

Public Employees
Retirement Association
of New Mexico

Annual Actuarial Valuation
June 30, 2001



#### October 25, 2001

The Retirement Board Public Employees Retirement Association Santa Fe, New Mexico

#### Dear Board Members:

This report contains the results of an actuarial valuation of the statutory obligations associated with PERA benefits and their relationship to the Association's statutory funding resources.

The valuation was made as of June 30, 2001 using financial and individual people information furnished by the Association.

The report is divided into parts and sections as follows:

#### **PART I**

| υ | Section 1        | Purpose of the Valuation, Valuation Results, Comments and Conclusions     |
|---|------------------|---|
| υ | Section 2        | Summary of Financial and People Information                               |
| υ | Section 3        | Summary of Benefit Provisions   |
| υ | <b>Section 4</b> | Summary of Actuarial Cost Methods, Estimates of Future Fiscal and         |
|   |                  | People Activities, and Definitions of Technical Terms                     |
| υ | Section 5        | Information for Governmental Accounting Standards Board Statements No. 25 |
|   |                  | and No. 27  |

#### **PART II**

Section 1 State Division Data Schedules
 Section 2 Municipal Division Data Schedules

This report was prepared under the supervision of a Member of the American Academy of Actuaries with significant experience valuing public employee retirement plans.

Respectfully submitted,

Kenneth G. Alberts

Norman S. Losk, FSA.

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### Part 1-- Section 1

# Purpose of Valuation Valuation Results Comments and Conclusions

#### PURPOSE OF THE ACTUARIAL VALUATION

#### PERA statutory obligations are:

- pension payments to current and future retired members, vested former members and survivor pension beneficiaries
- refunds of member contributions to non-vested former members
- administrative and investment expenses incurred in the operation of PERA

#### **PERA statutory funding resources are:**

- member contributions (fixed statutory rates)
- affiliated public employer contributions (fixed statutory rates)
- investment earnings of PERA assets

The basic funding objective of PERA is to avoid transfers of the cost of statutory obligations between generations of taxpayers. This objective will be realized if the PERA funding resources are sufficient to finance:

- costs allocated to the current year attributable to service rendered by PERA members in the current year (Normal Cost)
- costs allocated to prior years attributable to service rendered by PERA members in prior years (Unfunded Actuarial Accrued Liability)

Board policy is to finance unfunded actuarial accrued liability over a period not to exceed 30 years. This policy was adopted in October of 1996.

The actuarial valuation measures: (1) the relationship between PERA obligations and funding resources to determine if the funding objective is being met; and (2) the contribution rate needed to comply with the 30 year objective for financing the unfunded actuarial accrued liability.

### PERA STATUTORY OBLIGATIONS -- JUNE 30, 2001

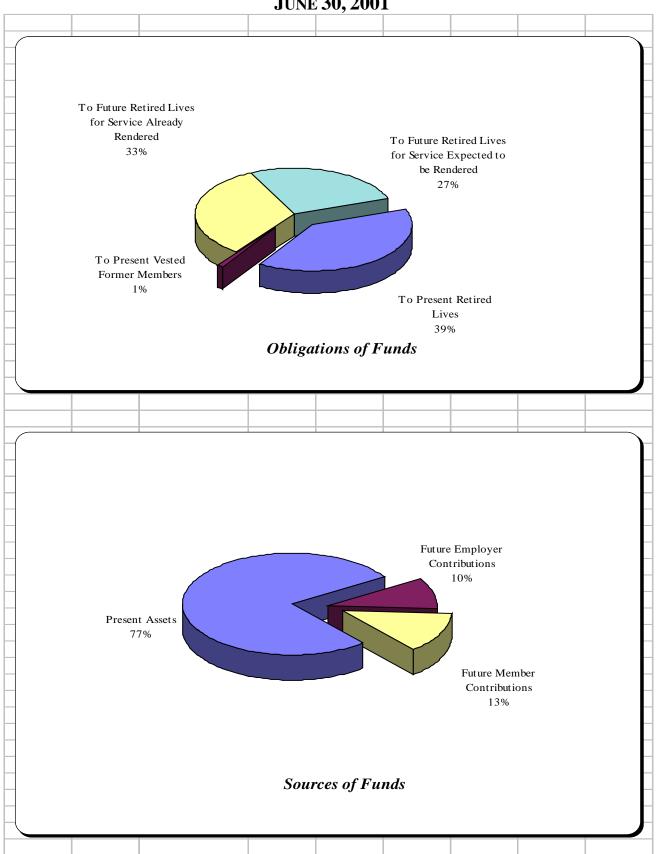
The statutory obligations of PERA were calculated to have an actuarial present value of \$10,738,377,924 on June 30, 2001. The funding value of PERA assets available to meet these obligations totaled \$8,302,819,833.

|  | Actuarial<br>Accrued<br>Liability | Future<br>Normal<br>Cost | Total<br>Actuarial<br>Obligation                       |
|--|-----------------------------------|--------------------------|--|
| Retired members  | \$ 4,227,515,710                  | none                     | \$ 4,227,515,710                                       |
| Vested Former members                                    | 121,354,733                       | none                     | 121,354,733  |
| Active members   | 3,527,704,450                     | \$ 2,861,803,031         | 6,389,507,481  |
| Total Actuarial Obligation  Less Funding Value of Assets | 7,876,574,893<br>8,302,819,833    | \$ 2,861,803,031         | \$ 10,738,377,924                                      |
| Unfunded Actuarial<br>Accrued Liability                  | (\$ 426,244,939)                  |                          |  |
|  | Actuarial Accrued<br>Liability    | Future Normal Cost       | Actuarial Present<br>Value of Statutory<br>Obligations |

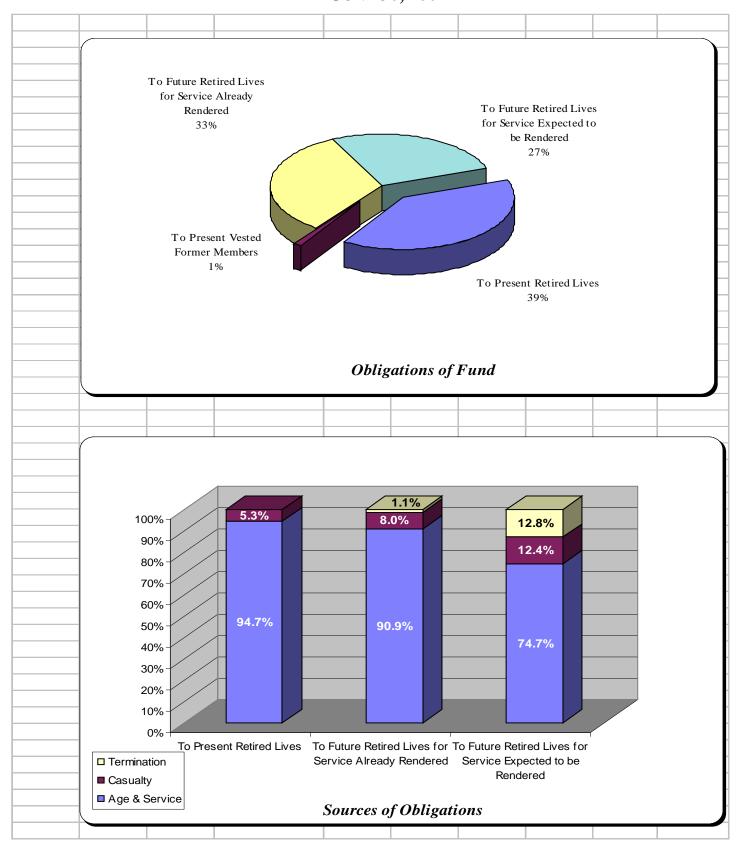
Derivation of the funding value of assets is shown on page 16.

The report excludes Legislative Division reported assets of \$5,189,608 (\$5,390,186 funding value) and the corresponding statutory obligations. An actuarial valuation of Legislative assets and statutory obligations is detailed in a separate report.

### STATUTORY OBLIGATIONS AND SOURCES OF FUNDS JUNE 30, 2001



# STATUTORY OBLIGATIONS JUNE 30, 2001



# ACTUARIAL PRESENT VALUE OF STATUTORY OBLIGATIONS BY DIVISION JUNE 30, 2001

The actuarial present value of statutory obligations and funding value of assets, by PERA division, is as follows:

|                                |                 |                 | Future          | APV of           |                 |
|--------------------------------|-----------------|-----------------|-----------------|------------------|-----------------|
|                                | Accrued L       | iability        | Normal          | Statutory        |                 |
| Division and Coverage Plans    | Retired         | Active*         | Cost            | Obligations      | Assets          |
| STATEDIVISION                  |                 |                 |                 |                  |                 |
| General coverage plan          | \$2,084,302,740 | \$1,747,233,392 | \$1,294,356,597 | \$5,125,892,729  | \$3,548,110,976 |
| Less Funding Value of Assets   | 2,084,302,740   | 1,463,808,236   |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | 283,425,156     |                 |                  |                 |
| Police/Haz. Duty coverage plan | 182,225,515     | 176,503,810     | 113,485,907     | 472,215,232      | 578,649,166     |
| Less Funding Value of Assets   | 182,225,515     | 396,423,651     |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | (219,919,841)   |                 |                  |                 |
| MUNICIPAL DIVISION             |                 |                 |                 |                  |                 |
| General coverage plan          | 1,100,388,240   | 1,199,178,079   | 989,034,530     | 3,288,600,849    | 2,583,878,504   |
| Less Funding Value of Assets   | 1,100,388,240   | 1,483,490,264   |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | (284,312,186)   |                 |                  |                 |
| Police coverage plan           | 497,975,415     | 345,691,623     | 284,415,908     | 1,128,082,946    | 1,056,049,368   |
| Less Funding Value of Assets   | 497,975,415     | 558,073,953     |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | (212,382,330)   |                 |                  |                 |
| Fire coverage plan             | 362,623,800     | 180,452,280     | 180,510,089     | 723,586,169      | 536,131,819     |
| Less Funding Value of Assets   | 362,623,800     | 173,508,019     |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | 6,944,260       |                 |                  |                 |
| PERA TOTALS                    |                 |                 |                 |                  |                 |
| All coverage plans             | \$4,227,515,710 | \$3,649,059,183 | \$2,861,803,031 | \$10,738,377,924 | \$8,302,819,833 |
| Less Funding Value of Assets   | 4,227,515,710   | 4,075,304,123   |                 |                  |                 |
| Unfunded Act. Accr. Liab       | none            | (\$426,244,940) |                 |                  |                 |

st Including vested former members.

#### STATUTORY CONTRIBUTION RATES

PERA member and employer contribution rates are defined by statute in terms of percents of active member payroll. The following rates were in effect on June 30, 2001:

|  | Contribut | ion Rates |
|--|-----------|-----------|
| Division and Coverage Plan             | Member    | Employer  |
| OTT A THE DAY HOLON                    |           |           |
| STATE DIVISION                         | 7.420/    | 16.500/   |
| General coverage plan 3                | 7.42%     | 16.59%    |
| Police coverage plan 1                 | 7.60      | 25.10     |
| Hazardous Duty coverage plan 2         | 4.78      | 25.72     |
| Weighted average for Police/Haz. Duty* | 6.07      | 25.44     |
| MUNICIPAL DIVISION                     |           |           |
| General coverage plans                 |           |           |
| Plan 1                                 | 7.00      | 7.00      |
| Plan 2                                 | 9.15      | 9.15      |
| Plan 3                                 | 13.15     | 9.15      |
| Plan 4                                 | 15.65     | 11.65     |
| Weighted average*                      | 11.22     | 8.89      |
| Police coverage plans                  |           |           |
| Plan 1                                 | 7.00      | 10.00     |
| Plan 2                                 | 7.00      | 15.00     |
| Plan 3                                 | 7.00      | 18.50     |
| Plan 4                                 | 12.35     | 18.50     |
| Plan 5                                 | 16.30     | 18.50     |
| Weighted average*                      | 15.26     | 17.94     |
| Fire coverage plans**                  |           |           |
| Plan 1                                 | 8.00      | 11.00     |
| Plan 2                                 | 8.00      | 17.50     |
| Plan 3                                 | 8.00      | 21.25     |
| Plan 4@                                | 12.80     | 21.25     |
| Plan 5                                 | 16.20     | 21.25     |
|  | 16.20     | 21.25     |
| Weighted average*                      | 10.11     | 21.1/     |

<sup>\*</sup> PERA financial records do not provide an asset breakdown by coverage plan which necessitates the use of a weighted average contribution rate for the purpose of comparing assets to the actuarial accrued liability and determining the financing period for the unfunded actuarial accrued liability.

<sup>\*\*</sup> These contribution rates include the 1% increase pursuant to 1998 legislation.

<sup>@</sup> As of June 30, 2001 no agencies were reported under these coverage plans.

### UTILIZATION OF STATUTORY CONTRIBUTION RATES -- JUNE 30, 2001 STATE DIVISION

The following schedule indicates utilization of the member and employer funding resource in meeting the actuarial present value of PERA statutory obligations and the financing period applicable to the unfunded actuarial accrued liability.

|   | General   | Police/Haz. Duty |
|---|-----------|------------------|
| FUNDING RESOURCE                          |           |                  |
| Members                                   | 7.42%     | 6.07%            |
| Affiliated Public Employers               | 16.59%    | 25.44%           |
| Total Funding Resource (Weighted Average) | 24.01%    | 31.51%           |
| UTILIZATION OF FUNDING RESOURCE           |           |                  |
| Normal Cost:                              |           |                  |
| Age & Service                             | 16.41%    | 20.97%           |
| Disability                                | 1.14%     | 2.44%            |
| Pre-retirement Survivors                  | 1.33%     | 1.07%            |
| Refunds                                   | 0.82%     | 0.74%            |
| Total Normal Cost                         | 19.70%    | 25.23%           |
| Unfunded Actuarial Accrued Liability      | 4.31%     | 6.28%            |
| Total Utilized                            | 24.01%    | 31.51%           |
| UNFUNDED ACTUARIAL ACCRUED LIABILITY      |           |                  |
| FINANCING PERIOD*                         |           |                  |
| Current Valuation                         | 12 years  | # years          |
| Last Year's Valuation                     | 6 years   | # years          |
| Change Since Last Year's Valuation        | 6 years   | - years**        |
| Change Since 1990                         | -53 years | -20 years        |
| FUNDING POLICY OBJECTIVE@                 | 0.00%     | 0.00%            |

<sup>\*</sup> The number of years required to fund the unfunded actuarial accrued liability based on current statutory contribution rates and allocation of liability to accrued service in accordance with the individual entry-age actuarial cost method.

<sup>@</sup> The additional percent-of-payroll funding resource needed to finance the unfunded actuarial accrued liability over 30 years.

<sup>#</sup> There was no unfunded actuarial accrued liability in the Police/Hazardous Duty division.

<sup>\*\*</sup> Change is not measurable - only direction of change can be determined (i.e., positive or negative).

### UTILIZATION OF STATUTORY CONTRIBUTION RATES -- JUNE 30, 2001 MUNICIPAL DIVISION

The following schedule indicates utilization of the member and employer funding resource in meeting the actuarial present value of PERA statutory obligations and the financing period applicable to the unfunded actuarial accrued liability.

|   | General   | Police    | Fire      |
|---|-----------|-----------|-----------|
| FUNDING RESOURCE                          |           |           |           |
| Members                                   | 11.22%    | 15.26%    | 16.11%    |
| Affiliated Public Employers               | 8.89%     | 17.94%    | 21.17%    |
| Total Funding Resource (Weighted Average) | 20.11%    | 33.20%    | 37.28%    |
| UTILIZATION OF FUNDING RESOURCE           |           |           |           |
| Normal Cost:                              |           |           |           |
| Age & Service                             | 14.46%    | 24.79%    | 26.63%    |
| Disability                                | 0.96%     | 1.91%     | 1.95%     |
| Pre-retirement Survivors                  | 1.39%     | 1.38%     | 1.64%     |
| Refunds                                   | 1.19%     | 1.06%     | 0.47%     |
| Total Normal Cost                         | 17.99%    | 29.13%    | 30.68%    |
| Unfunded Actuarial Accrued Liability      | 2.11%     | 4.07%     | 6.59%     |
| Total Utilized                            | 20.11%    | 33.20%    | 37.28%    |
| UNFUNDED ACTUARIAL ACCRUED LIABILITY      |           |           |           |
| FINANCING PERIOD*                         |           |           |           |
| Current Valuation                         | # years   | # years   | 2 years   |
| Last Year's Valuation                     | # years   | 0 years   | 3 years   |
| Change Since Last Year's Valuation        | -7 years  | # years   | -1 years  |
| Change Since 1990                         | -43 years | -80 years | - years** |
| FUNDING POLICY OBJECTIVE@                 | 0.00%     | 0.00%     | 0.00%     |

<sup>\*</sup> The number of years required to fund the unfunded actuarial accrued liability based on current statutory contribution rates and allocation of liability to accrued service in accordance with the individual entry-age actuarial cost method.

<sup>@</sup> The additional percent-of-payroll funding resource needed to finance the unfunded actuarial accrued liability over 30 years.

<sup>\*\*</sup> Change is not measurable - only direction of change can be determined (i.e., positive or negative).

<sup>#</sup> There was no unfunded actuarial accrued liability in the Municipal General and Municipal Police divisions.

#### **FUNDING PROGRESS**

No all-encompassing measure of funding progress and funded status exists. The schedule on the next page shows four indicators. It is important to keep the Interpretive Note in mind when assessing the indicators for prior years.

*First Indicator* - the trend in the financing period for the unfunded actuarial accrued liability. The financing period is expected to remain steady or slowly decrease in the absence of benefit enhancements.

Second Indicator – prior to 1999, the ratio of assets available to finance benefits to the actuarial present value of credited projected benefits (APVCPB). The APVCPB is independent of the actuarial cost method selected to implement the PERA basic funding objective and was the basis of the Pension Benefit Obligation used for financial reporting under Statement No. 5, Governmental Accounting Standards Board. Beginning in 1999, the actuarial accrued liability based on the entry-age actuarial cost method used for funding purposes is used rather than the APVCPB. This is in conformance with Statement No. 25 of the Governmental Accounting Standards Board, which supercedes Statement No. 5.

The ratio is expected to remain steady or slowly increase in the absence of benefit enhancements.

**Third Indicator** - the ratio of the unfunded APVCPB to active member payroll. Under the PERA basic funding objective, the unfunded APVCPB is controlled in terms of inflation-adjusted dollars and should not increase in relationship to active member payroll in the absence of benefit enhancements or a diminishing work force size.

**Fourth Indicator** - the experience gain (loss) realized during the year preceding the actuarial valuation, expressed as a percent of the actuarial accrued liability at the beginning of the year. Gains and losses are expected to offset each other over long periods of time.

Interpretive Note - PERA benefits have undergone a long series of legislated enhancements. Each time benefits were enhanced the funded status of PERA was diminished because the benefit obligation was immediately increased but the offsetting assets were only gradually increased by the higher contributions of members and/or affiliated public employers. A similar diminishment occurs each time a previously legislated coverage plan is adopted by an affiliated public employer.

# FUNDING PROGRESS INDICATORS -- HISTORICAL COMPARISON (DOLLAR AMOUNTS IN THOUSANDS)

| Valuation<br>Date | FIRST INDICATOR Financing Period | Funding<br>Value<br>of Assets | APVCPB@    | SECOND<br>INDICATOR<br>Percent<br>Funded | Unfunde d<br>APVCPB | Valuation<br>Payroll | THIRD INDICATOR Payroll Ratio | FOURTH R INDICATOR Experience Gain (Loss) |
|-------------------|----------------------------------|-------------------------------|------------|--|---------------------|----------------------|-------------------------------|---|
| 1978              | 18 yrs.                          | \$ 270,782                    | \$ 287,716 | 94%                                      | \$ 16,934           | \$ 257,423           | 7%                            | %   |
| 1979              | 19                               | 309,046                       | 356,894    | 87                                       | 47,848              | 281,849              | 17                            |   |
| 1980              | 20                               | 355,247                       | 420,874    | 84                                       | 65,627              | 317,301              | 21                            |   |
| 1981              | 57                               | 422,581                       | 644,489    | 66                                       | 221,908             | 375,226              | 59                            |   |
| 1982              | 31                               | 510,426                       | 753,770    | 68                                       | 243,344             | 416,655              | 58                            |   |
| 1983              | 32                               | 636,764                       | 921,331    | 69                                       | 284,567             | 465,053              | 61                            |   |
| 1984              | 29                               | 763,783                       | 1,020,245  | 75                                       | 256,462             | 485,408              | 53                            |   |
| 1985              | 45                               | 899,133                       | 1,280,402  | 70                                       | 381,269             | 584,280              | 65                            |   |
| 1986              | 45                               | 1,077,411                     | 1,431,839  | 75                                       | 354,428             | 572,685              | 62                            |   |
| 1987*             |                                  |                               |            |  |                     |                      |                               |   |
| 1988              | 55                               | 1,447,499                     | 1,937,662  | 75                                       | 490,163             | 644,664              | 76                            |   |
| 1989              | 63                               | 1,649,238                     | 2,207,009  | 75                                       | 557,771             | 682,245              | 82                            | (1.9)                                     |
| 1990              | 57                               | 1,865,707                     | 2,472,000  | 75                                       | 606,294             | 760,639              | 80                            | (1.3)                                     |
| 1991              | 57                               | 2,104,450                     | 2,730,199  | 77                                       | 625,749             | 825,006              | 76                            | 0.2                                       |
| 1992              | 50                               | 2,399,346                     | 2,981,655  | 80                                       | 582,309             | 843,915              | 69                            | 2.7                                       |
| 1993              | 40                               | 2,696,511                     | 3,202,244  | 84                                       | 505,733             | 909,242              | 56                            | 1.7                                       |
| 1994              | 43                               | 2,974,816                     | 3,641,320  | 82                                       | 666,504             | 943,330              | 71                            | (1.6)                                     |
| 1995              | 38                               | 3,364,452                     | 4,240,843  | 79                                       | 876,391             | 1,043,575            | 84                            | (0.9)                                     |
| 1996              | 40                               | 3,845,138                     | 4,688,085  | 82                                       | 842,947             | 1,098,636            | 77                            | 2.2                                       |
| 1997              | 30                               | 4,560,312                     | 5,171,481  | 88                                       | 611,169             | 1,102,082            | 55                            | 5.3                                       |
| 1998              | 13                               | 5,487,476                     | 5,604,745  | 98                                       | 117,269             | 1,146,991            | 10                            | 10.5                                      |
| 1999              | 9                                | 6,490,295                     | 6,548,103  | 99                                       | 57,808              | 1,200,565            | 5                             | 9.7                                       |
| 2000              | 4                                | 7,522,348                     | 7,112,380  | 106                                      | (409,968)           | 1,253,305            | (33)                          | 6.4                                       |
| 2001              | 7                                | 8,302,820                     | 7,876,575  | 105                                      | (426,245)           | 1,318,275            | (32)                          | 2.4                                       |

<sup>\*</sup> No actuarial valuation performed

<sup>#</sup> In calculating this aggregate number, only assets up to the accrued liabilities for each division were considered.

<sup>@</sup> Beginning in 1999 based on accrued liability used for funding purposes, consistent with GASB Statement No. 25.

#### **COMMENT A**

Effective with the June 30, 2001 a new set of actuarial assumptions was used to value PERA. This set of assumptions was the result of GRS recommendations emanating from the 8/27/01 Experience Study Report adopted by the Retirement Board. In this study all the economic and demographic assumptions were reviewed and compared with PERA's actual experience. Assumptions were then modified to more closely coincide with PERA's actual experience. Assumptions that were reviewed and/or modified include the following:

- -Rate of Investment Return
- -Rate of Inflation
- -Rates of Mortality
- -Rates of Disability
- -Rates of Withdrawal
- -Rates of Retirement
- -Rates of Salary Increases

The changes in assumptions resulted in a net increase in accrued liability of \$249 million.

#### **COMMENT B**

In aggregate, fund experience was more favorable than expected, producing an experience gain for the year ending June 30, 2001. The primary sources of the experience gain were a rate of return on the funding value of assets greater than assumed (10.2% vs. 8%) and pay increases less than assumed (3.4% vs. 5.5%). Note that experience for the year ending June 30, 2001 is compared with the "old" assumptions for purposes of determining a gain or loss. In future years the comparison will be made against the new assumptions.

The rate of return on the funding value of assets was greater than assumed, as discussed in the previous comment. This occurred even though the rate of return on a market value basis was actually negative during the year. The funding value of assets uses a smoothing technique that smoothes gains and losses out over a four year period. One quarter of this years' investment loss has been recognized in this year's funding value and one quarter of it will be recognized in each of the next three years. Past gains that have yet to be fully recognized in the funding value more than offset this year's loss. It is likely however, that this year's loss will have a larger impact on results in future years, after the past gains have been fully recognized.

In aggregate, the experience gains resulted in a decrease in accrued liabilities of approximately \$171 million, or 2.4% of beginning of year accrued liabilities.

This gain was slightly more than offset by the changes resulting from the changes in assumptions. As a result, PERA's aggregate funding percent dropped slightly from 105.8% to 105.4% and the remaining amortization years increased from 4 years to 7 years.

#### **COMMENT C**

Active populations in the State General and Municipal General divisions increased by approximately 2% during the year ending June 30, 2001. Active populations for Municipal Police and Municipal Fire remained relatively level during the year. However, some shifting occurred between State Police and Hazardous Duty (State Corrections). The table below indicates the active population for these two groups over the past 3 years.

|                | Active Members |           |           |  |  |
|----------------|----------------|-----------|-----------|--|--|
|                | 6/30/1999      | 6/30/2000 | 6/30/2001 |  |  |
| State Police   | 435            | 432       | 481       |  |  |
| Hazardous Duty | 958            | 862       | 805       |  |  |

#### **CONCLUSIONS**

Our conclusions based on the June 30, 2001 annual actuarial valuation of PERA are as follows:

- PERA funding status remained strong during the year ended June 30, 2001, with the
  aggregate funding ratio of accrued valuation assets to accrued liabilities at 105%. This is
  the measure used by Governmental Accounting Standards Board Statement No. 25 for
  financial reporting.
- Future funding progress will be primarily determined by rates of investment earnings and salary increases. Retirement rates are also expected to have a significant impact in all Divisions. Of lesser but important influence are mortality decreases and member withdrawals.
- PERA has an actuarial balance between resources and obligations.
- The financing periods for all Divisions are within the 30 year period targeted under the Retirement Board's funding policy.
- Future ability to properly monitor PERA's actuarial balance is dependent upon continued diligence with respect to data quality and a period of benefit stability permitting derivation of underlying benefit utilization patterns.

#### STATUTORY RESERVE TRANSFERS

#### NMSA 10-11-126.B. provides:

B. Each year following receipt of the report of the annual actuarial valuation, the excess, if any, of the reported actuarial present value of pensions being paid and likely to be paid to retired members and survivor pension beneficiaries and residual refunds likely to be paid to refund beneficiaries of retired members and to survivor pension beneficiaries over the balance in the retirement reserve fund (RRF) shall be transferred to the retirement reserve fund from the employers accumulation fund (EAF).

|                             | Reported                   | Actuarial Present<br>Value of Pensions |               |
|-----------------------------|----------------------------|--|---------------|
| Division                    | Fund Balances**            | Being Paid                             | Transfer      |
| CTATE CENEDAL               |                            |  |               |
| STATE GENERAL               | Ф 427 155 2 <i>C</i> 1     |  |               |
| MCF*                        | \$ 437,155,361             |  | (010 547 771) |
| EAF                         | 1,114,169,414              | <b>#2</b> 00 4 <b>202 5</b> 40         | (219,547,771) |
| RRF                         | 1,864,754,969              | \$2,084,302,740                        | 219,547,771   |
| STATE POLICE/HAZ. DUTY      |                            |  |               |
| MCF                         | \$ 35,046,826              |  |               |
| EAF                         | 237,114,176                |  | 0             |
| RRF                         | 284,955,647                | 182,225,515                            | 0             |
| MUNICIPAL GENERAL           |                            |  |               |
| MCF                         | \$ 517,836,633             |  |               |
| EAF                         | 619,548,374                |  | 0             |
| RRF                         | 1,350,342,992              | 1,100,388,240                          | 0             |
| MUNICIPAL POLICE            |                            |  |               |
| MCF                         | \$ 154,355,667             |  |               |
| EAF                         | 265,443,684                |  | 0             |
| RRF                         | 596,952,628                | 497,975,415                            | 0             |
| MUNICIPAL FIRE              |                            |  |               |
| MCF                         | \$ 77,923,592              |  |               |
| EAF                         | 89,849,292                 |  | (14,215,239)  |
| RRF                         | 348,408,561                | 362,623,800                            | 14,215,239    |
|                             | \$7,993,857,814            |  |               |
| * Members contribution fund | ψ1,273,031,01 <del>4</del> |  |               |

<sup>\*</sup> Members contribution fund.

<sup>\*\*</sup> At market value.

# EXPERIENCE GAIN (LOSS) -- YEAR ENDED JUNE 30, 2001 (DOLLAR AMOUNTS IN THOUSANDS)

|   | State D    | ivision     | Mu          | ınicipal Divisio | n         |              |
|---|------------|-------------|-------------|------------------|-----------|--------------|
| DERIVATION  | General    | Pol / H.D.  | General     | Police           | Fire      | Totals       |
| (1) UAAL at start of year                               | \$ 182,633 | \$(197,316) | \$(224,978) | \$(183,000)      | \$ 12,692 | \$ (409,969) |
| (2) Normal Cost for year<br>(NC x Pays from 2000 val'n) | 115,948    | 10,337      | 83,620      | 24,071           | 13,051    | 247,027      |
| (3) EE and ER contributions (net of refunds)            | (144,692)  | (17,030)    | (89,295)    | (35,369)         | (20,149)  | (306,535)    |
| (4) Interest Accrual                                    | 13,605     | (16,250)    | (18,334)    | (15,249)         | 742       | (35,486)     |
| (5) Expected UAAL before changes                        | 167,494    | (220,259)   | (248,987)   | (209,547)        | 6,336     | (504,963)    |
| (6) Effect of assumption changes*                       | 162,135    | 17,026      | 39,935      | 18,017           | 12,351    | 249,464      |
| (7) Effect of benefit changes                           | 0          | 0           | 0           | 0                | 0         | 0            |
| (8) Effect of new employers and plan coverage shifts    | 0          | 0           | 0           | 0                | 0         | 0            |
| (9) Expected UAAL after changes                         | 329,629    | (203,233)   | (209,052)   | (191,530)        | 18,687    | (255,499)    |
| (10) Actual UAAL  | 283,425    | (219,920)   | (284,312)   | (212,382)        | 6,944     | (426,245)    |
| (11) Gain (Loss)  | 46,204     | 16,687      | 75,260      | 20,852           | 11,743    | 170,746      |
| (12) As % of beginning of year AAL                      | 1.35%      | 5.12%       | 3.58%       | 2.70%            | 2.34%     | 2.40%        |

<sup>\*</sup> Effect of the audit adjustment is spread over 3 years in the derivation of the Funding Value of Assets.

AAL represents actuarial accrued liability.

UAAL represents unfunded actuarial accrued liability.

Note: Numbers may not add due to rounding to nearest \$1,000's.

### Part 1-- Section 2

Summary of Financial and People Information Used for the Valuation

### SUMMARY OF FISCAL INFORMATION FURNISHED FOR THE VALUATION

|   | 6-30-01          | 6-30-00         |
|---|------------------|-----------------|
| Fund balance beginning of year            | \$8,152,748,384  | \$7,299,968,088 |
| Revenues                                  |                  |                 |
| a. Member contributions                   | 135,594,355      | 125,928,866     |
| b. Employer contributions                 | 196,544,110      | 182,000,473     |
| c. Purchases of service                   | 2,002,209        | 2,054,098       |
| d. Investment Income                      |                  |                 |
| 1. Adjustments of inv to market value     | (651,921,819)    | (357,241,441)   |
| 2. Interest, dividends, etc.              | 309,832,765      | 271,076,498     |
| 3. Realized gains/(losses)                | 192,573,518      | 932,586,802     |
| e. Other Income                           | 1,459,548        | 4,901,266       |
| f. Total revenues                         | \$186,084,686    | \$1,161,306,562 |
|   |                  |                 |
| Expenditures                              |                  |                 |
| a. Pensions paid                          | 291,118,491      | 264,480,078     |
| b. Refunds of member contributions        | 27,357,500       | 26,811,590      |
| c. Administrative and investment expenses | 21,309,656       | 17,234,598      |
| d. Total expenditures                     | \$ 339,785,647   | \$ 308,526,266  |
| Audit Adjustment                          | 0                | 0               |
| Fund balance end of year (Market value)   | \$7,999,047,423  | \$8,152,748,384 |
| ASSETS AND LIABILITIES                    | 2001             | 2000            |
| Cash & Receivables                        | \$ 32,821,049    | n/a             |
| Property & Equipment                      | 16,097,219       | n/a             |
| Troperty & Equipment                      | 10,077,217       | 17 (1           |
| Short Terms & Accruals                    | 241,715,441      | n/a             |
| US Gov't & Agency Securities              | 1,858,305,666    | n/a             |
| Corporate Bonds                           | 3,505,136,198    | n/a             |
| Corporate Stocks                          | 1,046,714,458    | n/a             |
| International Stocks                      | 1,297,506,237    | n/a             |
| Other Investments                         | 751,155          | n/a             |
|   |                  |                 |
| Net Assets                                | \$ 7,999,047,423 | \$8,152,748,384 |

Fiscal information was furnished by PERA prior to availability of audited financial statements and may differ from information contained in the audited financial statements.

### DERIVATION OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

Fiscal Years Ending June 30,

|   |                 | 11000           | n rears Ename ou | 110 00,          |                  |
|---|-----------------|-----------------|------------------|------------------|------------------|
|   | 1997            | 1998            | 1999             | 2000             | 2001             |
| A. Funding Value Beginning of Year              | \$3,847,878,140 | \$4,563,326,404 | \$5,490,941,333  | \$6,494,486,751  | \$7,527,280,315  |
| B. Market Value End of Year                     | 5,305,765,738   | 6,340,544,208   | 7,299,968,088    | 8,152,748,384    | 7,999,047,423    |
| C. Market Value Beginning of Year               | 4,367,164,910   | 5,305,765,738   | 6,340,544,208    | 7,299,968,088    | 8,152,748,384    |
| D. Non-Investment Net Cash Flow                 | 77,306,397      | 43,561,876      | 32,982,104       | 18,691,769       | 15,664,683       |
| E. Investment Income                            |                 |                 |                  |                  |                  |
| E1. Market Total: B - C - D                     | 861,294,431     | 991,216,594     | 926,441,776      | 834,088,527      | (169,365,644)    |
| E2. Amount for Immediate Recognition            | 315,685,249     | 372,769,227     | 446,634,626      | 526,151,649      | 608,078,109      |
| E3. Amount for Phased-In Recognition E1-E2      | 545,609,182     | 618,447,367     | 479,807,150      | 307,936,878      | (777,443,753)    |
| F. Phased-In Recognition of Investment Income   |                 |                 |                  |                  |                  |
| F1. Current Year: 0.25 x E3                     | 136,402,296     | 154,611,842     | 119,951,788      | 76,984,220       | (194,360,938)    |
| F2. First Prior Year                            | 110,362,961     | 136,402,296     | 154,611,842      | 119,951,788      | 76,984,220       |
| F3. Second Prior Year                           | 107,306,926     | 110,362,961     | 136,402,296      | 154,611,842      | 119,951,788      |
| F4. Third Prior Year                            | (34,215,366)    | 107,306,926     | 110,362,961      | 136,402,296      | 154,611,842      |
| F5. Total Recogn. Phased -In Investment Gain    | 319,856,817     | 508,684,025     | 521,328,887      | 487,950,146      | 157,186,912      |
| G. Audit Adjustment Phase-In                    | 2,599,801       | 2,599,801       | 2,599,801        | 0                | 0                |
| H. Funding Value End of Year: A + D + E2 + F5 + | 4,563,326,404   | 5,490,941,333   | 6,494,486,751    | \$ 7,527,280,315 | \$ 8,308,210,019 |
|   | 4               | 5               | 7                | 9                | 10               |
| Difference between Market & Funding Value       | 742,439,334     | 849,602,875     | 805,481,337      | 625,468,069      | (309,162,596)    |
| I. Recognized Rate of Return                    | 16.42%          | 19.28%          | 17.62%           | 15.59%           | 10.16%           |

Asset information was furnished by PERA prior to availability of audited financial statements and may differ from information contained in the audited financial statements.

### ALLOCATION OF FUNDING VALUE OF ASSETS BY DIVISION -- JUNE 30, 2001

|                                    | State Division  |               |             | Mu              | nicipal Division |               | PERA            | PERA Totals     |
|------------------------------------|-----------------|---------------|-------------|-----------------|------------------|---------------|-----------------|-----------------|
|                                    | General         | Police        | Legislative | General         | Police           | Fire          | Totals          | w/o Legislative |
| Member Contribution Fund           | \$ 437,155,361  | \$ 35,046,826 | \$ 102,842  | \$ 517,836,633  | \$ 154,355,667   | \$ 77,923,592 | \$1,222,420,919 | \$1,222,318,078 |
| Employer Accumulation Fund         | 1,114,169,414   | 237,114,176   | 2,369,545   | 619,548,374     | 265,443,684      | 89,849,292    | 2,328,494,485   | 2,326,124,940   |
| Retirement Reserve Fund            | 1,864,754,969   | 284,955,647   | 2,717,222   | 1,350,342,992   | 596,952,628      | 348,408,561   | 4,448,132,019   | 4,445,414,797   |
| <b>Total Fund Balances</b>         | 3,416,079,744   | 557,116,648   | 5,189,608   | 2,487,727,999   | 1,016,751,979    | 516,181,444   | 7,999,047,423   | 7,993,857,814   |
| Funding Value Adjustment           | 132,031,232     | 21,532,518    | 200,578     | 96,150,505      | 39,297,389       | 19,950,375    | 309,162,596     | 308,962,018     |
| <b>Total Funding Value of Asse</b> | \$3,548,110,976 | \$578,649,166 | \$5,390,186 | \$2,583,878,504 | \$1,056,049,368  | \$536,131,819 | \$8,308,210,019 | \$8,302,819,833 |

Fund information was furnished by PERA prior to availability of audited financial statements and may differ from information contained in the audited financial statements.

<sup>\*</sup> The funding value adjustment is the difference between the funding value of assets derived on page 18 and the total fund balance at market value. It was allocated to funding groups in proportion to the Total Fund Balances.

## SUMMARY OF RETIRED MEMBER AND SURVIVOR PENSION BENEFICIARY INFORMATION

There were 15,619 retired members and 2,418 survivor beneficiaries reported for the June 30, 2001 valuation, involving an annual pension payroll of \$309,090,461. The distribution by division and group was:

|                   | F      | Retired Members       |          | Sur   | vivor Pension Benefit |          |  |
|-------------------|--------|-----------------------|----------|-------|-----------------------|----------|--|
| STATE DIVISION    | No.    | <b>Annual Pension</b> | Avg. Age | No.   | <b>Annual Pension</b> | Avg. Age |  |
| General           | 8,472  | \$146,914,496         | 66.7     | 1,219 | \$ 10,525,124         | 69.1     |  |
| Police/Haz Duty   | 495    | 11,759,222            | 61.6     | 81    | 1,075,174             | 57.4     |  |
| Totals            | 8,967  | 158,673,718           | 66.5     | 1,300 | 11,600,298            | 68.3     |  |
| MUNICIPAL DIVISIO | N      |                       |          |       |                       |          |  |
| General           | 4,740  | 74,902,976            | 66.7     | 875   | 7,338,117             | 68.0     |  |
| Police            | 1,109  | 30,709,238            | 56.9     | 152   | 1,942,883             | 61.1     |  |
| Fire              | 803    | 22,476,149            | 58.2     | 91    | 1,447,082             | 65.5     |  |
| Totals            | 6,652  | 128,088,363           | 64.0     | 1,118 | 10,728,082            | 66.9     |  |
| PERA TOTALS       | 15,619 | \$286,762,081         | 65.4     | 2,418 | \$22,328,380          | 67.7     |  |

Retired member and survivor pension beneficiaries added during the year ended June 30, 2001 and included in the preceding schedule totaled 1,302 with an annualized pension payroll of \$25,665,563. The distribution by division and group was:

|    |                   | I   | Retired Members        |          |     | vivor Pension Ben      | e fit    |
|----|-------------------|-----|------------------------|----------|-----|------------------------|----------|
|    |                   | No. | <b>Annual Pensions</b> | Avg. Age | No. | <b>Annual Pensions</b> | Avg. Age |
| ST | ATE DIVISION      |     |                        |          |     |                        |          |
|    | General           | 580 | \$12,353,405           | 56.5     | 84  | \$943,562              | 61.3     |
|    | Police/Haz Duty   | 33  | 773,891                | 54.2     | 3   | 17,690                 | 59.9     |
|    | Totals            | 613 | 13,127,296             | 56.3     | 87  | 961,252                | 61.3     |
| ΜU | JNICIPAL DIVISION |     |                        |          |     |                        |          |
|    | General           | 380 | 6,383,934              | 59.2     | 58  | 624,571                | 64.7     |
|    | Police            | 111 | 3,146,818              | 49.0     | 11  | 192,862                | 54.7     |
|    | Fire              | 35  | 1,109,716              | 47.6     | 7   | 119,113                | 63.7     |
|    | Totals            | 526 | \$10,640,468           | 56.3     | 76  | \$936,546              | 63.1     |

# RETIRED MEMBERS AND SURVIVOR PENSION BENEFICIARIES HISTORICAL DEVELOPMENT OF PENSION PAYROLL

|         | Pension Recipients |                         |                  | Pension Payroll         |                   |
|---------|--------------------|-------------------------|------------------|-------------------------|-------------------|
| June 30 | Number             | Percent<br>Increase (1) | Annual<br>Amount | Percent<br>Increase (1) | Average<br>Amount |
| June 30 | Number             | merease (1)             | Amount           | increase (1)            | Amount            |
| 1955    | 217                | n.a.%                   | \$ 251,900       | n.a.%                   | \$ 1,161          |
| 1960    | 593                | 22.3                    | 717,200          | 23.3                    | 1,209             |
| 1965    | 1,072              | 12.6                    | 1,440,800        | 15.0                    | 1,344             |
| 1970    | 1,730              | 10.0                    | 2,949,300        | 15.4                    | 1,705             |
| 1975    | 2,883              | 10.8                    | 6,885,000        | 18.5                    | 2,388             |
| 1980    | 4,252              | 8.1                     | 12,896,700       | 13.4                    | 3,033             |
| 1985    | 6,698              | 9.5                     | 37,478,500       | 23.8                    | 5,595             |
| 1990    | 10,216             | 8.8                     | 92,567,196       | 19.8                    | 9,061             |
| 1991    | 10,751             | 8.2                     | 102,307,842      | 17.2                    | 9,516             |
| 1992    | 11,209             | 6.7                     | 112,397,776      | 14.3                    | 10,027            |
| 1993    | 11,466             | 4.9                     | 121,856,712      | 10.8                    | 10,628            |
| 1994    | 12,378             | 4.8                     | 142,425,282      | 10.7                    | 11,506            |
| 1995    | 13,028             | 5.0                     | 158,150,864      | 11.3                    | 12,139            |
| 1996    | 13,400             | 4.5                     | 169,346,648      | 10.6                    | 12,638            |
| 1997    | 14,631             | 5.5                     | 201,694,430      | 12.4                    | 13,785            |
| 1998    | 15,440             | 6.1                     | 226,128,019      | 13.2                    | 14,646            |
| 1999    | 16,370             | 5.7                     | 253,914,635      | 12.3                    | 15,511            |
| 2000    | 17,181             | 5.7                     | 280,495,600      | 12.1                    | 16,326            |
| 2001    | 18,037             | 6.1                     | 309,090,461      | 12.8                    | 17,136            |

<sup>(1)</sup> Annual rate of increase during the preceding 5 years.

# RETIRED MEMBERS AND SURVIVOR PENSION BENEFICIARIES DISPLAYED BY TYPE OF PENSION BEING PAID -- JUNE 30, 2001

| Type of Pension  | Number     | Pension       | Average      |
|--|------------|---------------|--------------|
| Normal Retirement Pensions                                     |            |               |              |
| Single life pension terminating on death (options A, 1, and 2) | 6,835      | \$120,807,036 | \$17,675     |
| Two life 100% survivor pension (options B and 3)               |            |               |              |
| Retired member recipient                                       | 5,528      | 107,261,709   | 19,403       |
| Survivor recipient   | 1,139      | 11,924,033    | 10,469       |
| Two life 50% survivor pension (options C and 4)                |            |               |              |
| Retired member recipient                                       | 2,386      | 48,345,115    | 20,262       |
| Survivor recipient   | 440        | 2,846,292     | 6,469        |
| Single life with temporary child survivor pension (option D)   |            |               |              |
| Retired member recipient                                       | 86         | 2,093,376     | 24,342       |
| Child recipient  | 2          | 25,836        | 12,918       |
| Total Normal Retirement Pensions                               | 16,416     | 293,303,397   | 17,867       |
| Disability Retirement Pensions                                 |            |               |              |
| Single life pension terminating on death (options A, 1, and 2) | 292        | 3,020,112     | 10,343       |
| Two life 100% survivor pension (options B and 3)               |            |               |              |
| Retired member recipient                                       | 414        | 4,367,125     | 10,549       |
| Survivor recipient   | 77         | 735,382       | 9,550        |
| Two life 50% survivor pension (options C and 4)                |            |               |              |
| Retired member recipient                                       | 73         | 803,011       | 11,000       |
| Survivor recipient   | 15         | 67,256        | 4,484        |
| Single life with temporary child survivor pension (option D)   |            |               |              |
| Retired member recipient                                       | 14         | 144,277       | 10,306       |
| Child recipient  |            |               | <del>_</del> |
| Total Disability Retirement Pensions                           | 885        | 9,137,164     | 10,324       |
| Pre-retirement Survivor Pensions                               | <u>736</u> | 6,649,877     | 9,035        |
| <b>Total Pensions Being Paid</b>                               | 8,037      | \$309,090,461 | \$17,136     |

# RETIRED MEMBERS AND SURVIVOR BENEFICIARIES DISPLAYED BY ATTAINED AGE - JUNE 30, 2001

|                    | State Division |             | Munio | cipal Division |        | Totals      |  |  |
|--------------------|----------------|-------------|-------|----------------|--------|-------------|--|--|
| Attained           | No             | Annual      | No    | Annual         | No     | Annual      |  |  |
| Age                | No.            | Pensions    | No.   | Pensions       | No.    | Pensions    |  |  |
| Under 20           | 34             | \$ 181,107  | 26    | \$ 169,627     | 60     | \$ 350,734  |  |  |
| 20-24              | 6              | 37,599      | 1     | 2,720          | 7      | 40,319      |  |  |
| 25-29              | 7              | 46,761      | 8     | 83,219         | 15     | 129,980     |  |  |
| 30-34              | 15             | 139,967     | 18    | 162,014        | 33     | 301,981     |  |  |
| 35-39              | 47             | 492,860     | 38    | 471,355        | 85     | 964,215     |  |  |
| 40-44              | 115            | 1,883,813   | 224   | 5,388,085      | 339    | 7,271,898   |  |  |
| 45-49              | 533            | 11,896,390  | 629   | 16,214,308     | 1,162  | 28,110,698  |  |  |
| 50-54              | 1,219          | 29,350,011  | 1,024 | 26,339,300     | 2,243  | 55,689,311  |  |  |
| 55-59              | 1,132          | 25,907,365  | 949   | 22,926,336     | 2,081  | 48,833,701  |  |  |
| 60-64              | 1,549          | 29,289,162  | 1,128 | 21,906,958     | 2,677  | 51,196,120  |  |  |
| 65-69              | 1,722          | 26,909,814  | 1,302 | 19,534,812     | 3,024  | 46,444,626  |  |  |
| 70-74              | 1,400          | 19,565,167  | 1,013 | 13,367,342     | 2,413  | 32,932,510  |  |  |
| 75-79              | 1,180          | 14,442,390  | 729   | 7,642,507      | 1,909  | 22,084,896  |  |  |
| 80-84              | 715            | 6,222,040   | 408   | 3,139,768      | 1,123  | 9,361,808   |  |  |
| 85-89              | 398            | 2,746,490   | 182   | 1,023,858      | 580    | 3,770,348   |  |  |
| 90-94              | 127            | 787,208     | 63    | 334,040        | 190    | 1,121,248   |  |  |
| 95 & Over          | 67             | 372,663     | 27    | 103,894        | 94     | 476,557     |  |  |
| <b>Grand Total</b> | 10,267         | 170,274,017 | 7,770 | 138,816,444    | 18,037 | 309,090,461 |  |  |

# FORMER MEMBERS DISPLAYED BY DIVISION JUNE 30, 2001

#### **VESTED FORMER MEMBERS**

|                          | Estimated | Av   | erage   |
|--------------------------|-----------|------|---------|
| Division                 | Number    | Age  | Service |
| State District           |           |      |         |
| State Division General   | 1,493     | 48.6 | 9.7     |
| Police/Haz. Duty         | 63        | 44.6 | 11.1    |
| Total State Division     | 1,556     | 48.7 | 9.8     |
| Municipal Division       |           |      |         |
| General                  | 793       | 49.1 | 9.9     |
| Police                   | 55        | 46.4 | 10.2    |
| Fire                     | <u> </u>  | 45.6 | 9.2     |
| Total Municipal Division | 858       | 48.9 | 9.9     |
| Total PERA               | 2,414     | 48.8 | 9.8     |

# ACTIVE MEMBERS DISPLAYED BY DIVISION AND COVERAGE PLAN JUNE 30, 2001

|                          |        |               | A    | verages* |        |
|--------------------------|--------|---------------|------|----------|--------|
| Divisions/Coverage Plan  | Number | Payroll _     | Age  | Service  | Pay    |
| State Division           |        |               | _    |          |        |
| General                  | 20,513 | 642,701,705   | 42.5 | 8.2      | 31,331 |
| Police                   | 481    | 18,483,535    | 35.6 | 10.9     | 38,427 |
| Hazardous Duty           | 805    | 21,916,404    | 42.5 | 11.7     | 27,225 |
| Total State Division     | 21,799 | 683,101,645   | 42.3 | 8.4      | 31,336 |
| Municipal Division       |        |               |      |          |        |
| General Cov. Plan 1      | 3,179  | 79,248,853    | 41.0 | 6.4      | 24,929 |
| General Cov. Plan 2      | 5,095  | 131,477,879   | 41.9 | 7.0      | 25,805 |
| General Cov. Plan 3      | 9,163  | 280,179,390   | 42.1 | 9.1      | 30,577 |
| General Cov. Plan 4      | 628    | 15,120,262    | 43.7 | 7.2      | 24,077 |
| Total General            | 18,065 | 506,026,384   | 41.9 | 8.0      | 28,011 |
|                          |        |               |      |          |        |
| Police Cov. Plan 1       | 172    | 4,740,087     | 38.9 | 6.6      | 27,559 |
| Police Cov. Plan 2       | 71     | 1,852,054     | 38.3 | 6.2      | 26,085 |
| Police Cov. Plan 3       | 34     | 1,115,651     | 42.3 | 9.0      | 32,813 |
| Police Cov. Plan 4       | 122    | 3,766,106     | 38.2 | 8.3      | 30,870 |
| Police Cov. Plan 5       | 1,846  | 71,936,010    | 37.6 | 10.5     | 38,969 |
| Total Police             | 2,245  | 83,409,907    | 37.9 | 9.9      | 37,154 |
| Fire Cov. Plan 1         | 15     | 336,350       | 31.9 | 6.0      | 22,423 |
| Fire Cov. Plan 2         | 2      | 58,994        | 43.7 | 16.5     | 29,497 |
| Fire Cov. Plan 3         | 4      | 128,995       | 27.0 | 3.2      | 32,249 |
| Fire Cov. Plan 4         | _      | 1             | 0.0  | 0.0      |        |
| Fire Cov. Plan 5         | 1,167  | 45,212,242    | 37.8 | 10.5     | 38,742 |
| Total Fire               | 1,188  | 45,736,582    | 37.7 | 10.4     | 38,499 |
|                          |        |               |      |          |        |
| Total Municipal Division | 21,498 | 635,172,872   | 41.2 | 8.3      | 29,546 |
| Total PERA               | 43,297 | 1,318,274,517 | 41.8 | 8.3      | 30,447 |

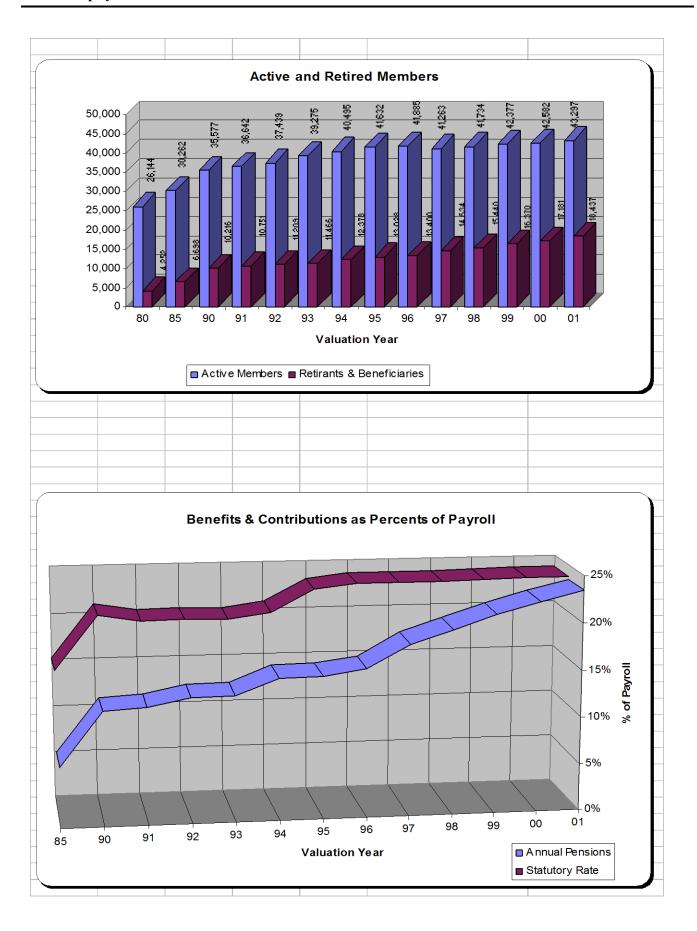
<sup>\*</sup> Averages are shown because of general interest. The valuation process utilizes individual information.

### **ACTIVE MEMBERS -- HISTORICAL DEVELOPMENT**

|         |        |               |      | Averages | *        |
|---------|--------|---------------|------|----------|----------|
| June 30 | Number | Payroll       | Age  | Service  | Pay      |
| 1056    | 9,633  | ¢ 20 000 712  |      |          | ф 2 250  |
| 1956    | 8,632  | \$ 28,998,712 | n.a. | n.a.     | \$ 3,359 |
| 1966    | 16,286 | 76,447,968    | n.a. | n.a.     | 4,694    |
| 1972    | 18,148 | 127,685,808   | n.a. | n.a.     | 7,036    |
| 1976    | 24,713 | 208,275,180   | n.a. | n.a.     | 8,428    |
| 1980    | 26,144 | 317,301,000   | 39.2 | 6.9      | 12,137   |
| 1981    | 27,499 | 375,226,000   | 39.1 | 7.0      | 13,645   |
| 1982    | 27,251 | 416,655,000   | 39.6 | 7.4      | 15,290   |
| 1983    | 28,232 | 465,053,000   | 39.4 | 7.3      | 16,473   |
| 1984    | 28,071 | 485,408,000   | 39.2 | 7.4      | 17,292   |
| 1985    | 30,262 | 584,280,000   | 39.2 | 7.5      | 19,307   |
| 1986    | 31,092 | 572,685,000   | 39.9 | 7.5      | 18,419   |
| 1987#   | ,      | , ,           |      |          | - ,      |
| 1988    | 32,620 | 644,663,769   | 39.3 | 7.2      | 19,763   |
| 1989    | 33,400 | 682,244,826   | 39.4 | 7.2      | 20,426   |
| 1990    | 35,577 | 760,639,320   | 39.6 | 7.4      | 21,380   |
| 1991    | 36,642 | 825,005,795   | 39.8 | 7.5      | 22,515   |
| 1992    | 37,439 | 843,978,100   | 39.9 | 7.5      | 22,543   |
| 1993    | 39,275 | 909,241,989   | 40.5 | 7.6      | 23,151   |
| 1994    | 40,495 | 943,330,328   | 40.6 | 7.7      | 23,295   |
| 1995    | 41,632 | 1,043,574,707 | 40.7 | 7.9      | 25,067   |
| 1995    | 41,885 | 1,043,374,707 | 41.1 | 8.3      | 26,230   |
| 1990    | 41,263 | 1,102,082,081 | 41.1 | 8.3      | 26,708   |
| 1998    | 41,692 | 1,146,991,018 | 41.3 | 8.2      | 27,511   |
| 1998    | 42,377 | 1,200,564,605 | 41.3 | 8.2      | 28,331   |
| 1997    | 72,377 | 1,200,304,003 | 71.4 | 0.2      | 20,331   |
| 2000    | 42,582 | 1,253,305,021 | 41.6 | 8.3      | 29,433   |
| 2001    | 43,297 | 1,318,274,516 | 41.8 | 8.3      | 30,447   |
|         |        |               |      |          |          |

<sup>\*</sup> Averages are shown because of general interest. The valuation process utilizes individual information.

<sup>#</sup> No actuarial valuation was performed.



# ACTIVE MEMBERS STATE DIVISION BY ATTAINED AGE AND YEARS OF SERVICE JUNE 30, 2001

|                  | Years of Service to Valuation Date |       |               |          |       |       |         |        | Totals               |  |
|------------------|------------------------------------|-------|---------------|----------|-------|-------|---------|--------|----------------------|--|
| Attained<br>Age  | 0-4                                | 5-9   | 10-14         | 15-19    | 20-24 | 25-29 | 30 Plus | No.    | Valuation<br>Payroll |  |
|                  |                                    |       |               |          |       |       |         |        |                      |  |
| 15-19            | 45                                 | -     | -             | -        | -     | -     | -       | 45     | \$ 921,255           |  |
| 20-24            | 859                                | 11    | -             | -        | -     | -     | -       | 870    | 17,162,934           |  |
| 25-29            | 1,470                              | 335   | 9             | -        | -     | -     | -       | 1,814  | 44,177,586           |  |
| 30-34            | 1,651                              | 861   | 328           | 10       | -     | -     | -       | 2,850  | 79,131,397           |  |
| 35-39            | 1,340                              | 839   | 745           | 338      | 14    | -     | -       | 3,276  | 99,382,236           |  |
| 40-44            | 1,091                              | 774   | 761           | 606      | 317   | 11    |         | 3,560  | 116,525,834          |  |
| 45-49            | 1,012                              | 745   | 673           | 512      | 463   | 69    | -       | 3,474  | 118,511,977          |  |
| 50-54            | 815                                | 639   | 601           | 433      | 376   | 82    | 15      | 2,961  | 105,510,822          |  |
| 55-59            | 463                                | 389   | 424           | 335      | 215   | 45    | 14      | 1,885  | 65,829,476           |  |
|                  |                                    |       |               |          |       |       |         | ŕ      | , ,                  |  |
| 60               | 44                                 | 60    | 73            | 47       | 26    | 6     | 3       | 259    | 8,361,934            |  |
| 61               | 45                                 | 63    | 59            | 40       | 9     | 4     | _       | 220    | 7,538,916            |  |
| 62               | 31                                 | 41    | 44            | 22       | 19    | 1     | 1       | 159    | 5,310,674            |  |
| 63               | 27                                 | 44    | 42            | 11       | 12    | 1     | 2       | 139    | 4,626,893            |  |
| 64               | 15                                 | 27    | 20            | 17       | 2     | 3     | _       | 84     | 2,994,354            |  |
| 65               | 16                                 | 14    | 12            | 6        | 3     | 2     | _       | 53     | 1,841,830            |  |
| 66               | 11                                 | 10    | 11            | 2        | 2     | 1     | 1       | 38     | 1,398,864            |  |
| 67               | 7                                  | 5     | 4             | 2        | _     | _     | 1       | 19     | 757,109              |  |
| 68               | 4                                  | 5     | 1             | 5        | 2     | _     | _       | 17     | 648,250              |  |
| 69               | 3                                  | 3     | 1             | <i>-</i> | 1     | 1     | _       | 9      | 276,629              |  |
| 70               | 4                                  | 3     | 3             | 1        | 1     | 1     |         | 13     | 485,142              |  |
| 70               | 2                                  | 3     | 3             | 1        | 1     | 1     | -       | 8      | 302,304              |  |
| 71 72            | 3                                  | 2     |               | -        |       |       | -       |        | 137,337              |  |
| 72               | 2                                  | 3     | $\frac{1}{2}$ | -<br>1   | -     | -     | -<br>1  | 6<br>9 |                      |  |
| 73<br>74         |                                    | 3     |               |          | -     | -     | 1       |        | 302,893              |  |
|                  | 1                                  |       | 1             | 1        | -     | -     | 2       | 8      | 307,045              |  |
| 75<br>76         | -                                  | 1     | - 1           | -        | -     | -     | 1       | 2      | 74,554               |  |
| 76               | -                                  | 2     | 1             | 2        | -     | -     | -       | 5      | 138,430              |  |
| 77<br><b>-</b> 2 | 1                                  | 1     | -             | -        | 1     | -     | -       | 3      | 101,862              |  |
| 79               | 1                                  | -     | -             | 1        | -     | -     | -       | 2      | 46,546               |  |
|                  | 2                                  | 3     | 3             | -        | -     | -     | 1       | 9      | 248,276              |  |
| Totals           | 8,965                              | 4,886 | 3,822         | 2,392    | 1,463 | 227   | 42      | 21,797 | \$683,053,359        |  |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

| Service | Ac     | tive Member | Count  | <b>Active Member Pays</b> |         |  |
|---------|--------|-------------|--------|---------------------------|---------|--|
| Years   | Males  | Females     | Total  | Total                     | Average |  |
|         |        |             |        |                           |         |  |
| 0       | 1,089  | 1,468       | 2,557  | \$ 64,578,147             | 25,255  |  |
| 1       | 875    | 1,118       | 1,993  | 49,280,583                | 24,727  |  |
| 2       | 911    | 1,020       | 1,931  | 50,914,784                | 26,367  |  |
| 3       | 629    | 863         | 1,492  | 41,836,121                | 28,040  |  |
| 4       | 449    | 543         | 992    | 29,623,427                | 29,862  |  |
| 5       | 376    | 454         | 830    | 24,988,470                | 30,107  |  |
| 6       | 535    | 576         | 1,111  | 34,968,219                | 31,475  |  |
| 7       | 572    | 556         | 1,128  | 35,741,244                | 31,686  |  |
| 8       | 459    | 511         | 970    | 31,462,031                | 32,435  |  |
| 9       | 457    | 390         | 847    | 29,134,558                | 34,397  |  |
| 10      | 443    | 476         | 919    | 32,315,847                | 35,164  |  |
| 11      | 429    | 373         | 802    | 27,672,564                | 34,504  |  |
| 12      | 405    | 406         | 811    | 27,930,457                | 34,440  |  |
| 13      | 344    | 367         | 711    | 24,659,585                | 34,683  |  |
| 14      | 311    | 268         | 579    | 20,788,162                | 35,904  |  |
| 15 & Up | 2,214  | 1,910       | 4,124  | 157,159,160               | 38,108  |  |
| Totals  | 10,498 | 11,299      | 21,797 | \$683,053,359             | 31,337  |  |

# ACTIVE MEMBERS MUNICIPAL DIVISION BY ATTAINED AGE AND YEARS OF SERVICE JUNE 30, 2001

|                 |          | Y     | ears of Se | rvice to Va | aluation D | ate   |         |        | Totals               |
|-----------------|----------|-------|------------|-------------|------------|-------|---------|--------|----------------------|
| Attained<br>Age | 0-4      | 5-9   | 10-14      | 15-25       | 20-24      | 25-29 | 30 Plus | No.    | Valuation<br>Payroll |
| 15 10           | 00       |       |            |             |            |       |         | 00     | ф. 1 <b>7</b> 66044  |
| 15-19           | 89       | - 1.5 | -          | -           | -          | -     | -       | 89     | \$ 1,766,944         |
| 20-24           | 1,000    | 15    | -          | -           | -          | -     | -       | 1,015  | 21,031,000           |
| 25-29           | 1,614    | 479   | 11         | 10          | -          | -     | -       | 2,104  | 51,680,325           |
| 30-34           | 1,621    | 1,057 | 448        | 18          | -          | -     | -       | 3,144  | 86,846,676           |
| 35-39           | 1,281    | 828   | 862        | 486         | 18         | -     | -       | 3,475  | 105,159,783          |
| 40-44           | 1,083    | 689   | 790        | 764         | 320        | 6     | -       | 3,652  | 116,909,233          |
| 45-49           | 863      | 605   | 561        | 550         | 394        | 67    | -       | 3,040  | 98,728,999           |
| 50-54           | 693      | 472   | 452        | 399         | 272        | 67    | 4       | 2,359  | 76,628,710           |
| 55-59           | 366      | 324   | 295        | 294         | 173        | 39    | 15      | 1,506  | 47,125,899           |
| 60              | 54       | 41    | 38         | 37          | 25         | 4     | _       | 199    | 6,224,603            |
| 61              | 42       | 43    | 44         | 40          | 18         | 5     | 1       | 193    | 5,681,806            |
| 62              | 44       | 28    | 34         | 23          | 15         | 4     | _       | 148    | 3,970,242            |
| 63              | 33       | 30    | 19         | 12          | 8          | 3     | _       | 105    | 2,863,456            |
| 64              | 21       | 23    | 16         | 18          | 4          | 1     | 3       | 86     | 2,197,456            |
| 65              | 25       | 13    | 12         | 10          | 5          | 4     | 2       | 71     | 1,879,690            |
| 66              | 16       | 15    | 14         | 4           | 3          | _     | 1       | 53     | 1,360,912            |
| 67              | 15       | 12    | 8          | 8           | _          | 2     | _       | 45     | 1,114,465            |
| 68              | 12       | 9     | 5          | 2           | 2          | _     | _       | 30     | 616,473              |
| 69              | 12       | 10    | 5          | _           | _          | 1     | 1       | 29     | 556,054              |
| 70              | 6        | 11    | 1          | 3           | 5          | _     | _       | 26     | 557,487              |
| 71              | 10       | 5     | 7          | _           | 1          | _     | _       | 23     | 356,826              |
| 72              | 8        | 3     | 5          | _           | _          | _     | 1       | 17     | 334,835              |
| 73              | 8        | 6     | 6          | 1           | _          | _     | _       | 21     | 383,272              |
| 74              | 4        | 8     | 3          | 1           | 1          | _     | _       | 17     | 254,459              |
| 75              | 1        | 4     | 1          | _           | _          | _     | _       | 6      | 90,674               |
| 76              | 2        | 3     | _          | _           | _          | _     | _       | 5      | 56,072               |
| 77              | 2        | 3     | 2          | _           | _          | _     | _       | 7      | 70,082               |
| 78              | 3        | 2     | _          | _           | _          | _     | _       | 5      | 61,424               |
| 79              | 4        | 9     | 9          | 2           | 2          | _     | 1       | 27     | 613,243              |
|                 | <u> </u> |       |            |             |            |       |         |        | 010,210              |
| Totals          | 8,932    | 4,747 | 3,648      | 2,672       | 1,266      | 203   | 29      | 21,497 | \$635,121,099        |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

| Service | Ac     | tive Member | Active Me | mber Pays     |          |
|---------|--------|-------------|-----------|---------------|----------|
| Years   | Males  | Females     | Total     | Total         | Average  |
|         |        |             |           |               |          |
| 0       | 1,529  | 1,198       | 2,727     | \$ 63,860,107 | \$23,418 |
| 1       | 1,100  | 834         | 1,934     | 41,678,241    | 21,550   |
| 2       | 1,060  | 616         | 1,676     | 40,006,134    | 23,870   |
| 3       | 920    | 509         | 1,429     | 35,788,085    | 25,044   |
| 4       | 753    | 413         | 1,166     | 30,321,265    | 26,005   |
| 5       | 768    | 383         | 1,151     | 31,545,379    | 27,407   |
| 6       | 693    | 394         | 1,087     | 30,185,520    | 27,770   |
| 7       | 635    | 332         | 967       | 27,821,831    | 28,771   |
| 8       | 521    | 261         | 782       | 23,059,931    | 29,488   |
| 9       | 514    | 246         | 760       | 23,268,380    | 30,616   |
| 10      | 547    | 232         | 779       | 24,902,346    | 31,967   |
| 11      | 593    | 254         | 847       | 28,757,451    | 33,952   |
| 12      | 576    | 230         | 806       | 28,263,679    | 35,067   |
| 13      | 446    | 184         | 630       | 22,838,271    | 36,251   |
| 14      | 409    | 177         | 586       | 21,382,840    | 36,489   |
| 15 & Up | 2,960  | 1,210       | 4,170     | 161,441,640   | 38,715   |
| Totals  | 14,024 | 7,473       | 21,497    | \$635,121,099 | \$29,545 |

### Part 1-- Section 3

Summary of Benefit Provisions

#### **SUMMARY OF BENEFIT PROVISIONS - - JUNE 30, 2001**

#### NORMAL RETIREMENT ELIGIBILITY CONDITIONS

Applicable to all members:

Any age with 25 or more years of credited service; or

Age 60 or older with 20 or more years of credited service; or

Age 61 or older with 17 or more years of credited service; or

Age 62 or older with 14 or more years of credited service; or

Age 63 or older with 11 or more years of credited service; or

Age 64 or older with 8 or more years of credited service; or

Age 65 or older with 5 or more years of credited service.

Applicable to police and fire members under one of the following coverage plans:

Municipal Police Coverage Plan 3

Municipal Police Coverage Plan 4

Municipal Police Coverage Plan 5

Municipal Fire Coverage Plan 3

Municipal Fire Coverage Plan 4

Municipal Fire Coverage Plan 5

Any age with 20 or more years of credited service.

#### NORMAL RETIREMENT PENSION AMOUNT

The amount of normal retirement pension is based on:

- -- Final average salary, which is the average of salary for the 36 consecutive months of credited service producing the largest average;
- -- Credited service (years and months); and the
- -- Coverage plan.

The pension accrual factor and maximum pension, as a percent of final average salary, under each coverage plan are:

| Coverage Plan               | Pension Factor Per Year of Credited Service | Maximum Pension as<br>Percent of<br>Final Average Salary |  |  |
|-----------------------------|---|--|--|--|
|                             |   | 3 ,  |  |  |
| State General Member        |   |  |  |  |
| Coverage Plan 3             | 3.0%  | 80%  |  |  |
| State Police Member         |   |  |  |  |
| Coverage Plan 1             | 3.0   | 80   |  |  |
| State Hazardous Duty Member |   |  |  |  |
| Coverage Plan 2             | 3.0   | 100  |  |  |
| Municipal General Member    |   |  |  |  |
| Coverage Plan 1             | 2.0   | 60   |  |  |
| Coverage Plan 2             | 2.5   | 75   |  |  |
| Coverage Plan 3             | 3.0   | 80   |  |  |
| Coverage Plan 4             | 3.0   | 80   |  |  |
| Municipal Police Member     |   |  |  |  |
| Coverage Plan 1             | 2.0   | 60   |  |  |
| Coverage Plan 2             | 2.5   | 100  |  |  |
| Coverage Plan 3             | 2.5   | 100  |  |  |
| Coverage Plan 4             | 3.0   | 80   |  |  |
| Coverage Plan 5             | 3.5   | 80   |  |  |
| Municipal Fire Member       |   |  |  |  |
| Coverage Plan 1             | 2.0   | 60   |  |  |
| Coverage Plan 2             | 2.5   | 100  |  |  |
| Coverage Plan 3             | 2.5   | 100  |  |  |
| Coverage Plan 4             | 3.0   | 80   |  |  |
| Coverage Plan 5             | 3.5   | 80   |  |  |
|                             |   |  |  |  |

#### **VESTED TERMINATION OF MEMBERSHIP (EMPLOYMENT)**

Termination of employment and membership with at least 5 years of credited service. Accumulated member contributions must be left on deposit. Payment of the pension is available upon eligibility for normal retirement. In addition, certain disability and survivor pension provisions apply.

#### NORMAL AND OPTIONAL FORMS OF PAYMENT

The normal form of payment is for life. Optional contingent survivor beneficiary forms of payment are available on an actuarial equivalent basis. Pension payments can never aggregate less than the member's accumulated contributions.

#### SURVIVOR PENSIONS - DEATH IN THE LINE-OF-DUTY

Pensions are paid to the eligible spouse and eligible children if survivor coverage has not been elected under the Elective Survivor Pension Beneficiary provision. The amount of pension payable for life to an eligible spouse is 50% of final average salary, or, if larger, 80% of the accrued normal retirement pension. The amount of pension payable to each eligible child is an equal share of 25% of final average salary. If there is not an eligible spouse or the eligible spouse dies, and if there are 2 or more eligible children, the amount of pension payable to each eligible child is an equal share of 50% of final average salary. An eligible child is an unmarried natural or adopted child who is under age 18 years. A child's pension terminates upon death, marriage or reaching age 18. The pension of any remaining eligible children is recalculated whenever a child's pension is terminated.

#### **DEATH NOT IN THE LINE-OF-DUTY**

Requires 5 years of credited service. Benefit applies to members and vested former members who have not elected coverage under the Elective Survivor Pension Beneficiary provision. Pensions are paid to an eligible spouse <u>OR</u> eligible children. The amount of pension payable for the life of an eligible spouse is 30% of final average salary, or if larger, 80% of accrued normal retirement pension. An eligible child pension is paid if there is not an eligible spouse or following the death of an eligible spouse. The amount of pension payable to each eligible child is an equal share, with each other child, of 25% of final average salary, or, if greater, 50% of accrued normal retirement pension. An eligible child is an unmarried natural or adopted child who is under age 18 years. A child's pension terminates upon death, marriage or reaching age 18. The pension of any remaining eligible children is recalculated whenever a child's pension is terminated.

#### ELECTIVE SURVIVOR PENSION BENEFICIARY PENSION

Applicable to members with 5 or more years of credited service and vested former members who have elected option B and designated a survivor pension beneficiary who has an insurable interest. The amount of pension is the amount of accrued normal retirement pension under optional form of payment B (100% continuation to beneficiary).

#### DISABILITY RETIREMENT

Applicable to members and vested former members with 5 or more years of credited service. The 5 year credited service requirement is waived if the disability is incurred in line-of-duty. The amount of disability pension is the accrued normal retirement pension at time of disability retirement. If the disability is in line-of-duty, the credited service used is the amount that would have been acquired when first eligible for normal retirement.

#### **COST-OF-LIVING INCREASES**

Pensions are increased each July 1 by 3% if retirement has been in effect for at least 2 full calendar years. If retired on account of disability or if at least age 65, the 2 calendar year waiting period is reduced to 1 full calendar year.

#### CONTRIBUTIONS BY MEMBERS AND EMPLOYERS

Contributions by members and affiliated public employers are at the following rates.

|   | Percent of Salary<br>Member | Contribution Rate<br>Employer |
|---|-----------------------------|-------------------------------|
|   |                             |                               |
| State General Member Coverage Plan 3        | 7.42%                       | 16.59%                        |
| State Police Member Coverage Plan 1         | 7.60                        | 25.10                         |
| State Hazardous Duty Member Coverage Plan 2 | 4.78                        | 25.72                         |
| State Hazardous Duty Member Coverage Hair 2 | 4.76                        | 23.12                         |
| Municipal General Member Coverage Plan 1    | 7.00                        | 7.00                          |
| Municipal General Member Coverage Plan 2    | 9.15                        | 9.15                          |
| Municipal General Member Coverage Plan 3    | 13.15                       | 9.15                          |
| Municipal General Member Coverage Plan 4    | 15.65                       | 11.65                         |
| Municipal Police Member Coverage Plan 1     | 7.00                        | 10.00                         |
| Municipal Police Member Coverage Plan 2     | 7.00                        | 15.00                         |
| Municipal Police Member Coverage Plan 3     | 7.00                        | 18.50                         |
|   |                             |                               |
| Municipal Police Member Coverage Plan 4     | 12.35                       | 18.50                         |
| Municipal Police Member Coverage Plan 5     | 16.30                       | 18.50                         |
| Municipal Fire Member Coverage Plan 1       | 8.00                        | 11.00                         |
| Municipal Fire Member Coverage Plan 2       | 8.00                        | 17.50                         |
| Municipal Fire Member Coverage Plan 3       | 8.00                        | 21.25                         |
| Municipal Fire Member Coverage Plan 4       | 12.80                       | 21.25                         |
| Municipal Fire Member Coverage Plan 5       | 16.20                       | 21.25                         |
|   |                             |                               |

Interest is credited to member contributions, on each June 30, at the rates set annually by the Retirement Board. The current rate is 5.25%.

### Part 1-- Section 4

Description of Actuarial Cost Methods

Summary of Estimates of Future Experience Used for the Valuation Definitions of Technical Terms

#### **ACTUARIAL COST METHODS USED FOR THE VALUATION**

An actuarial cost method is a procedure for allocating the actuarial present value of benefits and expenses to time periods. The method used for the PERA valuation is known as the individual entry-age actuarial cost method, and has the following characteristics:

- (i) The annual normal costs for each individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected pensionable compensation.

The individual entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's pensionable compensation between the entry age of the member and the pattern of projected exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting accrued assets from the actuarial accrued liability determines the unfunded actuarial accrued liability. The period of time needed to finance the unfunded actuarial accrued liability with current statutory contribution rates is determined using a level percent of payroll amortization technique.

Active member payroll was projected to increase 5.0% a year for the purpose of determining the financing period. This estimate is consistent with the base rate of increase in salaries used to calculate actuarial present values.

### ESTIMATES FOR FUTURE PERA EXPERIENCE USED FOR THE VALUATION

Funding objective contribution requirements and actuarial present values are calculated by applying estimates of future plan activities (actuarial assumptions) to the benefit provisions and people information of PERA, using the actuarial cost methods described on the previous page.

The principal areas of activity which require estimates are:

- (i) long-term rates of investment return to be generated by the assets of PERA
- (ii) patterns of pay increases to members
- (iii) rates of mortality among members, retired members, and beneficiaries
- (iv) rates of withdrawal of active members
- (v) rates of disability among active members
- (vi) the age patterns of actual retirements.

In making a valuation, the monetary effect of each activity is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

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Actual activities of PERA will not coincide exactly with estimated activities, due to the nature of the activities. Each valuation provides a complete recalculation of estimated future activities and takes into account the effect of past differences between estimated and actual activities. The result is a continual series of adjustments (usually small). From time to time one or more of the estimates are modified to reflect experience trends (but not random or temporary year to year fluctuations).

The estimates of future INFLATION, REAL INVESTMENT RETURN in excess of inflation and SALARY INCREASES were first used for the June 30, 1985 actuarial valuation. The fiscal estimates are used in combination with the demographic estimates to determine the present value of amounts expected to be paid in the future.

*Inflation*. Four and one-half percent per annum, compounded annually. This is the rate at which growth in the supply of money and credit is assumed to exceed growth in the supply of goods and services. It may be thought of as the rate of depreciation of the purchasing power of the dollar. There are a number of indices for measuring the inflation rate. The recent inflation rate, as measured by the Consumer Price Index, has been:

|        |      |      | Year 1 | Ended Ju | ine 30 | Average for |             |              |              |
|--------|------|------|--------|----------|--------|-------------|-------------|--------------|--------------|
|        | 2001 | 2000 | 1999   | 1998     | 1997   | 1996        | Last 5 Yrs. | Last 10 Yrs. | Last 30 Yrs. |
| Actual | 3.2% | 3.7% | 2.0%   | 1.7%     | 2.3%   | 2.8%        | 2.5%        | 2.7%         | 5.1%         |

**Real Investment Return**. Three and one-half percent per annum, compounded annually. This is the rate of return (net of administrative and investment expenses) to be produced by investing a pool of assets in an inflation-free environment.

Salary Increases. Salary increases occur in recognition of (i) individual merit and longevity, (ii) inflation-related depreciation of the purchasing power of salaries, and (iii) and other factors such as productivity gains and competition from other employers for personnel. A schedule of long-term rates of increase is used to project salaries from valuation salaries to final average salaries upon which pensions are based. Rates of increase for sample ages follow.

|  | Annual Ra | ates of Salary I | ncrease for Sa | mple Years of | Service |  |
|--|-----------|------------------|----------------|---------------|---------|--|
| Attributable to:                       | 1         | 5                | 10             | 15            | 20      |  |
| General Increase in Wage Level Due to: |           |                  |                |               |         |  |
| Inflation                              | 4.5%      | 4.5%             | 4.5%           | 4.5%          | 4.5%    |  |
| Other Factors                          | 0.5       | 0.5              | 0.5            | 0.5           | 0.5     |  |
| State General                          | 9.0       | 3.0              | 2.0            | 1.0           | 0.5     |  |
| State Police                           | 10.0      | 8.0              | 6.2            | 5.0           | 2.0     |  |
| State Corrections                      | 9.5       | 2.2              | 1.5            | 0.5           | 0.5     |  |
| Municipal General                      | 8.0       | 4.0              | 1.7            | 1.0           | 0.5     |  |
| Municipal Police                       | 10.0      | 3.7              | 3.7            | 2.5           | 2.5     |  |
| Municipal Fire                         | 10.5      | 7.7              | 4.7            | 2.0           | 2.2     |  |

*Mortality Table*. The 2000 Group Annuity Mortality Table (1971 GAM projected), set back 2 years for men and 7 years for women for healthy lives. Special disabled mortality is used for disabled lives.

Present values and life expectancies are shown for sample ages in the following schedule. Note that sex distinct mortality rates are used solely for determining PERA funded status and contribution rate adequacy. All benefit amounts are based on merged gender mortality rates.

|        |            | Reti                 | red Life Non-Disa | bled Mortality Ta | ble      |          |
|--------|------------|----------------------|-------------------|-------------------|----------|----------|
|        |            |                      | Present V         | Value of          |          |          |
|        | Present \  | Value of             | \$1.00/Mo. for    | Two Years         | Future   | Life     |
| Sample | \$1 Monthl | \$1 Monthly for Life |                   | Yr. Thereafter    | Expectan | cy Years |
| Ages   | Men        | Women                | Men               | Women             | Men      | Women    |
| 40     | \$143.69   | \$147.07             | \$197.99          | \$206.58          | 39.41    | 44.22    |
| 45     | 139.09     | 143.69               | 187.52            | 197.99            | 34.67    | 39.41    |
| 50     | 133.15     | 139.09               | 175.25            | 187.52            | 30.06    | 34.67    |
| 55     | 125.85     | 133.15               | 161.34            | 175.25            | 25.67    | 30.06    |
| 60     | 116.89     | 125.85               | 145.67            | 161.34            | 21.50    | 25.67    |
| 65     | 105.91     | 116.89               | 128.13            | 145.67            | 17.57    | 21.50    |
| 70     | 93.21      | 105.91               | 109.43            | 128.13            | 13.99    | 17.57    |
| 75     | 79.97      | 93.21                | 91.19             | 109.43            | 10.91    | 13.99    |
| 80     | 66.37      | 79.97                | 73.63             | 91.19             | 8.29     | 10.91    |
| 85     | 53.86      | 66.37                | 58.33             | 73.63             | 6.23     | 8.29     |

|        | Retired Life Disabled Mortality Table |                      |                |                |           |         |  |  |  |  |  |  |
|--------|---------------------------------------|----------------------|----------------|----------------|-----------|---------|--|--|--|--|--|--|
|        |                                       |                      | Present V      | Value of       |           |         |  |  |  |  |  |  |
|        | Present V                             | Value of             | \$1.00/Mo. for | Two Years      | Future    | Life    |  |  |  |  |  |  |
| Sample | \$1 Monthly                           | \$1 Monthly for Life |                | Yr. Thereafter | Expectano | y Years |  |  |  |  |  |  |
| Ages   | Men                                   | Women                | Men            | Women          | Men       | Women   |  |  |  |  |  |  |
| 40     | \$117.97                              | \$145.01             | \$155.18       | \$201.37       | 27.71     | 41.25   |  |  |  |  |  |  |
| 45     | 118.90                                | 140.94               | 154.36         | 191.71         | 26.19     | 36.49   |  |  |  |  |  |  |
| 50     | 115.65                                | 135.50               | 147.56         | 180.13         | 23.65     | 31.83   |  |  |  |  |  |  |
| 55     | 110.58                                | 128.78               | 138.32         | 166.93         | 20.89     | 27.36   |  |  |  |  |  |  |
| 60     | 104.12                                | 120.72               | 127.39         | 152.27         | 18.11     | 23.16   |  |  |  |  |  |  |
| 65     | 96.18                                 | 110.99               | 114.90         | 135.95         | 15.36     | 19.18   |  |  |  |  |  |  |
| 70     | 86.79                                 | 99.18                | 101.11         | 117.83         | 12.71     | 15.45   |  |  |  |  |  |  |
| 75     | 76.18                                 | 85.84                | 86.48          | 98.87          | 10.25     | 12.08   |  |  |  |  |  |  |
| 80     | 64.75                                 | 71.36                | 71.65          | 79.77          | 8.02      | 9.13    |  |  |  |  |  |  |
| 85     | 53.12                                 | 57.15                | 57.36          | 62.20          | 6.09      | 6.72    |  |  |  |  |  |  |

*Rates of Retirement*. These rates are used to measure the probability of an eligible member retiring at the indicated ages or indicated service.

| _          | Percents Retiring at Indicated Ages (by Coverage Plan) |         |        |            |          |            |           |           |  |  |
|------------|--|---------|--------|------------|----------|------------|-----------|-----------|--|--|
| Retirement | State (  | General | State  | State      | Municipa | al General | Municipal | Municipal |  |  |
| Ages       | Male   | Female  | Police | Correction | Male     | Female     | Police    | Fire      |  |  |
|            |  |         |        | S          |          |            |           |           |  |  |
| 60         | 25%  | 30%     | 20%    | 20%        | 25%      | 10%        | 20%       | 10%       |  |  |
| 61         | 25   | 35      | 20     | 20         | 30       | 15         | 20        | 10        |  |  |
| 62         | 50   | 50      | 40     | 20         | 30       | 25         | 40        | 50        |  |  |
| 63         | 35   | 35      | 50     | 30         | 30       | 25         | 20        | 50        |  |  |
| 64         | 35   | 35      | 50     | 40         | 30       | 25         | 25        | 50        |  |  |
| 65         | 60   | 40      | 100    | 80         | 40       | 35         | 100       | 100       |  |  |
| 66         | 30   | 35      |        | 50         | 25       | 25         |           |           |  |  |
| 67         | 30   | 50      |        | 100        | 20       | 15         |           |           |  |  |
| 68         | 30   | 20      |        |            | 15       | 20         |           |           |  |  |
| 69         | 35   | 35      |        |            | 15       | 20         |           |           |  |  |
| 70         | 20   | 30      |        |            | 20       | 20         |           |           |  |  |
| 71         | 20   | 30      |        |            | 10       | 25         |           |           |  |  |
| 72         | 20   | 30      |        |            | 10       | 25         |           |           |  |  |
| 73         | 20   | 20      |        |            | 15       | 25         |           |           |  |  |
| 74         | 20   | 20      |        |            | 50       | 50         |           |           |  |  |
| 75         | 100  | 100     |        |            | 100      | 100        |           |           |  |  |

|            | Percents Retiring at Indicated Service (by Coverage Plan) |         |        |             |         |            |           |           |  |  |
|------------|---|---------|--------|-------------|---------|------------|-----------|-----------|--|--|
| Retirement | State   | General | State  | State       | Municip | al General | Municipal | Municipal |  |  |
| Service    | Male  | Female  | Police | Corrections | Male    | Female     | Police    | Fire      |  |  |
| 20         | %   | %       | 10%    | %           | %       | %          | 10%       | 10%       |  |  |
| 21         |   |         | 10     |             |         |            | 10        | 10        |  |  |
| 22         |   |         | 10     |             |         |            | 6         | 10        |  |  |
| 23         |   |         | 10     |             |         |            | 6         | 10        |  |  |
| 24         |   |         | 10     |             |         |            | 6         | 10        |  |  |
| 25         | 10  | 10      | 10     | 40          | 5       | 5          | 10        | 10        |  |  |
| 26         | 10  | 10      | 10     | 60          | 5       | 5          | 10        | 10        |  |  |
| 27         | 10  | 10      | 10     | 50          | 10      | 5          | 15        | 10        |  |  |
| 28         | 10  | 10      | 10     | 50          | 5       | 5          | 15        | 10        |  |  |
| 29         | 10  | 10      | 50     | 50          | 5       | 5          | 30        | 10        |  |  |
| 30         | 20  | 10      | 100    | 50          | 5       | 10         | 100       | 10        |  |  |
| 31         | 10  | 18      |        | 50          | 10      | 10         |           | 10        |  |  |
| 32         | 20  | 10      |        | 50          | 10      | 10         |           | 50        |  |  |
| 33         | 10  | 10      |        | 50          | 100     | 100        |           | 50        |  |  |
| 34         | 10  | 35      |        | 100         |         |            |           | 50        |  |  |
| 35         | 15  | 35      |        |             |         |            |           | 100       |  |  |
| 36         | 25  | 100     |        |             |         |            |           |           |  |  |
| 37         | 100   | 100     |        |             |         |            |           |           |  |  |
| 38         |   |         |        |             |         |            |           |           |  |  |
| 39         |   |         |        |             |         |            |           |           |  |  |
| 40         |   |         |        |             |         |            |           |           |  |  |

**Rates of Separation From Active Membership**. The rates are used to measure probabilities of active members terminating that status for a reason other than disability or death. The rates do not apply to members who are within the retirement rate range. Separation rates are presumed to be service related during the first 5 to 7 years of employment and age related thereafter.

|        |          | Percent o | of Active Me | mbers Terr | ninating Du | Percent of Active Members Terminating During Year |          |           |         |           |        |          |  |  |  |  |
|--------|----------|-----------|--------------|------------|-------------|---|----------|-----------|---------|-----------|--------|----------|--|--|--|--|
| Sample | Years of | State (   | General      | State      | State Co    | rrections   | Municipa | l General | Municip | al Police | Munici | pal Fire |  |  |  |  |
| Ages   | Service  | Men       | Women        | Police     | Men         | Women   | Men      | Women     | Men     | Women     | Men    | Women    |  |  |  |  |
| All    | 0        | 35.0%     | 33.0%        | 12.0%      | 44.0%       | 20.0%   | 35.0%    | 40.0%     | 30.0%   | 25.0%     | 15.0%  | 10.0%    |  |  |  |  |
|        | 1        | 20.0      | 18.0         | 4.0        | 35.0        | 55.0  | 20.0     | 20.0      | 15.0    | 10.0      | 10.0   | 25.0     |  |  |  |  |
|        | 2        | 12.0      | 13.0         | 3.0        | 25.0        | 13.0  | 11.0     | 13.0      | 9.0     | 10.0      | 5.0    | 10.0     |  |  |  |  |
|        | 3        | 11.0      | 11.0         | 6.0        | 20.0        | 20.0  | 9.5      | 11.0      | 9.0     | 12.0      | 4.0    | 8.0      |  |  |  |  |
|        | 4        | 8.0       | 9.0          | 4.5        | 9.0         | 20.0  | 7.0      | 8.0       | 9.0     | 5.0       | 3.5    | 7.0      |  |  |  |  |
|        | 5        | n/a       | 5.0          | 4.5        |             | 10.0  | 5.0      | 5.5       |         |           |        |          |  |  |  |  |
|        | 6        |           |              | 4.5        |             | 10.0  |          |           |         |           |        |          |  |  |  |  |
|        | 7        |           |              |            |             | 10.0  |          |           |         |           |        |          |  |  |  |  |
|        | Over     |           |              |            |             |   |          |           |         |           |        |          |  |  |  |  |
|        | Select   |           |              |            |             |   |          |           |         |           |        |          |  |  |  |  |
| 20     | Period   | 8.0       | 10.0         | 1.5        | 9.0         | 6.0   | 2.0      | 12.0      | 10.0    | 10.0      | 3.6    | 3.6      |  |  |  |  |
| 25     |          | 5.6       | 6.5          | 1.5        | 9.0         | 6.0   | 2.0      | 7.8       | 6.5     | 6.5       | 3.6    | 3.6      |  |  |  |  |
| 30     |          | 4.2       | 4.2          | 1.5        | 7.0         | 6.0   | 2.0      | 5.0       | 4.1     | 4.1       | 2.8    | 2.8      |  |  |  |  |
| 35     |          | 3.3       | 2.9          | 1.5        | 4.8         | 6.0   | 2.0      | 3.4       | 2.5     | 2.5       | 1.9    | 1.9      |  |  |  |  |
| 40     |          | 2.5       | 2.2          | 1.5        | 3.3         | 6.0   | 2.0      | 2.7       | 1.5     | 1.5       | 1.3    | 1.3      |  |  |  |  |
| 45     |          | 2.0       | 2.0          | 1.5        | 2.2         | 6.0   | 2.0      | 2.4       | 1.0     | 1.0       | 0.9    | 0.9      |  |  |  |  |
| 50     |          | 1.7       | 1.9          | 1.5        | 1.8         | 6.0   | 2.0      | 2.3       | 0.9     | 0.9       | 0.7    | 0.7      |  |  |  |  |
| 55     |          | 1.6       | 1.5          | 1.5        | 1.8         | 6.0   | 2.0      | 1.9       | 0.9     | 0.9       | 0.7    | 0.7      |  |  |  |  |
| 60     |          | 1.6       | 1.5          | 1.5        | 1.8         | 6.0   | 2.0      | 1.8       | 0.9     | 0.9       | 0.7    | 0.7      |  |  |  |  |
| 65     |          | 1.6       | 1.5          | 1.5        | 1.8         | 6.0   | 2.0      | 1.8       | 0.5     | 0.5       | 0.7    | 0.7      |  |  |  |  |

*Rates of Disability*. The rates are used to measure the probabilities of active members becoming disabled. Rates for sample ages follow.

|                | <b>Percent Becoming Dis</b>               | Percent Becoming Disabled at Indicated Ages              |  |  |  |  |  |  |  |
|----------------|---|--|--|--|--|--|--|--|--|
| Sample<br>Ages | State General<br>and<br>Municipal General | State Police/<br>Hazardous Duty<br>Municipal Police/Fire |  |  |  |  |  |  |  |
| 20             | 0.04%                                     | 0.15%  |  |  |  |  |  |  |  |
| 25             | 0.04%                                     | 0.13%  |  |  |  |  |  |  |  |
| 30             | 0.05                                      | 0.18   |  |  |  |  |  |  |  |
| 35             | 0.08                                      | 0.29   |  |  |  |  |  |  |  |
| 40             | 0.13                                      | 0.42   |  |  |  |  |  |  |  |
| 45             | 0.19                                      | 0.65   |  |  |  |  |  |  |  |
| 50             | 0.31                                      | 1.05   |  |  |  |  |  |  |  |
| 55             | 0.55                                      | 1.84   |  |  |  |  |  |  |  |
| 60             | 0.92                                      | 3.06   |  |  |  |  |  |  |  |
| 65             | 0.99                                      | 3.30   |  |  |  |  |  |  |  |
|                |   |  |  |  |  |  |  |  |  |

Administrative and Investment Expenses. All expenses are deducted from gross investment income.

Active Member Group Size. The valuation is based on a stationary group size.

#### **DEFINITIONS OF TECHNICAL TERMS**

**Accrued Service.** Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between the actuarial present value of future benefits payments and the actuarial present value of future normal costs. Also referred to as "accrued liability" or "prior service liability."

Actuarial Experience Estimates. Estimates of expected future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Demographic estimates (rates of mortality, disability, turnover and retirement) are generally based on past experience, modified for projected changes in conditions. Fiscal estimates (salary increases, inflation and real investment return) consist of the underlying rates in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefit payments" between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial valuation cost method."

**Actuarial Equivalent.** A single amount or series of amounts of equal actuarial present value to another single amount or series of amounts, computed on the basis of appropriate actuarial experience estimates.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment. Also referred to as "present value."

**Actuary**. A person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events.

**Amortization.** Paying off an interest-discounted amount with periodic payments of interest and principal - as opposed to paying off with a lump sum payment.

*Experience Gain (Loss)*. The difference between actual actuarial costs and anticipated actuarial costs -- during the period between two valuation dates.

*Normal Cost.* The actuarial cost allocated to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

*Unfunded Actuarial Accrued Liability*. The difference between the actuarial accrued liability and the funding value of assets. Sometimes referred to as "unfunded past service liability," "unfunded accrued liability" or "unfunded supplemental present value."

Most retirement systems have an unfunded actuarial accrued liability. An amount arises each time new benefits are added, an affiliated public employer adopts a new coverage plan, and an experience loss occurs.

The existence of an unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. An unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is control of the amount of unfunded actuarial accrued liability and the trend in the amount (after due allowance for devaluation of the dollar from inflation and deliberate actions affecting the amount).

### Part 1-- Section 5

Disclosures and Supplementary
Information Required by
Statements No. 25 and No. 27
of the Governmental
Accounting Standards Board

#### **Actuarial Accrued Liability**

The actuarial accrued liability is a measure intended to help users assess (i) a pension fund's funded status on a going concern basis, and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the individual entry-age actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry-age and assumed exit age. Entry-age was established by subtracting credited service from current age on the valuation date.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

The entry age actuarial accrued liability was determined as part of an actuarial valuation of the plan as of June 30, 2001. Significant actuarial assumptions used in determining the entry age actuarial accrued liability include (a) a rate of return on the investment of present and future assets of 8.00% per year compounded annually, (b) projected salary increases of 5.0% per year compounded annually (4.5% attributable to inflation and 0.5% attributable to productivity), and (c) additional projected salary increases of 0.0% to 10.5% per year attributable to seniority/merit.

| Actuarial Accrued Liability:                                   |                 |
|--|-----------------|
| Active members   | \$3,527,154,791 |
| Retired members and beneficiaries currently receiving benefits | 4,227,515,710   |
| Vested terminated members not yet receiving benefits           | 121,904,392     |
| Total Actuarial Accrued Liability                              | 7,876,574,893   |
| Actuarial Value of Assets (market value was \$7,999,047,423)   | 8,302,819,833   |
| Assets in Excess of Actuarial Accrued Liability                | \$(426,244,939) |

During the year ended June 30, 2001, the Plan experienced a net change of \$764,195,231 in the actuarial accrued liability. There were several changes in actuarial assumptions during the year as a result of the Experience Study that was performed (see report dated 8/27/2001). The changes in actuarial assumptions resulted in an increase on actuarial accrued liability of \$248,646,475.

## REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Fiscal         | Actuarial  | Annual       |
|----------------|------------|--------------|
| Year           | Valuation  | Required     |
| ended June 30, | Date       | Contribution |
| 1992           | 6/30/1991  | 111,127,910  |
| 1993           | 6/30/1992  | 114,480,195  |
| 1994           | 6/30/1993  | 125,240,793  |
| 1995           | 6/30/1994  | 136,944,079  |
| 1996           | 6/30/1995  | 158,085,666  |
| 1997           | 6/30/1996  | 162,495,955  |
| 1998           | 6/30/1997  | 165,248,661  |
| 1999           | 6/30/1998  | 174,324,518  |
| 2000           | 6/30/1999  | 182,000,473  |
| 2001           | 6/30/2000  | 196,544,110  |
| 2002           | 6/30/2001* | 186,521,489  |

<sup>\*</sup> Projected amount: Actual required contribution dollar amount will be based on the statutory contribution rate and the actual pensionable payroll for the period.

# REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF FUNDING PROGRESS

|           |               |               | Unfunded      |        |               | UAAL as a  |
|-----------|---------------|---------------|---------------|--------|---------------|------------|
| Actuarial | Actuarial     | Actuarial     | Actuarial     |        |               | Percent of |
| Valuation | Value         | Accrued       | Accrued       | Funded | Covered       | Covered    |
| Date      | of Assets     | Liability-EA  | Liability     | Ratio  | Payroll       | Payroll    |
| 6/30/1992 | 2,399,346,019 | 3,277,968,426 | 878,622,407   | 73.2%  | 843,915,100   | 104.1%     |
| 6/30/1993 | 2,696,510,607 | 3,561,049,838 | 864,539,231   | 75.7%  | 909,241,989   | 95.1%      |
| 6/30/1994 | 2,974,815,939 | 3,976,512,076 | 1,001,696,137 | 74.8%  | 943,330,328   | 106.2%     |
| 6/30/1995 | 3,364,452,385 | 4,646,242,538 | 1,281,790,153 | 72.4%  | 1,043,574,707 | 122.8%     |
| 6/30/1996 | 3,845,137,772 | 5,054,258,029 | 1,209,120,257 | 76.1%  | 1,098,635,667 | 110.1%     |
|           |               |               |               |        |               |            |
| 6/30/1997 | 4,560,312,444 | 5,558,679,193 | 998,366,749   | 82.0%  | 1,102,082,081 | 90.6%      |
| 6/30/1998 | 5,487,475,524 | 6,000,438,884 | 512,963,360   | 91.5%  | 1,146,991,018 | 44.7%      |
| 6/30/1999 | 6,490,295,227 | 6,548,102,870 | 57,807,643    | 99.1%  | 1,146,991,019 | 5.0%       |
| 6/30/2000 | 7,522,348,007 | 7,112,379,662 | (409,968,345) | 105.8% | 1,253,305,021 | -          |
| 6/30/2001 | 8,302,819,833 | 7,876,574,893 | (426,244,939) | 105.4% | 1,318,274,517 | -          |

# NOTES TO REQUIRED SUPPLEMENTARY INFORMATION SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

| Valuation Date                |                             |  |                                | June 30, 20 | June 30, 2001 |  |
|-------------------------------|-----------------------------|--|--------------------------------|-------------|---------------|--|
| Actuarial Cost Method         |                             |  | Individual                     | Entry Age   |               |  |
| Amortization Method           |                             |  | Level Percent of Payroll, open |             |               |  |
| Remaining Amortization Period |                             |  |                                | 7 years     |               |  |
| Asset Valuation Method        |                             |  | 4-year smoothed market         |             |               |  |
| Actuarial Assump              | otions:                     |  |                                |             |               |  |
|                               | Investment Rate of Return*  |  | Return*                        | 8.00%       |               |  |
|                               | Projected Salary Increases* |  | 5.00% - 15.50%                 |             |               |  |
|                               | *Includes Inflation at      |  | 4.50%                          |             |               |  |
|                               | Cost-of-Living Adjustments  |  | 3.00%                          |             |               |  |

#### October 25, 2001 FX

Mr. Terry Slattery, Executive Director New Mexico PERA 1120 Paseo de Peralta Santa Fe, New Mexico 87501

Dear Mr. Slattery:

Enclosed are 5 copies of the report of an actuarial valuation as of June 30, 2001 of PERA New Mexico. The balance of the reports will be sent after we have finalized the new format. Please note that we have excluded part 2 from this report.

Sincerely yours,

Kenneth G. Alberts

KGA:kga Enclosures

CC: Mr. Kurt Weber, Deputy Executive Secretary

Ms. Mary Frederick, Deputy Executive Secretary

Ms. Lee Ann Rael, Comptroller

Ms. Tracy Hughes, General Council

Deloitte & Touche, LLP (+ 1 report copy)

Attn: Mr. Dan Whitnah, Senior Manager Human Capital Advisory Services 55 Seventeenth Street, Suite 3600 Denver, Colorado 80202-3942