

# **Fairfax County Police Officers Retirement System**

**A Pension  
Trust Fund of  
Fairfax County  
Virginia**



## **Comprehensive Annual Financial Report**

*For the Fiscal Year Ended June 30, 2002*

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## FAIRFAX COUNTY

**BOARD OF TRUSTEES  
POLICE OFFICERS RETIREMENT SYSTEM**  
10680 Main Street, Suite 280  
Fairfax, Virginia 22030-3812

Telephone: (703) 279-8200 (800) 333-1633 FAX: (703) 273-3185

V I R G I N I A

November 15, 2002

Dear Members of the Board of Trustees:

I am pleased to submit to you the annual report of the Fairfax County Police Officers Retirement System ("System") for the fiscal year ended June 30, 2002. This annual report is provided as an aid to understanding the structure and evaluating the status of the System. The System's management is responsible for the accuracy of financial information contained herein.

The annual report for fiscal year 2002 consists of five sections: (1) an Introductory Section that contains this transmittal letter along with the organization structure and review of plan provisions; (2) a Financial Section that contains the opinion of the independent auditors, management's discussion and analysis, the financial statements of the System and required supplementary information; (3) an Investment Section that contains investment results; (4) an Actuarial Section that includes the independent actuary's certification letter, a summary of the results of the actuarial valuation, and actuarial procedures and assumptions; and (5) a Statistical Section that contains information regarding the System membership.

### **History**

The Fairfax County Police Officers Retirement System was created under the authority granted by Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia) on March 29, 1944 to provide defined benefit pension plan coverage for sworn full-time law enforcement officers of the Fairfax County Police Department. In 1981, Fairfax County enacted Article 7 of the Fairfax County Code, which adopted and continued Chapter 303 as amended. There were 1,207 active members and 657 retirees participating in the System as of June 30, 2002.

### **Benefit Provisions**

The benefit provisions of the System are established by County Ordinance. The System provides normal service retirement and early service retirement benefits for members who attain age or service requirements. Coverage for service-connected disability benefits is immediate upon membership in the System. Ordinary (non-service related) disability benefits are provided after the attainment of five years of service. Members are vested after five years of service and are eligible for benefits at the early or normal service retirement date.

# INTRODUCTORY SECTION

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## **Capital Markets and Economic Conditions**

As shown in the Financial and Investment sections of this report, fiscal 2002 was an especially difficult year for the financial markets, particularly domestic and international equities. Domestic equities declined 18% and non-US equities declined 9% during fiscal 2002, continuing the decline begun during fiscal 2001. The equity declines were partially offset by increases in the value of fixed income and real estate investments. Even with these declines, the System performed well in relative terms, finishing the year in the top third of the public funds universe and beating the policy benchmarks set for the System.

After accounting for all cash flows, including contributions, expenses, and benefit payments, the market value of the System's net assets declined 5.3%, from \$605.4 million on June 30, 2001 to \$573.3 million on June 30, 2002.

## **Major Initiatives**

The County funding policy for the System was revised by the adoption of the "corridor method" for determining contribution rates effective with the actuarial valuation performed as of July 1, 2002. Adoption of this methodology will stabilize the employer contribution rate while providing adequate funding to the System. The custodian and actuarial contracts were put out for bid during fiscal 2002. The System switched its custodian banking relationship to Mellon Global Securities Services and retained Milliman USA as actuary. The System is currently undergoing an independent actuarial review in accordance with Board of Trustees policy.

## **Internal and Budgetary Controls**

The System's management is responsible for maintaining internal accounting controls to provide reasonable assurance that transactions are properly authorized and recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America. During fiscal 2002, a number of improperly authorized transactions processed in the Retirement Administration Agency were detected. Further review identified no improper transactions involving the funds of the Police Officers Retirement System. As a result of the review, certain internal controls within the Agency were augmented. Agency management will be taking any other steps necessary following the receipt of the final audit report.

Based on the recent intensive audit review, we believe the internal controls in effect adequately safeguard the System's assets and provide a reasonable assurance regarding the proper recording of financial transactions. In addition, the budget for the System is annually presented and approved by the Board of Trustees and the County's Board of Supervisors.

## **Funded Status**

An actuarial valuation of the System to determine funding requirements is performed annually. The System's funding policy provides for periodic employer contributions at actuarially determined rates which will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of benefit payments when due. The valuation of the System performed as of July 1, 2001 indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits increased from 96.9% to 99.0%. The Actuarial Section contains further information on the results of the July 1, 2001 valuation.

## **Investment Policies and Strategies**

The Board of Trustees has an adopted Statement of Investment Objectives and Policy. This Statement establishes the investment goals, guidelines, constraints and performance standards that the Board of Trustees uses when exercising its fiduciary duties to manage the investment assets of the System. The Board operates in conformity with the standard of care required in making investments as stated in the Code of Virginia §26-45.1.A.

The Board receives quarterly reporting from staff to ensure compliance with its stated objectives and policy. Staff also monitors the performance of the System and its investment managers. Rate of return information is included in the Investment Section.

Securities of the System except for mutual funds and the County's pooled cash and temporary investments, are held by Mellon Global Securities Services as agent in the System's name. Mellon Financial Corporation, the parent company, carries Financial Institution Bond insurance coverage including a Computer Crime Policy. An additional Excess Securities policy covers all risk of physical loss to securities.

## **Other Information**

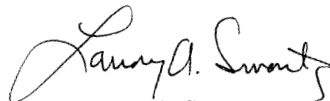
### *Independent Audit and Actuarial Certifications*

An independent auditors' report and certifications from the actuary are included in this report.

### *Acknowledgements*

The annual report of the Police Officers Retirement System was prepared by the System's staff under the leadership of the Board of Trustees. I would like to thank the staff who have worked hard throughout the year to ensure the successful operation of the System. This report is intended to provide complete and reliable information for determining the financial status of the System. It is being submitted to the Board of Supervisors and other interested parties and is available to the public via the County's website located at [www.fairfaxcounty.gov/retbrd/index](http://www.fairfaxcounty.gov/retbrd/index).

Respectfully submitted,



Laurnz A. Swartz  
Executive Director

# INTRODUCTORY SECTION

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## BOARD OF TRUSTEES

**Captain Arthur J. Hurlock, Jr.**

President

Member Trustee

*Term Expires: December 31, 2002*

**Lieutenant Erin F. Schaible**

Vice President

Member Trustee

*Term Expires: December 31, 2004*

**Robert L. Mears**

Treasurer

Fairfax County Director of Finance

Ex officio Trustee

**Brant Baber**

Baber & Kalinowski, P.C.

Board of Supervisors Appointee

*Term Expires: January 31, 2003*

**Forrest E. Williams**

Prudential-Bache Securities, Inc.

Board of Supervisors Appointee

*Term Expires: January 31, 2006*



## ADMINISTRATIVE ORGANIZATION

### Administrative Staff

Laurnz A. Swartz  
*Executive Director*

Jeffrey A. Willison  
*Investment Manager*

*Retirement Administrator*

### Professional Services

#### Actuary

Milliman USA  
Actuaries  
Vienna, VA

#### Auditor

KPMG LLP  
Certified Public Accountants  
Washington, DC

### Investment Managers

Credit Suisse Asset Management  
New York, NY

Dodge & Cox Investment Managers  
San Francisco, CA

Capital Guardian Trust Company  
Los Angeles, CA

State Street Global Advisors  
Boston, MA

Cohen & Steers Capital Management, Inc.  
New York, NY

Mellon Bond Associates, LLP  
Pittsburgh, PA

Janus Capital Corporation  
Denver, CO

PIMCO  
Newport Beach, CA

Oak Associates, LTD.  
Akron, OH

Robert E. Torray & Co., Inc.  
Bethesda, MD

#### Attorney

W. McCauley Arnold  
McCandlish & Lillard  
Fairfax, VA

#### Custodial Bank

Mellon Global Securities Services  
Pittsburgh, PA

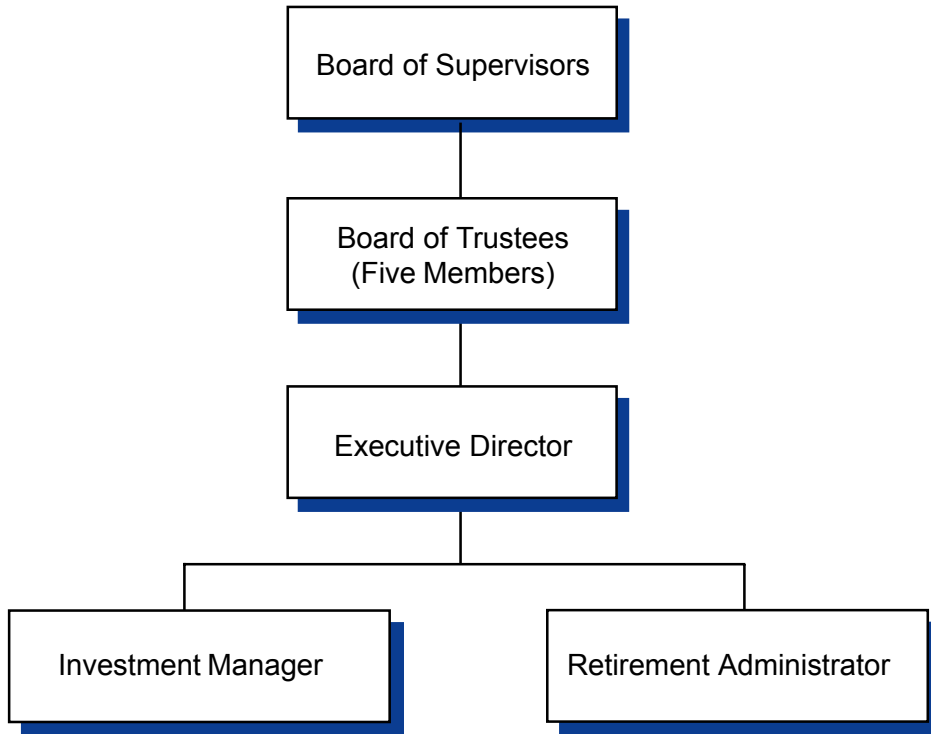
### Investment Consultant

Mercer Investment Consulting, Inc.  
Atlanta, GA

# INTRODUCTORY SECTION

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## ORGANIZATIONAL CHART



## SUMMARY OF PLAN PROVISIONS

Membership in the Fairfax County Police Officers Retirement System includes full-time sworn law enforcement officers in the Fairfax County Police Department.

The general provisions of the Police Officers Retirement System are as follows:

**Contribution Rate:** 12% of base salary (including roll call and holiday pay). Police Officers do not contribute to Social Security, except Police Officers hired after April 1, 1986 contribute to Medicare.

**Benefit:** 2.8% of average final compensation (highest consecutive three years) times creditable service up to a maximum of 84%. The total benefit is then increased by 3%.

**Normal Retirement:** is either age 55 or at least 25 years of creditable service (20 years if sworn in before July 1, 1981).

**Early Retirement:** is 20 years of creditable service if sworn in on or after July 1, 1981.

**Deferred Vested Retirement:** is available for vested members (vesting is at 5 years of creditable service) who leave their contributions in the System when they terminate. These members are entitled to their normal retirement benefit based on service with the Police Department at age 55.

**Service-Connected Disability Retirement:** is available for members, regardless of their length of service, who become disabled as a result of a job-related illness or injury. Benefits for total disability are  $66\frac{2}{3}\%$  of their average final compensation if sworn in on or after July 1, 1981. If sworn in before July 1, 1981, the total disability benefit is based on  $66\frac{2}{3}\%$  of the salary the member would have received if he or she had not been disabled. Any member who is still disabled when they reach their normal retirement date will have their benefit reduced to 60% of the salary he or she would have received if he or she had not been disabled.

**Non-Service Connected Disability Retirement:** is available for vested members who become disabled due to an injury or illness that is not job-related. Normal retirement benefits are paid (minimum is 10% of the member's salary).

# INTRODUCTORY SECTION

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## SUMMARY OF PLAN PROVISIONS

(Continued)

**Death Benefits: *Before Retirement*** — An automatic monthly benefit is payable to the spouse and children. This benefit equals \$1,522.85 for the spouse (until remarriage before age 60) or surviving handicapped child (if there is no spouse) plus each eligible child receives \$609.14 up to a total family benefit of \$3,045.69 (these benefits are indexed to inflation). If the death occurred in the line of duty, the spouse or surviving handicapped child (if there is no spouse) may elect to receive 66<sup>2</sup>/<sub>3</sub>% of the member's regular salary at the time of death in lieu of the automatic benefits. If no automatic benefit is payable, contributions will be refunded to the member's beneficiary.

***After Retirement*** — For those retiring on a regular service or service-connected disability retirement, an automatic monthly benefit is payable to the spouse and children. This benefit equals \$1,522.85 for the spouse (until remarriage before age 60) or surviving handicapped child (if there is no spouse) plus each eligible child receives \$609.14 up to a total family benefit of \$3,045.69 (these benefits are indexed to inflation). In addition, members who retire on a regular service retirement may elect a Joint and Contingent Spouse and Handicapped Child option which provides 100%, 66<sup>2</sup>/<sub>3</sub>%, or 50% of the retiree's reduced benefit to the spouse or eligible handicapped child for life. The member's annuity is reduced by a percentage based on the difference in age between the member and his or her spouse. If the spouse predeceases the member, the annuity is restored to what it would have been if this option had not been elected. If no automatic benefit is payable, contributions not yet paid out in benefits will be refunded to the member's beneficiary.

**Cost of Living Benefit:** Annual cost of living adjustments are provided to retirees and beneficiaries equal to the lesser of 4 percent or the percentage increase in the Consumer Price Index for the Washington Consolidated Metropolitan Statistical Area.



2001 M Street, NW  
Washington, DC 20036

## Independent Auditors' Report

The Board of Supervisors  
County of Fairfax, Virginia

The Board of Trustees  
of the Fairfax County Police Officers Retirement System:

We have audited the statements of plan net assets of the Fairfax County Police Officers Retirement System (the System), a pension trust fund of the County of Fairfax, Virginia, as of June 30, 2002 and 2001, and the related statements of changes in plan net assets for the years then ended. These basic financial statements are the responsibility of the System's management. Our responsibility is to express opinion on these basic financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the basic financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net assets as of June 30, 2002 and 2001, and the changes in plan net assets for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As discussed in the introduction section of the notes to the financial statements, the System has implemented Governmental Accounting Standards Board Statement No. 34, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments*, Statement No. 37, *Basic Financial Statements – and Management's Discussion and Analysis – for State and Local Governments: Omnibus*, Statement No. 38, *Certain Financial Statement Note Disclosures*, effective July 1, 2001.

The management's discussion and analysis on pages 13 through 15 is not a required part of the basic financial statements but is supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.



KPMG LLP, KPMG LLP, a U.S. limited liability partnership, is  
a member of KPMG International, a Swiss association.

# FINANCIAL SECTION

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Other required supplementary information on pages 23 and 24 is not a required part of the basic financial statements but is supplementary information required by accounting principles generally accepted in the United States of America. Other required supplementary information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as whole.

Our audit was conducted for the purpose of forming an opinion on the System's basic financial statements. The introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. The information in these sections has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we express no opinion on it.

KPMG LLP

November 15, 2002

## MANAGEMENT'S DISCUSSION AND ANALYSIS

This section presents management's discussion and analysis of the Fairfax County Police Officers Retirement System's ("System" or "plan") financial performance and provides an overview of the financial activities for the fiscal years ended June 30, 2002 and 2001. The information in this section should be reviewed in conjunction with the letter of transmittal provided in the Introductory Section of this report.

### Overview of Financial Statements and Accompanying Information

**Basic Financial Statements.** The System presents Statements of Plan Net Assets as of June 30, 2002 and 2001 and Statements of Changes in Plan Net Assets for the years then ended. These statements reflect the resources available for the payment of benefits as of year-end and the sources and uses of those funds during the year.

**Notes to Financial Statements.** The Notes to Financial Statements are an integral part of the financial statements and include additional information and schedules to provide a better understanding of the financial statements. The Notes to Financial Statements immediately follow the basic financial statements.

**Required Supplementary Information.** The required supplementary information and related notes provide information regarding the System's funding progress and employer contributions. The required supplementary information and related notes are immediately following the Notes to Financial Statements.

### Financial Analysis

**Summary of Plan Net Assets.** As indicated in the following Summary Statement of Plan Net Assets, the net assets held in the System declined \$32.1 million or 5.3% during fiscal 2002 and \$16.5 million or 2.7% during fiscal 2001. These reductions in net assets are due primarily to a reduction in the fair value of investments.

**Return on Investments.** The System's return on investments net of investment management fees for fiscal 2002 and 2001 were -5.1% and -3.1% respectively. Both domestic and international equity markets began a slide during fiscal 2001 which continued and intensified during fiscal 2002, especially after the events of September 11, 2001 and revelations of corporate fraud and accounting irregularities. Fixed income performed well in both years and real estate, which the System invests in using equity REIT securities, was the best performing sector for both years. Additional investment market commentary is provided in the Investment Section of this document.

**Summary of Additions and Deductions.** As presented in the Summary of Additions and Deductions (also included in this section), both years experienced overall reductions due to investment losses and increases in benefit payments. While the System experienced negative investment returns during fiscal 2002 and 2001, investment performance was very good in relative terms. The System's return on investments was in the top third of the universe of public pension funds during fiscal 2002 and was in the top quartile of that universe in fiscal 2001.

**Additions.** Employer contributions during fiscal 2002 decreased \$2.1 million or 12.1% from fiscal 2001 amounts. This decrease is attributable to a decrease in the employer contribution rate from 25.69% of covered payroll in fiscal 2001 to 21.79% in fiscal 2002, partially offset by an increase in payroll. Employer contributions increased 43.5% during fiscal 2001. The employer contribution rate increased 7.29 percentage points for fiscal 2001 over the fiscal 2000 rate of 18.4%. The rate increase plus a higher covered payroll base during fiscal 2001 resulted in the increase in employer contributions.

# FINANCIAL SECTION

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## MANAGEMENT'S DISCUSSION AND ANALYSIS

(Continued)

The net investment losses are the net effect of income from dividends, interest, realized and unrealized gains and losses on investments and securities lending. Interest and dividend income declined \$2.9 million or 12.7% from fiscal 2001 to fiscal 2002 due to declines in equity markets and a general decline in interest rates. This trend reversed the increase in interest and dividend income from fiscal 2000 to fiscal 2001, which was \$1.9 million or 9.3%. Realized and unrealized losses on investments totalled \$48.1 million in fiscal 2002, compared to losses of \$39.3 million in fiscal 2001. Investment-related expenses decreased by \$0.3 million in fiscal 2002 and by \$0.2 million in fiscal 2001, reflecting lower values of investments. Gross securities lending earnings and expenses decreased from fiscal 2001 to fiscal 2002, reflecting the lower interest rates. Net income from securities lending was fairly stable for the two years.

**Deductions.** Benefit payments increased 10.6% from fiscal 2001 to fiscal 2002 and 22.6% from fiscal 2000 to fiscal 2001. The number of retirees and beneficiaries receiving benefits and the amount of the average benefit increased in both years and were responsible for the increase in the expense. Retirees received cost of living increases during both years of 3.8% as of July 1, 2000 and 3.4% as of July 1, 2001. A special increase of 12% for retirees was granted effective July 1, 2000, accounting for the higher growth rate in fiscal 2001. Refunds of contributions and other expenses increased 31.7% from fiscal 2001 to fiscal 2002 and declined 16.6% from fiscal 2000 to fiscal 2001. The amount of refunds varies from year to year based on changes in employee turnover rates and decisions of terminated employees.

During fiscal 2002, a number of improperly authorized transactions processed in the Retirement Administration Agency were detected. Further review identified , no improper transactions within the Police Officers Retirement System. As a result of management's and the County's Internal Audit review, certain controls within the Agency were strengthened. Agency management will be taking any other steps necessary following receipt of the final internal audit report.

It is important to note that despite the net asset value reductions, the system remained nearly fully funded, with a funded ratio of 99.0% as of the July 1, 2001 actuarial valuation.

### Major Initiatives

The County's funding policy for the System was revised by the adoption of the "corridor method" for determining contribution rates beginning with fiscal 2003. Using this method, the contribution rate is fixed at normal cost plus administrative expense and is only adjusted to amortize unfunded liability (or surplus) when the funded ratio, or the actuarial assets expressed as a percentage of the actuarial accrued liability of the System, falls outside a range of 90% - 120% or when benefit provisions are changed. This methodology was adopted to further stabilize the employer contribution rate while providing adequate funding to the System.

The System's custodian bank contract was put out for bid in the fall of 2001. Mellon Global Securities Services was chosen as custodian beginning May 1, 2002. Mellon provides custody, accounting, securities lending, performance measurement and analytics and management of short-term investments for the System.

The System's actuarial contract was also put out for bid during fiscal 2002. Milliman, USA was retained as actuary. In accordance with a policy adopted by the System's Board of Trustees, the System is currently undergoing an independent actuarial audit by a second actuarial firm.



## MANAGEMENT'S DISCUSSION AND ANALYSIS

(Continued)

### *Summary Statement of Plan Net Assets*

|                            | 2002                 | 2001                 | Difference            | 2000                 | Difference            |
|----------------------------|----------------------|----------------------|-----------------------|----------------------|-----------------------|
| <b>Assets</b>              |                      |                      |                       |                      |                       |
| Total cash and investments | \$636,125,601        | \$662,101,561        | \$(25,975,960)        | \$733,631,970        | \$(71,530,409)        |
| Total receivables          | 14,243,921           | 10,977,594           | 3,266,327             | 14,198,015           | (3,220,421)           |
| <b>Total Assets</b>        | 650,369,522          | 673,079,155          | (22,709,633)          | 747,829,985          | (74,750,830)          |
| <b>Liabilities</b>         |                      |                      |                       |                      |                       |
|                            | 77,052,867           | 67,692,260           | 9,360,607             | 125,967,957          | (58,275,697)          |
| <b>Net Assets</b>          | <u>\$573,316,655</u> | <u>\$605,386,895</u> | <u>\$(32,070,240)</u> | <u>\$621,862,028</u> | <u>\$(16,475,133)</u> |

### *Summary of Additions and Deductions*

|                              | 2002                  | 2001                  | Difference            | 2000                | Difference            |
|------------------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|
| <b>Additions</b>             |                       |                       |                       |                     |                       |
| Contributions                |                       |                       |                       |                     |                       |
| Employer                     | \$15,077,920          | \$17,149,427          | \$(2,071,507)         | \$11,950,073        | \$5,199,354           |
| Plan members                 | 8,335,903             | 8,038,085             | 297,818               | 7,521,134           | 516,951               |
| Net investment income (loss) | (30,661,679)          | (19,333,682)          | (11,327,997)          | 44,579,345          | (63,913,027)          |
| <b>Total Additions</b>       | (7,247,856)           | 5,853,830             | (13,101,686)          | 64,050,552          | (58,196,722)          |
| <b>Deductions</b>            |                       |                       |                       |                     |                       |
| Benefit Payments             | 24,024,119            | 21,722,991            | 2,301,128             | 17,724,731          | 3,998,260             |
| Refunds and other            | 798,265               | 605,972               | 192,293               | 726,351             | (120,379)             |
| <b>Total Deductions</b>      | 24,822,384            | 22,328,963            | 2,493,421             | 18,451,082          | 3,877,881             |
| <b>Net Change</b>            | <u>\$(32,070,240)</u> | <u>\$(16,475,133)</u> | <u>\$(15,595,107)</u> | <u>\$45,599,470</u> | <u>\$(62,074,603)</u> |

# FINANCIAL SECTION

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## STATEMENTS OF PLAN NET ASSETS

as of June 30, 2002 and 2001

| <b>Assets</b>   | <b>2002</b>                  | <b>2001</b>                  |
|---|------------------------------|------------------------------|
| Equity in County's pooled cash and temporary investments            | \$ 1,252,997                 | \$ 2,156,214                 |
| Accrued interest and dividends receivable                           | 3,164,553                    | 3,512,044                    |
| Receivable from sale of investments                                 | 11,079,368                   | 7,465,550                    |
| Investments, at fair value  |                              |                              |
| U.S. Government obligations   | 15,606,275                   | 23,712,034                   |
| Asset-backed securities   | 86,529,263                   | 96,766,164                   |
| Municipal bonds   | 0                            | 400,411                      |
| Corporate bonds   | 82,238,563                   | 85,925,956                   |
| Common and preferred stock  | 237,377,248                  | 307,611,694                  |
| Mutual funds  | 78,692,336                   | 69,803,116                   |
| Short-term investments  | 100,617,804                  | 44,012,232                   |
| Cash collateral received under securities lending agreements        | 33,811,115                   | 31,713,740                   |
| Total investments   | 634,872,604                  | 659,945,347                  |
| Total assets  | 650,369,522                  | 673,079,155                  |
| <b>Liabilities</b>  |                              |                              |
| Payable for collateral received under securities lending agreements | 33,811,115                   | 31,713,740                   |
| Payable for purchase of investments                                 | 42,489,012                   | 35,071,340                   |
| Accounts payable and accrued expenses                               | 752,740                      | 907,180                      |
| Total liabilities   | 77,052,867                   | 67,692,260                   |
| <b>Net assets held in trust for pension benefits</b>                | <b><u>\$ 573,316,655</u></b> | <b><u>\$ 605,386,895</u></b> |

(A schedule of funding progress is presented on page 25.)

See accompanying notes to financial statements.

# FINANCIAL SECTION

## STATEMENTS OF CHANGES IN PLAN NET ASSETS

For the Years Ended June 30, 2002 and 2001

| <b>Additions</b>   | <b>2002</b>           | <b>2001</b>           |
|--|-----------------------|-----------------------|
| Contributions  |                       |                       |
| Employer   | \$ 15,077,920         | \$ 17,149,427         |
| Plan members   | 8,335,903             | 8,038,085             |
| Total contributions                                      | 23,413,823            | 25,187,512            |
| Investment income  |                       |                       |
| <i>From investment activities</i>                        |                       |                       |
| Net (depreciation) in fair value of investments          | (48,109,036)          | (39,326,988)          |
| Interest   | 13,040,559            | 16,043,053            |
| Dividends  | 6,586,016             | 6,435,447             |
| Other  | 3,191                 | 10,922                |
| Total income from investment activities                  | (28,479,270)          | (16,837,566)          |
| Less investment activity expenses                        |                       |                       |
| Management fees  | 2,033,715             | 2,385,978             |
| Custodial fees   | 130,371               | 132,197               |
| Consultant   | 115,192               | 69,596                |
| Allocated administrative expense                         | 96,882                | 104,879               |
| Total investment activity expenses                       | 2,376,160             | 2,692,650             |
| Net (loss) from investment activities                    | (30,855,430)          | (19,530,216)          |
| <i>From securities lending activities</i>                |                       |                       |
| Securities lending income                                | 928,972               | 3,641,028             |
| Securities lending expenses                              |                       |                       |
| Borrower rebates   | 631,709               | 3,338,653             |
| Management fees  | 103,512               | 105,841               |
| Total securities lending expenses                        | 735,221               | 3,444,494             |
| Net income from securities lending activities            | 193,751               | 196,534               |
| Total net investment (loss)                              | (30,661,679)          | (19,333,682)          |
| Total additions  | (7,247,856)           | 5,853,830             |
| <br><b>Deductions</b>                                    |                       |                       |
| Annuity benefits   | 21,668,153            | 19,534,126            |
| Disability benefits                                      | 1,146,266             | 1,205,413             |
| Survivor benefits  | 1,209,700             | 983,452               |
| Refunds and other expenses                               | 798,265               | 605,972               |
| Total deductions   | 24,822,384            | 22,328,963            |
| <br><b>Net (decrease)</b>                                | <br>(32,070,240)      | <br>(16,475,133)      |
| <br><b>Net assets held in trust for pension benefits</b> |                       |                       |
| Beginning of fiscal year                                 | 605,386,895           | 621,862,028           |
| <b>End of fiscal year</b>                                | <b>\$ 573,316,655</b> | <b>\$ 605,386,895</b> |

See accompanying notes to financial statements.

# FINANCIAL SECTION

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## NOTES TO THE FINANCIAL STATEMENTS

For the Year Ended June 30, 2002 and 2001

The Fairfax County Police Officers Retirement System (“System” or “plan”) is a legally separate single-employer defined benefit pension plan established under the Code of Virginia to provide defined benefit pension benefits to certain Fairfax County, Virginia (“County”) police and park police officers. As such, the System is considered part of the County reporting entity and its financial statements are included in the County’s basic financial statements as a pension trust fund.

Effective July 1, 2001, the System adopted Governmental Accounting Standards Board (GASB) statements No. 34, *Basic Financial Statements ~ and Management’s Discussion and Analysis ~ for State and Local Governments*, No. 37, *Basic Financial Statements ~ and Management’s Discussion and Analysis ~ for State and Local Governments: Omnibus*, and No. 38, *Certain Financial Statement Note Disclosures*.

These statements were developed to make annual reports of state and local governments easier to understand and more useful to the people who use governmental financial information to make decisions. The main change in financial reporting for the System with the implementation of Statements No. 34, No. 37 and No. 38 relates to the inclusion of Management’s Discussion and Analysis in the financial section, which provides a narrative introduction and analytical overview of the System’s financial activities comparable to analysis the private sector provides in their annual reports.

### A. Summary of Significant Accounting Policies

*Basis of Accounting.* The System’s financial statements have been prepared under the accrual basis of accounting in accordance with accounting principles applicable to governmental units in the United States of America. Member and employer contributions to the plan are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due in accordance with the terms of the plan. The cost of administering the plan is paid by the System.

*Method Used to Value Investments.* Short-term investments are reported at cost, which approximates fair value. All other investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Asset-backed securities are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. The System records investment purchases and sales as of the trade date. These transactions are not finalized until the settlement date, which occurs approximately three business days after the trade date. The amounts of trade receivables and payables are shown as receivables and payables on the Statements of Plan Net Assets. Cash received as collateral on securities lending transactions and investments made with such cash are reported as assets along with a related liability for collateral received.

*Equity in County’s pooled cash and temporary investments.* The System maintains cash with the County, which invests cash and allocates interest earned, net of a management fee, on a daily basis to the System based on the System’s average daily balance of equity in pooled cash. As of June 30, 2002 and 2001 the bank balance of the County’s public deposits was either insured by the Federal Deposit Insurance Corporation or through the State Treasury Board pursuant to the provisions of the Security for Public Deposit Act.

**NOTES TO THE FINANCIAL STATEMENTS**

(Continued)

**B. Plan Description and Contribution Information**

*Membership.* At July 1, 2001, the date of the latest actuarial valuation, membership in the System consisted of:

|  |                     |
|--|---------------------|
| Retirees and beneficiaries receiving benefits                      | 631                 |
| Terminated plan members entitled to but not yet receiving benefits | 4                   |
| Active plan members  | 1,169               |
| <b>Total</b>   | <b><u>1,804</u></b> |

*Plan Description.* The System is a single-employer defined benefit pension plan. The plan covers County police officers who are not covered by other plans of the County or the Virginia Retirement System and former Park Police officers who elected to transfer to the System effective January 22, 1983. Benefit provisions are established and may be amended by County ordinance. All benefits vest at five years of service. To be eligible for normal retirement, an individual must meet the following criteria: (a) if employed before July 1, 1981; attained the age of 55 or completed 20 years of service, or (b) if employed on or after July 1, 1981; attained the age of 55 or completed 25 years of service. The normal retirement benefit is calculated using average final compensation (i.e., the highest consecutive three years) and years (or partial years) of service at date of termination. The plan provides that unused sick leave credit may be used in the calculation of average final compensation by projecting the final salary during the unused sick leave period. To be eligible for early retirement, the employee must have 20 years of service (does not apply if hired before July 1, 1981). Benefits are determined based on the normal retirement benefit calculated using average final compensation and service at early retirement actuarially reduced.

Annual cost-of-living adjustments are provided to retirees and beneficiaries equal to the lesser of 4 percent or the percentage increase in the Consumer Price Index for the Washington Consolidated Metropolitan Statistical Area.

*Contributions.* The contribution requirements of System members are established and may be amended by County ordinances. Member contributions are based on 12 percent of compensation. The County is required to contribute at an actuarially determined rate; the rates for the years ended June 30, 2002 and 2001 were 21.79 percent and 25.69 percent of annual covered payroll, respectively.

*Deductions.* The deductions from the System include the payment of retiree and beneficiary payments, the refund of employee contributions to former members and other expenses.

**C. Investments**

The authority to establish the System is set forth in Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia). Section 26-45.1 of the *Code of Virginia* (Code) authorizes fiduciaries of the System to purchase investments (including common and preferred stocks and corporate bonds) that meet the standard of judgment and care set forth in Section 26-45.1 of the Code.

The System does not have investments (other than U.S. Government and U.S. Government guaranteed obligations) in any one organization that represent 5 percent or more of net assets available for benefits. All investments, except for the mutual funds, short-term investment fund, and short-term collateral

# FINANCIAL SECTION

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## NOTES TO THE FINANCIAL STATEMENTS

(Continued)

investment pool, are held by an unaffiliated custodian in the name of the System. Investment decisions for these assets are made by the Board of Trustees or investment managers selected by the Board.

*Derivative financial instruments.* As permitted by the Code described above, the System invests in derivative instruments on a limited basis in accordance with the Board of Trustees' policy. Derivative instruments are financial contracts whose value depends on the values of one or more underlying assets, reference rates or financial indexes. Derivatives include futures, forwards and options or swap contracts. In addition, some traditional securities can have derivative-like characteristics. These include structured notes in which the return may be linked to one or more indexes, and asset-backed securities such as collateralized mortgage obligations which are sensitive to changes in interest rates and prepayments. Futures, forwards, options and swaps are generally not recorded on the financial statements, whereas structured notes and asset-backed investments generally are reported.

Futures contracts are contracts to deliver or receive financial instruments at a specified future date and at a specific price or yield. Futures contracts are traded on organized exchanges and require initial margin collateral in the form of cash or marketable securities. The net change in the value of futures contracts is settled daily with the exchanges. Holders of futures contracts look to the exchange for performance under the contract and not to the entity holding the offsetting futures position. The System purchased futures contracts for the opportunity to gain market exposure to the Russell 2000 index in a more efficient way and at lower transaction costs. During fiscal 2002, the System held Russell 2000 index futures. At June 30, 2002 the current notional values of, or number of units specified in, the System's futures contracts was \$57,149,625. The System did not hold any futures contracts during fiscal 2001.

The System also purchases forward currency contracts to protect the base currency (US dollars) from fluctuations in the exchange rates of foreign currencies. The credit risk of the forward currency contract lies with the potential nonperformance of the counterparty to the transaction. The maximum credit risk is usually equal to any unrealized profit on the contracts. Market risk in forward currency contracts is related to adverse movements in currency exchange rates. During the year ended June 30, 2002, the System sold forward currency contracts with a market value of \$32,100,464 and purchased forward currency contracts with a market value of \$32,366,982. During fiscal 2001, the System sold forward currency contracts with a market value of \$24,086,878 and purchased forward currency contracts with a market value of \$24,301,999.

In the area of on-financial statement instruments with derivative-like characteristics, the System invests in various asset-backed securities such as collateralized mortgage obligations and principal only strips. These securities were purchased to increase earnings, provide exposure to portions of the mortgage market or to control duration within the portfolio. The credit risk of these investments results from the creditworthiness of the counterparties to the contracts. There is an additional credit risk related to the creditworthiness of the related consumers or mortgagees. The market risk of these securities is dependent on changes in interest rates and the level of the underlying prepayments, i.e., when the underlying principal and interest are repaid to the mortgagors. At June 30, 2002 and 2001 the System held \$23,167,806 or 4.0% of the fair value of investments and \$19,884,258 or 3.3% of the fair value of investments, respectively, in on-financial statement instruments with derivative-like characteristics.

## NOTES TO THE FINANCIAL STATEMENTS

(Continued)

*Securities Lending.* Board of Trustees' policies permit the System to lend its securities to broker-dealers and other entities (borrowers) for collateral that will be returned for the same securities in the future. The System's custodian is the agent in lending the plan's domestic securities for collateral of 102 percent and international securities for collateral of 105 percent. The System changed custodians during fiscal 2002, and the securities lending program was moved to the new custodian as of the May 1, 2002 conversion date. The custodian receives cash or securities as collateral. All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in the lending agent's collective collateral investment pool, which at June 30, 2002 had a weighted average maturity and duration of 27 days. The cash collateral investment pool of the lending agent at June 30, 2001 had a weighted average duration of 75 days and a weighted average maturity of 548 days. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of securities loans made by other plan entities that invest cash collateral in the investment pool.

The System did not impose any restrictions during fiscal 2002 or 2001 on the amounts of loans the lending agent made on its behalf. The custodian provides for full indemnification to the System for any losses that might occur in the program due to the failure of a broker/dealer to return a borrowed security or failure to pay the System for income earned on the securities while on loan. Securities on loan for securities collateral are classified in the following schedule of investments according to the category of the collateral received. Securities on loan at each year-end for cash collateral are unclassified as the cash collateral is invested in a collective collateral investment pool. At each year end, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System.

As of June 30, 2002 and 2001, the market value of securities on loan were \$32,242,219 and \$33,039,201, respectively. Cash received as collateral and the related liabilities of \$33,811,115 as of June 30, 2002 and \$31,713,740 as of June 30, 2001 are shown on the Statements of Plan Net Assets. Securities received as collateral are not reported as assets since the System does not have the ability to pledge or sell the collateral securities absent borrower default.

*Categorization.* The System's investments are categorized to give an indication of the level of risk assumed by the System at year end. Category 1 includes investments that are insured or registered or for which the securities are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the securities are held by a counterparty's trust department or agent in the System's name. Category 3 includes uninsured and unregistered investments for which the securities are held by a counterparty or its trust department or agent, but not in the System's name. All of the System's investments meet the criteria of Category 1, except investments in mutual funds, a short-term investment fund, a short-term collateral investment pool and those securities on loan for which the cash collateral is invested in the collateral investment pool. These investments by their nature are not required to be categorized.

# FINANCIAL SECTION

## NOTES TO THE FINANCIAL STATEMENTS

(Continued)

A schedule of investments as of June 30, 2002 and 2001 follows:

|   | 2002                        | 2001                        |
|---|-----------------------------|-----------------------------|
| <b>Categorized investments</b>  |                             |                             |
| Short-term investments  |                             |                             |
| Time deposits   | \$7,000,000                 | \$0                         |
| Repurchase agreements   | 72,209,304                  | 0                           |
| Corporate bonds   | 16,878,368                  | 0                           |
| U.S. Government obligations   |                             |                             |
| Not on securities loan  | \$ 6,052,174                | \$ 4,673,661                |
| On securities loan for other collateral   | 44,561                      | 0                           |
| Asset-backed securities   |                             |                             |
| Not on securities loan  | 76,151,513                  | 96,766,164                  |
| On securities loan for other collateral   | 267,150                     | 0                           |
| Corporate and other bonds   | 71,437,005                  | 85,737,883                  |
| Common and preferred stock  |                             |                             |
| Not on securities loan  | 235,868,439                 | 294,199,350                 |
| On securities loan for other collateral   | 0                           | 4,095,515                   |
| Total categorized investments   | 485,908,514                 | 485,472,573                 |
| <b>Uncategorized Investments</b>  |                             |                             |
| Short-term investment fund  | 4,530,132                   | 44,012,232                  |
| Mutual fund   | 78,692,336                  | 69,803,116                  |
| Securities lending short-term collateral investment pool                        | 33,811,115                  | 31,713,740                  |
| Investments held by broker dealers under securities loans with cash collateral: |                             |                             |
| U.S. Government obligations   | 9,509,540                   | 19,038,373                  |
| Corporate bonds   | 10,801,558                  | 558,484                     |
| Asset-backed securities   | 10,110,600                  | 0                           |
| Common and preferred stock  | 1,508,809                   | 9,316,829                   |
| Total Uncategorized Investments   | 148,964,090                 | 174,472,774                 |
| <b>Total investments</b>  | <b><u>\$634,872,604</u></b> | <b><u>\$659,945,347</u></b> |

### D. Income Taxes

The Internal Revenue Service issued a determination letter on February 23, 1995, which stated that the System and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and therefore are exempt from federal income taxes. In the opinion of the plan administrator, the System and its underlying trust have operated within the terms of the System and are qualified under the applicable provisions of the Internal Revenue Code.



## REQUIRED SUPPLEMENTARY INFORMATION

Six-year historical trend information about the System is presented herewith as required supplementary information. This information is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating assets to pay benefits when due, and make comparisons with other public employee retirement systems.

### SCHEDULE OF FUNDING PROGRESS

| 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) |
|--------------------------|-------------------------------|---|-------------------------|--------------------|---------------------|---|
| 7/1/96                   | \$ 343,288,369                | \$ 388,917,113                                  | \$ 45,628,744           | 88.27%             | \$ 49,065,647       | 93.00%  |
| 7/1/97                   | 399,772,825                   | 414,534,604                                     | 14,761,779              | 96.44%             | 50,307,487          | 29.34%  |
| 7/1/98                   | 434,259,212                   | 442,727,265                                     | 8,468,053               | 98.09%             | 51,955,916          | 16.30%  |
| 7/1/99                   | 503,649,251                   | 487,951,047                                     | (15,698,204)            | 103.22%            | 55,081,103          | (28.50%)  |
| 7/1/00                   | 568,941,559                   | 586,938,958                                     | 17,997,399              | 96.93%             | 64,946,049          | 27.71%  |
| 7/1/01                   | 611,514,245                   | 617,510,212                                     | 5,995,967               | 99.03%             | 66,755,263          | 8.98%   |

Analysis of the dollar amounts of plan net assets, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net assets as a percentage of the actuarial accrued liability provides one indication of the System's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in the unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the system's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system.

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Fiscal Year Ended June 30 | Annual Required Contribution | Percentage Contributed |
|---------------------------|------------------------------|------------------------|
| 1997                      | \$ 11,892,690                | 100%                   |
| 1998                      | 11,321,194                   | 100%                   |
| 1999                      | 10,685,734                   | 100%                   |
| 2000                      | 11,950,073                   | 100%                   |
| 2001                      | 17,149,427                   | 100%                   |
| 2002                      | 15,077,920                   | 100%                   |

# FINANCIAL SECTION

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## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

|                               |                                |
|-------------------------------|--------------------------------|
| Valuation date                | July 1, 2001                   |
| Actuarial cost method         | Entry age                      |
| Amortization method           | Level percent closed           |
| Remaining amortization period | Weighted average of 3.56 years |
| Asset valuation method        | 3-Year smoothed market         |
| Actuarial assumptions:        |                                |
| Investment rate of return*    | 7.5%                           |
| Projected salary increases*   | 4.5%-8.0%                      |
| *Includes inflation at        | 4.0%                           |
| Cost-of-living adjustments    | 3.0%                           |

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience, completed in 2001.

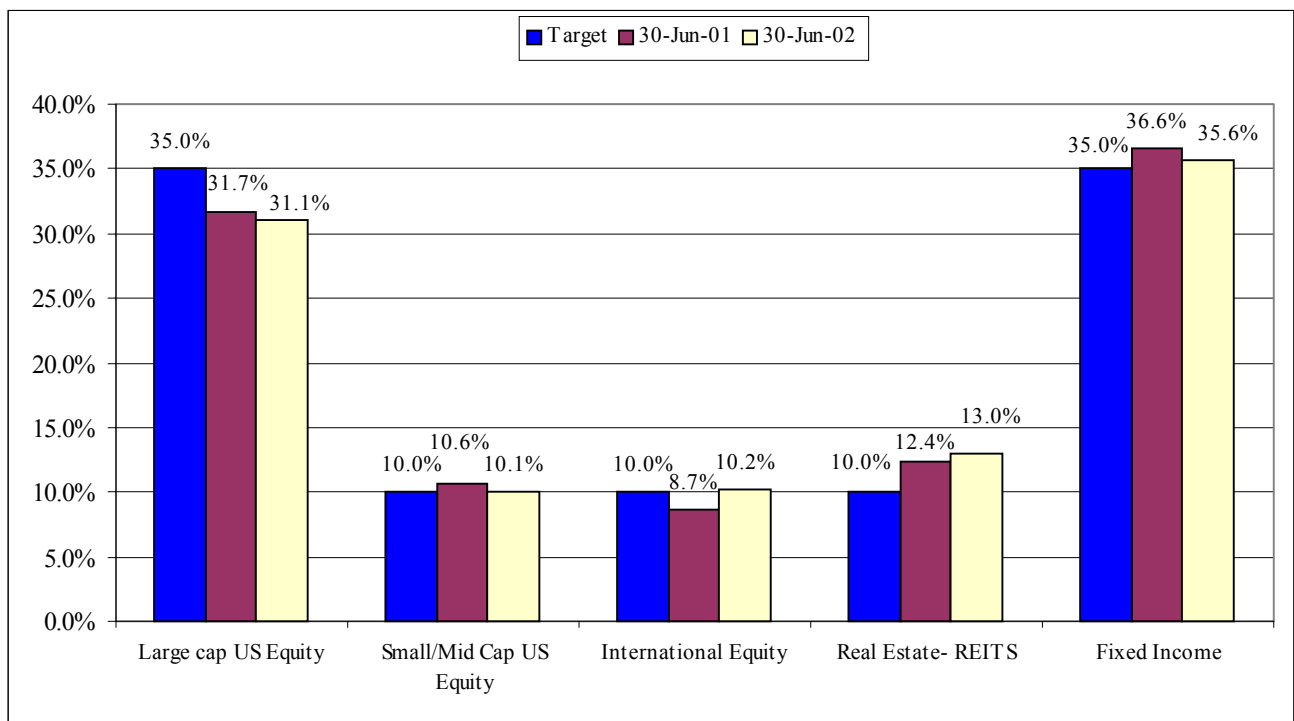
The rate of employer contributions to the plan is composed of the normal cost, amortization of the unfunded actuarial accrued liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability. The allowance for administrative expenses is based upon the plan's actual administrative expenses.

Investment gains from prior years have more than offset the effect of the investment losses incurred during fiscal 2001 for determining the employer contribution rate developed during the July 1, 2001 actuarial valuation. The impact of investment gains resulted in the adoption of an employer contribution rate of 19.97% for the fiscal year ending June 30, 2003, a decrease of 1.82% from the fiscal year 2002 rate of 21.79%.

## OVERVIEW

The Board of Trustees has established an investment policy for the System to identify investment objectives, guidelines and performance standards for the assets of the System. The objectives are formulated in response to the anticipated needs of the System, the risk tolerance of the System and the desire of the Board of Trustees to define and fulfill their fiduciary responsibility over System assets.

The Board has established its asset class strategic target allocations which it believes will achieve the return requirements of the fund at an appropriate level of risk and maintain a comfortable risk tolerance. Further, a disciplined rebalancing policy was adopted to ensure that market movements do not cause asset class weightings to unintentionally stray too far from the target percentages. The actual asset allocation at market is reviewed monthly and if asset class weightings fall outside the “no rebalancing range”, transfers between asset classes are initiated to rebalance the asset allocations to within the target ranges. The following graph shows the target and actual asset allocations as of June 30, 2002 and 2001.



The Board of Trustees hires investment management firms and provides each firm with a mandate and benchmark index or a blend of indices against which the performance of the account is measured. Each managed account has its own investment guidelines outlining the nature of investments to be held in the account and detailing allowed and/or prohibited transactions. Investment managers are requested to submit a written statement describing their proposed investment strategy and tactics for achieving the investment goals and objectives that are required by their guidelines. Investment manager performance is monitored by staff and is reviewed by the Board of Trustees quarterly.

# INVESTMENT SECTION

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## CAPITAL MARKETS AND ECONOMIC CONDITIONS

### Financial and Economic Summary

Fiscal year 2002, ending June 30, proved to be a second-consecutive turbulent and disappointing year for equity markets. After losing 14.8% in fiscal 2001, the S&P 500 Index fell 18.0% in 2002, the index's worst June fiscal year since 1970.

The fiscal year began by falling 10.5% through September 10<sup>th</sup> in a difficult environment characterized by a declining economy and rising unemployment. The terrorist attacks on the World Trade Center and Pentagon sent the markets into the worst weekly tailspin in decades. The Federal Reserve responded by cutting the Federal Funds rate 200 basis points in five moves, bringing that short-term rate down to 1.75%, the lowest level in 40 years. Lower interest rates, coupled with higher defense outlays and consumer spending, buoyed a wave of investor enthusiasm that lifted the equity markets nearly 20% by calendar year-end 2001. That late-year rally soon fizzled, however, as negative corporate earnings news, the end of Federal Reserve rate cuts, and conflicting reports on the economic front sent stocks tumbling. The corporate malfeasance of blue chip company managements such as Enron, Worldcom, Global Crossing and Tyco shook investor confidence severely and led to congressional inquiries and criminal investigations and prompted public outcries for accounting reforms. As a result, the S&P 500 Index fell 13.2% during the last six months of fiscal 2002, the largest second-half drop since 1970.

Small capitalization stocks fared better during fiscal 2002 than their mid- and large-capitalization counterparts (as measured by the Russell indices), losing 8.6% over the fiscal year versus declines of 9.2% and 17.9%, respectively. Value stocks declined 7.7% in the fiscal year, but still outperformed their growth-style counterparts by 18.7 percentage points. Since the market peak in March 2000, value stocks fell a cumulative 1.0%, versus a 55.5% loss for growth stocks. On a sector basis, only two of the 11 sectors (Consumer Staples +11.5%, Basic Materials +6.7%) had positive returns during the trailing year, but seven sectors outperformed the full index's return of -18.0%. The Technology and Utilities sectors were the biggest drags on the S&P 500's performance, falling 37.4% and 37.8%, respectively, and accounted for 91% of the benchmark's negative excess weighted return. At the end of fiscal 2002, the Technology sector accounted for 14% of the S&P 500 Index by weighted market capital, compared with 33% two years ago.

In parallel to the United States, economies of developed international countries experienced a general slowdown, as international stocks finished the fiscal year in negative territory. The MSCI Europe, Australasia and Far East Index (EAFE), a broad measure of international developed-country markets, declined 9.2% in dollar terms. The US dollar depreciated against most foreign currencies over the fiscal year, thus dampening the return from hedged mandates. Japan, whose economy remained in recession throughout the year, had the greatest negative influence on the benchmark, down 16.6%. European markets also floundered, but fell only 7.4%. The United Kingdom became the market with the largest weighting in the EAFE Index (25.2%), replacing Japan (20.7%), which at one time dominated the Index with a 40% weighting. International emerging markets were one of the few bright spots during the fiscal year, advancing 1.3% as measured by the MSCI Emerging Markets Free Index. Korea, up 57.1%, led the way, benefiting from a strong cyclical recovery.

US fixed income markets exhibited strong progress during the fiscal year, supported by declining interest rates. The Federal Reserve Board lowered the Fed Funds rate an unprecedented eleven times during calendar 2001, five of which occurred in fiscal 2002's first half. This 4.75 percentage point

reduction to 1.75% bolstered bonds across the spectrum and spurred consumer spending for housing and autos. The broad market Lehman Brothers Aggregate Bond Index gained 8.6% during fiscal 2002. The Mortgage sector was the best performing sector, rising 9.0%, followed by the Government/Agency sector. The Credit (Corporate) sector was weakest, as poor fundamentals and high profile corporate accounting scandals shook investor confidence. Rating agencies scrambled to restore credibility, producing a sharp rise in “fallen angels”, those companies whose debt has been downgraded from investment grade to junk status. This included such names as WorldCom, Kmart, Global Crossing, Calpine and Xerox. This loss of confidence, coupled with a doubling of the corporate default rate to 8%, dragged down the US high yield market, which fell 3.6% for the year, as measured by the Lehman Brothers High Yield Bond Index. International bond markets generally followed the US pattern. Developed country bond markets showed strength, rising 15.6% for the year as measured by the JP Morgan Non-US Government Bond Index, while emerging market bonds finished the year down 5.2%. Political and economic turmoil in Latin America dampened yearly performance, as Argentina, Brazil and Mexico all suffered ratings downgrades.

Real Estate was another bright spot in the capital markets, particularly public real estate securities. Public market real estate securities (REITs) performed very well as investors were attracted by the high dividend yield, the relative transparency of earnings and the perceived defensive orientation of the sector. The NAREIT Equity Index rose a stellar 16.2% for the fiscal year. Private market real estate achieved more subdued earnings, as reduced economic fundamentals led to a rise in vacancies and subsequent downgrading of property valuations. Property markdowns reduced the 8.7% income stream to a 3.8% total return, as measured by the Russell Real Estate Open-End Funds Universe.

### **System**

The Police Officers Retirement System operates a sound and diversified investment program with disciplined asset re-balancing to achieve strategic long-term goals. That disciplined investment process has been effective in achieving a long-term record of consistent asset growth. The investment program’s cost effectiveness, as measured by the expense ratio, was 45 basis points (compared with 48 basis points in 2001) and included investment office administrative expenses, consultant fees, money manager fees and master custodian fees.

On a market value basis, the total net assets held in trust declined from \$605.4 million at June 30, 2001, to \$573.3 million at June 30, 2002. For the fiscal year 2002, investments provided a return of -5.1%, net of fees, reflecting negative market conditions throughout the year. While these investment returns were disappointing in an absolute sense, this return ranked in the top 35th percentile of all public plan sponsors. The System’s annualized rate of return, net of fees, was -0.3% over the last three years and 4.7% over the last 5 years. The Police Officers Retirement System’s annualized net return over the last five years has trailed the rate of 7.5%, the long-term return used for actuarial purposes. At year-end 2002, the System’s assets were allocated by manager mandate as follows: Domestic and international equities – 51.4%; Fixed income securities – 35.6%; and Real Estate REITs – 13.0%.

# INVESTMENT SECTION

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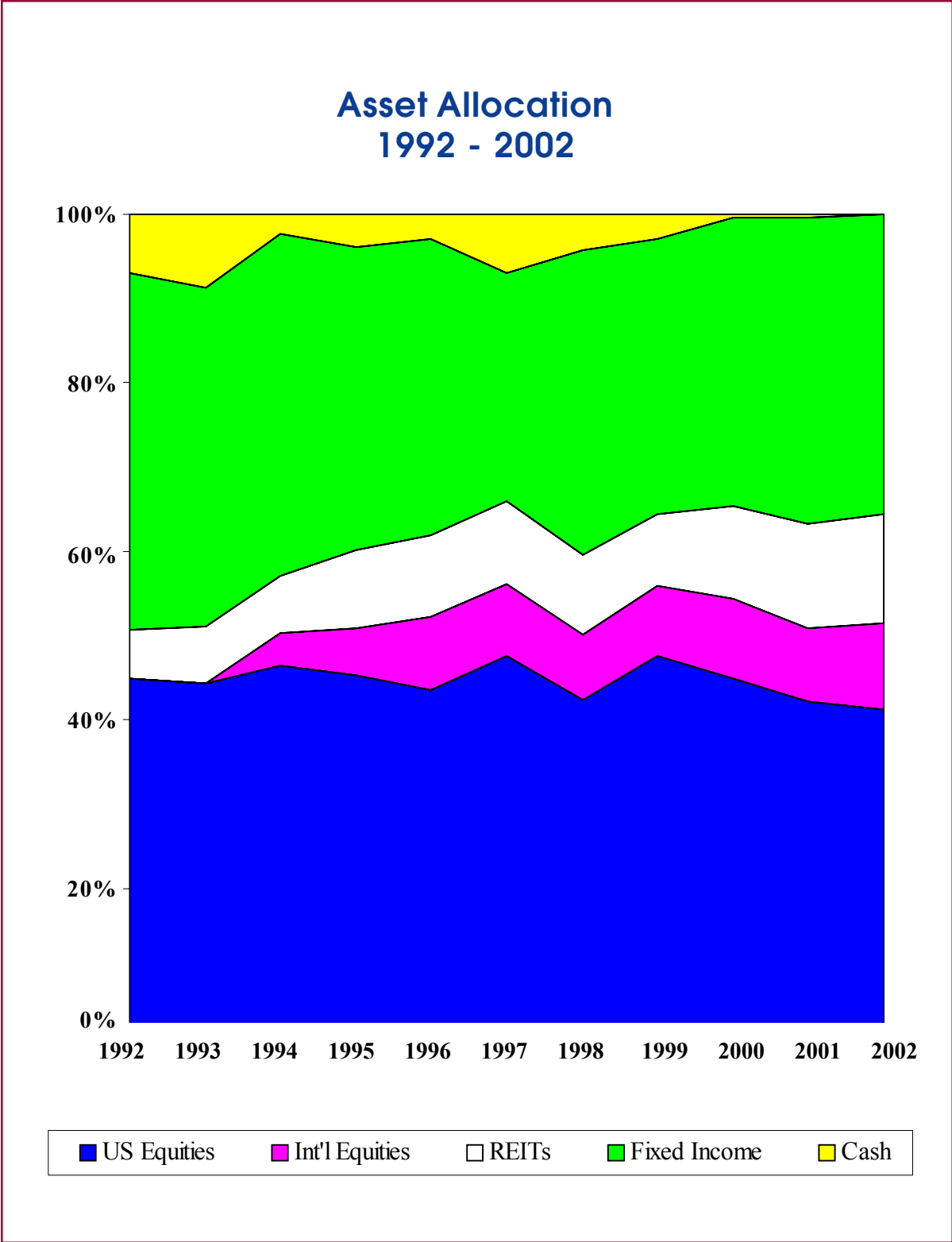
## ASSET ALLOCATION BY CATEGORY AND INVESTMENT MANAGER

June 30, 2002

| Asset Class<br>Manager        | Investment Style         | Total<br>Assets      | % of Total<br>Assets |
|-------------------------------|--------------------------|----------------------|----------------------|
| <b>Domestic Equities</b>      |                          |                      |                      |
| Robert E. Torray              | Active Large Cap Value   | \$70,360,269         | 12.3%                |
| Janus Capital                 | Active Large Cap Growth  | 24,010,870           | 4.2%                 |
| Oak Associates                | Active Large Cap Growth  | 17,016,219           | 3.0%                 |
| PIMCO Stocksplus LP *         | Enhanced Large Cap Index | 66,926,077           | 11.7%                |
| State Street Global Advisors  | Small Cap Equity Futures | 57,851,302           | 10.1%                |
| <b>International Equities</b> |                          |                      |                      |
| Capital Guardian              | Active Developed Markets | 58,404,601           | 10.2%                |
| <b>Real Estate</b>            |                          |                      |                      |
| Cohen & Steers                | Active Equity REITs      | 74,417,194           | 13.0%                |
| <b>Domestic Fixed Income</b>  |                          |                      |                      |
| Dodge & Cox                   | Active Domestic Core     | 100,186,650          | 17.5%                |
| <b>Global Fixed Income</b>    |                          |                      |                      |
| Credit Suisse                 | Active Global Core       | 103,453,049          | 18.0%                |
| <b>Short-term</b>             |                          |                      |                      |
| Mellon Bond Enhanced STIF     |                          |                      |                      |
| - Fund portion                | Active Short-term        | 185,684              | 0.0%                 |
| Cash Held by County Treasurer | Active Short Term        | 1,257,480            | 0.2%                 |
| <b>Net Assets**</b>           |                          | <b>\$574,069,395</b> | <b>100.0%</b>        |

\* Pooled Fund

\*\* Without deduction for accounts payable and accrued liabilities.



# INVESTMENT SECTION

## LIST OF LARGEST ASSETS HELD

June 30, 2002

### Fifteen Largest Equity Holdings

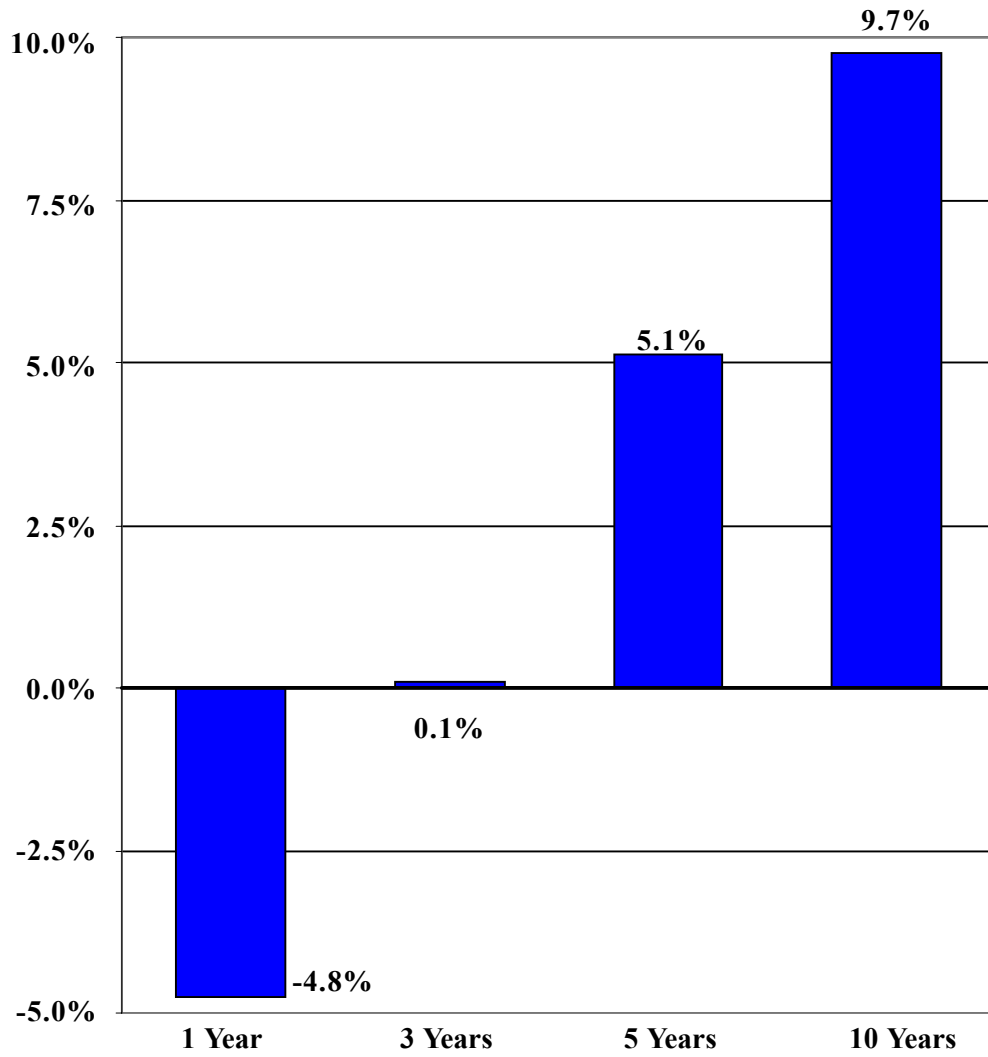
|                                    | Shares  | Market Value |
|------------------------------------|---------|--------------|
| Equity Office Properties Trust     | 186,138 | \$ 5,602,754 |
| Vornado Realty Trust               | 100,200 | \$ 4,629,240 |
| Boston Properties, Inc.            | 115,800 | \$ 4,626,210 |
| Prologis                           | 158,900 | \$ 4,131,400 |
| Boston Scientific Corp.            | 130,600 | \$ 3,829,192 |
| Arden Realty Group, Inc.           | 132,600 | \$ 3,772,470 |
| Avalon Bay Communities, Inc.       | 77,200  | \$ 3,605,240 |
| Tribune Co.                        | 82,200  | \$ 3,575,700 |
| Illinois Tool Works, Inc.          | 51,400  | \$ 3,510,620 |
| Kimberly Clark Corp.               | 56,450  | \$ 3,499,900 |
| United Technologies Corp.          | 46,700  | \$ 3,170,930 |
| American International Group, Inc. | 43,400  | \$ 2,961,182 |
| Simon Property Group, Inc.         | 79,000  | \$ 2,910,360 |
| Carr America Realty Corp.          | 94,100  | \$ 2,902,985 |
| Franklin Resources, Inc.           | 68,000  | \$ 2,899,520 |

### Fifteen Largest Fixed Income Holdings

|   | Interest Rate | Maturity Date     | Market Value |
|---|---------------|-------------------|--------------|
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool     | 8.000%        | July 1, 2032      | \$ 9,905,836 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool     | 7.000%        | July 1, 2032      | \$ 9,009,938 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool     | 7.500%        | July 1, 2032      | \$ 5,706,050 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool     | 6.500%        | July 1, 2032      | \$ 4,742,273 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage pool     | 6.000%        | July 1, 2032      | \$ 3,363,926 |
| Commitment to purchase FNMA 15 year Single Family TBA Mortgage pool     | 6.500%        | July 1, 2017      | \$ 2,021,601 |
| Commitment to purchase GNMA 30 year Single Family TBA Mortgage pool     | 7.000%        | July 15, 2032     | \$ 1,816,168 |
| Government National Mortgage Association (GNMA) Mortgage pool # 0559037 | 7.000%        | July 15, 2031     | \$ 1,552,228 |
| Government National Mortgage Association (GNMA) Mortgage pool #0508483  | 7.000%        | May 15, 2031      | \$ 1,524,241 |
| General Electric Capital Corp. Notes                                    | 6.000%        | June 15, 2012     | \$ 1,163,979 |
| United States Treasury Notes  | 4.875%        | February 15, 2012 | \$ 1,154,313 |
| United States Treasury Inflation Index Notes                            | 4.250%        | January 15, 2010  | \$ 1,154,050 |
| Ford Motor Credit Company   | 7.875%        | June 15, 2010     | \$ 1,049,178 |
| Federal National Mortgage Assn. Debentures                              | 6.125%        | March 15, 2012    | \$ 952,317   |
| Federal National Mortgage Assn. Mortgage Pool #0535101                  | 6.500%        | August 1, 2013    | \$ 906,160   |



### Compound Annual Return on Investment Portfolio



*Returns are gross of expenses*

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January 30, 2002

Fairfax County Police Officers  
Retirement System  
10680 Main Street, Suite 280  
Fairfax, Virginia 22030-3812

Dear Members of the Board:

At your request, we have conducted our annual actuarial valuation of the Fairfax County Police Officers Retirement System as of July 1, 2001. The results of the valuation are contained in the following report. The purpose of the valuation is discussed in the Board Summary.

### ***Funding Objective***

The funding objective of the System is to establish contribution rates which, over time, will remain level as a percent of payroll. In order to achieve this, a contribution rate has been determined which will provide for current cost (i.e., normal cost expressed as a level percent of payroll) plus level percent of payroll amortizations of each layer of the unfunded liability over a 15 year period. This funding objective is currently being realized.

### ***Assumptions***

The actuarial assumptions used in performing this valuation have been recommended by the actuary and adopted by the Board of Trustees based on Milliman's most recent review of the System's experience completed during Fiscal Year 2002. We believe the assumptions used, in the aggregate, reflect our best estimate of anticipated future experience of the plan. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from these assumptions, the true cost of the plan could vary from our results. Since the prior valuation there have been only minor changes to plan features which did not materially impact the overall contribution rate for the System.

The assumptions and methods used in performing this valuation meet the parameters set by Government Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contributions Plans*

### ***Reliance on Others***

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, Plan provisions, employee data, and financial information. Census data provided to us has been reviewed for reasonableness, and for consistency with prior year's data.

### ***Supporting Schedules***

We were responsible for all supporting schedules to be found in the Actuarial Section.

We were responsible for all years of the Schedule of Funding Progress, Schedule of Employer Contributions and Notes to Required Supplementary Information shown in the Financial Section.

### ***Compliance with Code of Virginia §51.1-800***

Code of Virginia §51.1-800 requires that the benefits provided to a retiree at age 65 from a local retirement system equal or exceed two-thirds of the allowance to which the employee would be entitled under the provisions of the Virginia Retirement System (VRS). The Board of Trustees of the VRS is to determine whether a local system satisfies this condition, taking into account differences in member contributions between the local system and the VRS.

Although there is no formal procedure for making this comparison, we have compared the least valuable rate under the Police Officers Plan to the most valuable accrual rate under the VRS, making adjustments for the fact that employee contributions are required in excess of the VRS 5% rate. The employer provided accrual rates do exceed two-thirds of the employer provided accrual rates under the VRS plan.

I certify that, to the best of my knowledge and understanding, the Fairfax County Police Officers Retirement System satisfies the requirements of the Code of Virginia §51.1-800.

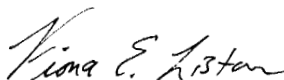
### ***Certification***

I, Fiona Liston, am a consulting actuary for Milliman, USA. I am also a member of the American Academy of Actuaries and meet their Qualification Standards to render the actuarial opinion contained herein.

I hereby certify that, to the best of my knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations and Interpretations of the American Academy of Actuaries.

Sincerely,

Milliman USA



Fiona E. Liston, F.S.A.  
Consulting Actuary

MILLIMAN USA

## SUMMARY OF VALUATION RESULTS

### Overview

This report presents the results of the July 1, 2001 actuarial valuation of the Fairfax County Police Officers Retirement System. The primary purposes of performing the annual actuarial valuation are to:

- determine the contributions to be paid by the County in fiscal year 2003;
- measure and disclose, as of the valuation date, the financial condition of the System;
- indicate trends in the financial progress of the System;
- provide specific information and documentation required by the Governmental Accounting Standards Board (GASB).

In this section of the report, we will present a summary of the above information in the form of:

- the actuary's comments;
- the prior year's experience of the System's assets, liabilities, contributions, and membership;
- a series of graphs which highlight key trends experienced by the System; and
- a summary of all the principal results from this year's valuation, compared to the prior year's, in a single table, intended for quick reference purposes.

### Actuary's Comments

As of the July 1, 2000 actuarial valuation the System had a total unfunded actuarial liability of \$18.0 million. As noted at that time, the key to maintaining the System's financial condition will be investment performance. Through this July 1, 2001 valuation date the System's assets returned (3.10)% which was considerably smaller than the 7.5% assumption. Thanks to stored gains from the prior decade's asset run-up, the impact on the actuarial, or smoothed, value of assets was minimized. The funding will reflect an asset return (on an actuarial basis) of 6.96%, which constitutes an investment loss for funding purposes of \$3.1 million. Combined with a liability gain of \$12.9 million, this results in an overall plan experience of a net gain of \$9.8 million.

This report reflects one plan change, that of offering a 1% ad hoc COLA, and several assumption changes as detailed in the Actuarial Assumptions and Methods section of this document. One additional change is that with the strengthening of mortality for disabled members, coupled with an analysis showing that increased service-connected-disabilities have not emerged since the rule was instated on light-duty disabilities, we have removed the contingency for partial-duty disability which has been a rate component since 1997.

The balance of this section presents summarized information regarding System trends, tables presenting the principal results and details on the current assumptions and methods, including changes made as a result of the experience study completed in 2001.

# ACTUARIAL SECTION

## SUMMARY OF VALUATION RESULTS

(Continued)

### Prior Year Experience

#### ASSETS

Plan assets for this System are measured on both a market value and an actuarial value basis. The actuarial value is established by phasing in investment experience outside of the actuarial assumptions at a rate of 33-1/3% per year. In periods of high return, this method significantly limits the amount of asset gain which is recognized, or conversely, the amount of asset loss recognized when returns are abnormally low. The advantage of this approach is that costs are more stable over time, however, the plan does not enjoy the full immediate impact of lower costs when assets increase dramatically. For the plan year ending June 30, 2001, the System earned (3.10)% on a market value basis, and 6.96% on an actuarial value basis. The market value return was significantly lower than the assumption of 7.5%, which produces a loss (when compared to the expected growth using the 7.5% assumption) to the System of \$66 million. However, on an actuarial basis, the return is slightly below the assumption and produces a much smaller loss. The specific changes between the prior year amounts and this year's are presented below.

| Item                                | Market Value         | Actuarial Value      |
|-------------------------------------|----------------------|----------------------|
| July 1, 2000 value                  | \$621,862,028        | \$568,941,559        |
| Employer Contributions              | 17,149,427           | 17,149,427           |
| Member Contributions                | 8,038,085            | 8,038,085            |
| Benefit payments and expenses       | (22,328,963)         | (22,328,963)         |
| Expected investment earnings (7.5%) | 46,746,848           | 42,777,813           |
| Expected value July 1, 2001         | 671,467,425          | 614,577,921          |
| Investment gain (loss)              | (66,080,530)         | (3,063,676)          |
| <b>July 1, 2001 value</b>           | <b>\$605,386,895</b> | <b>\$611,514,245</b> |

#### LIABILITIES

Three different measures of liabilities are calculated for this System: a total value of future obligations, an actuarial liability, and an accounting liability. Each type of liability is distinguished by the people ultimately using the figures, and the purpose for which they are using them.

Total future obligations liability is used for analyzing the financial outlook of the System. This represents the amount of money needed today to fully pay off all future benefits and expenses of the System, assuming participants continue to accrue benefits.

Actuarial liability is used for funding calculations and GASB disclosures. Taking the total future obligations and subtracting the present value of future member contributions and future employer normal costs under an acceptable actuarial funding method calculate this liability. The entry age normal funding method is used.

Accrued liability is used for communicating the current level of liabilities. This liability represents the total amount of money needed today to fully pay off the current accrued obligations of the System, assuming no future accruals of benefits. This liability is required for accounting purposes under Statement No. 35 of the Financial Accounting Standards Board.

Only the actuarial liability is analyzed in terms of a gain or loss experience, which then is used to determine the System's funding and GASB disclosures. During the plan year ending in 2001, the actuarial liabilities experienced a gain of \$12.9 million, which is 2.1% of the total actuarial liability being measured. The liability gain was due primarily to average pay increases being less than the actuarial assumption. We will continue to monitor gains and losses to ensure there is no significant pattern.

## SUMMARY OF VALUATION RESULTS

(Continued)

| Liabilities  | Total Value   | Actuarial     | Accounting    |
|--------------|---------------|---------------|---------------|
| July 1, 2000 | \$777,272,963 | \$586,938,958 | \$488,726,757 |
| July 1, 2001 | \$851,315,006 | \$617,510,212 | \$521,796,639 |

### UNFUNDED LIABILITIES AND FUNDING RATIOS

The difference between assets and liabilities is the unfunded liability. This is measured in two ways: unfunded actuarial liabilities, which compare the actuarial liabilities to the actuarial asset value, and unfunded accrued benefits, which compare the accounting liability to the market value of assets. These amounts are shown for July 1, 2000 and July 1, 2001, as well as the corresponding funding ratios for each (assets divided by liabilities).

| Unfunded Liabilities                | Actuarial    | Accounting      |
|-------------------------------------|--------------|-----------------|
| Net (Surplus) Unfunded July 1, 2000 | \$17,997,399 | \$(133,135,271) |
| Funded Ratio                        | 96.9%        | 127.2%          |
| Net (Surplus) Unfunded July 1, 2001 | \$5,995,967  | \$(83,590,256)  |
| Funded Ratio                        | 99.0%        | 116.0%          |

### CONTRIBUTIONS

This summary presents the County contribution rate and compares it to the rate developed in the July 1, 2000 actuarial valuation.

|  |         |
|--|---------|
| Rate as a percent of covered payroll                   | 21.79%  |
| July 1, 2000 valuation; FY 2002 contribution rate      | 21.79%  |
| Increase in UAL due to Ad-Hoc COLA                     | 0.47%   |
| Increase due to investment loss (gain)                 | 0.40%   |
| Decrease due to liability losses (gains)               | (1.83%) |
| Decrease due to actuarial assumption changes           | (0.86%) |
| July 1, 2001 valuation rate; FY 2003 contribution rate | 19.97%  |

### MEMBERSHIP

There are three types of plan participants, current active workers, workers who have terminated employment who retain a right to a deferred vested benefit, and retirees and beneficiaries receiving benefits. Details on membership statistics are presented in the actuarial assumptions and methods section of this summary. Below are totals for each group as of July 1, 2001 and 2000.

There was an overall increase in participation during the year.

|   | 7/1/2001 | 7/1/2000 | Change |
|---|----------|----------|--------|
| Active participants                           | 1,169    | 1,115    | +4.8%  |
| Terminated vested participants                | 4        | 3        | +33.3% |
| Retirees and beneficiaries receiving benefits | 631      | 583      | +7.7%  |
| Total participants                            | 1,804    | 1,701    | +5.9%  |

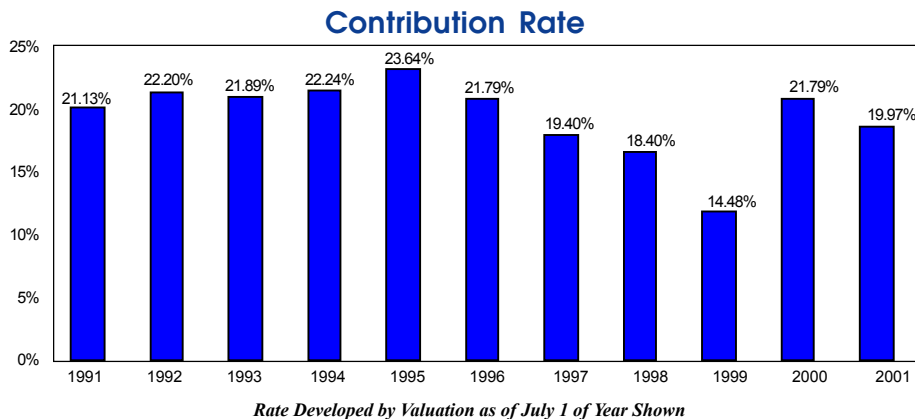
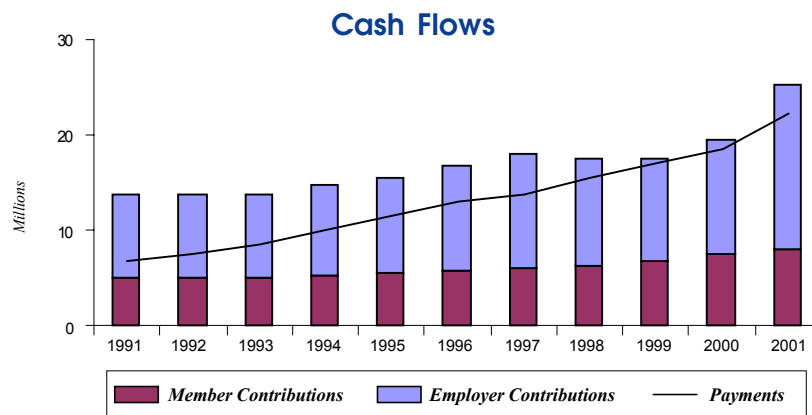
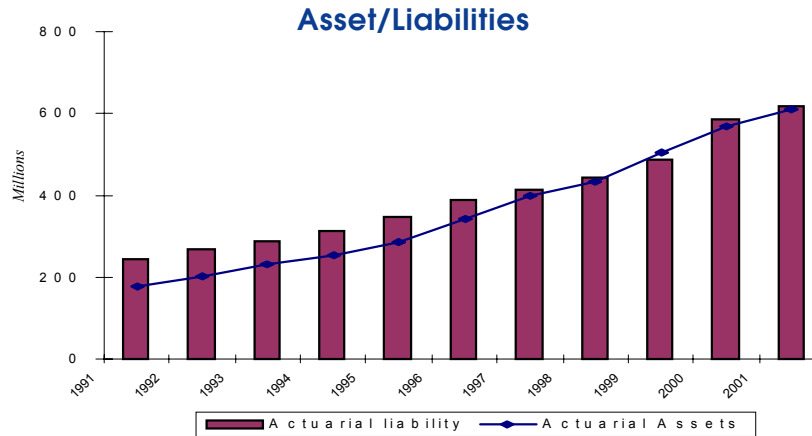
# ACTUARIAL SECTION

## SUMMARY OF VALUATION RESULTS

(Continued)

### Trends

To truly understand the financial condition of the pension plan, a review of the prior year's funded status is helpful in seeing the big picture and general trend evolving. Below are three charts which present trend information from 1991 through the end of 2001.





## SUMMARY OF VALUATION RESULTS

(Continued)

### SUMMARY OF PRINCIPAL RESULTS

This table compares the principal results from the 2001 and 2000 valuations. The 2000 liabilities do not reflect any additional amounts for the potential impact of the policy change on partial duty positions.

| <b>Participant Data</b>                                | <b><u>July 1, 2001</u></b> | <b><u>July 1, 2000</u></b> | <b><u>Percent Change</u></b> |
|--|----------------------------|----------------------------|------------------------------|
| Number of:   |                            |                            |                              |
| Active Members   | 1,169                      | 1,115                      | + 4.8%                       |
| Retired Members and Beneficiaries                      | 631                        | 583                        | +8.2%                        |
| Vested Former Members                                  | 4                          | 3                          | +33.3%                       |
| Annual Salaries of Active Members                      | \$63,997,646               | \$60,774,712               | + 5.3%                       |
| Annual Benefits for Retired Members, and Beneficiaries | \$23,364,401               | \$20,675,727               | +13.0%                       |

| <b>Assets and Liabilities</b> | <b><u>July 1, 2001</u></b> | <b><u>July 1, 2000</u></b> | <b><u>Percent Change</u></b> |
|-------------------------------|----------------------------|----------------------------|------------------------------|
| Total Actuarial Liability     | \$ 617,510,212             | \$ 586,938,958             | +5.2%                        |
| Assets for Valuation Purposes | \$ 611,514,245             | \$568,941,559              | + 7.5%                       |
| Unfunded Actuarial Liability  | \$ 5,995,967               | \$ 17,997,399              | -66.7%                       |
| Funded Ratio                  | 99.0%                      | 96.9%                      | N/A                          |

| <b>Contributions</b> <i>(as percent of payroll)</i>     | <b><u>Fiscal Year 2003</u></b> | <b><u>Fiscal year 2002</u></b> |
|---|--------------------------------|--------------------------------|
| Employer Normal Cost Rate                               | 17.00%                         | 14.85%                         |
| Unfunded Actuarial Liability Contribution               | 2.67                           | 4.11                           |
| Administrative Expenses                                 | 0.30                           | 0.30                           |
| Total Employer Contribution                             | 19.97%                         | 19.26%                         |
| Contingency for Policy Change in Partial Duty Positions | N/A                            | 2.53%                          |
| Total Employer Contribution                             | 19.97%                         | 21.79%                         |

# ACTUARIAL SECTION

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## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

### Funding Method

The funding method used for this valuation is the “aggregate accrual modification of the entry age normal cost method.” Under this method, the employer contribution has three components--the normal cost, the payment toward the unfunded actuarial liability, and the expense rate.

The normal cost is a level percent of pay cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The level percent developed is called the normal cost rate and the product of that rate and payroll is the normal cost.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The expense rate is added to cover the System’s administrative expenses.

### Actuarial Value of Assets

For purposes of determining the County contribution to the plan we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long term nature of the actuarial valuation process.

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumed rate. This expected value is compared to the market value and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

### Changes Since Last Valuation

There were no changes to the funding method or determination of the actuarial value of assets.

## ACTUARIAL ASSUMPTIONS AND METHODS

### Long Term Assumptions Used to Determine System Costs and Liabilities

#### Demographic Assumptions

##### Mortality

#### 1994 Uninsured Pensioners Mortality Table Annual Deaths Per 1,000 Members\*

| Age | Male<br>Deaths | Female<br>Deaths | Age | Male<br>Deaths | Female<br>Deaths |
|-----|----------------|------------------|-----|----------------|------------------|
| 20  | 1              | 0                | 65  | 16             | 9                |
| 25  | 1              | 0                | 70  | 26             | 15               |
| 30  | 1              | 0                | 75  | 40             | 24               |
| 35  | 1              | 1                | 80  | 67             | 42               |
| 40  | 1              | 1                | 85  | 105            | 73               |
| 45  | 2              | 1                | 90  | 164            | 125              |
| 50  | 3              | 2                | 95  | 251            | 200              |
| 55  | 5              | 2                | 100 | 341            | 297              |
| 60  | 9              | 5                | 105 | 441            | 415              |

\*20% of deaths are assumed to be service-connected.

#### Termination of Employment : (Prior to Normal Retirement Eligibility)

##### Annual Terminations per 1,000 Members

| Years of Service | Terminations |
|------------------|--------------|
| 0                | 100          |
| 1                | 75           |
| 2                | 50           |
| 3                | 50           |
| 4                | 30           |
| 5 or more        | 15           |

It is assumed that members who terminate before normal or early retirement age elect to receive a refund of contributions instead of vested benefits.

# ACTUARIAL SECTION

## ACTUARIAL ASSUMPTIONS AND METHODS

(Continued)

### Disability

| Age | Annual Disabilities<br>per 1,000<br>Members* |  | Age | Annual Deaths Per<br>1,000 Disabled Members<br>1994 Uninsured Pensioners<br>Mortality Table +5 |        |
|-----|--|--|-----|--|--------|
|     | Male and Female                              |  |     | Male   | Female |
| 20  | 2  |  | 40  | 2  | 1      |
| 25  | 2  |  | 45  | 3  | 2      |
| 30  | 2  |  | 50  | 5  | 2      |
| 35  | 2  |  | 55  | 9  | 5      |
| 40  | 2  |  | 60  | 16   | 9      |
| 45  | 4  |  | 65  | 26   | 15     |
| 50  | 6  |  | 70  | 40   | 24     |
| 55  | 6  |  | 75  | 67   | 42     |
| 60  | 6  |  | 80  | 105  | 73     |

\*70% of disabilities are assumed to be service-connected, and are assumed to receive Workers Compensation benefits.

### Retirement

| Years of<br>Service | Probability of Retirement: |                   |
|---------------------|----------------------------|-------------------|
|                     | Hired pre-7/1/81           | Hired post-7/1/81 |
| 20                  | 25%                        | N/A               |
| 21                  | 25%                        | N/A               |
| 22                  | 25%                        | N/A               |
| 23                  | 25%                        | N/A               |
| 24                  | 25%                        | N/A               |
| 25                  | 25%                        | 25%               |
| 26                  | 25%                        | 25%               |
| 27                  | 25%                        | 25%               |
| 28                  | 25%                        | 25%               |
| 29                  | 25%                        | 25%               |
| 30                  | 100%                       | 100%              |

## ACTUARIAL ASSUMPTIONS AND METHODS

(Continued)

### Merit/Seniority Salary Increase (In addition to across-the-board increase)

| Years of Service | Merit/Seniority Increase |
|------------------|--------------------------|
| 0                | 6.0%                     |
| 5                | 6.0%                     |
| 10               | 3.1%                     |
| 15               | 2.9%                     |
| 20               | 1.2%                     |
| 25               | 0.9%                     |
| 30               | 0.0%                     |

### Family Composition

For purposes of valuing the pre-retirement death benefit, an assumption concerning how many employees are married is needed. The assumption used in this valuation is that 80% of employees are married at death while active and that the female spouse is 5 years younger than the male spouse. In addition, each married employee is assumed to have two children, 22 and 24 years younger than the employee.

### Sick Leave Credit

It is assumed that retirees, deferred vested terminations, and deceased members receive an additional 3% of service credit due to sick leave.

### Economic Assumptions

**Investment Return:** 7.50% compounded per annum.

**Cost-of-Living Benefit Increases:** 3.00% compounded per annum.  
(Based on assumed CPI increase of 4%.)

**Across-the-Board Increase in County Salaries:** 4.00% compounded per annum.

**Total Payroll Increase (for amortization):** 4.00% compounded per annum.

**Administrative Expenses:** 0.30% of payroll.

# ACTUARIAL SECTION

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## ACTUARIAL ASSUMPTIONS AND METHODS

(Continued)

### Changes Since Last Valuation

The demographic assumptions for disability, disabled life mortality and merit/seniority salary increase were changed from those used in the July 1, 2000 valuation. These are the assumptions used in the July 1, 2000 valuation.

#### Disability (Remove partial duty contingency)

| Age | Annual Disability<br>Per 1,000 members for<br>Partial-duty contingency * |
|-----|--|
| 25  | 5  |
| 30  | 5  |
| 35  | 5  |
| 40  | 6  |
| 45  | 11   |
| 50  | 17   |
| 55  | 17   |
| 60  | 17   |

\* Assumes that 3 partial duty officers per year are expected to receive benefits.

#### Disabled Life Mortality

| Age | Annual Deaths Per<br>1,000 Disabled Members<br>Male and Female |
|-----|--|
| 45  | 43   |
| 50  | 48   |
| 55  | 53   |
| 60  | 58   |
| 65  | 64   |
| 70  | 73   |
| 75  | 89   |
| 80  | 107  |

#### Merit/Seniority Salary Increase (in addition to across-the-board increase)

| Years of Service | Merit/Seniority Increase |
|------------------|--------------------------|
| 0                | 4.0%                     |
| 5                | 4.0%                     |
| 10               | 1.7%                     |
| 15               | 1.4%                     |
| 20               | 1.1%                     |
| 25               | 0.8%                     |
| 30               | 0.5%                     |

## ANALYSIS OF FINANCIAL EXPERIENCE

### Gain and Loss in Accrued Liability During Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience

| Type of Activity  | <i>Gain (or Loss) for Year ending June 30,</i> |                      |                        |                      |
|---|--|----------------------|------------------------|----------------------|
|   | 1998   | 1999                 | 2000                   | 2001                 |
| Investment Income                                       | \$ 2,262,366                                   | \$36,306,654         | \$ 26,460,234          | \$(3,063,676)        |
| Combined Liability Experience                           | 5,167,343                                      | (9,545,346)          | 90,399                 | 12,919,293           |
| Gain (or Loss) During Year<br>from Financial Experience | \$7,429,709                                    | \$26,761,308         | \$26,550,573           | \$9,855,617          |
| Non-Recurring Items                                     | (2,195,961)                                    | (2,668,187)          | (62,239,875)           | 1,060,013            |
| Composite Gain (or Loss)<br>During Year                 | <b>\$ 5,223,748</b>                            | <b>\$ 24,093,121</b> | <b>\$ (35,689,302)</b> | <b>\$ 10,915,630</b> |

## SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

| Year<br>Ended<br>June 30 | Added to Rolls |                     | Removed From Rolls |                     | On Rolls @ Yr. End |                     | % Increase<br>Allowance | Average<br>Allowance |
|--------------------------|----------------|---------------------|--------------------|---------------------|--------------------|---------------------|-------------------------|----------------------|
|                          | No.            | Annual<br>Allowance | No.                | Annual<br>Allowance | No.                | Annual<br>Allowance |                         |                      |
| 1996                     | 21             | \$ 817,684          | 7                  | \$ 138,637          | 453                | \$ 12,704,286       | 5.65%                   | \$ 28,045            |
| 1997                     | 39             | 1,309,515           | 6                  | 132,576             | 486                | 13,881,225          | 9.26%                   | 28,562               |
| 1998                     | 52             | 1,942,183           | 6                  | 98,211              | 532                | 15,725,197          | 13.28%                  | 29,559               |
| 1999                     | 30             | 1,471,335           | 2                  | 47,133              | 560                | 17,149,399          | 9.06%                   | 30,624               |
| 2000                     | 35             | 3,754,716           | 9                  | 205,494             | 586                | 20,698,621          | 20.70%                  | 35,322               |
| 2001                     | 57             | 2,970,121           | 12                 | 304,340             | 631                | 23,364,401          | 12.88%                  | 37,028               |

## SOLVENCY TEST

### Aggregate Accrued Liabilities For

| Valuation<br>Date | (1)                               | (2)  | (3)  | Reported<br>Assets | Portion of Accrued<br>Liabilities Covered<br>by Reported Assets |      |      |
|-------------------|-----------------------------------|--|--|--------------------|---|------|------|
|                   | Active<br>Member<br>Contributions | Retirees<br>Vested Terms,<br>Beneficiaries | Active Members<br>(Employer<br>Financed Portion) |                    | (1)   | (2)  | (3)  |
| 7/1/96            | \$ 44,117,091                     | \$ 202,684,707                             | \$ 142,115,315                                   | \$ 343,288,369     | 100%  | 100% | 68%  |
| 7/1/97            | 47,116,095                        | 220,184,346                                | 147,234,163                                      | 399,772,825        | 100%  | 100% | 90%  |
| 7/1/98            | 48,387,340                        | 249,724,374                                | 144,615,551                                      | 434,259,212        | 100%  | 100% | 94%  |
| 7/1/99            | 51,421,149                        | 270,112,380                                | 166,417,518                                      | 503,649,251        | 100%  | 100% | 100% |
| 7/1/00            | 55,487,975                        | 323,515,804                                | 207,935,179                                      | 568,941,559        | 100%  | 100% | 91%  |
| 7/1/01            | 54,082,616                        | 359,197,834                                | 204,229,762                                      | 611,514,245        | 100%  | 100% | 97%  |

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## SCHEDULE OF ADDITIONS BY SOURCE

| Fiscal Year | Plan Member Contributions | Employer Contributions | Employer Contributions % of Covered Payroll | Net Investment Income (loss) | Total Revenues |
|-------------|---------------------------|------------------------|---|------------------------------|----------------|
| 1997        | \$ 6,030,834              | \$ 11,892,690          | 23.64%                                      | \$ 79,291,566                | \$ 97,215,090  |
| 1998        | 6,235,043                 | 11,321,194             | 21.79%                                      | 78,218,263                   | 95,774,500     |
| 1999        | 6,861,605                 | 10,685,734             | 19.40%                                      | 42,983,245                   | 60,530,584     |
| 2000        | 7,521,134                 | 11,950,073             | 18.40%                                      | 44,579,345                   | 64,050,552     |
| 2001        | 8,038,085                 | 17,149,427             | 25.69%                                      | (19,333,682)                 | 5,853,830      |
| 2002        | 8,335,903                 | 15,077,920             | 21.79%                                      | (30,661,679)                 | (7,247,856)    |

## SCHEDULE OF DEDUCTIONS BY TYPE

| Fiscal Year | Benefit Payments | Refunds of Contributions | Administrative Expenses | Total Expenses |
|-------------|------------------|--------------------------|-------------------------|----------------|
| 1997        | \$ 13,252,630    | \$ 268,755               | \$ 140,522              | \$ 13,661,907  |
| 1998        | 14,765,658       | 476,784                  | 153,738                 | 15,396,180     |
| 1999        | 16,428,235       | 464,747                  | 158,989                 | 17,051,971     |
| 2000        | 17,724,731       | 530,622                  | 195,729                 | 18,451,082     |
| 2001        | 21,722,991       | 388,850                  | 217,122                 | 22,328,963     |
| 2002        | 24,024,119       | 599,127                  | 199,138                 | 24,822,384     |

# STATISTICAL SECTION

## SCHEDULE OF BENEFIT PAYMENTS BY TYPE

| Fiscal Year Ended June 30 | Annuity       | Service-Connected Disability | Ordinary Disability | Survivor   | Total         |
|---------------------------|---------------|------------------------------|---------------------|------------|---------------|
| 1997                      | \$ 11,610,814 | \$ 815,848                   | \$ 98,785           | \$ 727,183 | \$ 13,252,630 |
| 1998                      | 12,939,235    | 906,259                      | 100,147             | 820,017    | 14,765,658    |
| 1999                      | 14,435,055    | 1,030,037                    | 102,885             | 860,258    | 16,428,235    |
| 2000                      | 15,660,231    | 1,096,252                    | 106,195             | 862,053    | 17,724,731    |
| 2001                      | 19,534,126    | 1,068,524                    | 136,889             | 983,452    | 21,722,991    |
| 2002                      | 21,668,153    | 995,832                      | 150,434             | 1,209,700  | 24,024,119    |

## SCHEDULE OF RETIRED MEMBERS BY BENEFIT TYPE

| Fiscal Year Ended June 30 | Annuity | Service-Connected Disability | Ordinary Disability | Survivor | Total |
|---------------------------|---------|------------------------------|---------------------|----------|-------|
| 1997                      | 388     | 35                           | 8                   | 55       | 486   |
| 1998                      | 431     | 38                           | 8                   | 55       | 532   |
| 1999                      | 459     | 38                           | 8                   | 55       | 560   |
| 2000                      | 481     | 41                           | 8                   | 56       | 586   |
| 2001                      | 522     | 40                           | 9                   | 63       | 634   |
| 2002                      | 545     | 33                           | 9                   | 70       | 657   |

## SCHEDULE OF AVERAGE MONTHLY BENEFIT AMOUNTS

| Fiscal Year Ended June 30 | Annuity  | Service-Connected Disability | Ordinary Disability | Survivor | Average  |
|---------------------------|----------|------------------------------|---------------------|----------|----------|
| 1997                      | \$ 2,603 | \$ 2,002                     | \$ 1,049            | \$ 1,243 | \$ 2,380 |
| 1998                      | 2,671    | 2,121                        | 1,068               | 1,276    | 2,463    |
| 1999                      | 2,753    | 2,362                        | 1,095               | 1,310    | 2,563    |
| 2000                      | 3,214    | 2,362                        | 1,136               | 1,398    | 2,955    |
| 2001                      | 3,360    | 2,432                        | 1,397               | 1,465    | 3,088    |
| 2002                      | 3,456    | 2,449                        | 1,430               | 1,482    | 3,324    |