

October 11, 2002

Actuarial Valuation Report as of July 1, 2002
State of Oklahoma Public Employees Retirement System

MERCER

Human Resource Consulting

Contents

Highlights

| | |
|---|-----------|
| Purpose | 1 |
| Summary of Principal Valuation Results | 2 |
| Effects of Changes | 3 |
| Certification..... | 5 |
| Section 1 Funding Results..... | 6 |
| 1.1 Comparative Summary of Valuation Results..... | 7 |
| 1.2 Unfunded Actuarial Accrued Liability | 10 |
| 1.3 Actuarial Gain/(Loss)..... | 11 |
| 1.4 Normal Cost | 12 |
| 1.5 Contributions..... | 13 |
| 1.6 Ten-Year Projected Cash Flow | 14 |
| 1.7 Liability Detail | 15 |
| Section 2 Accounting Results | 16 |
| 2.1 FAS No. 35 Information | 17 |
| 2.2 GASB No. 25 Information | 19 |
| Section 3 Plan Assets | 20 |
| 3.1 Summary of Assets | 21 |
| 3.2 Reconciliation of Assets | 22 |
| 3.3 Actuarial Value of Assets | 23 |
| 3.4 Average Annual Rates of Investment Return..... | 24 |
| Section 4 Basis of Valuation..... | 25 |
| 4.1 Plan Members | 26 |
| 4.2 Actuarial Basis | 32 |
| 4.3 Summary of Plan Provisions | 41 |
| Addendum | 49 |

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Highlights - Purpose

This report has been prepared by Mercer Human Resource Consulting for the Oklahoma Public Employees Retirement System to:

- Present the results of the valuation as of July 1, 2002;
- Review experience under the Plan for the year ended June 30, 2002;
- Provide reporting and disclosure information for auditors' reports, governmental agencies and other interested parties.

The main financial highlights are:

- The funded status of the System, as measured by the funded ratio, decreased from 82.6% to 79.8% over the past year. The unfunded accrued liability increased by \$259.9 million.

| Funded Status (\$000,000) | July 1, 2002 | July 1, 2001 |
|----------------------------|----------------|----------------|
| Accrued Liability | \$ 6,639.7 | \$ 6,190.2 |
| Actuarial Value of Assets | <u>5,299.8</u> | <u>5,110.2</u> |
| Unfunded Accrued Liability | \$ 1,339.9 | \$ 1,080.0 |
| Funded Ratio | 79.8% | 82.6% |

- The key items responsible for changes in the funded status are described below.
 - There were changes in plan provisions and actuarial assumptions. These changes increased the accrued liability. The Effects of Changes section of this report describes these changes and shows the effect of the changes on the System.
 - Liability gains occurred resulting in an accrued liability \$157.8 million less than expected (2.3% of expected liability). The components of this loss are summarized in the Effects of Changes section in this report.
 - The market value of assets lost approximately 5.3% during the year. The actuarial value of assets is determined using a method to smooth gains and losses to result in more stable costs. As a result, the return on the actuarial value was approximately 5.3%. Compared to the expected return of 7.5%, there was a loss of \$115.2 million.
- The funded ratio on a FAS 35 basis, measuring the market value of plan assets versus the present value of benefits accrued as of the valuation date, decreased from 111.7% to 98.2%.
- The required employer contribution increased as a percent of covered payroll.

| Contribution Summary (\$000,000) | July 1, 2002 | July 1, 2001 |
|----------------------------------|--------------|--------------|
| Total Required Contribution | \$284.9 | \$234.6 |
| Expected Employee Contributions | <u>52.0</u> | <u>46.6</u> |
| Required Employer Contribution | \$232.9 | \$188.0 |
| As a % of Covered Payroll | 16.1% | 14.3% |

Highlights - Summary of Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described in the section titled "Effects of Changes."

| | Actuarial Valuation as of | | Change Between Years | |
|--|---------------------------|----------------|----------------------|---------|
| | July 1, 2002 | July 1, 2001 | Amount | Percent |
| Summary of Costs | | | | |
| Required Employer Contribution for Current Year | \$ 232,891,719 | \$ 187,991,746 | \$ 44,899,973 | 23.9% |
| Actual Employer Contributions Received in Prior Year | \$ 139,614,903 | \$ 131,200,423 | \$ 8,414,480 | 6.4% |

| GASB No. 25 Funded Status | | | | |
|--------------------------------------|------------------|------------------|----------------|-------|
| Actuarial Accrued Liability | \$ 6,639,720,469 | \$ 6,190,228,108 | \$ 449,492,361 | 7.3% |
| Actuarial Value of Assets | \$ 5,299,781,370 | \$ 5,110,226,650 | \$ 189,554,720 | 3.7% |
| Unfunded Actuarial Accrued Liability | \$ 1,339,939,099 | \$ 1,080,001,458 | \$ 259,937,641 | 24.1% |

| Market Value of Assets and Additional Liabilities | | | | |
|--|------------------|------------------|------------------|--------|
| Market Value of Assets | \$ 4,485,546,116 | \$ 4,815,296,738 | \$ (329,750,622) | (6.8%) |
| Actuarial Present Value of Accumulated Plan Benefits (FAS No.35) | \$ 4,567,396,314 | \$ 4,310,393,532 | \$ 257,002,782 | 6.0% |
| Present Value of Projected Plan Benefits | \$ 7,881,307,366 | \$ 7,190,954,492 | \$ 690,352,874 | 9.6% |

| Summary of Data | | | | |
|-------------------------------------|---------------|---------------|--------------|-------------|
| Number of Participants in Valuation | | | | |
| Active Members | 44,292 | 43,696 | 596 | 1.4% |
| Terminated Vested Members | 5,392 | 5,241 | 151 | 2.9% |
| Retired Members | 18,529 | 18,099 | 430 | 2.4% |
| Joint Annuitants/Surviving Spouses | 1,837 | 1,744 | 93 | 5.3% |
| Disabled Members | 1,086 | 1,020 | 66 | 6.5% |
| Total | 71,136 | 69,800 | 1,336 | 1.9% |

| Active Participant Statistics | | | | |
|--------------------------------------|------------------|------------------|----------------|--------|
| Total Annual Compensation | \$ 1,450,317,127 | \$ 1,317,043,030 | \$ 133,274,097 | 10.1% |
| Average Compensation | \$ 32,745 | \$ 30,141 | \$ 2,604 | 8.6% |
| Average Age | 45.2 | 45.0 | 0.2 | 0.4% |
| Average Service | 10.4 | 10.5 | (0.1) | (1.0%) |

Highlights - Effects of Changes

Changes in Plan Provisions

- House Bill 2124 provides an increase in benefits, or COLA, for any person receiving benefits from OPERS on June 30, 2001 and who continue to receive benefits on or after July 1, 2002. This increase will be payable beginning with the July 1, 2002 benefit payment and will be 5% for those persons receiving a benefit based upon less than 25 years of service; 5½% for persons receiving a benefit based on at least 25 years of service and less than 30 years of service, and 6% for those persons receiving a benefit based on at least 30 years of service.
- The 401(a)(17) salary limit was increased from \$170,000 to \$200,000.
- Senate Bill 405 changes the retirement benefits and the retirement eligibility requirements for Oklahoma Military Department (OMD) firefighters. OMD firefighters who begin employment July 1, 2002 and after will be entitled to a 2½% computation factor. They will also be eligible for full benefits after 20 years as a firefighter. Their employee contribution rate will be 8%. Current OMD firefighters will have the option to participate in the new provisions by making an irrevocable election before December 31, 2002 to base their future benefits on the new statutes if they contribute 8% of pay in the future. They may also increase their computation factor for past OMD firefighter service by paying the actuarial cost of the increase. This change has no effect on this year's valuation.

The total effect of these changes to the System's accrued liability was an increase of \$100.2 million.

Changes in Actuarial Assumptions

As a result of the July 1, 1998 to June 30, 2001 experience analysis:

- The projected salary scale has been increased across all ages.
- The retirement rates were increased at a few specific ages.
- The disability rates for males were lowered for most ages.
- The withdrawal rates for employees with at least three years of service were increased.

The total effect of these changes to the System's accrued liability was an increase of \$176.2 million.

Changes in Actuarial Methods

There have been no changes in actuarial methods since the prior valuation.

Highlights - Effects of Changes

Actuarial Experience During the Plan Year

The Plan experienced a liability gain of \$157,792,000 and an asset loss of \$115,151,000 during the year ended June 30, 2002. The significant items are developed as follows:

| Liability Sources | Impact on Actuarial Liability | Percent of Expected Liability |
|--------------------------|-------------------------------|-------------------------------|
| Salary Increases | \$ (71,066,000) | (1.05%) |
| Deaths | 64,179,000 | 0.94% |
| Terminations | (30,717,000) | (0.45%) |
| Retirements | 140,552,000 | 2.07% |
| Disability | 13,264,000 | 0.20% |
| New Entrants and Rehires | (29,286,000) | (0.43%) |
| Miscellaneous/Data | 70,866,000 | 1.04% |
| Actuarial Gain/(Loss) | \$ 157,792,000 | 2.32% |

| Asset Sources | Impact on Actuarial Value of Assets |
|--|-------------------------------------|
| Expected Investment Return | \$ 380,427,000 |
| Investment Return on Actuarial Value of Assets | 265,276,000 |
| Actuarial Gain/(Loss) | \$ (115,151,000) |

| | |
|----------------------------------|----------------------|
| Net Actuarial Gain/(Loss) | \$ 42,641,000 |
|----------------------------------|----------------------|

Highlights - Certification

We have prepared an actuarial valuation of the Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2002, for the plan year ending June 30, 2003. The results of the valuation are set forth in this report, which reflects the provisions of the Plan as amended and effective on July 1, 2002.

The valuation is based on employee and financial data which were provided by OPERS and the independent auditor, respectively, and which are summarized in this report.

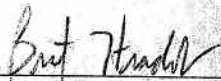
All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current State Statutes and regulations issued thereunder, using an actuarial cost method which we believe is appropriate. In our opinion, the actuarial assumptions are reasonable and represent our best estimate of the anticipated experience under the Plan. This report fully and fairly discloses the actuarial position of the Plan on an ongoing basis.

There have been changes in actuarial assumptions and plan provisions since the last valuation of the Plan. A description of those changes is incorporated in this report.

In the course of this valuation, we have examined the relative magnitude of medical benefits provided under Section 401(h) of the Internal Revenue Code. We have determined that these medical benefits are subordinate to the retirement benefits, as required.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

I, Brent A. Hradek, FSA, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.


Brent A. Hradek, FSA, EA

10/11/2002
Date

I, Stephen T. McElhaney, FSA, meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.


Stephen T. McElhaney, FSA, EA

10/11/2002
Date

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Section 1: Funding Results

- Section 1.1** A comparative summary of valuation results
- Section 1.2** The unfunded actuarial accrued liability as of the valuation date
- Section 1.3** A development of the actuarial gain or loss during the year
- Section 1.4** The normal cost as of the valuation date
- Section 1.5** A summary of the contribution requirements for the plan year
- Section 1.6** A ten-year projection of benefit payments
- Section 1.7** A summary of the components of the actuarial accrued liability

Comparative Summary of Principal Valuation Results

| | Actuarial Valuation as of | | Percent Change |
|---|---------------------------|------------------|----------------|
| | July 1, 2002 | July 1, 2001 | |
| A. Summary of Data | | | |
| 1. Active Members | | | |
| a. Number | | | |
| i) Active Members | 43,426 | 42,450 | 2.3% |
| ii) Members Without Applications | 866 | 1,246 | (30.5%) |
| iii) Total | 44,292 | 43,696 | 1.4% |
| b. Annual Compensation | \$ 1,450,317,127 | \$ 1,317,043,030 | 10.1% |
| c. Average Annual Compensation | \$ 32,745 | \$ 30,141 | 8.6% |
| d. Average Age | 45.2 | 45.0 | 0.4% |
| e. Average Service | 10.4 | 10.5 | (1.0%) |
| 2. Accumulated Member Contributions | | | |
| a. Active Members | \$ 301,163,376 | \$ 273,213,844 | 10.2% |
| b. Unclaimed Contribution Accounts | \$ 11,777,256 | \$ 10,689,887 | 10.2% |
| c. Members Without Applications | \$ 1,669,119 | \$ 1,530,603 | 9.1% |
| d. Total | \$ 314,609,751 | \$ 285,434,334 | 10.2% |
| 3. Vested Terminated Members | | | |
| a. Number | 4,147 | 4,100 | 1.1% |
| b. Annual Deferred Benefits | \$ 30,159,498 | \$ 29,168,179 | |
| c. Average Annual Deferred Benefit | \$ 7,273 | \$ 7,114 | |
| d. Annual Supplemental Medical Insurance Premiums | \$ 5,225,220 | \$ 5,166,000 | 1.1% |
| 4. Assumed Deferred Vested-Number | 1,245 | 1,141 | 9.1% |
| 5. Retired Members | | | |
| a. Number | 18,529 | 18,099 | 2.4% |
| b. Annual Retirement Benefits | \$ 231,146,858 | \$ 210,695,925 | 9.7% |
| c. Average Annual Retirement Benefit | \$ 12,475 | \$ 11,641 | 7.2% |
| d. Annual Supplemental Medical Insurance Premiums | \$ 16,682,400 | \$ 16,323,300 | 2.2% |
| 6. Joint Annuitants/Surviving Spouses | | | |
| a. Number | 1,837 | 1,744 | 5.3% |
| b. Annual Retirement Benefits | \$ 13,835,510 | \$ 11,971,690 | 15.6% |
| c. Average Annual Retirement Benefit | \$ 7,532 | \$ 6,865 | 9.7% |
| 7. Disabled Members | | | |
| a. Number | 1,086 | 1,020 | 6.5% |
| b. Annual Retirement Benefits | \$ 8,412,860 | \$ 7,453,499 | 12.9% |
| c. Average Annual Retirement Benefit | \$ 7,747 | \$ 7,307 | 6.0% |
| d. Annual Supplemental Medical Insurance Premiums | \$ 917,280 | \$ 858,060 | 6.9% |
| 8. Total Members Included in Valuation | 71,136 | 69,800 | 1.9% |

Comparative Summary of Principal Valuation Results

| | Actuarial Valuation as of | | Percent Change |
|---|---------------------------|------------------|----------------|
| | July 1, 2002 | July 1, 2001 | |
| B. Summary of Assets, Liabilities and Funded Status | | | |
| 1. Plan Assets on Valuation Date | | | |
| a. Actuarial Value | \$ 5,299,781,370 | \$ 5,110,226,650 | 3.7% |
| b. Market Value | \$ 4,485,546,116 | \$ 4,815,296,738 | (6.8%) |
| 2. Actuarial Accrued Liability ¹ | | | |
| | \$ 6,639,720,469 | \$ 6,190,228,108 | 7.3% |
| a. Funded Ratio - Actuarial Value ¹ | 79.8% | 82.6% | (3.4%) |
| b. Funded Ratio - Market Value | 67.6% | 77.8% | (13.1%) |
| 3. Unfunded Actuarial Accrued Liability (Based on Actuarial Value of Assets) | | | |
| | \$ 1,339,939,099 | \$ 1,080,001,458 | 24.1% |
| 4. Present Value of Accumulated Benefits (FASB No. 35) | | | |
| a. Funded Ratio - Actuarial Value | 116.0% | 118.6% | (2.2%) |
| b. Funded Ratio - Market Value | 98.2% | 111.7% | (12.1%) |

¹ GASB No. 25 Basis.

Comparative Summary of Principal Valuation Results

| | Actuarial Valuation as of | | | | Percent Change in Amount |
|---|---------------------------|--------------------|------------------|--------------------|--------------------------|
| | July 1, 2002 | | July 1, 2001 | | |
| | Amount | % of Covered Comp. | Amount | % of Covered Comp. | |
| C. Summary of Contribution Requirements | | | | | |
| 1. Annual Covered Compensation for Members Included in Valuation | \$ 1,450,317,127 | N/A | \$ 1,317,043,030 | N/A | 10.1% |
| 2. Total Normal Cost Mid-year | \$ 163,733,551 | 11.3% | \$ 137,726,673 | 10.5% | 18.9% |
| 3. Unfunded Actuarial Accrued Liability | \$ 1,339,939,099 | 92.4% | \$ 1,080,001,458 | 82.0% | 24.1% |
| 4. Amortization of Unfunded Actuarial Accrued Liability over 40 Years from July 1, 1987 Mid-year | \$ 116,013,575 | 8.0% | \$ 92,245,534 | 7.0% | 25.8% |
| 5. Budgeted Expenses Provided by the System | \$ 5,113,760 | 0.4% | \$ 4,631,148 | 0.4% | 10.4% |
| 6. Total Required Contribution (2. + 4. + 5.) | \$ 284,860,886 | 19.6% | \$ 234,603,355 | 17.8% | 21.4% |
| 7. Estimated Member Contribution | \$ 51,969,167 | 3.6% | \$ 46,611,609 | 3.5% | 11.5% |
| 8. Required State Contribution to Amortize Unfunded Actuarial Accrued Liability over 40 Years From July 1, 1987 at Mid-year (6.-7.) | \$ 232,891,719 | 16.1% | \$ 187,991,746 | 14.3% | 23.9% |
| 9. Previous Year's Actual Contribution | | | | | |
| a. Member | \$ 50,750,779 | 3.9% ² | \$ 47,323,569 | 3.7% ² | 7.2% |
| b. Employer | \$ 139,614,903 | 10.6% ² | \$ 131,200,423 | 10.2% ² | 6.4% |
| c. Total | \$ 190,365,682 | 14.5% ² | \$ 178,523,992 | 13.9% ² | 6.6% |

² Percent of previous years' annual compensation for active members (\$1,317,043,030 at July 1, 2001 and \$1,281,505,876 at July 1, 2000).

Unfunded Actuarial Accrued Liability

The actuarial accrued liability is the present value of projected plan benefits allocated to past service by the actuarial funding method being used.

| | July 1, 2002 | July 1, 2001 |
|---|-------------------------|-------------------------|
| 1. Actuarial Present Value of Benefits | | |
| a. Active Members ³ | \$ 4,755,258,098 | \$ 4,111,534,949 |
| b. Terminated Vested Members ⁴ | 262,679,323 | 250,189,649 |
| c. Retirees, Disableds and Joint Annuitants/Surviving Spouses | 2,863,369,945 | 2,829,229,894 |
| d. Total (a. + b. +c.) | \$ 7,881,307,366 | \$ 7,190,954,492 |
| 2. Actuarial Present Value of Future Normal Costs | \$ 1,241,586,897 | \$ 1,000,726,384 |
| 3. Total Actuarial Accrued Liability (1 - 2) | \$ 6,639,720,469 | \$ 6,190,228,108 |
| 4. Actuarial Value of Assets | \$ 5,299,781,370 | \$ 5,110,226,650 |
| 5. Unfunded Actuarial Accrued Liability (3. - 4., not less than \$0) | \$ 1,339,939,099 | \$ 1,080,001,458 |

³ Includes \$22,249,264 for 866 members who have not completed applications as of July 1, 2002.

⁴ Includes \$11,777,256 for unclaimed contributions, \$48,292,562 for 1,245 assumed deferred vested employees, and \$1,217,513 for the limited additional retirement benefits as of July 1, 2002. Includes \$10,689,887 for unclaimed contributions, \$47,662,349 for 1,141 assumed deferred vested employees, and \$1,100,433 for the limited additional retirement benefit as of July 1, 2001.

Actuarial Gain/(Loss)

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2002.

| | |
|---|------------------|
| 1. Expected Actuarial Accrued Liability | |
| a. Actuarial Accrued Liability at July 1, 2001 | \$ 6,190,228,108 |
| b. Normal Cost at July 1, 2001 | 132,748,600 |
| c. Interest on a. + b. to End of Year | 474,223,253 |
| d. Benefit Payments for Plan Year Ending June 30, 2002, with Interest to End of Year | (276,065,755) |
| e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. + d.) | \$ 6,521,134,206 |
| f. Change in Actuarial Accrued Liability at July 1, 2002, Due to Change in Actuarial Assumptions | 176,174,343 |
| g. Change in Actuarial Accrued Liability at July 1, 2002, Due to Change in Plan Provisions | 100,203,840 |
| h. Expected Actuarial Accrued Liability at July 1, 2002 (e. + f. + g.) | \$ 6,797,512,389 |
| 2. Actuarial Accrued Liability at July 1, 2002 | \$ 6,639,720,469 |
| 3. Actuarial Liability Gain/(Loss) (1.h. - 2) | \$ 157,791,920 |
| 4. Expected Actuarial Value of Assets | |
| a. Actuarial Value of Assets at July 1, 2001 | \$ 5,110,226,650 |
| b. Interest on a. to End of Year | 383,266,999 |
| c. Contributions Made for Plan Year Ending June 30, 2002 | 190,365,682 |
| d. Interest on c. to End of Year | 7,138,713 |
| e. Benefit Payments for Plan Year Ending June 30, 2002, with Interest to End of Year | (276,065,755) |
| f. Expected Actuarial Value of Assets at July 1, 2001 (a. + b. + c. + d. + e.) | \$ 5,414,932,289 |
| 5. Actuarial Value of Assets as of July 1, 2002 | \$ 5,299,781,370 |
| 6. Actuarial Asset Gain/(Loss) (5. - 4f.) | \$ (115,150,919) |
| 7. Net Actuarial Gain/(Loss) (3. + 6.) | \$ 42,641,001 |
| COLA Reserve | |
| 1. Reserve as of July 1, 2001 | \$ 51,601,609 |
| 2. Interest at 7.5% | 3,870,121 |
| 3. Reserve Increment | 51,588,251 |
| 4. Expected Reserve as of July 1, 2002 | 107,059,981 |
| 5. Ad Hoc Cost of Living Increase During 2001/2002 | 136,966,808 |
| 6. Actual Reserve on July 1, 2002 (4. less 5., not less than \$0) | 0 |

Normal Cost

The components of normal cost under the Plan's funding method are:

| Component | July 1, 2002 | July 1, 2001 |
|---|-----------------------|-----------------------|
| Retirement Benefits | \$ 111,384,296 | \$ 91,949,128 |
| Withdrawal Benefits | 17,016,602 | 13,984,350 |
| Disability Benefits | 5,486,801 | 5,023,050 |
| Death Benefits | 5,631,676 | 4,877,491 |
| Refunds | 6,443,865 | 5,701,255 |
| Supplemental Medical Insurance Premiums | 9,676,122 | 8,967,584 |
| Contributions with no Application from Client | 2,176,109 | 2,245,742 |
| Total Normal Cost at Beginning of Year | \$ 157,815,471 | \$ 132,748,600 |
| Total Normal Cost at Mid Year | \$ 163,733,551 | \$ 137,726,673 |
| Normal Cost Rate at Mid Year | 11.29% | 10.46% |
| Annual Covered Payroll | \$ 1,450,317,127 | \$ 1,317,043,030 |

Contributions

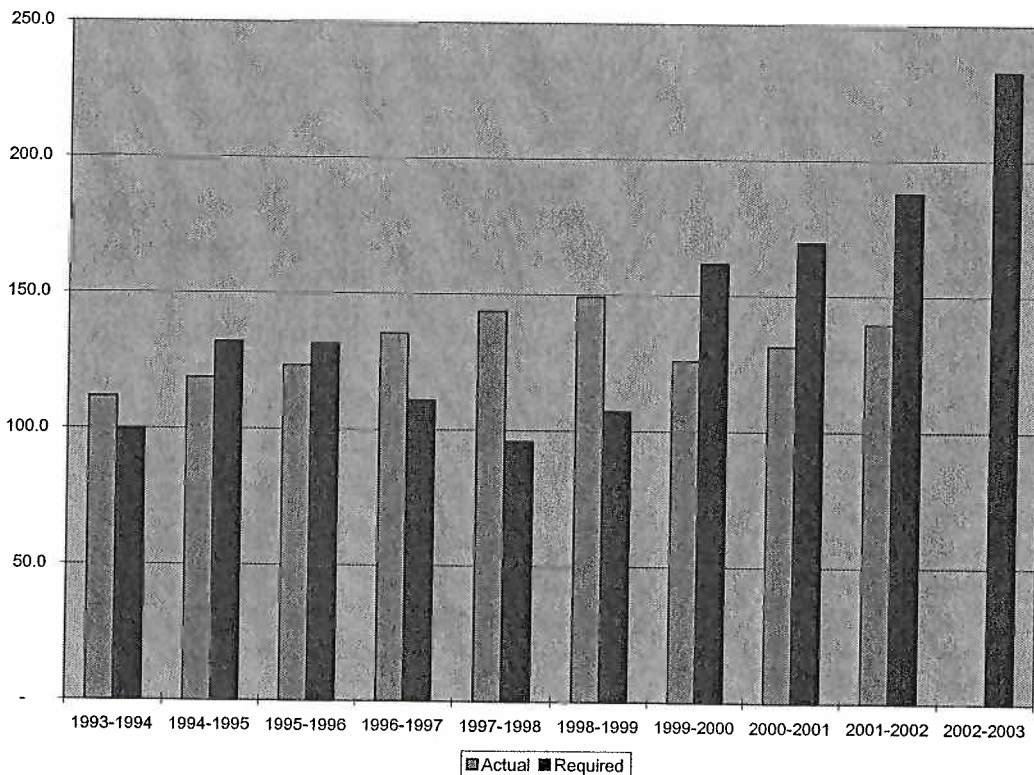
Contributions to the Retirement System are made by the Members and their employers.

Effective July 1, 1998, State employees pay 3.0% of gross salary up to \$25,000 per year and 3.5% of gross salary over \$25,000. Local government employees contribute from 3.5% to 8.5% of gross salary, depending on the rate chosen by their employers. Elected officials and employees of the Department of Corrections have different required contributions (see Section 4.3).

Following is a graph representing the total required employer contribution compared to the amount actually received in the year. The funding policy contribution equals the plan's normal cost, budgeted expenses and an amortization of the unfunded accrued liability. For July 1, 1998 and prior years, the unfunded accrued liability was amortized over 25 years from July 1, 1987. For the July 1, 1999 valuation, the amortization period was changed to 40 years from July 1, 1987 (26 years remaining as of July 1, 2001).

As of July 1, 1999, the State's employer contribution was reduced to 10.0% of gross salary. The State contribution is not sufficient to fund the contribution developed under Governmental Accounting Standards Number 25 (developed on page 8) which includes the recognition of future ad-hoc COLAs at 66.7% of the assumed inflation rate.

**Employer Contributions Received
versus Contributions Required
by Funding Policy
(\$000,000)**



Ten-Year Projected Cash Flow (Retirement Benefit Payments)

The chart below shows estimated benefits expected to be paid over the next ten years, based on the assumptions used in this valuation. The "Actives" column shows benefits expected to be paid to Members currently active on July 1, 2002. The "Retirees" column shows benefits expected to be paid to all other Members. This includes those who, as of July 1, 2002, are receiving benefit payments or who terminated employment and are entitled to a deferred vested benefit.

| Plan Year Ending | Actives | Retirees ⁵ | Total ⁶ |
|------------------|---------------|-----------------------|--------------------|
| 06/30/2003 | \$ 27,239,272 | \$ 274,730,333 | \$ 301,969,605 |
| 06/30/2004 | 47,681,804 | 274,288,268 | 321,970,072 |
| 06/30/2005 | 69,820,336 | 273,598,932 | 343,419,268 |
| 06/30/2006 | 93,696,769 | 272,642,269 | 366,339,038 |
| 06/30/2007 | 118,944,483 | 271,357,787 | 390,302,270 |

| | | | |
|------------|-------------|-------------|-------------|
| 06/30/2008 | 146,594,844 | 269,879,018 | 416,473,862 |
| 06/30/2009 | 176,836,865 | 268,433,463 | 445,270,328 |
| 06/30/2010 | 208,933,482 | 266,804,486 | 475,737,968 |
| 06/30/2011 | 243,291,604 | 264,645,755 | 507,937,359 |
| 06/30/2012 | 279,252,298 | 261,993,065 | 541,245,363 |

Expected Three Year Cash Flow on Supplemental Medical Insurance Premiums.

| Plan Year Ending | Actives | Retirees | Total |
|------------------|--------------|---------------|---------------|
| 06/30/2003 | \$ 1,734,800 | \$ 17,504,658 | \$ 19,239,458 |
| 06/30/2004 | 3,267,105 | 17,067,790 | 20,334,895 |
| 06/30/2005 | 4,826,913 | 16,640,160 | 21,467,073 |

⁵ Includes disabled Members, joint annuitants and beneficiaries, surviving spouses and terminated vested Members.

⁶ Includes supplemental medical insurance premium.

Liability Detail

| Actuarial Accrued Liability | July 1, 2002 | July 1, 2001 |
|---|-------------------------|-------------------------|
| 1. Actives | | |
| a. Retirement Benefits | \$ 3,061,206,384 | \$ 2,680,337,176 |
| b. Withdrawal Benefits | 143,062,885 | 128,528,538 |
| c. Disability Benefits | 101,806,977 | 97,572,621 |
| d. Death Benefits | 101,160,851 | 92,906,629 |
| e. Refunds | (34,221,433) | (30,590,219) |
| f. Supplemental Medical Insurance Premiums | 135,355,555 | 134,098,963 |
| g. Liability for People Who Have Not Submitted an Application | 5,299,982 | 7,954,857 |
| h. Refund of Excess Contributions for Active Members | 0 | 0 |
| i. Total | \$ 3,513,671,201 | \$ 3,110,808,565 |
| 2. Inactives | | |
| a. Terminated Vested Members | \$ 219,530,144 | \$ 209,475,665 |
| b. Unclaimed Contributions | 11,777,256 | 10,689,887 |
| c. Retired Members | 2,495,230,733 | 2,435,585,119 |
| d. Disabled Members | 91,025,313 | 85,170,509 |
| e. Joint Annuitants/Surviving Spouses | 135,355,939 | 118,050,721 |
| f. Supplemental Medical Insurance Premiums | 171,912,370 | 167,745,600 |
| g. Refund of Excess Contributions for Terminated Vested Members | 1,217,513 | 1,100,433 |
| h. COLA Reserve | 0 | 51,601,609 |
| i. Total | \$ 3,126,049,268 | \$ 3,079,419,543 |
| 3. Actuarial Accrued Liability | \$ 6,639,720,469 | \$ 6,190,228,108 |

| Normal Cost | | |
|---|-----------------------|-----------------------|
| 1. Retirement Benefits | \$ 111,384,296 | \$ 91,949,128 |
| 2. Withdrawal Benefits | 17,016,602 | 13,984,350 |
| 3. Disability Benefits | 5,486,801 | 5,023,050 |
| 4. Death Benefits | 5,631,676 | 4,877,491 |
| 5. Refunds | 6,443,865 | 5,701,255 |
| 6. Supplemental Medical Insurance Premiums | 9,676,122 | 8,967,584 |
| 7. People Who Have Not Submitted an Application | 2,176,109 | 2,245,742 |
| 8. Total | \$ 157,815,471 | \$ 132,748,600 |

Section 2: Accounting Results

Section 2.1 Information pertaining to the actuarial present value of accumulated plan benefits as required under FAS No. 35

Section 2.2 Items required under GASB No. 25

FAS No. 35 Information

A. Actuarial Present Value of Accumulated Plan Benefits

The actuarial present value of vested and nonvested accumulated plan benefits is computed on an ongoing plan basis in order to provide required information under Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current participants as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate.

Assumptions regarding future salary and accrual of future benefit service are not necessary for this purpose. *Assumption of 2% future ad hoc cost-of-living increases is not reflected in this liability. Only System liabilities accrued (and in statute) as of the valuation date are included.*

| Accumulated Plan Benefits | July 1, 2002 | July 1, 2001 |
|---|-------------------------|-------------------------|
| Vested Benefits | | |
| • Active Members ⁷ | \$ 1,437,304,530 | \$ 1,319,138,975 |
| • Terminated Vested Members ⁸ | 198,397,585 | 188,703,420 |
| • Retirees and Joint Annuitants/Surviving Spouses | 2,338,283,560 | 2,247,537,652 |
| • Supplemental Medical Insurance Premiums | 274,669,731 | 266,356,261 |
| Total Vested Benefits | \$ 4,248,655,406 | \$ 4,021,736,308 |
| Nonvested Benefits | 318,740,908 | 288,657,224 |
| Total Accumulated Plan Benefits | \$ 4,567,396,314 | \$ 4,310,393,532 |
| Assumed Rate of Interest | 7.50% | 7.50% |
| Market Value of Assets Available for Benefits | \$ 4,485,546,116 | \$ 4,815,296,738 |
| Funded Ratio | 98.2% | 111.7% |
| Change in Accumulated Plan Benefits Due to: | | |
| • Assumption Changes | \$ 93,199,774 | \$ 0 |
| • Plan Provision Changes | \$ 118,676,123 | \$ 0 |

| Number of Members | July 1, 2002 | July 1, 2001 |
|---|---------------|---------------|
| Vested Members | | |
| • Active Members ⁷ | 21,944 | 23,736 |
| • Terminated Vested Members ⁸ | 5,392 | 5,116 |
| • Retirees and Joint Annuitants/Surviving Spouses | 21,452 | 20,306 |
| Total Vested Members | 48,788 | 49,158 |
| Nonvested Members | 22,348 | 20,642 |
| Total Members | 71,136 | 69,800 |

⁷ Includes \$1,769,471 for 866 Members who have not completed applications as of July 1, 2002 and \$2,975,611 for 1,246 Members who had not completed applications as of July 1, 2001.

⁸ Includes \$11,777,256 for unclaimed contributions and \$1,217,513 for the limited additional retirement benefit as of July 1, 2002. Includes \$10,689,887 for unclaimed contributions and \$1,100,433 for the limited additional retirement benefit as of July 1, 2001.

FAS No. 35 Information

B. Statement of Changes in Accumulated Plan Benefits

A statement of changes in the actuarial present value of accumulated plan benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

| | |
|--|-------------------------|
| Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2001 | \$ 4,310,393,532 |
| Increase/(Decrease) During Year Attributable to: | |
| • Normal Cost and (Gains)/Losses | \$ (2,086,875) |
| • Increase for Interest Due to Decrease in Discount Period | 313,301,235 |
| • Benefits Paid | (266,087,475) |
| • Plan Amendment | 118,676,123 |
| • Assumption Changes | 93,199,774 |
| Net Increase/(Decrease) | \$ 257,002,782 |
| Actuarial Present Value of Accumulated Plan Benefits as of July 1, 2002 | \$ 4,567,396,314 |

The benefits valued include all benefits (retirement, preretirement death, vested termination and return of contributions) payable from the Plan for member service prior to the valuation date. Benefits are assumed to accrue/(accumulate) in accordance with the plan provisions.

GASB No. 25 Information**Supplementary Schedules**

Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25), became effective for periods beginning after June 15, 1996, and requires funded status to be measured based upon the actuarial funding method adopted by the Board of Retirement. The Board adopted the Entry Age Normal Cost Method.

A. Schedule of Funding Progress

The GASB Statement No. 25 liabilities and assets resulting from the last six actuarial valuations are as follows:

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|--------------------------|-------------------------------|---|---------------------------|--------------------|---------------------|---|
| 07/01/1997 | \$3,270,947,820 | \$3,594,630,911 | \$323,683,091 | 91.0% | \$1,176,659,783 | 27.5% |
| 07/01/1998 | 3,732,849,134 | 4,116,569,826 | 383,720,692 | 90.7% | 1,154,342,141 | 33.2% |
| 07/01/1999 | 4,261,624,240 | 5,179,784,869 | 918,160,629 | 82.3% | 1,219,031,066 | 75.3% |
| 07/01/2000 | 4,785,555,333 | 5,694,725,385 | 909,170,052 | 84.0% | 1,281,505,876 | 70.9% |
| 07/01/2001 | 5,110,226,650 | 6,190,228,108 | 1,080,001,458 | 82.6% | 1,317,043,030 | 82.0% |
| 07/01/2002 | 5,299,781,370 | 6,639,720,469 | 1,339,939,099 | 79.8% | 1,450,317,127 | 92.4% |

B. Schedule of Employer Contributions

The GASB Statement No. 25 required and actual contributions are as follows:

| Year Ended June 30 | Annual Required Contribution | Percentage Contributed |
|--------------------|------------------------------|------------------------|
| 1997 | \$ 110,887,284 | 122.1% |
| 1998 | 95,973,977 | 149.7% |
| 1999 | 107,171,639 | 139.2% |
| 2000 | 161,793,250 | 77.8% |
| 2001 | 169,642,126 | 77.3% |
| 2002 | 187,991,746 | 74.3% |

Section 3: Plan Assets

This section presents information regarding plan assets as reported by the plan administrator or trustee. The plan assets represent the portion of total plan liabilities which has been funded as of the valuation date.

- Section 3.1** Summary of market value of assets
- Section 3.2** Reconciliation of assets
- Section 3.3** Actuarial value of plan assets as of July 1, 2002
- Section 3.4** Average annual rates of investment return

Summary of Assets

| Asset Category | Market Value as of June 30, 2002 | Market Value as of June 30, 2001 |
|---|-------------------------------------|-------------------------------------|
| 1. Cash and Short-Term Investments | Amount | Amount |
| a. Cash and Short-Term Investments | \$ 150,629,380 | \$ 141,176,125 |
| 2. Receivables | | |
| a. Interest and Dividends | 22,687,459 | 27,594,938 |
| b. Member Contributions | 801,046 | 758,639 |
| c. Employer Contributions | 1,943,945 | 1,938,750 |
| d. Due from Brokers for Securities Sold | 130,072,628 | 62,291,985 |
| e. Total | \$ 155,505,078 | \$ 92,584,312 |
| 3. Investments at Fair Value | | |
| a. Government Bonds | 1,210,356,852 | 1,374,512,455 |
| b. Corporate Bonds | 639,960,003 | 592,791,836 |
| c. Domestic Stocks | 1,943,672,841 | 2,161,752,068 |
| d. Foreign Stocks | 538,230,707 | 553,499,634 |
| e. Real Estate | 0 | 37,774 |
| f. Total | \$ 4,332,220,403 | \$ 4,682,593,767 |
| 4. Other Assets | | |
| a. Other Assets | 185,923 | 111,394 |
| 5. Assets Used in Plan Operations | | |
| a. Property and Equipment | 391,920 | 428,701 |
| 6. Total Assets | 4,638,932,704 | 4,916,894,299 |
| 7. Liabilities | | |
| a. Due to Brokers and Investment Managers | (153,386,588) | (101,597,561) |
| b. Accounts Payable and Accrued Expenses | 0 | 0 |
| c. Benefits Payable | 0 | 0 |
| d. Total Liabilities | (153,386,588) | (101,597,561) |
| 8. Net Assets Available for Pension Benefits | \$ 4,485,546,116 | \$ 4,815,296,738 |

Reconciliation of Assets

| Transactions | Fiscal Year Ended June 30, 2002 | Fiscal Year Ended June 30, 2001 |
|---|------------------------------------|------------------------------------|
| Additions | | |
| 1. Contributions | | |
| a. Contributions from Plan Members | \$ 50,750,779 | \$ 47,323,569 |
| b. Contributions from Employers | \$ 139,614,903 | \$ 131,200,423 |
| c. Total | \$ 190,365,682 | \$ 178,523,992 |
| 2. Net Investment Income | | |
| a. Interest | \$ 116,711,068 | \$ 126,929,478 |
| b. Dividends | 11,676,601 | 9,978,449 |
| c. Realized and Unrealized Appreciation | (374,464,731) | (440,787,117) |
| d. Real Estate | (884) | (217,694) |
| e. Security Lending Activities | 1,709,138 | 2,000,132 |
| f. Other | 99,191 | 133,899 |
| g. Total | \$ (244,269,617) | \$ (301,962,853) |
| h. Investment Expense | (6,562,232) | (9,587,954) |
| i. Net Investment Income | \$ (250,831,849) | \$ (311,550,807) |
| 3. Total Additions | \$ (60,466,167) | \$ (133,026,815) |
| Deductions | | |
| 4. Retirement, Death and Survivor Benefits | \$ (257,938,411) | \$ (247,076,546) |
| 5. Refund of Contributions | (8,149,064) | (47,550,520) |
| 6. Administrative Expenses | (3,196,980) | (2,825,116) |
| 7. Total Deductions | \$ (269,284,455) | \$ (297,452,182) |
| 8. Change in Assets Not Available for Benefits | 0 | 0 |
| 9. Net Increase | \$ (329,750,622) | \$ (430,478,997) |
| 10. Net Assets Held in Trust for Pension Benefits | | |
| a. Beginning of Year | \$ 4,815,296,738 | \$ 5,245,775,735 |
| b. End of Year | \$ 4,485,546,116 | \$ 4,815,296,738 |
| Reconciliation of Actuarial Value and Market Value | | |
| Actuarial Asset Value | \$ 5,299,781,370 | \$ 5,110,226,650 |
| Deferred Gain/(Loss) | \$ (814,235,254) | \$ (294,929,912) |
| Market Value | \$ 4,485,546,116 | \$ 4,815,296,738 |

Actuarial Value of Assets

| Schedule of Asset Gains/(Losses) | | | | |
|----------------------------------|-------------------------|---------------------------|-------------------------|----------------------------|
| Year | Original Amount | Recognized in Prior Years | Recognized This Year | Recognized in Future Years |
| 1997/1998 | \$ 445,803,918 | \$ 356,643,136 | \$ 89,160,782 | \$ 0 |
| 1998/1999 | 132,941,494 | 79,764,897 | 26,588,299 | 26,588,298 |
| 1999/2000 | 159,231,381 | 63,692,552 | 31,846,276 | 63,692,553 |
| 2000/2001 | (666,007,650) | (133,201,530) | (133,201,530) | (399,604,590) |
| 2001/2002 | (631,139,394) | 0 | (126,227,879) | (504,911,515) |
| Total | \$ (559,170,251) | \$ 366,899,055 | \$ (111,834,052) | \$ (814,235,254) |

| Development of Actuarial Value of Assets | | |
|--|--|------------------|
| 1. Actuarial Value as of July 1, 2001 | | \$ 5,110,226,650 |
| 2. Contributions | | |
| a. Member | | \$ 50,750,779 |
| b. Employer | | 139,614,903 |
| c. Total (a. + b.) | | \$ 190,365,682 |
| 3. Decreases During Year | | |
| a. Benefit Payments | | \$ (257,938,411) |
| b. Return of Member Contributions | | (8,149,064) |
| c. Noninvestment Expenses | | (3,196,980) |
| d. Total (a. + b. + c.) | | \$ (269,284,455) |
| 4. Expected Return at 7.5% on: | | |
| a. Item 1 | | \$ 383,266,999 |
| b. Item 2 (one-half year) | | 7,138,713 |
| c. Item 3 (one-half year) | | (10,098,167) |
| d. Total (a. + b. + c.) | | \$ 380,307,545 |
| 5. Expected Actuarial Value of Assets June 30, 2002 (1. + 2. + 3. + 4.) | | \$ 5,411,615,422 |
| 6. Unrecognized Asset Gain as of June 30, 2001 | | (294,929,912) |
| 7. Expected Actuarial Value June 30, 2002, plus Previous Year's Unrecognized Asset Gain (5. + 6.) | | \$ 5,116,685,510 |
| 8. Market Value June 30, 2002 | | 4,485,546,116 |
| 9. 2001/2002 Asset Gain (8. - 7.) | | \$ (631,139,394) |
| 10. Asset Gain to be Recognized as of June 30, 2002 | | (111,834,052) |
| 11. Initial Actuarial Value July 1, 2002 (5. + 10.) | | \$ 5,299,781,370 |
| 12. Constraining Values: | | |
| a. 80% of Market Value (8. x .8) | | \$ 3,588,436,893 |
| b. 120% of Market Value (8. x 1.2) | | \$ 5,382,655,339 |
| 13. Actuarial Value as of July 1, 2002 (11.), but no less than (12a.), nor greater than (12b.) | | \$ 5,299,781,370 |

Average Annual Rates of Investment Return

| Fiscal Year Ending June 30 | Actuarial Value | | Market Value | |
|----------------------------------|-----------------|-------------------------------------|--------------|-------------------------------------|
| | Annual | Average Return Since Fiscal Year | Annual | Average Return Since Fiscal Year |
| 1993 | 8.5% | 11.0% | 13.8% | 8.6% |
| 1994 | 8.9% | 11.3% | 0.1% | 8.1% |
| 1995 | 10.0% | 11.6% | 16.6% | 9.1% |
| 1996 | 11.7% | 11.8% | 15.0% | 8.1% |
| 1997 | 13.2% | 11.8% | 18.6% | 7.0% |
| 1998 | 14.4% | 11.5% | 18.3% | 4.8% |
| 1999 | 15.0% | 10.8% | 9.2% | 1.7% |
| 2000 | 13.8% | 9.4% | 9.9% | (0.7%) |
| 2001 | 9.4% | 7.3% | (6.0%) | (5.6%) |
| 2002 | 5.3% | 5.3% | (5.3%) | (5.3%) |

Section 4: Basis of Valuation

This section presents and describes the basis of the valuation. The census of Members, actuarial basis and provisions of the Plan are the foundation of the valuation since these are the present facts on which the projection of benefit payments will depend. The valuation is based on the premise that the Plan will continue in existence.

Section 4.1 The member data used for the actuarial valuation

Section 4.2 The actuarial funding method, procedures and actuarial assumptions

Section 4.3 The plan provisions valued in the actuarial valuation

Plan Members

A. Member Data Reconciliation

| | Inactive Members | | | | | Total Members |
|------------------------------------|------------------|------------------------|--------------------|------------------|--|---------------|
| | Active Members | With Deferred Benefits | Receiving Benefits | | | |
| | | | Retired Members | Disabled Members | Joint Annuitants and Surviving Spouses | |
| As of July 1, 2001 | 43,696 | 5,241 | 18,099 | 1,020 | 1,744 | 69,800 |
| Age Retirements | (959) | (194) | 1,153 | 0 | 0 | 0 |
| Disability Retirements | (63) | (37) | 0 | 100 | 0 | 0 |
| Deaths Without Payments Continuing | (75) | (35) | (605) | (26) | (76) | (817) |
| Deaths With Payments Continuing | (23) | (9) | (126) | (11) | 169 | 0 |
| Nonvested Terminations | (2,827) | 0 | 0 | 0 | 0 | (2,827) |
| Vested Terminations | (816) | 816 | 0 | 0 | 0 | 0 |
| Refund of Contributions | 0 | (288) | 0 | 0 | 0 | (288) |
| Transfers | 0 | 0 | 0 | 0 | 0 | 0 |
| Data Corrections | 0 | 51 ⁹ | 13 ¹⁰ | 3 ¹¹ | 0 ¹² | 67 |
| Rehires | 669 | (153) | (5) | 0 | 0 | 511 |
| Net | (4,094) | 151 | 430 | 66 | 93 | (3,354) |
| New Entrants During the Year | 4,203 | 0 | 0 | 0 | 0 | 4,203 |
| No Applications | 487 | 0 | 0 | 0 | 0 | 487 |
| Net Change | 596 | 151 | 430 | 66 | 93 | 1,336 |
| As of July 1, 2002 | 44,292 | 5,392 | 18,529 | 1,086 | 1,837 | 71,136 |

⁹ 50 people were shown as unclaimed contributions in the last valuation and are now shown on the vested tape, 1 person was listed as a term vested this year and was reported as a retiree last year.

¹⁰ 14 people were shown as unclaimed contributions in the last valuation and are now valued as retired, 1 person was listed as a retiree last year and this year was reported as a term vested participant.

¹¹ 3 people were shown as unclaimed contributions in the last valuation and are now valued as disabled members.

¹² 2 people were shown as unclaimed contributions in the last valuation and are now valued as beneficiaries. 3 people were reported as beneficiaries in the last valuation and were not shown on the retired tape this year. 1 person was shown as a death without payments continuing in the last valuation and is now valued as a beneficiary.

B. Count of Paid Active Members

| Age | Years of Service | | | | | | | | | Total |
|--------------|------------------|--------------|--------------|--------------|--------------|--------------|------------|------------|-----------|---------------|
| | 0 - 4 | 5 - 9 | 10 -14 | 15 -19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | |
| Under 20 | 64 | | | | | | | | | 64 |
| 20 - 24 | 1,411 | 12 | | | | | | | | 1,423 |
| 25 - 29 | 2,591 | 475 | 5 | | | | | | | 3,071 |
| 30 - 34 | 2,462 | 1,231 | 431 | 9 | | | | | | 4,133 |
| 35 - 39 | 2,045 | 1,141 | 1,224 | 513 | 96 | 1 | | | | 5,020 |
| 40 - 44 | 2,020 | 1,134 | 1,239 | 1,096 | 983 | 52 | | | | 6,524 |
| 45 - 49 | 1,906 | 1,104 | 1,280 | 922 | 1,338 | 587 | 67 | 1 | | 7,205 |
| 50 - 54 | 1,558 | 1,078 | 1,261 | 909 | 1,035 | 693 | 336 | 51 | | 6,921 |
| 55 - 59 | 1,091 | 837 | 1,041 | 833 | 761 | 341 | 250 | 141 | 21 | 5,316 |
| 60 - 64 | 522 | 466 | 573 | 467 | 347 | 171 | 89 | 56 | 38 | 2,729 |
| 65 - 69 | 159 | 130 | 213 | 104 | 80 | 36 | 21 | 11 | 14 | 768 |
| 70 - 74 | 38 | 36 | 56 | 16 | 27 | 8 | 4 | 3 | 5 | 193 |
| 75+ | 16 | 5 | 10 | 8 | 11 | 3 | 2 | 1 | 3 | 59 |
| Total | 15,883 | 7,649 | 7,333 | 4,877 | 4,678 | 1,892 | 769 | 264 | 81 | 43,426 |

C. Average Compensation ¹⁴

$$\frac{866^{13}}{44,292}$$

| Age | Years of Service | | | | | | | | | Total |
|--------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------|
| | 0 - 4 | 5 - 9 | 10 -14 | 15 -19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | |
| Under 20 | 15,566 | | | | | | | | | 15,566 |
| 20 - 24 | 21,777 | 25,553 | | | | | | | | 21,809 |
| 25 - 29 | 27,093 | 29,786 | 29,702 | | | | | | | 27,513 |
| 30 - 34 | 28,094 | 33,027 | 33,777 | 34,641 | | | | | | 30,170 |
| 35 - 39 | 28,097 | 32,762 | 36,729 | 37,342 | 36,966 | ¹⁵ | | | | 32,377 |
| 40 - 44 | 27,802 | 32,128 | 36,178 | 39,770 | 37,883 | 36,300 | | | | 33,742 |
| 45 - 49 | 28,795 | 33,215 | 35,501 | 38,231 | 40,530 | 39,350 | 40,043 | ¹⁵ | | 35,016 |
| 50 - 54 | 28,293 | 32,257 | 35,032 | 37,897 | 39,341 | 41,846 | 44,095 | 39,720 | | 35,260 |
| 55 - 59 | 28,363 | 31,428 | 34,658 | 37,221 | 37,700 | 40,372 | 43,848 | 45,794 | 43,753 | 34,825 |
| 60 - 64 | 26,453 | 30,580 | 33,320 | 36,489 | 35,117 | 36,887 | 43,133 | 44,986 | 48,723 | 33,307 |
| 65 - 69 | 27,045 | 30,104 | 33,113 | 35,053 | 33,185 | 35,072 | 41,589 | 41,770 | 52,495 | 32,419 |
| 70 - 74 | 22,527 | 27,969 | 33,392 | 38,424 | 31,997 | 39,412 | 50,241 | 46,616 | 58,292 | 31,913 |
| 75+ | 38,593 | 30,592 | 40,444 | 29,672 | 46,316 | 83,042 | 39,575 | ¹⁵ | 22,341 | 39,717 |
| Total | 27,337 | 32,161 | 35,266 | 37,994 | 38,614 | 40,126 | 43,502 | 44,186 | 47,700 | 32,921¹⁴ |

¹³ Members without applications¹⁴ Average compensation for members without applications is \$23,919. The average for all members including the members without applications is \$32,745.¹⁵ The average compensation is not shown for cells with only one member.

D. Paid Members in Pay Status - Annual Benefits

| Attained Age | Retirees | | Joint Annuitants & Surviving Spouses | | Disabled Members | | Current Payment Total | |
|--------------|---------------|-----------------------|--------------------------------------|----------------------|------------------|---------------------|-----------------------|-----------------------|
| | No. | Benefit | No. | Benefit | No. | Benefit | No. | Benefit |
| Under 51 | 40 | \$ 780,418 | 52 | \$ 373,748 | 148 | \$ 1,119,195 | 240 | \$ 2,273,361 |
| 51 | 44 | 968,300 | 5 | 26,743 | 38 | 329,465 | 87 | 1,324,508 |
| 52 | 61 | 1,474,838 | 13 | 124,923 | 43 | 342,843 | 117 | 1,942,604 |
| 53 | 129 | 2,842,539 | 13 | 144,228 | 48 | 464,236 | 190 | 3,451,003 |
| 54 | 144 | 3,237,961 | 24 | 246,771 | 48 | 397,222 | 216 | 3,881,954 |
| 55 | 207 | 4,170,108 | 15 | 160,833 | 50 | 462,748 | 272 | 4,793,689 |
| 56 | 245 | 4,186,427 | 23 | 180,492 | 54 | 433,412 | 322 | 4,800,331 |
| 57 | 243 | 4,217,090 | 24 | 174,957 | 38 | 300,816 | 305 | 4,692,863 |
| 58 | 306 | 5,094,383 | 28 | 203,041 | 55 | 355,336 | 389 | 5,652,760 |
| 59 | 415 | 7,111,040 | 34 | 285,457 | 61 | 480,258 | 510 | 7,876,755 |
| 60 | 385 | 6,555,895 | 43 | 288,059 | 59 | 515,473 | 487 | 7,359,427 |
| 61 | 451 | 7,413,971 | 41 | 385,239 | 52 | 366,710 | 544 | 8,165,920 |
| 62 | 528 | 8,132,896 | 38 | 308,626 | 60 | 457,403 | 626 | 8,898,925 |
| 63 | 691 | 9,646,199 | 51 | 420,218 | 44 | 318,955 | 786 | 10,385,372 |
| 64 | 704 | 9,309,421 | 56 | 418,687 | 47 | 327,742 | 807 | 10,055,850 |
| 65 | 733 | 9,694,002 | 44 | 378,982 | 39 | 312,586 | 816 | 10,385,570 |
| 66 | 779 | 9,676,316 | 44 | 419,799 | 30 | 180,887 | 853 | 10,277,002 |
| 67 | 835 | 10,122,891 | 68 | 510,962 | 28 | 179,796 | 931 | 10,813,649 |
| 68 | 862 | 10,500,837 | 76 | 517,556 | 32 | 254,110 | 970 | 11,272,503 |
| 69 | 752 | 9,264,994 | 62 | 496,831 | 29 | 216,247 | 843 | 9,978,072 |
| 70 | 792 | 9,413,684 | 63 | 455,009 | 22 | 162,292 | 877 | 10,030,985 |
| 71 | 760 | 8,789,741 | 58 | 515,150 | 18 | 128,311 | 836 | 9,433,202 |
| 72 | 724 | 8,446,496 | 66 | 489,532 | 22 | 144,861 | 812 | 9,080,889 |
| 73 | 720 | 8,420,622 | 69 | 563,201 | 14 | 116,540 | 803 | 9,100,363 |
| 74 | 669 | 7,069,626 | 73 | 531,019 | 6 | 38,876 | 748 | 7,639,521 |
| 75 | 625 | 7,253,169 | 84 | 713,882 | 0 | 0 | 709 | 7,967,051 |
| 76 | 641 | 7,058,835 | 70 | 504,088 | 0 | 0 | 711 | 7,562,923 |
| 77 | 574 | 6,104,083 | 72 | 616,683 | 0 | 0 | 646 | 6,720,766 |
| 78 | 555 | 5,836,671 | 67 | 491,689 | 0 | 0 | 622 | 6,328,360 |
| 79 | 547 | 5,969,730 | 51 | 386,736 | 1 | 6,540 | 599 | 6,363,006 |
| 80 | 435 | 4,764,088 | 53 | 368,028 | 0 | 0 | 488 | 5,132,116 |
| 81 | 491 | 5,164,950 | 49 | 324,897 | 0 | 0 | 540 | 5,489,847 |
| 82 | 368 | 3,783,216 | 52 | 293,320 | 0 | 0 | 420 | 4,076,536 |
| 83 | 308 | 2,929,622 | 44 | 273,599 | 0 | 0 | 352 | 3,203,221 |
| 84 | 311 | 2,787,810 | 31 | 176,950 | 0 | 0 | 342 | 2,964,760 |
| 85 | 255 | 2,378,345 | 26 | 129,507 | 0 | 0 | 281 | 2,507,852 |
| 86 | 232 | 2,066,853 | 25 | 164,292 | 0 | 0 | 257 | 2,231,145 |
| 87 | 159 | 1,358,425 | 26 | 193,560 | 0 | 0 | 185 | 1,551,985 |
| 88 | 172 | 1,519,751 | 22 | 125,038 | 0 | 0 | 194 | 1,644,789 |
| 89 | 162 | 1,397,505 | 22 | 94,390 | 0 | 0 | 184 | 1,491,895 |
| 90 | 130 | 1,179,972 | 19 | 117,021 | 0 | 0 | 149 | 1,296,993 |
| Over 90 | 345 | 3,053,138 | 41 | 241,767 | 0 | 0 | 386 | 3,294,905 |
| Total | 18,529 | \$ 231,146,858 | 1,837 | \$ 13,835,510 | 1,086 | \$ 8,412,860 | 21,452 | \$ 253,395,228 |

E. Terminated Vested Members - Annual Benefits

| Attained Age | Members With Deferred Benefits | |
|--------------|--------------------------------|----------------------|
| | No. | Benefit |
| Under 41 | 767 | \$ 4,224,556 |
| 41 | 152 | 1,051,995 |
| 42 | 175 | 1,176,105 |
| 43 | 204 | 1,516,743 |
| 44 | 209 | 1,678,852 |
| 45 | 248 | 1,884,014 |
| 46 | 268 | 2,176,009 |
| 47 | 252 | 1,993,842 |
| 48 | 282 | 2,462,573 |
| 49 | 275 | 2,586,192 |
| 50 | 265 | 2,374,325 |
| 51 | 260 | 2,208,698 |
| 52 | 288 | 2,462,755 |
| 53 | 276 | 2,232,626 |
| 54 | 304 | 2,382,839 |
| 55 | 265 | 1,939,068 |
| 56 | 215 | 1,377,767 |
| 57 | 139 | 952,814 |
| 58 | 145 | 873,594 |
| 59 | 130 | 782,192 |
| 60 | 110 | 583,383 |
| 61 | 81 | 453,529 |
| 62 | 46 | 197,988 |
| 63 | 9 | 41,346 |
| 64 | 9 | 40,258 |
| 65 | 3 | 7,859 |
| 66 | 3 | 11,399 |
| 67 | 3 | 11,269 |
| 68 | 1 | 184 |
| 69 | 3 | 17,544 |
| 70 | 1 | 1,510 |
| Over 70 | 4 | 44,203 |
| Total | 5,392 | \$ 39,748,031 |

F. Member Statistics

| Inactive Members as of July 1, 2002 | No. | Amount of Annual Benefit ¹⁶ |
|---|---------------|--|
| Members Receiving Benefits | | |
| • Retired | 18,529 | \$ 231,146,858 |
| • Joint Annuitants and Surviving Spouses | 1,837 | 13,835,510 |
| • Disabled | 1,086 | 8,412,860 |
| Total | 21,452 | \$ 253,395,228 |
| Members with Deferred Benefits | | |
| • Vested Terminated | 4,147 | \$ 30,159,498 |
| • Assumed Deferred Vested Members ¹⁷ | 1,245 | 9,588,533 |
| Total | 5,392 | \$ 39,748,031 |

| Statistics for Active Members | No. | Average | | |
|-------------------------------|---------------|-------------|-------------|------------------|
| | | Age | Service | Earnings |
| As of July 1, 2001 | | | | |
| • Continuing | 38,113 | 46.0 | 11.7 | \$ 32,059 |
| • New | 5,583 | 38.3 | 2.1 | \$ 17,051 |
| Total | 43,696 | 45.0 | 10.5 | \$ 30,141 |
| As of July 1, 2002 | | | | |
| • Continuing | 38,618 | 46.3 | 11.7 | \$ 34,122 |
| • New | 5,674 | 37.7 | 1.7 | \$ 23,368 |
| Total | 44,292 | 45.2 | 10.4 | \$ 32,745 |

¹⁶ Does not include monthly medical insurance premium.

¹⁷ Estimated benefits.

G. Data Tape Reconciliation

| | Active | Retired | Vested Terminations | Total |
|---|-------------------|----------------------|---------------------|--------|
| Records Submitted on Data Tape | 43,527 | 34,472 | 4,162 | 82,161 |
| Passed Without Alteration | 43,425 | 21,452 | 4,147 | 69,024 |
| Earnings Based on Salary Due to Missing Year to Date Earnings | 1 | 0 | 0 | 1 |
| New Members with Hire Dates not Reflecting Breaks in Service | 0 | 0 | 0 | 0 |
| Data Tapes Records Included | 43,426 | 21,452 | 4,147 | 69,025 |
| Other Members Included | 866 ¹⁸ | 0 | 1,245 ²¹ | 2,111 |
| Total Valued | 44,292 | 21,452 | 5,392 | 71,136 |
| Number Deleted | 101 ¹⁹ | 13,020 ²⁰ | 15 ²² | 13,175 |
| Number Added | 866 | 0 | 1,245 | 2,111 |

¹⁸ Members who have not completed applications.

¹⁹ 2 not yet eligible to participate.

5 members were on the vested tape. They were assumed to be vested terminations.

92 members were on the retired tape. They were assumed to be receiving payments.

2 members were on the unclaimed contribution tape. They were assumed to be unclaimed contributions.

²⁰ 13,020 people were marked as deaths without a beneficiary receiving a payment.

²¹ Assumed deferred vesteds.

²² 13 were on the retired tape as receiving payments, 1 was marked as a death with a beneficiary and 1 was marked as a death without a beneficiary.

Actuarial Basis

A. Entry Age Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding.

Sometimes called "funding method," this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of plan assets actually on hand on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Present Value of Accrued Plan Benefit (FASB #35)

The present value of accrued plan benefits represents the actuarial present value of benefits which are accrued based on service and salary information as of the valuation date.

Actuarial Basis

B. Asset Valuation Method

The actuarial value of assets is based on a five-year moving average of expected and market values determined as follows:

- at the beginning of each plan year, a preliminary expected actuarial asset value is calculated as the sum of the previous year's actuarial value increased with a year's interest at the Plan valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous plan year;
- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous plan year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous plan year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous plan years, but in no case more than 120% of the market value or less than 80% of the market value.

Actuarial Basis

C. Valuation Procedures

No actuarial accrued liability is held for nonvested, inactive Members who have a break in service, or for nonvested Members who have quit or been terminated, even if a break in service has not occurred as of the valuation date.

The wages used in the projection of benefits and liabilities are considered earnings for the year ending June 30, 2002 increased by the salary scale to develop expected earnings for the current valuation year. Earnings are annualized for Members with less than twelve months of reported earnings.

The calculations for the required State contribution are determined as of mid-year. This is a reasonable estimate since contributions are made on a monthly basis throughout the year.

In computing accrued benefits, average earnings are determined using actual pay history provided for valuation purposes.

Benefits above the projected 415 limit for active participants are assumed to be immaterial for the valuation.

The compensation limitation under IRC Section 401(a)(17) is considered in this valuation. On a projected basis, the impact of this limitation is insignificant.

Liability is included for members who appear to be deferred vested, but who are not on the vested data tapes provided. An estimated benefit was calculated based on pay and service from prior valuations. A corrected benefit and status will be provided by the plan administrator when the actual benefit and status have been finalized.

Included in the valuation are "Members Without Applications." These Members are contributing to the plan but have not yet filled out an enrollment application. For these Members, amounts are added to the active liability and normal cost based on the average liability and normal cost for a new Member. They are also assigned the average compensation for new Members. Additional compensation equal to the average for new Members is added to total earnings so that these Members would be reflected in the normal cost contribution.

The retirement benefit liability for retired Members that elected payment Option A or payment Option B is increased by 2.0% to account for the liability for the pop-up provision of the payment option.

A liability is included for contribution amounts due to be refunded to terminated vested members who made voluntary contributions to increase the maximum compensation limit prior to July 1, 1998. The plan administrator supplied the included amounts.

An amount has been included in the accrued liability to account for cost of living adjustments to the benefits of retired participants that have not been granted by the valuation date. Any ad hoc increase granted will decrease the reserve amount by the cost of the increase. When the cost of an ad hoc increase is greater than the amount of the reserve, the reserve is set to zero and the period for calculating ungranted increases is set to the valuation date.

Actuarial Basis

D. Actuarial Assumptions

Economic Assumptions

- 1. Investment Return 7.5% net of investment expenses per annum, compounded annually.
- 2. Earnings Progression Sample rates below (midpoint of range shown):

| Attained Age | Inflation | Merit | % Increase |
|-----------------|-----------|-------|---------------|
| 20-24 | 3.0 | 6.0 | 9.0 |
| 25-29 | 3.0 | 5.0 | 8.0 |
| 30-34 | 3.0 | 3.7 | 6.7 |
| 35-39 | 3.0 | 3.1 | 6.1 |
| 40-44 | 3.0 | 2.8 | 5.8 |
| 45-49 | 3.0 | 2.4 | 5.4 |
| 50-54 | 3.0 | 2.1 | 5.1 |
| 55-59 | 3.0 | 2.1 | 5.1 |
| 60-64 | 3.0 | 2.1 | 5.1 |
| 65+ | 3.0 | 2.1 | 5.1 |

The assumption used for the July 1, 2002 valuation was 1% lower at all ages.

- 3. COLA Assumption
 - Monthly benefits 2% per year (two-thirds of the inflation assumption).
 - Medical supplement No increases assumed.
- 4. Projection of 401(a)(17) Compensation Limit Projected with inflation at 3%.

Actuarial Basis

D. Actuarial Assumptions (continued)

Demographic Assumptions

1. Retirement Age

Elected and Non-elected Members

Annual Rates of Retirement
Per 100 Eligible Members

| <u>Attained Age</u> | <u>Those Eligible for Unreduced Early Retirement</u> | <u>Those Not Eligible for Unreduced Early Retirement</u> |
|---------------------|--|--|
| 50 | 10 | N/A |
| 51 | 10 | N/A |
| 52 | 10 | N/A |
| 53 | 10 | N/A |
| 54 | 10 | N/A |
| 55 | 10 | 7 |
| 56 | 10 | 6 |
| 57 | 11 | 7 |
| 58 | 12 | 7 |
| 59 | 13 | 7 |
| 60 | 14 | 9 |
| 61 | 20 | 20 |
| 62 | 40 | N/A |
| 63 | 22 | N/A |
| 64 | 25 | N/A |
| 65 | 40 | N/A |
| 66 | 25 | N/A |
| 67 | 23 | N/A |
| 68 | 22 | N/A |
| 69 | 21 | N/A |
| 70 | 100 | N/A |

The assumption used for the July 1, 2001 valuation for those eligible for unreduced early retirement graded from 6.0% at age 50 to 9.5% at age 55 and was the same as above thereafter. The assumption used for the July 1, 2001 valuation for those not eligible for unreduced early retirement was the same as the above table except for age 61, which was 15% rather than 20%.

Actuarial Basis

D. Actuarial Assumptions (continued)

Demographic Assumptions

Department of Corrections
Members

Annual Rates of Retirement
Per 100 Eligible Members

| <u>Service</u> | <u>Rate</u> | <u>Attained Age</u> | <u>Less Than 20 Years of Service</u> |
|----------------|-------------|-------------------------|--|
| 20-21 | 25 | 50 | N/A |
| 21-30 | 15 | 51 | N/A |
| 30+ | 100 | 52 | N/A |
| | | 53 | N/A |
| | | 54 | N/A |
| | | 55 | 7 |
| | | 56 | 6 |
| | | 57 | 7 |
| | | 58 | 7 |
| | | 59 | 7 |
| | | 60 | 9 |
| | | 61 | 20 |
| | | 62 | 40 |
| | | 63 | 22 |
| | | 64 | 25 |
| | | 65 | 40 |
| | | 66 | 25 |
| | | 67 | 23 |
| | | 68 | 22 |
| | | 69 | 21 |
| | | 70 | 100 |

The assumption used for the January 1, 2001 valuation was the same as that shown above except that the age 61 rate was 15% rather than 20%.

Actuarial Basis

D. Actuarial Assumptions (continued)

- 2. Mortality Rates
 - Active participants and nondisabled pensioners 1983 Group Annuity Mortality Table.
 - Disabled pensioners 1983 Group Annuity Mortality Table set forward 10 years for disabled experience.

3. Disability Rates

Graduated rates.
Disabled rates per 100 members

| <u>Attained Age</u> | <u>Male</u> | <u>Female</u> |
|---------------------|-------------|---------------|
| 20 | .00 | .01 |
| 30 | .02 | .03 |
| 40 | .08 | .10 |
| 50 | .26 | .25 |
| 60 | .68 | .50 |

The assumption for males for the January 1, 2001 valuation was generally about 25% higher for males before age 55.

Actuarial Basis

D. Actuarial Assumptions (*continued*)

4. Withdrawal Rates

| Ages | Current 0-2 Years | Current 2-3 Years | Current 3-4 Years | Current 4-5 Years | Current Over 5 Years |
|------|----------------------|----------------------|----------------------|----------------------|-------------------------|
| 25 | 0.2355 | 0.1891 | 0.1709 | 0.1369 | 0.1072 |
| 30 | 0.2210 | 0.1704 | 0.1554 | 0.1268 | 0.0881 |
| 35 | 0.2044 | 0.1535 | 0.1365 | 0.1214 | 0.0742 |
| 40 | 0.1809 | 0.1398 | 0.1207 | 0.1094 | 0.0587 |
| 45 | 0.1667 | 0.1248 | 0.1131 | 0.0945 | 0.0468 |
| 50 | 0.1400 | 0.1085 | 0.1029 | 0.0834 | 0.0398 |
| 55 | 0.1314 | 0.0934 | 0.0869 | 0.0704 | 0.0303 |

The rates at all ages for three to four years of service, four to five years of service and over five years of service were increased as a result of the experience analysis performed for July 1, 1998 to June 30, 2001.

5. Marital Status

Percentage married

Males: 85%; Females: 85%.

Age difference

Males are assumed to be four years older than spouses.

6. Line of Duty Deaths for Department of Corrections Members

None assumed.

Actuarial Basis

D. Actuarial Assumptions *(continued)*

Other Assumptions

1. Assumed Age of Commencement for Deferred Benefits
Age 62 for non-elected Members, age 60 for elected Members.
2. Actuarial Value of Assets
An expected actuarial value is determined equal to the prior year's actuarial value of assets plus cash flow (excluding realized and unrealized gains and losses) for the year ended on the valuation date and assuming 7.5% interest return. Twenty percent (20%) of any (gain)/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the expected actuarial value plus prior unrecognized gains or losses. The (gain)/loss is amortized over five years. The result is constrained to a value of 80% to 120% of the market value at the valuation date.
3. Provision for Expenses
Administrative expenses, as budgeted by the Oklahoma Public Employees Retirement System.

Summary of Plan Provisions

- Effective Date:** The Plan became effective January 1, 1964. The plan year is July 1 to June 30.
- Administration:** The plan is administered by a 13 Member Oklahoma Public Employees Retirement System Board of Trustees. The Board acts as the fiduciary for investment and administration of the plan.
- Employees Included:** All permanent employees of the State of Oklahoma, legislated agencies, and any other employer such as county, county hospital, city, or trust in which a municipality is the primary beneficiary, are eligible to join if:

- the employee is not eligible for or participating in another state retirement system, is covered by Social Security and not participating in the U.S. Civil Service Retirement System,
- the employee is scheduled for 1,000 hours per year and salary is not less than the hourly rate of the monthly minimum wage for State employees (for employees of local government employers, not less than the hourly rate of the monthly minimum wage for such employees).

Membership is mandatory for new eligible employees on the first of the month following employment.

Employee and Employer Contributions:

See the following chart for the schedule of employee contributions for all State employees except elected officials and Department of Corrections employees. Elected officials contribute 4.5%, 6%, 7.5%, 8.5%, 9%, or 10% depending upon the computation factor used in determining their benefit. The benefits and contribution amounts for elected officials will be based on the maximum compensation levels set forth in the chart below. Contributions for Department of Corrections employees are summarized at the end of Section 4.3. Local government employees contribute from 3.5% to 8.5% of pay, depending on the rate chosen by their employers.

Effective July 1, 1994, all contribution amounts are based on the maximum compensation level in effect for the year. Members do not have the option of choosing to contribute on earnings above \$25,000.

Employee contributions on compensation between \$25,000 and \$40,000 made between January 1, 1987 and July 1, 1994 were transferred into another qualified plan on July 31, 2000. The transfer included interest of 7.5% compounded annually.

Summary of Plan Provisions (*continued*)

| Year | State Employee Contributions for Pay Under \$25,000 | | | Applicable Salary Cap |
|-----------|--|--------------------------|-----------------------|--------------------------|
| | Employer Contribution | Employee Contribution | Total Contribution | |
| 1994-1995 | 11.5% | 2.0% | 13.5% | \$50,000 |
| 1995-1996 | 11.5% | 2.0% | 13.5% | \$60,000 |
| 1996-1997 | 12.0% | 2.5% | 14.5% | \$70,000 |
| 1997-1998 | 12.5% | 3.0% | 15.5% | \$80,000 |
| 1998-1999 | 12.5% | 3.0% | 16.0% | No Cap |
| 1999+ | 10.0% | 3.0% | 13.0% | No Cap |

| Year | State Employee Contributions for Pay Between \$25,000 and Cap | | | Applicable Salary Cap |
|-----------|--|--------------------------|-----------------------|--------------------------|
| | Employer Contribution | Employee Contribution | Total Contribution | |
| 1994-1995 | 11.5% ²³ | 3.5% ²⁴ | 15.0% | \$50,000 |
| 1995-1996 | 11.5% | 3.5% | 15.0% | \$60,000 |
| 1996-1997 | 12.0% | 3.5% | 15.5% | \$70,000 |
| 1997-1998 | 12.5% | 3.5% | 16.0% | \$80,000 |
| 1998-1999 | 12.5% | 3.5% | 16.0% | No Cap |
| 1999+ | 10.0% | 3.5% | 13.5% | No Cap |

Service Considered:Prior Service

All service of the employee prior to the employer's entry date is credited prior service providing the participating employer joined on or before January 1, 1975. Prior service for employees of employers who join after January 1, 1975, may be purchased by the employee. Prior service is allowed for certain active wartime military service (maximum 5 years credit) for members employed prior to July 1, 2001 and for employment with public schools or Board of Regents for Higher Education prior to July, 1943. Service need not be continuous employment to be credited.

²³ For 1994-1995, the employer contribution was 11.5% for pay between \$25,000 and \$40,000. No employer contributions were paid for pay between \$40,000 and \$50,000.

²⁴ For 1994-1995, the employee contribution was 3.5% for pay between \$25,000 and \$40,000 and 10% for pay between \$40,000 and \$50,000.

Summary of Plan Provisions (*continued*)

Participating Service

After the employer's entry date, a Member's participating service is credited for all periods of employment for which required contributions are made. Service is prorated according to hours worked per month on and after March 1, 1979. Certain active wartime military service is credited, provided the contribution accumulation is not withdrawn. Active and retired Members are credited with additional participating service based on their accumulated contributions prior to June 30, 1977 (if not withdrawn prior to retirement), according to the following:

| <u>Member Accumulation</u> | <u>Additional Years</u> |
|----------------------------|-------------------------|
| \$ 1 to \$ 500 | 1 |
| 501 to 1,000 | 2 |
| 1,001 to 1,500 | 3 |
| 1,501 to 2,000 | 4 |
| 2,001 or more | 5 |

A Member who has withdrawn his contributions and later returns to membership may repay the amount withdrawn plus interest as determined by the Board to reinstate participating service which was canceled by his withdrawal.

A Member may receive credit for those years of service as an elected official if the Member is not receiving credit for that service in any other public retirement system. The Member must pay an amount equal to the actuarial cost to fund the difference between the Member's projected benefits with and without the additional service credit.

The total participating service of a Member who retires or terminates employment and elects a vested benefit shall include up to one hundred thirty (130) days of unused sick leave accumulated subsequent to August 1, 1959, during the Member's employment with any participating employer. Such credit shall be added in terms of whole months. If unused sick leave entitles the member to an additional year of service, the additional cost is borne by the employer.

A Member may receive credit for those years of credited service accumulated by the Member while a Member of the Oklahoma Firefighters Pension and Retirement System, the Oklahoma Police Pension and Retirement System, the Uniform Retirement System for Justices and Judges, the Oklahoma Law Enforcement Retirement System, or the Teachers' Retirement System of Oklahoma, if the Member is not receiving or eligible to receive retirement credit or benefits from this service in any other public retirement system. The Member may receive credit for this service by paying the amount actuarially determined to cover the cost of the previous service.

Summary of Plan Provisions (*continued*)

Credited Service

Credited service equals prior service plus participating service. This service is added together and the result is rounded up to the next year if the number of remaining months is equal to or greater than six.

Considered Compensation:

The Member's basic salary and wages as defined by the Board of Trustees includes amounts for deferred tax sheltered annuities. Overtime and moving expenses are excluded. Any compensation in excess of the maximum applicable amount is excluded.

Final Average Compensation:

The average of the three highest years of compensation earned within the last ten (10) years of participating service, subject to any applicable salary caps and on which contributions have been made.

For all Members hired prior to July 1, 1995, the minimum final average compensation is \$13,800. For Members hired on or after July 1, 1995, no minimum is applied until the Member has fifteen (15) years of service. For Members with between fifteen (15) and twenty (20) years of service, the minimum final average compensation is \$6,900. For Members with more than twenty (20) years of service, the minimum is \$13,800.

Normal Retirement Date:

Normal retirement is the earliest of: first day of the month coinciding with or next following the 62nd birthday; or, the first day of the month coinciding with or following the date at which the sum of a Member's age and number of years of credited service total eighty (80) if the Member was hired prior to July 1, 1992 or following the date at which the sum of Member's age and number of years of credited service total ninety (90) if the Member was hired after July 1, 1992. Members employed after July 1, 1982 must complete at least six years of full-time equivalent employment with a participating employer before receiving any retirement benefits. The normal retirement date for elected officials is the first of the month coinciding with or following the official's 60th birth date or the first day of the month coinciding with or following the date at which the sum of the Member's age and years of credited service total eighty (80).

Summary of Plan Provisions (continued)

Normal Retirement Benefit:

The benefit on or after normal retirement, payable monthly for life to non-elected Members, is as follows:

2% of final average compensation up to applicable maximum compensation multiplied by all service.

The benefit for Oklahoma Military Department firefighters who begin employment July 1, 2002 and after will be entitled to a 2½% computation factor. They will also be eligible for full benefits after 20 years as a firefighter and their employee contribution rate will be 8%. Oklahoma Military Department firefighters employed prior to July 1, 2002 will be given a one time option prior to December 31, 2002 to (a) have their benefit formula, retirement eligibility, and employee contribution rate remain unchanged, (b) apply the new provisions (including the new contribution rate) to service after July 1, 2002, or (c) apply the new benefit formula and retirement eligibility to all of the Member's service, apply the 8% contribution rate for service after July 1, 2002, and make a contribution equal to the increase in the actuarial value of the Member's retirement benefit.

The benefit payable monthly for life to elected officials is the greater of 1) the preceding benefit, or 2) the benefit calculated using highest annual compensation as an elected official up to the maximum applicable limit times credited service multiplied by the following applicable percentage:

| <u>% of Highest Annual Compensation</u> | <u>Alternate Formula if Vested on July 1, 1980</u> | <u>% of Compensation Contributed</u> |
|---|--|--------------------------------------|
| 1.9% | \$12.50 | 4.5% |
| 2.5 | 20.00 | 6.0 |
| 3.0 | 25.00 | 7.5 |
| 3.4 | 27.50 | 8.5 |
| 3.6 | 30.00 | 9.0 |
| 4.0 | 40.00 | 10.0 |

Elected officials who become members after July 1, 1990 must participate in the System as an elected official for at least six years to qualify for the elected official benefit formula.

Summary of Plan Provisions (*continued*)

Early Retirement Benefit:

A Member with at least ten (10) years of participating service may retire as early as age 55. The benefit is determined by the normal retirement formula based on credited service and Final Average Compensation (highest annual compensation for elected officials) at termination. The percentage payable at early retirement age is:

| <u>Elected Officials</u> | | <u>Other Members</u> | |
|--------------------------|-------------------|----------------------|-------------------|
| <u>Age</u> | <u>Percentage</u> | <u>Age</u> | <u>Percentage</u> |
| 60 | 100% | 62 | 100.0% |
| 59 | 94 | 61 | 93.3 |
| 58 | 88 | 60 | 86.7 |
| 57 | 82 | 59 | 80.0 |
| 56 | 76 | 58 | 73.3 |
| 55 | 70 | 57 | 66.7 |
| | | 56 | 63.3 |
| | | 55 | 60.0 |

Disability Benefit:

A Member with at least eight (8) years of credited service is eligible for a disability benefit provided the Member qualifies for federal Social Security disability benefits within one year of the date last physically on the job. The benefit is determined by the normal retirement formula based on service and salary history at date of disability. The benefit is payable immediately without actuarial reduction.

Vested Benefit:

A Member who terminates after eight years of credited service (six years for elected officials) is eligible for a vested benefit determined by the normal retirement formula, based on service and salary history to date of termination.

The benefit is payable at age 62 (or age 60 if an elected official), provided the Member's contribution accumulation is not withdrawn and the Member has at least six years of full time equivalent employment. A Member with 10 or more years of service also has the option of reduced benefits at early retirement age.

Members terminating with less than eight years (or six years if an elected official) of credited service may elect to receive a refund of their contribution accumulation.

A limited additional retirement benefit of \$200 per month is payable up to the total of excess contributions paid by the Member for those vested Members as of July 1, 1998. This is not applicable for active Members who received a transfer of excess contributions or retired Members as of July 1, 1998.

Summary of Plan Provisions (*continued*)

Pre-Retirement Death Benefit:

The spouse of a deceased active Member who had met normal, early or vested retirement provisions may elect a spouse's benefit. The spouse's benefit is the benefit that would have been paid if the Member had retired and elected the joint and 100% survivor option (Option B). If named as the designated beneficiary, the spouse may elect a refund of the Member's contribution accumulation in lieu of the Option B monthly benefit.

In addition to the provisions above, the eligible spouse of a deceased elected official with at least six (6) years of elected service and married at least thirty months immediately preceding death may elect to receive 50% of the benefit the Member would be eligible to receive. The starting date of benefits is the date the deceased Member would have been eligible for early or normal retirement. Benefits cease upon death or remarriage of the surviving spouse.

Any other designated beneficiary of a Member other than an eligible spouse will receive a refund of the Member's contribution accumulation.

Post-Retirement Death Benefit:

Upon the death of a retired Member, a \$5,000 lump-sum death benefit will be paid to the Member's beneficiary, or estate if there is no beneficiary.

Form of Payments:

The normal form of benefit for a single Member other than an elected official is a single life monthly annuity with a guaranteed refund of the contribution accumulation. The normal form for a married Member is a 50% joint and survivor annuity benefit. Optional forms of payment with actuarial reduction are available to all Members retiring under the normal retirement, early retirement or vested retirement provisions. These options providing post-retirement death benefits are:

Option A--Joint and 50% survivor annuity with a return to the unreduced amount if the joint annuitant dies.

Option B--Joint and 100% survivor annuity with a return to the unreduced amount if the joint annuitant dies.

Option C--Life annuity with a minimum of 120 monthly payments.

Summary of Plan Provisions (continued)

Post-Retirement

Medical Insurance Premium: Effective July 1, 2000, the System will contribute the lesser of \$105 per month or the Medicare Supplement Premium to the Oklahoma State and Education Employee's Group Health Insurance Program (or other eligible employer health plans) for Members receiving retirement benefits.

Expenses: The expenses of administering the retirement system are paid from the retirement trust fund.

Department of Corrections

Benefits: Members covered by the Department of Corrections Hazardous Duty Provisions have the retirement eligibility requirements, contribution rates and benefit formula described below.

The normal retirement age is 20 years of service as a Member covered by the Department of Corrections Hazardous Duty Provisions. The benefit formula is 2½% of final average compensation, multiplied by the number of years of service as an eligible officer for service, not exceeding 20 years. For service in excess of 20 years the benefit formula is 2% of final average compensation.

Special Surviving Spouse and Child benefits for correctional officers or probation and parole officers killed or mortally wounded during the performance of duty after January 1, 2000 are equal to 2.5% of final average monthly compensation multiplied by the greater of the Member's actual service or 20 years.

Contributions for Members covered by the Department of Corrections Hazardous Duty Provisions are:

| <u>Year</u> | <u>Up to \$25,000</u> | <u>Above \$25,000</u> | |
|-------------|--|--------------------------------|-----------------------|
| 1994/1995 | 6.5% | 8.0% | |
| 1995/1996 | 6.5% | 8.0% | |
| 1996/1997 | 7.0% | 8.0% | |
| 1997/1998 | 7.5% | 8.0% | |
| | <u>First 20 Years of Service</u> | <u>Service Beyond 20 Years</u> | |
| | | <u>Up to \$25,000</u> | <u>Above \$25,000</u> |
| 1998/1999 | 8.0% | 3.0% | 0.0% |
| 1999/2000 | 8.0% | 3.0% | 0.0% |
| 2000 and on | 8.0% | 3.0% | 3.5% |

Certification

We have prepared an actuarial valuation of the State of Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2002, for the plan year ending June 30, 2003. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2002.

The valuation is based on employee and financial data which were provided by OPERS and the independent auditor, respectively, and which are summarized in this report.

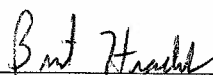
The results in this Addendum have been prepared for the sole purpose of meeting the Retirement Board's requirement to submit this information to the Oklahoma State Pension Commission, based on the following prescribed assumptions (11 O.S. 2001, Section 50-105.4, Section H):

- Interest rate: 7.5%
- COLA assumption: 2.0%
- Mortality: RP 2000 Mortality Table for Employees, Healthy Retirees and Disabled Retirees with Mortality Projected forward from 2000 using Scale AA.
- Amortization period: 30 years, open period
- Sources of all contributions and revenues, including dedicated tax fee revenue and federal monies

All other assumptions, methodologies, and plan provisions used are consistent with those used in the July 1, 2002 valuation.

The results shown in this Addendum are not consistent with those in the July 1, 2002 valuation. The July 1, 2002 valuation results were determined in accordance with generally accepted actuarial principles and procedures, and are in compliance with the Actuarial Standards Board Actuarial Standard of Practice No. 27- Selection of Economic Assumptions for Measuring Pension Obligations. The results shown in this Addendum are not based on the assumptions and methodologies adopted by the Retirement Board. For those results, see the July 1, 2002 actuarial valuation.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.



Brent Hradek, FSA, EA

October 11, 2002



Stephen T. McElhaney, FSA, EA

October 11, 2002

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Summary of Valuation Results under Prescribed Assumptions

This supplemental report has been prepared by Mercer Human Resource Consulting to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2002, based on the prescribed assumptions under 11 O.S. 2001, Section 50-105.4, Section H of current statutes and regulations issued thereunder.

A summary of principal valuation results from the current valuation and the prior valuation follows.

| | Actuarial Valuation as of | | Change Between Years | |
|--|---------------------------|--------------|----------------------|---------|
| | July 1, 2002 | July 1, 2001 | Amount | Percent |
| Summary of Costs | | | | |
| Required Employer Contribution for Current Year | \$ 247,807,896 | N/A | N/A | N/A |
| Actual Employer Contributions Received in Prior Year | \$ 139,614,903 | N/A | N/A | N/A |
| Funded Status | | | | |
| Actuarial Accrued Liability | \$ 6,811,518,438 | N/A | N/A | N/A |
| Actuarial Value of Assets | \$ 5,299,781,370 | N/A | N/A | N/A |
| Unfunded Actuarial Accrued Liability | \$ 1,511,737,068 | N/A | N/A | N/A |
| Market Value of Assets and Additional Liabilities | | | | |
| Market Value of Assets | \$ 4,485,546,116 | N/A | N/A | N/A |
| Present Value of Projected Plan Benefits | \$ 8,121,397,729 | N/A | N/A | N/A |

Summary of Valuation Results under Prescribed Assumptions

| | Actuarial Valuation as of | | | | Percent Change in Amount |
|---|---------------------------|---------------------|--------------|--------------------|--------------------------|
| | July 1, 2002 | | July 1, 2001 | | |
| | Amount | % of Covered Comp. | Amount | % of Covered Comp. | |
| Summary of Contribution Requirements | | | | | |
| 1. Annual Covered Compensation for Members Included in Valuation | \$ 1,450,317,127 | N/A | N/A | N/A | N/A |
| 2. Total Normal Cost Mid-year | \$ 171,127,796 | 11.8% | N/A | N/A | N/A |
| 3. Unfunded Actuarial Accrued Liability | \$ 1,511,737,068 | 104.2% | N/A | N/A | N/A |
| 4. Amortization of Unfunded Actuarial Accrued Liability over 30 Years | \$ 123,535,507 | 8.5% | N/A | N/A | N/A |
| 5. Budgeted Expenses Provided by the System | \$ 5,113,760 | 0.4% | N/A | N/A | N/A |
| 6. Total Required Contribution (2. + 4. + 5.) | \$ 299,777,063 | 20.7% | N/A | N/A | N/A |
| 7. Estimated Member Contribution | \$ 51,969,167 | 3.6% | N/A | N/A | N/A |
| 8. Required State Contribution to Amortize Unfunded Actuarial Accrued Liability over 30 Years from July 1, 1987 at Mid-year (6.-7.) | \$ 247,807,896 | 17.1% | N/A | N/A | N/A |
| 9. Previous Year's Actual Contribution | | | | | |
| a. Member | \$ 50,750,779 | 3.9% ²³ | N/A | N/A | N/A |
| b. Employer | \$ 139,614,903 | 10.6% ²³ | N/A | N/A | N/A |
| c. Total | \$ 190,365,682 | 14.5% ²³ | N/A | N/A | N/A |

²³ Percent of previous years' annual compensation for active Members (\$1,317,043,030 at July 1, 2001).

Unfunded Actuarial Accrued Liability

The actuarial accrued liability is the present value of projected plan benefits allocated to past service by the actuarial funding method being used.

| | July 1, 2002 | July 1, 2001 |
|---|-------------------------|--------------|
| 1. Actuarial Present Value of Benefits | | |
| a. Active Members ²⁴ | \$ 4,965,687,774 | N/A |
| b. Terminated Vested Members ²⁵ | 269,886,660 | N/A |
| c. Retirees, Disableds and Joint Annuitants/Surviving Spouses | 2,885,823,295 | N/A |
| d. Total (a. + b. +c.) | \$ 8,121,397,729 | N/A |
| 2. Actuarial Present Value of Future Normal Costs | \$ 1,309,879,291 | N/A |
| 3. Total Actuarial Accrued Liability (1 - 2) | \$ 6,811,518,438 | N/A |
| 4. Actuarial Value of Assets | \$ 5,299,781,370 | N/A |
| 5. Unfunded Actuarial Accrued Liability (3. - 4., not less than \$0) | \$ 1,511,737,068 | N/A |

²⁴ Includes \$23,582,262 for 866 members who have not completed applications as of July 1, 2002.

²⁵ Includes \$11,777,256 for unclaimed contributions, \$50,193,549 for 1,245 assumed deferred vested employees, and \$1,217,513 for the limited additional retirement benefits as of July 1, 2002.

Normal Cost

The components of normal cost under the Plan's funding method are:

| Component | July 1, 2002 | July 1, 2001 |
|---|---------------------|---------------------|
| Retirement Benefits | \$ 118,555,912 | N/A |
| Withdrawal Benefits | 17,956,564 | N/A |
| Disability Benefits | 5,748,423 | N/A |
| Death Benefits | 3,901,718 | N/A |
| Refunds | 6,390,539 | N/A |
| Supplemental Medical Insurance Premiums | 10,086,738 | N/A |
| Contributions with No Application from Client | 2,302,560 | N/A |
| Total Normal Cost at Beginning of Year | \$ 164,942,454 | N/A |
| Total Normal Cost at Mid Year | \$ 171,127,796 | N/A |
| Normal Cost Rate at Mid Year | 11.80% | N/A |
| Annual Covered Payroll | \$ 1,450,317,127 | N/A |

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