

**SANTA BARBARA COUNTY  
EMPLOYEES' RETIREMENT SYSTEM**

**REPORT ON THE  
ACTUARIAL VALUATION  
AS OF DECEMBER 31, 1995**

**BUCK  
CONSULTANTS**

**BUCK  
CONSULTANTS**  
100 California Street Suite 1300  
San Francisco, California 94111

April 10, 1996

Board of Retirement  
Santa Barbara County  
Employees' Retirement System  
County Administration Building, Room 301  
105 East Anapamu Street  
Santa Barbara, California 93101

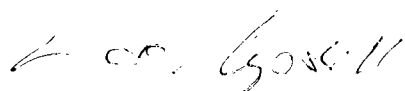
Members of the Board:

We are pleased to present our report on the actuarial valuation of your retirement system as of December 31, 1995.

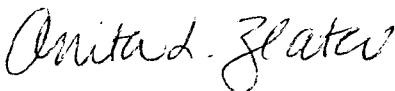
We hereby certify that the valuation was performed in accordance with generally accepted actuarial principles and practices.

We look forward to discussing this report with the Board and wish to express our appreciation for the invaluable cooperation extended to us by the Retirement Staff during the course of this study.

Respectfully submitted,



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Principal and Consulting Actuary



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## **SECTION I: EXECUTIVE SUMMARY**

We were commissioned by the Board to perform an actuarial valuation of the retirement system as of December 31, 1995, using the statistical information available for the active, inactive and retired membership, and the financial statements as of December 31, 1995.

The results presented herein are based upon the unaudited data supplied by the Retirement Office and the benefits for General Plan 1, 2, and 3, Safety and Probation Plan 1 and 3, and Air Pollution Control District (APCD) Plan 1 members under Sections 31676.1, 31486.4, 31664, and 31676.15 of the County Employees Retirement Law of 1937.

A brief summary of the results of our valuation is presented below. More comprehensive information on each topic is presented in the relevant section of the report.

### **Section II - Statistical Highlights**

Total System membership increased from 5,787 to 5,899. Active membership increased by 0.9% while total covered payroll increased by 6.6%. These numbers include 79 active Air Pollution Control District members.

The number of retired members went up by 4.2% and the retired pension roll increased by 9.4%.

### **Section III - Summary of Actuarial Assumptions**

#### *Noneconomic Assumptions*

The biennial experience study was conducted at the time of the December 31, 1994 valuation. At that time, we analyzed the data for the two previous years regarding service retirements, deaths, disabilities and terminations of employment, and compared the number of actual terminations to the incidence expected using the current actuarial assumptions. When the results differed materially, we

modified the assumptions. We will continue to use these actuarial assumptions until the next experience analysis.

#### Economic Assumptions

In order to ensure that the same inflationary expectations are consistently included in all of the economic assumptions, we have used a building block approach in developing the economic assumptions. That is, we assumed that the investment return earned over the long term is comprised of two components: inflation and real rate of return.

In addition, we have assumed that future salary increases are comprised of the following components: inflation and merit and longevity increases.

In our report we recommend that the current 4.75% long term level of inflation be continued. In addition, based upon future anticipated returns on the system's current and targeted asset mixes, we also recommend that the 3.25% future real rate of return be continued. In combination, these assumptions equate to an 8.00% long-term investment return assumption.

We incorporated the same inflation assumption, 4.75%, into the recommended long term salary increase assumption.

#### **Section IV - Contribution Rates**

A comparison of employer and employee contribution rates between the rates that are currently being paid ("Phase-In Step 1"), the rates that were expected to be paid this year ("Phase-In Step 2") and the recommended rates developed for this valuation is shown on the following page utilizing the same actuarial assumptions as those used to conduct the December 31, 1994 valuation. All contribution rates and corresponding annual amounts shown on the following page exclude the amount payable by the Air Pollution Control District. Their contribution rate is shown in Section IV.

|                           | EMPLOYER*    |                 | EMPLOYEE*    |                 |
|---------------------------|--------------|-----------------|--------------|-----------------|
|                           | % of Payroll | Annual Amount** | % of Payroll | Annual Amount** |
| <b>Current Rates</b>      |              |                 |              |                 |
| Phase-In Step 1           | 16.06 %      | \$ 24,101,000   | 3.73 %       | \$ 5,419,000    |
| Phase-In Step 2           | 17.53 %      | \$ 26,313,000   | 3.73 %       | \$ 5,419,000    |
| <b>Recalculated Rates</b> | 18.43 %      | \$ 27,664,000   | 3.73 %       | \$ 5,419,000    |

\* Excludes the Air Pollution Control District contributions.

\*\* Based on December 31, 1995 payroll. The employee contribution rates and annual amounts exclude General Plan 2 payroll.

The overall increase in employer contribution rates was primarily attributable to unfavorable plan experience.

## Section V - Assets and Liabilities

### Actuarial Value of Assets

An actuarial value of assets is used for purposes of determining employer contribution rates. As of December 31, 1995 the net actuarial value of assets was \$608,667,000. The net value of assets was \$586,697,000 at book value and \$708,887,000 at market value. The return on investments for the fiscal year ending June 30, 1995, net of expenses, was 5.9% on a book value basis and 17.7% on a market value basis. For the six month period ending December 31, 1995, the return on investments, net of expenses, was 8.8% on a book value basis and 12.1% on a market value basis. The above assets and rates of return include the assets allocated on behalf of the Air Pollution Control District.

### Actuarial Balance Sheet

The actuarial balance sheet compares the present value of all future benefits anticipated to be paid for the current membership with the sources of funds to be used to provide these benefits. It illustrates that if recommended contribution levels made in the future prove out over time, current assets plus

future employer and member contributions will be adequate to meet future benefit payments for the current membership.

Funding Ratio - GASB 5

In order to judge the funding progress of the System a comparison was made of the ratio of the System's liabilities for benefits earned to date to the current value of assets. For this purpose, liabilities were calculated in accordance with Governmental Accounting Standards Board Statement No. 5 (GASB 5). GASB 5 liabilities include all liabilities for current retired and inactive members including future automatic cost-of-living increases. For current active members, the liability reflects the projected retirement benefits earned through the valuation date.

|                                      | December 31, 1994 * | December 31, 1995 |
|--------------------------------------|---------------------|-------------------|
| 1. GASB 5 Pension Benefit Obligation | \$586,293,000       | \$636,834,000     |
| 2. Net Value of Assets At:           |                     |                   |
| a. Book                              | \$516,671,000       | \$586,697,000     |
| b. Market                            | \$544,797,000       | \$708,887,000     |
| 3. Funding Ratio At:                 |                     |                   |
| a. Book                              | 88%                 | 92%               |
| b. Market                            | 93%                 | 111%              |

\* All December 31, 1994 figures exclude APCD members.

The increase in the funding ratio at book value is primarily attributable to the higher than expected earnings on book value of assets for the six month period ending December 31, 1995.

**Section VI - Appendix**

A summary of the major provisions of the Plan is included in the Appendix, together with detailed information on the actuarial assumptions, demographic information and plan assets. General, Safety, Probation, and APCD member contribution rates, by entry age, are shown in Schedule 5.

**SECTION II: STATISTICAL HIGHLIGHTS**

Our December 31, 1995 actuarial valuation of your System was based on the following data. For comparison, we also show a summary of the December 31, 1994 statistical information. Please note the total active data for both years includes the 79 active members of the Air Pollution Control District.

| <b>SUMMARY OF INACTIVE MEMBERSHIP</b> |                          |                          |  |
|---------------------------------------|--------------------------|--------------------------|--|
|                                       | <b>December 31, 1994</b> | <b>December 31, 1995</b> | <b>Percentage Change During the Period</b> |
| <b>TOTAL</b>                          |                          |                          |  |
| Number*                               | 377                      | 387                      | 2.7 %                                      |

\* Excludes pending withdrawals

| <b>SUMMARY OF RETIRED MEMBERSHIP</b> |                          |                          |  |
|--------------------------------------|--------------------------|--------------------------|--|
|                                      | <b>December 31, 1994</b> | <b>December 31, 1995</b> | <b>Percentage Change During the Period</b> |
| <b>TOTAL</b>                         |                          |                          |  |
| Number                               | 1,654                    | 1,724                    | 4.2 %                                      |
| Basic Annual Allowance               | \$ 14,526,000            | \$ 15,792,000            | 8.7 %                                      |
| Average Basic Monthly Allowance      | \$ 732                   | \$ 763                   | 4.2 %                                      |
| Total Annual Allowance               | \$ 18,711,000            | \$ 20,475,000            | 9.4 %                                      |
| Average Total Monthly Allowance      | \$ 943                   | \$ 990                   | 5.0 %                                      |

| <b>SUMMARY OF ACTIVE MEMBERSHIP</b> |                          |                          |  |
|-------------------------------------|--------------------------|--------------------------|--|
|                                     | <b>December 31, 1994</b> | <b>December 31, 1995</b> | <b>Percentage Change During the Period</b> |
| <b>TOTAL</b>                        |                          |                          |  |
| Number                              | 3,756                    | 3,788                    | 0.9 %                                      |
| Annual Payroll*                     | \$ 144,524,000           | \$ 154,120,000           | 6.6 %                                      |
| Average Monthly Salary              | \$ 3,207                 | \$ 3,391                 | 5.7 %                                      |
| Average Age                         | 42.33                    | 42.66                    | 0.8 %                                      |
| Average Service                     | 8.67                     | 9.03                     | 4.2 %                                      |

\* Represents the annualization of active members' pay rates on December 31.



| SUMMARY OF ACTIVE MEMBERSHIP |                   |            |                   |            |  |
|------------------------------|-------------------|------------|-------------------|------------|--|
|                              | December 31, 1994 |            | December 31, 1995 |            | Percentage Change<br>During the Period |
| <b>GENERAL PLAN 1</b>        |                   |            |                   |            |  |
| Number                       |                   | 2,661      |                   | 2,490      | (6.4) %                                |
| Annual Payroll*              | \$                | 97,067,000 | \$                | 97,825,000 | 0.8 %                                  |
| Average Monthly Salary       | \$                | 3,040      | \$                | 3,274      | 7.7 %                                  |
| Average Age                  |                   | 42.85      |                   | 43.60      | 1.8 %                                  |
| Average Service              |                   | 7.96       |                   | 8.89       | 11.7 %                                 |
| <b>GENERAL PLAN 2</b>        |                   |            |                   |            |  |
| Number                       |                   | 126        |                   | 130        | 3.2 %                                  |
| Annual Payroll*              | \$                | 4,427,000  | \$                | 4,864,000  | 9.9 %                                  |
| Average Monthly Salary       | \$                | 2,928      | \$                | 3,118      | 6.5 %                                  |
| Average Age                  |                   | 43.70      |                   | 44.26      | 1.3 %                                  |
| Average Service              |                   | 8.71       |                   | 8.71       | 0.0 %                                  |
| <b>GENERAL PLAN 3</b>        |                   |            |                   |            |  |
| Number                       |                   | 92         |                   | 285        | 209.8 %                                |
| Annual Payroll*              | \$                | 2,553,000  | \$                | 8,960,000  | 251.0 %                                |
| Average Monthly Salary       | \$                | 2,313      | \$                | 2,620      | 13.3 %                                 |
| Average Age                  |                   | 35.74      |                   | 36.88      | 3.2 %                                  |
| Average Service              |                   | 0.00       |                   | 0.70       | N/A                                    |
| <b>SAFETY PLAN 1</b>         |                   |            |                   |            |  |
| Number                       |                   | 633        |                   | 610        | (3.6) %                                |
| Annual Payroll*              | \$                | 30,121,000 | \$                | 30,481,000 | 1.2 %                                  |
| Average Monthly Salary       | \$                | 3,965      | \$                | 4,164      | 5.0 %                                  |
| Average Age                  |                   | 41.23      |                   | 42.06      | 2.0 %                                  |
| Average Service              |                   | 12.97      |                   | 13.92      | 7.3 %                                  |
| <b>SAFETY PLAN 3</b>         |                   |            |                   |            |  |
| Number                       |                   | 6          |                   | 44         | 633.3 %                                |
| Annual Payroll*              | \$                | 180,000    | \$                | 1,470,000  | 716.7 %                                |
| Average Monthly Salary       | \$                | 2,500      | \$                | 2,784      | 11.4 %                                 |
| Average Age                  |                   | 31.83      |                   | 30.25      | (5.0) %                                |
| Average Service              |                   | 0.00       |                   | 0.70       | N/A                                    |
| <b>PROBATION</b>             |                   |            |                   |            |  |
| Number                       |                   | 159        |                   | 150        | (5.7) %                                |
| Annual Payroll*              | \$                | 6,223,000  | \$                | 6,513,000  | 4.7 %                                  |
| Average Monthly Salary       | \$                | 3,262      | \$                | 3,618      | 10.9 %                                 |
| Average Age                  |                   | 42.21      |                   | 43.45      | 2.9 %                                  |
| Average Service              |                   | 10.04      |                   | 11.23      | 11.9 %                                 |
| <b>APCD PLAN 1</b>           |                   |            |                   |            |  |
| Number                       |                   | 79         |                   | 79         | 0.0 %                                  |
| Annual Payroll*              | \$                | 3,953,000  | \$                | 4,007,000  | 1.4 %                                  |
| Average Monthly Salary       | \$                | 4,170      | \$                | 4,227      | 1.4 %                                  |
| Average Age                  |                   | 40.22      |                   | 41.15      | 2.3 %                                  |
| Average Service              |                   | 5.92       |                   | 6.58       | 11.1 %                                 |

\* Represents the annualization of active members' pay rates on December 31.

6.6%

### **SECTION III: SUMMARY OF ACTUARIAL ASSUMPTIONS**

To carry out an actuarial valuation of the assets and liabilities of your System, the actuary must first adopt assumptions with respect to each of the following items:

#### *Noneconomic assumptions*

- The probabilities of members separating from active service on account of nonvested and vested withdrawal, retirement for service, death, and disability, and
- The mortality rates to be experienced among retired persons.

#### *Economic assumptions*

- Interest earnings to be realized on the funds over many years in the future, and
- The relative increases in a member's salary from the date of the valuation to the date of separation from active service.

We discuss each of the above items in the following paragraphs of this Section.

#### **NONECONOMIC ASSUMPTIONS**

##### *Rates of Separation from Active Service*

In connection with the December 31, 1994 actuarial valuation, we compared the expected number of terminations from active service to the number actually experienced during the two-year period beginning January 1, 1993 and ending December 31, 1994. Based on this comparison, the probabilities of separation were adjusted accordingly. We are using the probabilities developed in the December 31, 1994 study to determine the costs shown in this report.

A complete listing of the rates of separation from active service can be found in Schedule 6 of the Appendix. These rates should be viewed in the aggregate rather than examining each of them separately. This is due to interdependency of the rates. For example, if turnover were to increase, there would be fewer retirements.

On the following pages, we show the number of members expected to eventually separate from active service for each of the various causes of termination based on the current assumptions. We also show the percentage of members expected to eventually separate from the system, in pie chart format. For purposes of the chart, we have grouped the following:

- service retirement and terminated vested into Service,
- ordinary and duty disability into Disability, and
- ordinary death, duty death, and death while eligible into Death.

**GENERAL MALE MEMBERS**

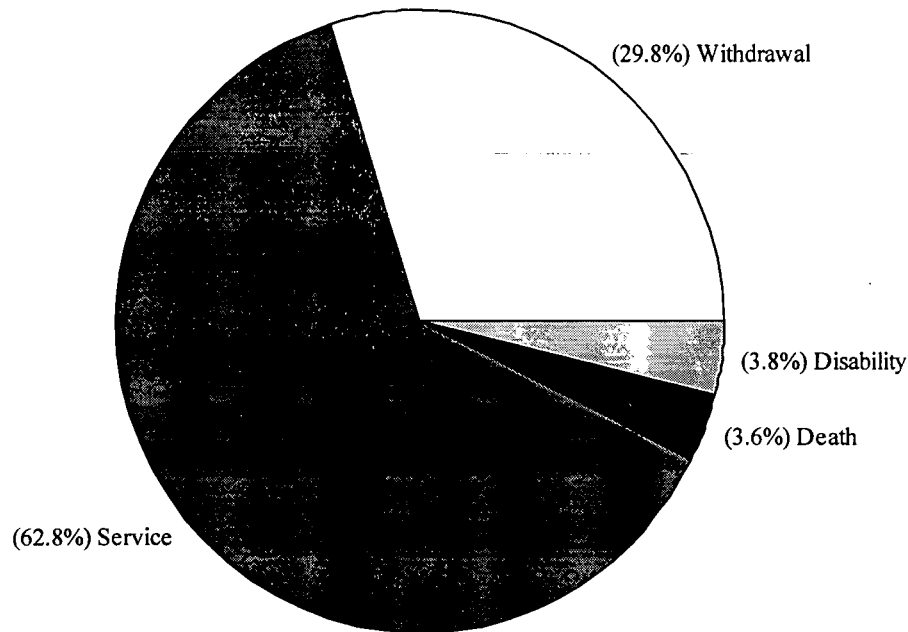
Current Assumptions\*

Expected Number to Eventually Separate for Indicated Cause

| Age          | Number of Actives | Withdrawal | Service    | Terminated Vested | Ordinary Death | Death While Eligible | Duty Death | Ordinary Disability | Duty Disability |
|--------------|-------------------|------------|------------|-------------------|----------------|----------------------|------------|---------------------|-----------------|
| 20-24        | 12                | 10         | 1          | 1                 | 0              | 0                    | 0          | 0                   | 0               |
| 25-29        | 52                | 36         | 8          | 6                 | 1              | 0                    | 0          | 0                   | 1               |
| 30-34        | 144               | 79         | 33         | 24                | 2              | 2                    | 0          | 2                   | 2               |
| 35-39        | 170               | 70         | 58         | 30                | 3              | 3                    | 0          | 3                   | 4               |
| 40-44        | 209               | 62         | 95         | 34                | 4              | 4                    | 0          | 4                   | 5               |
| 45-49        | 215               | 43         | 126        | 26                | 4              | 4                    | 0          | 5                   | 5               |
| 50-54        | 143               | 18         | 102        | 10                | 3              | 3                    | 0          | 3                   | 3               |
| 55-59        | 78                | 5          | 64         | 3                 | 1              | 1                    | 0          | 2                   | 1               |
| 60-64        | 39                | 1          | 35         | 1                 | 1              | 1                    | 0          | 1                   | 0               |
| 65 & OVER    | 26                | 0          | 25         | 0                 | 0              | 0                    | 0          | 0                   | 0               |
| <b>TOTAL</b> | <b>1,088</b>      | <b>325</b> | <b>547</b> | <b>136</b>        | <b>19</b>      | <b>18</b>            | <b>1</b>   | <b>19</b>           | <b>23</b>       |
|              |                   | 29.8%      | 50.3%      | 12.5%             | 1.7%           | 1.7%                 | 0.1%       | 1.8%                | 2.1%            |

\* The individual numbers in the columns may not add to the total shown due to rounding

Expected Percentage to Eventually Separate for Indicated Cause



**GENERAL FEMALE MEMBERS**

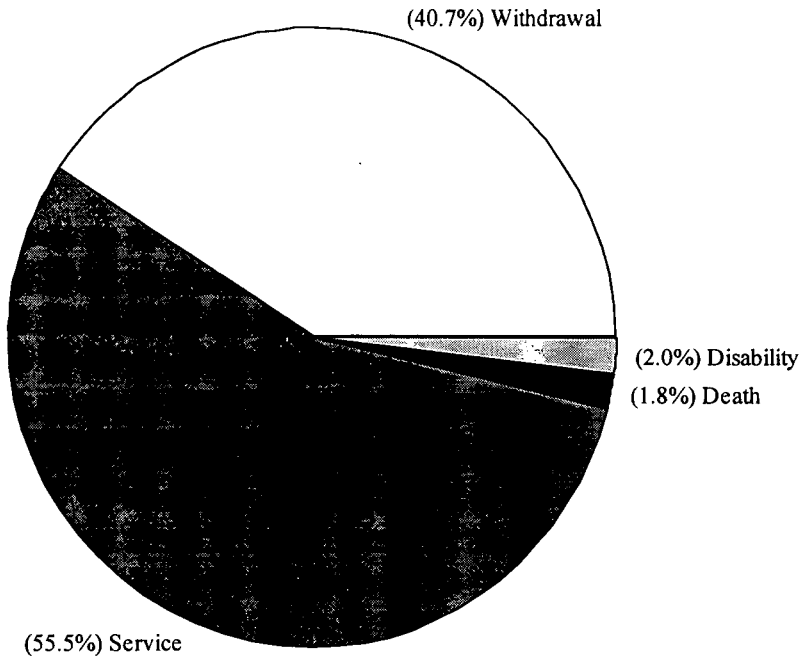
Current Assumptions\*

Expected Number to Eventually Separate for Indicated Cause

| Age          | Number of Actives | Withdrawal | Service    | Terminated Vested | Ordinary Death | Death While Eligible | Duty Death | Ordinary Disability | Duty Disability |
|--------------|-------------------|------------|------------|-------------------|----------------|----------------------|------------|---------------------|-----------------|
| 20-24        | 66                | 58         | 3          | 5                 | 0              | 0                    | 0          | 0                   | 0               |
| 25-29        | 211               | 163        | 18         | 27                | 1              | 1                    | 0          | 1                   | 1               |
| 30-34        | 260               | 164        | 43         | 46                | 2              | 1                    | 0          | 2                   | 2               |
| 35-39        | 311               | 151        | 89         | 60                | 3              | 2                    | 0          | 3                   | 3               |
| 40-44        | 310               | 108        | 132        | 55                | 4              | 3                    | 0          | 4                   | 4               |
| 45-49        | 288               | 73         | 165        | 36                | 4              | 3                    | 0          | 4                   | 4               |
| 50-54        | 202               | 36         | 142        | 13                | 3              | 2                    | 0          | 3                   | 3               |
| 55-59        | 144               | 16         | 119        | 3                 | 2              | 1                    | 0          | 2                   | 1               |
| 60-64        | 70                | 4          | 63         | 1                 | 1              | 1                    | 0          | 0                   | 0               |
| 65 & OVER    | 34                | 1          | 33         | 0                 | 0              | 0                    | 0          | 0                   | 0               |
| <b>TOTAL</b> | <b>1,896</b>      | <b>772</b> | <b>808</b> | <b>245</b>        | <b>19</b>      | <b>13</b>            | <b>2</b>   | <b>19</b>           | <b>18</b>       |
|              |                   | 40.7%      | 42.6%      | 12.9%             | 1.0%           | 0.7%                 | 0.1%       | 1.0%                | 1.0%            |

\* The individual numbers in the columns may not add to the total shown due to rounding

Expected Percentage to Eventually Separate for Indicated Cause



**SAFETY MEMBERS**

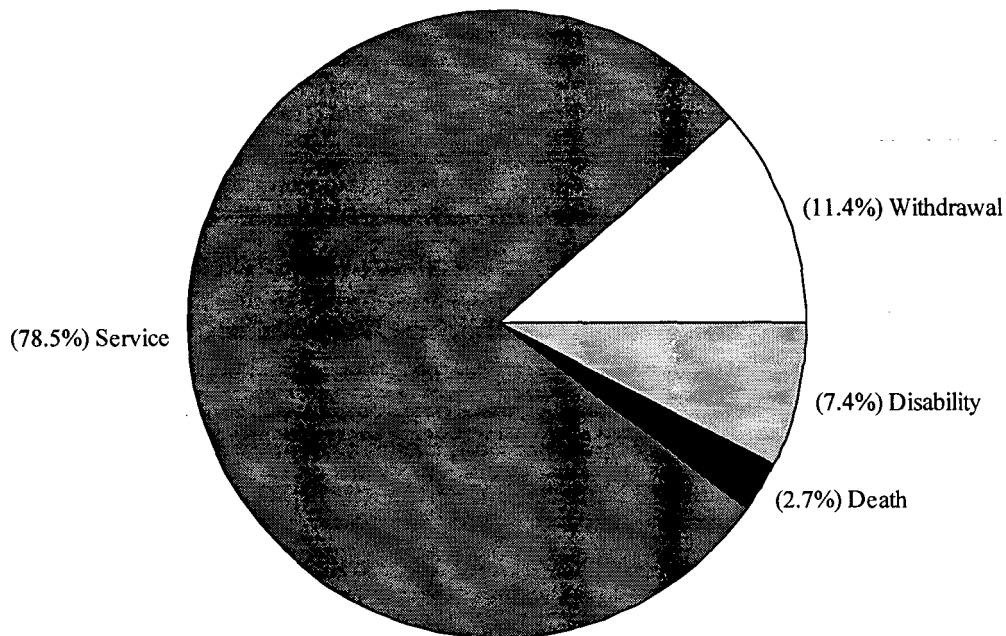
Current Assumptions\*

Expected Number to Eventually Separate for Indicated Cause

| Age          | Number of Actives | Withdrawal | Service    | Terminated Vested | Ordinary Death | Death While Eligible | Duty Death | Ordinary Disability | Duty Disability |
|--------------|-------------------|------------|------------|-------------------|----------------|----------------------|------------|---------------------|-----------------|
| 20-24        | 21                | 10         | 6          | 3                 | 0              | 0                    | 0          | 0                   | 1               |
| 25-29        | 77                | 26         | 32         | 11                | 1              | 1                    | 1          | 1                   | 5               |
| 30-34        | 114               | 25         | 64         | 11                | 1              | 1                    | 1          | 2                   | 9               |
| 35-39        | 142               | 18         | 96         | 8                 | 1              | 2                    | 2          | 3                   | 12              |
| 40-44        | 129               | 8          | 101        | 4                 | 1              | 1                    | 1          | 3                   | 10              |
| 45-49        | 140               | 4          | 122        | 1                 | 1              | 1                    | 2          | 2                   | 8               |
| 50-54        | 134               | 1          | 126        | 0                 | 1              | 1                    | 1          | 1                   | 3               |
| 55 & OVER    | 47                | 0          | 47         | 0                 | 0              | 0                    | 0          | 0                   | 0               |
| <b>TOTAL</b> | <b>804</b>        | <b>92</b>  | <b>593</b> | <b>38</b>         | <b>6</b>       | <b>7</b>             | <b>8</b>   | <b>12</b>           | <b>48</b>       |
|              |                   | 11.4%      | 73.8%      | 4.7%              | 0.8%           | 0.9%                 | 1.0%       | 1.5%                | 5.9%            |

\* The individual numbers in the columns may not add to the total shown due to rounding

Expected Percentage to Eventually Separate for Indicated Cause



### *Mortality After Retirement*

At the time of the December 31, 1994 actuarial valuation, we also analyzed mortality after retirement. The following mortality tables were adopted for use at that time:

#### *Service Retirement Mortality Tables:*

|                 |  |
|-----------------|--|
| General Males   | 1983 Group Annuity Mortality Table for Males, set forward 1 year   |
| General Females | 1983 Group Annuity Mortality Table for Females, set forward 1 year |
| Safety          | 1983 Group Annuity Mortality Table for Males, set forward 1 year   |

#### *Disability Retirement Mortality Tables:*

|         |   |
|---------|---|
| General | 1981 Disability Mortality Table for General Members |
| Safety  | 1981 Disability Mortality Table for Safety Members  |

A full listing of the life expectancies based on these tables is shown in Schedule 7 of the Appendix. The costs developed for this report are based upon these tables.

### **ECONOMIC ASSUMPTIONS**

In setting the economic assumptions, we take a building block approach. Specifically, we first look at the rate of inflation which underlies both the total rate of return and the salary scale assumptions. To aid us in determining an appropriate inflation rate for your System, we have reviewed long term historical inflation averages, recent trends, and the assumptions adopted by other public retirement systems governed by the 1937 Act. It should be noted that we have placed more emphasis on long term historical averages and long term future predictions than on the more recent, short term trends. This helps to minimize fluctuations which are more apparent in short term trends.

Secondly, we review the anticipated real rate of return on investments. The real rate of return is dependent on the anticipated returns on classes of investments and the asset allocation of the System's funds. To develop the individual real rates of return we utilize various empirical studies. By

applying the results of these studies to the System's target asset allocation, we develop the real rate of return. This rate may then be adjusted for any known or anticipated changes in the economy that may occur. Using our building block approach, we combine the underlying inflation assumption with the real rate of return to develop the total rate of return assumption (interest rate assumption).

The salary scale assumption is developed in a similar manner. The inflation rate is combined with merit and longevity increases to produce a total salary scale assumption.

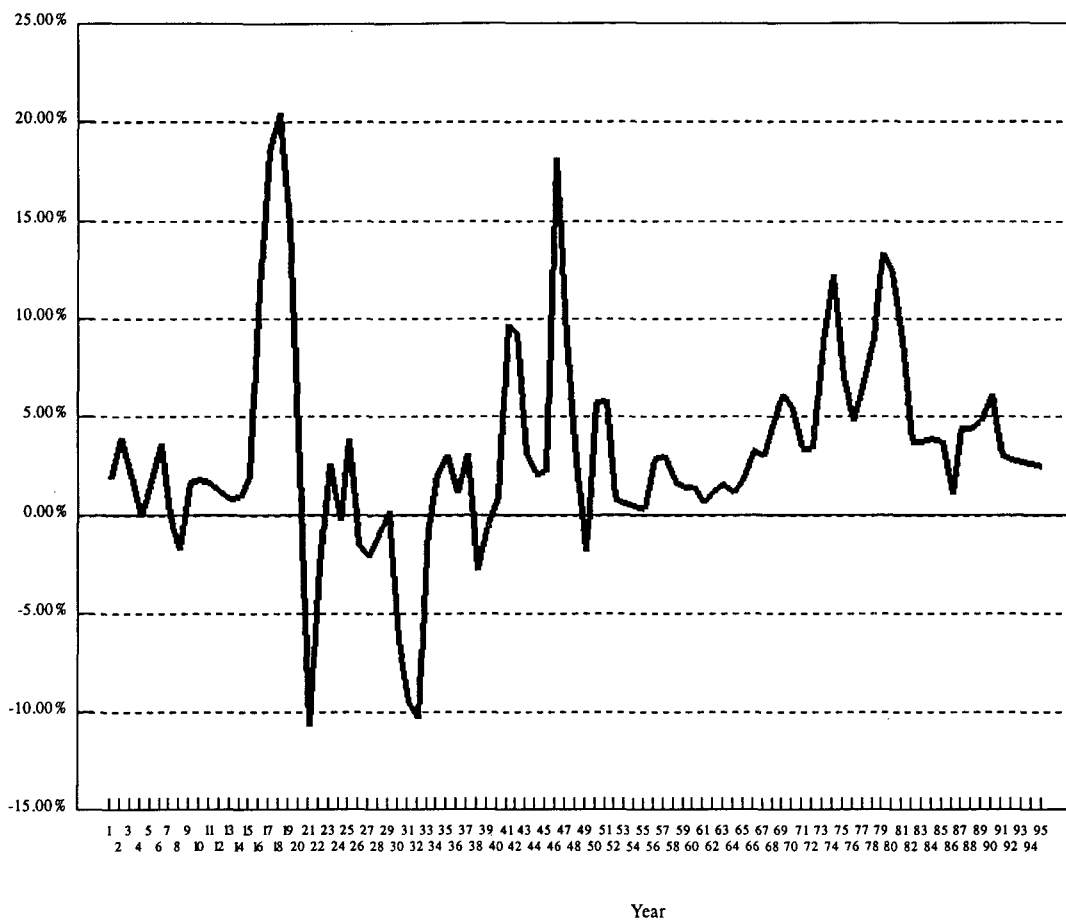
### *Inflation*

Rate of inflation is an important assumption used in valuing the System's liabilities. This assumption underlies both the investment return assumption and the salary increases assumption. These in turn directly impact the employer and employee contribution rates.

The annual inflation rates have averaged about 2.7% per year, for the most recent four years; for the four years prior to that, the average was 4.6%. If the pattern of inflation during the last 90-year period is analyzed, it may be extrapolated that the current low rates will not continue into the future indefinitely. Inflation appears to move in a cyclical fashion as may be seen in the following graph. Currently, we seem to be near the bottom of the most recent downturn.



### HISTORICAL INFLATION RATES \*



\* US City Average (December index)

| From | To | Years | Average |       |
|------|----|-------|---------|-------|
| 1986 | -  | 1995  | 10      | 3.48% |
| 1976 | -  | 1995  | 20      | 5.27% |
| 1966 | -  | 1995  | 30      | 5.43% |
| 1956 | -  | 1995  | 40      | 4.50% |
| 1946 | -  | 1995  | 50      | 4.44% |
| 1936 | -  | 1995  | 60      | 4.18% |
| 1926 | -  | 1995  | 70      | 3.21% |
| 1916 | -  | 1995  | 80      | 3.57% |
| 1906 | -  | 1995  | 90      | 3.31% |

Because of the cyclical nature of inflation and the long term nature of the System's liabilities, we believe that it is appropriate to assume that the average inflation rate to be experienced over the next

30 to 50 years (which is approximately the lifetime of the present obligations of the System) will be between 4.50% and 5.50%.

The current long term inflation assumptions adopted by the other 1937 act counties are shown in the following chart. The average inflation assumption for these systems is currently 4.73%.

**Current Long Term Inflation Assumptions  
Adopted by Other 1937 Act Counties**

| <u>Retirement System</u> | <u>Assumed<br/>Inflation Rate</u> | <u>Retirement System</u> | <u>Assumed<br/>Inflation Rate</u> |
|--------------------------|-----------------------------------|--------------------------|-----------------------------------|
| Alameda                  | 4.75 %                            | Sacramento               | 4.50 %                            |
| Contra Costa             | 4.75 %                            | San Bernardino           | 5.00 %                            |
| Fresno                   | 4.75 %                            | San Diego                | 5.00 %                            |
| Imperial                 | 5.00 %                            | San Joaquin              | 4.50 %                            |
| Kern                     | 4.00 %                            | San Mateo                | 4.75 %                            |
| Los Angeles              | 5.00 %                            | Santa Barbara            | 4.75 %                            |
| Marin                    | 5.00 %                            | Sonoma                   | 4.50 %                            |
| Mendocino                | 4.75 %                            | Stanislaus               | 4.50 %                            |
| Merced                   | 4.50 %                            | Tulare                   | 5.00 %                            |
| Orange                   | 5.00 %                            | Ventura                  | 4.50 %                            |

We believe that it is appropriate to continue using a 4.75% inflation rate assumption.

***Real Rate of Return***

The first step in developing a real rate of return is to analyze how the System's assets are allocated among the various investment classes. Based on this information, we can then apply the anticipated rate of return to the respective classes and develop an overall estimated real rate of return. The System has adopted the following target asset allocation:

**Asset Allocation as of December 31, 1995  
(Market Value)**

|                             | Target |
|-----------------------------|--------|
| Equity                      | 58 %*  |
| Fixed Income/Bonds          | 40 %*  |
| Real Estate                 | 0 %    |
| Short Term Cash Equivalents | 2 %    |

\* Includes International Equity and Fixed Income

There have been numerous studies performed which analyze the expected long-term real rates of return for use in asset allocation models. Roger Ibbotson and Rex A. Sinquefeld produced such a study for the period 1926-1994 called *Stocks, Bonds and Inflation: Simulations of the Future*. The results of this study are presented below.

**Ibbotson-Sinquefeld  
Real Rates of Return  
(1926 - 1994)**

|                            |      |
|----------------------------|------|
| Stocks                     | 6.9% |
| Long-term government bonds | 1.7% |
| Long-term corporate bonds  | 2.2% |
| Treasury bills             | 0.5% |

Applying the System's target asset allocation to the real rates of return in the table above produces a real rate of return of approximately 4.8% (assuming an equal proportion of government and corporate bonds). This rate, however, should be adjusted to reflect expenses and potential adverse future experience.

After making this adjustment, we believe that a real rate of return of 3.25% provides a reasonable degree of conservatism when used with a 4.75% inflation rate. Thus, we feel that the 8.00% investment return assumption should be continued.

The return on assets, net of expenses, experienced by the Fund since 1981 is shown on the following page. The increase in the Consumer Price Index is also shown for comparative purposes.

**Net Return on Assets  
vs.  
Increase in Consumer Price Index**

| Year Ended June 30,      | Net Return @<br>Book Value | Net Return @<br>Market Value | Increase in<br>Consumer<br>Price Index |
|--------------------------|----------------------------|------------------------------|--|
| 1981                     | 10.2 %                     | %                            | 9.6 %                                  |
| 1982                     | 11.7 %                     | %                            | 7.1 %                                  |
| 1983                     | 10.9 %                     | %                            | 2.6 %                                  |
| 1984                     | 3.0 %                      | %                            | 4.2 %                                  |
| 1985                     | 13.7 %                     | %                            | 3.8 %                                  |
| 1986                     | 24.2 %                     | %                            | 1.8 %                                  |
| 1987                     | 16.6 %                     | %                            | 3.7 %                                  |
| 1988                     | 4.0 %                      | 1.9 %                        | 4.0 %                                  |
| 1989                     | 10.3 %                     | 17.6 %                       | 5.2 %                                  |
| 1990                     | 11.3 %                     | 10.8 %                       | 4.7 %                                  |
| 1991                     | 8.6 %                      | 9.7 %                        | 4.7 %                                  |
| 1992                     | 13.0 %                     | 18.5 %                       | 3.1 %                                  |
| 1993                     | 13.0 %                     | 13.2 %                       | 3.0 %                                  |
| 1994                     | 9.3 %                      | (0.7) %                      | 2.5 %                                  |
| 1995                     | 5.9 %                      | 17.7 %                       | 3.0 %                                  |
| 15-Year Compound Average | 10.9 %                     | N/A                          | 4.2 %                                  |
| 8-Year Compound Average  | 9.4 %                      | 10.9 %                       | 3.8 %                                  |

For the six month period ending December 31, 1995, the return on investments, net of expenses, was 8.8% on a book value basis and 12.1% on a market value basis.

***Recommendation***

Based on the information provided in this section, we recommended that the long term inflation rate assumption remain at 4.75% and that the long term interest assumption remain at 8.00%.

*Merit and Longevity Increases*

The merit and longevity component of the total salary scale assumption reflects increases in members' salaries due to promotions, advances in pay grades, etc. These increases are dependent on an individual's membership and are graded downward as members age.

The overall effect of the merit and longevity increases is to add approximately 1.00% to the total salary scale assumption. Combined with the 4.75% inflation rate, we feel that the total salary scale assumption should continue at the 5.75% (approximate) level.

**SECTION IV: CONTRIBUTION RATES**

Below we show a comparison between the contribution rates that are currently being paid ("Phase-In Step 1"), the rates that were expected to be paid this year ("Phase-In Step 2") and the recommended rates developed for this valuation. The rates shown below are based upon the current actuarial assumptions which are described in the Appendix and exclude the amount payable by the Air Pollution Control District.

|                           | EMPLOYER*    |                 | EMPLOYEE*    |                 |
|---------------------------|--------------|-----------------|--------------|-----------------|
|                           | % of Payroll | Annual Amount** | % of Payroll | Annual Amount** |
| <b>Current Rates</b>      |              |                 |              |                 |
| Phase-In Step 1           | 16.06 %      | \$ 24,101,000   | 3.73 %       | \$ 5,419,000    |
| Phase-In Step 2           | 17.53 %      | \$ 26,313,000   | 3.73 %       | \$ 5,419,000    |
| <b>Recalculated Rates</b> | 18.43 %      | \$ 27,664,000   | 3.73 %       | \$ 5,419,000    |

\* Excludes the Air Pollution Control District contributions.

\*\* Based on December 31, 1995 payroll. The employee contribution rates and annual amounts exclude General Plan 2 payroll.

**MEMBER CONTRIBUTION RATES**

*Member Basic Contributions*

Sections 31621.4 and 31621 set forth the basis for the determination of the normal rates of contribution for General Plan 1 and Plan 3 members, respectively. Sections 31639.5 and 31639.25 set forth the basis for the normal rates of contribution for Safety and Probation Plan 1 and Plan 3 members. Sections 31621.6 sets forth the basis for the determination of the normal rates of contribution for APCD Plan 1 members.

The law further provides that the contribution rates of members will be based on the age nearest birthday at the time of entrance into the Retirement System. Section 31453 states that no adjustment

will be included in the rates of contribution for time prior to the effective date of any revisions. Note that the law was changed in 1976 to remove the sex differential in member contribution rates.

The basic employee contribution rates for General and APCD members were calculated on a unisex basis using the 1983 Group Annuity Mortality Table for Males with a 2 year setback. The Safety and Probation basic employee rates were based upon the 1983 Group Annuity Mortality Table for Males set forward 1 year.

There is no change in employee basic contribution rates since the underlying assumptions, interest rate, salary scale, and mortality have not changed.

A summary of the average employee contribution rates is provided below. Rates at sample ages are shown on the following page.

| AVERAGE MEMBER BASIC CONTRIBUTION RATES |         |        |        |        |           |         |  |
|---|---------|--------|--------|--------|-----------|---------|--|
|   | GENERAL |        | SAFETY |        | PROBATION | APCD    |  |
|   | Plan 1  | Plan 3 | Plan 1 | Plan 3 | Plan 1*   | Plan 1* |  |
| Current Rates                           | 2.98 %  | 5.96 % | 4.15 % | 8.45 % | 8.92 %    | 4.21 %  |  |

\* There were no Plan 3 Probation members nor Plan 2 APCD members as of the valuation date.

***Cost of Living Contributions***

The employees do not pay for any portion of the cost-of-living contribution rates.

| SAMPLE GENERAL PLAN 1 MEMBER CONTRIBUTION RATES |                     |
|---|---------------------|
| Entry Age                                       | Current Assumptions |
| 25  | 2.85 %              |
| 35  | 3.04 %              |
| 59  | 3.98 %              |

| SAMPLE GENERAL PLAN 3 MEMBER CONTRIBUTION RATES |                     |
|---|---------------------|
| Entry Age                                       | Current Assumptions |
| 25  | 5.43 %              |
| 35  | 5.78 %              |
| 59  | 7.57 %              |

| SAMPLE SAFETY PLAN 1 MEMBER CONTRIBUTION RATES |                     |
|--|---------------------|
| Entry Age                                      | Current Assumptions |
| 25   | 4.37 %              |
| 35   | 4.72 %              |
| 49   | 5.24 %              |

| SAMPLE SAFETY PLAN 3 MEMBER CONTRIBUTION RATES |                     |
|--|---------------------|
| Entry Age                                      | Current Assumptions |
| 25   | 8.22 %              |
| 35   | 8.88 %              |
| 49   | 9.85 %              |

| SAMPLE PROBATION PLAN 1 MEMBER CONTRIBUTION RATES |                     |
|---|---------------------|
| Entry Age   | Current Assumptions |
| 25  | 8.74 %              |
| 35  | 9.45 %              |
| 49  | 10.47 %             |



| SAMPLE PROBATION PLAN 3 MEMBER CONTRIBUTION RATES |                     |
|---|---------------------|
| Entry Age   | Current Assumptions |
| 25  | 8.22 %              |
| 35  | 8.88 %              |
| 49  | 9.85 %              |

| SAMPLE APCD PLAN 1 MEMBER CONTRIBUTION RATES |                     |
|--|---------------------|
| Entry Age                                    | Current Assumptions |
| 25   | 4.01 %              |
| 35   | 4.23 %              |
| 54   | 5.12 %              |

| SAMPLE APCD PLAN 2 MEMBER CONTRIBUTION RATES |                     |
|--|---------------------|
| Entry Age                                    | Current Assumptions |
| 25   | 7.60 %              |
| 35   | 8.02 %              |
| 54   | 9.71 %              |

Schedule 5 in the Appendix contains the complete set of members' basic contribution rates. The interest rate, mortality table, inflation rate, and cost-of-living benefit are indicated on the bottom of the schedules.

**EMPLOYER CONTRIBUTION RATES**

Employer contributions have been determined under the Entry Age Normal Actuarial Cost Method, permitted by Section 31453.5. The Entry Age Normal method defines the Normal Cost as the level percentage of salary necessary to fund the projected future benefit over the period from the date of entry to the date of separation from active service. The Actuarial Accrued Liability is the cost allocated to years prior to the actuarial valuation date; it is the excess of the total value of benefits

over the value of future member contributions and the value of future Normal Costs. The difference between the Actuarial Accrued Liability and the plan assets is called the Unfunded Actuarial Accrued Liability and is funded (amortized) as a level percentage of projected future payroll over 10 years from December 31, 1995.

The average amortization period for the 1937 Act Counties is approximately 18 years as of January 1, 1996. The actual amortization periods vary between 5 and 26.5 years.

The following charts specify the employer contributions and components thereof (expressed as a level percentage of payroll) for the last valuation and this valuation. A breakdown between basic and cost of living benefits is provided.

**TOTAL EMPLOYER CONTRIBUTION RATES**

Current Contribution Rates (Step 1 of Phase-In)

| <b>BREAKDOWN BETWEEN BASIC AND COST OF LIVING BENEFITS</b> |                        |               |               |                       |               |                  |               |
|--|------------------------|---------------|---------------|-----------------------|---------------|------------------|---------------|
|  | <b>General Members</b> |               |               | <b>Safety Members</b> |               | <b>Probation</b> | <b>APCD</b>   |
|  | <b>Plan 1</b>          | <b>Plan 2</b> | <b>Plan 3</b> | <b>Plan 1</b>         | <b>Plan 3</b> | <b>Plan 1</b>    | <b>Plan 1</b> |
| Basic Benefits   | 9.79 %                 | 6.46 %        | 8.23 %        | 14.47 %               | 11.89 %       | 11.82 %          | 13.40 %       |
| Cost of Living Benefits                                    | 3.67 %                 | 1.06 %        | 3.73 %        | 11.08 %               | 11.38 %       | 9.16 %           | 5.28 %        |
| Total  | 13.46 %                | 7.52 %        | 11.96 %       | 25.55 %               | 23.27 %       | 20.98 %          | 18.68 %       |

Average Rate for Total Group Excluding APCD = 16.06%

**TOTAL EMPLOYER CONTRIBUTION RATES**

Expected Contribution Rates (Step 2 of Phase-In)

| BREAKDOWN BETWEEN BASIC AND COST OF LIVING BENEFITS |                 |        |         |                |         |           |         |
|---|-----------------|--------|---------|----------------|---------|-----------|---------|
|   | General Members |        |         | Safety Members |         | Probation | APCD    |
|   | Plan 1          | Plan 2 | Plan 3  | Plan 1         | Plan 3  | Plan 1    | Plan 1  |
| Basic Benefits                                      | 10.57 %         | 6.86 % | 9.16 %  | 16.39 %        | 13.80 % | 11.23 %   | 13.40 % |
| Cost of Living Benefits                             | 3.96 %          | 1.12 % | 4.14 %  | 12.56 %        | 13.22 % | 8.70 %    | 5.28 %  |
| Total   | 14.53 %         | 7.98 % | 13.30 % | 28.95 %        | 27.02 % | 19.93 %   | 18.68 % |

Average Rate for Total Group Excluding APCD = 17.53%

**TOTAL EMPLOYER CONTRIBUTION RATES**

Recalculated Contribution Rates

| BREAKDOWN BETWEEN BASIC AND COST OF LIVING BENEFITS |                 |        |         |                |         |           |         |
|---|-----------------|--------|---------|----------------|---------|-----------|---------|
|   | General Members |        |         | Safety Members |         | Probation | APCD    |
|   | Plan 1          | Plan 2 | Plan 3  | Plan 1         | Plan 3  | Plan 1    | Plan 1  |
| Basic Benefits                                      | 11.21 %         | 7.75 % | 9.80 %  | 17.00 %        | 13.05 % | 11.89 %   | 13.97 % |
| Cost of Living Benefits                             | 4.17 %          | 1.38 % | 4.38 %  | 13.07 %        | 13.00 % | 8.92 %    | 5.41 %  |
| Total   | 15.38 %         | 9.13 % | 14.18 % | 30.07 %        | 26.05 % | 20.81 %   | 19.38 % |

Average Rate for Total Group Excluding APCD = 18.43%

The overall increase in employer contribution rates was primarily attributable to unfavorable plan experience. Specifically, the total population grew by less than 1%, however, the average monthly salary increased by 5.7%. These higher salaries caused the unfunded liabilities to increase more than expected, and this increase has to be funded over 10 years, the current amortization period.

In addition, 23 contractors were added to the General Plan 1 population, and their average entry age, age 46, was 11 years older than the average entry age of the existing General Plan 1 population. These new members with past service were the other reason for the increase in the General Plan 1

employer contribution rate. The General Plan 2 employer contribution rate also increased because new members are entering on average 3 years older. Conversely, Safety Plan 3 members entered on average 3 years younger than the existing population and this lowered their employer contribution rate.

**RECOMMENDATIONS**

We recommend that the Board adopt the recalculated contribution rates as of December 31, 1995 as shown in this section. These rates reflect the current economic and noneconomic assumptions, are based on the Entry Age Normal Actuarial Cost Method with an unfunded actuarial accrued liability amortized as a level percentage of payroll over 10 years from December 31, 1995, and utilize an actuarial value of assets. This combination of assumptions and methods reflects our best judgment of future long term experience for the System.

Employer contribution rates at the recommended level expressed as a percentage of payroll are as follows:

**TOTAL EMPLOYER CONTRIBUTION RATES**

Recommended Contribution Rates

| <b>BREAKDOWN BETWEEN BASIC AND COST OF LIVING BENEFITS</b> |                        |               |                |                       |                |                  |                |
|--|------------------------|---------------|----------------|-----------------------|----------------|------------------|----------------|
|  | <b>General Members</b> |               |                | <b>Safety Members</b> |                | <b>Probation</b> | <b>APCD</b>    |
|  | <b>Plan 1</b>          | <b>Plan 2</b> | <b>Plan 3</b>  | <b>Plan 1</b>         | <b>Plan 3</b>  | <b>Plan 1</b>    | <b>Plan 1</b>  |
| Basic Benefits   | 11.21 %                | 7.75 %        | 9.80 %         | 17.00 %               | 13.05 %        | 11.89 %          | 13.97 %        |
| Cost of Living Benefits                                    | 4.17 %                 | 1.38 %        | 4.38 %         | 13.07 %               | 13.00 %        | 8.92 %           | 5.41 %         |
| <b>Total</b>   | <b>15.38 %</b>         | <b>9.13 %</b> | <b>14.18 %</b> | <b>30.07 %</b>        | <b>26.05 %</b> | <b>20.81 %</b>   | <b>19.38 %</b> |

Average Rate for Total Group Excluding APCD = 18.43%

The recommended employee contribution rates are shown in Schedule 5 of the Appendix. These rates remain unchanged since the last valuation.

**HEALTH INSURANCE OFFSET**

As requested, we have calculated the liabilities associated with the current monthly Health Insurance Offset benefit (\$8.00 per year of service for covered employees and \$1.47 per year of service for non-covered employees). We assumed that this benefit does not receive any future adjustment after retirement. Our results are based upon the current retirees and members retiring in the future from the current active and inactive group. We assumed that 60% of the current active and inactive group will be covered at the time of retirement based on the most recent actuarial experience.

The liabilities determined as of December 31, 1995 are shown below. These amounts reflect the current economic and noneconomic actuarial assumptions. Note that employees hired after December 31, 1995 are excluded from this analysis.

| <b>HEALTH INSURANCE OFFSET BENEFIT</b> |                |
|--|----------------|
| Present Value of Benefits              |                |
| Current Actives and Inactives          | \$ 14,678,000  |
| Current Retirees                       | 16,437,000     |
| Total Present Value                    | \$ 31,115,000  |
| Present Value Future Normal Cost       | 5,033,000      |
| Accrued Liability                      | \$ 26,082,000  |
| Less: Health Coverage Reserve          | 34,462,000     |
| Unfunded Accrued Liability             | \$ (8,380,000) |

The contribution rate needed to fully fund this benefit is shown below:

| Contribution | % of Payroll |
|--------------|--------------|
| Normal Cost  | 0.37 %       |
| UAAL         | (0.65) %     |
| Total        | (0.28) %     |

*Recommendation*

Based on the overfunded status of this benefit, we recommend that no Normal Cost contribution be made at this time.

**SECTION V: ASSETS AND LIABILITIES**

**ACTUARIAL VALUE OF ASSETS**

For purposes of calculating the required contribution rates for the valuation, a modified book value of the Fund's assets was used. Under this approach, recognition is given each year to total earnings of the Fund to date.

The current approach used by your System is to spread each year's unrealized gains and losses over five years. In other words, only 20% of unrealized gains and losses are to be recognized in any one year. Please note that starting with the 1993-1994 Fiscal Year realized and unrealized gains and losses are treated the same. This was done on a prospective basis only i.e., the effect of this change was reflected for the first time in the December 31, 1994 actuarial valuation.

These modified assets, which we called the Actuarial Value of Assets, were arrived at as follows:

1. Gains (Losses)

| Year Ending<br>June 30 | Total Gains<br>(Losses) | Percentage<br>Recognized to<br>12/31/95 | Total Gains<br>(Losses)<br>Recognized to<br>12/31/95 |
|------------------------|-------------------------|---|--|
| 1991*                  | \$ 38,579,101           | 100 %                                   | \$ 38,579,101  |
| 1992                   | 26,505,503              | 90 %                                    | 23,854,953   |
| 1993                   | 9,638,878               | 70 %                                    | 6,747,215  |
| 1994                   | (26,712,121)            | 50 %                                    | (13,356,061)   |
| 1995                   | 69,594,663              | 30 %                                    | 20,878,399   |
| 1995**                 | 61,421,529              | 10 %                                    | 6,142,153  |

2. Total Gains (Losses) Recognized to December 31, 1995 \$ 82,845,760

\* Total as of 6/30/91.

\*\* Last six months of 1995.

|  |    |              |
|--|----|--------------|
| 3. Book Value as of December 31, 1995 (less payables)        | \$ | 586,697,249  |
| 4. Less Realized Gains Through December 31, 1995             |    | (56,837,485) |
| 5. Total Gains (Losses) Recognized Through December 31, 1995 |    | 82,845,760   |
| 6. Item 3 + Item 4 + Item 5                                  | \$ | 612,705,524  |
| 7. Corridor Limit: (Net assets at Market: \$708,887,315)     |    |              |
| a. 80% of Market Value (less payables)                       | \$ | 567,109,852  |
| b. 120% of Market Value (less payables)                      | \$ | 850,664,778  |
| 8. Item 6 After Corridor Applied                             | \$ | 612,705,524  |
| 9. Actuarial Value Ratio (Item 8/Item 3)                     |    | 1.04433      |

The ratio arrived at in Item 9 above is only used to adjust the reserves used in determining the employer contribution rate. These reserves are the Member Deposit, County Advance, Employer Supplemental and Retired Member Reserves. Total Actuarial Value of Assets, with the ratio applied only to these reserves, are \$624,822,614. These assets were derived as follows:

|   |    |             |
|---|----|-------------|
| 1. Member Deposit, County Advance, Employer Supplemental and Retired Member Reserves  | \$ | 495,602,363 |
| 2. Actuarial Value Ratio  |    | 1.04433     |
| 3. Item 1* Item 2   | \$ | 517,572,416 |
| 4. Members Supplemental Reserve, Accounts Payable, Health Coverage Reserve, Designated Liability Transfer Account, Special Allowance, Supplemental Health Coverage Reserve, Burial Allowance, Special Reserve for Interest Fluctuation, Unreserved Earnings, Undesignated | \$ | 107,250,198 |
| 5. Item 3 + Item 4  | \$ | 624,822,614 |
| 6. Air Pollution Control District Actuarial Value of Assets   | \$ | 2,671,627   |
| 7. Actuarial Value of Assets (Item 5 - Item 6)  | \$ | 622,150,987 |



## *Reserve Certifications*

Certain reserves are excluded from the actuarial valuation of assets for purposes of determining contribution rates. The following section clarifies the purpose of these reserves in supporting the liabilities of the Santa Barbara County Employees' Retirement System.

### Special Reserve for Interest Fluctuation

The Special Reserve for Interest Fluctuation of \$6,017,169 as of December 31, 1995 has been funded by investment income that has exceeded the interest crediting benchmark over the years. It will be utilized to supplement investment income in shortfall periods. The following describes its importance in the operation of the 1937 Act and the setting of actuarial interest rates.

There are two aspects to the application of the actuarial interest rate in 1937 Act retirement systems: (1) The expected long-term total rate of return on the funds, and (2) a short-term benchmark for the semiannual crediting of interest on the fund's reserves.

With respect to the second application, six-month returns on the fund are volatile, due to the short measuring period. In some six-month periods, the returns will exceed the benchmark, and in others they will fall short. Given that the actuarial rate serves as a benchmark, there is a natural tendency to minimize the probability of a shortfall by setting a lower benchmark. The restricted balance counteracts this tendency by serving as a stabilizing mechanism which allows the county retirement systems to consistently maintain a higher level of interest crediting on reserve accounts that are used to determine employer contribution rates.

Thus, the restricted balance mechanism is a factor in the actuarial interest rate setting process. We can focus on the expected long-term total rate of return in setting the interest rate assumption rather than on the short-term downside risks.

## LIABILITIES

In this report we present two different perspectives of the system's funding. Our first view of the funding of the System is given by an Actuarial Balance Sheet. The Actuarial Balance Sheet provides insight into the ongoing employer and employee financial commitment necessary to fund the benefits provided by the System. The other perspective is a snapshot of assets and liabilities. This provides insight into the funding status of the System by comparing current assets against a different measure of the current accumulated liability.

### *Actuarial Balance Sheet*

In this approach, we first determine the amount and timing of all future payments that will be made by the System. We then discount these payments at 8.00% per annum to December 31, 1995, the date of the valuation, thereby determining their present value. We see from the lower portion of the Balance Sheet that the total present value of benefits to be paid to current members or their beneficiaries equals \$933.7 million (including \$107.3 million in reserves used for other purposes). We title this present value the "liability" of the System.

Second, in the upper portion, we determine how this liability will be met. Item 1 in the Balance Sheet represents the amount of assets (\$624.8 million) already accumulated by the System at Actuarial Value. Item 2 is the present value of the contributions (\$51.7 million) anticipated to be received in the future from the current members. Item 3 is the present value of future employer normal costs with respect to current members, using the Entry Age Normal Cost method. The employer is budgeting a percentage of payroll on behalf of each member. The Entry Age Normal Cost percentage is, simply stated, the employer's level percentage of payroll needed to fund benefits for new entrants to the System. The present value of these contributions amounts to \$170.2 million.

Finally, we compare the existing assets plus the present value of the future normal costs and future member contributions to the present value of the benefits to be paid from the System. We see that we are "short" by \$87.0 million ( $\$933.7 \text{ million} - \$624.8 \text{ million} - \$51.7 \text{ million} - \$170.2 \text{ million}$ ).

This shortfall (or balancing item) of \$87.0 million is known as the Unfunded Actuarial Accrued Liability of your System. In the text we will abbreviate it as UAAL. To bring the System into actuarial balance, we then need to budget a pattern of contributions with respect to the UAAL which has a present value of \$87.0 million. The UAAL is amortized as a level percentage of payroll for the next 10 years from December 31, 1995.

| ACTUARIAL BALANCE SHEET AS OF DECEMBER 31, 1995 |   |                |
|---|---|----------------|
| ASSETS  |   |                |
| 1.  | Total actuarial value of assets   | \$ 624,822,614 |
| 2.  | Present value of future contributions by members  | 51,705,861     |
| 3.  | Present value of future employer contributions for normal cost  | 170,153,100    |
| 4.  | Present value of other future employer contributions (UAAL)   | 87,045,858     |
| 5.  | Total actuarial assets  | \$ 933,727,433 |
| LIABILITIES                                     |   |                |
| 6.  | Present value of retirement allowances payable to retired members and their survivors                     | \$ 236,095,712 |
| 7.  | Present value of service retirement allowances payable to presently active members and their survivors    | 467,767,232    |
| 8.  | Present value of allowances payable to vested terminated members and their survivors                      | 56,741,624     |
| 9.  | Present value of disability retirement allowances payable to presently active members and their survivors | 36,956,707     |
| 10.   | Present value of death benefits payable on behalf of presently active members                             | 10,763,903     |
| 11.   | Present value of members' contributions to be returned upon withdrawal                                    | 18,152,056     |
| 12.   | Contingency reserves  | 6,017,169      |
| 13.   | Other designated reserves   | 85,077,717     |
| 14.   | Miscellaneous liabilities   | 16,155,313     |
| 15.   | Total actuarial liabilities   | \$ 933,727,433 |

**Funding Ratio -- GASB 5**

The second view of the funding of your System is the standardized pension obligation measurement promulgated by GASB 5. This measurement assumes an ongoing plan, that is, it includes future withdrawals, deaths and service and disability retirements. It is the actuarial present value of credited projected benefits. This view focuses on benefits based on *projected* salaries and *current* service; unlike the balance sheet value, it does not take into account future service.

The following example demonstrates how the calculation is prepared. In a plan that provides 1.67% of final average pay at age 55 for each year of service, a person who entered the plan at age 25 and is now age 45 is two-thirds of the way to retirement and therefore has earned two-thirds of the projected benefit expected at age 55. If the member's current average monthly salary was \$1,000, projected final salary would be about \$1,700, and total GASB obligation would be based on a monthly benefit of \$567.80 ( $\$1,700 \times 1.67\% \times 30 \text{ years} \times 2/3$ ). We then determine the present value of \$567.80 per month taking into account the probability the member will receive the benefit, the likely duration of the benefit, and expected cost-of-living increases. Applying the above methodology to all assumption and benefit combinations being considered, we have determined the following:

**GOVERNMENTAL ACCOUNTING STANDARDS BOARD STATEMENT NO. 5**

|   | December 31, 1994 * | December 31, 1995 |
|---|---------------------|-------------------|
| 1. Pension Benefit Obligation (PBO)               |                     |                   |
| a. Current Retirees and Beneficiaries             | \$ 217,098,000      | \$ 236,096,000    |
| b. Terminated Vested Participants                 | 21,775,000          | 22,631,000        |
| c. Active Participants' Accumulated Contributions | 56,968,000          | 62,273,000        |
| d. Active Participants' Employer Financed Portion | 224,811,000         | 249,421,000       |
| e. Total Pension Benefit Obligation               | \$ 520,652,000      | \$ 570,421,000    |
| f. Other Designated Reserves                      | 65,641,000          | 66,413,000        |
| g. Total Benefit Obligations                      | \$ 586,293,000      | \$ 636,834,000    |
| 2. Net Value of Assets At:                        |                     |                   |
| a. Book   | \$ 516,671,000      | \$ 586,697,000    |
| b. Market   | \$ 544,797,000      | \$ 708,887,000    |
| 3. Funding Ratio At:                              |                     |                   |
| a. Book   | 88.1%               | 92.1%             |
| b. Market   | 92.9%               | 111.3%            |

258,727

\* All December 31, 1994 figures exclude APCD members.

The increase in the funding ratio shown on the previous page is primarily attributable to the higher than expected earnings on assets for the six month period ending December 31, 1995.

For comparative purposes, we have provided below a summary of the current GASB #5 ratios and the underlying interest rate assumptions for all of the 1937 Act counties.

| County               | Valuation Date  | Interest Rate | GASB #5 Ratio |
|----------------------|-----------------|---------------|---------------|
| Alameda              | 01/01/95        | 8.00%         | 92%           |
| Contra Costa         | 01/01/95        | 8.00%         | 93%           |
| Fresno               | 07/01/94        | 8.25%         | 95%           |
| Imperial             | 07/01/94        | 8.00%         | 78%           |
| Kern                 | 07/01/92        | 8.25%         | 77%           |
| Los Angeles          | 07/01/92        | 8.00%         | 98%           |
| Marin                | 07/01/94        | 8.00%         | 70%           |
| Mendocino            | 07/01/95        | 8.00%         | 67%           |
| Merced               | 07/01/94        | 7.50%         | 69%           |
| Orange               | 01/01/93        | 8.00%         | 101%          |
| Sacramento           | 07/01/94        | 8.00%         | 74%           |
| San Bernardino       | 07/01/95        | 8.00%         | 80%           |
| San Diego            | 07/01/94        | 8.00%         | 104%          |
| San Joaquin          | 01/01/95        | 8.25%         | 92%           |
| San Mateo            | 07/01/94        | 8.00%         | 74%           |
| <b>Santa Barbara</b> | <b>01/01/96</b> | <b>8.00%</b>  | <b>92%</b>    |
| Sonoma               | 01/01/95        | 8.00%         | 101%          |
| Stanislaus           | 07/01/94        | 8.00%         | 82%           |
| Tulare               | 07/01/95        | 8.00%         | 101%          |
| Ventura              | 07/01/94        | 8.25%         | 86%           |
| Average              |                 | 8.03%         | 86%           |

Note: All of the GASB #5 ratios are based on assets at cost value except for Sacramento (accounting value), San Bernardino (actuarial value), and Tulare (market value).

**SECTION VI - APPENDIX**

## SCHEDULE 1

### SUMMARY OF ACTUARIAL ASSUMPTIONS

The Entry Age Normal Actuarial Cost Method was used in conjunction with the following actuarial assumptions. The UAAL is being funded over 10 years from the December 31, 1995 valuation date.

1. Interest: 8.00% per annum.
2. Interest Credited to Employee Accounts: 8.00% per annum.
3. Inflation: 4.75% per annum.
4. Asset Valuation: Actuarial book value.
5. Salary Scale: See Schedule 9
6. Spouses and Dependents: 80% of male employees and 50% of female employees assumed married at retirement, with wives assumed three years younger than husbands.
7. Rates of Termination of Employment: See Schedule 6
8. Years of Life Expectancy After Retirement: See Schedule 7
9. Years of Life Expectancy After Disability: See Schedule 7
10. Life Expectancy After Retirement for Employee Contribution Rate Purposes
  - General Members: 1983 Group Annuity Table for Males, set back two years.
  - Safety Members: 1983 Group Annuity Table for Males, set ahead one year.

## SCHEDULE 2

### SUMMARY OF MAJOR PLAN PROVISIONS

#### 1. ELIGIBILITY

First of pay period following date of employment.

#### 2. DEFINITION OF SALARY

Highest 12 consecutive months of compensation earnable for Plan 1 members and highest 36 consecutive months of compensation earnable for Plan 2 and Plan 3 members.

#### 3. SERVICE RETIREMENT

- Normal retirement age

Ages 57, 65, 50, and 55 for Sections 31676.1 (General Plans 1 and 3), 31486.4 (General Plan 2), 31664 (Safety and Probation), and Section 31676.15 (APCD Plans 1 and 2), respectively.

- Early retirement

Age 50 and 10 years for Plans 1 and 3 and APCD Plan 2 and age 55 and 10 years for General Plan 2; or 30 years for General Plans 1 and 3, and 20 years for Safety and Probation.

- Benefit

- 1/60 times final average salary per year of service for General Plans 1 and 3,
- 2% of final average salary per year of service (max. 35 years) plus 1% of final average salary per year of service in excess of 35 (max. 10 years) reduced by 1/35 of Social Security benefit at age 65 per year of service (max. 35 years) for General Plan 2, and
- 1/50 times final average salary per year of service for Safety, Probation and APCD.

- Benefit adjustments

Reduced for retirement before ages 57, 65, 50, and 55 for Sections 31676.1, 31486.4, 31664, and 31676.15, respectively. Reductions for Section 31486.4 are actuarial equivalents.

Increased for retirement after ages 57, 50 and 55 for Sections 31676.1, 31664 and 31676.15, respectively.



**4. DISABILITY RETIREMENT**

- Nonservice connected for Plans 1 and 3 and APCD Plan 2  
  
1.5% (General Plans 1 and 3) and 1.8% (Safety, Probation and APCD) of final average salary per year of service, with a maximum of 33-1/3% if projected service is used (age 65 for General Plans 1 and 3 and APCD, age 55 for Safety and Probation), or 90% of the accrued service retirement benefit without a benefit adjustment.
- Service connected for Plans 1 and 3 and APCD Plan 2  
  
Greater of 50% of final average salary or service retirement benefit (if eligible).
- Benefit for General Plan 2  
  
60% of salary provided outside of the Plan. Payments are reduced by other disability income benefits. Service retirement at age 65 (credit given toward service retirement while disabled under the LTD plan).

**5. DEATH BEFORE RETIREMENT**

- Nonservice connected before eligible to retire, for Plans 1 and 3 and APCD Plan 2
  - refund of contributions plus 1/12 of last years' salary per year of service up to 6 years.
- Eligible for nonservice connected disability or service retirement for Plans 1 and 3 and APCD Plan 2
  - 60% of member's accrued allowance.
- Service connected for Plans 1 and 3 and APCD Plan 2
  - 50% of salary.
- Benefit for General Plan 2
  - 1/12 of last years' salary per year of service up to 6 years.

**6. DEATH AFTER RETIREMENT**

- \$1,000 lump sum death benefit for Plans 1 and 3 and APCD Plan 2.
- Service retirement or nonservice connected disability
  - 60% of member's allowance payable to an eligible spouse for Plans 1 and 3 and APCD Plan 2.
  - 50% of member's allowance payable to an eligible spouse for General Plan 2.

- Service connected disability
  - 100% of member's allowance payable to an eligible spouse for Plans 1 and 3 and APCD Plan 2.
  - 50% of member's allowance payable to an eligible spouse for General Plan 2.

**7. VESTING**

- Must leave contributions on deposit.
- Five years of service for Plans 1 and 3 and APCD Plan 2.
- Ten years of service for General Plan 2.

**8. MEMBERS' CONTRIBUTIONS**

- Based on entry age.
- Half rates for General, Safety and APCD Plans 1. Full rates for General and Safety Plans 3, Probation, and APCD Plan 2. General Plan 2 is noncontributory.

**9. MAXIMUM BENEFIT**

- 100% of final average salary for Plans 1 and 3 and APCD Plan 2.
- Benefit and Social Security combined cannot exceed 70% of final average salary if service is less than 35, otherwise 80% for General Plan 2.

**10. COST-OF-LIVING**

- "Automatic" 3% COLA for Plans 1 and 3 and APCD Plan 2.
- None for General Plan 2.

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 1

| CURRENT AGE | YEARS OF SERVICE |        |        |        |        |        |           | TOTAL  |
|-------------|------------------|--------|--------|--------|--------|--------|-----------|--------|
|             | 0-4              | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30 & Over |        |
| Below 19    | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
| 20-24       | 40               | 2      | 0      | 0      | 0      | 0      | 0         | 42     |
|             | 24,705           | 27,311 | 0      | 0      | 0      | 0      | 0         | 24,829 |
| 25-29       | 137              | 56     | 2      | 0      | 0      | 0      | 0         | 195    |
|             | 29,487           | 30,882 | 29,870 | 0      | 0      | 0      | 0         | 29,892 |
| 30-34       | 139              | 148    | 36     | 0      | 0      | 0      | 0         | 323    |
|             | 32,944           | 35,084 | 34,512 | 0      | 0      | 0      | 0         | 34,099 |
| 35-39       | 138              | 139    | 84     | 32     | 0      | 0      | 0         | 393    |
|             | 37,040           | 38,485 | 40,554 | 36,006 | 0      | 0      | 0         | 38,218 |
| 40-44       | 140              | 145    | 85     | 59     | 9      | 0      | 0         | 438    |
|             | 36,700           | 40,650 | 42,522 | 48,684 | 37,939 | 0      | 0         | 40,777 |
| 45-49       | 104              | 130    | 93     | 63     | 37     | 12     | 1         | 440    |
|             | 38,732           | 42,136 | 51,412 | 47,868 | 48,646 | 37,622 | 30,611    | 44,511 |
| 50-54       | 73               | 92     | 53     | 46     | 28     | 14     | 7         | 313    |
|             | 35,332           | 45,696 | 46,625 | 43,892 | 46,270 | 50,700 | 52,421    | 43,597 |
| 55-59       | 38               | 49     | 29     | 35     | 21     | 17     | 12        | 201    |
|             | 36,911           | 35,150 | 40,932 | 44,102 | 44,795 | 46,454 | 51,046    | 40,789 |
| 60-64       | 19               | 30     | 18     | 17     | 7      | 5      | 3         | 99     |
|             | 34,885           | 35,794 | 38,431 | 36,426 | 50,035 | 49,548 | 43,012    | 38,128 |
| 65-69       | 10               | 7      | 4      | 3      | 4      | 1      | 1         | 30     |
|             | 56,522           | 32,675 | 45,222 | 29,139 | 33,029 | 26,980 | 28,681    | 41,668 |
| 70 & Over   | 3                | 3      | 2      | 2      | 3      | 2      | 1         | 16     |
|             | 15,554           | 59,463 | 28,730 | 67,102 | 34,698 | 26,361 | 31,593    | 37,820 |
| TOTAL       | 841              | 801    | 406    | 257    | 109    | 51     | 25        | 2,490  |
|             | 34,651           | 38,833 | 43,578 | 44,528 | 45,542 | 44,675 | 47,977    | 39,287 |

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 2

| CURRENT AGE | YEARS OF SERVICE |        |        |        |        |        |           | TOTAL  |
|-------------|------------------|--------|--------|--------|--------|--------|-----------|--------|
|             | 0-4              | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30 & Over |        |
| Below 19    | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
| 20-24       | 3                | 0      | 0      | 0      | 0      | 0      | 0         | 3      |
|             | 29,133           | 0      | 0      | 0      | 0      | 0      | 0         | 29,133 |
| 25-29       | 5                | 1      | 0      | 0      | 0      | 0      | 0         | 6      |
|             | 33,392           | 31,976 | 0      | 0      | 0      | 0      | 0         | 33,156 |
| 30-34       | 4                | 9      | 2      | 1      | 0      | 0      | 0         | 16     |
|             | 28,925           | 39,448 | 42,934 | 36,464 | 0      | 0      | 0         | 37,067 |
| 35-39       | 8                | 10     | 9      | 0      | 0      | 0      | 0         | 27     |
|             | 36,885           | 43,117 | 34,880 | 0      | 0      | 0      | 0         | 38,525 |
| 40-44       | 5                | 9      | 7      | 4      | 0      | 0      | 0         | 25     |
|             | 29,632           | 35,859 | 35,811 | 37,535 | 0      | 0      | 0         | 34,868 |
| 45-49       | 4                | 3      | 5      | 4      | 2      | 2      | 0         | 20     |
|             | 35,059           | 50,217 | 32,787 | 37,216 | 42,936 | 46,578 | 0         | 39,136 |
| 50-54       | 1                | 6      | 2      | 1      | 0      | 0      | 0         | 10     |
|             | 34,996           | 46,202 | 56,528 | 26,980 | 0      | 0      | 0         | 45,224 |
| 55-59       | 2                | 3      | 0      | 0      | 1      | 1      | 0         | 7      |
|             | 61,187           | 29,926 | 0      | 0      | 30,353 | 40,204 | 0         | 40,387 |
| 60-64       | 1                | 4      | 3      | 0      | 0      | 0      | 0         | 8      |
|             | 15,810           | 32,106 | 37,220 | 0      | 0      | 0      | 0         | 31,987 |
| 65-69       | 0                | 3      | 1      | 0      | 0      | 0      | 0         | 4      |
|             | 0                | 55,049 | 28,941 | 0      | 0      | 0      | 0         | 48,522 |
| 70 & Over   | 1                | 3      | 0      | 0      | 0      | 0      | 0         | 4      |
|             | 12,457           | 30,878 | 0      | 0      | 0      | 0      | 0         | 26,273 |
| TOTAL       | 34               | 51     | 29     | 10     | 3      | 3      | 0         | 130    |
|             | 33,505           | 40,093 | 36,830 | 36,245 | 38,742 | 44,453 | 0         | 37,416 |

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE GENERAL MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 3

| CURRENT AGE | YEARS OF SERVICE |     |       |       |       |       |           | TOTAL  |
|-------------|------------------|-----|-------|-------|-------|-------|-----------|--------|
|             | 0-4              | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & Over |        |
| Below 19    | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| 20-24       | 32               | 0   | 0     | 0     | 0     | 0     | 0         | 32     |
|             | 22,702           | 0   | 0     | 0     | 0     | 0     | 0         | 22,702 |
| 25-29       | 57               | 0   | 0     | 0     | 0     | 0     | 0         | 57     |
|             | 26,394           | 0   | 0     | 0     | 0     | 0     | 0         | 26,394 |
| 30-34       | 49               | 0   | 0     | 0     | 0     | 0     | 0         | 49     |
|             | 31,900           | 0   | 0     | 0     | 0     | 0     | 0         | 31,900 |
| 35-39       | 44               | 0   | 0     | 0     | 0     | 0     | 0         | 44     |
|             | 33,841           | 0   | 0     | 0     | 0     | 0     | 0         | 33,841 |
| 40-44       | 39               | 0   | 0     | 0     | 0     | 0     | 0         | 39     |
|             | 34,622           | 0   | 0     | 0     | 0     | 0     | 0         | 34,622 |
| 45-49       | 30               | 0   | 0     | 0     | 0     | 0     | 0         | 30     |
|             | 30,354           | 0   | 0     | 0     | 0     | 0     | 0         | 30,354 |
| 50-54       | 19               | 0   | 0     | 0     | 0     | 0     | 0         | 19     |
|             | 45,026           | 0   | 0     | 0     | 0     | 0     | 0         | 45,026 |
| 55-59       | 9                | 0   | 0     | 0     | 0     | 0     | 0         | 9      |
|             | 35,176           | 0   | 0     | 0     | 0     | 0     | 0         | 35,176 |
| 60-64       | 2                | 0   | 0     | 0     | 0     | 0     | 0         | 2      |
|             | 46,917           | 0   | 0     | 0     | 0     | 0     | 0         | 46,917 |
| 65-69       | 3                | 0   | 0     | 0     | 0     | 0     | 0         | 3      |
|             | 43,580           | 0   | 0     | 0     | 0     | 0     | 0         | 43,580 |
| 70 & Over   | 1                | 0   | 0     | 0     | 0     | 0     | 0         | 1      |
|             | 19,308           | 0   | 0     | 0     | 0     | 0     | 0         | 19,308 |
| TOTAL       | 285              | 0   | 0     | 0     | 0     | 0     | 0         | 285    |
|             | 31,438           | 0   | 0     | 0     | 0     | 0     | 0         | 31,438 |

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE SAFETY MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 1

| CURRENT AGE | YEARS OF SERVICE |        |        |        |        |        |           | TOTAL  |
|-------------|------------------|--------|--------|--------|--------|--------|-----------|--------|
|             | 0-4              | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30 & Over |        |
| Below 19    | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
| 20-24       | 4                | 0      | 0      | 0      | 0      | 0      | 0         | 4      |
|             | 38,485           | 0      | 0      | 0      | 0      | 0      | 0         | 38,485 |
| 25-29       | 29               | 24     | 0      | 0      | 0      | 0      | 0         | 53     |
|             | 40,673           | 42,630 | 0      | 0      | 0      | 0      | 0         | 41,559 |
| 30-34       | 28               | 42     | 20     | 1      | 0      | 0      | 0         | 91     |
|             | 42,063           | 45,056 | 46,329 | 40,785 | 0      | 0      | 0         | 44,368 |
| 35-39       | 23               | 39     | 28     | 23     | 0      | 0      | 0         | 113    |
|             | 41,884           | 48,159 | 49,540 | 50,692 | 0      | 0      | 0         | 47,740 |
| 40-44       | 5                | 19     | 24     | 43     | 9      | 0      | 0         | 100    |
|             | 46,981           | 46,556 | 50,862 | 51,356 | 52,067 | 0      | 0         | 50,171 |
| 45-49       | 9                | 8      | 15     | 19     | 37     | 16     | 0         | 104    |
|             | 43,890           | 50,550 | 47,881 | 52,136 | 56,411 | 59,103 | 0         | 53,279 |
| 50-54       | 5                | 7      | 14     | 3      | 21     | 46     | 15        | 111    |
|             | 54,214           | 44,344 | 48,394 | 67,114 | 60,031 | 57,470 | 62,448    | 56,769 |
| 55-59       | 0                | 3      | 0      | 4      | 7      | 8      | 6         | 28     |
|             | 0                | 49,966 | 0      | 53,562 | 56,149 | 55,279 | 56,422    | 54,927 |
| 60-64       | 1                | 2      | 1      | 0      | 2      | 0      | 0         | 6      |
|             | 58,623           | 51,195 | 40,042 | 0      | 46,790 | 0      | 0         | 49,106 |
| 65-69       | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
| 70 & Over   | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0      | 0         | 0      |
| TOTAL       | 104              | 144    | 102    | 93     | 76     | 70     | 21        | 610    |
|             | 42,636           | 46,148 | 48,727 | 51,841 | 56,620 | 57,593 | 60,726    | 49,968 |

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE SAFETY MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 3

| CURRENT AGE | YEARS OF SERVICE |     |       |       |       |       |           | TOTAL  |
|-------------|------------------|-----|-------|-------|-------|-------|-----------|--------|
|             | 0-4              | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & Over |        |
| Below 19    | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| 20-24       | 17               | 0   | 0     | 0     | 0     | 0     | 0         | 17     |
|             | 33,438           | 0   | 0     | 0     | 0     | 0     | 0         | 33,438 |
| 25-29       | 12               | 0   | 0     | 0     | 0     | 0     | 0         | 12     |
|             | 32,534           | 0   | 0     | 0     | 0     | 0     | 0         | 32,534 |
| 30-34       | 5                | 0   | 0     | 0     | 0     | 0     | 0         | 5      |
|             | 31,653           | 0   | 0     | 0     | 0     | 0     | 0         | 31,653 |
| 35-39       | 6                | 0   | 0     | 0     | 0     | 0     | 0         | 6      |
|             | 39,002           | 0   | 0     | 0     | 0     | 0     | 0         | 39,002 |
| 40-44       | 1                | 0   | 0     | 0     | 0     | 0     | 0         | 1      |
|             | 36,516           | 0   | 0     | 0     | 0     | 0     | 0         | 36,516 |
| 45-49       | 2                | 0   | 0     | 0     | 0     | 0     | 0         | 2      |
|             | 27,376           | 0   | 0     | 0     | 0     | 0     | 0         | 27,376 |
| 50-54       | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| 55-59       | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| 60-64       | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| 65-69       | 1                | 0   | 0     | 0     | 0     | 0     | 0         | 1      |
|             | 28,024           | 0   | 0     | 0     | 0     | 0     | 0         | 28,024 |
| 70 & Over   | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
|             | 0                | 0   | 0     | 0     | 0     | 0     | 0         | 0      |
| TOTAL       | 44               | 0   | 0     | 0     | 0     | 0     | 0         | 44     |
|             | 33,419           | 0   | 0     | 0     | 0     | 0     | 0         | 33,419 |

AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE PROBATION MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 1

| CURRENT AGE | YEARS OF SERVICE |        |        |        |        |         |           | TOTAL  |
|-------------|------------------|--------|--------|--------|--------|---------|-----------|--------|
|             | 0-4              | 5-9    | 10-14  | 15-19  | 20-24  | 25-29   | 30 & Over |        |
| Below 19    | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
| 20-24       | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
| 25-29       | 10               | 2      | 0      | 0      | 0      | 0       | 0         | 12     |
|             | 34,090           | 39,811 | 0      | 0      | 0      | 0       | 0         | 35,044 |
| 30-34       | 5                | 11     | 2      | 0      | 0      | 0       | 0         | 18     |
|             | 33,466           | 43,454 | 45,262 | 0      | 0      | 0       | 0         | 40,880 |
| 35-39       | 4                | 8      | 11     | 0      | 0      | 0       | 0         | 23     |
|             | 27,730           | 42,842 | 46,197 | 0      | 0      | 0       | 0         | 41,818 |
| 40-44       | 1                | 5      | 9      | 12     | 1      | 0       | 0         | 28     |
|             | 31,027           | 44,423 | 45,270 | 47,243 | 37,862 | 0       | 0         | 45,191 |
| 45-49       | 7                | 8      | 4      | 8      | 6      | 1       | 0         | 34     |
|             | 31,927           | 42,152 | 40,857 | 48,432 | 50,710 | 105,254 | 0         | 44,738 |
| 50-54       | 0                | 8      | 5      | 5      | 3      | 2       | 0         | 23     |
|             | 0                | 41,361 | 46,248 | 48,117 | 52,756 | 65,551  | 0         | 47,482 |
| 55-59       | 1                | 4      | 0      | 0      | 1      | 3       | 1         | 10     |
|             | 31,916           | 35,492 | 0      | 0      | 35,414 | 55,055  | 48,920    | 42,338 |
| 60-64       | 0                | 0      | 1      | 0      | 0      | 0       | 0         | 1      |
|             | 0                | 0      | 47,719 | 0      | 0      | 0       | 0         | 47,719 |
| 65-69       | 0                | 0      | 1      | 0      | 0      | 0       | 0         | 1      |
|             | 0                | 0      | 44,724 | 0      | 0      | 0       | 0         | 44,724 |
| 70 & Over   | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0      | 0       | 0         | 0      |
| TOTAL       | 28               | 46     | 33     | 25     | 11     | 6       | 1         | 150    |
|             | 32,342           | 42,012 | 45,249 | 47,798 | 48,709 | 66,920  | 48,920    | 43,417 |



AGE AND SERVICE DISTRIBUTION WITH ANNUAL AVERAGE SALARY  
OF ACTIVE APCD MEMBERS  
AS OF DECEMBER 31, 1995  
PLAN 1

| CURRENT AGE | YEARS OF SERVICE |        |        |        |       |       |           | TOTAL  |
|-------------|------------------|--------|--------|--------|-------|-------|-----------|--------|
|             | 0-4              | 5-9    | 10-14  | 15-19  | 20-24 | 25-29 | 30 & Over |        |
| Below 19    | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
| 20-24       | 1                | 0      | 0      | 0      | 0     | 0     | 0         | 1      |
|             | 39,873           | 0      | 0      | 0      | 0     | 0     | 0         | 39,873 |
| 25-29       | 4                | 1      | 0      | 0      | 0     | 0     | 0         | 5      |
|             | 43,372           | 28,280 | 0      | 0      | 0     | 0     | 0         | 40,354 |
| 30-34       | 5                | 11     | 0      | 0      | 0     | 0     | 0         | 16     |
|             | 42,113           | 41,738 | 0      | 0      | 0     | 0     | 0         | 41,855 |
| 35-39       | 3                | 11     | 3      | 0      | 0     | 0     | 0         | 17     |
|             | 55,057           | 59,304 | 62,270 | 0      | 0     | 0     | 0         | 59,078 |
| 40-44       | 4                | 9      | 3      | 1      | 0     | 0     | 0         | 17     |
|             | 42,636           | 54,056 | 71,372 | 59,771 | 0     | 0     | 0         | 54,761 |
| 45-49       | 5                | 7      | 0      | 1      | 0     | 0     | 0         | 13     |
|             | 40,793           | 65,579 | 0      | 61,851 | 0     | 0     | 0         | 55,759 |
| 50-54       | 2                | 1      | 0      | 0      | 0     | 0     | 0         | 3      |
|             | 29,041           | 47,411 | 0      | 0      | 0     | 0     | 0         | 35,164 |
| 55-59       | 0                | 4      | 1      | 0      | 0     | 0     | 0         | 5      |
|             | 0                | 56,829 | 51,361 | 0      | 0     | 0     | 0         | 55,735 |
| 60-64       | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
| 65-69       | 0                | 2      | 0      | 0      | 0     | 0     | 0         | 2      |
|             | 0                | 25,653 | 0      | 0      | 0     | 0     | 0         | 25,653 |
| 70 & Over   | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
|             | 0                | 0      | 0      | 0      | 0     | 0     | 0         | 0      |
| TOTAL       | 24               | 46     | 7      | 2      | 0     | 0     | 0         | 79     |
|             | 42,570           | 52,420 | 64,612 | 60,811 | 0     | 0     | 0         | 50,721 |

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED GENERAL MEMBERS  
AS OF DECEMBER 31, 1995  
MALES

| CURRENT AGE | YEARS OF RETIREMENT |        |        |        |        |        |           | TOTAL  |
|-------------|---------------------|--------|--------|--------|--------|--------|-----------|--------|
|             | 0-4                 | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30 & Over |        |
| Below 45    | 3                   | 0      | 0      | 0      | 0      | 0      | 0         | 3      |
|             | 5,655               | 0      | 0      | 0      | 0      | 0      | 0         | 5,655  |
| 45-49       | 1                   | 3      | 0      | 0      | 0      | 0      | 0         | 4      |
|             | 9,120               | 11,215 | 0      | 0      | 0      | 0      | 0         | 10,691 |
| 50-54       | 11                  | 1      | 1      | 0      | 1      | 0      | 0         | 14     |
|             | 10,012              | 9,239  | 12,100 | 0      | 10,902 | 0      | 0         | 10,170 |
| 55-59       | 34                  | 19     | 1      | 1      | 0      | 0      | 0         | 55     |
|             | 13,570              | 10,281 | 7,899  | 9,077  | 0      | 0      | 0         | 12,249 |
| 60-64       | 44                  | 21     | 14     | 4      | 0      | 0      | 1         | 84     |
|             | 21,358              | 11,259 | 5,896  | 9,483  | 0      | 0      | 7,432     | 15,525 |
| 65-69       | 39                  | 53     | 32     | 16     | 1      | 0      | 0         | 141    |
|             | 22,733              | 20,285 | 10,554 | 6,090  | 11,138 | 0      | 0         | 17,078 |
| 70-74       | 12                  | 33     | 44     | 40     | 7      | 0      | 0         | 136    |
|             | 10,084              | 15,327 | 15,104 | 7,068  | 4,480  | 0      | 0         | 11,805 |
| 75-79       | 1                   | 5      | 46     | 46     | 12     | 2      | 0         | 112    |
|             | 5,224               | 26,515 | 12,169 | 11,128 | 6,654  | 12,593 | 0         | 11,737 |
| 80-84       | 2                   | 2      | 9      | 36     | 13     | 4      | 0         | 66     |
|             | 6,607               | 12,587 | 9,113  | 6,134  | 11,739 | 5,277  | 0         | 7,802  |
| 85 & Over   | 0                   | 0      | 1      | 8      | 17     | 8      | 3         | 37     |
|             | 0                   | 0      | 11,195 | 6,858  | 11,576 | 5,335  | 6,687     | 8,800  |
| TOTAL       | 147                 | 137    | 148    | 151    | 51     | 14     | 4         | 652    |
|             | 17,438              | 16,156 | 11,877 | 8,045  | 9,464  | 6,355  | 6,873     | 12,804 |

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED GENERAL MEMBERS  
AS OF DECEMBER 31, 1995  
FEMALES

| CURRENT AGE | YEARS OF RETIREMENT |        |        |        |       |       |           | TOTAL  |
|-------------|---------------------|--------|--------|--------|-------|-------|-----------|--------|
|             | 0-4                 | 5-9    | 10-14  | 15-19  | 20-24 | 25-29 | 30 & Over |        |
| Below 45    | 4                   | 2      | 1      | 1      | 0     | 0     | 0         | 8      |
|             | 8,077               | 16,586 | 6,199  | 7,417  | 0     | 0     | 0         | 9,887  |
| 45-49       | 1                   | 1      | 0      | 1      | 0     | 0     | 0         | 3      |
|             | 17,841              | 6,405  | 0      | 9,109  | 0     | 0     | 0         | 11,118 |
| 50-54       | 23                  | 3      | 1      | 1      | 0     | 0     | 0         | 28     |
|             | 6,080               | 10,186 | 7,898  | 6,919  | 0     | 0     | 0         | 6,615  |
| 55-59       | 33                  | 14     | 2      | 1      | 2     | 0     | 0         | 52     |
|             | 7,900               | 7,634  | 11,298 | 11,115 | 6,270 | 0     | 0         | 7,958  |
| 60-64       | 55                  | 24     | 15     | 2      | 2     | 1     | 1         | 100    |
|             | 13,924              | 8,300  | 5,186  | 5,433  | 5,046 | 6,131 | 3,145     | 10,730 |
| 65-69       | 60                  | 49     | 28     | 21     | 2     | 0     | 0         | 160    |
|             | 12,049              | 11,339 | 6,986  | 4,303  | 4,379 | 0     | 0         | 9,833  |
| 70-74       | 19                  | 52     | 42     | 46     | 14    | 2     | 0         | 175    |
|             | 11,860              | 12,244 | 8,873  | 4,204  | 5,532 | 4,821 | 0         | 8,658  |
| 75-79       | 5                   | 13     | 41     | 54     | 25    | 5     | 0         | 143    |
|             | 8,640               | 13,801 | 7,731  | 6,500  | 7,198 | 8,941 | 0         | 7,799  |
| 80-84       | 0                   | 1      | 13     | 40     | 31    | 12    | 2         | 99     |
|             | 0                   | 5,210  | 8,267  | 6,029  | 5,852 | 4,201 | 2,422     | 5,965  |
| 85 & Over   | 0                   | 0      | 0      | 7      | 19    | 25    | 9         | 60     |
|             | 0                   | 0      | 0      | 5,046  | 7,159 | 5,522 | 4,249     | 5,794  |
| TOTAL       | 200                 | 159    | 143    | 174    | 95    | 45    | 12        | 828    |
|             | 11,040              | 11,026 | 7,743  | 5,498  | 6,381 | 5,532 | 3,853     | 8,365  |

AVERAGE ANNUAL BENEFIT AND MEMBERSHIP DISTRIBUTION  
OF RETIRED SAFETY MEMBERS  
AS OF DECEMBER 31, 1995  
TOTAL

| CURRENT AGE | YEARS OF RETIREMENT |        |        |        |        |        |           | TOTAL  |
|-------------|---------------------|--------|--------|--------|--------|--------|-----------|--------|
|             | 0-4                 | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30 & Over |        |
| Below 45    | 0                   | 2      | 1      | 1      | 0      | 0      | 0         | 4      |
|             | 0                   | 16,965 | 20,294 | 14,525 | 0      | 0      | 0         | 17,187 |
| 45-49       | 3                   | 2      | 2      | 5      | 0      | 0      | 0         | 12     |
|             | 24,289              | 25,629 | 18,394 | 13,472 | 0      | 0      | 0         | 19,023 |
| 50-54       | 19                  | 6      | 6      | 6      | 5      | 0      | 0         | 42     |
|             | 24,649              | 23,728 | 14,756 | 11,090 | 10,791 | 0      | 0         | 19,517 |
| 55-59       | 23                  | 14     | 11     | 15     | 5      | 1      | 0         | 69     |
|             | 36,151              | 25,684 | 16,764 | 14,268 | 11,874 | 8,197  | 0         | 24,015 |
| 60-64       | 19                  | 13     | 7      | 4      | 2      | 1      | 0         | 46     |
|             | 30,981              | 30,861 | 23,727 | 11,887 | 13,894 | 9,519  | 0         | 26,973 |
| 65-69       | 3                   | 3      | 4      | 4      | 4      | 2      | 0         | 20     |
|             | 24,783              | 37,926 | 27,667 | 13,435 | 11,109 | 9,464  | 0         | 20,795 |
| 70-74       | 3                   | 1      | 2      | 7      | 9      | 2      | 2         | 26     |
|             | 37,271              | 7,727  | 37,685 | 14,763 | 11,166 | 8,697  | 6,583     | 16,512 |
| 75-79       | 0                   | 0      | 2      | 2      | 6      | 2      | 0         | 12     |
|             | 0                   | 0      | 12,446 | 25,747 | 17,747 | 10,170 | 0         | 16,934 |
| 80-84       | 0                   | 0      | 0      | 0      | 1      | 1      | 1         | 3      |
|             | 0                   | 0      | 0      | 0      | 5,545  | 22,575 | 3,156     | 10,425 |
| 85 & Over   | 0                   | 0      | 0      | 0      | 0      | 4      | 6         | 10     |
|             | 0                   | 0      | 0      | 0      | 0      | 10,756 | 10,510    | 10,608 |
| TOTAL       | 70                  | 41     | 35     | 44     | 32     | 13     | 9         | 244    |
|             | 30,678              | 27,069 | 20,201 | 14,058 | 12,440 | 10,767 | 8,820     | 21,313 |

**SCHEDULE 4**  
**SUMMARY OF ANNUAL RETIREMENT ALLOWANCES**  
as of December 31, 1995

**GENERAL MEMBERS**

|                      | <u>Number</u>       | <u>Annual Allowance</u>     |
|----------------------|---------------------|-----------------------------|
| <b>Service</b>       |                     |                             |
| Males                | 558                 | \$ 7,549,352                |
| Females              | 626                 | 5,516,900                   |
| Total                | <u>1,184</u>        | <u>\$ 13,066,252</u>        |
| <b>Disability</b>    |                     |                             |
| Males                | 54                  | \$ 595,148                  |
| Females              | 27                  | 285,950                     |
| Total                | <u>81</u>           | <u>\$ 881,098</u>           |
| <b>Beneficiaries</b> |                     |                             |
| Males                | 40                  | \$ 203,958                  |
| Females              | 175                 | 1,123,521                   |
| Total                | <u>215</u>          | <u>\$ 1,327,479</u>         |
| <b>Total</b>         | <u><u>1,480</u></u> | <u><u>\$ 15,274,829</u></u> |

**SAFETY MEMBERS**

|                      | <u>Number</u>     | <u>Annual Allowance</u>    |
|----------------------|-------------------|----------------------------|
| <b>Service</b>       |                   |                            |
| Males                | 114               | \$ 3,211,829               |
| Females              | 6                 | 135,802                    |
| Total                | <u>120</u>        | <u>\$ 3,347,631</u>        |
| <b>Disability</b>    |                   |                            |
| Males                | 74                | \$ 1,262,166               |
| Females              | 3                 | 32,706                     |
| Total                | <u>77</u>         | <u>\$ 1,294,872</u>        |
| <b>Beneficiaries</b> |                   |                            |
| Males                | 5                 | \$ 52,203                  |
| Females              | 42                | 505,629                    |
| Total                | <u>47</u>         | <u>\$ 557,832</u>          |
| <b>Total</b>         | <u><u>244</u></u> | <u><u>\$ 5,200,335</u></u> |

**SCHEDULE 5**  
(Current Assumptions)

**GENERAL PLAN 1 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age  | Rate   | Entry Age | Rate   |
|--|--------|-----------|--------|
| 20   | 2.82 % | 40        | 3.18 % |
| 21   | 2.83   | 41        | 3.21   |
| 22   | 2.83   | 42        | 3.24   |
| 23   | 2.84   | 43        | 3.28   |
| 24   | 2.84   | 44        | 3.31   |
| 25   | 2.85   | 45        | 3.35   |
| 26   | 2.87   | 46        | 3.39   |
| 27   | 2.88   | 47        | 3.43   |
| 28   | 2.89   | 48        | 3.47   |
| 29   | 2.91   | 49        | 3.51   |
| 30   | 2.93   | 50        | 3.55   |
| 31   | 2.95   | 51        | 3.59   |
| 32   | 2.97   | 52        | 3.63   |
| 33   | 2.99   | 53        | 3.68   |
| 34   | 3.01   | 54        | 3.73   |
| 35   | 3.04   | 55        | 3.77   |
| 36   | 3.06   | 56        | 3.82   |
| 37   | 3.09   | 57        | 3.87   |
| 38   | 3.12   | 58        | 3.92   |
| 39   | 3.15   | 59 +      | 3.98   |
| <p>INTEREST: 8.00%</p> <p>INFLATION: 4.75%</p> <p>COLA: 3.00%</p> <p>MORTALITY: 83 GA (Male, -2)</p> |        |           |        |

**SCHEDULE 5**  
(Current Assumptions)

**GENERAL PLAN 3 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age  | Rate   | Entry Age | Rate   |
|--|--------|-----------|--------|
| 20   | 5.37 % | 40        | 6.05 % |
| 21   | 5.38   | 41        | 6.11   |
| 22   | 5.39   | 42        | 6.18   |
| 23   | 5.40   | 43        | 6.24   |
| 24   | 5.41   | 44        | 6.31   |
| 25   | 5.43   | 45        | 6.38   |
| 26   | 5.45   | 46        | 6.45   |
| 27   | 5.48   | 47        | 6.52   |
| 28   | 5.50   | 48        | 6.59   |
| 29   | 5.54   | 49        | 6.67   |
| 30   | 5.57   | 50        | 6.75   |
| 31   | 5.61   | 51        | 6.83   |
| 32   | 5.65   | 52        | 6.92   |
| 33   | 5.69   | 53        | 7.00   |
| 34   | 5.73   | 54        | 7.09   |
| 35   | 5.78   | 55        | 7.18   |
| 36   | 5.83   | 56        | 7.27   |
| 37   | 5.88   | 57        | 7.37   |
| 38   | 5.94   | 58        | 7.47   |
| 39   | 5.99   | 59 +      | 7.57   |
| <p>INTEREST: 8.00%</p> <p>INFLATION: 4.75%</p> <p>COLA: 3.00%</p> <p>MORTALITY: 83 GA (Male, -2)</p> |        |           |        |

**SCHEDULE 5**  
(Current Assumptions)

**SAFETY PLAN 1 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age  | Rate   | Entry Age | Rate   |
|--|--------|-----------|--------|
| 20   | 4.20 % | 35        | 4.72 % |
| 21   | 4.23   | 36        | 4.76   |
| 22   | 4.26   | 37        | 4.80   |
| 23   | 4.30   | 38        | 4.83   |
| 24   | 4.33   | 39        | 4.87   |
| 25   | 4.37   | 40        | 4.91   |
| 26   | 4.40   | 41        | 4.95   |
| 27   | 4.44   | 42        | 4.98   |
| 28   | 4.47   | 43        | 5.02   |
| 29   | 4.51   | 44        | 5.06   |
| 30   | 4.54   | 45        | 5.09   |
| 31   | 4.58   | 46        | 5.13   |
| 32   | 4.61   | 47        | 5.16   |
| 33   | 4.65   | 48        | 5.20   |
| 34   | 4.69   | 49 +      | 5.24   |
| <p>INTEREST: 8.00%</p> <p>INFLATION: 4.75%</p> <p>COLA: 3.00%</p> <p>MORTALITY: 83 GA (Male, +1)</p> |        |           |        |



**SCHEDULE 5**  
(Current Assumptions)

**SAFETY AND PROBATION PLAN 3 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age  | Rate   | Entry Age | Rate   |
|--|--------|-----------|--------|
| 20   | 7.89 % | 35        | 8.88 % |
| 21   | 7.96   | 36        | 8.95   |
| 22   | 8.02   | 37        | 9.02   |
| 23   | 8.09   | 38        | 9.09   |
| 24   | 8.15   | 39        | 9.16   |
| 25   | 8.22   | 40        | 9.23   |
| 26   | 8.28   | 41        | 9.30   |
| 27   | 8.35   | 42        | 9.37   |
| 28   | 8.41   | 43        | 9.44   |
| 29   | 8.48   | 44        | 9.51   |
| 30   | 8.54   | 45        | 9.58   |
| 31   | 8.61   | 46        | 9.64   |
| 32   | 8.68   | 47        | 9.71   |
| 33   | 8.74   | 48        | 9.78   |
| 34   | 8.81   | 49 +      | 9.85   |
| <p>INTEREST: 8.00%</p> <p>INFLATION: 4.75%</p> <p>COLA: 3.00%</p> <p>MORTALITY: 83 GA (Male, +1)</p> |        |           |        |

**SCHEDULE 5**  
(Current Assumptions)

**PROBATION PLAN 1 CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age   | Rate             | Entry Age | Rate   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
|---|------------------|-----------|--------|-----------|-------|--|--|------------|-------|--|--|-------|-------|--|--|------------|------------------|--|--|
| 20  | 8.39 %           | 35        | 9.45 % |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 21  | 8.46             | 36        | 9.52   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 22  | 8.53             | 37        | 9.59   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 23  | 8.60             | 38        | 9.67   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 24  | 8.67             | 39        | 9.74   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 25  | 8.74             | 40        | 9.82   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 26  | 8.81             | 41        | 9.89   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 27  | 8.88             | 42        | 9.97   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 28  | 8.95             | 43        | 10.04  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 29  | 9.01             | 44        | 10.11  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 30  | 9.08             | 45        | 10.18  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 31  | 9.16             | 46        | 10.25  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 32  | 9.23             | 47        | 10.33  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 33  | 9.30             | 48        | 10.40  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 34  | 9.37             | 49 +      | 10.47  |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| <table> <tr> <td>INTEREST:</td> <td>8.00%</td> <td></td> <td></td> </tr> <tr> <td>INFLATION:</td> <td>4.75%</td> <td></td> <td></td> </tr> <tr> <td>COLA:</td> <td>3.00%</td> <td></td> <td></td> </tr> <tr> <td>MORTALITY:</td> <td>83 GA (Male, +1)</td> <td></td> <td></td> </tr> </table> |                  |           |        | INTEREST: | 8.00% |  |  | INFLATION: | 4.75% |  |  | COLA: | 3.00% |  |  | MORTALITY: | 83 GA (Male, +1) |  |  |
| INTEREST:   | 8.00%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| INFLATION:  | 4.75%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| COLA:   | 3.00%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| MORTALITY:  | 83 GA (Male, +1) |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |

**SCHEDULE 5**  
(Current Assumptions)

**APCD PLAN 1 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age  | Rate   | Entry Age | Rate   |
|--|--------|-----------|--------|
| 20   | 3.98 % | 38        | 4.34 % |
| 21   | 3.98   | 39        | 4.37   |
| 22   | 3.98   | 40        | 4.41   |
| 23   | 3.99   | 41        | 4.46   |
| 24   | 4.00   | 42        | 4.50   |
| 25   | 4.01   | 43        | 4.54   |
| 26   | 4.02   | 44        | 4.59   |
| 27   | 4.03   | 45        | 4.63   |
| 28   | 4.05   | 46        | 4.68   |
| 29   | 4.07   | 47        | 4.73   |
| 30   | 4.09   | 48        | 4.78   |
| 31   | 4.12   | 49        | 4.83   |
| 32   | 4.14   | 50        | 4.89   |
| 33   | 4.17   | 51        | 4.95   |
| 34   | 4.20   | 52        | 5.00   |
| 35   | 4.23   | 53        | 5.06   |
| 36   | 4.26   | 54+       | 5.12   |
| 37   | 4.30   |           |        |
| <p>INTEREST: 8.00%</p> <p>INFLATION: 4.75%</p> <p>COLA: 3.00%</p> <p>MORTALITY: 83 GA (Male, -2)</p> |        |           |        |

**SCHEDULE 5**  
(Current Assumptions)

**APCD PLAN 2 MEMBERS' CONTRIBUTION RATES**  
(expressed as a percentage of biweekly compensation)

| Entry Age   | Rate             | Entry Age | Rate   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
|---|------------------|-----------|--------|-----------|-------|--|--|------------|-------|--|--|-------|-------|--|--|------------|------------------|--|--|
| 20  | 7.55 %           | 38        | 8.22 % |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 21  | 7.55             | 39        | 8.29   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 22  | 7.56             | 40        | 8.37   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 23  | 7.56             | 41        | 8.45   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 24  | 7.58             | 42        | 8.53   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 25  | 7.60             | 43        | 8.61   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 26  | 7.62             | 44        | 8.70   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 27  | 7.65             | 45        | 8.79   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 28  | 7.68             | 46        | 8.88   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 29  | 7.72             | 47        | 8.97   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 30  | 7.76             | 48        | 9.07   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 31  | 7.80             | 49        | 9.17   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 32  | 7.85             | 50        | 9.27   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 33  | 7.91             | 51        | 9.38   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 34  | 7.96             | 52        | 9.49   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 35  | 8.02             | 53        | 9.60   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 36  | 8.09             | 54+       | 9.71   |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| 37  | 8.15             |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| <table> <tr> <td>INTEREST:</td> <td>8.00%</td> <td></td> <td></td> </tr> <tr> <td>INFLATION:</td> <td>4.75%</td> <td></td> <td></td> </tr> <tr> <td>COLA:</td> <td>3.00%</td> <td></td> <td></td> </tr> <tr> <td>MORTALITY:</td> <td>83 GA (Male, -2)</td> <td></td> <td></td> </tr> </table> |                  |           |        | INTEREST: | 8.00% |  |  | INFLATION: | 4.75% |  |  | COLA: | 3.00% |  |  | MORTALITY: | 83 GA (Male, -2) |  |  |
| INTEREST:   | 8.00%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| INFLATION:  | 4.75%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| COLA:   | 3.00%            |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |
| MORTALITY:  | 83 GA (Male, -2) |           |        |           |       |  |  |            |       |  |  |       |       |  |  |            |                  |  |  |

## SCHEDULE 6

### PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE

The following pages indicate the probability of separation from active service for each of eight separate sources of termination:

- *Withdrawal:* member terminates and elects refund of member contributions.
- *Vested termination:* member terminates and contributions are left on deposit.
- *Ordinary death:* member dies prior to eligibility for retirement; death not employment-related.
- *Ordinary disability:* member receives disability retirement; disability not employment-related.
- *Service retirement:* member retires after satisfaction of requirements of age and/or service for reasons other than disability.
- *Duty disability:* member receives disability retirement; disability is employment-related.
- *Duty death:* member dies prior to retirement; death is employment-related.
- *Death while eligible:* member dies prior to retirement but after satisfaction of age and/or service requirements for service retirement.

The probabilities shown for each cause of termination represent the probability that a given member will terminate at a particular age for the indicated reason. For example, if the probability of withdrawal at age 25 is .1500, then we are assuming that 15.0% of the active members at age 25 will terminate without vested rights during the next year.

**SCHEDULE 6**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**GENERAL MEMBERS – FEMALES**  
(Current Assumptions)

| Age | Withdrawal | Ordinary<br>Death | Ordinary<br>Disability | Service | Death<br>While<br>Eligible | Duty<br>Death | Duty<br>Disability | Terminated<br>Vested |
|-----|------------|-------------------|------------------------|---------|----------------------------|---------------|--------------------|----------------------|
| 20  | .1725      | .0001             | .00000                 | .00000  | .0000                      | .0001         | .00008             | .0000                |
| 21  | .1650      | .0001             | .00000                 | .00000  | .0000                      | .0001         | .00008             | .0000                |
| 22  | .1575      | .0001             | .00000                 | .00000  | .0000                      | .0001         | .00008             | .0000                |
| 23  | .1475      | .0001             | .00000                 | .00000  | .0000                      | .0001         | .00008             | .0000                |
| 24  | .1375      | .0001             | .00000                 | .00000  | .0000                      | .0001         | .00008             | .0000                |
| 25  | .1325      | .0001             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0000                |
| 26  | .1300      | .0001             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0000                |
| 27  | .1250      | .0002             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0040                |
| 28  | .1200      | .0002             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0060                |
| 29  | .1150      | .0002             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0080                |
| 30  | .1100      | .0002             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0100                |
| 31  | .1050      | .0002             | .00008                 | .00000  | .0001                      | .0001         | .00008             | .0120                |
| 32  | .1000      | .0002             | .00015                 | .00000  | .0001                      | .0001         | .00008             | .0140                |
| 33  | .0950      | .0002             | .00015                 | .00000  | .0001                      | .0001         | .00008             | .0160                |
| 34  | .0910      | .0002             | .00015                 | .00000  | .0001                      | .0001         | .00008             | .0170                |
| 35  | .0870      | .0003             | .00022                 | .00000  | .0001                      | .0001         | .00016             | .0180                |
| 36  | .0820      | .0003             | .00022                 | .00000  | .0001                      | .0001         | .00016             | .0180                |
| 37  | .0760      | .0003             | .00022                 | .00000  | .0001                      | .0001         | .00024             | .0180                |
| 38  | .0690      | .0003             | .00022                 | .00000  | .0001                      | .0001         | .00024             | .0180                |
| 39  | .0620      | .0003             | .00022                 | .00000  | .0001                      | .0001         | .00032             | .0180                |
| 40  | .0550      | .0004             | .00030                 | .00000  | .0001                      | .0001         | .00040             | .0185                |
| 41  | .0500      | .0004             | .00038                 | .00000  | .0001                      | .0001         | .00048             | .0190                |
| 42  | .0450      | .0004             | .00038                 | .00000  | .0001                      | .0001         | .00056             | .0190                |
| 43  | .0400      | .0004             | .00052                 | .00000  | .0001                      | .0001         | .00064             | .0190                |
| 44  | .0360      | .0004             | .00060                 | .00000  | .0001                      | .0001         | .00064             | .0190                |
| 45  | .0320      | .0005             | .00068                 | .00000  | .0002                      | .0001         | .00072             | .0190                |
| 46  | .0300      | .0005             | .00075                 | .00000  | .0002                      | .0001         | .00072             | .0190                |
| 47  | .0290      | .0005             | .00075                 | .00000  | .0002                      | .0001         | .00080             | .0185                |
| 48  | .0280      | .0006             | .00082                 | .00000  | .0003                      | .0001         | .00088             | .0185                |
| 49  | .0270      | .0006             | .00090                 | .00000  | .0003                      | .0001         | .00096             | .0180                |
| 50  | .0260      | .0006             | .00097                 | .02000  | .0004                      | .0001         | .00096             | .0175                |
| 51  | .0250      | .0006             | .00105                 | .01200  | .0005                      | .0001         | .00104             | .0165                |
| 52  | .0240      | .0007             | .00112                 | .01200  | .0006                      | .0001         | .00112             | .0150                |
| 53  | .0230      | .0008             | .00112                 | .01300  | .0007                      | .0001         | .00120             | .0130                |
| 54  | .0220      | .0009             | .00120                 | .01300  | .0008                      | .0001         | .00128             | .0100                |
| 55  | .0210      | .0010             | .00127                 | .05000  | .0009                      | .0001         | .00136             | .0080                |
| 56  | .0200      | .0011             | .00135                 | .03000  | .0010                      | .0001         | .00144             | .0060                |
| 57  | .0190      | .0012             | .00142                 | .02500  | .0011                      | .0001         | .00144             | .0050                |
| 58  | .0180      | .0014             | .00157                 | .03500  | .0012                      | .0001         | .00152             | .0040                |
| 59  | .0170      | .0016             | .00172                 | .04000  | .0013                      | .0001         | .00160             | .0040                |
| 60  | .0165      | .0018             | .00187                 | .06000  | .0014                      | .0001         | .00168             | .0040                |
| 61  | .0155      | .0020             | .00203                 | .10000  | .0015                      | .0001         | .00176             | .0040                |
| 62  | .0150      | .0022             | .00225                 | .20000  | .0016                      | .0001         | .00184             | .0040                |
| 63  | .0150      | .0024             | .00247                 | .15000  | .0017                      | .0001         | .00192             | .0040                |
| 64  | .0150      | .0026             | .00270                 | .15000  | .0018                      | .0001         | .00200             | .0040                |
| 65  | .0150      | .0028             | .00000                 | .30000  | .0020                      | .0001         | .00000             | .0000                |
| 66  | .0150      | .0030             | .00000                 | .25000  | .0022                      | .0001         | .00000             | .0000                |
| 67  | .0150      | .0033             | .00000                 | .25000  | .0024                      | .0001         | .00000             | .0000                |
| 68  | .0150      | .0036             | .00000                 | .30000  | .0026                      | .0001         | .00000             | .0000                |
| 69  | .0150      | .0039             | .00000                 | .50000  | .0028                      | .0001         | .00000             | .0000                |
| 70  | .0000      | .0000             | .00000                 | 1.00000 | .0000                      | .0000         | .00000             | .0000                |

**SCHEDULE 6**  
**PROBABILITIES OF SEPARATION FROM ACTIVE SERVICE**  
**SAFETY AND PROBATION MEMBERS**  
(Current Assumptions)

| Age | Withdrawal | Ordinary<br>Death | Ordinary<br>Disability | Service | Death<br>While<br>Eligible | Duty<br>Death | Duty<br>Disability | Terminated<br>Vested |
|-----|------------|-------------------|------------------------|---------|----------------------------|---------------|--------------------|----------------------|
| 20  | .0700      | .0001             | .00000                 | .00000  | .00000                     | .0001         | .00015             | .0000                |
| 21  | .0670      | .0001             | .00000                 | .00000  | .00000                     | .0001         | .00015             | .0020                |
| 22  | .0640      | .0001             | .00000                 | .00000  | .00000                     | .0001         | .00015             | .0045                |
| 23  | .0610      | .0001             | .00000                 | .00000  | .00000                     | .0001         | .00015             | .0070                |
| 24  | .0580      | .0001             | .00000                 | .00000  | .00000                     | .0001         | .00020             | .0095                |
| 25  | .0550      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00030             | .0120                |
| 26  | .0520      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00040             | .0145                |
| 27  | .0490      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00055             | .0165                |
| 28  | .0450      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00070             | .0185                |
| 29  | .0410      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00085             | .0180                |
| 30  | .0380      | .0002             | .00007                 | .00000  | .00008                     | .0002         | .00105             | .0175                |
| 31  | .0350      | .0002             | .00014                 | .00000  | .00008                     | .0002         | .00125             | .0165                |
| 32  | .0320      | .0002             | .00021                 | .00000  | .00015                     | .0002         | .00145             | .0150                |
| 33  | .0290      | .0002             | .00035                 | .00000  | .00015                     | .0002         | .00170             | .0130                |
| 34  | .0270      | .0002             | .00049                 | .00000  | .00015                     | .0002         | .00195             | .0105                |
| 35  | .0250      | .0002             | .00063                 | .00000  | .00015                     | .0002         | .00225             | .0095                |
| 36  | .0230      | .0002             | .00077                 | .00000  | .00022                     | .0002         | .00260             | .0090                |
| 37  | .0210      | .0002             | .00091                 | .00000  | .00030                     | .0002         | .00295             | .0085                |
| 38  | .0190      | .0002             | .00105                 | .00000  | .00030                     | .0002         | .00330             | .0080                |
| 39  | .0170      | .0002             | .00119                 | .00000  | .00038                     | .0002         | .00365             | .0075                |
| 40  | .0150      | .0003             | .00133                 | .00000  | .00045                     | .0003         | .00400             | .0070                |
| 41  | .0130      | .0003             | .00147                 | .00000  | .00045                     | .0003         | .00435             | .0065                |
| 42  | .0110      | .0003             | .00161                 | .00000  | .00045                     | .0003         | .00475             | .0060                |
| 43  | .0090      | .0003             | .00168                 | .00000  | .00052                     | .0003         | .00515             | .0050                |
| 44  | .0070      | .0003             | .00168                 | .00000  | .00052                     | .0003         | .00555             | .0040                |
| 45  | .0060      | .0004             | .00175                 | .00600  | .00060                     | .0004         | .00600             | .0035                |
| 46  | .0050      | .0004             | .00175                 | .00800  | .00068                     | .0005         | .00645             | .0030                |
| 47  | .0045      | .0004             | .00182                 | .01000  | .00068                     | .0006         | .00690             | .0025                |
| 48  | .0040      | .0005             | .00182                 | .01000  | .00075                     | .0007         | .00735             | .0020                |
| 49  | .0040      | .0005             | .00189                 | .01000  | .00075                     | .0008         | .00780             | .0015                |
| 50  | .0040      | .0006             | .00189                 | .05000  | .00082                     | .0009         | .00825             | .0010                |
| 51  | .0040      | .0007             | .00196                 | .04000  | .00090                     | .0010         | .00875             | .0008                |
| 52  | .0040      | .0008             | .00196                 | .04000  | .00097                     | .0011         | .00925             | .0007                |
| 53  | .0040      | .0009             | .00203                 | .03500  | .00105                     | .0012         | .00975             | .0006                |
| 54  | .0040      | .0010             | .00210                 | .03500  | .00112                     | .0013         | .01025             | .0005                |
| 55  | .0000      | .0011             | .00000                 | .01000  | .00120                     | .0014         | .00000             | .0000                |
| 56  | .0000      | .0012             | .00000                 | .07500  | .00127                     | .0015         | .00000             | .0000                |
| 57  | .0000      | .0013             | .00000                 | .07500  | .00135                     | .0016         | .00000             | .0000                |
| 58  | .0000      | .0014             | .00000                 | .15000  | .00142                     | .0018         | .00000             | .0000                |
| 59  | .0000      | .0015             | .00000                 | .40000  | .00150                     | .0020         | .00000             | .0000                |
| 60  | .0000      | .0000             | .00000                 | 1.00000 | .00000                     | .0000         | .00000             | .0000                |

**SCHEDULE 7**

**YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT**

| Age | General |        |        | Age | General |        |        |
|-----|---------|--------|--------|-----|---------|--------|--------|
|     | Male    | Female | Safety |     | Male    | Female | Safety |
| 50  | 28.30   | 33.97  | 28.30  | 81  | 6.81    | 9.09   | 6.81   |
| 51  | 27.42   | 33.03  | 27.42  | 82  | 6.43    | 8.57   | 6.43   |
| 52  | 26.55   | 32.10  | 26.55  | 83  | 6.07    | 8.07   | 6.07   |
| 53  | 25.68   | 31.16  | 25.68  | 84  | 5.73    | 7.58   | 5.73   |
| 54  | 24.83   | 30.24  | 24.83  | 85  | 5.41    | 7.11   | 5.41   |
| 55  | 23.98   | 29.31  | 23.98  | 86  | 5.10    | 6.66   | 5.10   |
| 56  | 23.13   | 28.39  | 23.13  | 87  | 4.82    | 6.23   | 4.82   |
| 57  | 22.29   | 27.48  | 22.29  | 88  | 4.54    | 5.81   | 4.54   |
| 58  | 21.46   | 26.57  | 21.46  | 89  | 4.28    | 5.41   | 4.28   |
| 59  | 20.64   | 25.67  | 20.64  | 90  | 4.04    | 5.02   | 4.04   |
| 60  | 19.83   | 24.78  | 19.83  | 91  | 3.80    | 4.66   | 3.80   |
| 61  | 19.02   | 23.89  | 19.02  | 92  | 3.58    | 4.31   | 3.58   |
| 62  | 18.23   | 23.02  | 18.23  | 93  | 3.37    | 3.98   | 3.37   |
| 63  | 17.45   | 22.15  | 17.45  | 94  | 3.16    | 3.67   | 3.16   |
| 64  | 16.69   | 21.29  | 16.69  | 95  | 2.98    | 3.37   | 2.98   |
| 65  | 15.95   | 20.43  | 15.95  | 96  | 2.80    | 3.10   | 2.80   |
| 66  | 15.23   | 19.59  | 15.23  | 97  | 2.62    | 2.84   | 2.62   |
| 67  | 14.52   | 18.76  | 14.52  | 98  | 2.45    | 2.60   | 2.45   |
| 68  | 13.84   | 17.94  | 13.84  | 99  | 2.28    | 2.36   | 2.28   |
| 69  | 13.18   | 17.13  | 13.18  | 100 | 2.11    | 2.14   | 2.11   |
| 70  | 12.54   | 16.34  | 12.54  | 101 | 1.95    | 1.94   | 1.95   |
| 71  | 11.92   | 15.57  | 11.92  | 102 | 1.78    | 1.74   | 1.78   |
| 72  | 11.31   | 14.81  | 11.31  | 103 | 1.61    | 1.55   | 1.61   |
| 73  | 10.72   | 14.08  | 10.72  | 104 | 1.43    | 1.37   | 1.43   |
| 74  | 10.15   | 13.38  | 10.15  | 105 | 1.26    | 1.19   | 1.26   |
| 75  | 9.60    | 12.69  | 9.60   | 106 | 1.09    | 1.03   | 1.09   |
| 76  | 9.08    | 12.03  | 9.08   | 107 | .92     | .87    | .92    |
| 77  | 8.57    | 11.40  | 8.57   | 108 | .74     | .71    | .74    |
| 78  | 8.10    | 10.79  | 8.10   | 109 | .50     | .50    | .50    |
| 79  | 7.64    | 10.20  | 7.64   | 110 | --      | --     | --     |
| 80  | 7.21    | 9.63   | 7.21   | 111 | --      | --     | --     |

1983 GA (x+1, y+1) for General Members

1983 GA (x+1) for Safety Members



**SCHEDULE 7**

**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**

**GENERAL MEMBERS**

| <b>Age</b> | <b>Years of Life<br/>Expectancy</b> | <b>Age</b> | <b>Years of Life<br/>Expectancy</b> | <b>Age</b> | <b>Years of Life<br/>Expectancy</b> |
|------------|-------------------------------------|------------|-------------------------------------|------------|-------------------------------------|
| 20         | 38.73                               | 51         | 20.59                               | 82         | 6.27                                |
| 21         | 37.98                               | 52         | 20.11                               | 83         | 5.94                                |
| 22         | 37.26                               | 53         | 19.63                               | 84         | 5.63                                |
| 23         | 36.56                               | 54         | 19.16                               | 85         | 5.34                                |
| 24         | 35.87                               | 55         | 18.68                               | 86         | 5.06                                |
| 25         | 35.19                               | 56         | 18.22                               | 87         | 4.80                                |
| 26         | 34.53                               | 57         | 17.75                               | 88         | 4.55                                |
| 27         | 33.87                               | 58         | 17.29                               | 89         | 4.31                                |
| 28         | 33.23                               | 59         | 16.83                               | 90         | 4.09                                |
| 29         | 32.60                               | 60         | 16.37                               | 91         | 3.87                                |
| 30         | 31.98                               | 61         | 15.91                               | 92         | 3.66                                |
| 31         | 31.37                               | 62         | 15.45                               | 93         | 3.46                                |
| 32         | 30.76                               | 63         | 14.99                               | 94         | 3.26                                |
| 33         | 30.17                               | 64         | 14.53                               | 95         | 3.07                                |
| 34         | 29.58                               | 65         | 14.07                               | 96         | 2.89                                |
| 35         | 29.00                               | 66         | 13.60                               | 97         | 2.71                                |
| 36         | 28.43                               | 67         | 13.13                               | 98         | 2.54                                |
| 37         | 27.87                               | 68         | 12.66                               | 99         | 2.37                                |
| 38         | 27.31                               | 69         | 12.18                               | 100        | 2.20                                |
| 39         | 26.76                               | 70         | 11.70                               | 101        | 2.04                                |
| 40         | 26.21                               | 71         | 11.21                               | 102        | 1.88                                |
| 41         | 25.67                               | 72         | 10.72                               | 103        | 1.72                                |
| 42         | 25.14                               | 73         | 10.22                               | 104        | 1.55                                |
| 43         | 24.61                               | 74         | 9.73                                | 105        | 1.38                                |
| 44         | 24.09                               | 75         | 9.24                                | 106        | 1.21                                |
| 45         | 23.57                               | 76         | 8.76                                | 107        | 1.04                                |
| 46         | 23.06                               | 77         | 8.28                                | 108        | .88                                 |
| 47         | 22.56                               | 78         | 7.83                                | 109        | .72                                 |
| 48         | 22.06                               | 79         | 7.41                                | 110        | .50                                 |
| 49         | 21.57                               | 80         | 7.00                                |            |                                     |
| 50         | 21.08                               | 81         | 6.63                                |            |                                     |

1981 Disability (General)

**SCHEDULE 7**

**YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT**

**SAFETY AND PROBATION MEMBERS**

| <b>Age</b> | <b>Years of Life<br/>Expectancy</b> | <b>Age</b> | <b>Years of Life<br/>Expectancy</b> | <b>Age</b> | <b>Years of Life<br/>Expectancy</b> |
|------------|-------------------------------------|------------|-------------------------------------|------------|-------------------------------------|
| 20         | 49.29                               | 51         | 22.80                               | 81         | 6.63                                |
| 21         | 48.39                               | 52         | 22.03                               | 82         | 6.27                                |
| 22         | 47.48                               | 53         | 21.26                               | 83         | 5.94                                |
| 23         | 46.58                               | 54         | 20.50                               | 84         | 5.63                                |
| 24         | 45.68                               | 55         | 19.77                               | 85         | 5.34                                |
| 25         | 44.79                               | 56         | 19.06                               | 86         | 5.06                                |
| 26         | 43.89                               | 57         | 18.40                               | 87         | 4.80                                |
| 27         | 43.01                               | 58         | 17.78                               | 88         | 4.55                                |
| 28         | 42.12                               | 59         | 17.20                               | 89         | 4.31                                |
| 29         | 41.24                               | 60         | 16.64                               | 90         | 4.09                                |
| 30         | 40.36                               | 61         | 16.11                               | 91         | 3.87                                |
| 31         | 39.48                               | 62         | 15.59                               | 92         | 3.66                                |
| 32         | 38.61                               | 63         | 15.08                               | 93         | 3.46                                |
| 33         | 37.74                               | 64         | 14.58                               | 94         | 3.26                                |
| 34         | 36.88                               | 65         | 14.09                               | 95         | 3.07                                |
| 35         | 36.02                               | 66         | 13.61                               | 96         | 2.89                                |
| 36         | 35.16                               | 67         | 13.13                               | 97         | 2.71                                |
| 37         | 34.31                               | 68         | 12.66                               | 98         | 2.54                                |
| 38         | 33.46                               | 69         | 12.18                               | 99         | 2.37                                |
| 39         | 32.61                               | 70         | 11.70                               | 100        | 2.20                                |
| 40         | 31.77                               | 71         | 11.21                               | 101        | 2.04                                |
| 41         | 30.93                               | 72         | 10.72                               | 102        | 1.88                                |
| 42         | 30.09                               | 73         | 10.22                               | 103        | 1.72                                |
| 43         | 29.26                               | 74         | 9.73                                | 104        | 1.55                                |
| 44         | 28.43                               | 75         | 9.24                                | 105        | 1.38                                |
| 45         | 27.61                               | 76         | 8.75                                | 106        | 1.21                                |
| 46         | 26.80                               | 77         | 8.28                                | 107        | 1.04                                |
| 47         | 25.99                               | 78         | 7.83                                | 108        | .88                                 |
| 48         | 25.18                               | 79         | 7.41                                | 109        | .72                                 |
| 49         | 24.38                               | 80         | 7.00                                | 110        | .50                                 |
| 50         | 23.59                               |            |                                     |            |                                     |

1981 Disability (Safety)

## SCHEDULE 8

### GLOSSARY OF TERMS

Following is a glossary of some of the commonly used actuarial terms.

*Actuarial Accrued Liability*

The portion, as determined by a particular cost method, of the total present value of benefits that is attributable to past service credit

*Actuarial Gain (Loss)*

A measure of the difference between actual and expected experience based upon a set of actuarial assumptions. Examples include higher than expected salary increases (loss) and a higher return on fund assets than anticipated (gain).

*Actuarial Present Value*

Also referred to as the present value of benefits. It is the value, as of a specified date, of an amount payable in the future, where the amount has been adjusted to reflect both the time value of money and the probability that the payment is actually made.

*Amortization or UAAL Payment*

That portion of the pension plan contribution which is designed to pay off (amortize) the unfunded actuarial accrued liability in a systematic fashion. Equivalently, it is a series of periodic payments required to pay off a debt.

*Annual Amount*

Estimated contributions due for the year in order to ensure the orderly funding of the pension plan (equal to the contribution rate multiplied by the annual payroll).  
The annual amount is comprised of normal cost and UAAL payments.

*Entry Age Actuarial Cost Method*

This method assumes that the annual costs are the level premiums needed from entry age until retirement age to fund the ultimate retirement benefit. These premiums are expressed as a percentage of salary. The portion of this actuarial present value allocated to a valuation year is called the normal cost.

*Final Average Salary*

The average amount of compensation earned over a specified number of consecutive months preceding retirement during which compensation was highest.

*Funding Policy*

The policy for the amounts and timing of contributions to be made by the employer, members, and any other sources to provide the benefits promised by the pension plan.

*Noneconomic Actuarial Assumptions*

Probabilities that members will separate from active service for causes such as retirement, disability, death and withdrawal, as well as rates of post-retirement mortality. The probabilities reflect the experience of the System membership.

*Normal Cost*

The ongoing annual cost allocated to the system by a particular actuarial cost method for providing benefits (future cost). Normal cost payments are made during the working lifetime of the member.

*Projected Unit Credit Method  
Actuarial Cost Method*

This method assumes that the benefit for a new is zero. Each year that an employee works a portion of the ultimate retirement benefit is accrued, based on a service ratio. These actuarial accrued liability under this method is the present value of the benefit earned to date

*Unfunded Actuarial Accrued Liability*

The excess of the actuarial accrued liability over the actuarial value of assets.

*Vested Benefit*

The benefit an employee is entitled to even if the employee separates from active service prior to normal retirement age.

**SCHEDULE 9**

**RATIO OF CURRENT COMPENSATION  
TO COMPENSATION ANTICIPATED AT RETIREMENT**

**(Current Assumptions)**

| Age | General Members | Safety Members | Age | General Members | Safety Members |
|-----|-----------------|----------------|-----|-----------------|----------------|
| 20  | 0.043           | 0.093          | 46  | 0.292           | 0.462          |
| 21  | 0.047           | 0.098          | 47  | 0.310           | 0.492          |
| 22  | 0.052           | 0.105          | 48  | 0.328           | 0.524          |
| 23  | 0.057           | 0.111          | 49  | 0.347           | 0.558          |
| 24  | 0.062           | 0.118          | 50  | 0.368           | 0.593          |
| 25  | 0.068           | 0.125          | 51  | 0.388           | 0.630          |
| 26  | 0.074           | 0.133          | 52  | 0.410           | 0.668          |
| 27  | 0.081           | 0.142          | 53  | 0.433           | 0.709          |
| 28  | 0.088           | 0.151          | 54  | 0.456           | 0.750          |
| 29  | 0.095           | 0.161          | 55  | 0.482           | 0.793          |
| 30  | 0.103           | 0.171          | 56  | 0.508           | 0.831          |
| 31  | 0.111           | 0.182          | 57  | 0.534           | 0.870          |
| 32  | 0.119           | 0.194          | 58  | 0.562           | 0.911          |
| 33  | 0.128           | 0.207          | 59  | 0.591           | 0.955          |
| 34  | 0.137           | 0.220          | 60  | 0.622           | 1.000          |
| 35  | 0.147           | 0.234          | 61  | 0.653           |                |
| 36  | 0.157           | 0.249          | 62  | 0.686           |                |
| 37  | 0.168           | 0.264          | 63  | 0.720           |                |
| 38  | 0.179           | 0.281          | 64  | 0.756           |                |
| 39  | 0.191           | 0.299          | 65  | 0.793           |                |
| 40  | 0.204           | 0.318          | 66  | 0.831           |                |
| 41  | 0.217           | 0.338          | 67  | 0.870           |                |
| 42  | 0.230           | 0.360          | 68  | 0.911           |                |
| 43  | 0.245           | 0.383          | 69  | 0.955           |                |
| 44  | 0.260           | 0.407          | 70  | 1.000           |                |
| 45  | 0.276           | 0.434          |     |                 |                |

Note: Salary scale assumption reflects 4.75% for inflation and graded merit and longevity.

## SCHEDULE 10

### ASSET STATEMENT

|  |                       |
|--|-----------------------|
| CASH   | 58,155,415.29         |
| RECEIVABLES                                  |                       |
| CONTRIBUTIONS                                | 1,135,704.63          |
| INVESTMENT                                   | 4,627,503.52          |
| TRADE  | 1,709,757.84          |
| INVESTMENTS AT COST                          |                       |
| CORPORATE BONDS (MARKET VALUE 155,557,460)   | 149,181,392.95        |
| GOVERNMENT BONDS (MARKET VALUE 182,462,980)  | 169,923,910.35        |
| REAL ESTATE (MARKET VALUE 1,676,032)         | 767,559.38            |
| EQUITY SECURITIES (MARKET VALUE 319,717,774) | <u>217,351,317.23</u> |
| TOTAL  | <u>602,852,561.19</u> |
| ACCOUNTS PAYABLE                             | 24,803.35             |
| BENEFIT PAYABLE                              | 1,982,741.58          |
| TRADES PAYABLE                               | 4,006,905.87          |
| DEFERRED REVENUE ACCT                        | 10,140,861.76         |
| TOTAL LIABILITIES                            | 16,155,312.56         |
| FUND EQUITY                                  |                       |
| MEMBER DEPOSIT RESERVES                      |                       |
| GENERAL                                      |                       |
| NORMAL                                       | 41,143,817.61         |
| COL  | 3,849,052.52          |
| SAFETY                                       |                       |
| NORMAL                                       | 21,794,451.34         |
| COL  | 1,784,260.84          |
| INACTIVE DEPOSITS                            | 9,714.29              |
| MEMBERS SUPPLEMENTAL RESERVE                 | 6,349,382.20          |
| TOTAL MEMBER RESERVES                        | 74,930,678.80         |
| COUNTY & DISTRICT ADVANCE RESERVES           |                       |
| GENERAL                                      |                       |
| CURRENT SERVICE                              | 33,354,649.86         |
| COL  | 57,407,801.99         |
| SUPPLEMENTAL CURRENT SERVICE                 | 5,093,551.16          |
| SUPPLEMENTAL COL                             | 108,496.63            |
| NON-CONTRIBUTORY                             | 4,054,947.69          |
| NON-CONTRIBUTORY COL                         | 815,723.89            |
| DEATH BENEFITS                               | 831,019.88            |
| SAFETY                                       |                       |
| CURRENT SERVICE                              | 61,414,251.05         |
| COL  | 35,611,004.95         |
| SUPPLEMENTAL CURRENT SERVICE                 | 14,530,917.70         |
| SUPPLEMENTAL COL                             | 579,302.94            |
| DEATH BENEFITS                               | 674,517.53            |
| HEALTH COVERAGE RESERVE                      | 34,462,437.91         |
| DESIGNATED LIABILITY TRANSFER ACCT           | <u>(2,291,995.27)</u> |
| TOTAL  | 246,646,627.91        |
| RETIRED MEMBER RESERVES                      |                       |
| GENERAL                                      |                       |
| ANNUITY                                      | 26,933,918.37         |
| PENSION                                      | 95,027,019.94         |
| COL  | 27,034,498.55         |
| PRIOR BENEFIT                                | 346,329.41            |
| SAFETY                                       | 0.00                  |
| ANNUITY                                      | 8,892,867.22          |
| PENSION                                      | 42,277,259.28         |
| COL  | 11,907,967.44         |
| PRIOR BENEFIT                                | 125,021.36            |
| SPECIAL ALLOWANCE                            | 19,802,794.04         |
| SUPPLEMENTAL HEALTH COVERAGE RESERVE         | 5,570,968.96          |
| BURIAL ALLOWANCE                             | 227,647.60            |
| UNDESIGNATED                                 | 653,126.79            |
| TOTAL RETIRED                                | 238,799,418.96        |
| DESIGNATED                                   |                       |
| INVESTMENT CONTINGENCY                       | 6,017,168.56          |
| INTEREST APPORTIONMENT RESERVE               | <u>20,303,354.40</u>  |
| TOTAL FUND EQUITY                            | <u>26,320,522.96</u>  |
| TOTAL LIABILITIES & FUND EQUITY              | <u>602,852,561.19</u> |