11 | 8 | 5 |
| 35 | 13 | 10 | 8 | 3 |
| 40 | 10 | 9 | 7 | 3 |
| 45 | 5 | 8 | 6 | 2 |
| 50 | 3 | 6 | 4 | 2 |
| 55 | 2 | 4 | 2 | 0 |
| 60 | 0 | 0 | 0 | 0 |

***Cost of Living
Increases:***

3% per year for retirees on or after July 1, 1980.
4½% per year for retirees prior to July 1, 1980.

Asset Valuation:

Adjusted market value: assets are written up (or down) by spreading recognition of gains and losses over five years, plus an additional write-up (or write-down) as necessary so that the final adjusted value is within 20% of market value.

APPENDIX D

ACTUARIAL SURPLUS TEST

APPENDIX D

ACTUARIAL SURPLUS TEST AS OF JUNE 30, 1995

Section 5-162h(b) 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:** actual rate of return for the Fiscal Year ending June 30, 1995 must exceed the actuarial assumption of 8.5%.

| | | |
|----|--------------------------------------|-----------------|
| A. | Market Value of Assets July 1, 1994 | \$4,150,379,946 |
| B. | Market Value of Assets June 30, 1995 | 4,624,722,528 |
| I. | Investment Income for FY 94-95 | 539,341,368 |

$$\text{Actual Rate of Return for FY 94 - 95} = \frac{2I}{A+B-I} = 13.10\%$$

Actual Rate of Return of 13.10% is MORE than the assumption of 8.5%, so first criteria is met.

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

| | | |
|----|---|-------------------|
| A. | Market Value of Assets June 30, 1995 | \$4,624,722,528 |
| B. | Specified Liabilities June 30, 1995 | |
| | Liability for Retired Members | 4,259,436,367 |
| | Liability for Terminated Vested Members | 40,208,864 |
| | Active Member Contributions | 297,251,212 |
| | Interest on Active Member Contributions | <u>88,393,558</u> |
| | Total | \$4,685,290,001 |
| C. | 50% of Specified Liabilities | \$2,342,645,001 |

Market Value of Assets exceeds 50% of Specified Liabilities, so second criteria is met.

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

| | | |
|----|--|-----------------|
| A. | Actual Unfunded Liability June 30, 1995 | \$3,628,974,979 |
| B. | Projected Unfunded Liability June 30, 2000 | 1,734,339,000 |

Actual Unfunded Liability exceeds Projected Unfunded Liability so third criteria is not met and there is no actuarial surplus.

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 criteria 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. The following Projection 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).

| Year | (000) June 30 Unfunded Liability | Year | (000) June 30 Unfunded Liability | Year | (000) June 30 Unfunded Liability |
|------|---|------|---|------|---|
| 1984 | 2,155,459 | 2000 | 1,734,339 | 2016 | 1,364,443 |
| 1985 | 2,201,605 | 2001 | 1,722,646 | 2017 | 1,321,309 |
| 1986 | 2,206,090 | 2002 | 1,709,958 | 2018 | 1,274,507 |
| 1987 | 2,524,556 | 2003 | 1,696,191 | 2019 | 1,223,727 |
| 1988 | 1,954,257 | 2004 | 1,681,255 | 2020 | 1,168,632 |
| 1989 | 1,432,333 | 2005 | 1,665,050 | 2021 | 1,108,853 |
| 1990 | 1,939,758 | 2006 | 1,647,466 | 2022 | 1,043,992 |
| 1991 | 1,930,524 | 2007 | 1,628,388 | 2023 | 973,619 |
| 1992 | 1,920,505 | 2008 | 1,607,689 | 2024 | 897,265 |
| 1993 | 1,794,192 | 2009 | 1,585,229 | 2025 | 814,419 |
| 1994 | 1,787,586 | 2010 | 1,560,861 | 2026 | 724,533 |
| 1995 | 1,780,419 | 2011 | 1,534,422 | 2027 | 627,005 |
| 1996 | 1,772,643 | 2012 | 1,505,736 | 2028 | 521,188 |
| 1997 | 1,764,205 | 2013 | 1,474,610 | 2029 | 406,377 |
| 1998 | 1,755,050 | 2014 | 1,440,840 | 2030 | 281,377 |
| 1999 | 1,745,116 | 2015 | 1,404,198 | 2031 | 146,648 |

APPENDIX E

ENTRY AGE NORMAL VALUATION RESULTS

APPENDIX E

ENTRY AGE NORMAL VALUATION RESULTS

| | <i>June 30, 1994</i> | <i>June 30, 1995</i> |
|---|----------------------|----------------------|
| A. Current Results | | |
| 1. Present Value of Future Benefits | | |
| - Active Members | \$5,586,724,434 | \$ 6,067,746,725 |
| - Retired and Beneficiaries | 4,045,626,976 | 4,259,436,367 |
| - Deferred Vested Members | <u>32,951,832</u> | <u>40,208,864</u> |
| - Total Present Value | \$9,665,303,242 | \$10,367,391,956 |
| 2. Present Value Future Normal Cost Contributions | 1,816,861,532 | 1,975,246,683 |
| 3. Total Actuarial Liability: (1)-(2) | \$7,848,441,710 | \$8,392,145,273 |
| 4. Actuarial Value of Assets | 3,944,521,448 | 4,209,235,826 |
| 5. Unfunded Actuarial Liability: (3)-(4) | \$3,903,920,262 | \$4,182,909,447 |
| 6. Total Normal Cost | 193,590,656 | 209,745,370 |
| 7. Expected Employee Contributions | 35,143,546 | 37,511,139 |
| 8. Employer Normal Cost: (6)-(7) | \$ 158,447,110 | \$172,234,231 |
| B. Projections to Following Year | | |
| 1. Employer Normal Cost | \$ 180,788,820 | \$ 196,641,210 |
| 2. Unfunded Actuarial Liability | 4,041,366,763 | 4,378,209,904 |
| 3. Past Service Cost | 347,817,896 | 378,461,221 |
| 4. Total Cost: (1)+(3) | \$ 528,606,716 | \$ 575,102,431 |
| 5. Total Cost as a Percent of Pay | 22.45% | 22.63% |