

**THE CONSOLIDATED POLICE AND  
FIREMEN'S PENSION FUND  
OF NEW JERSEY  
ANNUAL REPORT  
OF THE ACTUARY  
PREPARED AS OF JULY 1, 2001**

January 7, 2002

Commission  
Consolidated Police and Firemen's Pension  
Fund of New Jersey  
Trenton, New Jersey

Ladies and Gentlemen:

The law governing the operation of The Consolidated Police and Firemen's Pension Fund of New Jersey provides for annual actuarial valuations of the System. The results of the July 1, 2001 valuation are submitted in this report which also includes a comparison with the preceding year's valuation.

The valuation shows the financial condition of the Plan as of July 1, 2001 and gives the basis for determining the required annual contribution for the plan year beginning July 1, 2001.

The valuation was prepared on the basis of the same assumptions as were employed for the previous valuation which include an interest rate of 8.75% per year. In addition, the valuation includes the provisions of Chapter 4, P.L. 2001, which provides for an increase in the pension allowance payable to certain retired members of the System.

Once again, the actuaries recommend that the funding policy be reviewed since the actual investment returns have been consistently less than 8.75% .

The Table of Contents, which follows, highlights the Sections of the Report.

Respectfully submitted,

(Signed) LISA A. WITLEN

Lisa A. Witlen  
Principal & Consulting Actuary

(Signed) GEORGE M. LOVAGLIO

George M. Lovaglio  
Principal & Consulting Actuary

## TABLE OF CONTENTS

| <u>Section</u>      | <u>Item</u>  | <u>Page No.</u> |
|---------------------|--|-----------------|
| I                   | Summary of Key Results   | 1               |
| II                  | Employee Data  | 6               |
| III                 | Assets, Liabilities and Contributions  | 8               |
|                     | A. Market Value of Assets as of June 30, 2001  |                 |
|                     | B. Reconciliation of Market Value of<br>Assets from June 30, 2000 to June 30, 2001                   |                 |
|                     | C. Development of Actuarial Value of Assets<br>as of July 1, 2001                                    |                 |
|                     | D. Present Value of Benefits   |                 |
|                     | E. Development of State Contribution   |                 |
| IV                  | Comments Concerning the Valuation  | 11              |
| V                   | Accounting Information   | 12              |
| <br><u>Appendix</u> |  |                 |
| A                   | Brief Summary of the Benefit and<br>Contribution Provisions as Interpreted for<br>Valuation Purposes | 15              |
| B                   | Outline of Actuarial Assumptions and Methods   | 17              |
| C                   | Tabulations Used as a Basis for the 2001 Valuation   | 19              |
|                     | Table 1 - Service Retirements  |                 |
|                     | Table 2 - Disability Retirements   |                 |
|                     | Table 3 - Active Members' Death Benefits   |                 |
|                     | Table 4 - Retired Members' Death Benefits  |                 |

REPORT ON THE ANNUAL  
VALUATION OF  
THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND  
OF NEW JERSEY  
PREPARED AS OF JULY 1, 2001

SECTION I - SUMMARY OF KEY RESULTS

The Consolidated Police and Firemen's Pension Fund of New Jersey was established by Chapter 358, P.L. 1952. This report, prepared as of July 1, 2001 presents the results of the annual actuarial valuation of the Fund.

For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized on the following pages.

| <b>Valuation Date</b>             | <b>July 1, 2001</b> | <b>July 1, 2000</b> |
|-----------------------------------|---------------------|---------------------|
| <u>Participant Data</u>           |                     |                     |
| Active Members                    | 0                   | 0                   |
| Retired Members and Beneficiaries | <u>1,364</u>        | <u>1,498</u>        |
| Total Participants                | 1,364               | 1,498               |
|                                   |                     |                     |
| Annual Compensation               | \$ 0                | \$ 0                |
| Annual Retirement Allowances      | \$ 9,098,678        | \$ 9,809,706        |
|                                   |                     |                     |
| <u>Assets</u>                     |                     |                     |
| Market Value of Assets            | \$ 32,090,874       | \$ 38,385,048       |
| Actuarial Value of Assets         | \$ 39,162,802       | \$ 46,078,644       |
|                                   |                     |                     |
| <u>Contribution Amounts</u>       |                     |                     |
| Normal Contribution               | \$ 0                | \$ 0                |
| Accrued Liability Contribution*   | <u>2,713,914</u>    | <u>506,541</u>      |
| Total Contribution                | \$ 2,713,914        | \$ 506,541          |

\*The unfunded accrued liability has been amortized over a period of one year.

The major benefit and contribution provisions of the statute as reflected in the valuation are summarized in Appendix A. The valuation reflects the provisions of Chapter 4, P.L. 2001 which provided for an increase in the pension allowance payable to certain retired members of the System. There were no other changes from the provisions used in the previous valuation.

The actuarial assumptions and methods used for valuing the Fund are summarized in Appendix B. There were no changes in actuarial assumptions and methods since the previous valuation. As noted in prior valuations, the actuaries continue to recommend reviewing the funding alternatives since recent investment rates of return have been considerably less than the assumed rate of 8.75%. Alternatives that could be considered are to merge the Fund into another Fund, to revise the actuarial rate of return, or to revise the asset allocation.

The combination of the plan provisions, actuarial assumptions and member and beneficiary data is used to generate the overall required level of State contributions. The required State contribution is developed in Section III E.

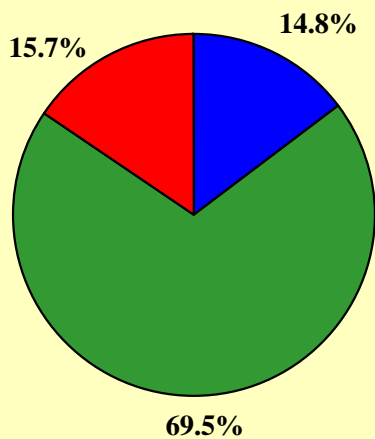
The valuation also generates a balance sheet which summarizes in some detail the total present and prospective assets and liabilities of the Fund. A summary comparison of the balance sheets as of July 1, 2000 and July 1, 2001 is set forth in the following table. The allocation of assets among the various investment alternatives is shown in graphic form on page 5.

**TABLE I  
COMPARATIVE BALANCE SHEET**

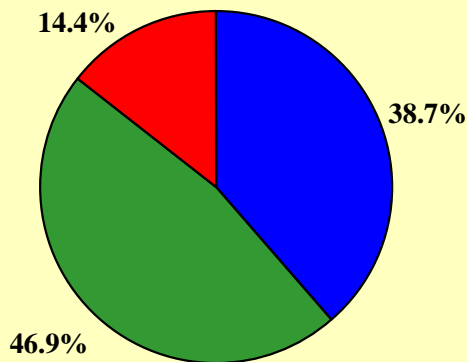
| <b><u>ASSETS</u></b>  | <b>2001</b>   | <b>2000</b>   |
|---|---------------|---------------|
| Actuarial value of assets of Fund   | \$ 39,162,802 | \$ 46,078,644 |
| Unfunded accrued liability/(surplus)  | 2,495,553     | 465,785       |
| Total Assets  | \$ 41,658,355 | \$ 46,544,429 |
| <b><u>LIABILITIES</u></b>   |               |               |
| Present value of benefits to present beneficiaries payable from the Retirement Reserve Fund | \$ 41,658,355 | \$ 46,544,429 |
| Present value of benefits to present active members   | 0             | 0             |
| Total Liabilities   | \$ 41,658,355 | \$ 46,544,429 |

## THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY

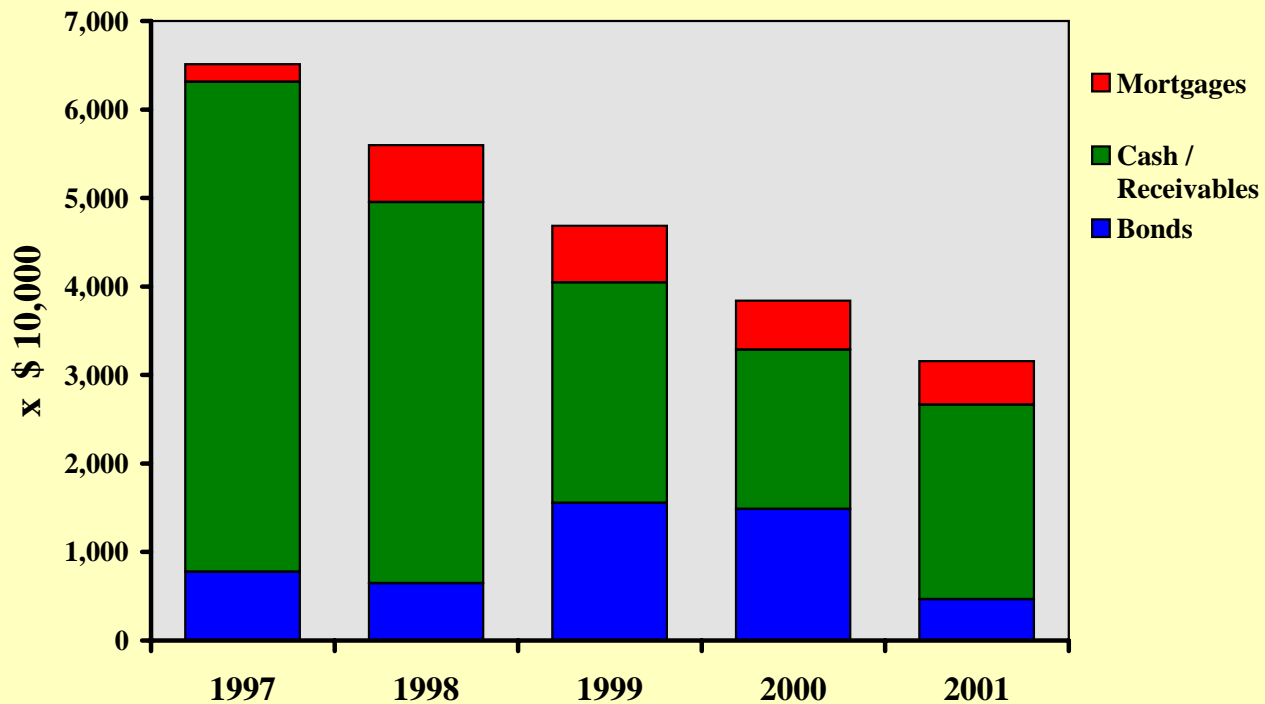
### ASSET ALLOCATION MARKET VALUE



**2001**



**2000**





SECTION II - EMPLOYEE DATA

The data employed for the valuations were furnished to the actuary by the Division of Pensions and Benefits. Appendix C contains summary tables which present the number and retirement allowances of members classified by age. The following summarizes and compares the Fund membership as of July 1, 2000 and July 1, 2001 by various categories.

**ACTIVE MEMBERSHIP**

- There have been no active participants in the Plan since July 1, 1992.

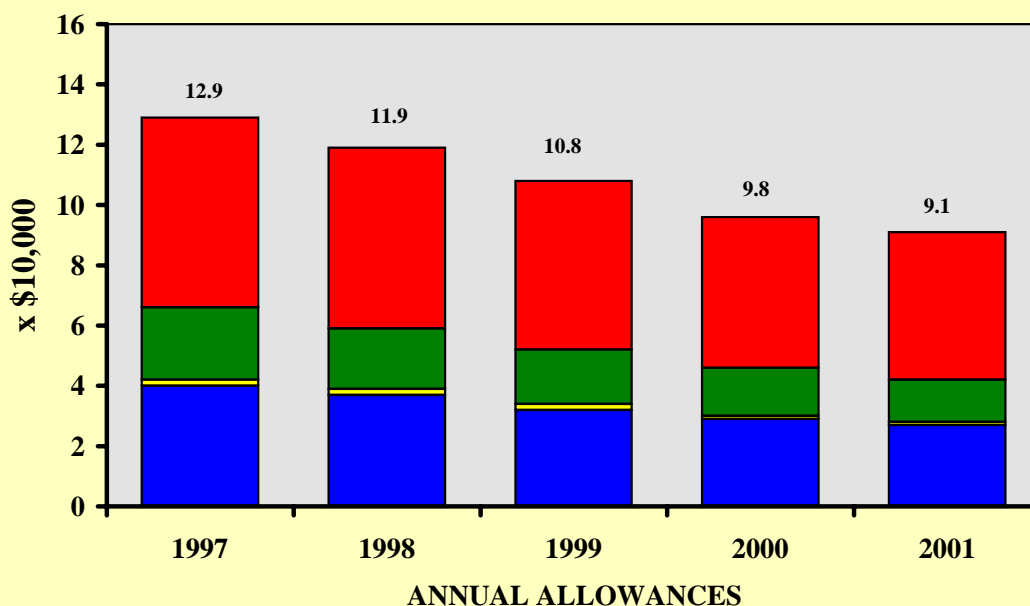
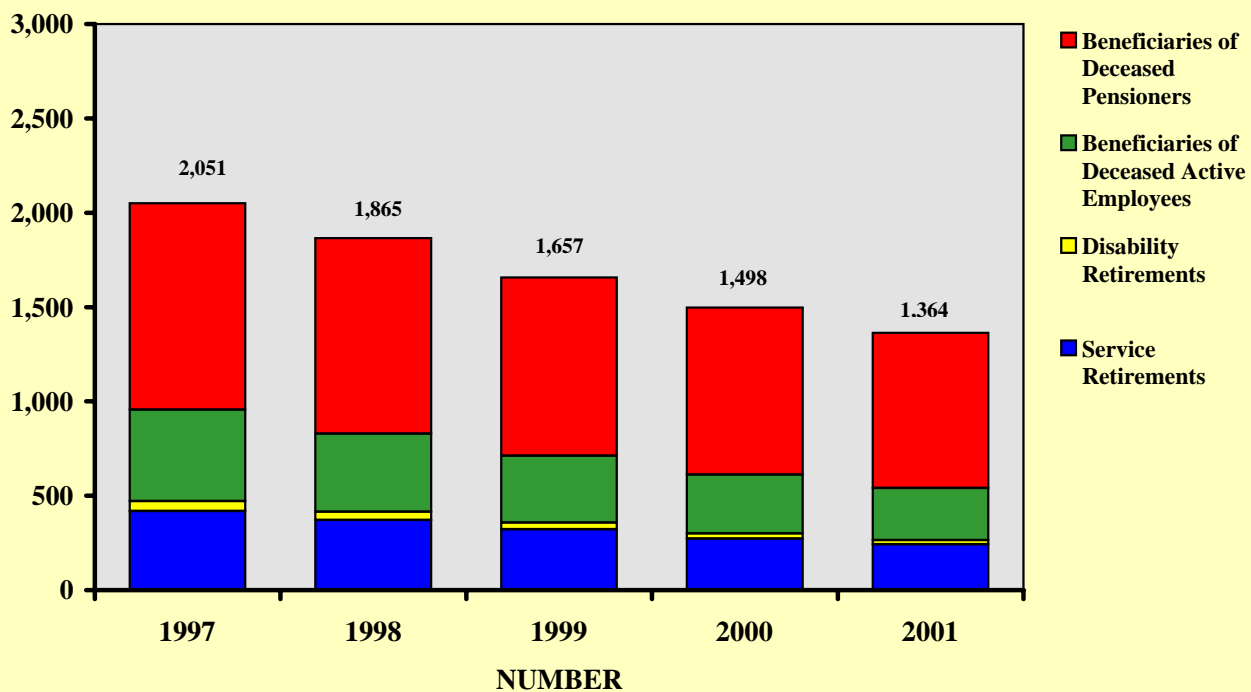
**RETIRED MEMBERS AND BENEFICIARIES**

| <b>GROUP</b>                               | <b>2001</b>   |                          | <b>2000</b>   |                          |
|--|---------------|--------------------------|---------------|--------------------------|
|  | <b>Number</b> | <b>Annual Allowances</b> | <b>Number</b> | <b>Annual Allowances</b> |
| Service Retirements                        | 243           | \$ 2,715,171             | 273           | \$ 2,868,075             |
| Disability Retirements                     | 22            | \$ 96,277                | 27            | \$ 122,886               |
| Beneficiaries of Deceased Pensioners       | 823           | \$ 4,927,053             | 886           | \$ 5,265,094             |
| Beneficiaries of Deceased Active Employees | 276           | \$ 1,360,177             | 312           | \$ 1,553,651             |

Graphic presentations of the statistical data on membership for the two preceding years are shown on the following page.

# THE CONSOLIDATED POLICE AND FIREMEN'S PENSION FUND OF NEW JERSEY

## SUMMARY OF RETIRED PARTICIPATION



SECTION III - ASSETS, LIABILITIES AND CONTRIBUTIONS**A. Market Value of Assets as of June 30, 2001**

|    |   |    |                  |
|----|---|----|------------------|
| 1. | Assets  |    |                  |
|    | a. Cash   | \$ | 6,852,942        |
|    | b. Investment Holdings  |    | 23,041,522       |
|    | c. Accrued Interest on Investments                              |    | 275,333          |
|    | d. Accounts Receivable - Other                                  |    | 2,265,539        |
|    | e. Administrative Expense Receivable                            |    | 92,183           |
|    | f. Employers' Contributions Receivable – Pension Adjustment     |    | <u>1,019,417</u> |
|    | g. Total  | \$ | 33,546,936       |
| 2. | Liabilities   |    |                  |
|    | a. Pension Payroll Payable                                      | \$ | 690,995          |
|    | b. Pension Adjustment Payroll Payable                           |    | 1,085,861        |
|    | c. Withholdings Payable   |    | 151,598          |
|    | d. Administrative Expense Payable                               |    | 7,228            |
|    | e. Accounts Payable – Other                                     |    | 108              |
|    | f. Accounts Payable – Pension Adjustment                        |    | <u>26,813</u>    |
|    | g. Total  | \$ | 1,962,603        |
| 3. | Receivable Contributions  | \$ | 506,541          |
| 4. | Market Value of Assets as of June 30, 2001<br>= 1(g) - 2(g) + 3 | \$ | 32,090,874       |

**B. Reconciliation of Market Value of Assets from June 30, 2000 to June 30, 2001**

|    |   |    |                  |
|----|---|----|------------------|
| 1. | Market Value of Assets as of June 30, 2000                          | \$ | 38,385,048       |
| 2. | Increases   |    |                  |
|    | a. Members' Contributions at 7%                                     | \$ | 0                |
|    | b. Municipal Contributions at 6%                                    |    | 0                |
|    | c. State Appropriations   |    | 0                |
|    | d. Administrative Revenue – Local                                   |    | 82,355           |
|    | e. Pension Adjustment   |    | 12,760,405       |
|    | f. Minimum Pension Benefit  |    | 92               |
|    | g. Investment Income  |    | <u>2,479,555</u> |
|    | h. Total  | \$ | 15,322,407       |
| 3. | Decreases   |    |                  |
|    | a. Retirement Allowances  | \$ | 9,305,374        |
|    | b. Benefit Expense – Pension Adjustment                             |    | 12,760,405       |
|    | c. Benefit Expense – Minimum Pension                                |    | 92               |
|    | d. Miscellaneous Expense  |    | 0                |
|    | e. Administrative Expenses  |    | <u>57,251</u>    |
|    | f. Total  | \$ | 22,123,122       |
| 4. | Receivable Contribution   | \$ | 506,541          |
| 5. | Market Value of Assets as of June 30, 2001<br>= 1 + 2(h) - 3(f) + 4 | \$ | 32,090,874       |

**C. Development of Actuarial Value of Assets as of July 1, 2001**

|    |  |    |                    |
|----|--|----|--------------------|
| 1. | Actuarial Value of Assets as of July 1, 2000                                       | \$ | 46,078,644         |
| 2. | Net Cash Flow excluding Investment Income and<br>receivable Employer Contributions |    | (9,280,270)        |
| 3. | Receivable Employer Contributions  |    | 506,541            |
| 4. | Expected Investment Income at 8.75%:   |    |                    |
|    | a. Interest on Assets as of July 1, 2000   | \$ | 4,031,881          |
|    | b. Interest on Net Cash Flow   |    | <u>(406,012)</u>   |
|    | c. Total   | \$ | 3,625,869          |
| 5. | Expected Actuarial Value of Assets as of July 1, 2001<br>= 1 + 2 + 3 + 4(c)        | \$ | 40,930,784         |
| 6. | 20% of Difference from Market Value  |    | <u>(1,767,982)</u> |
| 7. | Actuarial Value of Assets as of July 1, 2001                                       | \$ | 39,162,802         |

**D. Present Value of Benefits**

|    |   |    |                  |
|----|---|----|------------------|
| 1. | Active Members  |    |                  |
|    | a. Service Retirement                                     | \$ | 0                |
|    | b. Death After Retirement                                 |    | <u>0</u>         |
|    | c. Total: (a) + (b)                                       | \$ | 0                |
| 2. | Service Retirees  |    | 13,352,186       |
| 3. | Disability Retirees                                       |    | 436,588          |
| 4. | Beneficiaries of Deceased Pensioners                      |    | 22,526,012       |
| 5. | Beneficiaries of Deceased Active Employees                |    | <u>5,343,569</u> |
| 6. | Total Present Value of Benefits<br>= 1(c) + 2 + 3 + 4 + 5 | \$ | 41,658,355       |

**E. Development of State Contribution**

|    |  |    |                   |
|----|--|----|-------------------|
| 1. | Present Value of Benefits as of July 1, 2001       | \$ | 41,658,355        |
| 2. | Actuarial Value of Assets                          |    | <u>39,162,802</u> |
| 3. | Unfunded Accrued Liability/(Net Surplus) = 1. – 2. | \$ | 2,495,553         |
| 4. | Amortization Years Remaining*                      |    | 1                 |
| 5. | Total State Contribution as of July 1, 2001        |    | 2,495,553         |
| 6. | Total State Contribution as of July 1, 2002        | \$ | 2,713,914         |

\*The latest unfunded accrued liability payment schedule required the amortization of any plan gains or losses over the remainder of the 9 year period that began on June 30, 1991. Without additional guidance, we have assumed the immediate payment of any unfunded accrued liability.

SECTION IV - COMMENTS CONCERNING THE VALUATION

The variation in liabilities and contributions reflects the Fund's actual experience during the year.

The Fund experienced a net actuarial loss during the year that ended June 30, 2001.

The experience loss is, once again, primarily due to an actual return on Fund assets less than that expected. For valuation purposes, an 8.75% per annum rate of return was assumed. The actual return on the Fund's actuarial value of assets was approximately 5.91% for the period from July 1, 2000 through June 30, 2001. There was also a loss due to mortality experience among the retired participants.

The following shows the development of the actuarial experience and identifies the major experience components:

**A. Calculation of Actuarial Experience for the Year Ended June 30, 2001**

|    |  |    |            |
|----|--|----|------------|
| 1. | Unfunded Accrued Liability as of July 1, 2000  | \$ | 465,785    |
| 2. | Interest on 1. at 8.75%  |    | 40,756     |
| 3. | Contributions Receivable   |    | 506,541    |
| 4. | Interest on 3.   |    | <u>N/A</u> |
| 5. | Expected Unfunded Accrued Liability as of July 1, 2001<br>= 1. + 2. - 3. - 4.        | \$ | 0          |
| 6. | Increase in Unfunded Accrued Liability due to recognition<br>of Chapter 4, P.L. 2001 | \$ | 587,961    |
| 7. | Actual Unfunded Accrued Liability as of July 1, 2001                                 | \$ | 2,495,553  |
| 8. | Actuarial Loss (Gain) = 7. - 5. - 6.   | \$ | 1,907,592  |

SECTION V - ACCOUNTING INFORMATION

Statement No. 5 of the Governmental Accounting Standards Board, issued November 1986, established standards of disclosure of pension information by public retirement systems. Statement No. 25 of the Governmental Accounting Standards Board, issued November 1994, established financial reporting standards for defined benefit pension plans and for the notes to the financial statements of defined contribution plans of state and local governmental liabilities and superseded Statement No. 5 effective for periods beginning after June 15, 1996. Statement No. 27, Accounting for Pensions by State and Local Governmental Employers superseded Statement 5 for employers participating in pension plans and is effective for periods beginning after June 15, 1997.

The information required by both Statements No. 25 and No. 27 is presented in the following tables. These include the development of the Annual Required Contribution (ARC), the development of the Net Pension Obligation (NPO), the Schedule of Funding Progress and the Schedule of Employer Contributions.

**(A) Development of the Annual Required Contribution (ARC) as of June 30, 2003:**

|    |   |                |
|----|---|----------------|
| 1. | Actuarial Value of Plan Assets as of June 30, 2001                          |                |
|    | (a) Valuation Assets as of June 30, 2001                                    | \$ 39,162,802  |
|    | (b) Adjustment for Receivable Contributions included in (a)                 | <u>506,541</u> |
|    | (c) Valuation Assets as of June 30, 2001 for GASB<br>Disclosure = (a) - (b) | \$ 38,656,261  |
| 2. | Actuarial Accrued Liability as of June 30, 2001 for GASB<br>Disclosure      | \$ 41,658,355  |

|    |   |    |                |
|----|---|----|----------------|
| 3. | Unfunded Actuarial Accrued Liability/(Surplus) as of June 30, 2001<br>= 2 - 1 (c) | \$ | 3,002,094      |
| 4. | Amortization of Unfunded Actuarial Accrued Liability/(Surplus) over<br>1 year     | \$ | 3,002,094      |
| 5. | Normal Cost as of June 30, 2001   | \$ | 0              |
| 6. | Annual Required Contribution as of June 30, 2003                                  |    |                |
|    | (a) Annual Required Contribution as of June 30, 2001<br>= 4. + 5.                 | \$ | 3,002,094      |
|    | (b) Interest Adjustment to June 30, 2003  |    | <u>548,351</u> |
|    | (c) Annual Required Contribution as of June 30, 2003<br>= (a) + (b)               | \$ | 3,550,445      |

**(B) Development of the Net Pension Obligation (NPO) as of June 30, 2003:**

|    |  |    |                  |
|----|--|----|------------------|
| 1. | Annual Required Contribution as of June 30, 2003     | \$ | 3,550,445        |
| 2. | Interest on Net Pension Obligation                   |    | 3,878            |
| 3. | Adjustment to Annual Required Contribution           |    | <u>(48,201)</u>  |
| 4. | Annual Pension Cost = 1. + 2. + 3.                   | \$ | 3,506,122        |
| 5. | Expected Employer Contributions for Fiscal Year 2003 |    | <u>2,713,914</u> |
| 6. | Increase in Net Pension Obligation = 4. - 5.         | \$ | 792,208          |
| 7. | Net Pension Obligation at June 30, 2002              |    | <u>44,323</u>    |
| 8. | Net Pension Obligation at June 30, 2003<br>= 6. + 7. | \$ | 836,531          |



**C. Schedule of Funding Progress**

| <b>Actuarial Valuation Date</b> | <b>Actuarial Value of Assets (a)</b> | <b>Actuarial Accrued Liability (b)</b> | <b>Unfunded Actuarial Accrued Liability (b-a)</b> | <b>Funded Ratio (a/b)</b> | <b>Covered Payroll (c)</b> | <b>Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll <math>\frac{(b-a)}{c}</math></b> |
|---------------------------------|--------------------------------------|--|---|---------------------------|----------------------------|---|
| 6/30/96                         | \$ 78,769,717                        | \$ 73,694,514                          | \$ (5,075,203)                                    | 106.9%                    | \$ 0                       | N/A   |
| 6/30/97                         | \$ 70,420,937                        | \$ 66,004,245                          | \$ (4,416,692)                                    | 106.7%                    | \$ 0                       | N/A   |
| 6/30/98                         | \$ 62,205,001                        | \$ 59,272,789                          | \$ (2,932,212)                                    | 104.9%                    | \$ 0                       | N/A   |
| 6/30/99                         | \$ 54,018,660                        | \$ 52,226,208                          | \$ (1,792,452)                                    | 103.4%                    | \$ 0                       | N/A   |
| 6/30/00                         | \$ 46,078,644                        | \$ 46,544,429                          | \$ 465,785  | 99.0%                     | \$ 0                       | N/A   |
| 6/30/01                         | \$ 38,656,261                        | \$ 41,658,355                          | \$ 3,002,094                                      | 92.8%                     | \$ 0                       | N/A   |

**D. Schedule of Employer Contributions**

| <b>Fiscal Year</b> | <b>Annual Required Contribution</b> | <b>Employer Contribution</b> | <b>Percentage Contributed</b> |
|--------------------|-------------------------------------|------------------------------|-------------------------------|
| 1998               | \$ 0                                | \$ 0                         | 100.0%                        |
| 1999               | \$ 0                                | \$ 0                         | 100.0%                        |
| 2000               | \$ 0                                | \$ 0                         | 100.0%                        |
| 2001               | \$ 0                                | \$ 0                         | 100.0%                        |
| 2002               | \$ 550,864                          | \$ 506,541                   | 92.0%                         |
| 2003               | \$ 3,550,445                        | \$ 2,713,914                 | 76.4%                         |

**E. The information presented in the required supplementary schedules was determined as part of the actuarial valuation. Additional information follows:**

|                               |                                |
|-------------------------------|--------------------------------|
| Valuation Date                | June 30, 2001                  |
| Actuarial Cost Method         | Projected Unit Credit          |
| Amortization Method           | Level Dollar, closed           |
| Remaining Amortization Period | 1 year                         |
| Asset Valuation Method        | 5 year average of market value |
| Actuarial Assumptions:        |                                |
| Investment Rate of Return     | 8.75%                          |

APPENDIX A

BRIEF SUMMARY OF THE BENEFIT AND  
CONTRIBUTION PROVISIONS AS INTERPRETED  
FOR VALUATION PURPOSES

Eligibility for Membership

Member of a municipal police department, municipal paid or part-paid fire department or county police department, or a paid or part-paid fire department of a fire district located in a township who has contributed to this pension fund; and who is not covered by the Police and Firemen's Retirement System which became effective on July 1, 1994.

Active Member: Any member who is a policeman, fireman, detective, lineman, driver of police van, fire alarm operator, or inspector of combustibles and who is subject to call for active service as such.

Employee Member: Any member who is not subject to active service or duty.

1. Definitions

|                    |  |
|--------------------|--|
| Plan Year          | The 12-month period beginning on July 1 and ending on June 30.   |
| Service            | Service rendered while a member as described above.  |
| Compensation       | Base salary; not including individual salary adjustments which are granted primarily in anticipation of retirement or additional remuneration for performing temporary duties beyond the regular work day. (Effective June 30, 1996 Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code). |
| Final Compensation | Compensation received during the last 12 months of service preceding retirement or termination of service.   |
| Average Salary     | Salary averaged over the last three years prior to retirement or other termination of service.   |

2. Benefits:

Service

Retirement

Mandatory retirement at age 65 with 25 years of service (a municipality may retain the Chief of Police until age 70). Voluntary retirement after 25 years of service for an active member and after age 60 with 25 years of service for an employee member. Benefit is life annuity equal to 60% of final compensation, plus 1% of final compensation for years of service in excess of 25.

Death

Benefit

While on duty:

Immediate life annuity equal to 70% of average salary payable to the spouse. If there is no spouse or if the spouse dies or remarries, 20% of final compensation will be payable to one surviving child and 35% (50%) of final compensation will be payable, to two (three) surviving children. If there is no surviving spouse or child, 25% (40%) of final compensation will be payable to one (two) surviving dependent parent(s). The minimum spousal annuity is \$4,500 per annum.

While not on duty after retirement:

Life annuity equal to 50% of the member's average salary payable to the spouse, plus 15% (25%) to one (two or more ) surviving child (children). If there is no surviving spouse or if the surviving spouse dies or remarries, 20% (35%, 50%) of the member's average salary to one (two, three or more) surviving child (children). In the event that there is no surviving spouse or child, 25% (40%) of the member's average salary will be payable to one (two) dependent parent(s). The minimum spousal annuity is \$4,500 per annum.

Ordinary

Disability

Retirement

Totally and permanently incapacitated from service for any cause other than as a direct result of a traumatic event occurring during the performance of duty. Benefit is an immediate life annuity equal to 1/2 of average salary.

Accidental

Disability

Retirement

Totally and permanently incapacitated as a direct result of a traumatic event occurring while performing regular or assigned duties. Benefit is an immediate life annuity equal to 2/3 of average salary.

3. Contributions

Each member contributes 7% of his salary to the pension fund.

## APPENDIX B

## OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION INTEREST RATE: 8.75% per annum, compounded annually for development of costs.

DEATHS AFTER RETIREMENT: Rates vary by age. Representative values of the assumed orders of mortality are as follows:

| Age | Lives Per 1,000    |                       |        |
|-----|--------------------|-----------------------|--------|
|     | Service Pensioners | Disability Pensioners | Widows |
| 50  | 6.2                | 12.8                  | 2.2    |
| 55  | 9.9                | 17.4                  | 3.3    |
| 60  | 15.6               | 24.5                  | 5.5    |
| 65  | 23.9               | 35.7                  | 9.6    |
| 70  | 30.3               | 53.2                  | 16.5   |
| 75  | 49.1               | 80.2                  | 32.4   |
| 80  | 81.5               | 121.1                 | 56.1   |
| 85  | 126.3              | 182.0                 | 89.2   |

MARRIAGE: Males are assumed to be 4 years older than females, no assumption was made as to children.

For those participants with listed beneficiaries, the beneficiary allowance was assumed to be the greater of twice the amount contained in the record or the minimum of \$4,500/yr. (The information contained in the record has not been updated for the change from 25% to 50% payment to the survivor.)

For those participants without listed beneficiaries, 65% were assumed to be married and the beneficiary amount was assumed to be the minimum benefit payable (\$4,500/yr.).

Actuarial Method: The unfunded accrued liability was measured as of June 30, 1990 and the accrued liability contribution rate was then determined such that the unfunded accrued liability was to be amortized over a period of 9 years with contributions expected to remain constant.

In determining the unfunded accrued liability and the contribution rate, the actuarial value of assets as of June 30, 1990 was based upon 100% of the market value of system assets. For subsequent actuarial valuations, the actuarial value of assets is adjusted to reflect actual contributions and benefit payments, an assumed rate of return on the previous years' assets and current years' cash flow at an annual rate of 8.75% with an adjustment to reflect 20% of the difference between the resulting value and the actual market value of System assets.

In developing the unfunded accrued liability contribution rate as of June 30, 1991 and subsequent years, the contribution rate is adjusted to amortize any gains or losses over the remainder of the 9-year period. (Without additional guidance, we have assumed that the unfunded accrued liability determined as of June 30, 2001 will be amortized over 1 year).

**APPENDIX C**

**TABULATIONS USED AS A BASIS FOR THE 2001 VALUATION**

The following tables give the number and retirement allowances of beneficiaries classified by age as of July 1, 2001.

TABLE 1

**THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED  
BY AGE AS OF JULY 1, 2001**

**SERVICE RETIREMENTS**

| AGE   | MEN    |              | WOMEN  |          |
|-------|--------|--------------|--------|----------|
|       | NUMBER | AMOUNT       | NUMBER | AMOUNT   |
| 79    | 1      | \$ 43,306    |        |          |
| 81    | 3      | 64,354       |        |          |
| 82    | 3      | 61,289       |        |          |
| 83    | 13     | 175,165      |        |          |
| 84    | 30     | 447,264      |        |          |
| 85    | 18     | 187,221      |        |          |
| 86    | 30     | 388,428      |        |          |
| 87    | 27     | 335,393      |        |          |
| 88    | 18     | 169,110      | 1      | \$ 8,527 |
| 89    | 20     | 219,252      |        |          |
| 90    | 18     | 180,007      |        |          |
| 91    | 14     | 100,360      |        |          |
| 92    | 15     | 121,664      |        |          |
| 93    | 9      | 69,350       |        |          |
| 94    | 5      | 35,531       |        |          |
| 95    | 7      | 43,721       |        |          |
| 96    | 3      | 31,442       |        |          |
| 97    | 4      | 19,359       |        |          |
| 98    | 1      | 3,356        |        |          |
| 99    | 2      | 9,646        |        |          |
| 101   | 1      | 1,425        |        |          |
| TOTAL | 242    | \$ 2,706,644 | 1      | \$ 8,527 |

TABLE 2

**THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF RETIRED MEMBERS DISTRIBUTED  
BY AGE AS OF JULY 1, 2001**

**DISABILITY RETIREMENTS**

| AGE   | MEN    |           | WOMEN  |        |
|-------|--------|-----------|--------|--------|
|       | NUMBER | AMOUNT    | NUMBER | AMOUNT |
| 80    | 1      | \$ 3,212  |        |        |
| 81    | 1      | 3,065     |        |        |
| 83    | 1      | 2,892     |        |        |
| 84    | 2      | 9,647     |        |        |
| 85    | 2      | 11,327    |        |        |
| 86    | 2      | 15,717    |        |        |
| 87    | 3      | 13,566    |        |        |
| 88    | 1      | 3,592     |        |        |
| 89    | 4      | 15,072    |        |        |
| 90    | 1      | 5,816     |        |        |
| 91    | 1      | 3,113     |        |        |
| 93    | 3      | 9,210     |        |        |
| TOTAL | 22     | \$ 96,227 |        |        |



TABLE 3

**THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES DISTRIBUTED  
BY AGE AS OF JULY 1, 2001**

**ACTIVE MEMBERS' DEATH BENEFITS**

| AGE          | MEN      |                 | WOMEN      |                     |
|--------------|----------|-----------------|------------|---------------------|
|              | NUMBER   | AMOUNT          | NUMBER     | AMOUNT              |
| 50           |          |                 | 1          | \$ 778              |
| 56           |          |                 | 1          | 1,800               |
| 57           | 1        | \$ 1,800        |            |                     |
| 59           |          |                 | 1          | 2,215               |
| 64           |          |                 | 1          | 4,500               |
| 65           |          |                 | 1          | 705                 |
| 69           |          |                 | 1          | 4,500               |
| 73           |          |                 | 2          | 9,000               |
| 74           |          |                 | 1          | 700                 |
| 75           |          |                 | 2          | 4,845               |
| 76           |          |                 | 2          | 15,163              |
| 77           |          |                 | 2          | 9,000               |
| 78           |          |                 | 4          | 21,789              |
| 79           |          |                 | 4          | 18,000              |
| 80           |          |                 | 7          | 46,575              |
| 81           |          |                 | 3          | 13,500              |
| 82           |          |                 | 8          | 44,922              |
| 83           |          |                 | 13         | 69,421              |
| 84           |          |                 | 14         | 77,844              |
| 85           |          |                 | 12         | 60,288              |
| 86           | 1        | 4,500           | 24         | 124,371             |
| 87           |          |                 | 15         | 73,718              |
| 88           |          |                 | 12         | 66,662              |
| 89           |          |                 | 20         | 91,124              |
| 90           |          |                 | 16         | 77,965              |
| 91           |          |                 | 18         | 89,863              |
| 92           |          |                 | 11         | 51,885              |
| 93           |          |                 | 13         | 64,696              |
| 94           |          |                 | 10         | 56,145              |
| 95           |          |                 | 15         | 69,582              |
| 96           |          |                 | 12         | 54,000              |
| 97           |          |                 | 8          | 36,000              |
| 98           |          |                 | 8          | 36,000              |
| 99           |          |                 | 3          | 13,500              |
| 100          |          |                 | 2          | 11,320              |
| 101          |          |                 | 3          | 13,500              |
| 102          |          |                 | 1          | 4,500               |
| 103          |          |                 | 2          | 9,000               |
| 105          |          |                 | 1          | 4,500               |
| <b>TOTAL</b> | <b>2</b> | <b>\$ 6,300</b> | <b>274</b> | <b>\$ 1,353,877</b> |

TABLE 4

**THE NUMBER AND ANNUAL RETIREMENT  
ALLOWANCES OF BENEFICIARIES DISTRIBUTED  
BY AGE AS OF JULY 1, 2001**

**RETIRED MEMBERS' DEATH BENEFITS**

| AGE          | MEN      |                  | WOMEN      |                     |
|--------------|----------|------------------|------------|---------------------|
|              | NUMBER   | AMOUNT           | NUMBER     | AMOUNT              |
| 36           |          |                  | 1          | \$ 4,500            |
| 41           |          |                  | 1          | 3,168               |
| 47           | 1        | \$ 3,575         |            |                     |
| 48           |          |                  | 1          | 2,070               |
| 53           | 1        | 1,670            |            |                     |
| 54           |          |                  | 1          | 4,500               |
| 57           |          |                  | 1          | 1,686               |
| 58           | 1        | 5,137            | 2          | 3,515               |
| 61           |          |                  | 2          | 5,412               |
| 62           |          |                  | 2          | 1,859               |
| 63           | 1        | 1,350            | 1          | 4,500               |
| 65           |          |                  | 4          | 18,000              |
| 66           | 1        | 450              | 3          | 10,295              |
| 68           |          |                  | 1          | 4,500               |
| 69           |          |                  | 3          | 13,500              |
| 70           |          |                  | 4          | 24,316              |
| 71           |          |                  | 4          | 21,153              |
| 72           | 1        | 1,923            | 4          | 36,355              |
| 73           |          |                  | 5          | 35,182              |
| 74           |          |                  | 6          | 54,670              |
| 75           |          |                  | 9          | 68,823              |
| 76           |          |                  | 7          | 55,261              |
| 77           |          |                  | 9          | 67,407              |
| 78           |          |                  | 12         | 101,857             |
| 79           |          |                  | 23         | 136,249             |
| 80           |          |                  | 20         | 147,525             |
| 81           |          |                  | 36         | 241,572             |
| 82           |          |                  | 38         | 270,198             |
| 83           |          |                  | 39         | 262,646             |
| 84           |          |                  | 64         | 421,323             |
| 85           |          |                  | 62         | 399,350             |
| 86           |          |                  | 63         | 378,379             |
| 87           |          |                  | 60         | 376,149             |
| 88           |          |                  | 58         | 328,325             |
| 89           |          |                  | 53         | 288,834             |
| 90           |          |                  | 60         | 324,686             |
| 91           |          |                  | 34         | 174,282             |
| 92           |          |                  | 31         | 170,186             |
| 93           |          |                  | 24         | 117,438             |
| 94           |          |                  | 22         | 107,037             |
| 95           | 1        | 4,500            | 12         | 63,507              |
| 96           |          |                  | 18         | 86,038              |
| 97           |          |                  | 5          | 22,695              |
| 98           |          |                  | 8          | 36,000              |
| 99           |          |                  | 2          | 9,000               |
| 101          |          |                  | 1          | 4,500               |
| <b>TOTAL</b> | <b>7</b> | <b>\$ 18,605</b> | <b>816</b> | <b>\$ 4,908,448</b> |