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**PUBLIC EMPLOYEES RETIREMENT FUND**

**ACTUARIAL VALUATION REPORT**

**JULY 1, 1990**

THE *Wyatt* COMPANY

ACTUARIAL SERVICES  
PENSION PROGRAMS  
ADMINISTRATIVE SYSTEMS  
INTERNATIONAL SERVICES  
ORGANIZATION SURVEYS

15TH FLOOR  
8400 NORMANDALE LAKE BOULEVARD  
MINNEAPOLIS, MINNESOTA 55437  
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EMPLOYEE BENEFITS  
EMPLOYEE COMMUNICATIONS  
RISK MANAGEMENT  
INSURANCE CONSULTING  
HEALTH CARE CONSULTING

October 22, 1990

Legislative Commission on  
Pensions and Retirement  
55 State Office Building  
St. Paul, Minnesota 55155

**RE: PUBLIC EMPLOYEES RETIREMENT FUND**

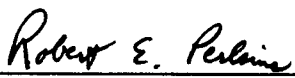
Commission Members:

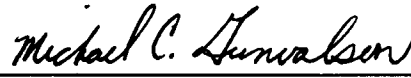
We have prepared an actuarial valuation of the Fund as of July 1, 1990 based on membership and financial data supplied by PERA.

We certify that to the best of our knowledge and belief this actuarial valuation was performed in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on September 20, 1989.

Respectfully submitted,

THE WYATT COMPANY

  
Robert E. Perkins, FSA  
Consulting Actuary

  
Michael C. Gunvalson, FSA  
Actuary

## PUBLIC EMPLOYEES RETIREMENT FUND

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# PUBLIC EMPLOYEES RETIREMENT FUND

## REPORT HIGHLIGHTS (DOLLARS IN THOUSANDS)

|                                                          | <u>07/01/89</u><br><u>VALUATION</u> | <u>07/01/90</u><br><u>VALUATION</u> |
|----------------------------------------------------------|-------------------------------------|-------------------------------------|
| <b>A. CONTRIBUTIONS (TABLE 11)</b>                       |                                     |                                     |
| 1. Statutory Contributions - Chapter 353<br>% of Payroll | 9.33%                               | 9.25%                               |
| 2. Required Contributions - Chapter 356<br>% of Payroll  | 8.83%                               | 10.04%                              |
| 3. Sufficiency (Deficiency) (A1-A2)                      | 0.50%                               | -0.79%                              |
| <b>B. FUNDING RATIOS</b>                                 |                                     |                                     |
| 1. Accrued Benefit Funding Ratio                         |                                     |                                     |
| a. Current Assets (Table 1)                              | \$2,992,285                         | \$3,297,216                         |
| b. Current Benefit Obligations (Table 8)                 | \$3,714,257                         | \$4,089,960                         |
| c. Funding Ratio (a/b)                                   | 80.56%                              | 80.62%                              |
| 2. Accrued Liability Funding Ratio                       |                                     |                                     |
| a. Current Assets (Table 1)                              | \$2,992,285                         | \$3,297,216                         |
| b. Actuarial Accrued Liability (Table 9)                 | \$4,175,240                         | \$4,560,469                         |
| c. Funding Ratio (a/b)                                   | 71.67%                              | 72.30%                              |
| 3. Projected Benefit Funding Ratio (Table 8)             |                                     |                                     |
| a. Current and Expected Future Assets                    | \$5,228,236                         | \$5,431,928                         |
| b. Current and Expected Future Benefit Obligations       | \$5,008,731                         | \$5,797,210                         |
| c. Funding Ratio (a/b)                                   | 104.38%                             | 93.70%                              |
| <b>C. PLAN PARTICIPANTS</b>                              |                                     |                                     |
| 1. Active Members                                        |                                     |                                     |
| a. Number (Table 3)                                      | 99,515                              | 102,664                             |
| b. Projected Annual Earnings                             | \$1,932,674                         | \$2,074,092                         |
| c. Average Annual Earnings (Actual \$)                   | \$19,421                            | \$20,203                            |
| d. Average Age                                           | 42.5                                | 42.6                                |
| e. Average Service                                       | 8.2                                 | 8.3                                 |
| 2. Others                                                |                                     |                                     |
| a. Service Retirements (Table 4)                         | 22,932                              | 24,314                              |
| b. Disability Retirements (Table 5)                      | 689                                 | 708                                 |
| c. Survivors (Table 6)                                   | 4,251                               | 4,414                               |
| d. Deferred Retirements (Table 7)                        | 2,349                               | 2,699                               |
| e. Terminated Other Non-vested (Table 7)                 | 6,805                               | 7,695                               |
| f. Total                                                 | 37,026                              | 39,830                              |

## PUBLIC EMPLOYEES RETIREMENT FUND

### COMMENTARY

#### Purpose

The purpose of this valuation is to determine the financial status of the Fund. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

#### Report Highlights

The statutory contributions for the Public Employees Retirement Fund are not sufficient by an amount of 0.79% of payroll. According to this valuation a contribution rate of 10.04% is required to comply with Minnesota Law. This contribution rate is based on a new set of assumed separation rates adopted for the July 1, 1990 valuation. All plan provisions and all other actuarial assumptions are the same as the prior valuation.

The financial status of the Fund can be measured by three different funding ratios:

- o The Accrued Benefit Funding Ratio is a measure of current funding status, and when viewed over a period of years, presents a view of the funding progress. This year's ratio is 80.62%. The corresponding ratio for the prior year was 80.56%.

- o The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used. For 1990 the ratio is 72.30%, which is an increase from the 1989 value of 71.67%.
- o The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This ratio, which is less than 100%, verifies that the current statutory contributions are inadequate.

#### Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.



This Fund participates in the MPRIF (i.e. Minnesota Post Retirement Investment Fund). The asset value shown for MPRIF on line A3 is set equal to the MPRIF Reserves reported on line D3 for both market and cost value purposes. This reserve is based on a 5% interest assumption.

Investment performance by SBI (i.e. State Board of Investment) above the 5% level is not shown in the assets but will be added in on January 1, 1991 when benefits will be increased for those annuitants who have been receiving payments for at least 7 months. Next year's valuation will include the 1991 benefit increase in determining the MPRIF value.

After the MPRIF liability has been calculated for each participating Fund, SBI will determine each Fund's portion of the excess earnings for the January benefit increase as well as the Fund's allocated market share of MPRIF. An approximation of those values on June 30, 1990 is provided below:

|                               |                 |
|-------------------------------|-----------------|
| MPRIF Reserves                | \$1,763,685,000 |
| Reserves Plus Excess Earnings | 1,846,000,000   |
| MPRIF Market Value            | 1,921,000,000   |

#### Membership Data (Tables 3, 4, 5, 6 and 7)

Tables 3 through 6 summarize statistical information about members by category. Active members are grouped by age and completed years of service in Table 3. The earnings shown for these members are for the prior fiscal year except in the case of new hires whose earnings have been annualized.

The service retirements in Table 4 include not only those retiring from active status but also disabled members who have attained retirement age. Disabled members under retirement age are shown in Table 5. The survivors category

(Table 6) includes spouses and children of deceased members.

A reconciliation of members in Table 7 provides a method for tracking what happened to members during the past year.

#### **Actuarial Balance Sheet (Table 8)**

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

Current funding levels are evaluated by comparing Current Assets on line A to Current Benefit Obligations on line D5. Current and future funding levels are evaluated by comparing the Total Current and Expected Future Assets on line C to the Total Current and Expected Future Benefit Obligations on line F.

The Current Benefit Obligation used to measure current funding levels is calculated in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- o For active members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.
- o For non-active members - the discounted value of benefits, including augmentation in cases where benefits have not commenced.

### GASB Disclosure

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB).

However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The July 1, 1990 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the table below. The table shows the impact of the change in actuarial assumptions. See page 10 for an explanation of the change in actuarial assumptions.

|                                                                                                             | <u>Old Assumptions</u> | <u>New Assumptions</u> |
|-------------------------------------------------------------------------------------------------------------|------------------------|------------------------|
| Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits | \$1,970,629,000        | \$1,970,629,000        |
| Current Employees -                                                                                         |                        |                        |
| Accumulated employee contributions including allocated investment income                                    | \$837,519,000 *        | \$837,519,000 *        |
| Employer-financed vested                                                                                    | 1,029,866,000          | 1,071,788,000          |
| Employer-financed nonvested                                                                                 | 192,004,000            | 210,024,000            |
|                                                                                                             | -----                  | -----                  |
| Total Pension Benefit Obligation                                                                            | \$4,030,018,000        | \$4,089,960,000        |

\* Estimated

The net assets available for benefits, at cost, is \$3,250,157,000. The total Pension Benefit Obligation after the assumption change exceeds the assets by \$839,803,000 to produce a funded ratio of 79.47%.

### Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary

characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

The payments will increase 6.5% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years the annual payment will cover the interest and also repay a portion of the unfunded.

#### **Sources of Actuarial Gains and Losses (Table 10)**

The assumptions used in making the calculations using the Entry Age Normal

Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectation. The major sources of gain and loss, which have been identified, are:

- o A gain from salaries where the average increase was 5.0% compared to the expected 6.5%.
- o A gain from Non-MPRIF Assets (i.e. Current Assets reduced by MPRI Reserves) because the return was 13.2% instead of the assumed 8.5%.
- o A loss of \$75,000,000 (reported on line D5) due to fewer active members terminating than anticipated.
- o A loss of \$6,000,000 (reported on line D5) due to fewer active members dying than anticipated.

#### Contribution Sufficiency (Table 11)

This report answers the question of "How adequate are the Statutory Contributions?" by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- o Normal Costs based on the Entry Age Normal Actuarial Cost Method
- o A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability

o An Allowance for Expenses

Table 11 shows the Fund has a contribution deficiency since the Statutory Contribution Rate is 9.25% compared to the Required Contribution Rate of 10.04%.

**Projected Cash Flow (Table 12)**

Table 12 illustrates the anticipated cash flow over the amortization period. The cash flow begins with the Non-MPRIF Assets, which are the Current Assets reduced by the MPRIIF Reserves. Contributions are then added based on the present statutory rates for employers and employees. As members become eligible for payments from MPRIIF an amount of reserve is transferred to SBI. The other disbursements represent benefit payments and expenses made directly by the Fund. This projected cash flow assumes that future payrolls increase by 6.5%. Table 12 is the only table in this report where new members are assumed to be hired in order to replace those who terminate from the active group. This open group method provides a more realistic picture of future cash flow. The statutory interest rate of 8.5% is used to project future investment return.

The amounts transferred to MPRIIF will be affected by the number of members who reach the assumed retirement age during a given year. The amount for 1992 is large because it includes those already over age 64 who are assumed to retire a year from the valuation date.

**Changes in Plan Provisions**

This valuation does not reflect any changes in plan provisions since the prior valuation.

### Changes in Actuarial Assumptions

The rates of separation have been updated to reflect recent plan experience.

Sample rates of separation are as follows:

| Age | Separation Rates |       |        |       |
|-----|------------------|-------|--------|-------|
|     | Male             |       | Female |       |
|     | Old              | New   | Old    | New   |
| 20  | .2750            | .2542 | .3832  | .2913 |
| 30  | .1610            | .1018 | .2805  | .1394 |
| 40  | .0818            | .0532 | .1340  | .0826 |
| 50  | .0385            | .0321 | .0663  | .0550 |

See Table 13 for the complete set of new separation rates.

Prior to the actuarial assumption change the Fund had an Unfunded Actuarial Accrued Liability of \$1,230,470,000. With the new separation rate assumption, the Unfunded Actuarial Accrued Liability is \$1,263,253,000. The following table shows the impact due to the change in the separation rate assumption.

|                                              | <u>Impact Due to Change in<br/>Actuarial Assumptions</u> |
|----------------------------------------------|----------------------------------------------------------|
| Actuarial Accrued Liability                  | \$32,783,000                                             |
| Pension Benefit Obligation<br>for GASB No. 5 | 59,942,000                                               |
| Normal Cost                                  | 1.09%                                                    |
| Supplemental Contribution                    | <u>0.07%</u>                                             |
| Required Contribution                        | 1.16%                                                    |

### Basic and Coordinated

Additional tables at the end of this report show membership data, statutory contributions and normal costs for the Basic and Coordinated Plans.

TABLE 1

## PUBLIC EMPLOYEES RETIREMENT FUND

ACCOUNTING BALANCE SHEET  
(DOLLARS IN THOUSANDS)

July 1, 1990

|                                                                             | <u>MARKET VALUE</u> | <u>COST VALUE</u>  |
|-----------------------------------------------------------------------------|---------------------|--------------------|
| <b>A. ASSETS</b>                                                            |                     |                    |
| 1. Cash, Equivalents, Short-Term Securities                                 | \$42,625            | \$42,625           |
| 2. Investments                                                              |                     |                    |
| a. Fixed Income                                                             | 435,599             | 442,030            |
| b. Equity                                                                   | 1,041,002           | 917,040            |
| c. Real Estate                                                              | 117,822             | 94,176             |
| 3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)              | 1,763,685           | 1,763,685          |
| 4. Other                                                                    | 832                 | 832                |
| <b>B. TOTAL ASSETS</b>                                                      | <u>\$3,401,565</u>  | <u>\$3,260,388</u> |
| <b>C. AMOUNTS CURRENTLY PAYABLE</b>                                         | \$10,231            | \$10,231           |
| <b>D. ASSETS AVAILABLE FOR BENEFITS</b>                                     |                     |                    |
| 1. Member Reserves                                                          | \$588,793           | \$588,793          |
| 2. Employer Reserves                                                        | 1,038,856           | 897,679            |
| 3. MPRIF Reserves                                                           | 1,763,685           | 1,763,685          |
| 4. Non-MPRIF Reserves                                                       | 0                   | 0                  |
| <b>5. Total Assets Available for Benefits</b>                               | <u>\$3,391,334</u>  | <u>\$3,250,157</u> |
| <b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b> | <u>\$3,401,565</u>  | <u>\$3,260,388</u> |
| <b>F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>                        |                     |                    |
| 1. Cost Value of Assets Available for Benefits (D5)                         |                     | \$3,250,157        |
| 2. Market Value (D5)                                                        | \$3,391,334         |                    |
| 3. Cost Value (D5)                                                          | 3,250,157           |                    |
| 4. Market Over Cost (F2-F3)                                                 | <u>\$141,177</u>    |                    |
| 5. 1/3 of Market Over Cost(F4)/3                                            |                     | 47,059             |
| 6. Actuarial Value of Assets (F1+F5)<br>(Same as "Current Assets")          |                     | <u>\$3,297,216</u> |



TABLE 2

PUBLIC EMPLOYEES RETIREMENT FUND  
CHANGES IN ASSETS AVAILABLE FOR BENEFITS  
(DOLLARS IN THOUSANDS)

YEAR ENDING JUNE 30, 1990

|                                          | <u>MARKET VALUE</u> | <u>COST VALUE</u> |
|------------------------------------------|---------------------|-------------------|
| A. ASSETS AVAILABLE AT BEGINNING OF YEAR | \$3,106,902         | \$2,934,977       |
| B. OPERATING REVENUES                    |                     |                   |
| 1. Member Contributions                  | \$87,031            | \$87,031          |
| 2. Employer Contributions                | 93,865              | 93,865            |
| 3. Investment Income                     | 190,862             | 190,862           |
| 4. MPRIF Income                          | 144,529             | 144,529           |
| 5. Net Realized Gain (Loss)              | 0                   | 0                 |
| 6. Other                                 | 872                 | 872               |
| 7. Net Change in Unrealized Gain (Loss)  | (30,748)            | 0                 |
|                                          | -----               | -----             |
| 8. Total Revenue                         | \$486,411           | \$517,159         |
|                                          | -----               | -----             |
| C. OPERATING EXPENSES                    |                     |                   |
| 1. Service Retirements                   | \$165,740           | \$165,740         |
| 2. Disability Benefits                   | 4,057               | 4,057             |
| 3. Survivor Benefits                     | 12,566              | 12,566            |
| 4. Refunds                               | 12,711              | 12,711            |
| 5. Expenses                              | 6,296               | 6,296             |
| 6. Other                                 | 609                 | 609               |
|                                          | -----               | -----             |
| 7. Total Disbursements                   | \$201,979           | \$201,979         |
|                                          | -----               | -----             |
| D. OTHER CHANGES IN RESERVES             | 0                   | 0                 |
| E. ASSETS AVAILABLE AT END OF YEAR       | \$3,391,334         | \$3,250,157       |
|                                          | =====               | =====             |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 3

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |        |        |        |        |       |       |     | TOTAL   |
|-------|------------------|--------|--------|--------|--------|-------|-------|-----|---------|
|       | <1               | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25-29 | 30+ |         |
| <25   | 1,452            | 2,063  | 104    |        |        |       |       |     | 3,619   |
| 25-29 | 1,917            | 5,277  | 2,142  | 199    |        |       |       |     | 9,535   |
| 30-34 | 1,913            | 5,823  | 3,653  | 2,461  | 161    |       |       |     | 14,011  |
| 35-39 | 1,866            | 6,414  | 3,870  | 3,676  | 1,555  | 76    |       |     | 17,457  |
| 40-44 | 2,073            | 6,173  | 3,931  | 3,263  | 2,171  | 692   | 29    |     | 18,332  |
| 45-49 | 764              | 3,441  | 2,947  | 2,716  | 1,744  | 1,088 | 283   | 17  | 13,000  |
| 50-54 | 483              | 2,121  | 1,952  | 2,356  | 1,858  | 1,179 | 505   | 278 | 10,732  |
| 55-59 | 304              | 1,439  | 1,430  | 1,745  | 1,710  | 1,306 | 567   | 335 | 8,836   |
| 60-64 | 150              | 785    | 860    | 1,036  | 1,140  | 913   | 361   | 176 | 5,421   |
| 65+   | 78               | 331    | 326    | 349    | 319    | 198   | 70    | 50  | 1,721   |
| TOTAL | 11,000           | 33,867 | 21,215 | 17,801 | 10,658 | 5,452 | 1,815 | 856 | 102,664 |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |        |        |        |        |        |        |        | ALL    |
|-------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   | 8,436            | 13,105 | 16,450 |        |        |        |        |        | 11,328 |
| 25-29 | 10,461           | 17,131 | 20,029 | 20,369 |        |        |        |        | 16,509 |
| 30-34 | 9,795            | 17,185 | 22,626 | 23,383 | 23,290 |        |        |        | 18,753 |
| 35-39 | 9,409            | 16,057 | 22,557 | 26,763 | 26,803 | 27,027 |        |        | 20,047 |
| 40-44 | 8,211            | 14,715 | 20,566 | 26,104 | 30,810 | 31,753 | 26,956 |        | 19,830 |
| 45-49 | 9,529            | 14,910 | 18,500 | 21,939 | 26,724 | 32,245 | 32,845 | 33,043 | 20,326 |
| 50-54 | 8,668            | 14,160 | 17,393 | 19,461 | 21,330 | 27,108 | 33,355 | 32,070 | 19,696 |
| 55-59 | 8,179            | 13,226 | 16,607 | 19,147 | 20,191 | 24,040 | 31,629 | 35,628 | 19,745 |
| 60-64 | 7,093            | 12,340 | 15,162 | 18,531 | 19,309 | 22,001 | 26,959 | 32,244 | 18,538 |
| 65+   | 6,627            | 8,416  | 11,049 | 13,552 | 14,885 | 15,290 | 22,586 | 25,778 | 12,946 |
| ALL   | 9,196            | 15,477 | 19,999 | 22,916 | 24,380 | 26,702 | 30,947 | 33,150 | 18,970 |

## PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

| <1      | 1-4     | 5-9     | 10-14   | 15-19   | 20-24   | 25-29  | 30+    | TOTAL     |
|---------|---------|---------|---------|---------|---------|--------|--------|-----------|
| 101,155 | 524,173 | 424,268 | 407,930 | 259,841 | 145,593 | 56,168 | 28,376 | 1,947,504 |

TABLE 4

## PUBLIC EMPLOYEES RETIREMENT FUND

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |       |       |       |       |       |     | TOTAL  |
|-------|---------------|-------|-------|-------|-------|-------|-----|--------|
|       | <1            | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ |        |
| <50   |               | 1     |       |       |       |       |     | 1      |
| 50-54 | 7             | 12    |       |       |       |       |     | 19     |
| 55-59 | 255           | 714   | 4     |       |       |       |     | 973    |
| 60-64 | 638           | 2,553 | 660   |       |       |       |     | 3,851  |
| 65-69 | 475           | 3,749 | 2,503 | 64    | 1     |       |     | 6,792  |
| 70-74 | 46            | 699   | 4,170 | 824   | 24    |       |     | 5,763  |
| 75-79 | 3             | 93    | 628   | 2,943 | 230   | 5     |     | 3,902  |
| 80-84 | 2             | 23    | 72    | 324   | 1,372 | 70    | 1   | 1,864  |
| 85+   |               | 5     | 15    | 43    | 312   | 563   | 211 | 1,149  |
| TOTAL | 1,426         | 7,849 | 8,052 | 4,198 | 1,939 | 638   | 212 | 24,314 |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |       |        |       |       | ALL    |
|-------|---------------|--------|--------|-------|--------|-------|-------|--------|
|       | <1            | 1-4    | 5-9    | 10-14 | 15-19  | 20-24 | 25+   |        |
| <50   |               | 7,832  |        |       |        |       |       | 7,832  |
| 50-54 | 15,976        | 12,276 |        |       |        |       |       | 13,639 |
| 55-59 | 6,303         | 7,392  | 16,416 |       |        |       |       | 7,144  |
| 60-64 | 5,846         | 7,026  | 13,982 |       |        |       |       | 8,023  |
| 65-69 | 5,325         | 5,511  | 9,396  | 8,593 | 10,234 |       |       | 6,960  |
| 70-74 | 3,136         | 3,951  | 6,336  | 8,475 | 8,923  |       |       | 6,338  |
| 75-79 | 297           | 3,446  | 4,452  | 5,973 | 8,555  | 5,093 |       | 5,815  |
| 80-84 | 1,449         | 1,180  | 2,388  | 4,464 | 4,831  | 4,626 | 6,321 | 4,617  |
| 85+   |               | 3,145  | 1,711  | 4,740 | 4,004  | 4,020 | 4,337 | 4,067  |
| ALL   | 5,698         | 6,008  | 7,728  | 6,375 | 5,193  | 4,095 | 4,346 | 6,493  |

## TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

| <1    | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25+ | TOTAL   |
|-------|--------|--------|--------|--------|-------|-----|---------|
| 8,126 | 47,157 | 62,229 | 26,763 | 10,069 | 2,612 | 921 | 157,877 |

TABLE 5

## PUBLIC EMPLOYEES RETIREMENT FUND

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |            |            |              |              |              |            | TOTAL |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 22             | 41         | 11         | 5            |              |              |            | 79    |
| 50-54 | 24             | 51         | 11         | 4            | 2            |              |            | 92    |
| 55-59 | 19             | 98         | 50         | 14           | 2            |              |            | 183   |
| 60-64 | 33             | 156        | 108        | 49           | 2            | 3            |            | 351   |
| 65-69 |                | 2          | 1          |              |              |              |            | 3     |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 98             | 348        | 181        | 72           | 6            | 3            | 0          | 708   |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |            |            |              |              |              |            | ALL   |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 3,919          | 3,481      | 3,847      | 2,796        |              |              |            | 3,611 |
| 50-54 | 5,796          | 4,873      | 8,871      | 5,684        | 5,610        |              |            | 5,643 |
| 55-59 | 7,721          | 5,432      | 8,043      | 8,443        | 4,708        |              |            | 6,605 |
| 60-64 | 4,347          | 4,166      | 6,607      | 6,455        | 5,801        | 4,398        |            | 5,265 |
| 65-69 |                | 6,777      | 10,312     |              |              |              |            | 7,955 |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 5,260          | 4,560      | 6,994      | 6,545        | 5,373        | 4,398        | 0          | 5,487 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 515          | 1,588      | 1,266      | 471          | 32           | 13           | 0          | 3,885        |

TABLE 6

## PUBLIC EMPLOYEES RETIREMENT FUND

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |       |       |       |       |     | TOTAL |
|-------|-------------------|-----|-------|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9   | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 15                | 47  | 20    | 26    | 5     | 1     | 1   | 115   |
| 50-54 | 6                 | 42  | 41    | 18    | 5     | 2     | 1   | 115   |
| 55-59 | 18                | 99  | 56    | 31    | 9     | 9     | 1   | 223   |
| 60-64 | 19                | 152 | 201   | 58    | 33    | 18    | 16  | 497   |
| 65-69 | 8                 | 100 | 263   | 133   | 48    | 38    | 23  | 613   |
| 70-74 | 8                 | 51  | 221   | 283   | 102   | 74    | 46  | 785   |
| 75-79 | 7                 | 49  | 82    | 206   | 194   | 98    | 77  | 713   |
| 80-84 | 16                | 51  | 76    | 108   | 136   | 119   | 88  | 594   |
| 85+   | 4                 | 68  | 100   | 110   | 164   | 144   | 169 | 759   |
| TOTAL | 101               | 659 | 1,060 | 973   | 696   | 503   | 422 | 4,414 |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL   |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   | 7,882             | 6,061 | 7,273 | 4,494 | 4,203 | 1,953 | 2,192 | 6,005 |
| 50-54 | 4,731             | 6,819 | 7,641 | 6,571 | 3,568 | 1,671 | 2,110 | 6,692 |
| 55-59 | 4,109             | 6,237 | 8,397 | 6,980 | 4,091 | 2,072 | 2,115 | 6,438 |
| 60-64 | 4,244             | 6,925 | 7,656 | 6,587 | 3,693 | 2,161 | 2,124 | 6,537 |
| 65-69 | 2,575             | 5,338 | 6,410 | 6,211 | 4,306 | 2,235 | 2,050 | 5,555 |
| 70-74 | 2,716             | 4,950 | 5,460 | 5,380 | 4,479 | 1,975 | 2,133 | 4,719 |
| 75-79 | 2,672             | 2,987 | 3,188 | 4,669 | 4,453 | 2,113 | 2,117 | 3,678 |
| 80-84 | 2,695             | 2,344 | 3,058 | 3,394 | 3,839 | 2,653 | 2,079 | 3,000 |
| 85+   | 2,432             | 2,691 | 2,477 | 2,733 | 3,128 | 2,821 | 2,561 | 2,757 |
| ALL   | 4,110             | 5,275 | 5,757 | 4,944 | 3,965 | 2,431 | 2,285 | 4,475 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

| <1  | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ | TOTAL  |
|-----|-------|-------|-------|-------|-------|-----|--------|
| 415 | 3,476 | 6,103 | 4,811 | 2,760 | 1,223 | 964 | 19,752 |

TABLE 7

## PUBLIC EMPLOYEES RETIREMENT FUND

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On June 30, 1989            | 99,515         | 2,349                          | 6,805                       |
| B. Additions                   | 12,665         | 934                            | 3,115                       |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | (1,635)        | (303)                          | (90)                        |
| 2. Disability                  | (133)          | (17)                           | (4)                         |
| 3. Death                       | (83)           | (8)                            | (7)                         |
| 4. Terminated-Deferred         | (926)          |                                |                             |
| 5. Terminated-Refund           | (4,249)        | 0                              | (1,405)                     |
| 6. Terminated-Other Non-vested | (2,271)        |                                |                             |
| 7. Returned as Active          |                | (128)                          | (897)                       |
| D. Data Adjustments            | (219)          | (128)                          | 178                         |
|                                | Vested         | 72,235                         |                             |
|                                | Non-Vested     | 30,429                         |                             |
| E. Total on June 30, 1990      | 102,664        | 2,699                          | 7,695                       |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On June 30, 1989       | 22,932                           | 689             | 4,251            |
| B. Additions              | 2,089                            | 162             | 363              |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | (68)            |                  |
| 2. Death                  | (692)                            | (62)            | (187)            |
| 3. Annuity Expired        | 0                                | 0               | (1)              |
| 4. Returned as Active     | 0                                | (3)             |                  |
| D. Data Adjustments       | (15)                             | (10)            | (12)             |
| E. Total on June 30, 1990 | 24,314                           | 708             | 4,414            |

TABLE 8

## PUBLIC EMPLOYEES RETIREMENT FUND

ACTUARIAL BALANCE SHEET  
(DOLLARS IN THOUSANDS)

JULY 1, 1990

|                                                                          |                   |               |              |             |
|--------------------------------------------------------------------------|-------------------|---------------|--------------|-------------|
| A. CURRENT ASSETS (TABLE 1, F6)                                          |                   |               |              | \$3,297,216 |
| B. EXPECTED FUTURE ASSETS                                                |                   |               |              |             |
| 1. Present Value of Expected Future Statutory Supplemental Contributions |                   |               |              | 897,971     |
| 2. Present Value of Future Normal Costs                                  |                   |               |              | 1,236,741   |
|                                                                          |                   |               |              | -----       |
| 3. Total Expected Future Assets                                          |                   |               |              | 2,134,712   |
|                                                                          |                   |               |              | -----       |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                              |                   |               |              | \$5,431,928 |
|                                                                          |                   |               |              | =====       |
| D. CURRENT BENEFIT OBLIGATIONS                                           | <u>Non-Vested</u> | <u>Vested</u> | <u>Total</u> |             |
| 1. Benefit Recipients                                                    |                   |               |              |             |
| a. Retirement Annuities                                                  |                   | \$1,681,306   |              | \$1,681,306 |
| b. Disability Benefits                                                   |                   | 24,435        |              | 24,435      |
| c. Surviving Spouse and Child Benefits                                   |                   | 215,590       |              | 215,590     |
| 2. Deferred Retirements with Future Augmentation                         |                   | 41,077        |              | 41,077      |
| 3. Former Members without Vested Rights                                  |                   | 8,221         |              | 8,221       |
| 4. Active Members                                                        |                   |               |              |             |
| a. Retirement Annuities                                                  | 21,393            | 1,466,971     |              | 1,488,364   |
| b. Disability Benefits                                                   | 89,595            | 0             |              | 89,595      |
| c. Survivors' Benefits                                                   | 87,465            | 0             |              | 87,465      |
| d. Deferred Retirements                                                  | 11,571            | 386,465       |              | 398,036     |
| e. Refund Liability Due to Death or Withdrawal                           | 0                 | 55,871        |              | 55,871      |
|                                                                          |                   |               |              | -----       |
| 5. Total Current Benefit Obligations                                     | \$210,024         | \$3,879,936   |              | \$4,089,960 |
|                                                                          |                   |               |              | -----       |
| E. EXPECTED FUTURE BENEFIT OBLIGATIONS                                   |                   |               |              | \$1,707,250 |
|                                                                          |                   |               |              | -----       |
| F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS                 |                   |               |              | \$5,797,210 |
|                                                                          |                   |               |              | =====       |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)                           |                   |               |              | \$792,744   |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                 |                   |               |              | \$365,282   |

TABLE 9

## PUBLIC EMPLOYEES RETIREMENT FUND

**DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)  
AND SUPPLEMENTAL CONTRIBUTION RATE  
(DOLLARS IN THOUSANDS)**

JULY 1, 1990

|                                                                                      | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS<br><u>(1)</u> | ACTUARIAL<br>PRESENT VALUE<br>OF FUTURE<br>NORMAL COSTS<br><u>(2)</u> | ACTUARIAL<br>ACCRUED<br>LIABILITY<br><u>(3)=(1)-(2)</u> |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>                         |                                                                      |                                                                       |                                                         |
| 1. Active Members                                                                    |                                                                      |                                                                       |                                                         |
| a. Retirement Annuities                                                              | \$2,744,950                                                          | \$717,456                                                             | \$2,027,494                                             |
| b. Disability Benefits                                                               | 157,780                                                              | 55,601                                                                | 102,179                                                 |
| c. Survivors Benefits                                                                | 152,959                                                              | 51,551                                                                | 101,408                                                 |
| d. Deferred Retirements                                                              | 688,630                                                              | 275,719                                                               | 412,911                                                 |
| e. Refunds Due to Death or<br>Withdrawal                                             | 82,262                                                               | 136,414                                                               | (54,152)                                                |
| f. Total                                                                             | <u>\$3,826,581</u>                                                   | <u>\$1,236,741</u>                                                    | <u>\$2,589,840</u>                                      |
| 2. Deferred Retirements with<br>Future Augmentation                                  | \$41,077                                                             |                                                                       | \$41,077                                                |
| 3. Former Members Without<br>Vested Rights                                           | 8,221                                                                |                                                                       | 8,221                                                   |
| 4. Annuitants in MPRIF                                                               | 1,763,685                                                            |                                                                       | 1,763,685                                               |
| 5. Recipients Not in MPRIF                                                           | 157,646                                                              |                                                                       | 157,646                                                 |
| 6. Total                                                                             | <u>\$5,797,210</u><br>=====                                          | <u>\$1,236,741</u><br>=====                                           | <u>\$4,560,469</u><br>=====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>               |                                                                      |                                                                       |                                                         |
| 1. AAL (A6)                                                                          |                                                                      |                                                                       | \$4,560,469                                             |
| 2. Current Assets (Table 1,F6)                                                       |                                                                      |                                                                       | 3,297,216                                               |
| 3. UAAL (B1-B2)                                                                      |                                                                      |                                                                       | <u>\$1,263,253</u><br>=====                             |
| <b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>                            |                                                                      |                                                                       |                                                         |
| 1. Present Value of Future Payrolls through the<br>Amortization Date of July 1, 2020 |                                                                      |                                                                       | \$46,049,816                                            |
| 2. Supplemental Contribution Rate (B3/C1)                                            |                                                                      |                                                                       | 2.74%                                                   |



TABLE 10

**PUBLIC EMPLOYEES RETIREMENT FUND**  
**CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)**  
**(DOLLARS IN THOUSANDS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                          |             |
|----------------------------------------------------------------------------------------------------------|-------------|
| A. UAAL AT BEGINNING OF YEAR                                                                             | \$1,182,955 |
| B. CHANGE DUE TO INTEREST REQUIREMENTS AND<br>CURRENT RATE OF FUNDING                                    |             |
| 1. Normal Cost and Expenses                                                                              | \$119,619   |
| 2. Contribution                                                                                          | (180,896)   |
| 3. Interest on A, B1, and B2                                                                             | 97,947      |
|                                                                                                          | -----       |
| 4. Total (B1+B2+B3)                                                                                      | \$36,670    |
|                                                                                                          | -----       |
| C. EXPECTED UAAL AT END OF YEAR (A+B4)                                                                   | \$1,219,625 |
| D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS)<br>BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED |             |
| 1. Salary Increases                                                                                      | (\$47,601)  |
| 2. Investment Return                                                                                     | (64,680)    |
| 3. MPRIF Mortality                                                                                       | 7,007       |
| 4. Mortality of Other Benefit Recipients                                                                 | 3,981       |
| 5. Other Items                                                                                           | 112,138     |
|                                                                                                          | -----       |
| 6. Total                                                                                                 | \$10,845    |
|                                                                                                          | -----       |
| E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS<br>AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)             | \$1,230,470 |
| F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO<br>PLAN AMENDMENTS                                       | \$0         |
| G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO<br>CHANGES IN ACTUARIAL ASSUMPTIONS                      | \$32,783    |
|                                                                                                          | -----       |
| H. UAAL AT END OF YEAR (E+F+G)                                                                           | \$1,263,253 |
|                                                                                                          | =====       |

TABLE 11

**PUBLIC EMPLOYEES RETIREMENT FUND**  
**DETERMINATION OF CONTRIBUTION SUFFICIENCY**  
**(DOLLARS IN THOUSANDS)**

JULY 1, 1990

|                                                                                        | <u>% OF<br/>PAYROLL</u> | <u>\$<br/>AMOUNT</u>        |
|----------------------------------------------------------------------------------------|-------------------------|-----------------------------|
| <b>A. STATUTORY CONTRIBUTIONS - CHAPTER 353</b>                                        |                         |                             |
| 1. Employee Contributions                                                              | 4.44%                   | \$92,112                    |
| 2. Employer Contributions                                                              | 4.81%                   | 99,760                      |
| 3. Total                                                                               | -----<br>9.25%<br>===== | -----<br>\$191,872<br>===== |
| <b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>                                         |                         |                             |
| 1. Normal Cost                                                                         |                         |                             |
| a. Retirement Benefits                                                                 | 4.10%                   | \$85,041                    |
| b. Disability Benefits                                                                 | 0.30%                   | 6,244                       |
| c. Survivors                                                                           | 0.28%                   | 5,902                       |
| d. Deferred Retirement Benefits                                                        | 1.73%                   | 35,798                      |
| e. Refunds Due to Death or<br>Withdrawal                                               | 0.57%                   | 11,816                      |
| f. Total                                                                               | -----<br>6.98%<br>----- | -----<br>\$144,801<br>----- |
| 2. Supplemental Contribution<br>Amortization by July 1, 2020<br>of UAAL of \$1,263,253 | 2.74%                   | \$56,830                    |
| 3. Allowance for Expenses                                                              | 0.32%                   | \$6,637                     |
| 4. Total                                                                               | -----<br>10.04%         | -----<br>\$208,268          |
| <b>C. CONTRIBUTION SUFFICIENCY (DEFICIENCY)</b>                                        |                         |                             |
| (A3-B4)                                                                                | -0.79%                  | (\$16,396)                  |

Note: Projected Annual Payroll for Fiscal Year Beginning  
on July 1, 1990 is \$2,074,092

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 12

PROJECTED CASH FLOW  
(DOLLARS IN THOUSANDS)

| <u>FISCAL<br/>YEAR</u> | <u>STATUTORY<br/>CONTRIBUTIONS</u> | <u>TRANSFERS<br/>TO<br/>MPRIF</u> | <u>OTHER<br/>DISBURSEMENTS</u> | <u>INVESTMENT<br/>RETURN</u> | <u>NON-MPRIF<br/>ASSETS<br/>YEAR END</u> |
|------------------------|------------------------------------|-----------------------------------|--------------------------------|------------------------------|------------------------------------------|
| 1990                   |                                    |                                   |                                |                              | \$1,533,531                              |
| 1991                   | \$191,872                          | \$38,503                          | \$41,985                       | \$135,084                    | 1,779,999                                |
| 1992                   | 202,509                            | 215,027                           | 42,915                         | 148,944                      | 1,873,510                                |
| 1993                   | 214,592                            | 142,634                           | 43,861                         | 160,442                      | 2,062,049                                |
| 1994                   | 227,173                            | 152,575                           | 44,982                         | 176,533                      | 2,268,198                                |
| 1995                   | 240,751                            | 183,279                           | 46,738                         | 193,253                      | 2,472,185                                |
| 1996                   | 255,119                            | 205,712                           | 48,231                         | 210,186                      | 2,683,547                                |
| 1997                   | 270,310                            | 221,488                           | 50,219                         | 228,042                      | 2,910,192                                |
| 1998                   | 286,662                            | 250,976                           | 52,056                         | 246,671                      | 3,140,493                                |
| 1999                   | 304,101                            | 276,521                           | 54,625                         | 265,792                      | 3,379,240                                |
| 2000                   | 322,728                            | 295,446                           | 57,333                         | 285,958                      | 3,635,147                                |
| 2001                   | 342,579                            | 322,742                           | 60,251                         | 307,270                      | 3,902,003                                |
| 2002                   | 363,884                            | 358,369                           | 63,444                         | 329,208                      | 4,173,282                                |
| 2003                   | 386,695                            | 374,814                           | 67,188                         | 352,378                      | 4,470,353                                |
| 2004                   | 411,202                            | 409,810                           | 71,543                         | 376,999                      | 4,777,201                                |
| 2005                   | 437,499                            | 462,864                           | 76,313                         | 401,741                      | 5,077,264                                |
| 2006                   | 465,570                            | 486,454                           | 81,303                         | 427,224                      | 5,402,301                                |
| 2007                   | 495,476                            | 541,014                           | 87,086                         | 453,559                      | 5,723,236                                |
| 2008                   | 527,389                            | 556,963                           | 93,344                         | 481,251                      | 6,081,569                                |
| 2009                   | 561,381                            | 655,076                           | 100,293                        | 508,689                      | 6,396,270                                |
| 2010                   | 597,663                            | 682,375                           | 107,402                        | 535,518                      | 6,739,674                                |
| 2011                   | 636,410                            | 745,177                           | 115,103                        | 563,358                      | 7,079,162                                |
| 2012                   | 677,679                            | 780,098                           | 122,986                        | 592,149                      | 7,445,906                                |
| 2013                   | 721,669                            | 758,837                           | 131,343                        | 625,740                      | 7,903,135                                |
| 2014                   | 768,553                            | 857,276                           | 139,980                        | 662,047                      | 8,336,479                                |
| 2015                   | 818,506                            | 979,103                           | 148,074                        | 695,482                      | 8,723,290                                |
| 2016                   | 871,706                            | 978,569                           | 156,607                        | 730,282                      | 9,190,102                                |
| 2017                   | 928,367                            | 986,909                           | 166,253                        | 771,605                      | 9,736,912                                |
| 2018                   | 988,711                            | 982,025                           | 176,717                        | 820,411                      | 10,387,292                               |
| 2019                   | 1,052,977                          | 1,179,043                         | 187,822                        | 869,580                      | 10,942,984                               |
| 2020                   | 1,121,421                          | 1,166,233                         | 198,660                        | 919,806                      | 11,619,318                               |

**PUBLIC EMPLOYEES RETIREMENT FUND**  
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

|                                         |                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interest:                               | Pre-Retirement: 8.5% per annum<br>Post-Retirement: 5% per annum                                                                                                                                                                                                                                                                                     |
| Salary Increases:                       | Reported salary for prior fiscal year, with new hires annualized, increased 6.5% to current fiscal year and 6.5% annually for each future year.                                                                                                                                                                                                     |
| Mortality:                              | Pre-Retirement:<br>Male - 1971 Group Annuity Mortality Table male rates projected to 1984 by Scale D<br>Female - 1971 Group Annuity Mortality Table female rates projected to 1984 by Scale D<br><br>Post-Retirement:<br>Male - Same as above<br>Female - Same as above<br><br>Post-Disability:<br>Male - 1965 RRB rates<br>Female - 1965 RRB rates |
| Retirement Age:                         | Age 64, or if over age 64, one year from valuation date. In addition, 50% of employees are assumed to retire under the Rule of 90 when first eligible.                                                                                                                                                                                              |
| Separation:                             | Graded rates based on plan experience as of June 30, 1989. Rates are shown in rate table.                                                                                                                                                                                                                                                           |
| Disability:                             | Rates as shown in rate table.                                                                                                                                                                                                                                                                                                                       |
| Administrative and Investment Expenses: | Prior year expenses expressed as percentage of prior year payroll. (0.32% of payroll)                                                                                                                                                                                                                                                               |
| Return of Contributions:                | All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.                                                                                                                                                                   |
| Family Composition:                     | 85% of male Members and 65% of female Members are assumed to be married. Female is four years younger than male. Assume Members have no children.                                                                                                                                                                                                   |
| Social Security:                        | NA                                                                                                                                                                                                                                                                                                                                                  |

TABLE 13  
(cont)

|                                                      |                                                                                                                                                                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benefit Increases After Retirement:                  | Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.                                                                                                                                             |
| Special Consideration:                               | Married Members assumed to elect subsidized joint and survivor form of annuity as follows:<br>Males - 30% elect 50% J & S option;<br>45% elect 100% J & S option.<br>Females - 15% elect 50% J & S option;<br>15% elect 100% J & S option.           |
| Actuarial Cost Method:                               | Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains(Losses) reduce(increase) the Unfunded Actuarial Accrued Liability.                                           |
| Asset Valuation Method:                              | Cost Value plus one-third Unrealized Gains or Losses.                                                                                                                                                                                                |
| Payment on the Unfunded Actuarial Accrued Liability: | A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.                                                                                                                             |
| Projected Cash Flow Method:                          | Cash flows from the Non-MPRIF portion of the Fund were projected based on the current plan benefits, participant data, and actuarial assumptions. In addition, new entrants were assumed so that the total payroll would increase by 6.5% per annum. |

TABLE 13  
(cont)SEPARATIONS EXPRESSED AS THE  
NUMBER OF OCCURRENCES PER 10,000

| Age | Death |        | Withdrawal |        | Disability |        | Retirement |        |
|-----|-------|--------|------------|--------|------------|--------|------------|--------|
|     | Male  | Female | Male       | Female | Male       | Female | Male       | Female |
| 20  | 5     | 2      | 2,542      | 2,913  | 9          | 9      | 0          | 0      |
| 21  | 5     | 2      | 2,277      | 2,666  | 9          | 9      | 0          | 0      |
| 22  | 5     | 2      | 2,050      | 2,450  | 9          | 9      | 0          | 0      |
| 23  | 5     | 3      | 1,854      | 2,259  | 10         | 10     | 0          | 0      |
| 24  | 5     | 3      | 1,684      | 2,091  | 10         | 10     | 0          | 0      |
| 25  | 6     | 3      | 1,536      | 1,942  | 10         | 10     | 0          | 0      |
| 26  | 6     | 3      | 1,406      | 1,808  | 10         | 10     | 0          | 0      |
| 27  | 6     | 3      | 1,291      | 1,688  | 10         | 10     | 0          | 0      |
| 28  | 7     | 3      | 1,189      | 1,580  | 11         | 11     | 0          | 0      |
| 29  | 7     | 4      | 1,099      | 1,482  | 11         | 11     | 0          | 0      |
| 30  | 7     | 4      | 1,018      | 1,394  | 11         | 11     | 0          | 0      |
| 31  | 8     | 4      | 945        | 1,313  | 11         | 11     | 0          | 0      |
| 32  | 8     | 4      | 880        | 1,239  | 11         | 11     | 0          | 0      |
| 33  | 9     | 5      | 821        | 1,172  | 12         | 12     | 0          | 0      |
| 34  | 10    | 5      | 767        | 1,110  | 12         | 12     | 0          | 0      |
| 35  | 10    | 5      | 719        | 1,053  | 12         | 12     | 0          | 0      |
| 36  | 11    | 6      | 675        | 1,000  | 12         | 12     | 0          | 0      |
| 37  | 12    | 6      | 634        | 952    | 13         | 13     | 0          | 0      |
| 38  | 13    | 7      | 597        | 907    | 13         | 13     | 0          | 0      |
| 39  | 14    | 7      | 563        | 865    | 14         | 14     | 0          | 0      |
| 40  | 15    | 8      | 532        | 826    | 15         | 15     | 0          | 0      |
| 41  | 16    | 9      | 503        | 790    | 16         | 16     | 0          | 0      |
| 42  | 18    | 9      | 476        | 756    | 17         | 17     | 0          | 0      |
| 43  | 21    | 10     | 452        | 724    | 18         | 18     | 0          | 0      |
| 44  | 24    | 11     | 429        | 695    | 20         | 20     | 0          | 0      |
| 45  | 27    | 12     | 408        | 667    | 22         | 22     | 0          | 0      |
| 46  | 30    | 13     | 388        | 641    | 23         | 23     | 0          | 0      |
| 47  | 34    | 14     | 370        | 616    | 25         | 25     | 0          | 0      |
| 48  | 39    | 15     | 352        | 593    | 27         | 27     | 0          | 0      |
| 49  | 44    | 17     | 336        | 571    | 30         | 30     | 0          | 0      |
| 50  | 49    | 18     | 321        | 550    | 33         | 33     | 0          | 0      |
| 51  | 54    | 20     | 316        | 531    | 36         | 36     | 0          | 0      |
| 52  | 60    | 21     | 310        | 513    | 40         | 40     | 0          | 0      |
| 53  | 65    | 23     | 270        | 495    | 45         | 45     | 0          | 0      |
| 54  | 72    | 25     | 230        | 487    | 51         | 51     | 0          | 0      |

TABLE 13  
(cont)

| Age | Death |        | Withdrawal |        | Disability |        | Retirement |        |
|-----|-------|--------|------------|--------|------------|--------|------------|--------|
|     | Male  | Female | Male       | Female | Male       | Female | Male       | Female |
| 55  | 78    | 27     | 195        | 478    | 58         | 58     | 0          | 0      |
| 56  | 85    | 30     | 150        | 410    | 66         | 66     | 0          | 0      |
| 57  | 92    | 33     | 100        | 362    | 76         | 76     | 0          | 0      |
| 58  | 100   | 37     | 50         | 210    | 88         | 88     | 0          | 0      |
| 59  | 110   | 41     | 20         | 50     | 102        | 102    | 0          | 0      |
| 60  | 121   | 46     | 0          | 0      | 118        | 118    | 0          | 0      |
| 61  | 133   | 52     | 0          | 0      | 136        | 136    | 0          | 0      |
| 62  | 146   | 58     | 0          | 0      | 157        | 157    | 0          | 0      |
| 63  | 160   | 65     | 0          | 0      | 181        | 181    | 0          | 0      |
| 64  | 176   | 73     | 0          | 0      | 208        | 208    | 10,000     | 10,000 |
| 65  | 195   | 81     | 0          | 0      | 0          | 0      | 0          | 0      |
| 66  | 219   | 90     | 0          | 0      | 0          | 0      | 0          | 0      |
| 67  | 243   | 99     | 0          | 0      | 0          | 0      | 0          | 0      |
| 68  | 270   | 109    | 0          | 0      | 0          | 0      | 0          | 0      |
| 69  | 300   | 123    | 0          | 0      | 0          | 0      | 0          | 0      |
| 70  | 334   | 140    | 0          | 0      | 0          | 0      | 0          | 0      |

PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 3A  
BASIC

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     |       |       |       |       |     | 0     |
| 35-39 |                  |     |     |       | 1     | 2     |       |     | 3     |
| 40-44 |                  |     |     |       | 4     | 130   | 22    |     | 156   |
| 45-49 |                  |     |     |       | 3     | 305   | 223   | 16  | 547   |
| 50-54 |                  |     |     |       | 5     | 365   | 385   | 234 | 989   |
| 55-59 |                  | 1   | 1   |       | 5     | 371   | 428   | 255 | 1,061 |
| 60-64 |                  |     | 1   |       | 4     | 291   | 273   | 119 | 688   |
| 65+   |                  | 1   |     |       | 1     | 68    | 57    | 38  | 165   |
| TOTAL | 0                | 2   | 2   | 0     | 23    | 1,532 | 1,388 | 662 | 3,609 |

AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |        |        |       |        |        |        |        | ALL    |
|-------|------------------|--------|--------|-------|--------|--------|--------|--------|--------|
|       | <1               | 1-4    | 5-9    | 10-14 | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |        |        |       |        |        |        |        | 0      |
| 25-29 |                  |        |        |       |        |        |        |        | 0      |
| 30-34 |                  |        |        |       |        |        |        |        | 0      |
| 35-39 |                  |        |        |       | 2,764  | 31,016 |        |        | 21,598 |
| 40-44 |                  |        |        |       | 19,383 | 29,828 | 29,589 |        | 29,526 |
| 45-49 |                  |        |        |       | 26,200 | 32,767 | 31,728 | 33,163 | 32,319 |
| 50-54 |                  |        |        |       | 28,974 | 27,957 | 32,273 | 31,510 | 30,483 |
| 55-59 |                  | 27,982 | 22,093 |       | 27,624 | 23,947 | 29,670 | 34,416 | 28,791 |
| 60-64 |                  |        | 26,284 |       | 18,734 | 21,412 | 25,670 | 28,555 | 24,328 |
| 65+   |                  | 25,000 |        |       | 23,368 | 12,741 | 21,787 | 24,905 | 18,806 |
| ALL   | 0                | 26,491 | 24,189 | 0     | 23,487 | 26,188 | 29,611 | 31,759 | 28,508 |

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24  | 25-29  | 30+    | TOTAL   |
|----|-----|-----|-------|-------|--------|--------|--------|---------|
| 0  | 53  | 48  | 0     | 540   | 40,002 | 41,101 | 21,024 | 102,768 |



PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 4A  
BASIC

SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |       |       |       |       |       |     | TOTAL  |
|-------|---------------|-------|-------|-------|-------|-------|-----|--------|
|       | <1            | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ |        |
| <50   |               | 1     |       |       |       |       |     | 1      |
| 50-54 | 6             | 11    |       |       |       |       |     | 17     |
| 55-59 | 92            | 313   | 4     |       |       |       |     | 409    |
| 60-64 | 146           | 960   | 499   |       |       |       |     | 1,605  |
| 65-69 | 107           | 1,184 | 1,482 | 57    | 1     |       |     | 2,831  |
| 70-74 | 8             | 163   | 2,161 | 613   | 21    |       |     | 2,966  |
| 75-79 |               | 20    | 230   | 1,907 | 207   | 5     |     | 2,369  |
| 80-84 |               | 3     | 17    | 198   | 1,016 | 69    | 1   | 1,304  |
| 85+   |               | 1     | 6     | 29    | 216   | 477   | 211 | 940    |
| TOTAL | 359           | 2,656 | 4,399 | 2,804 | 1,461 | 551   | 212 | 12,442 |

AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |        |       |       | ALL    |
|-------|---------------|--------|--------|--------|--------|-------|-------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25+   |        |
| <50   |               | 7,832  |        |        |        |       |       | 7,832  |
| 50-54 | 17,526        | 12,732 |        |        |        |       |       | 14,424 |
| 55-59 | 13,453        | 13,985 | 16,416 |        |        |       |       | 13,889 |
| 60-64 | 11,223        | 12,929 | 17,014 |        |        |       |       | 14,044 |
| 65-69 | 10,522        | 10,350 | 12,972 | 9,002  | 10,234 |       |       | 11,702 |
| 70-74 | 8,829         | 9,544  | 9,352  | 10,053 | 9,698  |       |       | 9,509  |
| 75-79 |               | 10,518 | 8,400  | 7,415  | 8,797  | 5,093 |       | 7,653  |
| 80-84 |               | 4,043  | 6,452  | 5,698  | 5,401  | 4,618 | 6,321 | 5,416  |
| 85+   |               | 9,559  | 3,068  | 6,343  | 4,729  | 4,283 | 4,337 | 4,459  |
| ALL   | 11,637        | 11,664 | 11,378 | 7,892  | 5,848  | 4,332 | 4,346 | 9,580  |

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

| <1    | 1-4    | 5-9    | 10-14  | 15-19 | 20-24 | 25+ | TOTAL   |
|-------|--------|--------|--------|-------|-------|-----|---------|
| 4,178 | 30,979 | 50,051 | 22,129 | 8,544 | 2,387 | 921 | 119,189 |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 5A  
BASIC

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |            |            |              |              |              |            | TOTAL |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 1              | 2          | 1          | 3            |              |              |            | 7     |
| 50-54 | 5              | 10         | 5          | 3            | 2            |              |            | 25    |
| 55-59 | 4              | 27         | 27         | 11           | 2            |              |            | 71    |
| 60-64 | 6              | 26         | 46         | 31           | 2            | 2            |            | 113   |
| 65-69 |                |            |            |              |              |              |            | 0     |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 16             | 65         | 79         | 48           | 6            | 2            | 0          | 216   |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |            |            |              |              |              |            | ALL    |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   | 16,891         | 11,453     | 9,558      | 3,198        |              |              |            | 8,421  |
| 50-54 | 14,762         | 13,925     | 14,434     | 6,736        | 5,610        |              |            | 12,666 |
| 55-59 | 16,246         | 13,159     | 12,664     | 10,122       | 4,708        |              |            | 12,436 |
| 60-64 | 6,995          | 10,758     | 11,589     | 9,045        | 5,801        | 5,491        |            | 10,246 |
| 65-69 |                |            |            |              |              |              |            | 0      |
| 70-74 |                |            |            |              |              |              |            | 0      |
| 75-79 |                |            |            |              |              |              |            | 0      |
| 80-84 |                |            |            |              |              |              |            | 0      |
| 85+   |                |            |            |              |              |              |            | 0      |
| TOTAL | 12,354         | 12,264     | 12,111     | 8,782        | 5,373        | 5,491        | 0          | 11,187 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 198          | 796        | 957        | 422          | 32           | 11           | 0          | 2,416        |

PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 6A  
BASIC

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 9                 | 24  | 11  | 23    | 5     | 1     | 1   | 74    |
| 50-54 | 2                 | 21  | 28  | 15    | 5     | 2     | 1   | 74    |
| 55-59 | 6                 | 45  | 42  | 27    | 9     | 9     | 1   | 139   |
| 60-64 | 6                 | 73  | 140 | 51    | 30    | 18    | 16  | 334   |
| 65-69 | 3                 | 46  | 179 | 109   | 46    | 38    | 23  | 444   |
| 70-74 | 8                 | 32  | 151 | 224   | 88    | 74    | 46  | 623   |
| 75-79 | 7                 | 47  | 68  | 157   | 164   | 95    | 77  | 615   |
| 80-84 | 16                | 50  | 71  | 98    | 117   | 116   | 88  | 556   |
| 85+   | 4                 | 68  | 100 | 105   | 157   | 139   | 162 | 735   |
| TOTAL | 61                | 406 | 790 | 809   | 621   | 492   | 415 | 3,594 |

AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |        |       |       |       |       | ALL   |
|-------|-------------------|--------|--------|-------|-------|-------|-------|-------|
|       | <1                | 1-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   | 11,775            | 9,373  | 9,302  | 4,997 | 4,203 | 1,953 | 2,192 | 7,748 |
| 50-54 | 9,673             | 10,668 | 9,867  | 7,372 | 3,568 | 1,671 | 2,110 | 8,831 |
| 55-59 | 5,991             | 10,572 | 10,190 | 7,648 | 4,091 | 2,072 | 2,115 | 8,660 |
| 60-64 | 8,398             | 10,630 | 9,800  | 7,199 | 3,792 | 2,161 | 2,124 | 8,240 |
| 65-69 | 1,527             | 7,918  | 8,026  | 7,088 | 4,435 | 2,235 | 2,050 | 6,563 |
| 70-74 | 2,716             | 5,729  | 6,824  | 6,067 | 4,902 | 1,975 | 2,133 | 5,249 |
| 75-79 | 2,672             | 3,079  | 3,536  | 5,187 | 4,824 | 2,075 | 2,117 | 3,853 |
| 80-84 | 2,695             | 2,372  | 2,784  | 3,577 | 4,049 | 2,659 | 2,079 | 3,013 |
| 85+   | 2,432             | 2,691  | 2,477  | 2,782 | 3,096 | 2,881 | 2,584 | 2,772 |
| ALL   | 5,074             | 6,637  | 6,749  | 5,424 | 4,148 | 2,439 | 2,290 | 4,855 |

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

| <1  | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ | TOTAL  |
|-----|-------|-------|-------|-------|-------|-----|--------|
| 310 | 2,695 | 5,330 | 4,388 | 2,576 | 1,200 | 950 | 17,449 |

PUBLIC EMPLOYEES RETIREMENT FUND  
DETERMINATION OF CONTRIBUTION SUFFICIENCY  
(DOLLARS IN THOUSANDS)

TABLE 11A  
BASIC

JULY 1, 1990

|                                                                   | <u>% OF<br/>PAYROLL</u> | <u>\$<br/>AMOUNT</u> |
|-------------------------------------------------------------------|-------------------------|----------------------|
| <b>A. STATUTORY CONTRIBUTIONS - CHAPTER 353</b>                   |                         |                      |
| 1. Employee Contributions                                         | 8.23%                   | \$9,008              |
| 2. Employer Contributions                                         | 10.73%                  | 11,744               |
|                                                                   | -----                   | -----                |
| 3. Total                                                          | 18.96%                  | \$20,752             |
|                                                                   | =====                   | =====                |
| <b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356 (NORMAL COST ONLY)</b> |                         |                      |
| 1. Normal Cost                                                    |                         |                      |
| a. Retirement Benefits                                            | 4.98%                   | \$5,448              |
| b. Disability Benefits                                            | 0.58%                   | 636                  |
| c. Survivors                                                      | 1.11%                   | 1,215                |
| d. Deferred Retirement Benefits                                   | 2.26%                   | 2,476                |
| e. Refunds Due to Death or<br>Withdrawal                          | 1.67%                   | 1,829                |
|                                                                   | -----                   | -----                |
| f. Total                                                          | 10.60%                  | \$11,604             |
|                                                                   | -----                   | -----                |

Note: Projected Annual Payroll for Fiscal Year Beginning  
on July 1, 1990 is \$109,448

**PUBLIC EMPLOYEES RETIREMENT FUND**

**SUMMARY OF PLAN PROVISIONS**

|                   |                                                                                                                                                                                                                                                     |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility       | A public employee who is not covered under the Social Security Act. General exceptions are employees covered by other public funds and certain part-time employees. City managers and persons holding elective office may choose to become Members. |
| Contributions     |                                                                                                                                                                                                                                                     |
| Member            | 8.23% of Salary.                                                                                                                                                                                                                                    |
| Employer          | 10.73% of Salary.                                                                                                                                                                                                                                   |
| Allowable Service | Service during which Member contributions were deducted. May also include certain leaves of absence and military service.                                                                                                                           |
| Salary            | Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump sum payments at separation and Workers' Compensation benefits.             |
| Average Salary    | Average of the 5 highest successive years of Salary. Average Salary is based on all Allowable Service if less than 5 years.                                                                                                                         |

**RETIREMENT**

**Normal Retirement Benefit  
Eligibility**

First hired before July 1, 1989:  
Age 65 and 3 years of Allowable Service.  
Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.

First hired after June 30, 1989:  
The greater of age 65 or the age eligible for full Social Security retirement benefits and 3 years of Allowable Service.  
Proportionate Retirement Annuity is available at normal retirement age and 1 year of Allowable Service.

|        |                                                            |
|--------|------------------------------------------------------------|
| Amount | 2.5% of Average Salary for each year of Allowable Service. |
|--------|------------------------------------------------------------|

TABLE 14A  
BASIC  
(Cont)

Early Retirement Benefit  
Eligibility

First hired before July 1, 1989:  
Age 55 and 3 years of Allowable Service.  
Any age with 30 years of Allowable Service.  
Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:  
Age 55 with 3 years of Allowable Service.

Amount

First hired before July 1, 1989:  
The greater of  
2% of Average Salary for each of the first 10 years of Allowable Service and 2.5% of Average Salary for each subsequent year with reduction of 0.25% for each month the member is under age 65 at time of retirement or age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.

or

2.5% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the member is under age 65.

First hired after June 30, 1989:  
2.5% of Average Salary for each year of Allowable Service assuming augmentation to the age eligible for full Social Security retirement benefit at 3% per year and actuarial reduction for each month the member is under the Social Security retirement age.

Form of Payment

Life annuity with return on death of any balance of contributions over aggregate monthly payments.

Actuarially equivalent options are:

50% or 100% joint and survivor with bounce back feature without additional reduction (option is cancelled if Member is pre-deceased by beneficiary).

Benefit Increases

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase.

**TABLE 14A  
BASIC  
(Cont)**

Members receiving benefits for at least 1 full month but less than 12 full months will receive a partial increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

**DISABILITY**  
Disability Benefit  
Eligibility

Total and permanent disability before normal retirement age with 3 years of Allowable Service.

Amount

Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before normal retirement age. Supplemental benefit of \$5 per month for each year under normal retirement age at commencement of disability (maximum of \$50 per month). The disability benefit is reduced to that amount which, when added to Workers' Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.

Payments stop if disability ceases or death occurs. Payments revert to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.

Form of Payment

Same as for retirement.

Benefit Increases

Adjusted by PERA to provide same increase as MPRIF.

Retirement After  
Disability  
Eligibility

Normal retirement age.

**TABLE 14A  
BASIC  
(Cont)**

|                                                    |                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amount                                             | Any optional annuity continues. Otherwise the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.                                                      |
| Benefit Increases                                  | Same as for retirement.                                                                                                                                                                                                                                                                   |
| <b>DEATH</b>                                       |                                                                                                                                                                                                                                                                                           |
| Surviving Spouse Benefit Eligibility               | Active Member with 18 months of Allowable Service or Member receiving a disability benefit.                                                                                                                                                                                               |
| Amount                                             | 50% of Salary averaged over last 6 months. Maximum family benefit is \$1,000 per month. Benefits paid until spouse's death but no payments while spouse is remarried.<br><br>Surviving spouse optional annuity may be elected in lieu of this benefit.                                    |
| Surviving Dependent Children's Benefit Eligibility | Active Member with 18 months of Allowable Service or Member receiving a disability benefit.                                                                                                                                                                                               |
| Amount                                             | 10% of Salary averaged over last 6 months for each child. Family benefit minimum (including spouse's benefit) of 50% of Salary and maximum of \$1,000 per month. Benefits paid until child marries, dies, or attains age 18 (age 22 if full time student).                                |
| Surviving Spouse Optional Annuity Eligibility      | Member or former Member who dies before retirement or disability benefits commence, if age 50 with 3 years of Allowable Service or any age with 30 years of Allowable Service. If the Member dies before age 55, benefits commence when Member would have qualified for early retirement. |
| Amount                                             | Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.                                                                                                                                                                                    |
| Benefit Increases                                  | Adjusted by PERA to provide same increase as MPRIF.                                                                                                                                                                                                                                       |
| Refund of Contributions Eligibility                | Member dies before receiving any retirement benefits and survivor benefits are not payable.                                                                                                                                                                                               |



**TABLE 14A  
BASIC  
(Cont)**

|                         |                                                                                                                                                                                                                                                                                                                               |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amount                  | The excess of the Member's contributions with 6% interest over any disability or survivor benefits paid.                                                                                                                                                                                                                      |
| <b>TERMINATION</b>      |                                                                                                                                                                                                                                                                                                                               |
| Refund of Contributions |                                                                                                                                                                                                                                                                                                                               |
| Eligibility             | Termination of public service.                                                                                                                                                                                                                                                                                                |
| Amount                  | Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989, and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if 3 or more years of Allowable Service.                                                     |
| Deferred Benefit        |                                                                                                                                                                                                                                                                                                                               |
| Eligibility             | 3 years of Allowable Service.                                                                                                                                                                                                                                                                                                 |
| Amount                  | Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/71, 5% from 7/1/71 to 1/1/81, and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement. |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 3B  
COORDINATED

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |        |        |        |        |       |       |     | TOTAL  |
|-------|------------------|--------|--------|--------|--------|-------|-------|-----|--------|
|       | <1               | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25-29 | 30+ |        |
| <25   | 1,452            | 2,063  | 104    |        |        |       |       |     | 3,619  |
| 25-29 | 1,917            | 5,277  | 2,142  | 199    |        |       |       |     | 9,535  |
| 30-34 | 1,913            | 5,823  | 3,653  | 2,461  | 161    |       |       |     | 14,011 |
| 35-39 | 1,866            | 6,414  | 3,870  | 3,676  | 1,554  | 74    |       |     | 17,454 |
| 40-44 | 2,073            | 6,173  | 3,931  | 3,263  | 2,167  | 562   | 7     |     | 18,176 |
| 45-49 | 764              | 3,441  | 2,947  | 2,716  | 1,741  | 783   | 60    | 1   | 12,453 |
| 50-54 | 483              | 2,121  | 1,952  | 2,356  | 1,853  | 814   | 120   | 44  | 9,743  |
| 55-59 | 304              | 1,438  | 1,429  | 1,745  | 1,705  | 935   | 139   | 80  | 7,775  |
| 60-64 | 150              | 785    | 859    | 1,036  | 1,136  | 622   | 88    | 57  | 4,733  |
| 65+   | 78               | 330    | 326    | 349    | 318    | 130   | 13    | 12  | 1,556  |
| TOTAL | 11,000           | 33,865 | 21,213 | 17,801 | 10,635 | 3,920 | 427   | 194 | 99,055 |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |        |        |        |        |        |        |        | ALL    |
|-------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   | 8,436            | 13,105 | 16,450 |        |        |        |        |        | 11,328 |
| 25-29 | 10,461           | 17,131 | 20,029 | 20,369 |        |        |        |        | 16,509 |
| 30-34 | 9,795            | 17,185 | 22,626 | 23,383 | 23,290 |        |        |        | 18,753 |
| 35-39 | 9,409            | 16,057 | 22,557 | 26,763 | 26,819 | 26,919 |        |        | 20,046 |
| 40-44 | 8,211            | 14,715 | 20,566 | 26,104 | 30,831 | 32,198 | 18,681 |        | 19,747 |
| 45-49 | 9,529            | 14,910 | 18,500 | 21,939 | 26,725 | 32,042 | 36,997 | 31,117 | 19,799 |
| 50-54 | 8,668            | 14,160 | 17,393 | 19,461 | 21,309 | 26,728 | 36,829 | 35,048 | 18,601 |
| 55-59 | 8,179            | 13,216 | 16,603 | 19,147 | 20,169 | 24,076 | 37,660 | 39,494 | 18,511 |
| 60-64 | 7,093            | 12,340 | 15,150 | 18,531 | 19,311 | 22,276 | 30,959 | 39,946 | 17,696 |
| 65+   | 6,627            | 8,366  | 11,049 | 13,552 | 14,859 | 16,624 | 26,090 | 28,541 | 12,325 |
| ALL   | 9,196            | 15,477 | 19,998 | 22,916 | 24,382 | 26,903 | 35,289 | 37,898 | 18,622 |

## PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

| <1      | 1-4     | 5-9     | 10-14   | 15-19   | 20-24   | 25-29  | 30+   | TOTAL     |
|---------|---------|---------|---------|---------|---------|--------|-------|-----------|
| 101,155 | 524,119 | 424,220 | 407,930 | 259,301 | 105,591 | 15,068 | 7,352 | 1,844,736 |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 4B  
COORDINATED

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |       |       |       |       |       |     | TOTAL  |
|-------|---------------|-------|-------|-------|-------|-------|-----|--------|
|       | <1            | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ |        |
| <50   |               |       |       |       |       |       |     | 0      |
| 50-54 | 1             | 1     |       |       |       |       |     | 2      |
| 55-59 | 163           | 401   |       |       |       |       |     | 564    |
| 60-64 | 492           | 1,593 | 161   |       |       |       |     | 2,246  |
| 65-69 | 368           | 2,565 | 1,021 | 7     |       |       |     | 3,961  |
| 70-74 | 38            | 536   | 2,009 | 211   | 3     |       |     | 2,797  |
| 75-79 | 3             | 73    | 398   | 1,036 | 23    |       |     | 1,533  |
| 80-84 | 2             | 20    | 55    | 126   | 356   | 1     |     | 560    |
| 85+   |               | 4     | 9     | 14    | 96    | 86    |     | 209    |
| TOTAL | 1,067         | 5,193 | 3,653 | 1,394 | 478   | 87    | 0   | 11,872 |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |       |       |       |       |       |     | ALL   |
|-------|---------------|-------|-------|-------|-------|-------|-----|-------|
|       | <1            | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |       |       |       |       |       |     | 0     |
| 50-54 | 6,674         | 7,264 |       |       |       |       |     | 6,969 |
| 55-59 | 2,267         | 2,246 |       |       |       |       |     | 2,252 |
| 60-64 | 4,250         | 3,468 | 4,586 |       |       |       |     | 3,720 |
| 65-69 | 3,814         | 3,278 | 4,205 | 5,267 |       |       |     | 3,570 |
| 70-74 | 1,938         | 2,250 | 3,093 | 3,889 | 3,494 |       |     | 2,976 |
| 75-79 | 297           | 1,509 | 2,171 | 3,319 | 6,372 |       |     | 2,975 |
| 80-84 | 1,449         | 751   | 1,132 | 2,526 | 3,203 | 5,157 |     | 2,757 |
| 85+   |               | 1,542 | 807   | 1,419 | 2,373 | 2,561 |     | 2,303 |
| ALL   | 3,700         | 3,115 | 3,334 | 3,324 | 3,190 | 2,591 | 0   | 3,259 |

## TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

|  | <1    | 1-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25+ | TOTAL  |
|--|-------|--------|--------|-------|-------|-------|-----|--------|
|  | 3,948 | 16,178 | 12,178 | 4,634 | 1,525 | 225   | 0   | 38,688 |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 5B  
COORDINATED

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |     |     |       |       |       |     | TOTAL |
|-------|----------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1             | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 21             | 39  | 10  | 2     |       |       |     | 72    |
| 50-54 | 19             | 41  | 6   | 1     |       |       |     | 67    |
| 55-59 | 15             | 71  | 23  | 3     |       |       |     | 112   |
| 60-64 | 27             | 130 | 62  | 18    |       | 1     |     | 238   |
| 65-69 |                | 2   | 1   |       |       |       |     | 3     |
| 70-74 |                |     |     |       |       |       |     | 0     |
| 75-79 |                |     |     |       |       |       |     | 0     |
| 80-84 |                |     |     |       |       |       |     | 0     |
| 85+   |                |     |     |       |       |       |     | 0     |
| TOTAL | 82             | 283 | 102 | 24    | 0     | 1     | 0   | 492   |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |       |        |       |       |       |     | ALL   |
|-------|----------------|-------|--------|-------|-------|-------|-----|-------|
|       | <1             | 1-4   | 5-9    | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 3,301          | 3,072 | 3,275  | 2,194 |       |       |     | 3,143 |
| 50-54 | 3,437          | 2,666 | 4,236  | 2,526 |       |       |     | 3,023 |
| 55-59 | 5,448          | 2,494 | 2,617  | 2,288 |       |       |     | 2,909 |
| 60-64 | 3,759          | 2,847 | 2,910  | 1,995 |       | 2,211 |     | 2,900 |
| 65-69 |                | 6,777 | 10,312 |       |       |       |     | 7,955 |
| 70-74 |                |       |        |       |       |       |     | 0     |
| 75-79 |                |       |        |       |       |       |     | 0     |
| 80-84 |                |       |        |       |       |       |     | 0     |
| 85+   |                |       |        |       |       |       |     | 0     |
| TOTAL | 3,876          | 2,791 | 3,031  | 2,070 | 0     | 2,211 | 0   | 2,985 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

| <1  | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ | TOTAL |
|-----|-----|-----|-------|-------|-------|-----|-------|
| 318 | 790 | 309 | 50    | 0     | 2     | 0   | 1,469 |

## PUBLIC EMPLOYEES RETIREMENT FUND

TABLE 6B  
COORDINATED

## SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 6                 | 23  | 9   | 3     |       |       |     | 41    |
| 50-54 | 4                 | 21  | 13  | 3     |       |       |     | 41    |
| 55-59 | 12                | 54  | 14  | 4     |       |       |     | 84    |
| 60-64 | 13                | 79  | 61  | 7     | 3     |       |     | 163   |
| 65-69 | 5                 | 54  | 84  | 24    | 2     |       |     | 169   |
| 70-74 |                   | 19  | 70  | 59    | 14    |       |     | 162   |
| 75-79 |                   | 2   | 14  | 49    | 30    | 3     |     | 98    |
| 80-84 |                   | 1   | 5   | 10    | 19    | 3     |     | 38    |
| 85+   |                   |     |     | 5     | 7     | 5     | 7   | 24    |
| TOTAL | 40                | 253 | 270 | 164   | 75    | 11    | 7   | 820   |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL   |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   | 2,042             | 2,605 | 4,793 | 635   |       |       |       | 2,859 |
| 50-54 | 2,260             | 2,969 | 2,847 | 2,563 |       |       |       | 2,832 |
| 55-59 | 3,168             | 2,624 | 3,018 | 2,471 |       |       |       | 2,760 |
| 60-64 | 2,326             | 3,500 | 2,737 | 2,127 | 2,698 |       |       | 3,047 |
| 65-69 | 3,203             | 3,141 | 2,968 | 2,223 | 1,349 |       |       | 2,905 |
| 70-74 |                   | 3,639 | 2,518 | 2,769 | 1,818 |       |       | 2,680 |
| 75-79 |                   | 819   | 1,498 | 3,011 | 2,422 | 3,325 |       | 2,579 |
| 80-84 |                   | 939   | 6,944 | 1,592 | 2,544 | 2,420 |       | 2,820 |
| 85+   |                   |       |       | 1,698 | 3,838 | 1,160 | 2,031 | 2,307 |
| ALL   | 2,639             | 3,090 | 2,854 | 2,579 | 2,455 | 2,094 | 2,031 | 2,808 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

|  | <1  | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ | TOTAL |
|--|-----|-----|-----|-------|-------|-------|-----|-------|
|  | 106 | 781 | 771 | 423   | 184   | 23    | 14  | 2,302 |

PUBLIC EMPLOYEES RETIREMENT FUND  
DETERMINATION OF CONTRIBUTION SUFFICIENCY  
(DOLLARS IN THOUSANDS)

TABLE 11B  
COORDINATED

JULY 1, 1990

|                                                            | <u>% OF<br/>PAYROLL</u> | <u>\$<br/>AMOUNT</u>        |
|------------------------------------------------------------|-------------------------|-----------------------------|
| A. STATUTORY CONTRIBUTIONS - CHAPTER 353                   |                         |                             |
| 1. Employee Contributions                                  | 4.23%                   | \$83,104                    |
| 2. Employer Contributions                                  | 4.48%                   | 88,016                      |
| 3. Total                                                   | -----<br>8.71%<br>===== | -----<br>\$171,120<br>===== |
| B. REQUIRED CONTRIBUTIONS - CHAPTER 356 (NORMAL COST ONLY) |                         |                             |
| 1. Normal Cost                                             |                         |                             |
| a. Retirement Benefits                                     | 4.04%                   | \$79,593                    |
| b. Disability Benefits                                     | 0.29%                   | 5,608                       |
| c. Survivors                                               | 0.24%                   | 4,687                       |
| d. Deferred Retirement Benefits                            | 1.70%                   | 33,322                      |
| e. Refunds Due to Death or<br>Withdrawal                   | 0.51%                   | 9,987                       |
| f. Total                                                   | -----<br>6.78%<br>----- | -----<br>\$133,197<br>----- |

Note: Projected Annual Payroll for Fiscal Year Beginning  
on July 1, 1990 is \$1,964,644

PUBLIC EMPLOYEES RETIREMENT FUND COORDINATED

SUMMARY OF PLAN PROVISIONS

|                   |                                                                                                                                                                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility       | A public employee who is covered under the Social Security Act. General exceptions are employees covered by other public funds and certain part-time employees. City managers and persons holding elective office may choose to become Members. |
| Contributions     |                                                                                                                                                                                                                                                 |
| Member            | 4.23% of Salary.                                                                                                                                                                                                                                |
| Employer          | 4.48% of Salary.                                                                                                                                                                                                                                |
| Allowable Service | Service during which Member contributions were deducted. May also include certain leaves of absence and military service.                                                                                                                       |
| Salary            | Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump sum payments at separation and Workers' Compensation benefits.         |
| Average Salary    | Average of the 5 highest successive years of Salary. Average Salary is based on all Allowable Service if less than 5 years.                                                                                                                     |

RETIREMENT

Normal Retirement Benefit  
Eligibility

First hired before July 1, 1989:  
Age 65 and 3 years of Allowable Service.  
Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.

First hired after June 30, 1989:  
The greater of age 65 or the age eligible for full Social Security retirement benefits and 3 years of Allowable Service.  
Proportionate Retirement Annuity is available at normal retirement age and 1 year of Allowable Service.

|        |                                                            |
|--------|------------------------------------------------------------|
| Amount | 1.5% of Average Salary for each year of Allowable Service. |
|--------|------------------------------------------------------------|

TABLE 14B  
COORDINATED  
(cont)

Early Retirement Benefit  
Eligibility

First hired before July 1, 1989:

Age 55 and 3 years of Allowable Service.

Any age with 30 years of Allowable Service.

Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:

Age 55 with 3 years of Allowable Service.

Amount

First hired before July 1, 1989:

The greater of

1% of Average Salary for each of the first 10 years of Allowable Service and 1.5% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement or age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.

or

1.5% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the Member is under age 65.

First hired after June 30, 1989:

1.5% of Average Salary for each year of Allowable Service assuming augmentation to the age eligible for full Social Security retirement benefits at 3% per year and actuarial reduction for each month the Member is under the Social Security retirement age.

Form of Payment

Life annuity with return on death of any balance of contributions over aggregate monthly payments.

Actuarially equivalent options are:

50% or 100% joint and survivor with bounce back feature without additional reduction (option is cancelled if Member is pre-deceased by beneficiary).



**TABLE 14B  
COORDINATED  
(cont)**

**Benefit Increases**

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Benefit recipients receiving benefits for at least 1 full month but less than 12 months will receive a partial increase.

Members retired under law in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is \$25 times each full year of Allowable Service. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

**DISABILITY**  
Disability Benefit  
Eligibility

Total and permanent disability before normal retirement age with 3 years of Allowable Service.

**Amount**

Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before normal retirement age. The disability benefit is reduced to that amount which, when added to Worker's Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.

Payments stop if disability ceases or death occurs. Payments revert to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.

**Form of Payment**

Same as for retirement.

**Benefit Increases**

Adjusted by PERA to provide same increase as MPRIF.

**Retirement After  
Disability  
Eligibility**

Normal retirement age.

**TABLE 14B  
COORDINATED  
(cont)**

|                                                     |                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amount                                              | Any optional annuity continues. Otherwise the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.                                                      |
| Benefit Increases                                   | Same as for retirement.                                                                                                                                                                                                                                                                   |
| <b>DEATH</b>                                        |                                                                                                                                                                                                                                                                                           |
| Surviving Spouse<br>Optional Annuity<br>Eligibility | Member or former Member who dies before retirement or disability benefits commence, if age 50 with 3 years of Allowable Service or any age with 30 years of Allowable Service. If the Member dies before age 55, benefits commence when Member would have qualified for early retirement. |
| Amount                                              | Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.                                                                                                                                                                                    |
| Benefit Increases                                   | Adjusted by PERA to provide same increase as MPRIF.                                                                                                                                                                                                                                       |
| Refund of Contributions<br>Eligibility              | Member dies before receiving any retirement benefits and survivor benefits are not payable.                                                                                                                                                                                               |
| Amount                                              | The excess of the Member's contributions with 6% interest over any disability or survivor benefits paid.                                                                                                                                                                                  |
| <b>TERMINATION</b>                                  |                                                                                                                                                                                                                                                                                           |
| Refund of Contributions<br>Eligibility              | Termination of public service.                                                                                                                                                                                                                                                            |
| Amount                                              | Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989, or 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if 3 or more years of Allowable Service.                  |
| Deferred Benefit<br>Eligibility                     | 3 years of Allowable Service.                                                                                                                                                                                                                                                             |

**TABLE 14B  
COORDINATED  
(cont)**

Amount

Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/71, 5% from 7/1/71 to 1/1/81, and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

**PUBLIC EMPLOYEES POLICE AND FIRE FUND**

**ACTUARIAL VALUATION REPORT**

**JULY 1, 1990**

THE *Wyatt* COMPANY

ACTUARIAL SERVICES  
PENSION PROGRAMS  
ADMINISTRATIVE SYSTEMS  
INTERNATIONAL SERVICES  
ORGANIZATION SURVEYS

15TH FLOOR  
8400 NORMANDALE LAKE BOULEVARD  
MINNEAPOLIS, MINNESOTA 55437

(612) 921-8700

EMPLOYEE BENEFITS  
EMPLOYEE COMMUNICATIONS  
RISK MANAGEMENT  
INSURANCE CONSULTING  
HEALTH CARE CONSULTING

October 22, 1990

Legislative Commission on  
Pensions and Retirement  
55 State Office Building  
St. Paul, Minnesota 55155

**RE: PUBLIC EMPLOYEES POLICE AND FIRE FUND**

Commission Members:

We have prepared an actuarial valuation of the Fund as of July 1, 1990 based on membership and financial data supplied by PERA.

We certify that to the best of our knowledge and belief this actuarial valuation was performed in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on September 20, 1989.

Respectfully submitted,

THE WYATT COMPANY

*Robert E. Perkins*

Robert E. Perkins, FSA  
Consulting Actuary

*Michael C. Gunvalson*

Michael C. Gunvalson, FSA  
Actuary

**PUBLIC EMPLOYEES POLICE AND FIRE FUND**

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# PUBLIC EMPLOYEES POLICE AND FIRE FUND

## REPORT HIGHLIGHTS (DOLLARS IN THOUSANDS)

|                                                          | <u>07/01/89</u><br><u>VALUATION</u> | <u>07/01/90</u><br><u>VALUATION</u> |
|----------------------------------------------------------|-------------------------------------|-------------------------------------|
| <b>A. CONTRIBUTIONS (TABLE 11)</b>                       |                                     |                                     |
| 1. Statutory Contributions - Chapter 353<br>% of Payroll | 20.00%                              | 20.00%                              |
| 2. Required Contributions - Chapter 356<br>% of Payroll  | 16.21%                              | 17.56%                              |
| 3. Sufficiency (Deficiency) (A1-A2)                      | 3.79%                               | 2.44%                               |
| <b>B. FUNDING RATIOS</b>                                 |                                     |                                     |
| 1. Accrued Benefit Funding Ratio                         |                                     |                                     |
| a. Current Assets (Table 1)                              | \$656,654                           | \$755,204                           |
| b. Current Benefit Obligations (Table 8)                 | \$582,299                           | \$657,453                           |
| c. Funding Ratio (a/b)                                   | 112.77%                             | 114.87%                             |
| 2. Accrued Liability Funding Ratio                       |                                     |                                     |
| a. Current Assets (Table 1)                              | \$656,654                           | \$755,204                           |
| b. Actuarial Accrued Liability (Table 9)                 | \$651,776                           | \$715,963                           |
| c. Funding Ratio (a/b)                                   | 100.75%                             | 105.48%                             |
| 3. Projected Benefit Funding Ratio (Table 8)             |                                     |                                     |
| a. Current and Expected Future Assets                    | \$1,211,268                         | \$1,386,324                         |
| b. Current and Expected Future Benefit Obligations       | \$1,035,701                         | \$1,230,055                         |
| c. Funding Ratio (a/b)                                   | 116.95%                             | 112.70%                             |
| <b>C. PLAN PARTICIPANTS</b>                              |                                     |                                     |
| 1. Active Members                                        |                                     |                                     |
| a. Number (Table 3)                                      | 5,891                               | 6,136                               |
| b. Projected Annual Earnings                             | \$197,982                           | \$216,022                           |
| c. Average Annual Earnings (Actual \$)                   | \$33,608                            | \$35,206                            |
| d. Average Age                                           | 37.5                                | 37.6                                |
| e. Average Service                                       | 10.0                                | 10.1                                |
| 2. Others                                                |                                     |                                     |
| a. Service Retirements (Table 4)                         | 995                                 | 1,057                               |
| b. Disability Retirements (Table 5)                      | 84                                  | 89                                  |
| c. Survivors (Table 6)                                   | 333                                 | 347                                 |
| d. Deferred Retirements (Table 7)                        | 110                                 | 128                                 |
| e. Terminated Other Non-vested (Table 7)                 | 100                                 | 121                                 |
| f. Total                                                 | 1,622                               | 1,742                               |



## PUBLIC EMPLOYEES POLICE AND FIRE FUND

### COMMENTARY

#### Purpose

The purpose of this valuation is to determine the financial status of the Fund. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

#### Report Highlights

The statutory contributions for the PERA Police and Fire Fund continue to be sufficient. The margin of sufficiency has decreased from 3.79% in 1989 to 2.44% in 1990. According to this valuation a contribution rate of 17.56% is required to comply with Minnesota Law. This contribution rate is based on a new set of assumed separation rates adopted for the July 1, 1990 valuation. All plan provisions and all other actuarial assumptions are the same as the prior valuation. The Fund is in a surplus position and the Supplemental Contribution for amortizing the Unfunded Actuarial Accrued Liability is zero.

The financial status of the Fund can be measured by three different funding ratios:

- o The Accrued Benefit Funding Ratio is a measure of current funding status, and when viewed over a period of years, presents a view of the funding progress. This year's ratio is 114.87%. The corresponding ratio for the prior year was 112.77%.

- o The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used. For 1990 the ratio is 105.48%, which is an increase from the 1989 value of 100.75%.
- o The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This ratio exceeds 100% and verifies that the current statutory contributions are adequate.

#### Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

This Fund participates in the MPRIF (i.e. Minnesota Post Retirement Investment

) Fund). The asset value shown for MPRIF on line A3 is set equal to the MPRIF Reserves reported on line D3 for both market and cost value purposes. This reserve is based on a 5% interest assumption.

Investment performance by SBI (i.e. State Board of Investment) above the 5% level is not shown in the assets but will be added in on January 1, 1991 when benefits will be increased for those annuitants who have been receiving payments for at least 7 months. Next year's valuation will include the 1991 benefit increase in determining the MPRIF value.

) After the MPRIF liability has been calculated for each participating Fund, SBI will determine each Fund's portion of the excess earnings for the January benefit increase as well as the Fund's allocated market share of MPRIF. An approximation of those values on June 30, 1990 is provided below:

|                               |               |
|-------------------------------|---------------|
| MPRIF Reserves                | \$181,703,000 |
| Reserves Plus Excess Earnings | 190,000,000   |
| MPRIF Market Value            | 198,000,000   |

**Membership Data (Tables 3, 4, 5, 6 and 7)**

) Tables 3 through 6 summarize statistical information about members by category. Active members are grouped by age and completed years of service in Table 3. The earnings shown for these members are for the prior fiscal year except in the case of new hires whose earnings have been annualized.

) The service retirements in Table 4 include not only those retiring from active status but also disabled members who have attained retirement age. Disabled members under retirement age are shown in Table 5. The survivors category (Table 6) includes spouses and children of deceased members.

) A reconciliation of members in Table 7 provides a method for tracking what happened to members during the past year.

#### **Actuarial Balance Sheet (Table 8)**

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

Current funding levels are evaluated by comparing Current Assets on line A to Current Benefit Obligations on line D5. Current and future funding levels are evaluated by comparing the Total Current and Expected Future Assets on line C to the Total Current and Expected Future Benefit Obligations on line F.

) The Current Benefit Obligation used to measure current funding levels is calculated in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- o For active members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.
- o For non-active members - the discounted value of benefits, including augmentation in cases where benefits have not commenced.

#### **GASB Disclosure**

) The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB).

However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The July 1, 1990 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the table below. This table shows the impact of the change in actuarial assumptions. See page 9 for an explanation of the change in actuarial assumptions.

|                                                                                                             | <u>Old Assumptions</u> | <u>New Assumptions</u> |
|-------------------------------------------------------------------------------------------------------------|------------------------|------------------------|
| Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits | \$222,683,000          | \$222,683,000          |
| Current Employees -                                                                                         |                        |                        |
| Accumulated employee contributions including allocated investment income                                    | 169,242,000 *          | 169,242,000 *          |
| Employer-financed vested                                                                                    | 174,898,000            | 175,876,000            |
| Employer-financed nonvested                                                                                 | 83,652,000             | 89,652,000             |
|                                                                                                             | -----                  | -----                  |
| Total Pension Benefit Obligation                                                                            | \$650,475,000          | \$657,453,000          |

\* Estimated

The net assets available for benefits, at cost, is \$739,068,000. The assets exceed the total Pension Benefit Obligation after the assumption change by \$81,615,000 to produce a funded ratio of 112.41%.

#### Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

The payments will increase 6.5% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years the annual payment will cover the interest and also repay a portion of the unfunded.

#### Sources of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectation. The major sources of gain and loss, which have been identified, are:

- o A gain from salaries where the average increase was 5.9% compared to the expected increase of 6.5%.
- o A gain from Non-MPRIF Assets (i.e. Current Assets reduced by MPRIIF Reserves) because the return was 12.6% instead of the assumed 8.5%.

#### **Contribution Sufficiency (Table 11)**

This report answers the question of "How adequate are the Statutory Contributions?" by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- o Normal Costs based on the Entry Age Normal Actuarial Cost Method.
- o A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability. Since a surplus exists, no contribution is required to amortize the Unfunded Actuarial Accrued Liability.
- o An Allowance for Expenses.

Table 11 shows the Fund has a contribution sufficiency since the Statutory Contribution Rate is 20.00% compared to the Required Contribution Rate of 17.56%.

#### **Projected Cash Flow (Table 12)**

Table 12 illustrates the anticipated cash flow over the amortization period. The cash flow begins with the Non-MPRIF Assets, which are the Current Assets

) reduced by the MPRIF Reserves. Contributions are then added based on the present statutory rates for employers and employees. As members become eligible for payments from MPRIF an amount of reserve is transferred to SBI. The other disbursements represent benefit payments and expenses made directly by the Fund.

This projected cash flow assumes that future payrolls increase by 6.5%. Table 12 is the only table in this report where new members are assumed to be hired in order to replace those who terminate from the active group. This open group method provides a more realistic picture of future cash flow. The statutory interest rate of 8.5% is used to project future investment return.

) The amounts transferred to MPRIF will be affected by the number of members who reach the assumed retirement age during a given year. The amount for 1992 is large because it includes those already over age 60 who are assumed to retire a year from the valuation date.

#### Changes in Plan Provisions

This valuation does not reflect any changes in plan provisions since the prior valuation.

#### Changes in Actuarial Assumptions

The rates of separation have been updated to reflect recent plan experience. Sample rates of separation are as follows:

| Separation Rates |       |       |
|------------------|-------|-------|
| Age              | Old   | New   |
| 20               | .0700 | .0859 |
| 30               | .0658 | .0280 |
| 40               | .0245 | .0126 |
| 50               | .0050 | .0050 |

) See Table 13 for the complete set of new separation rates.



Prior to the actuarial assumption change the Fund had an Unfunded Actuarial Accrued Liability of \$(28,227,000). With the new separation rate assumption, the Unfunded Actuarial Accrued Liability is \$(39,241,000). The following table shows the impact due to the change in the separation rate assumption.

|                             | <u>Impact Due to Change in<br/>Actuarial Assumptions</u> |
|-----------------------------|----------------------------------------------------------|
| Actuarial Accrued Liability | \$(11,014,000)                                           |
| Pension Benefit Obligation  |                                                          |
| for GASB No. 5              | 6,978,000                                                |
| Normal Cost                 | 1.22%                                                    |
| Supplemental Contribution   | <u>0.00%*</u>                                            |
| Required Contribution       | 1.22%                                                    |

\* Does not reflect any amortization of surplus. If the surplus of \$28,227,000 existing before the change in actuarial assumptions was amortized, the supplemental contribution rate before the change would have been (.59%). If the surplus of \$39,241,000 existing after the change in actuarial assumptions was amortized, the supplemental contribution rate would have been (.82%) or a decrease of .23%.

PUBLIC EMPLOYEES POLICE AND FIRE FUND

TABLE 1

ACCOUNTING BALANCE SHEET  
(DOLLARS IN THOUSANDS)

July 1, 1990

|                                                                             | <u>MARKET VALUE</u> | <u>COST VALUE</u> |
|-----------------------------------------------------------------------------|---------------------|-------------------|
| <b>A. ASSETS</b>                                                            |                     |                   |
| 1. Cash, Equivalents, Short-Term Securities                                 | \$17,137            | \$17,137          |
| 2. Investments                                                              |                     |                   |
| a. Fixed Income                                                             | 161,208             | 163,242           |
| b. Equity                                                                   | 385,258             | 342,791           |
| c. Real Estate                                                              | 43,604              | 35,629            |
| 3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)              | 181,703             | 181,703           |
| 4. Other                                                                    | 175                 | 175               |
| <b>B. TOTAL ASSETS</b>                                                      | <u>\$789,085</u>    | <u>\$740,677</u>  |
| <b>C. AMOUNTS CURRENTLY PAYABLE</b>                                         | \$1,609             | \$1,609           |
| <b>D. ASSETS AVAILABLE FOR BENEFITS</b>                                     |                     |                   |
| 1. Member Reserves                                                          | \$120,005           | \$120,005         |
| 2. Employer Reserves                                                        | 485,768             | 437,360           |
| 3. MPRIF Reserves                                                           | 181,703             | 181,703           |
| 4. Non-MPRIF Reserves                                                       | 0                   | 0                 |
| <b>5. Total Assets Available for Benefits</b>                               | <u>\$787,476</u>    | <u>\$739,068</u>  |
| <b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b> | <u>\$789,085</u>    | <u>\$740,677</u>  |
| <hr/>                                                                       |                     |                   |
| <b>F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>                        |                     |                   |
| 1. Cost Value of Assets Available for Benefits (D5)                         |                     | \$739,068         |
| 2. Market Value (D5)                                                        | \$787,476           |                   |
| 3. Cost Value (D5)                                                          | 739,068             |                   |
| 4. Market Over Cost (F2-F3)                                                 | <u>\$48,408</u>     |                   |
| 5. 1/3 of Market Over Cost(F4)/3                                            |                     | 16,136            |
| 6. Actuarial Value of Assets (F1+F5)<br>(Same as "Current Assets")          |                     | <u>\$755,204</u>  |

**PUBLIC EMPLOYEES POLICE AND FIRE FUND**  
**CHANGES IN ASSETS AVAILABLE FOR BENEFITS**  
**(DOLLARS IN THOUSANDS)**

TABLE 2

YEAR ENDING JUNE 30, 1990

|                                            | <u>MARKET VALUE</u> | <u>COST VALUE</u> |
|--------------------------------------------|---------------------|-------------------|
| A. ASSETS AVAILABLE AT BEGINNING OF PERIOD | \$694,227           | \$637,868         |
| B. OPERATING REVENUES                      |                     |                   |
| 1. Member Contributions                    | \$16,224            | \$16,224          |
| 2. Employer Contributions                  | 24,274              | 24,274            |
| 3. Investment Income                       | 66,039              | 66,039            |
| 4. MPRIF Income                            | 14,525              | 14,525            |
| 5. Net Realized Gain (Loss)                | 0                   | 0                 |
| 6. Other                                   | 1,720               | 1,720             |
| 7. Net Change in Unrealized Gain (Loss)    | (7,951)             | 0                 |
|                                            | -----               | -----             |
| 8. Total Revenue                           | \$114,831           | \$122,782         |
|                                            | -----               | -----             |
| C. OPERATING EXPENSES                      |                     |                   |
| 1. Service Retirements                     | \$14,985            | \$14,985          |
| 2. Disability Benefits                     | 1,179               | 1,179             |
| 3. Survivor Benefits                       | 1,467               | 1,467             |
| 4. Refunds                                 | 1,038               | 1,038             |
| 5. Expenses                                | 1,167               | 1,167             |
| 6. Other                                   | 1,746               | 1,746             |
|                                            | -----               | -----             |
| 7. Total Disbursements                     | \$21,582            | \$21,582          |
|                                            | -----               | -----             |
| D. OTHER CHANGES IN RESERVES               | 0                   | 0                 |
| E. ASSETS AVAILABLE AT END OF PERIOD       | \$787,476           | \$739,068         |
|                                            | =====               | =====             |

PUBLIC EMPLOYEES POLICE AND FIRE FUND

TABLE 3

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |       |       |       |       |       |       |     | TOTAL |
|-------|------------------|-------|-------|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   | 152              | 153   | 2     |       |       |       |       |     | 307   |
| 25-29 | 134              | 666   | 259   | 2     |       |       |       |     | 1,061 |
| 30-34 | 91               | 363   | 535   | 267   | 2     |       |       |     | 1,258 |
| 35-39 | 23               | 186   | 281   | 532   | 218   | 3     |       |     | 1,243 |
| 40-44 | 18               | 75    | 153   | 264   | 427   | 99    |       |     | 1,036 |
| 45-49 | 3                | 37    | 52    | 74    | 165   | 237   | 21    |     | 589   |
| 50-54 | 5                | 18    | 24    | 43    | 80    | 142   | 75    | 12  | 399   |
| 55-59 | 4                | 10    | 16    | 18    | 35    | 48    | 30    | 14  | 175   |
| 60-64 |                  | 3     | 6     | 7     | 18    | 9     | 8     | 7   | 58    |
| 65+   |                  | 1     |       | 1     | 1     | 2     | 3     | 2   | 10    |
| TOTAL | 430              | 1,512 | 1,328 | 1,208 | 946   | 540   | 137   | 35  | 6,136 |

AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |        |        |        |        |        |        |        | ALL    |
|-------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   | 17,055           | 25,184 | 32,282 |        |        |        |        |        | 21,205 |
| 25-29 | 17,902           | 28,963 | 32,963 | 40,159 |        |        |        |        | 28,563 |
| 30-34 | 19,275           | 29,600 | 35,623 | 34,947 | 36,608 |        |        |        | 32,561 |
| 35-39 | 17,579           | 28,711 | 36,287 | 36,872 | 36,002 | 33,298 |        |        | 35,000 |
| 40-44 | 14,432           | 25,187 | 33,831 | 36,321 | 38,682 | 39,790 |        |        | 36,071 |
| 45-49 | 9,578            | 24,810 | 26,071 | 34,157 | 38,200 | 40,000 | 42,366 |        | 36,507 |
| 50-54 | 18,063           | 23,453 | 23,485 | 33,008 | 36,119 | 39,272 | 40,469 | 38,053 | 36,224 |
| 55-59 | 13,255           | 27,823 | 30,548 | 27,653 | 30,413 | 38,992 | 41,040 | 40,484 | 34,582 |
| 60-64 |                  | 3,762  | 19,695 | 28,469 | 32,090 | 37,378 | 34,396 | 52,978 | 32,565 |
| 65+   |                  | 1,472  |        | 24,270 | 35,514 | 33,981 | 32,588 | 30,922 | 28,883 |
| ALL   | 17,631           | 28,272 | 34,307 | 35,831 | 37,324 | 39,577 | 40,358 | 41,603 | 33,057 |

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

| <1    | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25-29 | 30+   | TOTAL   |
|-------|--------|--------|--------|--------|--------|-------|-------|---------|
| 7,581 | 42,747 | 45,560 | 43,284 | 35,309 | 21,372 | 5,529 | 1,456 | 202,838 |

TABLE 4

## PUBLIC EMPLOYEES POLICE AND FIRE FUND

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |            |            |              |              |              |            | TOTAL |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 1             |            |            |              |              |              |            | 1     |
| 50-54 | 9             |            |            |              |              |              |            | 9     |
| 55-59 | 51            | 147        |            |              |              |              |            | 198   |
| 60-64 | 17            | 97         | 142        |              |              |              |            | 256   |
| 65-69 | 5             | 66         | 101        | 74           |              |              |            | 246   |
| 70-74 | 1             | 8          | 61         | 78           | 28           |              |            | 176   |
| 75-79 |               | 7          | 8          | 59           | 31           | 2            |            | 107   |
| 80-84 |               | 1          |            | 6            | 29           | 6            |            | 42    |
| 85+   |               |            |            |              | 3            | 14           | 5          | 22    |
| TOTAL | 84            | 326        | 312        | 217          | 91           | 22           | 5          | 1,057 |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |            |            |              |              |              |            | ALL    |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   | 6,550         |            |            |              |              |              |            | 6,550  |
| 50-54 | 14,863        |            |            |              |              |              |            | 14,863 |
| 55-59 | 16,156        | 15,512     |            |              |              |              |            | 15,678 |
| 60-64 | 13,318        | 16,536     | 17,081     |              |              |              |            | 16,625 |
| 65-69 | 10,293        | 14,620     | 13,716     | 12,958       |              |              |            | 13,661 |
| 70-74 | 10,936        | 12,708     | 9,956      | 13,959       | 9,664        |              |            | 11,814 |
| 75-79 |               | 5,392      | 5,751      | 10,258       | 8,370        | 6,386        |            | 8,983  |
| 80-84 |               | 8,946      |            | 9,221        | 7,328        | 6,052        |            | 7,455  |
| 85+   |               |            |            |              | 12,003       | 6,368        | 5,437      | 6,925  |
| ALL   | 14,918        | 15,330     | 14,308     | 12,481       | 8,556        | 6,283        | 5,437      | 13,592 |

| TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT |            |            |              |              |              |            |              |
|------------------------------------------------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| <u>&lt;1</u>                                               | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
| 1,253                                                      | 4,998      | 4,464      | 2,708        | 779          | 138          | 27         | 14,367       |

TABLE 5

## PUBLIC EMPLOYEES POLICE AND FIRE FUND

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |            |            |              |              |              |            | TOTAL |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 7              | 36         | 10         | 5            | 1            |              |            | 59    |
| 50-54 | 2              | 14         | 8          | 6            |              |              |            | 30    |
| 55-59 |                |            |            |              |              |              |            | 0     |
| 60-64 |                |            |            |              |              |              |            | 0     |
| 65-69 |                |            |            |              |              |              |            | 0     |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 9              | 50         | 18         | 11           | 1            | 0            | 0          | 89    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |            |            |              |              |              |            | ALL    |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   | 14,331         | 13,378     | 11,712     | 10,417       | 5,746        |              |            | 12,828 |
| 50-54 | 17,369         | 15,509     | 16,827     | 13,304       |              |              |            | 15,543 |
| 55-59 |                |            |            |              |              |              |            | 0      |
| 60-64 |                |            |            |              |              |              |            | 0      |
| 65-69 |                |            |            |              |              |              |            | 0      |
| 70-74 |                |            |            |              |              |              |            | 0      |
| 75-79 |                |            |            |              |              |              |            | 0      |
| 80-84 |                |            |            |              |              |              |            | 0      |
| 85+   |                |            |            |              |              |              |            | 0      |
| TOTAL | 15,006         | 13,974     | 13,985     | 11,992       | 5,746        | 0            | 0          | 13,743 |

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | TOTAL |
|--------------|------------|------------|--------------|--------------|--------------|------------|-------|
| 135          | 698        | 252        | 132          | 6            | 0            | 0          | 1,223 |

PUBLIC EMPLOYEES POLICE AND FIRE FUND

TABLE 6

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 4                 | 14  | 17  | 8     | 3     |       |     | 46    |
| 50-54 | 1                 | 6   | 3   | 4     | 2     | 1     |     | 17    |
| 55-59 | 2                 | 6   | 10  | 10    | 1     | 2     |     | 31    |
| 60-64 |                   | 9   | 18  | 9     | 8     | 2     | 1   | 47    |
| 65-69 |                   | 4   | 12  | 14    | 8     | 4     |     | 42    |
| 70-74 | 1                 | 5   | 10  | 24    | 15    | 4     | 6   | 65    |
| 75-79 |                   | 3   | 2   | 11    | 11    | 9     | 1   | 37    |
| 80-84 | 1                 | 3   | 5   | 5     | 10    | 5     | 3   | 32    |
| 85+   |                   | 4   | 5   | 5     | 7     | 4     | 5   | 30    |
| TOTAL | 9                 | 54  | 82  | 90    | 65    | 31    | 16  | 347   |

AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |        |       |       |       |       | ALL    |
|-------|-------------------|--------|--------|-------|-------|-------|-------|--------|
|       | <1                | 1-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25+   |        |
| <50   | 17,315            | 10,142 | 11,364 | 7,393 | 4,289 |       |       | 10,358 |
| 50-54 | 17,534            | 14,210 | 11,002 | 8,436 | 5,871 | 2,043 |       | 10,784 |
| 55-59 | 13,376            | 12,140 | 13,545 | 8,088 | 6,282 | 2,048 |       | 10,526 |
| 60-64 |                   | 11,908 | 9,191  | 7,060 | 3,915 | 2,073 | 2,093 | 7,951  |
| 65-69 |                   | 4,914  | 7,929  | 8,778 | 6,549 | 2,060 |       | 7,103  |
| 70-74 | 3,151             | 3,924  | 7,403  | 6,528 | 6,136 | 2,077 | 2,153 | 5,642  |
| 75-79 |                   | 4,628  | 2,351  | 6,151 | 4,153 | 2,085 | 2,142 | 4,131  |
| 80-84 | 3,254             | 3,107  | 2,976  | 3,434 | 2,893 | 2,199 | 2,105 | 2,839  |
| 85+   |                   | 3,155  | 2,623  | 2,130 | 2,675 | 1,973 | 3,529 | 2,688  |
| ALL   | 13,328            | 8,933  | 8,890  | 6,804 | 4,615 | 2,080 | 2,569 | 6,770  |

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

| <1  | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ | TOTAL |
|-----|-----|-----|-------|-------|-------|-----|-------|
| 120 | 482 | 730 | 612   | 300   | 64    | 41  | 2,349 |

**PUBLIC EMPLOYEES POLICE AND FIRE FUND**  
**RECONCILIATION OF MEMBERS**

**TABLE 7**

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On June 30, 1989            | 5,891          | 110                            | 100                         |
| B. Additions                   | 484            | 35                             | 51                          |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | (70)           | (12)                           | (7)                         |
| 2. Disability                  | (13)           | (5)                            | 0                           |
| 3. Death                       | (6)            | 0                              | 0                           |
| 4. Terminated-Deferred         | (35)           |                                |                             |
| 5. Terminated-Refund           | (68)           | 0                              | (15)                        |
| 6. Terminated-Other Non-vested | (35)           |                                |                             |
| 7. Returned as Active          |                | (4)                            | (11)                        |
| D. Data Adjustments            | (12)           | 4                              | 3                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 4,904          |                                |                             |
|                                | 1,232          |                                |                             |
| E. Total on June 30, 1990      | 6,136          | 128                            | 121                         |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On June 30, 1989       | 995                              | 84              | 333              |
| B. Additions              | 97                               | 16              | 29               |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | (10)            |                  |
| 2. Death                  | (35)                             | 0               | (10)             |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | (1)             | (5)              |
| E. Total on June 30, 1990 | 1,057                            | 89              | 347              |



## PUBLIC EMPLOYEES POLICE AND FIRE FUND

TABLE 8

ACTUARIAL BALANCE SHEET  
(DOLLARS IN THOUSANDS)

JULY 1, 1990

|                                                                          |                   |                  |                  |             |
|--------------------------------------------------------------------------|-------------------|------------------|------------------|-------------|
| A. CURRENT ASSETS (TABLE 1, F6)                                          |                   |                  |                  | \$755,204   |
| B. EXPECTED FUTURE ASSETS                                                |                   |                  |                  |             |
| 1. Present Value of Expected Future Statutory Supplemental Contributions |                   |                  |                  | 117,028     |
| 2. Present Value of Future Normal Costs                                  |                   |                  |                  | 514,092     |
| 3. Total Expected Future Assets                                          |                   |                  |                  | 631,120     |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                              |                   |                  |                  | \$1,386,324 |
| D. CURRENT BENEFIT OBLIGATIONS                                           |                   |                  |                  |             |
| 1. Benefit Recipients                                                    | <u>Non-Vested</u> | <u>Vested</u>    | <u>Total</u>     |             |
| a. Retirement Annuities                                                  |                   | \$170,780        | \$170,780        |             |
| b. Disability Benefits                                                   |                   | 12,823           | 12,823           |             |
| c. Surviving Spouse and Child Benefits                                   |                   | 29,580           | 29,580           |             |
| 2. Deferred Retirements with Future Augmentation                         |                   | 8,929            | 8,929            |             |
| 3. Former Members without Vested Rights                                  |                   | 571              | 571              |             |
| 4. Active Members                                                        |                   |                  |                  |             |
| a. Retirement Annuities                                                  | 3,866             | 313,276          | 317,142          |             |
| b. Disability Benefits                                                   | 41,426            | 0                | 41,426           |             |
| c. Survivors' Benefits                                                   | 43,363            | 0                | 43,363           |             |
| d. Deferred Retirements                                                  | 997               | 28,713           | 29,710           |             |
| e. Refund Liability Due to Death or Withdrawal                           | 0                 | 3,129            | 3,129            |             |
| 5. Total Current Benefit Obligations                                     | <u>\$89,652</u>   | <u>\$567,801</u> | <u>\$657,453</u> |             |
| E. EXPECTED FUTURE BENEFIT OBLIGATIONS                                   |                   |                  |                  | \$572,602   |
| F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS                 |                   |                  |                  | \$1,230,055 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)                           |                   |                  |                  | (\$97,751)  |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                 |                   |                  |                  | (\$156,269) |

TABLE 9

## PUBLIC EMPLOYEES POLICE AND FIRE FUND

**DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)  
AND SUPPLEMENTAL CONTRIBUTION RATE  
(DOLLARS IN THOUSANDS)**

JULY 1, 1990

|                                                                                      | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS<br>(1) | ACTUARIAL<br>PRESENT VALUE<br>OF FUTURE<br>NORMAL COSTS<br>(2) | ACTUARIAL<br>ACCRUED<br>LIABILITY<br>(3)=(1)-(2) |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>                         |                                                               |                                                                |                                                  |
| 1. Active Members                                                                    |                                                               |                                                                |                                                  |
| a. Retirement Annuities                                                              | \$770,602                                                     | \$358,559                                                      | \$412,043                                        |
| b. Disability Benefits                                                               | 87,086                                                        | 51,929                                                         | 35,157                                           |
| c. Survivors Benefits                                                                | 87,864                                                        | 54,574                                                         | 33,290                                           |
| d. Deferred Retirements                                                              | 55,455                                                        | 42,053                                                         | 13,402                                           |
| e. Refunds Due to Death or<br>Withdrawal                                             | 6,365                                                         | 6,977                                                          | (612)                                            |
| f. Total                                                                             | <u>\$1,007,372</u>                                            | <u>\$514,092</u>                                               | <u>\$493,280</u>                                 |
| 2. Deferred Retirements with<br>Future Augmentation                                  | \$8,929                                                       |                                                                | \$8,929                                          |
| 3. Former Members Without<br>Vested Rights                                           | 571                                                           |                                                                | 571                                              |
| 4. Annuitants in MPRIF                                                               | 181,703                                                       |                                                                | 181,703                                          |
| 5. Recipients Not in MPRIF                                                           | 31,480                                                        |                                                                | 31,480                                           |
| 6. Total                                                                             | <u>\$1,230,055</u>                                            | <u>\$514,092</u>                                               | <u>\$715,963</u>                                 |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>               |                                                               |                                                                |                                                  |
| 1. AAL (A6)                                                                          |                                                               |                                                                | \$715,963                                        |
| 2. Current Assets (Table 1,F6)                                                       |                                                               |                                                                | 755,204                                          |
| 3. UAAL (B1-B2)                                                                      |                                                               |                                                                | <u>(\$39,241)</u>                                |
| <b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>                            |                                                               |                                                                |                                                  |
| 1. Present Value of Future Payrolls through the<br>Amortization Date of July 1, 2020 |                                                               |                                                                | \$4,796,211                                      |
| 2. Supplemental Contribution Rate (B3/C1)                                            |                                                               |                                                                | 0.00%                                            |

PUBLIC EMPLOYEES POLICE AND FIRE FUND

CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)  
(DOLLARS IN THOUSANDS)

TABLE 10

YEAR ENDING JUNE 30, 1990

|                                                                                                          |                              |
|----------------------------------------------------------------------------------------------------------|------------------------------|
| A. UAAL AT BEGINNING OF YEAR                                                                             | (\$4,878)                    |
| B. CHANGE DUE TO INTEREST REQUIREMENTS AND<br>CURRENT RATE OF FUNDING                                    |                              |
| 1. Normal Cost and Expenses                                                                              | \$32,874                     |
| 2. Contribution                                                                                          | (40,498)                     |
| 3. Interest on A, B1, and B2                                                                             | (739)                        |
| 4. Total (B1+B2+B3)                                                                                      | -----<br>(\$8,363)<br>-----  |
| C. EXPECTED UAAL AT END OF YEAR (A+B4)                                                                   | (\$13,241)                   |
| D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS)<br>BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED |                              |
| 1. Salary Increases                                                                                      | (\$4,724)                    |
| 2. Investment Return                                                                                     | (20,677)                     |
| 3. MPRIF Mortality                                                                                       | 304                          |
| 4. Mortality of Other Benefit Recipients                                                                 | 1,948                        |
| 5. Other Items                                                                                           | 8,163                        |
| 6. Total                                                                                                 | -----<br>(\$14,986)<br>----- |
| E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS<br>AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)             | (\$28,227)                   |
| F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO<br>PLAN AMENDMENTS                                       | \$0                          |
| G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO<br>CHANGES IN ACTUARIAL ASSUMPTIONS                      | (\$11,014)                   |
| H. UAAL AT END OF YEAR (E+F+G)                                                                           | -----<br>(\$39,241)<br>===== |

PUBLIC EMPLOYEES POLICE AND FIRE FUND  
DETERMINATION OF CONTRIBUTION SUFFICIENCY  
(DOLLARS IN THOUSANDS)

TABLE 11

JULY 1, 1990

|                                                                                       | <u>% OF<br/>PAYROLL</u>  | <u>\$<br/>AMOUNT</u>       |
|---------------------------------------------------------------------------------------|--------------------------|----------------------------|
| <b>A. STATUTORY CONTRIBUTIONS - CHAPTER 353</b>                                       |                          |                            |
| 1. Employee Contributions                                                             | 8.00%                    | \$17,282                   |
| 2. Employer Contributions                                                             | 12.00%                   | 25,923                     |
| 3. Total                                                                              | -----<br>20.00%<br>===== | -----<br>\$43,205<br>===== |
| <b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>                                        |                          |                            |
| 1. Normal Cost                                                                        |                          |                            |
| a. Retirement Benefits                                                                | 11.89%                   | \$25,650                   |
| b. Disability Benefits                                                                | 1.70%                    | 3,678                      |
| c. Survivors                                                                          | 1.86%                    | 4,022                      |
| d. Deferred Retirement Benefits                                                       | 1.32%                    | 2,857                      |
| e. Refunds Due to Death or<br>Withdrawal                                              | 0.21%                    | 464                        |
| f. Total                                                                              | -----<br>16.98%<br>----- | -----<br>\$36,671<br>----- |
| 2. Supplemental Contribution<br>Amortization by July 1, 2020<br>of UAAL of \$(39,241) | 0.00%                    | \$0                        |
| 3. Allowance for Expenses                                                             | 0.58%                    | \$1,253                    |
| 4. Total                                                                              | -----<br>17.56%          | -----<br>\$37,924          |
| <b>C. CONTRIBUTION SUFFICIENCY (DEFICIENCY)<br/>    (A3-B4)</b>                       | 2.44%                    | \$5,281                    |

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1990 is \$216,022

## PUBLIC EMPLOYEES POLICE AND FIRE FUND

TABLE 12

PROJECTED CASH FLOW  
(DOLLARS IN THOUSANDS)

| <u>FISCAL<br/>YEAR</u> | <u>STATUTORY<br/>CONTRIBUTIONS</u> | <u>TRANSFERS<br/>TO<br/>MPRIF</u> | <u>OTHER<br/>DISBURSEMENTS</u> | <u>INVESTMENT<br/>RETURN</u> | <u>NON-MPRIF<br/>ASSETS<br/>YEAR END</u> |
|------------------------|------------------------------------|-----------------------------------|--------------------------------|------------------------------|------------------------------------------|
| 1990                   |                                    |                                   |                                |                              | \$573,501                                |
| 1991                   | \$43,205                           | \$1,941                           | \$4,259                        | \$50,320                     | 660,826                                  |
| 1992                   | 46,013                             | 19,615                            | 4,653                          | 57,094                       | 739,665                                  |
| 1993                   | 49,004                             | 10,040                            | 5,104                          | 64,311                       | 837,836                                  |
| 1994                   | 52,189                             | 10,129                            | 5,618                          | 72,765                       | 947,043                                  |
| 1995                   | 55,581                             | 14,719                            | 6,159                          | 81,974                       | 1,063,720                                |
| 1996                   | 59,194                             | 19,715                            | 6,754                          | 91,807                       | 1,188,252                                |
| 1997                   | 63,041                             | 22,292                            | 7,398                          | 102,419                      | 1,324,022                                |
| 1998                   | 67,139                             | 34,343                            | 8,103                          | 113,591                      | 1,462,306                                |
| 1999                   | 71,503                             | 38,511                            | 8,890                          | 125,320                      | 1,611,728                                |
| 2000                   | 76,151                             | 43,373                            | 9,760                          | 137,975                      | 1,772,721                                |
| 2001                   | 81,101                             | 44,874                            | 10,709                         | 151,766                      | 1,950,005                                |
| 2002                   | 86,372                             | 54,008                            | 11,589                         | 166,633                      | 2,137,413                                |
| 2003                   | 91,986                             | 76,913                            | 12,493                         | 181,790                      | 2,321,783                                |
| 2004                   | 97,966                             | 74,233                            | 13,607                         | 197,782                      | 2,529,691                                |
| 2005                   | 104,333                            | 82,683                            | 14,818                         | 215,314                      | 2,751,837                                |
| 2006                   | 111,115                            | 97,163                            | 16,114                         | 233,814                      | 2,983,489                                |
| 2007                   | 118,337                            | 122,017                           | 17,525                         | 252,695                      | 3,214,979                                |
| 2008                   | 126,029                            | 173,784                           | 18,976                         | 270,437                      | 3,418,685                                |
| 2009                   | 134,221                            | 161,992                           | 20,504                         | 288,537                      | 3,658,947                                |
| 2010                   | 142,946                            | 189,166                           | 22,136                         | 308,105                      | 3,898,696                                |
| 2011                   | 152,237                            | 210,152                           | 23,817                         | 327,916                      | 4,144,880                                |
| 2012                   | 162,133                            | 203,740                           | 25,645                         | 349,457                      | 4,427,085                                |
| 2013                   | 172,671                            | 233,901                           | 27,552                         | 372,529                      | 4,710,832                                |
| 2014                   | 183,895                            | 249,966                           | 29,590                         | 396,355                      | 5,011,526                                |
| 2015                   | 195,848                            | 291,005                           | 31,541                         | 420,595                      | 5,305,423                                |
| 2016                   | 208,578                            | 294,919                           | 33,647                         | 445,861                      | 5,631,296                                |
| 2017                   | 222,136                            | 286,703                           | 35,887                         | 474,391                      | 6,005,233                                |
| 2018                   | 236,574                            | 293,850                           | 38,219                         | 506,386                      | 6,416,124                                |
| 2019                   | 251,952                            | 284,347                           | 40,717                         | 542,263                      | 6,885,275                                |
| 2020                   | 268,329                            | 303,592                           | 43,150                         | 581,916                      | 7,388,778                                |

**PUBLIC EMPLOYEES POLICE AND FIRE FUND**  
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

|                          |                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interest:                | Pre-Retirement: 8.5% per annum<br>Post-Retirement: 5% per annum                                                                                                                                                                                                                                                                                     |
| Salary Increases:        | Reported salary for prior fiscal year, with new hires annualized, increased 6.5% to current fiscal year and 6.5% annually for each future year.                                                                                                                                                                                                     |
| Mortality:               | Pre-Retirement:<br>Male - 1971 Group Annuity Mortality Table male rates projected to 1984 by Scale D<br>Female - 1971 Group Annuity Mortality Table female rates projected to 1984 by Scale D<br><br>Post-Retirement:<br>Male - Same as above<br>Female - Same as above<br><br>Post-Disability:<br>Male - 1965 RRB rates<br>Female - 1965 RRB rates |
| Retirement Age:          | Age 60, or if over age 60, one year from the valuation date.                                                                                                                                                                                                                                                                                        |
| Separation:              | Graded rates based on plan experience as of June 30, 1989. Rates are shown in rate table.                                                                                                                                                                                                                                                           |
| Disability:              | Rates as shown in rate table.                                                                                                                                                                                                                                                                                                                       |
| Expenses:                | Prior year expenses expressed as percentage of prior year payroll. (0.58% of payroll)                                                                                                                                                                                                                                                               |
| Return of Contributions: | All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.                                                                                                                                                   |
| Family Composition:      | 85% of male Members and 65% of female Members are assumed to be married. Female is four years younger than male. Assume Members have no children.                                                                                                                                                                                                   |
| Social Security:         | NA                                                                                                                                                                                                                                                                                                                                                  |

**TABLE 13**  
**(cont)**

|                                                      |                                                                                                                                                                                                                                                     |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benefit Increases After Retirement:                  | Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumption.                                                                                                                                             |
| Special Consideration:                               | Married Members assumed to elect subsidized joint and survivor form of annuity as follows:<br>Males - 40% elect 50% J & S option;<br>45% elect 100% J & S option;<br>Females - 15% elect 50% J & S option;<br>15% elect 100% J & S option;          |
| Actuarial Cost Method:                               | Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains(Losses) reduce(increase) the Unfunded Actuarial Accrued Liability.                                          |
| Asset Valuation Method:                              | Cost Value plus one-third Unrealized Gains or Losses.                                                                                                                                                                                               |
| Payment on the Unfunded Actuarial Accrued Liability: | A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.                                                                                                                            |
| Projected Cash Flow Method:                          | Cash flows for the non-MPRIF portion of the Fund were projected based on the current plan benefits, participant data, and actuarial assumptions. In addition, new entrants were assumed so that the total payroll would increase by 6.5% per annum. |

TABLE 13  
(cont)SEPARATIONS EXPRESSED AS THE  
NUMBER OF OCCURRENCES PER 10,000

| Age | Death |        | Withdrawal |        | Disability |        | Retirement |        |
|-----|-------|--------|------------|--------|------------|--------|------------|--------|
|     | Male  | Female | Male       | Female | Male       | Female | Male       | Female |
| 20  | 5     | 2      | 859        | 859    | 11         | 11     | 0          | 0      |
| 21  | 5     | 2      | 750        | 750    | 11         | 11     | 0          | 0      |
| 22  | 5     | 2      | 660        | 660    | 12         | 12     | 0          | 0      |
| 23  | 5     | 3      | 583        | 583    | 12         | 12     | 0          | 0      |
| 24  | 5     | 3      | 519        | 519    | 13         | 13     | 0          | 0      |
| 25  | 6     | 3      | 463        | 463    | 13         | 13     | 0          | 0      |
| 26  | 6     | 3      | 416        | 416    | 14         | 14     | 0          | 0      |
| 27  | 6     | 3      | 374        | 374    | 14         | 14     | 0          | 0      |
| 28  | 7     | 3      | 339        | 339    | 14         | 14     | 0          | 0      |
| 29  | 7     | 4      | 307        | 307    | 15         | 15     | 0          | 0      |
| 30  | 7     | 4      | 280        | 280    | 16         | 16     | 0          | 0      |
| 31  | 8     | 4      | 256        | 256    | 16         | 16     | 0          | 0      |
| 32  | 8     | 4      | 234        | 234    | 17         | 17     | 0          | 0      |
| 33  | 9     | 5      | 215        | 215    | 17         | 17     | 0          | 0      |
| 34  | 10    | 5      | 198        | 198    | 18         | 18     | 0          | 0      |
| 35  | 10    | 5      | 183        | 183    | 19         | 19     | 0          | 0      |
| 36  | 11    | 6      | 169        | 169    | 20         | 20     | 0          | 0      |
| 37  | 12    | 6      | 157        | 157    | 22         | 22     | 0          | 0      |
| 38  | 13    | 7      | 146        | 146    | 23         | 23     | 0          | 0      |
| 39  | 14    | 7      | 135        | 135    | 24         | 24     | 0          | 0      |
| 40  | 15    | 8      | 126        | 126    | 26         | 26     | 0          | 0      |
| 41  | 16    | 9      | 118        | 118    | 28         | 28     | 0          | 0      |
| 42  | 18    | 9      | 110        | 110    | 29         | 29     | 0          | 0      |
| 43  | 21    | 10     | 103        | 103    | 31         | 31     | 0          | 0      |
| 44  | 24    | 11     | 97         | 97     | 34         | 34     | 0          | 0      |
| 45  | 27    | 12     | 91         | 91     | 36         | 36     | 0          | 0      |
| 46  | 30    | 13     | 86         | 86     | 41         | 41     | 0          | 0      |
| 47  | 34    | 14     | 81         | 81     | 46         | 46     | 0          | 0      |
| 48  | 39    | 15     | 69         | 69     | 52         | 52     | 0          | 0      |
| 49  | 44    | 17     | 59         | 59     | 60         | 60     | 0          | 0      |
| 50  | 49    | 18     | 50         | 50     | 69         | 69     | 0          | 0      |
| 51  | 54    | 20     | 39         | 39     | 80         | 80     | 0          | 0      |
| 52  | 60    | 21     | 29         | 29     | 91         | 91     | 0          | 0      |
| 53  | 65    | 23     | 22         | 22     | 104        | 104    | 0          | 0      |
| 54  | 72    | 25     | 15         | 15     | 119        | 119    | 0          | 0      |



TABLE 13  
(cont)

| Age | Death |        | Withdrawal |        | Disability |        | Retirement |        |
|-----|-------|--------|------------|--------|------------|--------|------------|--------|
|     | Male  | Female | Male       | Female | Male       | Female | Male       | Female |
| 55  | 78    | 27     | 11         | 11     | 135        | 135    | 0          | 0      |
| 56  | 85    | 30     | 7          | 7      | 152        | 152    | 0          | 0      |
| 57  | 92    | 33     | 5          | 5      | 171        | 171    | 0          | 0      |
| 58  | 100   | 37     | 3          | 3      | 192        | 192    | 0          | 0      |
| 59  | 110   | 41     | 1          | 1      | 215        | 215    | 0          | 0      |
| 60  | 121   | 46     | 0          | 0      | 0          | 0      | 10,000     | 10,000 |
| 61  | 133   | 52     | 0          | 0      | 0          | 0      | 0          | 0      |
| 62  | 146   | 58     | 0          | 0      | 0          | 0      | 0          | 0      |
| 63  | 160   | 65     | 0          | 0      | 0          | 0      | 0          | 0      |
| 64  | 176   | 73     | 0          | 0      | 0          | 0      | 0          | 0      |
| 65  | 195   | 81     | 0          | 0      | 0          | 0      | 0          | 0      |
| 66  | 219   | 90     | 0          | 0      | 0          | 0      | 0          | 0      |
| 67  | 243   | 99     | 0          | 0      | 0          | 0      | 0          | 0      |
| 68  | 270   | 109    | 0          | 0      | 0          | 0      | 0          | 0      |
| 69  | 300   | 123    | 0          | 0      | 0          | 0      | 0          | 0      |
| 70  | 334   | 140    | 0          | 0      | 0          | 0      | 0          | 0      |

TABLE 14

## PUBLIC EMPLOYEES POLICE AND FIRE FUND

## SUMMARY OF PLAN PROVISIONS

|                           |                                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility               | All full time, and certain part time, police officers and fire fighters, who are not contributing to any other local retirement fund.                                                                                                   |
| Contributions             |                                                                                                                                                                                                                                         |
| Member                    | 8% of Salary.                                                                                                                                                                                                                           |
| Employer                  | 12% of Salary.                                                                                                                                                                                                                          |
| Allowable Service         | Police and fire service during which Member contributions were deducted. May also include certain leaves of absence and military service.                                                                                               |
| Salary                    | Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump sum payments at separation and Workers' Compensation benefits. |
| Average Salary            | Average of the 5 highest successive years of Salary. Average salary is based on all Allowable Service if less than 5 years.                                                                                                             |
| <b>RETIREMENT</b>         |                                                                                                                                                                                                                                         |
| Normal Retirement Benefit |                                                                                                                                                                                                                                         |
| Eligibility               | Age 55 and 3 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.                                                                                                       |
| Amount                    | 2.5% of Average Salary for each year of Allowable Service.                                                                                                                                                                              |
| Early Retirement Benefit  |                                                                                                                                                                                                                                         |
| Eligibility               | Age 50 and 3 years of Allowable Service.                                                                                                                                                                                                |
| Amount                    | Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date assuming augmentation to age 55 at 3% per year and actuarial reduction for each month the Member is under age 55.                            |
| Form of Payment           | Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:                                                                                                  |

**TABLE 14  
(cont)**

50% or 100% joint and survivor with bounce back feature without additional reduction (option cancelled if Member is pre-deceased by beneficiary.

**Benefit Increases**

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Benefit recipients receiving benefits for at least 1 full month but less than 12 full months will receive a partial increase.

Members retired under law in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

**DISABILITY**

**Duty Disability Benefit  
Eligibility**

Under age 55 and physically or mentally unable to perform duties as a police officer or fire fighter as a direct result of an act of duty.

**Amount**

50% of Average Salary plus 2.5% of Average Salary for each year in excess of 20 years of Allowable Service. The disability benefit is reduced to that amount which when added to Workers' Compensation, does not exceed Salary. Payments revert to retirement annuity at age 55.

**Non-Duty Disability Benefit  
Eligibility**

Under age 55 and physically or mentally unable to perform duties as a police officer or fire fighter with 1 year of Allowable Service.

**Amount**

Normal Retirement Benefit based on Allowable Service (minimum of 15 years) and Average Salary at disability without reduction for commencement before age 55. Payments revert to retirement annuity at age 55.

**TABLE 14**  
**(cont)**

|                                   |                                                                                                                                                                                                                                                                               |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form of Payment                   | Same as for retirement.                                                                                                                                                                                                                                                       |
| Benefit Increases                 | Adjusted by PERA to provide same increase as MPRIF.                                                                                                                                                                                                                           |
| Retirement Benefits               |                                                                                                                                                                                                                                                                               |
| Eligibility                       | Age 55.                                                                                                                                                                                                                                                                       |
| Amount                            | Any optional annuity continues. Otherwise the larger of the disability benefit paid before age 55 or the normal retirement benefit available at age 55, or an actuarially equivalent optional annuity.                                                                        |
| Benefit Increases                 | Same as for retirement.                                                                                                                                                                                                                                                       |
| <b>DEATH</b>                      |                                                                                                                                                                                                                                                                               |
| Surviving Spouse Benefit          |                                                                                                                                                                                                                                                                               |
| Eligibility                       | Active Member with surviving spouse, married for at least 1 year unless death in the line of duty.                                                                                                                                                                            |
| Amount                            | 50% of Salary averaged over last 6 months. Benefit paid until spouse's death but no payments while spouse is remarried.                                                                                                                                                       |
| Surviving Dependent Child Benefit |                                                                                                                                                                                                                                                                               |
| Eligibility                       | Active Member with dependent child.                                                                                                                                                                                                                                           |
| Amount                            | 10% of Salary averaged over last 6 months for each child. Family benefit minimum (including spouse's benefit) of 50% of Salary and maximum of 70% of Salary. Benefits paid until child marries, dies, or attains age 18. (Age 23 if full-time student).                       |
| Surviving Spouse Optional Annuity |                                                                                                                                                                                                                                                                               |
| Eligibility                       | Member who dies before termination if age 50 with 3 years of Allowable Service or any age with 30 years of Allowable Service. If the Member dies before age 55, benefits commence when Member would have been age 55 or as early as age 50 if qualified for early retirement. |
| Amount                            | Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated. Alternatively, spouse may elect refund of deceased contributions with interest if there are no dependent children.                                                     |

**TABLE 14  
(cont)**

Benefit Increases Adjusted by PERA to provide same increase as MPRIF.

**TERMINATION**

Refund of Contributions  
Eligibility

Termination of public service.

Amount

Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989, and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if 3 or more years of Allowable Service.

Deferred Annuity  
Eligibility

3 years of Allowable Service.

Amount

Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/71, 5% from 7/1/71 to 1/1/81, and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

**POLICE AND FIRE CONSOLIDATION FUND**

**ACTUARIAL VALUATION REPORT**

**JULY 1, 1990**

THE *Wyatt* COMPANY

ACTUARIAL SERVICES  
PENSION PROGRAMS  
ADMINISTRATIVE SYSTEMS  
INTERNATIONAL SERVICES  
ORGANIZATION SURVEYS

15TH FLOOR  
8400 NORMANDALE LAKE BOULEVARD  
MINNEAPOLIS, MINNESOTA 55437

(612) 921-8700

EMPLOYEE BENEFITS  
EMPLOYEE COMMUNICATIONS  
RISK MANAGEMENT  
INSURANCE CONSULTING  
HEALTH CARE CONSULTING

October 22, 1990

Legislative Commission on  
Pensions and Retirement  
55 State Office Building  
St. Paul, Minnesota 55155

**RE: POLICE AND FIRE CONSOLIDATION FUND**


Commission Members:


We have prepared an actuarial valuation of the Consolidation Accounts as of July 1, 1990 based on membership and financial data supplied by PERA.

We certify that to the best of our knowledge and belief this actuarial valuation was performed in accordance with the requirements of Section 353A.09 and Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on September 20, 1989.

Respectfully submitted,

THE WYATT COMPANY

  
Robert E. Perkins, FSA  
Consulting Actuary

  
Michael C. Gunvalson, FSA  
Actuary

POLICE AND FIRE CONSOLIDATION FUND

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##### **MEMBERSHIP DATA**

|          |                           |    |
|----------|---------------------------|----|
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#### **HIBBING FIRE CONSOLIDATION ACCOUNT**

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|----------|---------------------------|----|
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##### **FUNDING STATUS**

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#### **HIBBING POLICE CONSOLIDATION ACCOUNT**

##### **MEMBERSHIP DATA**

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|----------|----------------|----|
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|----------|----------------|----|

|          |                           |    |
|----------|---------------------------|----|
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#### RED WING POLICE CONSOLIDATION ACCOUNT

##### MEMBERSHIP DATA

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|----------|---------------------------|----|
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|----------|---------------------------|-----|
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|----------|---------------------------|-----|
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# POLICE AND FIRE CONSOLIDATION FUND

## REPORT HIGHLIGHTS (ACTUAL DOLLARS)

|                                                           | <u>07/01/89</u><br><u>VALUATION</u> | <u>07/01/90</u><br><u>VALUATION</u> |
|-----------------------------------------------------------|-------------------------------------|-------------------------------------|
| <b>A. CONTRIBUTIONS (TABLE 11)</b>                        |                                     |                                     |
| 1. Employee Contribution                                  | 8.00%                               | 8.00%                               |
| 2. Required Municipal Contribution                        | 12.00%                              | 12.00%                              |
| 3. Additional Municipal Contribution                      | \$1,006,971                         | \$3,056,618                         |
| <b>B. FUNDING RATIOS</b>                                  |                                     |                                     |
| 1. Accrued Benefit Funding Ratio                          |                                     |                                     |
| a. Current Assets (Table 1)                               | \$29,895,399                        | \$86,702,305                        |
| b. Current Pension Benefit Obligation (Table 8)           | \$42,745,655                        | \$117,386,244                       |
| c. Funding Ratio (a/b)                                    | 69.94%                              | 73.86%                              |
| 2. Accrued Liability Funding Ratio                        |                                     |                                     |
| a. Current Assets (Table 1)                               | \$29,895,399                        | \$86,702,305                        |
| b. Actuarial Accrued Liability (Table 9)                  | \$40,603,577                        | \$122,044,941                       |
| c. Funding Ratio (a/b)                                    | 73.63%                              | 71.04%                              |
| 3. Projected Benefit Funding Ratio (Table 8)              |                                     |                                     |
| a. Current and Expected Future Assets                     | \$47,834,163                        | \$142,306,566                       |
| b. Current and Expected Future Pension Benefit Obligation | \$47,834,163                        | \$142,306,566                       |
| c. Funding Ratio (a/b)                                    | 100.00%                             | 100.00%                             |
| <b>C. PLAN PARTICIPANTS</b>                               |                                     |                                     |
| 1. Active Members                                         |                                     |                                     |
| a. Number (Table 3)                                       | 102                                 | 287                                 |
| b. Projected Annual Earnings                              | \$3,679,158                         | \$10,885,238                        |
| c. Average Annual Earnings                                | \$36,070                            | \$37,928                            |
| d. Average Age                                            | 44.6                                | 45.9                                |
| e. Average Service                                        | 19.0                                | 19.7                                |
| 2. Others                                                 |                                     |                                     |
| a. Service Retirements (Table 4)                          | 91                                  | 248                                 |
| b. Disability Retirements (Table 5)                       | 4                                   | 16                                  |
| c. Survivors (Table 6)                                    | 45                                  | 129                                 |
| d. Deferred Retirements (Table 7)                         | 1                                   | 3                                   |
| e. Terminated Other Non-vested (Table 7)                  | 1                                   | 1                                   |
| f. Total                                                  | 142                                 | 397                                 |
| <b>D. NUMBER OF CONSOLIDATION FUND ACCOUNTS</b>           | <b>3</b>                            | <b>12</b>                           |

## POLICE AND FIRE CONSOLIDATION FUND

### COMMENTARY

#### Purpose

The purpose of this valuation is to determine if the current assets and future anticipated contributions for each Consolidation Account are adequate to provide for future benefits. If future contributions are more than adequate, an actuarial gain arises which will be amortized over 15 years and will reduce the Additional Municipal Contribution. Conversely, if future contributions are inadequate, an actuarial loss is produced which will be amortized over 15 years and will increase the Additional Municipal Contribution.

#### Report Highlights

This commentary reports the aggregate results for all twelve Accounts. Nine of the Accounts are new this year. The three Accounts last year were Buhl Police, Duluth Police and West St. Paul Fire. Information is provided in the tables at the end of this report for each individual Account listed below:

- |                  |                       |
|------------------|-----------------------|
| o Anoka Police   | o Red Wing Police     |
| o Buhl Police    | o Rochester Police    |
| o Duluth Police  | o St. Cloud Fire      |
| o Hibbing Fire   | o St. Louis Park Fire |
| o Hibbing Police | o West St. Paul Fire  |
| o Red Wing Fire  | o Winona Fire         |

The Additional Municipal Contribution for the Relief Association Consolidation Accounts increased by \$2,049,647 from \$1,006,971 to produce a new Additional



Municipal Contribution of \$3,056,618. The primary reason for the increase in the Municipal Contribution is the addition of the nine new accounts. This contribution is based on a new set of assumed separation rates adopted for the July 1, 1990 valuation. All plan provisions and all other actuarial assumptions are the same as the prior valuation or, if applicable, the actuarial calculations preliminary to consolidation.

The financial status can be measured by three different funding ratios:

- o The Accrued Benefit Funding Ratio is a measure of current funding status, and when viewed over a period of years, presents a view of the funding progress. This year's ratio is 73.86%. The corresponding ratio for the prior year was 69.94%
- o The Accrued Liability Funding Ratio is also a measure of funding status, and funding progress. It is based on the actuarial cost method that has historically been used. For 1990 the ratio is 71.04%, which is a decrease from the 1989 value of 73.63%.
- o The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This ratio, which is 100%, verifies that the contributions are adequate based on the new level of Additional Municipal Contributions.

#### Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement

( exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is performed in total for all Consolidation Accounts as shown in Table 1 on lines F1 to F6. The aggregate result is allocated to each individual Consolidation Account based on its proportionate share of the cost value of the Assets Available for Benefits for all Consolidated Accounts. The Actuarial Value of Assets combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

( The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

The Accounts participate in the MPRIF (i.e. Minnesota Post Retirement Investment Fund). The asset value shown for MPRIF on line A3 is set equal to the MPRIF Reserves reported on line D3 for both market and cost value purposes. This reserve is based on a 5% interest assumption.

( Investment performance by SBI (i.e. State Board of Investment) above the 5% level is not shown in the assets but will be added in on January 1, 1991 when benefits will be increased for certain annuitants who selected PERA benefits. Benefits will be increased for those annuitants who retired after consolidation, and who have received payments for at least 7 months. For those annuitants who

retired prior to consolidation, benefits will be increased after payments have been received for at least 18 months. Next year's valuation will include the 1991 benefit increase in determining the MPRIF value.

After the MPRIF liability has been calculated for each participating Fund, SBI will determine each Fund's portion of the excess earnings for the January benefit increase as well as the Fund's allocated market share of MPRIF. An approximation of those values on June 30, 1990 is provided below:

|                               |              |
|-------------------------------|--------------|
| MPRIF Reserves                | \$40,666,279 |
| Reserves Plus Excess Earnings | 42,600,000   |
| MPRIF Market Value            | 44,300,000   |

#### Membership Data (Tables 3, 4, 5, 6 and 7)

Tables 3 through 6 summarize statistical information about members by category. Active members are grouped by age and completed years of service in Table 3. The earnings shown for these members are for the prior fiscal year.

The service retirements in Table 4 include not only those retiring from active status but also disabled members who have attained retirement age. Any disabled members under retirement age are shown in Table 5. The survivors category (Table 6) includes spouses and children of deceased members.

A reconciliation of members in Table 7 provides a method for tracking what happened to members during the past year.

#### Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

Current funding levels are evaluated by comparing Current Assets on line A to the Pension Benefit Obligation on line D3. Current and future funding levels are evaluated by comparing the Total Current and Expected Future Assets on line C to the Total Current and Expected Future Pension Obligation on line F.

The process used in this valuation will always produce an exact balance when measured on a "current and future" basis (i.e. line C will equal line F). This exact balance is possible because of the annual adjustment in the Additional Municipal Contribution.

The Pension Benefit Obligation (PBO) used to measure current funding levels is calculated in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- o For active members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.
- o For non-active members - the PBO is the discounted value of benefits, including augmentation in cases where benefits have not commenced.

#### **GASB Disclosure**

The Current Pension Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). The total Pension Benefit Obligation is \$117,386,244. The net assets available for benefits, at cost, is \$86,372,787. The total Pension Benefit

Obligation exceeds the assets by \$31,013,457 to produce a funded ratio of 73.58%.

**Entry Age Normal Cost Calculations (Table 9)**

Subdivision 7 of Section 353A.09 of Minnesota Statutes requires disclosure of the Actuarial Accrued Liability, Current Assets, Unfunded Actuarial Accrued Liability and Normal Cost using the Entry Age Normal Actuarial Cost Method.

These items are shown for informational purposes and are not used in calculating contributions.

Table 9 displays the individual elections as of the valuation date. If a member has not elected, the liability shown is the larger of the local Relief Association benefit liability or the PERA Police and Fire benefit liability. The normal cost, although shown as a single number, is also calculated based on the elections made.

**Calculation of Net Actuarial Loss (Gain) (Table 10)**

The calculation of the actuarial gain or loss produces the annual adjustment in the Additional Municipal Contribution. The concept is the same as that presented in the Actuarial Balance Sheet (Table 8), however the order is turned around. The Balance Sheet approach shows:

Assets  
+ Employee Contributions  
+ Regular Municipal Contributions  
+ Additional Municipal Contributions (after the current year's adjustment)  
= Total Current and Expected Future Pension Benefit Obligation

The Actuarial gain or loss calculation renames the "Total Current and Expected Future Pension Benefit Obligation" as the "Actuarial Value of Projected Benefits" and calculates the gain or loss in the following manner:

Actuarial Value of Projected Benefits

- Employee Contributions
- Regular Municipal Contributions
- Assets
- Additional Municipal Contributions (before the current year's adjustment)
- = Loss (Gain)

The loss (gain) funded as a level dollar amount over 15 years determines the current year's adjustment to the Additional Municipal Contribution.

**Statutory Contributions (Table 11)**

The Statutory Contributions are reported either as a percentage that must be applied to the appropriate compensation to determine the corresponding dollar contributions or as a dollar amount derived from actual calculations. The amounts to be contributed by the Municipality should be adjusted to reflect any available State Aid.

Each year the Additional Municipal Contribution will be adjusted up (down) depending on the amount of actual loss (gain) that is calculated. Another adjustment will occur as each 15 year amortization period is completed.

**Projected Cash Flow (Table 12)**

Cash flow (which is normally reported in Table 12) has not been projected for the Consolidation Accounts.

### Changes in Plan Provisions

This valuation does not reflect any changes in plan provisions since the prior valuation or, if applicable, the actuarial calculations preliminary to consolidation.

### Changes in Actuarial Assumptions

The rates of separation were changed in this valuation because they were changed for the Police and Fire Fund. The Standards for Actuarial Work require that the assumptions for the Consolidation Fund be the same as the assumptions for the Police and Fire Fund. Sample separation rates are as follows:

| <u>Separation Rates</u> |            |            |
|-------------------------|------------|------------|
| <u>Age</u>              | <u>Old</u> | <u>New</u> |
| 20                      | .0700      | .0859      |
| 30                      | .0658      | .0280      |
| 40                      | .0245      | .0126      |
| 50                      | .0050      | .0050      |

See Table 13 for the complete set of new separation rates.

This change in separation rates did not have a significant impact on plan liabilities.

### Individual Consolidation Accounts

Additional tables at the end of this report show membership data, liabilities and contributions for the individual Consolidation Accounts.

## POLICE AND FIRE CONSOLIDATION FUND

TABLE 1

ACCOUNTING BALANCE SHEET  
(ACTUAL DOLLARS)

July 1, 1990

|                                                                      | <u>MARKET VALUE</u> | <u>COST VALUE</u> |
|----------------------------------------------------------------------|---------------------|-------------------|
| A. ASSETS                                                            |                     |                   |
| 1. Cash, Equivalents, Short-Term Securities                          | \$2,958,714         | \$2,958,714       |
| 2. Investments                                                       |                     |                   |
| a. Fixed Income                                                      | 11,429,178          | 11,433,612        |
| b. Equity                                                            | 28,143,912          | 27,168,287        |
| c. Real Estate                                                       | 3,137,986           | 3,120,623         |
| 3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)       | 40,666,279          | 40,666,279        |
| 4. Other                                                             | 1,601,797           | 1,601,797         |
|                                                                      | -----               | -----             |
| B. TOTAL ASSETS                                                      | \$87,937,866        | \$86,949,312      |
|                                                                      | =====               | =====             |
| C. AMOUNTS CURRENTLY PAYABLE                                         | \$576,525           | \$576,525         |
| D. ASSETS AVAILABLE FOR BENEFITS                                     |                     |                   |
| 1. Member Reserves                                                   | \$8,383,079         | \$8,383,079       |
| 2. Benefit Reserves                                                  | 38,311,983          | 37,323,429        |
| 3. MPRIF Reserves                                                    | 40,666,279          | 40,666,279        |
| 4. Non-MPRIF Reserves                                                | 0                   | 0                 |
|                                                                      | -----               | -----             |
| 5. Total Assets Available for Benefits                               | \$87,361,341        | \$86,372,787      |
|                                                                      | -----               | -----             |
| E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS | \$87,937,866        | \$86,949,312      |
|                                                                      | =====               | =====             |

## F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

|                                                                    |              |              |
|--------------------------------------------------------------------|--------------|--------------|
| 1. Cost Value of Assets Available for Benefits (D5)                |              | \$86,372,787 |
| 2. Market Value (D5)                                               | \$87,361,341 |              |
| 3. Cost Value (D5)                                                 | 86,372,787   |              |
|                                                                    | -----        |              |
| 4. Market Over Cost (F2-F3)                                        | \$988,554    |              |
| 5. 1/3 of Market Over Cost(F4)/3                                   |              | 329,518      |
|                                                                    |              | -----        |
| 6. Actuarial Value of Assets (F1+F5)<br>(Same as "Current Assets") |              | \$86,702,305 |
|                                                                    |              | =====        |



**POLICE AND FIRE CONSOLIDATION FUND**  
**CHANGES IN ASSETS AVAILABLE FOR BENEFITS**  
**(ACTUAL DOLLARS)**

**TABLE 2**

**YEAR ENDING JUNE 30, 1990**

|                                            | <u>MARKET VALUE</u> | <u>COST VALUE</u> |
|--------------------------------------------|---------------------|-------------------|
| A. ASSETS AVAILABLE AT BEGINNING OF PERIOD | \$30,269,864        | \$29,708,167      |
| B. OPERATING REVENUES                      |                     |                   |
| 1. Member Contributions                    | \$596,244           | \$596,244         |
| 2. Employer Contributions                  | 5,348,059           | 5,348,059         |
| 3. Investment Income                       | 2,365,823           | 2,365,823         |
| 4. MPRIF Income                            | 1,904,323           | 1,904,323         |
| 5. Net Realized Gain (Loss)                | 0                   | 0                 |
| 6. Other                                   | (22,447)            | (22,447)          |
| 7. Net Change in Unrealized Gain (Loss)    | 426,857             | 0                 |
|                                            | -----               | -----             |
| 8. Total Revenue                           | \$10,618,859        | \$10,192,002      |
|                                            | -----               | -----             |
| C. OPERATING EXPENSES                      |                     |                   |
| 1. Service Retirements                     | \$3,377,427         | \$3,377,427       |
| 2. Disability Benefits                     | 151,915             | 151,915           |
| 3. Survivor Benefits                       | 216,144             | 216,144           |
| 4. Refunds                                 | 183,303             | 183,303           |
| 5. Expenses                                | 59,871              | 59,871            |
| 6. Other                                   | 373,319             | 373,319           |
|                                            | -----               | -----             |
| 7. Total Disbursements                     | \$4,361,979         | \$4,361,979       |
|                                            | -----               | -----             |
| D. OTHER CHANGES IN RESERVES               | 50,834,597          | 50,834,597        |
| E. ASSETS AVAILABLE AT END OF PERIOD       | \$87,361,341        | \$86,372,787      |
|                                            | =====               | =====             |

TABLE 3

## POLICE AND FIRE CONSOLIDATION FUND

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     | 1   | 10    |       |       |       |     | 11    |
| 35-39 |                  |     |     | 47    | 4     |       |       |     | 51    |
| 40-44 |                  |     | 1   | 24    | 27    | 19    |       |     | 71    |
| 45-49 |                  |     | 1   | 2     | 15    | 48    | 10    |     | 76    |
| 50-54 |                  |     |     |       | 7     | 18    | 15    | 6   | 46    |
| 55-59 |                  |     |     |       | 1     | 6     | 11    | 9   | 27    |
| 60-64 |                  |     |     |       |       |       |       | 5   | 5     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 3   | 83    | 54    | 91    | 36    | 20  | 287   |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |        |        |        |        |        |        | ALL    |
|-------|------------------|-----|--------|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |        |        |        |        |        |        | 0      |
| 25-29 |                  |     |        |        |        |        |        |        | 0      |
| 30-34 |                  |     | 26,595 | 33,065 |        |        |        |        | 32,476 |
| 35-39 |                  |     |        | 33,966 | 31,640 |        |        |        | 33,784 |
| 40-44 |                  |     | 22,010 | 34,014 | 37,699 | 37,300 |        |        | 36,126 |
| 45-49 |                  |     | 38,534 | 39,493 | 34,155 | 35,960 | 39,110 |        | 36,145 |
| 50-54 |                  |     |        |        | 37,747 | 35,725 | 36,683 | 40,337 | 36,947 |
| 55-59 |                  |     |        |        | 26,865 | 35,494 | 31,207 | 42,375 | 35,721 |
| 60-64 |                  |     |        |        |        |        |        | 32,937 | 32,937 |
| 65+   |                  |     |        |        |        |        |        |        | 0      |
| ALL   | 0                | 0   | 29,046 | 34,004 | 36,072 | 36,163 | 35,684 | 39,404 | 35,613 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9    | 10-14     | 15-19     | 20-24     | 25-29     | 30+     | TOTAL      |
|----|-----|--------|-----------|-----------|-----------|-----------|---------|------------|
| 0  | 0   | 87,139 | 2,822,361 | 1,947,869 | 3,290,811 | 1,284,619 | 788,082 | 10,220,881 |

TABLE 4

## POLICE AND FIRE CONSOLIDATION FUND

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 | 3             | 8   | 2   |       |       |       |     | 13    |
| 55-59 | 1             | 23  | 11  | 1     | 1     |       |     | 37    |
| 60-64 | 3             | 18  | 22  | 19    | 4     |       |     | 66    |
| 65-69 | 1             | 8   | 13  | 13    | 17    | 4     |     | 56    |
| 70-74 |               | 1   | 3   | 12    | 5     | 10    | 4   | 35    |
| 75-79 |               |     |     | 8     | 5     | 6     | 4   | 23    |
| 80-84 |               |     |     |       | 3     | 3     | 5   | 11    |
| 85+   |               |     |     |       |       | 1     | 6   | 7     |
| TOTAL | 8             | 58  | 51  | 53    | 35    | 24    | 19  | 248   |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |        |        |        | ALL    |
|-------|---------------|--------|--------|--------|--------|--------|--------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25+    |        |
| <50   |               |        |        |        |        |        |        | 0      |
| 50-54 | 17,804        | 16,174 | 14,621 |        |        |        |        | 16,311 |
| 55-59 | 25,045        | 16,969 | 16,986 | 14,368 | 17,420 |        |        | 17,134 |
| 60-64 | 24,527        | 19,639 | 17,064 | 17,552 | 16,119 |        |        | 18,189 |
| 65-69 | 30,971        | 20,126 | 17,397 | 16,917 | 15,597 | 9,001  |        | 16,772 |
| 70-74 |               | 21,700 | 19,223 | 17,365 | 18,155 | 17,338 | 14,707 | 17,449 |
| 75-79 |               |        |        | 18,389 | 18,579 | 12,199 | 13,556 | 15,975 |
| 80-84 |               |        |        |        | 15,695 | 18,517 | 16,560 | 16,858 |
| 85+   |               |        |        |        |        | 7,046  | 14,363 | 13,318 |
| ALL   | 22,876        | 18,205 | 17,163 | 17,420 | 16,509 | 14,382 | 14,844 | 17,107 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

|  | <1      | 1-4       | 5-9     | 10-14   | 15-19   | 20-24   | 25+     | TOTAL     |
|--|---------|-----------|---------|---------|---------|---------|---------|-----------|
|  | 183,011 | 1,055,895 | 875,316 | 923,268 | 577,802 | 345,167 | 282,028 | 4,242,487 |

TABLE 5

## POLICE AND FIRE CONSOLIDATION FUND

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |            |            |              |              |              |            | TOTAL |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 1              | 4          | 1          | 1            | 2            |              |            | 9     |
| 50-54 | 1              | 6          |            |              |              |              |            | 7     |
| 55-59 |                |            |            |              |              |              |            | 0     |
| 60-64 |                |            |            |              |              |              |            | 0     |
| 65-69 |                |            |            |              |              |              |            | 0     |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 2              | 10         | 1          | 1            | 2            | 0            | 0          | 16    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |            |            |              |              |              |            | ALL    |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   | 17,729         | 14,440     | 14,067     | 14,827       | 14,296       |              |            | 14,775 |
| 50-54 | 19,128         | 15,660     |            |              |              |              |            | 16,155 |
| 55-59 |                |            |            |              |              |              |            | 0      |
| 60-64 |                |            |            |              |              |              |            | 0      |
| 65-69 |                |            |            |              |              |              |            | 0      |
| 70-74 |                |            |            |              |              |              |            | 0      |
| 75-79 |                |            |            |              |              |              |            | 0      |
| 80-84 |                |            |            |              |              |              |            | 0      |
| 85+   |                |            |            |              |              |              |            | 0      |
| TOTAL | 18,429         | 15,172     | 14,067     | 14,827       | 14,296       | 0            | 0          | 15,379 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 36,857       | 151,717    | 14,067     | 14,827       | 28,591       | 0            | 0          | 246,059      |

TABLE 6

## POLICE AND FIRE CONSOLIDATION FUND

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 3                 | 3   | 5   | 1     |       |       |     | 12    |
| 50-54 | 1                 | 5   | 1   | 1     | 1     |       |     | 9     |
| 55-59 |                   |     | 2   | 2     | 2     |       | 1   | 7     |
| 60-64 |                   | 9   | 2   | 2     | 1     | 1     | 1   | 16    |
| 65-69 |                   | 2   | 6   | 4     |       | 1     | 2   | 15    |
| 70-74 |                   |     | 3   | 3     | 2     | 1     |     | 9     |
| 75-79 |                   | 2   | 1   |       | 2     | 3     | 4   | 12    |
| 80-84 | 1                 | 4   | 2   | 1     | 3     | 3     | 7   | 21    |
| 85+   |                   | 2   | 2   | 3     | 6     | 4     | 11  | 28    |
| TOTAL | 5                 | 27  | 24  | 17    | 17    | 13    | 26  | 129   |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |        |        |        |        |       | ALL    |
|-------|-------------------|--------|--------|--------|--------|--------|-------|--------|
|       | <1                | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25+   |        |
| <50   | 16,235            | 9,251  | 4,426  | 7,324  |        |        |       | 8,826  |
| 50-54 | 7,039             | 10,781 | 9,036  | 7,324  | 14,493 |        |       | 10,200 |
| 55-59 |                   |        | 13,055 | 9,204  | 7,573  |        | 3,121 | 8,969  |
| 60-64 |                   | 10,945 | 6,574  | 10,298 | 11,753 | 10,370 | 9,036 | 10,213 |
| 65-69 |                   | 10,843 | 10,019 | 10,151 |        | 7,324  | 8,180 | 9,739  |
| 70-74 |                   |        | 8,716  | 10,286 | 6,843  | 8,038  |       | 8,748  |
| 75-79 |                   | 8,180  | 9,036  |        | 8,180  | 9,256  | 6,496 | 7,959  |
| 80-84 | 8,358             | 7,067  | 8,381  | 7,324  | 8,466  | 10,283 | 6,056 | 7,588  |
| 85+   |                   | 8,895  | 6,079  | 8,349  | 5,912  | 5,253  | 6,852 | 6,673  |
| ALL   | 12,821            | 9,788  | 8,110  | 9,264  | 7,783  | 8,105  | 6,626 | 8,453  |

| TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH |         |         |         |         |         |         |           |
|------------------------------------------------------------|---------|---------|---------|---------|---------|---------|-----------|
| <1                                                         | 1-4     | 5-9     | 10-14   | 15-19   | 20-24   | 25+     | TOTAL     |
| 64,103                                                     | 264,265 | 194,642 | 157,486 | 132,308 | 105,360 | 172,267 | 1,090,431 |

TABLE 7

## POLICE AND FIRE CONSOLIDATION FUND

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 102            | 1                              | 1                           |
| B. Additions                   | 193            | 2                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | (3)            | 0                              | 0                           |
| 2. Disability                  | (2)            | 0                              | 0                           |
| 3. Death                       | (2)            | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | (1)            | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 272            |                                |                             |
|                                | 15             |                                |                             |
| E. Total on June 30, 1990      | 287            | 3                              | 1                           |

|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>RECIPIENTS</u> |                  |
|---------------------------|----------------------------------|-------------------|------------------|
|                           |                                  | <u>DISABLED</u>   | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 91                               | 4                 | 45               |
| B. Additions              | 163                              | 13                | 89               |
| C. Deletions:             |                                  |                   |                  |
| 1. Service Retirement     |                                  | 0                 |                  |
| 2. Death                  | (6)                              | (1)               | (5)              |
| 3. Annuity Expired        | 0                                | 0                 | 0                |
| 4. Returned as Active     | 0                                | 0                 |                  |
| D. Data Adjustments       | 0                                | 0                 | 0                |
| E. Total on June 30, 1990 | 248                              | 16                | 129              |

TABLE 8

## POLICE AND FIRE CONSOLIDATION FUND

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                      |
|-------------------------------------------------------------------------------------------------------------------|----------------------|
| A. CURRENT ASSETS (TABLE 1, F6)                                                                                   | \$86,702,305         |
| B. EXPECTED FUTURE ASSETS                                                                                         |                      |
| 1. Present Value of Employee Contributions                                                                        | 8,718,620            |
| 2. Present Value of Regular Municipal Contributions                                                               | 13,077,930           |
| 3. Present Value of Additional Municipal Contributions                                                            | 33,807,711           |
| 4. Total Expected Future Assets                                                                                   | <u>\$55,604,261</u>  |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$142,306,566</u> |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                      |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$70,338,374         |
| 2. Current Employees                                                                                              |                      |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 12,238,816           |
| b. Employer-financed vested                                                                                       | 31,668,201           |
| c. Employer-financed nonvested                                                                                    | 3,140,853            |
| d. Total                                                                                                          | 47,047,870           |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$117,386,244</u> |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$24,920,322</u>  |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$142,306,566        |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$30,683,939         |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                  |
| * Estimated                                                                                                       |                      |

TABLE 9

**POLICE AND FIRE CONSOLIDATION FUND**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 140                                   | \$31,224,040                                                     | \$23,296,805                               |
| b. No Election (Greater Value)                                         | 147                                   | 40,744,152                                                       | 28,409,762                                 |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 287                                   | \$71,968,192                                                     | \$51,706,567                               |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 4                                     | 789,617                                                          | 789,617                                    |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 4                                     | \$789,617                                                        | \$789,617                                  |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 293                                   | \$44,598,817 *                                                   | \$44,598,817 *                             |
| b. Elected Relief Association                                          | 100                                   | 24,949,940                                                       | 24,949,940                                 |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 393                                   | \$69,548,757                                                     | \$69,548,757                               |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 433                                   | \$75,822,857                                                     | \$67,895,622                               |
| b. Elected Relief Association                                          | 100                                   | 24,949,940                                                       | 24,949,940                                 |
| c. No Election (Greater Value)                                         | 151                                   | 41,533,769                                                       | 29,199,379                                 |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| d. Total                                                               | 684                                   | \$142,306,566                                                    | \$122,044,941                              |
|                                                                        | ===                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$122,044,941                              |
| 2. Current Assets (Table 1,F6)                                         |                                       |                                                                  | 86,702,305                                 |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$35,342,636                               |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  |                                            |
|                                                                        |                                       |                                                                  | \$2,020,678                                |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$40,666,279.



TABLE 10

**POLICE AND FIRE CONSOLIDATION FUND**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                               |                |
|---------------------------------------------------------------------------------------------------------------|----------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9)</b>                                             |                |
| 1. Elected PERA Police and Fire                                                                               | \$75,822,857   |
| 2. Elected Relief Association                                                                                 | 24,949,940     |
| 3. No Election (Greater Value)                                                                                | 41,533,769     |
|                                                                                                               | -----          |
| 4. Total                                                                                                      | \$142,306,566  |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                      |                |
| 1. Elected PERA Police and Fire                                                                               | \$3,866,248    |
| 2. No Election (Greater Value)                                                                                | 4,852,372      |
|                                                                                                               | -----          |
| 3. Total                                                                                                      | \$8,718,620    |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                             |                |
| 1. Elected PERA Police and Fire                                                                               | \$5,799,371    |
| 2. No Election (Greater Value)                                                                                | 7,278,559      |
|                                                                                                               | -----          |
| 3. Total                                                                                                      | \$13,077,930   |
| <b>D. CURRENT VALUE OF ASSETS (TABLE 1, F6)</b>                                                               |                |
|                                                                                                               | \$86,702,305   |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                          |                |
| 1. Initial Contribution - Annual Payment of \$5,189,092<br>through the Amortization Date of December 31, 2010 | \$52,125,075   |
| 2. 15 Year Amortization of Prior Years' Loss (Gain)<br>(Table 11B, B.2.b + B.2.c)                             | (\$3,721,394)  |
|                                                                                                               | -----          |
| 3. Total                                                                                                      | \$48,403,681   |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                             |                |
|                                                                                                               | -----          |
|                                                                                                               | (\$14,595,970) |
|                                                                                                               | =====          |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                             |                |
| 1. MPRIF Mortality                                                                                            | (\$207,899)    |
| 2. Election of PERA Police and Fire Fund                                                                      | (13,145,957)   |
| 3. Other                                                                                                      | (1,242,114)    |
|                                                                                                               | -----          |
| 4. Total                                                                                                      | (\$14,595,970) |
|                                                                                                               | =====          |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                                 |                |
|                                                                                                               | (\$1,687,401)  |

TABLE 11

**POLICE AND FIRE CONSOLIDATION FUND**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                | AMOUNT<br><u>%</u> | AMOUNT<br><u>\$</u> |
|----------------------------------------------------------------|--------------------|---------------------|
| A. EMPLOYEE CONTRIBUTIONS                                      | 8.00%              |                     |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID) |                    |                     |
| 1. Regular Municipal Contribution                              | 12.00%             |                     |
| 2. Additional Municipal Contribution                           |                    |                     |
|                                                                | <u>Current</u>     | <u>Last</u>         |
| <u>Established</u>                                             | <u>Balance</u>     | <u>Payment</u>      |
| a. Initial                                                     | 52,125,075         | 12/31/2010          |
| b. 7/1/88                                                      | 190,201            | 12/31/2002          |
| c. 7/1/89                                                      | (3,911,595)        | 12/31/2003          |
| d. 7/1/90                                                      | (14,595,970)       | 12/31/2004          |
|                                                                | =====              | -----               |
| e. Total                                                       | 33,807,711         | \$3,056,618 *       |
|                                                                |                    | =====               |

C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$3,056,618

\* Contribution is assumed to be paid on December 31, 1990.

**POLICE AND FIRE CONSOLIDATION FUND**  
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

|                                              |                                                                                                                      |                                                                                    |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Interest:                                    | Pre-Retirement:                                                                                                      | 8.5% per annum                                                                     |
|                                              | Post-Retirement:                                                                                                     | 5.0% per annum<br>8.5% per annum                                                   |
| PERA Police and Fire:<br>Relief Association: |                                                                                                                      |                                                                                    |
| Salary Increases:                            | Reported salary for prior fiscal year, increased 6.5% to current fiscal year and 6.5% annually for each future year. |                                                                                    |
| Mortality:                                   | Pre-Retirement:                                                                                                      |                                                                                    |
|                                              | Male -                                                                                                               | 1971 Group Annuity Mortality Table<br>male rates projected to 1984 by<br>Scale D   |
|                                              | Female -                                                                                                             | 1971 Group Annuity Mortality Table<br>female rates projected to 1984 by<br>Scale D |
|                                              | Post-Retirement:                                                                                                     |                                                                                    |
|                                              | Male -                                                                                                               | Same as above                                                                      |
|                                              | Female -                                                                                                             | Same as above                                                                      |
|                                              | Post-Disability:                                                                                                     |                                                                                    |
|                                              | Male -                                                                                                               | 1965 RRB rates                                                                     |
|                                              | Female -                                                                                                             | 1965 RRB rates                                                                     |
| Retirement Age:                              |                                                                                                                      |                                                                                    |
| PERA Police and Fire                         | Age 60, or if over age 60, one year from the valuation date.                                                         |                                                                                    |
| Anoka Police                                 | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                     |                                                                                    |
| Buhl Police                                  | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                     |                                                                                    |
| Duluth Police                                | Age 58 and 5 years of service, or if over 58, one year from the valuation date.                                      |                                                                                    |
| Hibbing Fire                                 | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                     |                                                                                    |
| Hibbing Police                               | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                     |                                                                                    |
| Red Wing Fire                                | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                     |                                                                                    |

TABLE 13  
(cont)

|                                                                |                                                                                                                                                                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Retirement Age (cont):<br>Red Wing Police                      | Age 53 and 20 years of service, or if over 58, one year from the valuation date.                                                                                                                  |
| Rochester Police                                               | Age 60 and 20 years of service, or if over 58, one year from the valuation date.                                                                                                                  |
| St. Cloud Fire                                                 | Age 60 and 20 years of service, or if over 58, one year from the valuation date.                                                                                                                  |
| St. Louis Park Fire                                            | Age 62 and 20 years of service, or if over 58, one year from the valuation date.                                                                                                                  |
| West St. Paul Fire                                             | Age 58 and 20 years of service, or if over 58, one year from the valuation date.                                                                                                                  |
| Winona Fire                                                    | Age 58 and 20 years of service, or if over 58, one year of from the valuation date.                                                                                                               |
| Separation:                                                    | Graded rates based on PERA Police and Fire Fund experience as of June 30, 1990. Rates are shown in rate table.                                                                                    |
| Disability:                                                    | Rates as shown in rate table.                                                                                                                                                                     |
| Return of Contributions:<br>PERA Police and Fire               | All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit. |
| Relief Association                                             | If a relief association allows for the return of contributions, the contributions are returned to the Member if the Member is not eligible for any other benefit.                                 |
| Family Composition:                                            | 85% of male Members and 65% of female Members are assumed to be married. Female is four years younger than male. Assume Members have no children.                                                 |
| Social Security:                                               | NA                                                                                                                                                                                                |
| Benefit Increases<br>After Retirement:<br>PERA Police and Fire | Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement interest                                                                                              |
| Relief Association                                             | 6.5% per annum. The following are exceptions:                                                                                                                                                     |

TABLE 13  
(cont)

Benefit Increases  
After Retirement:

Buhl Police - 3.5% per annum

Red Wing Police - 6.5% per annum; increased in accordance with CPI increases if on active duty as of January 1, 1973 or later

Rochester Police - If hired before July 1, 1969: 6.5% per annum. If hired after June 30, 1969: 3.25% per annum

Special Consideration:  
PERA Police and Fire

Married members assumed to elect subsidized joint and survivor form of annuity as follows:

- Males - 40% elect 50% J & S option;  
45% elect 100% J & S option.
- Females - 15% elect 50% J & S option;  
15% elect 100% J & S option.

Relief Association

NA

Actuarial Cost Method:

Calculations of the Actuarial Accrued Liability and Normal Cost under the Entry Age Normal Actuarial Cost Method are disclosed in the report.

The Additional Municipal Contribution is derived by subtracting the following items from the Actuarial Present Value of Projected Benefits:

- Present Value of Future Employee Contributions
- Present Value of Future Regular Municipal Contributions
- Current Value of Assets
- Present Value of Additional Municipal Contributions (amount determined in the prior year)

Any excess (deficit) is a loss (gain) to be funded over 15 years and is added to the prior year Additional Municipal Contributions.

Asset Valuation Method:

Cost Value plus one-third Unrealized Gains or Losses.

TABLE 13  
(cont)

SEPARATIONS EXPRESSED AS THE  
NUMBER OF OCCURRENCES PER 10,000

| Age | PERA P&F<br>Death |        | PERA P&F<br>Withdrawal |        | PERA P&F<br>Disability |        | PERA P&F<br>Retirement |        |
|-----|-------------------|--------|------------------------|--------|------------------------|--------|------------------------|--------|
|     | Male              | Female | Male                   | Female | Male                   | Female | Male                   | Female |
| 20  | 5                 | 2      | 859                    | 859    | 11                     | 11     | 0                      | 0      |
| 21  | 5                 | 2      | 750                    | 750    | 11                     | 11     | 0                      | 0      |
| 22  | 5                 | 2      | 660                    | 660    | 12                     | 12     | 0                      | 0      |
| 23  | 5                 | 3      | 583                    | 583    | 12                     | 12     | 0                      | 0      |
| 24  | 5                 | 3      | 519                    | 519    | 13                     | 13     | 0                      | 0      |
| 25  | 6                 | 3      | 463                    | 463    | 13                     | 13     | 0                      | 0      |
| 26  | 6                 | 3      | 416                    | 416    | 14                     | 14     | 0                      | 0      |
| 27  | 6                 | 3      | 374                    | 374    | 14                     | 14     | 0                      | 0      |
| 28  | 7                 | 3      | 339                    | 339    | 14                     | 14     | 0                      | 0      |
| 29  | 7                 | 4      | 307                    | 307    | 15                     | 15     | 0                      | 0      |
| 30  | 7                 | 4      | 280                    | 280    | 16                     | 16     | 0                      | 0      |
| 31  | 8                 | 4      | 256                    | 256    | 16                     | 16     | 0                      | 0      |
| 32  | 8                 | 4      | 234                    | 234    | 17                     | 17     | 0                      | 0      |
| 33  | 9                 | 5      | 215                    | 215    | 17                     | 17     | 0                      | 0      |
| 34  | 10                | 5      | 198                    | 198    | 18                     | 18     | 0                      | 0      |
| 35  | 10                | 5      | 183                    | 183    | 19                     | 19     | 0                      | 0      |
| 36  | 11                | 6      | 169                    | 169    | 20                     | 20     | 0                      | 0      |
| 37  | 12                | 6      | 157                    | 157    | 22                     | 22     | 0                      | 0      |
| 38  | 13                | 7      | 146                    | 146    | 23                     | 23     | 0                      | 0      |
| 39  | 14                | 7      | 135                    | 135    | 24                     | 24     | 0                      | 0      |
| 40  | 15                | 8      | 126                    | 126    | 26                     | 26     | 0                      | 0      |
| 41  | 16                | 9      | 118                    | 118    | 28                     | 28     | 0                      | 0      |
| 42  | 18                | 9      | 110                    | 110    | 29                     | 29     | 0                      | 0      |
| 43  | 21                | 10     | 103                    | 103    | 31                     | 31     | 0                      | 0      |
| 44  | 24                | 11     | 97                     | 97     | 34                     | 34     | 0                      | 0      |
| 45  | 27                | 12     | 91                     | 91     | 36                     | 36     | 0                      | 0      |
| 46  | 30                | 13     | 86                     | 86     | 41                     | 41     | 0                      | 0      |
| 47  | 34                | 14     | 81                     | 81     | 46                     | 46     | 0                      | 0      |
| 48  | 39                | 15     | 69                     | 69     | 52                     | 52     | 0                      | 0      |
| 49  | 44                | 17     | 59                     | 59     | 60                     | 60     | 0                      | 0      |
| 50  | 49                | 18     | 50                     | 50     | 69                     | 69     | 0                      | 0      |
| 51  | 54                | 20     | 39                     | 39     | 80                     | 80     | 0                      | 0      |
| 52  | 60                | 21     | 29                     | 29     | 91                     | 91     | 0                      | 0      |
| 53  | 65                | 23     | 22                     | 22     | 104                    | 104    | 0                      | 0      |
| 54  | 72                | 25     | 15                     | 15     | 119                    | 119    | 0                      | 0      |

TABLE 13  
(cont)

| <u>Age</u> | <u>PERA P&amp;F<br/>Death</u> |               | <u>PERA P&amp;F<br/>Withdrawal</u> |               | <u>PERA P&amp;F<br/>Disability</u> |               | <u>PERA P&amp;F<br/>Retirement</u> |               |
|------------|-------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|------------------------------------|---------------|
|            | <u>Male</u>                   | <u>Female</u> | <u>Male</u>                        | <u>Female</u> | <u>Male</u>                        | <u>Female</u> | <u>Male</u>                        | <u>Female</u> |
| 55         | 78                            | 27            | 11                                 | 11            | 135                                | 135           | 0                                  | 0             |
| 56         | 85                            | 30            | 7                                  | 7             | 152                                | 152           | 0                                  | 0             |
| 57         | 92                            | 33            | 5                                  | 5             | 171                                | 171           | 0                                  | 0             |
| 58         | 100                           | 37            | 3                                  | 3             | 192                                | 192           | 0                                  | 0             |
| 59         | 110                           | 41            | 1                                  | 1             | 215                                | 215           | 0                                  | 0             |
| 60         | 121                           | 46            | 0                                  | 0             | 0                                  | 0             | 10,000                             | 10,000        |
| 61         | 133                           | 52            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 62         | 146                           | 58            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 63         | 160                           | 65            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 64         | 176                           | 73            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 65         | 195                           | 81            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 66         | 219                           | 90            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 67         | 243                           | 99            | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 68         | 270                           | 109           | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 69         | 300                           | 123           | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |
| 70         | 334                           | 140           | 0                                  | 0             | 0                                  | 0             | 0                                  | 0             |

TABLE 14

**POLICE AND FIRE CONSOLIDATION FUND**  
**SUMMARY OF PERA POLICE AND FIRE PLAN PROVISIONS**

|                           |                                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility               | All full time, and certain part time, police officers and firefighters, who are not contributing to any other local retirement fund.                                                                                                    |
| Contributions             |                                                                                                                                                                                                                                         |
| Member                    | 8% of Salary.                                                                                                                                                                                                                           |
| Employer                  | 12% of Salary.                                                                                                                                                                                                                          |
| Allowable Service         | Police and fire service during which Member contributions were deducted. May also include certain leaves of absence and military service.                                                                                               |
| Salary                    | Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump sum payments at separation and Workers' Compensation benefits. |
| Average Salary            | Average of the 5 highest successive years of Salary. Average salary is based on all Allowable Service if less than 5 years.                                                                                                             |
| <b>RETIREMENT</b>         |                                                                                                                                                                                                                                         |
| Normal Retirement Benefit |                                                                                                                                                                                                                                         |
| Eligibility               | Age 55 and 3 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.                                                                                                       |
| Amount                    | 2.5% of Average Salary for each year of Allowable Service.                                                                                                                                                                              |
| Early Retirement Benefit  |                                                                                                                                                                                                                                         |
| Eligibility               | Age 50 and 3 years of Allowable Service.                                                                                                                                                                                                |
| Amount                    | Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date assuming augmentation to age 55 at 3% per year and actuarial reduction for each month the Member is under age 55.                            |
| Form of Payment           | Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:                                                                                                  |



TABLE 14  
(cont)

50% or 100% joint and survivor with bounce back feature without additional reduction (option cancelled if Member is pre-deceased by beneficiary.

Benefit Increases

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Benefit recipients receiving benefits for at least 1 full month but less than 12 full months will receive a partial increase.

Members retired under law in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

**DISABILITY**

Duty Disability Benefit  
Eligibility

Under age 55 and physically or mentally unable to perform duties as a police officer or firefighter as a direct result of an act of duty.

Amount

50% of Average Salary plus 2.5% of Average Salary for each year in excess of 20 years of Allowable Service. The disability benefit is reduced to that amount which when added to Workers' Compensation, does not exceed Salary. Payments revert to retirement annuity at age 55.

Non-Duty Disability Benefit  
Eligibility

Under age 55 and physically or mentally unable to perform duties as a police officer or firefighter with 1 year of Allowable Service.

Amount

Normal Retirement Benefit based on Allowable Service (minimum of 15 years) and Average Salary at disability without reduction for commencement before age 55. Payments revert to retirement annuity at age 55.

**TABLE 14**  
**(cont)**

|                                               |                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form of Payment                               | Same as for retirement.                                                                                                                                                                                                                                                       |
| Benefit Increases                             | Adjusted by PERA to provide same increase as MPRIF.                                                                                                                                                                                                                           |
| Retirement Benefits Eligibility               | Age 55.                                                                                                                                                                                                                                                                       |
| Amount                                        | Any optional annuity continues. Otherwise the larger of the disability benefit paid before age 55 or the normal retirement benefit available at age 55, or an actuarially equivalent optional annuity.                                                                        |
| Benefit Increases                             | Same as for retirement.                                                                                                                                                                                                                                                       |
| <b>DEATH</b>                                  |                                                                                                                                                                                                                                                                               |
| Surviving Spouse Benefit Eligibility          | Active Member with surviving spouse, married for at least 1 year unless death in the line of duty.                                                                                                                                                                            |
| Amount                                        | 50% of Salary averaged over last 6 months. Benefit paid until spouse's death but no payments while spouse is remarried.                                                                                                                                                       |
| Surviving Dependent Child Benefit Eligibility | Active Member with dependent child.                                                                                                                                                                                                                                           |
| Amount                                        | 10% of Salary averaged over last 6 months for each child. Family benefit minimum (including spouse's benefit) of 50% of Salary and maximum of 70% of Salary. Benefits paid until child marries, dies, or attains age 18. (Age 23 if full-time student).                       |
| Surviving Spouse Optional Annuity Eligibility | Member who dies before termination if age 50 with 3 years of Allowable Service or any age with 30 years of Allowable Service. If the Member dies before age 55, benefits commence when Member would have been age 55 or as early as age 50 if qualified for early retirement. |
| Amount                                        | Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.<br><br>Alternatively, spouse may elect refund of deceased's contributions with interest if there are no dependent children.                                            |

TABLE 14  
(cont)

Benefit Increases                      Adjusted by PERA to provide same increase as MPRIF.

**TERMINATION**

Refund of Contributions  
Eligibility

Termination of public service.

Amount

Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989, and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if 3 or more years of Allowable Service.

Deferred Annuity  
Eligibility

3 years of Allowable Service.

Amount

Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/71, 5% from 7/1/71 to 1/1/81, and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

## POLICE AND FIRE CONSOLIDATION FUND

## SUMMARY OF LOCAL POLICE OR FIREFIGHTER PLAN PROVISIONS

|                     |                                                                                                                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility         | A Member of a local relief association consolidating with PERA Police and Fire Fund who elects to retain benefit coverage in the local relief association benefit plan.                                                                                                                      |
| Contributions       |                                                                                                                                                                                                                                                                                              |
| Member              | 8% of Contribution Salary.                                                                                                                                                                                                                                                                   |
| Employer            | 12% of Contribution Salary.                                                                                                                                                                                                                                                                  |
| Allowable Service   | Any service rendered in the municipality in which the local relief association is located before the effective date of consolidation and any service rendered by a covered employee as a police officer or firefighter in the municipality in which the local relief association is located. |
| Salary              |                                                                                                                                                                                                                                                                                              |
| Benefit Salary      |                                                                                                                                                                                                                                                                                              |
| Anoka Police        | Salary of a First Grade Patrol Officer.                                                                                                                                                                                                                                                      |
| Buhl Police         | Final salary.                                                                                                                                                                                                                                                                                |
| Duluth Police       | Salary of a First Grade Patrol Officer with 16 years of service.                                                                                                                                                                                                                             |
| Hibbing Fire        | Average Salary for final six months of employment.                                                                                                                                                                                                                                           |
| Hibbing Police      | Average Salary for final six months of employment.                                                                                                                                                                                                                                           |
| Red Wing Fire       | Average Annual Salary for highest three paid years.                                                                                                                                                                                                                                          |
| Red Wing Police     | Final Salary.                                                                                                                                                                                                                                                                                |
| Rochester Police    | Salary of a First Grade Patrol Officer.                                                                                                                                                                                                                                                      |
| St. Cloud Fire      | Salary of a First Grade Firefighter with 25 or more years of service.                                                                                                                                                                                                                        |
| St. Louis Park Fire | Salary of the highest grade full-time firefighter.                                                                                                                                                                                                                                           |
| West St. Paul Fire  | Salary of a First Grade Firefighter.                                                                                                                                                                                                                                                         |
| Winona Fire         | Salary of a First Grade Firefighter.                                                                                                                                                                                                                                                         |

TABLE 15  
(cont)

|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Contribution Salary | Greater of Benefit Salary or actual salary. The following are exceptions: |
|                     | Buhl Police - Benefit Salary.                                             |
|                     | Hibbing Fire - Benefit Salary.                                            |
|                     | Hibbing Police - Benefit Salary.                                          |
|                     | Red Wing Fire - Actual salary.                                            |
|                     | Red Wing Police - Benefit Salary.                                         |

# RETIREMENT

## Normal Retirement Benefit Eligibility

|                     |                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------|
| Anoka Police        | Age 50 and 20 years of Allowable Service.                                                                              |
| Buhl Police         | Age 50 and 20 years of Allowable Service.                                                                              |
| Duluth Police       | Age 50 and 5 years of Allowable Service.                                                                               |
| Hibbing Fire        | Age 55 and 20 years of Allowable Service.                                                                              |
| Hibbing Police      | Age 55 and 20 years of Allowable Service.                                                                              |
| Red Wing Fire       | Age 50 and 20 years of Allowable Service.                                                                              |
| Red Wing Police     | Age 50 and 20 years of Allowable Service.                                                                              |
| Rochester Police    | Age 55 and 20 years of Allowable Service or, if hired prior to July 1, 1969, Age 50 and 20 years of Allowable Service. |
| St. Cloud Fire      | Age 50 and 20 years of Allowable Service.                                                                              |
| St. Louis Park Fire | Age 50 and 20 years of Allowable Service.                                                                              |
| West St. Paul Fire  | Age 55 and 20 years of Allowable Service.                                                                              |
| Winona Fire         | Age 50 and 20 years of Allowable Service.                                                                              |

## Amount

|              |                                                                                                                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anoka Police | 2.5% of Benefit Salary for each of the first 20 years of Allowable Service.                                                                                                                                                  |
| Buhl Police  | 4.25% of Benefit Salary for each of the first 20 years of Allowable Service and \$120 per year for each year of Allowable Service in excess of 20 years of Allowable Service but no more than 25 years of Allowable Service. |

TABLE 15  
(cont)

Normal Retirement Benefit  
Amount (cont)

|                     |                                                                                                                                                                                                                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duluth Police       | 1.9875% of Benefit Salary for each of the first 20 years of Allowable Service, 1.25% of Benefit Salary for the 21st year of Allowable Service, and 2.5% of Benefit Salary for each year of Allowable Service in excess of 21 years but not more than 25 years of Allowable Service.                                    |
| Hibbing Fire        | 2.65% of Benefit Salary for each of the first 20 years of Allowable Service and \$120 per year for each year of Allowable Service in excess of 20 years but no more than 25 years.                                                                                                                                     |
| Hibbing Police      | 2.65% of Benefit Salary for each of the first 20 years of Allowable Service and \$120 per year for each year of Allowable Service in excess of 20 years but no more than 25 years.                                                                                                                                     |
| Red Wing Fire       | 2.0% of Benefit Salary for each of the first 25 years of Allowable Service and 1.0% of Benefit Salary for each year of Allowable Service in excess of 25 years.                                                                                                                                                        |
| Red Wing Police     | 2.5% of Benefit Salary for each of the first 20 years of Allowable Service.                                                                                                                                                                                                                                            |
| Rochester Police    | 2.333% of Benefit Salary for each of the first 20 years of Allowable Service, 1.333% of Benefit Salary for each year of Allowable Service in excess of 20 years but not in excess of 27 years and 0.5% of Benefit Salary for each year of allowable Service in excess of 25 years.                                     |
| St. Cloud Fire      | 2.333% of Benefit Salary for each of the first 20 years of Allowable Service, 1.333% of Benefit Salary for each year of Allowable Service in excess of 20 years but not in excess of 27 years and 0.5% of Benefit Salary for each year of allowable Service in excess of 25 years.                                     |
| St. Louis Park Fire | 2.6% of Benefit Salary for each of the first 20 years of Allowable Service and 1.0% of Benefit Service for each year of Allowable Service in excess of 20 years but not more than 30 years. If member had 20 or more years of Allowable Service on June 16, 1985 the 2.6% in the above formula is replaced by 2.6175%. |

TABLE 15  
(cont)

|                                         |                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal Retirement Benefit Amount (cont) |                                                                                                                                                                                                                                                                                                                                                                    |
| West St. Paul Fire                      | 2% of Benefit Salary for each of the first 20 years of Allowable Service, 1% of Allowable Service in excess of 20 years but not more than 24 years of Allowable Service, 3% of Benefit Salary for the 25th year of Allowable Service, and 1% of Benefit Salary for each year of Allowable Service in excess of 25 but not more than 30 years of Allowable Service. |
| Winona Fire                             | 2.133% of Benefit Salary for each of the first 20 years of Allowable Service, 1.333% of Benefit Salary for each year of Allowable Service in excess of 20 years but not more than 28 years and 0.5% of Benefit Salary for each year of Allowable Service in excess of 25 years.                                                                                    |
| Form of Payment                         | Life annuity.                                                                                                                                                                                                                                                                                                                                                      |
| Benefit Increases                       |                                                                                                                                                                                                                                                                                                                                                                    |
| Anoka Police                            | Same increase that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                                    |
| Buhl Police                             | 3.5% if there is any increase in the salary base.                                                                                                                                                                                                                                                                                                                  |
| Duluth Police                           | Same increase that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                                    |
| Hibbing Fire                            | One-half of the dollar amount that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                    |
| Hibbing Police                          | One-half of the dollar amount that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                    |
| Red Wing Fire                           | Same increase as the Consumer Price Index has increased over the preceding year.                                                                                                                                                                                                                                                                                   |
| Red Wing Police                         | Same increase as the Consumer Price Index has increased over the preceding year.                                                                                                                                                                                                                                                                                   |
| Rochester Police                        | Same increase that Benefit Salary is increased unless employed after July 1, 1969, then increase is one-half of the dollar increase granted to members employed prior to July 1, 1969. The additional benefit of 0.5% of Benefit Salary for each year of Allowable Service in excess of 25 years is not increased.                                                 |
| St. Cloud Fire                          | Same increase that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                                    |
| St. Louis Park Fire                     | Same increase that Benefit Salary is increased.                                                                                                                                                                                                                                                                                                                    |

**TABLE 15**  
**(cont)**

**Benefit Increases (cont)**  
West St. Paul Fire

Same increase that Benefit Salary is increased.

Winona Fire

Same increase that Benefit Salary is increased. The additional benefit of 0.5% of Benefit Salary for each year of Allowable Service in excess of 25 years is not increased.

**DISABILITY**

Duty Disability Benefit  
Eligibility

Not eligible for a retirement benefit and physically unfit to perform duties as a police officer or firefighter as a direct result of an act of duty.

Amount

Anoka Police

The retirement benefit calculated using the Benefit Salary as of the date of disability and the Allowable Service as of the date of disability with a minimum of 20 years of Allowable Service. Payments cease at age 50.

Buhl Police

The retirement benefit calculated using the Benefit Salary as of the date of disability and the Allowable Service as of the date of disability with a minimum of 20 years of Allowable Service. Payments cease at age 50.

Duluth Police

The retirement benefit calculated using the Benefit Salary as of the date of disability and the Allowable Service as of the date of disability with a minimum of 20 years of Allowable Service. Payments cease at age 50.

Hibbing Fire

First Class Disability: An amount equal to the amount which would be paid under Minnesota workers' compensation laws.

Second Class Disability: 75% of First Class Disability.

Third Class Disability: 50% of First Class Disability.

Hibbing Police

\$1,440 per year.

Red Wing Fire

40% of Benefit Salary if less than 20 years of Allowable Service plus 2% of Benefit Salary for each year of Allowable Service in excess of 20 years but not more than 25 years.



TABLE 15  
(cont)

|                                            |                                                                                                                                                                                                                                             |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duty Disability Benefit<br>Amount (cont)   |                                                                                                                                                                                                                                             |
| Red Wing Police                            | The retirement benefit calculated using the Benefit Salary as of the date of disability and the Allowable Service as of the date of disability with a minimum of 20 years of Allowable Service. Payments cease at age 50.                   |
| Rochester Police                           | An amount equal to 48% of the Benefit Salary.                                                                                                                                                                                               |
| St. Cloud Fire                             | An amount equal to 48% of the Benefit Salary.                                                                                                                                                                                               |
| St. Louis Park Fire                        | 50% of Benefit Salary if less than 20 years of Allowable Service. If 20 or more years of Allowable Service, an amount equal to the retirement benefit.                                                                                      |
| West St. Paul Fire                         | An amount equal to 40% of the Benefit Salary.                                                                                                                                                                                               |
| Winona Fire                                | 42.667% of Benefit Salary.                                                                                                                                                                                                                  |
| Non-Duty Disability Benefit<br>Eligibility | Not eligible for a retirement benefit and physically unfit to perform duties as a police officer or firefighter which did not arise as a direct result of an act of duty.                                                                   |
| Amount                                     | Same as the Duty Disability Benefit. The following are exceptions:<br><br>Red Wing Fire - 2% of Benefit Salary for each year of Allowable Service with a minimum of 10% of Benefit Salary and a maximum of 40% of Benefit Salary.           |
| Form of Payment                            | Same as for retirement.                                                                                                                                                                                                                     |
| Benefit Increases                          | Same as for retirement.                                                                                                                                                                                                                     |
| Retirement Benefits<br>Eligibility         | Age 50 and continued disability. The following are exceptions:<br><br>Hibbing Fire - Age 55 and continued disability.<br><br>Hibbing Police - Age 55 and continued disability.<br><br>West St. Paul Fire - Age 55 and continued disability. |

TABLE 15  
(cont)

Retirement Benefits (cont)  
Amount

The larger of the disability benefit paid before Eligibility or the retirement benefit available at Eligibility.

Benefit Increases

Same as for retirement.

DEATH

Surviving Spouse Benefit  
Eligibility

Any active, retired, disabled or deferred Member with surviving spouse.

Amount

Anoka Police

30% of the Benefit Salary.

Buhl Police

72.25% of Benefit Salary.

Duluth Police

25% of the Benefit Salary.

Hibbing Fire

30% of Benefit Salary.

Hibbing Police

30% of Benefit Salary.

Red Wing Fire

25% of the Benefit Salary.

Red Wing Police

Equal to the service pension of disability person.

Rochester Police

24% of the Benefit Salary.

St. Cloud Fire

32% of the Benefit Salary.

St. Louis Park Fire

40% of the Benefit Salary if former member had at least 20 years of Allowable Service. If less than 20 years of Allowable Service, a prorata portion of 40% of the Benefit Salary.

West St. Paul Fire

30% of the Benefit Salary.

Winona Fire

24% of the Benefit Salary.

Benefit Increases

Same as retirement. The following are exceptions:

Buhl Police - None.

Hibbing Fire - None.

Hibbing Police - None.

TABLE 15  
(cont)

Surviving Dependent  
Child Benefit  
Eligibility

Any active, deferred, retired or disabled Member with a child younger than age 18. The following are exceptions:

Buhl Police - Any active, deferred, retired or disabled Member with a child younger than age 18, or if the child is a full-time student, younger than age 22.

Duluth Police - Any active, deferred, retired or disabled Member with a child younger than age 18, or if the child is a full-time student, younger than age 22.

Hibbing Police - Any active, deferred, retired or disabled Member with a child younger than age 16.

Amount

|                     |                                                                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anoka Police        | \$25 per month.                                                                                                                                                                                 |
| Buhl Police         | \$1,500 per year if surviving spouse benefit is payable. If no surviving spouse benefit is payable, then surviving spouse benefit is payable divided in equal shares to all surviving children. |
| Duluth Poice        | 10% of Benefit Salary.                                                                                                                                                                          |
| Hibbing Fire        | 10% of Benefit Salary.                                                                                                                                                                          |
| Hibbing Police      | 10% of Benefit Salary.                                                                                                                                                                          |
| Red Wing Fire       | 8% of Benefit Salary.                                                                                                                                                                           |
| Red Wing Police     | Determined by Board of Directors upon remarriage of spouse.                                                                                                                                     |
| Rochester Police    | 8% of Benefit Salary.                                                                                                                                                                           |
| St. Cloud Fire      | 5.3334% of Benefit Salary.                                                                                                                                                                      |
| St. Louis Park Fire | 5% of Benefit Salary.                                                                                                                                                                           |
| West St. Paul Fire  | 5% of Benefit Salary.                                                                                                                                                                           |
| Winona Fire         | 8% of Benefit Salary.                                                                                                                                                                           |
| Benefit Increases   | Same as retirement. The following are exceptions:                                                                                                                                               |

TABLE 15  
(cont)

Surviving Dependent  
Child Benefit  
Benefit Increases (cont)

Anoka Police - None.  
Buhl Police - None.  
Hibbing Fire - None.  
Hibbing Police - None.  
Red Wing Police - None.

**TERMINATION**

Refund of Contributions  
Eligibility

Termination of public service and not eligible for any other benefits.

Amount

Members' accumulated contributions without interest. The following are exceptions:

Duluth Police - No refunds.

Rochester Police - 75% of the Members' accumulated contributions without interest.

Winona Fire - 75% of the Members' accumulated contributions without interest.

Deferred Annuity  
Eligibility

Any active Member with sufficient Allowable Service for the retirement benefit, but does not meet the age requirement for the retirement benefit. The following are exceptions:

St. Louis Park Fire - Prior to age 50 with minimum of 10 years of Allowable Service.

Amount

The amount calculated under the retirement benefit using the Allowable Service and Benefit Salary as of date of termination. The following are exceptions:

St. Cloud Fire - The amount calculated under the retirement benefit using the Allowable Service and Benefit Salary as of date of termination. Benefit cannot exceed 53.3333% of Benefit Salary.

TABLE 15  
(cont)

Deferred Annuity  
Amount (cont)

West St. Paul Fire - For the first 20 years of Allowable Service, 0.5% of Benefit Salary for each year of Allowable Service rendered before October 1, 1965, and 2% of Benefit Salary for each year of Allowable Service rendered after September 30, 1965, and 1% of Benefit Salary for each year of Allowable Service in excess of 20 years but not more than 52% of Benefit Salary.

Winona Fire - The amount calculated under the retirement benefit using the Allowable Service and Benefit Salary as of date of termination. Benefit cannot exceed 50.6667% of Benefit Salary.

Benefit Increases

Same as retirement. The following are exceptions:

Red Wing Police - None.

TABLE 3A

## ANOKA POLICE CONSOLIDATION ACCOUNT

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     |       |       |       |       |     | 0     |
| 35-39 |                  |     |     |       |       |       |       |     | 0     |
| 40-44 |                  |     |     |       |       |       |       |     | 0     |
| 45-49 |                  |     |     |       | 1     | 1     |       |     | 2     |
| 50-54 |                  |     |     |       |       |       |       |     | 0     |
| 55-59 |                  |     |     |       |       |       |       |     | 0     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 0     | 1     | 1     | 0     | 0   | 2     |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |       |        |        |       |     | ALL    |
|-------|------------------|-----|-----|-------|--------|--------|-------|-----|--------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19  | 20-24  | 25-29 | 30+ |        |
| <25   |                  |     |     |       |        |        |       |     | 0      |
| 25-29 |                  |     |     |       |        |        |       |     | 0      |
| 30-34 |                  |     |     |       |        |        |       |     | 0      |
| 35-39 |                  |     |     |       |        |        |       |     | 0      |
| 40-44 |                  |     |     |       |        |        |       |     | 0      |
| 45-49 |                  |     |     |       | 40,468 | 45,633 |       |     | 43,051 |
| 50-54 |                  |     |     |       |        |        |       |     | 0      |
| 55-59 |                  |     |     |       |        |        |       |     | 0      |
| 60-64 |                  |     |     |       |        |        |       |     | 0      |
| 65+   |                  |     |     |       |        |        |       |     | 0      |
| ALL   | 0                | 0   | 0   | 0     | 40,468 | 45,633 | 0     | 0   | 43,051 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14 | 15-19  | 20-24  | 25-29 | 30+ | TOTAL  |
|----|-----|-----|-------|--------|--------|-------|-----|--------|
| 0  | 0   | 0   | 0     | 40,468 | 45,633 | 0     | 0   | 86,101 |

TABLE 4A

## ANOKA POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                      |            |            |              |              |              |            | 0            |
| 50-54      |                      | 1          |            |              |              |              |            | 1            |
| 55-59      |                      |            | 1          |              |              |              |            | 1            |
| 60-64      |                      |            | 1          | 1            |              |              |            | 2            |
| 65-69      |                      |            |            | 1            | 1            |              |            | 2            |
| 70-74      |                      |            |            | 1            |              |              |            | 1            |
| 75-79      |                      |            |            |              |              |              |            | 0            |
| 80-84      |                      |            |            |              |              |              |            | 0            |
| 85+        |                      |            |            |              |              |              |            | 0            |
| TOTAL      | 0                    | 1          | 2          | 3            | 1            | 0            | 0          | 7            |

## AVERAGE ANNUAL ANNUITY

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                      |            |            |              |              |              |            | 0          |
| 50-54      |                      | 16,962     |            |              |              |              |            | 16,962     |
| 55-59      |                      |            | 17,647     |              |              |              |            | 17,647     |
| 60-64      |                      |            | 17,647     | 17,647       |              |              |            | 17,647     |
| 65-69      |                      |            |            | 17,647       | 17,647       |              |            | 17,647     |
| 70-74      |                      |            |            | 17,647       |              |              |            | 17,647     |
| 75-79      |                      |            |            |              |              |              |            | 0          |
| 80-84      |                      |            |            |              |              |              |            | 0          |
| 85+        |                      |            |            |              |              |              |            | 0          |
| ALL        | 0                    | 16,962     | 17,647     | 17,647       | 17,647       | 0            | 0          | 17,549     |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 16,962     | 35,294     | 52,941       | 17,647       | 0            | 0          | 122,844      |

TABLE 6A

## ANOKA POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS SINCE DEATH</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|--------------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>             | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                          |            |            |              |              |              |            | 0            |
| 50-54      |                          |            |            |              |              |              |            | 0            |
| 55-59      |                          |            |            |              |              |              |            | 0            |
| 60-64      |                          |            |            | 1            | 1            |              |            | 2            |
| 65-69      |                          |            |            |              |              |              |            | 0            |
| 70-74      |                          |            |            |              | 1            |              |            | 1            |
| 75-79      |                          |            |            |              |              |              | 1          | 1            |
| 80-84      |                          |            |            |              |              |              |            | 0            |
| 85+        |                          |            |            |              |              |              |            | 0            |
| TOTAL      | 0                        | 0          | 0          | 1            | 2            | 0            | 1          | 4            |

## AVERAGE ANNUAL BENEFIT

| <u>AGE</u> | <u>YEARS SINCE DEATH</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|--------------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>             | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                          |            |            |              |              |              |            | 0          |
| 50-54      |                          |            |            |              |              |              |            | 0          |
| 55-59      |                          |            |            |              |              |              |            | 0          |
| 60-64      |                          |            |            | 11,753       | 11,753       |              |            | 11,753     |
| 65-69      |                          |            |            |              |              |              |            | 0          |
| 70-74      |                          |            |            |              | 11,297       |              |            | 11,297     |
| 75-79      |                          |            |            |              |              |              | 936        | 936        |
| 80-84      |                          |            |            |              |              |              |            | 0          |
| 85+        |                          |            |            |              |              |              |            | 0          |
| ALL        | 0                        | 0          | 0          | 11,753       | 11,525       | 0            | 936        | 8,935      |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 0          | 11,753       | 23,050       | 0            | 936        | 35,739       |



TABLE 7A

## ANOKA POLICE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 2              | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 1                              |                             |
|                                | Non-Vested     | 1                              |                             |
| E. Total on June 30, 1990      | 2              | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 7                                | 0               | 4                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 7                                | 0               | 4                |

TABLE 8A

## ANOKA POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                    |
|-------------------------------------------------------------------------------------------------------------------|--------------------|
| A. CURRENT ASSETS (2.56% OF TABLE 1, F6)                                                                          | \$2,219,578        |
| B. EXPECTED FUTURE ASSETS                                                                                         |                    |
| 1. Present Value of Employee Contributions                                                                        | 68,588             |
| 2. Present Value of Regular Municipal Contributions                                                               | 102,882            |
| 3. Present Value of Additional Municipal Contributions                                                            | 314,471            |
| 4. Total Expected Future Assets                                                                                   | <u>\$485,941</u>   |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$2,705,519</u> |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                    |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$2,087,299        |
| 2. Current Employees                                                                                              |                    |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 118,662            |
| b. Employer-financed vested                                                                                       | 100,933            |
| c. Employer-financed nonvested                                                                                    | 196,918            |
| d. Total                                                                                                          | 416,513            |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$2,503,812</u> |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$201,707</u>   |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$2,705,519        |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$284,234          |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                |

\* Estimated

TABLE 9A

**ANOKA POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 2                            | 618,220                                                | 459,215                           |
|                                                                        | ---                          | ---                                                    | ---                               |
| c. Total                                                               | 2                            | \$618,220                                              | \$459,215                         |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | ---                                                    | ---                               |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 10                           | \$1,941,690 *                                          | \$1,941,690 *                     |
| b. Elected Relief Association                                          | 1                            | 145,609                                                | 145,609                           |
|                                                                        | ---                          | ---                                                    | ---                               |
| c. Total                                                               | 11                           | \$2,087,299                                            | \$2,087,299                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 10                           | \$1,941,690                                            | \$1,941,690                       |
| b. Elected Relief Association                                          | 1                            | 145,609                                                | 145,609                           |
| c. No Election (Greater Value)                                         | 2                            | 618,220                                                | 459,215                           |
|                                                                        | ---                          | ---                                                    | ---                               |
| d. Total                                                               | 13                           | \$2,705,519                                            | \$2,546,514                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$2,546,514                       |
| 2. Current Assets (2.56% of Table 1,F6)                                |                              |                                                        | 2,219,578                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$326,936                         |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$16,879                          |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$1,780,970.

**ANOKA POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**TABLE 10A**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |                    |
|-------------------------------------------------------------------------------------------------------------|--------------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9A)</b>                                          |                    |
| 1. Elected PERA Police and Fire                                                                             | \$1,941,690        |
| 2. Elected Relief Association                                                                               | 145,609            |
| 3. No Election (Greater Value)                                                                              | 618,220            |
|                                                                                                             | -----              |
| 4. Total                                                                                                    | \$2,705,519        |
|                                                                                                             | -----              |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |                    |
| 1. Elected PERA Police and Fire                                                                             | \$0                |
| 2. No Election (Greater Value)                                                                              | 68,588             |
|                                                                                                             | -----              |
| 3. Total                                                                                                    | \$68,588           |
|                                                                                                             | -----              |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |                    |
| 1. Elected PERA Police and Fire                                                                             | \$0                |
| 2. No Election (Greater Value)                                                                              | 102,882            |
|                                                                                                             | -----              |
| 3. Total                                                                                                    | \$102,882          |
|                                                                                                             | -----              |
| <b>D. CURRENT VALUE OF ASSETS (2.56% OF TABLE 1, F6)</b>                                                    | <b>\$2,219,578</b> |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |                    |
| 1. Initial Contribution - Annual Payment of \$101,834<br>through the Amortization Date of December 31, 2010 | \$1,022,935        |
|                                                                                                             | -----              |
| 2. Total                                                                                                    | \$1,022,935        |
|                                                                                                             | -----              |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | <b>(\$708,464)</b> |
|                                                                                                             | =====              |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |                    |
| 1. MPRIF Mortality                                                                                          | \$34,335           |
| 2. Election of PERA Police and Fire Fund                                                                    | (659,741)          |
| 3. Other                                                                                                    | (83,058)           |
|                                                                                                             | -----              |
| 4. Total                                                                                                    | (\$708,464)        |
|                                                                                                             | =====              |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | <b>(\$81,904)</b>  |

**ANOKA POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                         |                                         | AMOUNT<br>%                           | AMOUNT<br>\$        |
|-------------------------------------------------------------------------|-----------------------------------------|---------------------------------------|---------------------|
| A. EMPLOYEE CONTRIBUTIONS                                               |                                         | 8.00%                                 |                     |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)          |                                         |                                       |                     |
| 1. Regular Municipal Contribution                                       |                                         | 12.00%                                |                     |
| 2. Additional Municipal Contribution                                    |                                         |                                       |                     |
| a. <u>Established</u><br>Initial                                        | <u>Current<br/>Balance</u><br>1,022,935 | <u>Last<br/>Payment</u><br>12/31/2010 | 101,834             |
| b. 7/1/90                                                               | (708,464)                               | 12/31/2004                            | (81,904)            |
| c. Total                                                                | \$314,471<br>=====                      |                                       | \$19,930 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$19,930 |                                         |                                       |                     |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3B

## BUHL POLICE CONSOLIDATION ACCOUNT

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS OF SERVICE</u> |            |            |              |              |              |              |            | <u>TOTAL</u> |
|------------|-------------------------|------------|------------|--------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>            | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> |              |
| <25        |                         |            |            |              |              |              |              |            | 0            |
| 25-29      |                         |            |            |              |              |              |              |            | 0            |
| 30-34      |                         |            |            |              |              |              |              |            | 0            |
| 35-39      |                         |            |            |              |              |              |              |            | 0            |
| 40-44      |                         |            |            |              |              |              |              |            | 0            |
| 45-49      |                         |            |            |              |              |              |              |            | 0            |
| 50-54      |                         |            |            |              |              |              |              |            | 0            |
| 55-59      |                         |            |            |              |              |              |              |            | 0            |
| 60-64      |                         |            |            |              |              |              |              | 1          | 1            |
| 65+        |                         |            |            |              |              |              |              |            | 0            |
| TOTAL      | 0                       | 0          | 0          | 0            | 0            | 0            | 0            | 1          | 1            |

## AVERAGE ANNUAL EARNINGS

| <u>AGE</u> | <u>YEARS OF SERVICE</u> |            |            |              |              |              |              |            | <u>ALL</u> |
|------------|-------------------------|------------|------------|--------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>            | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> |            |
| <25        |                         |            |            |              |              |              |              |            | 0          |
| 25-29      |                         |            |            |              |              |              |              |            | 0          |
| 30-34      |                         |            |            |              |              |              |              |            | 0          |
| 35-39      |                         |            |            |              |              |              |              |            | 0          |
| 40-44      |                         |            |            |              |              |              |              |            | 0          |
| 45-49      |                         |            |            |              |              |              |              |            | 0          |
| 50-54      |                         |            |            |              |              |              |              |            | 0          |
| 55-59      |                         |            |            |              |              |              |              |            | 0          |
| 60-64      |                         |            |            |              |              |              |              | 30,613     | 30,613     |
| 65+        |                         |            |            |              |              |              |              |            | 0          |
| ALL        | 0                       | 0          | 0          | 0            | 0            | 0            | 0            | 30,613     | 30,613     |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 0          | 0            | 0            | 0            | 0            | 30,613     | 30,613       |

TABLE 4B

## BUHL POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                      |            |            |              |              |              |            | 0            |
| 50-54      |                      |            |            |              |              |              |            | 0            |
| 55-59      |                      | 1          |            |              |              |              |            | 1            |
| 60-64      |                      |            |            |              |              |              |            | 0            |
| 65-69      |                      |            |            |              |              |              |            | 0            |
| 70-74      |                      |            |            |              |              |              |            | 0            |
| 75-79      |                      |            |            |              |              |              |            | 0            |
| 80-84      |                      |            |            |              |              |              |            | 0            |
| 85+        |                      |            |            |              |              |              |            | 0            |
| TOTAL      | 0                    | 1          | 0          | 0            | 0            | 0            | 0          | 1            |

## AVERAGE ANNUAL ANNUITY

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                      |            |            |              |              |              |            | 0          |
| 50-54      |                      |            |            |              |              |              |            | 0          |
| 55-59      |                      | 21,172     |            |              |              |              |            | 21,172     |
| 60-64      |                      |            |            |              |              |              |            | 0          |
| 65-69      |                      |            |            |              |              |              |            | 0          |
| 70-74      |                      |            |            |              |              |              |            | 0          |
| 75-79      |                      |            |            |              |              |              |            | 0          |
| 80-84      |                      |            |            |              |              |              |            | 0          |
| 85+        |                      |            |            |              |              |              |            | 0          |
| ALL        | 0                    | 21,172     | 0          | 0            | 0            | 0            | 0          | 21,172     |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 21,172     | 0          | 0            | 0            | 0            | 0          | 21,172       |

TABLE 6B

## BUHL POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |            |            |              |              |              |            | TOTAL |
|-------|-------------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>      | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |                   |            |            |              |              |              |            | 0     |
| 50-54 |                   |            |            |              |              |              |            | 0     |
| 55-59 |                   |            |            |              |              |              |            | 0     |
| 60-64 |                   |            |            |              |              |              |            | 0     |
| 65-69 |                   |            | 1          |              |              |              |            | 1     |
| 70-74 |                   |            |            |              |              |              |            | 0     |
| 75-79 |                   |            |            |              |              |              |            | 0     |
| 80-84 |                   |            |            |              |              |              |            | 0     |
| 85+   |                   |            |            |              |              |              |            | 0     |
| TOTAL | 0                 | 0          | 1          | 0            | 0            | 0            | 0          | 1     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |            |            |              |              |              |            | ALL    |
|-------|-------------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>      | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   |                   |            |            |              |              |              |            | 0      |
| 50-54 |                   |            |            |              |              |              |            | 0      |
| 55-59 |                   |            |            |              |              |              |            | 0      |
| 60-64 |                   |            |            |              |              |              |            | 0      |
| 65-69 |                   |            | 11,011     |              |              |              |            | 11,011 |
| 70-74 |                   |            |            |              |              |              |            | 0      |
| 75-79 |                   |            |            |              |              |              |            | 0      |
| 80-84 |                   |            |            |              |              |              |            | 0      |
| 85+   |                   |            |            |              |              |              |            | 0      |
| ALL   | 0                 | 0          | 11,011     | 0            | 0            | 0            | 0          | 11,011 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 11,011     | 0            | 0            | 0            | 0          | 11,011       |



TABLE 7B

## BUHL POLICE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 1              | 0                              | 0                           |
| B. Additions                   | 0              | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 1                              |                             |
|                                | Non-Vested     | 0                              |                             |
| E. Total on June 30, 1990      | 1              | 0                              | 0                           |

|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>RECIPIENTS</u> |                  |
|---------------------------|----------------------------------|-------------------|------------------|
|                           |                                  | <u>DISABLED</u>   | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 1                                | 0                 | 1                |
| B. Additions              | 0                                | 0                 | 0                |
| C. Deletions:             |                                  |                   |                  |
| 1. Service Retirement     |                                  | 0                 |                  |
| 2. Death                  | 0                                | 0                 | 0                |
| 3. Annuity Expired        | 0                                | 0                 | 0                |
| 4. Returned as Active     | 0                                | 0                 |                  |
| D. Data Adjustments       | 0                                | 0                 | 0                |
| E. Total on June 30, 1990 | 1                                | 0                 | 1                |

TABLE 8B

## BUHL POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |           |
|-------------------------------------------------------------------------------------------------------------------|-----------|
| A. CURRENT ASSETS (0.89% OF TABLE 1, F6)                                                                          | \$771,651 |
| B. EXPECTED FUTURE ASSETS                                                                                         |           |
| 1. Present Value of Employee Contributions                                                                        | 2,608     |
| 2. Present Value of Regular Municipal Contributions                                                               | 3,912     |
| 3. Present Value of Additional Municipal Contributions                                                            | 67,798    |
|                                                                                                                   | -----     |
| 4. Total Expected Future Assets                                                                                   | \$74,318  |
|                                                                                                                   | -----     |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | \$845,969 |
|                                                                                                                   | =====     |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |           |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$433,290 |
| 2. Current Employees                                                                                              |           |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 54,931    |
| b. Employer-financed vested                                                                                       | 345,521   |
| c. Employer-financed nonvested                                                                                    | 0         |
| d. Total                                                                                                          | 400,452   |
|                                                                                                                   | -----     |
| 3. Total Pension Benefit Obligation                                                                               | \$833,742 |
|                                                                                                                   | -----     |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | \$12,227  |
|                                                                                                                   | -----     |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$845,969 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$62,091  |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0       |

\* Estimated

**BUHL POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9B

JULY 1, 1990

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 1                                     | 412,679                                                          | 403,735                                    |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 1                                     | \$412,679                                                        | \$403,735                                  |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 0                                     | \$0                                                              | \$0                                        |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 2                                     | \$433,290 *                                                      | \$433,290 *                                |
| b. Elected Relief Association                                          | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 2                                     | \$433,290                                                        | \$433,290                                  |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 2                                     | \$433,290                                                        | \$433,290                                  |
| b. Elected Relief Association                                          | 0                                     | 0                                                                | 0                                          |
| c. No Election (Greater Value)                                         | 1                                     | 412,679                                                          | 403,735                                    |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| d. Total                                                               | 3                                     | \$845,969                                                        | \$837,025                                  |
|                                                                        | ===                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$837,025                                  |
| 2. Current Assets (0.89% of Table 1,F6)                                |                                       |                                                                  | 771,651                                    |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$65,374                                   |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  | \$8,943                                    |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$433,290.

TABLE 10B

**BUHL POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                           |            |
|-----------------------------------------------------------------------------------------------------------|------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9B)</b>                                        |            |
| 1. Elected PERA Police and Fire                                                                           | \$433,290  |
| 2. Elected Relief Association                                                                             | 0          |
| 3. No Election (Greater Value)                                                                            | 412,679    |
|                                                                                                           | -----      |
| 4. Total                                                                                                  | \$845,969  |
|                                                                                                           | -----      |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                  |            |
| 1. Elected PERA Police and Fire                                                                           | \$0        |
| 2. No Election (Greater Value)                                                                            | 2,608      |
|                                                                                                           | -----      |
| 3. Total                                                                                                  | \$2,608    |
|                                                                                                           | -----      |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                         |            |
| 1. Elected PERA Police and Fire                                                                           | \$0        |
| 2. No Election (Greater Value)                                                                            | 3,912      |
|                                                                                                           | -----      |
| 3. Total                                                                                                  | \$3,912    |
|                                                                                                           | -----      |
| <b>D. CURRENT VALUE OF ASSETS (0.89% OF TABLE 1, F6)</b>                                                  | \$771,651  |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                      |            |
| 1. Initial Contribution - Annual Payment of \$9,556<br>through the Amortization Date of December 31, 2010 | \$95,991   |
| 2. 15 Year Amortization of Prior Years' Loss (Gain)<br>(Table 11B, B.2.b + B.2.c)                         | \$2,985    |
|                                                                                                           | -----      |
| 3. Total                                                                                                  | \$98,976   |
|                                                                                                           | -----      |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                         | (\$31,178) |
|                                                                                                           | =====      |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                         |            |
| 1. MPRIF Mortality                                                                                        | \$1,244    |
| 2. Election of PERA Police and Fire Fund                                                                  | 0          |
| 3. Other                                                                                                  | (32,422)   |
|                                                                                                           | -----      |
| 4. Total                                                                                                  | (\$31,178) |
|                                                                                                           | =====      |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                             | (\$3,604)  |

**BUHL POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|    |                                                             | AMOUNT<br>%                | AMOUNT<br>\$            |
|----|-------------------------------------------------------------|----------------------------|-------------------------|
| A. | EMPLOYEE CONTRIBUTIONS                                      | 8.00%                      |                         |
| B. | EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID) |                            |                         |
| 1. | Regular Municipal Contribution                              | 12.00%                     |                         |
| 2. | Additional Municipal Contribution                           |                            |                         |
|    | <u>Established</u>                                          | <u>Current<br/>Balance</u> | <u>Last<br/>Payment</u> |
| a. | Initial                                                     | 95,991                     | 12/31/2010              |
| b. | 7/1/88                                                      | 2,860                      | 12/31/2002              |
| c. | 7/1/89                                                      | 125                        | 12/31/2003              |
| d. | 7/1/90                                                      | (31,178)                   | 12/31/2004              |
|    |                                                             | -----                      | -----                   |
| e. | Total                                                       | \$67,798                   | \$6,324 *               |
|    |                                                             | =====                      | =====                   |

C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$6,324

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3C

## DULUTH POLICE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     | 1     |       |       |       |     | 1     |
| 35-39 |                  |     |     | 13    | 1     |       |       |     | 14    |
| 40-44 |                  |     |     | 7     | 10    | 12    |       |     | 29    |
| 45-49 |                  |     |     | 1     | 1     | 14    | 6     |     | 22    |
| 50-54 |                  |     |     |       |       | 4     | 5     | 2   | 11    |
| 55-59 |                  |     |     |       |       |       |       | 5   | 5     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 22    | 12    | 30    | 11    | 7   | 82    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |        |        |        |        |        | ALL    |
|-------|------------------|-----|-----|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |     |        |        |        |        |        | 0      |
| 25-29 |                  |     |     |        |        |        |        |        | 0      |
| 30-34 |                  |     |     | 40,702 |        |        |        |        | 40,702 |
| 35-39 |                  |     |     | 40,082 | 40,639 |        |        |        | 40,122 |
| 40-44 |                  |     |     | 38,600 | 43,048 | 40,373 |        |        | 40,867 |
| 45-49 |                  |     |     | 36,716 | 39,755 | 39,327 | 39,043 |        | 39,150 |
| 50-54 |                  |     |     |        |        | 39,208 | 45,000 | 50,603 | 43,913 |
| 55-59 |                  |     |     |        |        |        |        | 44,122 | 44,122 |
| 60-64 |                  |     |     |        |        |        |        |        | 0      |
| 65+   |                  |     |     |        |        |        |        |        | 0      |
| ALL   | 0                | 0   | 0   | 39,486 | 42,573 | 39,730 | 41,751 | 45,974 | 40,884 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14   | 15-19   | 20-24     | 25-29   | 30+     | TOTAL     |
|----|-----|-----|---------|---------|-----------|---------|---------|-----------|
| 0  | 0   | 0   | 868,686 | 510,870 | 1,191,888 | 459,258 | 321,816 | 3,352,518 |

TABLE 4C

## DULUTH POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 | 1             | 5   | 1   |       |       |       |     | 7     |
| 55-59 |               | 4   | 3   | 1     |       |       |     | 8     |
| 60-64 | 1             | 6   | 4   | 3     | 3     |       |     | 17    |
| 65-69 |               | 2   | 5   | 1     | 5     | 1     |     | 14    |
| 70-74 |               |     | 3   | 4     | 1     | 7     | 4   | 19    |
| 75-79 |               |     |     | 4     | 3     | 4     | 3   | 14    |
| 80-84 |               |     |     |       | 1     |       | 1   | 2     |
| 85+   |               |     |     |       |       |       | 3   | 3     |
| TOTAL | 2             | 17  | 16  | 13    | 13    | 12    | 11  | 84    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |        |        |        | ALL    |
|-------|---------------|--------|--------|--------|--------|--------|--------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25+    |        |
| <50   |               |        |        |        |        |        |        | 0      |
| 50-54 | 17,729        | 14,769 | 14,368 |        |        |        |        | 15,135 |
| 55-59 |               | 17,757 | 18,133 | 14,368 |        |        |        | 17,474 |
| 60-64 | 35,196        | 20,033 | 18,434 | 18,434 | 15,874 |        |        | 19,533 |
| 65-69 |               | 20,052 | 18,584 | 18,434 | 17,892 | 14,820 |        | 18,267 |
| 70-74 |               |        | 19,223 | 18,434 | 18,434 | 17,531 | 14,707 | 17,441 |
| 75-79 |               |        |        | 18,434 | 18,434 | 17,079 | 16,928 | 17,724 |
| 80-84 |               |        |        |        | 18,434 |        | 14,820 | 16,627 |
| 85+   |               |        |        |        |        |        | 15,723 | 15,723 |
| ALL   | 26,463        | 17,951 | 18,318 | 18,121 | 17,635 | 17,154 | 15,600 | 17,779 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <1     | 1-4     | 5-9     | 10-14   | 15-19   | 20-24   | 25+     | TOTAL     |
|--------|---------|---------|---------|---------|---------|---------|-----------|
| 52,925 | 305,171 | 293,093 | 235,578 | 229,252 | 205,849 | 171,601 | 1,493,469 |

TABLE 5C

## DULUTH POLICE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |            |            |              |              |              |            | TOTAL |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   | 1              |            |            |              |              |              |            | 1     |
| 50-54 | 1              | 1          |            |              |              |              |            | 2     |
| 55-59 |                |            |            |              |              |              |            | 0     |
| 60-64 |                |            |            |              |              |              |            | 0     |
| 65-69 |                |            |            |              |              |              |            | 0     |
| 70-74 |                |            |            |              |              |              |            | 0     |
| 75-79 |                |            |            |              |              |              |            | 0     |
| 80-84 |                |            |            |              |              |              |            | 0     |
| 85+   |                |            |            |              |              |              |            | 0     |
| TOTAL | 2              | 1          | 0          | 0            | 0            | 0            | 0          | 3     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |            |            |              |              |              |            | ALL    |
|-------|----------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>   | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   | 17,729         |            |            |              |              |              |            | 17,729 |
| 50-54 | 19,128         | 16,321     |            |              |              |              |            | 17,725 |
| 55-59 |                |            |            |              |              |              |            | 0      |
| 60-64 |                |            |            |              |              |              |            | 0      |
| 65-69 |                |            |            |              |              |              |            | 0      |
| 70-74 |                |            |            |              |              |              |            | 0      |
| 75-79 |                |            |            |              |              |              |            | 0      |
| 80-84 |                |            |            |              |              |              |            | 0      |
| 85+   |                |            |            |              |              |              |            | 0      |
| TOTAL | 18,429         | 16,321     | 0          | 0            | 0            | 0            | 0          | 17,726 |

| TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY |            |            |              |              |              |            |              |
|--------------------------------------------------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| <u>&lt;1</u>                                                 | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
| 36,857                                                       | 16,321     | 0          | 0            | 0            | 0            | 0          | 53,178       |



TABLE 6C

## DULUTH POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   | 3                 | 2   | 1   |       |       |       |     | 6     |
| 50-54 |                   |     | 1   |       |       |       |     | 1     |
| 55-59 |                   |     |     |       |       |       |     | 0     |
| 60-64 |                   | 1   |     |       |       |       | 1   | 2     |
| 65-69 |                   |     | 1   | 2     |       |       | 1   | 4     |
| 70-74 |                   |     | 2   | 1     |       |       |     | 3     |
| 75-79 |                   | 1   | 1   |       | 1     | 2     | 2   | 7     |
| 80-84 | 1                 | 1   | 1   |       | 2     | 1     | 2   | 8     |
| 85+   |                   | 1   | 1   | 2     | 2     |       | 5   | 11    |
| TOTAL | 4                 | 6   | 8   | 5     | 5     | 3     | 11  | 42    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL    |
|-------|-------------------|-------|-------|-------|-------|-------|-------|--------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |        |
| <50   | 16,235            | 8,691 | 3,615 |       |       |       |       | 11,617 |
| 50-54 |                   |       | 9,036 |       |       |       |       | 9,036  |
| 55-59 |                   |       |       |       |       |       |       | 0      |
| 60-64 |                   | 9,036 |       |       |       |       | 9,036 | 9,036  |
| 65-69 |                   |       | 9,036 | 9,037 |       |       | 9,036 | 9,036  |
| 70-74 |                   |       | 9,037 | 9,036 |       |       |       | 9,036  |
| 75-79 |                   | 9,036 | 9,036 |       | 9,036 | 8,700 | 8,864 | 8,891  |
| 80-84 | 8,358             | 9,036 | 9,036 |       | 9,037 | 9,036 | 9,037 | 8,952  |
| 85+   |                   | 7,822 | 9,036 | 8,864 | 9,037 |       | 9,036 | 8,895  |
| ALL   | 14,266            | 8,719 | 8,359 | 8,967 | 9,036 | 8,812 | 9,005 | 9,327  |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1     | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25+    | TOTAL   |
|--------|--------|--------|--------|--------|--------|--------|---------|
| 57,064 | 52,312 | 66,868 | 44,836 | 45,182 | 26,435 | 99,054 | 391,751 |

TABLE 7C

## DULUTH POLICE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 88             | 1                              | 1                           |
| B. Additions                   | 0              | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | (2)            | 0                              | 0                           |
| 2. Disability                  | (2)            | 0                              | 0                           |
| 3. Death                       | (2)            | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 82             |                                |                             |
|                                | 0              |                                |                             |
| E. Total on June 30, 1990      | 82             | 1                              | 1                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 85                               | 1               | 40               |
| B. Additions              | 2                                | 3               | 4                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | (3)                              | (1)             | (2)              |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 84                               | 3               | 42               |

## DULUTH POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |            |                     |
|-------------------------------------------------------------------------------------------------------------------|------------|---------------------|
| A. CURRENT ASSETS (31.43% OF TABLE 1, F6)                                                                         |            | \$27,250,534        |
| B. EXPECTED FUTURE ASSETS                                                                                         |            |                     |
| 1. Present Value of Employee Contributions                                                                        |            | 2,826,682           |
| 2. Present Value of Regular Municipal Contributions                                                               |            | 4,240,022           |
| 3. Present Value of Additional Municipal Contributions                                                            |            | 10,009,330          |
| 4. Total Expected Future Assets                                                                                   |            | <u>\$17,076,034</u> |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       |            | <u>\$44,326,568</u> |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |            |                     |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits |            | \$20,849,936        |
| 2. Current Employees                                                                                              |            |                     |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 4,073,698  |                     |
| b. Employer-financed vested                                                                                       | 10,970,187 |                     |
| c. Employer-financed nonvested                                                                                    | 0          |                     |
| d. Total                                                                                                          |            | 15,043,885          |
| 3. Total Pension Benefit Obligation                                                                               |            | <u>\$35,893,821</u> |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     |            | <u>\$8,432,747</u>  |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   |            | \$44,326,568        |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    |            | \$8,643,287         |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          |            | \$0                 |

\* Estimated

TABLE 9C

**DULUTH POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 14                                    | \$4,902,885                                                      | \$4,241,770                                |
| b. No Election (Greater Value)                                         | 68                                    | 18,573,747                                                       | 12,361,450                                 |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 82                                    | \$23,476,632                                                     | \$16,603,220                               |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 2                                     | 505,279                                                          | 505,279                                    |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 2                                     | \$505,279                                                        | \$505,279                                  |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 121                                   | \$18,388,290 *                                                   | \$18,388,290 *                             |
| b. Elected Relief Association                                          | 8                                     | 1,956,367                                                        | 1,956,367                                  |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 129                                   | \$20,344,657                                                     | \$20,344,657                               |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 135                                   | \$23,291,175                                                     | \$22,630,060                               |
| b. Elected Relief Association                                          | 8                                     | 1,956,367                                                        | 1,956,367                                  |
| c. No Election (Greater Value)                                         | 70                                    | 19,079,026                                                       | 12,866,729                                 |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| d. Total                                                               | 213                                   | \$44,326,568                                                     | \$37,453,156                               |
|                                                                        | ===                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$37,453,156                               |
| 2. Current Assets (31.43% of Table 1,F6)                               |                                       |                                                                  | 27,250,534                                 |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$10,202,622                               |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  | \$659,088                                  |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$16,971,620.

**DULUTH POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

TABLE 10C

YEAR ENDING JUNE 30, 1990

|                                                                                                               |               |
|---------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9C)</b>                                            |               |
| 1. Elected PERA Police and Fire                                                                               | \$23,291,175  |
| 2. Elected Relief Association                                                                                 | 1,956,367     |
| 3. No Election (Greater Value)                                                                                | 19,079,026    |
|                                                                                                               | -----         |
| 4. Total                                                                                                      | \$44,326,568  |
|                                                                                                               | -----         |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                      |               |
| 1. Elected PERA Police and Fire                                                                               | \$320,270     |
| 2. No Election (Greater Value)                                                                                | 2,506,412     |
|                                                                                                               | -----         |
| 3. Total                                                                                                      | \$2,826,682   |
|                                                                                                               | -----         |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                             |               |
| 1. Elected PERA Police and Fire                                                                               | \$480,404     |
| 2. No Election (Greater Value)                                                                                | 3,759,618     |
|                                                                                                               | -----         |
| 3. Total                                                                                                      | \$4,240,022   |
|                                                                                                               | -----         |
| <b>D. CURRENT VALUE OF ASSETS (31.43% OF TABLE 1, F6)</b>                                                     | \$27,250,534  |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                          |               |
| 1. Initial Contribution - Annual Payment of \$1,289,796<br>through the Amortization Date of December 31, 2010 | \$12,956,162  |
| 2. 15 Year Amortization of Prior Years' Loss (Gain)<br>(Table 11B, B.2.b + B.2.c)                             | (\$2,723,118) |
|                                                                                                               | -----         |
| 3. Total                                                                                                      | \$10,233,044  |
|                                                                                                               | -----         |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                             | (\$223,714)   |
|                                                                                                               | =====         |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                             |               |
| 1. MPRIF Mortality                                                                                            | (\$293,992)   |
| 2. Election of PERA Police and Fire Fund                                                                      | (166,002)     |
| 3. Other                                                                                                      | 236,280       |
|                                                                                                               | -----         |
| 4. Total                                                                                                      | (\$223,714)   |
|                                                                                                               | =====         |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                                 | (\$25,863)    |

**DULUTH POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                    | AMOUNT<br>%                | AMOUNT<br>\$            |
|--------------------------------------------------------------------------|--------------------|----------------------------|-------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                    | 8.00%                      |                         |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                    |                            |                         |
| 1. Regular Municipal Contribution                                        |                    | 12.00%                     |                         |
| 2. Additional Municipal Contribution                                     |                    |                            |                         |
|                                                                          | <u>Established</u> | <u>Current<br/>Balance</u> | <u>Last<br/>Payment</u> |
| a. Initial                                                               |                    | 12,956,162                 | 12/31/2010              |
| b. 7/1/88                                                                |                    | 187,341                    | 12/31/2002              |
| c. 7/1/89                                                                |                    | (2,910,459)                | 12/31/2003              |
| d. 7/1/90                                                                |                    | (223,714)                  | 12/31/2004              |
|                                                                          |                    | -----                      | -----                   |
| e. Total                                                                 |                    | \$10,009,330               | \$938,492 *             |
|                                                                          |                    | =====                      | =====                   |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$938,492 |                    |                            |                         |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3D

## HIBBING FIRE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     | 1     |       |       |       |     | 1     |
| 35-39 |                  |     |     | 6     | 1     |       |       |     | 7     |
| 40-44 |                  |     |     | 4     | 1     |       |       |     | 5     |
| 45-49 |                  |     |     |       | 1     | 3     |       |     | 4     |
| 50-54 |                  |     |     |       |       | 2     |       |     | 2     |
| 55-59 |                  |     |     |       | 1     |       |       |     | 1     |
| 60-64 |                  |     |     |       |       |       |       | 1   | 1     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 11    | 4     | 5     | 0     | 1   | 21    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |        |        |        |       |        | ALL    |
|-------|------------------|-----|-----|--------|--------|--------|-------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14  | 15-19  | 20-24  | 25-29 | 30+    |        |
| <25   |                  |     |     |        |        |        |       |        | 0      |
| 25-29 |                  |     |     |        |        |        |       |        | 0      |
| 30-34 |                  |     |     | 27,095 |        |        |       |        | 27,095 |
| 35-39 |                  |     |     | 30,679 | 28,200 |        |       |        | 30,325 |
| 40-44 |                  |     |     | 27,782 | 27,988 |        |       |        | 27,823 |
| 45-49 |                  |     |     |        | 27,802 | 26,880 |       |        | 27,111 |
| 50-54 |                  |     |     |        |        | 29,120 |       |        | 29,120 |
| 55-59 |                  |     |     |        | 26,865 |        |       |        | 26,865 |
| 60-64 |                  |     |     |        |        |        |       | 37,452 | 37,452 |
| 65+   |                  |     |     |        |        |        |       |        | 0      |
| ALL   | 0                | 0   | 0   | 29,300 | 27,714 | 27,776 | 0     | 37,452 | 29,023 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14   | 15-19   | 20-24   | 25-29 | 30+    | TOTAL   |
|----|-----|-----|---------|---------|---------|-------|--------|---------|
| 0  | 0   | 0   | 322,296 | 110,855 | 138,880 | 0     | 37,452 | 609,483 |

TABLE 4D

## HIBBING FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 |               |     |     |       |       |       |     | 0     |
| 55-59 |               | 4   |     |       |       |       |     | 4     |
| 60-64 |               | 1   | 7   |       |       |       |     | 8     |
| 65-69 |               |     | 1   | 1     |       |       |     | 2     |
| 70-74 |               |     |     | 1     |       |       |     | 1     |
| 75-79 |               |     |     |       |       |       |     | 0     |
| 80-84 |               |     |     |       |       |       |     | 0     |
| 85+   |               |     |     |       |       | 1     | 1   | 2     |
| TOTAL | 0             | 5   | 8   | 2     | 0     | 1     | 1   | 17    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |       |       |       | ALL    |
|-------|---------------|--------|--------|--------|-------|-------|-------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19 | 20-24 | 25+   |        |
| <50   |               |        |        |        |       |       |       | 0      |
| 50-54 |               |        |        |        |       |       |       | 0      |
| 55-59 |               | 17,316 |        |        |       |       |       | 17,316 |
| 60-64 |               | 15,905 | 16,127 |        |       |       |       | 16,099 |
| 65-69 |               |        | 11,981 | 14,705 |       |       |       | 13,343 |
| 70-74 |               |        |        | 16,088 |       |       |       | 16,088 |
| 75-79 |               |        |        |        |       |       |       | 0      |
| 80-84 |               |        |        |        |       |       |       | 0      |
| 85+   |               |        |        |        |       | 7,046 | 6,341 | 6,694  |
| ALL   | 0             | 17,034 | 15,608 | 15,397 | 0     | 7,046 | 6,341 | 14,954 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <1 | 1-4    | 5-9     | 10-14  | 15-19 | 20-24 | 25+   | TOTAL   |
|----|--------|---------|--------|-------|-------|-------|---------|
| 0  | 85,169 | 124,867 | 30,793 | 0     | 7,046 | 6,341 | 254,216 |



TABLE 6D

## HIBBING FIRE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     |     |       |       |       |     | 0     |
| 50-54 |                   |     |     |       |       |       |     | 0     |
| 55-59 |                   |     |     |       |       |       | 1   | 1     |
| 60-64 |                   |     | 1   |       |       |       |     | 1     |
| 65-69 |                   |     |     |       |       |       |     | 0     |
| 70-74 |                   |     |     |       |       |       |     | 0     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   | 1   |     |       |       |       | 3   | 4     |
| 85+   |                   |     | 1   |       | 1     | 2     | 2   | 6     |
| TOTAL | 0                 | 1   | 2   | 0     | 1     | 2     | 6   | 12    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL   |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   |                   |       |       |       |       |       |       | 0     |
| 50-54 |                   |       |       |       |       |       |       | 0     |
| 55-59 |                   |       |       |       |       |       | 3,121 | 3,121 |
| 60-64 |                   |       | 5,824 |       |       |       |       | 5,824 |
| 65-69 |                   |       |       |       |       |       |       | 0     |
| 70-74 |                   |       |       |       |       |       |       | 0     |
| 75-79 |                   |       |       |       |       |       |       | 0     |
| 80-84 |                   | 3,121 |       |       |       |       | 3,121 | 3,121 |
| 85+   |                   |       | 3,121 |       | 3,121 | 3,121 | 3,121 | 3,121 |
| ALL   | 0                 | 3,121 | 4,473 | 0     | 3,121 | 3,121 | 3,121 | 3,346 |

| TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH |       |       |       |       |       |        |        |
|------------------------------------------------------------|-------|-------|-------|-------|-------|--------|--------|
| <1                                                         | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+    | TOTAL  |
| 0                                                          | 3,121 | 8,945 | 0     | 3,121 | 6,242 | 18,727 | 40,156 |

**HIBBING FIRE CONSOLIDATION ACCOUNT**  
**RECONCILIATION OF MEMBERS**

TABLE 7D

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 21             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 21                             |                             |
|                                | Non-Vested     | 0                              |                             |
| E. Total on June 30, 1990      | 21             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 17                               | 0               | 12               |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 17                               | 0               | 12               |

TABLE 8D

## HIBBING FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |             |
|-------------------------------------------------------------------------------------------------------------------|-------------|
| A. CURRENT ASSETS (4.13% OF TABLE 1, F6)                                                                          | \$3,580,805 |
| B. EXPECTED FUTURE ASSETS                                                                                         |             |
| 1. Present Value of Employee Contributions                                                                        | 607,593     |
| 2. Present Value of Regular Municipal Contributions                                                               | 911,390     |
| 3. Present Value of Additional Municipal Contributions                                                            | 1,631,595   |
|                                                                                                                   | -----       |
| 4. Total Expected Future Assets                                                                                   | \$3,150,578 |
|                                                                                                                   | -----       |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | \$6,731,383 |
|                                                                                                                   | =====       |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |             |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$3,129,311 |
| 2. Current Employees                                                                                              |             |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 765,391     |
| b. Employer-financed vested                                                                                       | 1,354,983   |
| c. Employer-financed nonvested                                                                                    | 0           |
| d. Total                                                                                                          | 2,120,374   |
|                                                                                                                   | -----       |
| 3. Total Pension Benefit Obligation                                                                               | \$5,249,685 |
|                                                                                                                   | -----       |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | \$1,481,698 |
|                                                                                                                   | -----       |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$6,731,383 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$1,668,880 |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0         |

\* Estimated

**HIBBING FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9D

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 21                           | \$3,602,072                                            | \$2,337,313                       |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 21                           | \$3,602,072                                            | \$2,337,313                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 29                           | \$3,129,311 *                                          | \$3,129,311 *                     |
| b. Elected Relief Association                                          | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 29                           | \$3,129,311                                            | \$3,129,311                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 50                           | \$6,731,383                                            | \$5,466,624                       |
| b. Elected Relief Association                                          | 0                            | 0                                                      | 0                                 |
| c. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 50                           | \$6,731,383                                            | \$5,466,624                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$5,466,624                       |
| 2. Current Assets (4.13% of Table 1,F6)                                |                              |                                                        | 3,580,805                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$1,885,819                       |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$109,243                         |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$3,005,735.

TABLE 10D

**HIBBING FIRE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9D)</b>                                          |               |
| 1. Elected PERA Police and Fire                                                                             | \$6,731,383   |
| 2. Elected Relief Association                                                                               | 0             |
| 3. No Election (Greater Value)                                                                              | 0             |
| 4. Total                                                                                                    | \$6,731,383   |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |               |
| 1. Elected PERA Police and Fire                                                                             | \$607,593     |
| 2. No Election (Greater Value)                                                                              | 0             |
| 3. Total                                                                                                    | \$607,593     |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$911,390     |
| 2. No Election (Greater Value)                                                                              | 0             |
| 3. Total                                                                                                    | \$911,390     |
| <b>D. CURRENT VALUE OF ASSETS (4.13% OF TABLE 1, F6)</b>                                                    |               |
|                                                                                                             | \$3,580,805   |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |               |
| 1. Initial Contribution - Annual Payment of \$429,018<br>through the Amortization Date of December 31, 2010 | \$4,309,539   |
| 2. Total                                                                                                    | \$4,309,539   |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           |               |
|                                                                                                             | (\$2,677,944) |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |               |
| 1. MPRIF Mortality                                                                                          | \$1,098       |
| 2. Election of PERA Police and Fire Fund                                                                    | (1,713,137)   |
| 3. Other                                                                                                    | (965,905)     |
| 4. Total                                                                                                    | (\$2,677,944) |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               |               |
|                                                                                                             | (\$309,590)   |

TABLE 11D

**HIBBING FIRE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                                               | <u>AMOUNT</u><br><u>%</u>                   | <u>AMOUNT</u><br><u>\$</u>    |
|--------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                                               | 8.00%                                       |                               |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                                               |                                             |                               |
| 1. Regular Municipal Contribution                                        |                                               | 12.00%                                      |                               |
| 2. Additional Municipal Contribution                                     |                                               |                                             |                               |
| a. <u>Established</u><br>Initial                                         | <u>Current</u><br><u>Balance</u><br>4,309,539 | <u>Last</u><br><u>Payment</u><br>12/31/2010 | 429,018                       |
| b. 7/1/90                                                                | (2,677,944)                                   | 12/31/2004                                  | (309,590)                     |
| c. Total                                                                 | -----<br>\$1,631,595<br>=====                 |                                             | -----<br>\$119,428 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$119,428 |                                               |                                             |                               |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3E

## HIBBING POLICE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     | 1   |       |       |       |       |     | 1     |
| 35-39 |                  |     |     | 3     | 1     |       |       |     | 4     |
| 40-44 |                  |     | 1   | 2     | 1     |       |       |     | 4     |
| 45-49 |                  |     |     |       | 1     | 3     |       |     | 4     |
| 50-54 |                  |     |     |       | 2     | 1     | 1     |     | 4     |
| 55-59 |                  |     |     |       |       |       | 3     |     | 3     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 2   | 5     | 5     | 4     | 4     | 0   | 20    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |        |        |        |        |        |     | ALL    |
|-------|------------------|-----|--------|--------|--------|--------|--------|-----|--------|
|       | <1               | 1-4 | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30+ |        |
| <25   |                  |     |        |        |        |        |        |     | 0      |
| 25-29 |                  |     |        |        |        |        |        |     | 0      |
| 30-34 |                  |     | 26,595 |        |        |        |        |     | 26,595 |
| 35-39 |                  |     |        | 25,328 | 25,815 |        |        |     | 25,450 |
| 40-44 |                  |     | 22,010 | 25,081 | 26,437 |        |        |     | 24,652 |
| 45-49 |                  |     |        |        | 26,615 | 29,494 |        |     | 28,774 |
| 50-54 |                  |     |        |        | 26,185 | 26,910 | 26,717 |     | 26,499 |
| 55-59 |                  |     |        |        |        |        | 30,177 |     | 30,177 |
| 60-64 |                  |     |        |        |        |        |        |     | 0      |
| 65+   |                  |     |        |        |        |        |        |     | 0      |
| ALL   | 0                | 0   | 24,303 | 25,229 | 26,247 | 28,848 | 29,312 | 0   | 26,931 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9    | 10-14   | 15-19   | 20-24   | 25-29   | 30+ | TOTAL   |
|----|-----|--------|---------|---------|---------|---------|-----|---------|
| 0  | 0   | 48,605 | 126,146 | 131,236 | 115,391 | 117,249 | 0   | 538,627 |

TABLE 4E

## HIBBING POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 |               |     |     |       |       |       |     | 0     |
| 55-59 |               | 2   |     |       |       |       |     | 2     |
| 60-64 |               | 1   | 1   |       |       |       |     | 2     |
| 65-69 |               |     | 1   | 2     |       | 1     |     | 4     |
| 70-74 |               |     |     |       |       |       |     | 0     |
| 75-79 |               |     |     |       |       | 1     |     | 1     |
| 80-84 |               |     |     |       | 2     |       | 2   | 4     |
| 85+   |               |     |     |       |       |       |     | 0     |
| TOTAL | 0             | 3   | 2   | 2     | 2     | 2     | 2   | 13    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |        |       |        | ALL    |
|-------|---------------|--------|--------|--------|--------|-------|--------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25+    |        |
| <50   |               |        |        |        |        |       |        | 0      |
| 50-54 |               |        |        |        |        |       |        | 0      |
| 55-59 |               | 18,795 |        |        |        |       |        | 18,795 |
| 60-64 |               | 19,413 | 22,690 |        |        |       |        | 21,052 |
| 65-69 |               |        | 16,722 | 15,673 |        | 1,498 |        | 12,392 |
| 70-74 |               |        |        |        |        |       |        | 0      |
| 75-79 |               |        |        |        |        | 1,498 |        | 1,498  |
| 80-84 |               |        |        |        | 14,325 |       | 16,537 | 15,431 |
| 85+   |               |        |        |        |        |       |        | 0      |
| ALL   | 0             | 19,001 | 19,706 | 15,673 | 14,325 | 1,498 | 16,537 | 14,806 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <1 | 1-4    | 5-9    | 10-14  | 15-19  | 20-24 | 25+    | TOTAL   |
|----|--------|--------|--------|--------|-------|--------|---------|
| 0  | 57,002 | 39,412 | 31,346 | 28,650 | 2,996 | 33,074 | 192,480 |



TABLE 6E

## HIBBING POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |            |            |              |              |              |            | TOTAL |
|-------|-------------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>      | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |                   |            |            |              |              |              |            | 0     |
| 50-54 |                   | 1          |            |              |              |              |            | 1     |
| 55-59 |                   |            |            |              |              |              |            | 0     |
| 60-64 |                   |            |            |              |              |              |            | 0     |
| 65-69 |                   |            |            |              |              |              |            | 0     |
| 70-74 |                   |            |            |              |              |              |            | 0     |
| 75-79 |                   |            |            |              |              |              |            | 0     |
| 80-84 |                   |            |            |              |              |              |            | 0     |
| 85+   |                   |            |            |              | 2            |              | 1          | 3     |
| TOTAL | 0                 | 1          | 0          | 0            | 2            | 0            | 1          | 4     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |            |            |              |              |              |            | ALL   |
|-------|-------------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>      | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |                   |            |            |              |              |              |            | 0     |
| 50-54 |                   | 8,738      |            |              |              |              |            | 8,738 |
| 55-59 |                   |            |            |              |              |              |            | 0     |
| 60-64 |                   |            |            |              |              |              |            | 0     |
| 65-69 |                   |            |            |              |              |              |            | 0     |
| 70-74 |                   |            |            |              |              |              |            | 0     |
| 75-79 |                   |            |            |              |              |              |            | 0     |
| 80-84 |                   |            |            |              |              |              |            | 0     |
| 85+   |                   |            |            |              | 3,121        |              | 3,121      | 3,121 |
| ALL   | 0                 | 8,738      | 0          | 0            | 3,121        | 0            | 3,121      | 4,525 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | TOTAL  |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------|
| 0            | 8,738      | 0          | 0            | 6,242        | 0            | 3,121      | 18,101 |

TABLE 7E

**HIBBING POLICE CONSOLIDATION ACCOUNT**  
**RECONCILIATION OF MEMBERS**

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 20             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 19                             |                             |
|                                | Non-Vested     | 1                              |                             |
| E. Total on June 30, 1990      | 20             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 13                               | 0               | 4                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 13                               | 0               | 4                |

TABLE 8E

## HIBBING POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |             |
|-------------------------------------------------------------------------------------------------------------------|-------------|
| A. CURRENT ASSETS (2.81% OF TABLE 1, F6)                                                                          | \$2,436,335 |
| B. EXPECTED FUTURE ASSETS                                                                                         |             |
| 1. Present Value of Employee Contributions                                                                        | 462,303     |
| 2. Present Value of Regular Municipal Contributions                                                               | 693,455     |
| 3. Present Value of Additional Municipal Contributions                                                            | 1,902,491   |
|                                                                                                                   | -----       |
| 4. Total Expected Future Assets                                                                                   | \$3,058,249 |
|                                                                                                                   | -----       |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | \$5,494,584 |
|                                                                                                                   | =====       |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |             |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$2,036,401 |
| 2. Current Employees                                                                                              |             |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 846,831     |
| b. Employer-financed vested                                                                                       | 1,250,997   |
| c. Employer-financed nonvested                                                                                    | 168,256     |
| d. Total                                                                                                          | 2,266,084   |
|                                                                                                                   | -----       |
| 3. Total Pension Benefit Obligation                                                                               | \$4,302,485 |
|                                                                                                                   | -----       |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | \$1,192,099 |
|                                                                                                                   | -----       |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$5,494,584 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$1,866,150 |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0         |

\* Estimated

**HIBBING POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9E

JULY 1, 1990

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 18                                    | \$2,980,714                                                      | \$2,029,775                                |
| b. No Election (Greater Value)                                         | 2                                     | 477,469                                                          | 436,128                                    |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 20                                    | \$3,458,183                                                      | \$2,465,903                                |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 0                                     | \$0                                                              | \$0                                        |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 17                                    | \$2,036,401 *                                                    | \$2,036,401 *                              |
| b. Elected Relief Association                                          | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 17                                    | \$2,036,401                                                      | \$2,036,401                                |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 35                                    | \$5,017,115                                                      | \$4,066,176                                |
| b. Elected Relief Association                                          | 0                                     | 0                                                                | 0                                          |
| c. No Election (Greater Value)                                         | 2                                     | 477,469                                                          | 436,128                                    |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| d. Total                                                               | 37                                    | \$5,494,584                                                      | \$4,502,304                                |
|                                                                        | ===                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$4,502,304                                |
| 2. Current Assets (2.81% of Table 1,F6)                                |                                       |                                                                  | 2,436,335                                  |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$2,065,969                                |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  | \$100,700                                  |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$1,898,418.

TABLE 10E

**HIBBING POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9E)</b>                                          |               |
| 1. Elected PERA Police and Fire                                                                             | \$5,017,115   |
| 2. Elected Relief Association                                                                               | 0             |
| 3. No Election (Greater Value)                                                                              | 477,469       |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | \$5,494,584   |
|                                                                                                             | -----         |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |               |
| 1. Elected PERA Police and Fire                                                                             | \$447,910     |
| 2. No Election (Greater Value)                                                                              | 14,393        |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$462,303     |
|                                                                                                             | -----         |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$671,865     |
| 2. No Election (Greater Value)                                                                              | 21,590        |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$693,455     |
|                                                                                                             | -----         |
| <b>D. CURRENT VALUE OF ASSETS (2.81% OF TABLE 1, F6)</b>                                                    | \$2,436,335   |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |               |
| 1. Initial Contribution - Annual Payment of \$326,333<br>through the Amortization Date of December 31, 2010 | \$3,278,056   |
|                                                                                                             | -----         |
| 2. Total                                                                                                    | \$3,278,056   |
|                                                                                                             | -----         |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | (\$1,375,565) |
|                                                                                                             | =====         |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |               |
| 1. MPRIF Mortality                                                                                          | \$56,512      |
| 2. Election of PERA Police and Fire Fund                                                                    | (1,263,001)   |
| 3. Other                                                                                                    | (169,076)     |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | (\$1,375,565) |
|                                                                                                             | =====         |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | (\$159,025)   |

TABLE 11E

**HIBBING POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                                               | <u>AMOUNT</u><br><u>%</u>                   | <u>AMOUNT</u><br><u>\$</u>    |
|--------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                                               | 8.00%                                       |                               |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                                               |                                             |                               |
| 1. Regular Municipal Contribution                                        |                                               | 12.00%                                      |                               |
| 2. Additional Municipal Contribution                                     |                                               |                                             |                               |
| a. <u>Established</u><br>Initial                                         | <u>Current</u><br><u>Balance</u><br>3,278,056 | <u>Last</u><br><u>Payment</u><br>12/31/2010 | 326,333                       |
| b. 7/1/90                                                                | (1,375,565)                                   | 12/31/2004                                  | (159,025)                     |
| c. Total                                                                 | \$1,902,491<br>=====                          |                                             | -----<br>\$167,308 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$167,308 |                                               |                                             |                               |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3F

## RED WING FIRE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     |       |       |       |       |     | 0     |
| 35-39 |                  |     |     |       |       |       |       |     | 0     |
| 40-44 |                  |     |     |       |       |       |       |     | 0     |
| 45-49 |                  |     |     |       | 3     |       |       |     | 3     |
| 50-54 |                  |     |     |       | 4     | 1     |       | 1   | 6     |
| 55-59 |                  |     |     |       |       | 1     | 1     | 2   | 4     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 0     | 7     | 2     | 1     | 3   | 13    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |       |        |        |        |        | ALL    |
|-------|------------------|-----|-----|-------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |     |       |        |        |        |        | 0      |
| 25-29 |                  |     |     |       |        |        |        |        | 0      |
| 30-34 |                  |     |     |       |        |        |        |        | 0      |
| 35-39 |                  |     |     |       |        |        |        |        | 0      |
| 40-44 |                  |     |     |       |        |        |        |        | 0      |
| 45-49 |                  |     |     |       | 43,823 |        |        |        | 43,823 |
| 50-54 |                  |     |     |       | 43,504 | 43,755 |        | 36,905 | 42,446 |
| 55-59 |                  |     |     |       |        | 42,971 | 32,730 | 50,467 | 44,159 |
| 60-64 |                  |     |     |       |        |        |        |        | 0      |
| 65+   |                  |     |     |       |        |        |        |        | 0      |
| ALL   | 0                | 0   | 0   | 0     | 43,641 | 43,363 | 32,730 | 45,946 | 43,291 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14 | 15-19   | 20-24  | 25-29  | 30+     | TOTAL   |
|----|-----|-----|-------|---------|--------|--------|---------|---------|
| 0  | 0   | 0   | 0     | 305,487 | 86,726 | 32,730 | 137,839 | 562,782 |

TABLE 4F

## RED WING FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |            |            |              |              |              |            | TOTAL |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |               |            |            |              |              |              |            | 0     |
| 50-54 |               |            |            |              |              |              |            | 0     |
| 55-59 |               | 4          | 1          |              |              |              |            | 5     |
| 60-64 |               |            | 1          |              |              |              |            | 1     |
| 65-69 |               |            |            | 1            | 1            |              |            | 2     |
| 70-74 |               |            |            | 1            |              |              |            | 1     |
| 75-79 |               |            |            |              |              |              |            | 0     |
| 80-84 |               |            |            |              |              |              |            | 0     |
| 85+   |               |            |            |              |              |              |            | 0     |
| TOTAL | 0             | 4          | 2          | 2            | 1            | 0            | 0          | 9     |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |            |            |              |              |              |            | ALL    |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   |               |            |            |              |              |              |            | 0      |
| 50-54 |               |            |            |              |              |              |            | 0      |
| 55-59 |               | 13,423     | 13,317     |              |              |              |            | 13,402 |
| 60-64 |               |            | 11,480     |              |              |              |            | 11,480 |
| 65-69 |               |            |            | 13,666       | 10,414       |              |            | 12,040 |
| 70-74 |               |            |            | 13,235       |              |              |            | 13,235 |
| 75-79 |               |            |            |              |              |              |            | 0      |
| 80-84 |               |            |            |              |              |              |            | 0      |
| 85+   |               |            |            |              |              |              |            | 0      |
| ALL   | 0             | 13,423     | 12,399     | 13,451       | 10,414       | 0            | 0          | 12,867 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 53,693     | 24,797     | 26,901       | 10,414       | 0            | 0          | 115,805      |



TABLE 6F

## RED WING FIRE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     | 3   |       |       |       |     | 3     |
| 50-54 |                   |     |     |       |       |       |     | 0     |
| 55-59 |                   |     |     |       |       |       |     | 0     |
| 60-64 |                   |     |     | 1     |       |       |     | 1     |
| 65-69 |                   | 1   |     |       |       |       |     | 1     |
| 70-74 |                   |     |     |       |       |       |     | 0     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   |     |     |       |       |       | 1   | 1     |
| 85+   |                   |     |     |       |       | 1     |     | 1     |
| TOTAL | 0                 | 1   | 3   | 1     | 0     | 1     | 1   | 7     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL   |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   |                   |       | 2,104 |       |       |       |       | 2,104 |
| 50-54 |                   |       |       |       |       |       |       | 0     |
| 55-59 |                   |       |       |       |       |       |       | 0     |
| 60-64 |                   |       |       | 8,843 |       |       |       | 8,843 |
| 65-69 |                   | 7,192 |       |       |       |       |       | 7,192 |
| 70-74 |                   |       |       |       |       |       |       | 0     |
| 75-79 |                   |       |       |       |       |       |       | 0     |
| 80-84 |                   |       |       |       |       |       | 4,583 | 4,583 |
| 85+   |                   |       |       |       |       | 4,398 |       | 4,398 |
| ALL   | 0                 | 7,192 | 2,104 | 8,843 | 0     | 4,398 | 4,583 | 4,475 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   | TOTAL  |
|----|-------|-------|-------|-------|-------|-------|--------|
| 0  | 7,192 | 6,311 | 8,843 | 0     | 4,398 | 4,583 | 31,327 |

TABLE 7F

## RED WING FIRE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 14             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | (1)            | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 11             |                                |                             |
|                                | 2              |                                |                             |
| E. Total on June 30, 1990      | 13             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 10                               | 0               | 7                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | (1)                              | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 9                                | 0               | 7                |

TABLE 8F

## RED WING FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                    |
|-------------------------------------------------------------------------------------------------------------------|--------------------|
| A. CURRENT ASSETS (5.02% OF TABLE 1, F6)                                                                          | \$4,352,456        |
| B. EXPECTED FUTURE ASSETS                                                                                         |                    |
| 1. Present Value of Employee Contributions                                                                        | 305,590            |
| 2. Present Value of Regular Municipal Contributions                                                               | 458,384            |
| 3. Present Value of Additional Municipal Contributions                                                            | 985,811            |
| 4. Total Expected Future Assets                                                                                   | <u>\$1,749,785</u> |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$6,102,241</u> |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                    |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$2,282,202        |
| 2. Current Employees                                                                                              |                    |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 673,698            |
| b. Employer-financed vested                                                                                       | 1,827,555          |
| c. Employer-financed nonvested                                                                                    | 443,084            |
| d. Total                                                                                                          | 2,944,337          |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$5,226,539</u> |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$875,702</u>   |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$6,102,241        |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$874,083          |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                |

\* Estimated

TABLE 9F

**RED WING FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 11                           | \$3,160,749                                            | \$2,617,979                       |
| b. No Election (Greater Value)                                         | 2                            | 659,290                                                | 491,405                           |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 13                           | \$3,820,039                                            | \$3,109,384                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 1                            | \$212,016 *                                            | \$212,016 *                       |
| b. Elected Relief Association                                          | 15                           | 2,070,186                                              | 2,070,186                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 16                           | \$2,282,202                                            | \$2,282,202                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 12                           | \$3,372,765                                            | \$2,829,995                       |
| b. Elected Relief Association                                          | 15                           | 2,070,186                                              | 2,070,186                         |
| c. No Election (Greater Value)                                         | 2                            | 659,290                                                | 491,405                           |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 29                           | \$6,102,241                                            | \$5,391,586                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$5,391,586                       |
| 2. Current Assets (5.02% of Table 1,F6)                                |                              |                                                        | 4,352,456                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$1,039,130                       |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$111,224                         |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$212,016.

TABLE 10F

**RED WING FIRE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |             |
|-------------------------------------------------------------------------------------------------------------|-------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9F)</b>                                          |             |
| 1. Elected PERA Police and Fire                                                                             | \$3,372,765 |
| 2. Elected Relief Association                                                                               | 2,070,186   |
| 3. No Election (Greater Value)                                                                              | 659,290     |
|                                                                                                             | -----       |
| 4. Total                                                                                                    | \$6,102,241 |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |             |
| 1. Elected PERA Police and Fire                                                                             | \$245,315   |
| 2. No Election (Greater Value)                                                                              | 60,275      |
|                                                                                                             | -----       |
| 3. Total                                                                                                    | \$305,590   |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |             |
| 1. Elected PERA Police and Fire                                                                             | \$367,972   |
| 2. No Election (Greater Value)                                                                              | 90,412      |
|                                                                                                             | -----       |
| 3. Total                                                                                                    | \$458,384   |
| <b>D. CURRENT VALUE OF ASSETS (5.02% OF TABLE 1, F6)</b>                                                    |             |
|                                                                                                             | \$4,352,456 |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |             |
| 1. Initial Contribution - Annual Payment of \$140,194<br>through the Amortization Date of December 31, 2010 | \$1,408,266 |
|                                                                                                             | -----       |
| 2. Total                                                                                                    | \$1,408,266 |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           |             |
|                                                                                                             | -----       |
|                                                                                                             | (\$422,455) |
|                                                                                                             | =====       |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |             |
| 1. MPRIF Mortality                                                                                          | \$12,650    |
| 2. Election of PERA Police and Fire Fund                                                                    | (1,156,259) |
| 3. Other                                                                                                    | 721,154     |
|                                                                                                             | -----       |
| 4. Total                                                                                                    | (\$422,455) |
|                                                                                                             | =====       |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               |             |
|                                                                                                             | (\$48,839)  |

**RED WING FIRE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                         | <u>AMOUNT</u><br><u>%</u>                     | <u>AMOUNT</u><br><u>\$</u>                  |
|-------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                               | 8.00%                                         |                                             |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)          |                                               |                                             |
| 1. Regular Municipal Contribution                                       | 12.00%                                        |                                             |
| 2. Additional Municipal Contribution                                    |                                               |                                             |
| a. <u>Established</u><br>Initial                                        | <u>Current</u><br><u>Balance</u><br>1,408,266 | <u>Last</u><br><u>Payment</u><br>12/31/2010 |
| b. 7/1/90                                                               | (422,455)                                     | (48,839)                                    |
| c. Total                                                                | -----<br>\$985,811<br>=====                   | -----<br>\$91,355 *<br>=====                |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$91,355 |                                               |                                             |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3G

## RED WING POLICE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |            |            |              |              |              |              |            | TOTAL |
|-------|------------------|------------|------------|--------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>     | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> |       |
| <25   |                  |            |            |              |              |              |              |            | 0     |
| 25-29 |                  |            |            |              |              |              |              |            | 0     |
| 30-34 |                  |            |            |              |              |              |              |            | 0     |
| 35-39 |                  |            |            |              |              |              |              |            | 0     |
| 40-44 |                  |            |            | 1            | 2            |              |              |            | 3     |
| 45-49 |                  |            |            |              | 2            | 3            |              |            | 5     |
| 50-54 |                  |            |            |              |              |              |              |            | 0     |
| 55-59 |                  |            |            |              |              |              |              |            | 0     |
| 60-64 |                  |            |            |              |              |              |              |            | 0     |
| 65+   |                  |            |            |              |              |              |              |            | 0     |
| TOTAL | 0                | 0          | 0          | 1            | 4            | 3            | 0            | 0          | 8     |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |            |            |              |              |              |              |            | ALL    |
|-------|------------------|------------|------------|--------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>     | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> |        |
| <25   |                  |            |            |              |              |              |              |            | 0      |
| 25-29 |                  |            |            |              |              |              |              |            | 0      |
| 30-34 |                  |            |            |              |              |              |              |            | 0      |
| 35-39 |                  |            |            |              |              |              |              |            | 0      |
| 40-44 |                  |            |            | 39,019       | 43,385       |              |              |            | 41,930 |
| 45-49 |                  |            |            |              | 25,552       | 47,316       |              |            | 38,610 |
| 50-54 |                  |            |            |              |              |              |              |            | 0      |
| 55-59 |                  |            |            |              |              |              |              |            | 0      |
| 60-64 |                  |            |            |              |              |              |              |            | 0      |
| 65+   |                  |            |            |              |              |              |              |            | 0      |
| ALL   | 0                | 0          | 0          | 39,019       | 34,469       | 47,316       | 0            | 0          | 39,855 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 0          | 39,019       | 137,874      | 141,947      | 0            | 0          | 318,840      |

TABLE 4G

## RED WING POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                      |            |            |              |              |              |            | 0            |
| 50-54      |                      | 1          | 1          |              |              |              |            | 2            |
| 55-59      |                      | 2          | 1          |              |              |              |            | 3            |
| 60-64      |                      |            |            | 2            |              |              |            | 2            |
| 65-69      |                      |            |            |              | 1            | 1            |            | 2            |
| 70-74      |                      |            |            |              |              |              |            | 0            |
| 75-79      |                      |            |            |              |              | 1            | 1          | 2            |
| 80-84      |                      |            |            |              |              |              |            | 0            |
| 85+        |                      |            |            |              |              |              |            | 0            |
| TOTAL      | 0                    | 3          | 2          | 2            | 1            | 2            | 1          | 11           |

## AVERAGE ANNUAL ANNUITY

| <u>AGE</u> | <u>YEARS RETIRED</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|----------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>         | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                      |            |            |              |              |              |            | 0          |
| 50-54      |                      | 20,557     | 14,873     |              |              |              |            | 17,715     |
| 55-59      |                      | 16,796     | 17,127     |              |              |              |            | 16,906     |
| 60-64      |                      |            |            | 14,982       |              |              |            | 14,982     |
| 65-69      |                      |            |            |              |              | 4,128        |            | 2,064      |
| 70-74      |                      |            |            |              |              |              |            | 0          |
| 75-79      |                      |            |            |              |              | 3,378        | 3,438      | 3,408      |
| 80-84      |                      |            |            |              |              |              |            | 0          |
| 85+        |                      |            |            |              |              |              |            | 0          |
| ALL        | 0                    | 18,049     | 16,000     | 14,982       | 0            | 3,753        | 3,438      | 11,551     |

| <u>TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT</u> |            |            |              |              |              |            |              |  |
|---------------------------------------------------------------------|------------|------------|--------------|--------------|--------------|------------|--------------|--|
| <u>&lt;1</u>                                                        | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |  |
| 0                                                                   | 54,148     | 32,000     | 29,964       | 0            | 7,506        | 3,438      | 127,056      |  |



TABLE 5G

## RED WING POLICE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS DISABLED</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|-----------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>          | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                       |            | 1          | 1            |              |              |            | 2            |
| 50-54      |                       |            |            |              |              |              |            | 0            |
| 55-59      |                       |            |            |              |              |              |            | 0            |
| 60-64      |                       |            |            |              |              |              |            | 0            |
| 65-69      |                       |            |            |              |              |              |            | 0            |
| 70-74      |                       |            |            |              |              |              |            | 0            |
| 75-79      |                       |            |            |              |              |              |            | 0            |
| 80-84      |                       |            |            |              |              |              |            | 0            |
| 85+        |                       |            |            |              |              |              |            | 0            |
| TOTAL      | 0                     | 0          | 1          | 1            | 0            | 0            | 0          | 2            |

## AVERAGE ANNUAL BENEFIT

| <u>AGE</u> | <u>YEARS DISABLED</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|-----------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>          | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                       |            | 14,067     | 14,827       |              |              |            | 14,447     |
| 50-54      |                       |            |            |              |              |              |            | 0          |
| 55-59      |                       |            |            |              |              |              |            | 0          |
| 60-64      |                       |            |            |              |              |              |            | 0          |
| 65-69      |                       |            |            |              |              |              |            | 0          |
| 70-74      |                       |            |            |              |              |              |            | 0          |
| 75-79      |                       |            |            |              |              |              |            | 0          |
| 80-84      |                       |            |            |              |              |              |            | 0          |
| 85+        |                       |            |            |              |              |              |            | 0          |
| TOTAL      | 0                     | 0          | 14,067     | 14,827       | 0            | 0            | 0          | 14,447     |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 14,067     | 14,827       | 0            | 0            | 0          | 28,894       |

TABLE 6G

## RED WING POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     |     |       |       |       |     | 0     |
| 50-54 |                   | 1   |     |       |       |       |     | 1     |
| 55-59 |                   |     | 1   |       | 1     |       |     | 2     |
| 60-64 |                   |     |     |       |       |       |     | 0     |
| 65-69 |                   |     |     |       |       |       |     | 0     |
| 70-74 |                   |     |     |       | 1     |       |     | 1     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   |     |     |       |       |       |     | 0     |
| 85+   |                   |     |     |       |       |       | 1   | 1     |
| TOTAL | 0                 | 1   | 1   | 0     | 2     | 0     | 1   | 5     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |        |       |       |       |       | ALL    |
|-------|-------------------|--------|--------|-------|-------|-------|-------|--------|
|       | <1                | 1-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25+   |        |
| <50   |                   |        |        |       |       |       |       | 0      |
| 50-54 |                   | 14,564 |        |       |       |       |       | 14,564 |
| 55-59 |                   |        | 18,785 |       | 4,936 |       |       | 11,861 |
| 60-64 |                   |        |        |       |       |       |       | 0      |
| 65-69 |                   |        |        |       |       |       |       | 0      |
| 70-74 |                   |        |        |       | 2,388 |       |       | 2,388  |
| 75-79 |                   |        |        |       |       |       |       | 0      |
| 80-84 |                   |        |        |       |       |       |       | 0      |
| 85+   |                   |        |        |       |       |       | 2,388 | 2,388  |
| ALL   | 0                 | 14,564 | 18,785 | 0     | 3,662 | 0     | 2,388 | 8,612  |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4    | 5-9    | 10-14 | 15-19 | 20-24 | 25+   | TOTAL  |
|----|--------|--------|-------|-------|-------|-------|--------|
| 0  | 14,564 | 18,785 | 0     | 7,324 | 0     | 2,388 | 43,061 |

TABLE 7G

## RED WING POLICE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 8              | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 3              |                                |                             |
|                                | 5              |                                |                             |
| E. Total on June 30, 1990      | 8              | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 11                               | 2               | 5                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 11                               | 2               | 5                |

TABLE 8G

## RED WING POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |             |
|-------------------------------------------------------------------------------------------------------------------|-------------|
| A. CURRENT ASSETS (5.93% OF TABLE 1, F6)                                                                          | \$5,141,447 |
| B. EXPECTED FUTURE ASSETS                                                                                         |             |
| 1. Present Value of Employee Contributions                                                                        | 171,592     |
| 2. Present Value of Regular Municipal Contributions                                                               | 257,388     |
| 3. Present Value of Additional Municipal Contributions                                                            | 2,781,697   |
|                                                                                                                   | -----       |
| 4. Total Expected Future Assets                                                                                   | \$3,210,677 |
|                                                                                                                   | -----       |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | \$8,352,124 |
|                                                                                                                   | =====       |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |             |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$4,603,450 |
| 2. Current Employees                                                                                              |             |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 373,618     |
| b. Employer-financed vested                                                                                       | 1,101,210   |
| c. Employer-financed nonvested                                                                                    | 1,304,003   |
| d. Total                                                                                                          | 2,778,831   |
|                                                                                                                   | -----       |
| 3. Total Pension Benefit Obligation                                                                               | \$7,382,281 |
|                                                                                                                   | -----       |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | \$969,843   |
|                                                                                                                   | -----       |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$8,352,124 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$2,240,834 |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0         |

\* Estimated

TABLE 96

**RED WING POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 8                            | 3,748,674                                              | 3,008,182                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 8                            | \$3,748,674                                            | \$3,008,182                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 5                            | \$191,588 *                                            | \$191,588 *                       |
| b. Elected Relief Association                                          | 13                           | 4,411,862                                              | 4,411,862                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 18                           | \$4,603,450                                            | \$4,603,450                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 5                            | \$191,588                                              | \$191,588                         |
| b. Elected Relief Association                                          | 13                           | 4,411,862                                              | 4,411,862                         |
| c. No Election (Greater Value)                                         | 8                            | 3,748,674                                              | 3,008,182                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 26                           | \$8,352,124                                            | \$7,611,632                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$7,611,632                       |
| 2. Current Assets (5.93% of Table 1,F6)                                |                              |                                                        | 5,141,447                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$2,470,185                       |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$118,420                         |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$102,678.

TABLE 10G

**RED WING POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |                    |
|-------------------------------------------------------------------------------------------------------------|--------------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9G)</b>                                          |                    |
| 1. Elected PERA Police and Fire                                                                             | \$191,588          |
| 2. Elected Relief Association                                                                               | 4,411,862          |
| 3. No Election (Greater Value)                                                                              | 3,748,674          |
| 4. Total                                                                                                    | <u>\$8,352,124</u> |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |                    |
| 1. Elected PERA Police and Fire                                                                             | \$0                |
| 2. No Election (Greater Value)                                                                              | 171,592            |
| 3. Total                                                                                                    | <u>\$171,592</u>   |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |                    |
| 1. Elected PERA Police and Fire                                                                             | \$0                |
| 2. No Election (Greater Value)                                                                              | 257,388            |
| 3. Total                                                                                                    | <u>\$257,388</u>   |
| <b>D. CURRENT VALUE OF ASSETS (5.93% OF TABLE 1, F6)</b>                                                    |                    |
|                                                                                                             | \$5,141,447        |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |                    |
| 1. Initial Contribution - Annual Payment of \$193,055<br>through the Amortization Date of December 31, 2010 | \$1,939,262        |
| 2. Total                                                                                                    | <u>\$1,939,262</u> |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           |                    |
|                                                                                                             | <u>\$842,435</u>   |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |                    |
| 1. MPRIF Mortality                                                                                          | (\$23,049)         |
| 2. Election of PERA Police and Fire Fund                                                                    | (7,160)            |
| 3. Other                                                                                                    | 872,644            |
| 4. Total                                                                                                    | <u>\$842,435</u>   |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               |                    |
|                                                                                                             | \$97,392           |

**RED WING POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                               | AMOUNT<br>%                            | AMOUNT<br>\$                                           |
|--------------------------------------------------------------------------|-------------------------------|----------------------------------------|--------------------------------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                               | 8.00%                                  |                                                        |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                               |                                        |                                                        |
| 1. Regular Municipal Contribution                                        |                               | 12.00%                                 |                                                        |
| 2. Additional Municipal Contribution                                     |                               |                                        |                                                        |
| a.                                                                       | <u>Established</u><br>Initial | <u>Current</u><br>Balance<br>1,939,262 | <u>Last</u><br>Payment<br>12/31/2010                   |
| b.                                                                       | 7/1/89                        | 842,435                                | 12/31/2004                                             |
| c.                                                                       | Total                         | \$2,781,697<br>=====                   | 193,055<br><br>97,392<br>-----<br>\$290,447 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$290,447 |                               |                                        |                                                        |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     | 5     |       |       |       |     | 5     |
| 35-39 |                  |     |     | 15    | 1     |       |       |     | 16    |
| 40-44 |                  |     |     | 5     | 3     | 3     |       |     | 11    |
| 45-49 |                  |     |     |       | 1     | 15    | 3     |     | 19    |
| 50-54 |                  |     |     |       |       | 3     | 4     | 1   | 8     |
| 55-59 |                  |     |     |       |       | 1     | 2     |     | 3     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 25    | 5     | 22    | 9     | 1   | 62    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |        |        |        |        |        | ALL    |
|-------|------------------|-----|-----|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |     |        |        |        |        |        | 0      |
| 25-29 |                  |     |     |        |        |        |        |        | 0      |
| 30-34 |                  |     |     | 33,588 |        |        |        |        | 33,588 |
| 35-39 |                  |     |     | 32,740 | 31,905 |        |        |        | 32,688 |
| 40-44 |                  |     |     | 32,080 | 32,980 | 34,703 |        |        | 33,041 |
| 45-49 |                  |     |     |        | 33,063 | 34,174 | 34,659 |        | 34,192 |
| 50-54 |                  |     |     |        |        | 34,870 | 34,550 | 32,291 | 34,388 |
| 55-59 |                  |     |     |        |        | 33,025 | 30,677 |        | 31,460 |
| 60-64 |                  |     |     |        |        |        |        |        | 0      |
| 65+   |                  |     |     |        |        |        |        |        | 0      |
| ALL   | 0                | 0   | 0   | 32,777 | 32,781 | 34,289 | 33,726 | 32,291 | 33,444 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14   | 15-19   | 20-24   | 25-29   | 30+    | TOTAL     |
|----|-----|-----|---------|---------|---------|---------|--------|-----------|
| 0  | 0   | 0   | 819,436 | 163,907 | 754,353 | 303,530 | 32,291 | 2,073,517 |



TABLE 4H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |            |            |              |              |              |            | TOTAL |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |               |            |            |              |              |              |            | 0     |
| 50-54 | 1             | 1          |            |              |              |              |            | 2     |
| 55-59 |               | 3          | 2          |              |              |              |            | 5     |
| 60-64 |               | 7          | 3          | 6            |              |              |            | 16    |
| 65-69 |               | 3          |            | 3            | 2            |              |            | 8     |
| 70-74 |               | 1          |            | 3            | 2            | 1            |            | 7     |
| 75-79 |               |            |            | 1            | 2            |              |            | 3     |
| 80-84 |               |            |            |              |              | 1            | 2          | 3     |
| 85+   |               |            |            |              |              |              | 1          | 1     |
| TOTAL | 1             | 15         | 5          | 13           | 6            | 2            | 3          | 45    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |            |            |              |              |              |            | ALL    |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   |               |            |            |              |              |              |            | 0      |
| 50-54 | 17,944        | 18,028     |            |              |              |              |            | 17,986 |
| 55-59 |               | 18,648     | 18,221     |              |              |              |            | 18,477 |
| 60-64 |               | 19,710     | 16,751     | 18,640       |              |              |            | 18,754 |
| 65-69 |               | 20,632     |            | 17,742       | 15,576       |              |            | 18,284 |
| 70-74 |               | 21,700     |            | 18,839       | 17,677       | 18,756       |            | 18,904 |
| 75-79 |               |            |            | 18,756       | 18,798       |              |            | 18,784 |
| 80-84 |               |            |            |              |              | 18,756       | 17,454     | 17,888 |
| 85+   |               |            |            |              |              |              | 18,839     | 18,839 |
| ALL   | 17,944        | 19,703     | 17,339     | 18,488       | 17,350       | 18,756       | 17,916     | 18,575 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 17,944       | 295,539    | 86,694     | 240,342      | 104,100      | 37,512       | 53,747     | 835,878      |

TABLE 5H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |     |     |       |       |       |     | TOTAL |
|-------|----------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1             | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                |     |     |       | 1     |       |     | 1     |
| 50-54 |                | 3   |     |       |       |       |     | 3     |
| 55-59 |                |     |     |       |       |       |     | 0     |
| 60-64 |                |     |     |       |       |       |     | 0     |
| 65-69 |                |     |     |       |       |       |     | 0     |
| 70-74 |                |     |     |       |       |       |     | 0     |
| 75-79 |                |     |     |       |       |       |     | 0     |
| 80-84 |                |     |     |       |       |       |     | 0     |
| 85+   |                |     |     |       |       |       |     | 0     |
| TOTAL | 0              | 3   | 0   | 0     | 1     | 0     | 0   | 4     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |        |     |       |        |       |     | ALL    |
|-------|----------------|--------|-----|-------|--------|-------|-----|--------|
|       | <1             | 1-4    | 5-9 | 10-14 | 15-19  | 20-24 | 25+ |        |
| <50   |                |        |     |       | 10,474 |       |     | 10,474 |
| 50-54 |                | 16,490 |     |       |        |       |     | 16,490 |
| 55-59 |                |        |     |       |        |       |     | 0      |
| 60-64 |                |        |     |       |        |       |     | 0      |
| 65-69 |                |        |     |       |        |       |     | 0      |
| 70-74 |                |        |     |       |        |       |     | 0      |
| 75-79 |                |        |     |       |        |       |     | 0      |
| 80-84 |                |        |     |       |        |       |     | 0      |
| 85+   |                |        |     |       |        |       |     | 0      |
| TOTAL | 0              | 16,490 | 0   | 0     | 10,474 | 0     | 0   | 14,986 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <1 | 1-4    | 5-9 | 10-14 | 15-19  | 20-24 | 25+ | TOTAL  |
|----|--------|-----|-------|--------|-------|-----|--------|
| 0  | 49,470 | 0   | 0     | 10,474 | 0     | 0   | 59,944 |

TABLE 6H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     |     |       |       |       |     | 0     |
| 50-54 |                   | 2   |     |       |       |       |     | 2     |
| 55-59 |                   |     |     | 1     |       |       |     | 1     |
| 60-64 |                   | 3   |     |       |       |       |     | 3     |
| 65-69 |                   |     |     | 1     |       |       |     | 1     |
| 70-74 |                   |     | 1   |       |       | 1     |     | 2     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   | 2   | 1   |       |       |       |     | 3     |
| 85+   |                   |     |     |       | 1     |       | 1   | 2     |
| TOTAL | 0                 | 7   | 2   | 2     | 1     | 1     | 1   | 14    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |       |       |       |       |       | ALL   |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9   | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   |                   |       |       |       |       |       |       | 0     |
| 50-54 |                   | 8,056 |       |       |       |       |       | 8,056 |
| 55-59 |                   |       |       | 8,038 |       |       |       | 8,038 |
| 60-64 |                   | 8,675 |       |       |       |       |       | 8,675 |
| 65-69 |                   |       |       | 8,038 |       |       |       | 8,038 |
| 70-74 |                   |       | 8,074 |       |       | 8,038 |       | 8,056 |
| 75-79 |                   |       |       |       |       |       |       | 0     |
| 80-84 |                   | 8,056 | 7,726 |       |       |       |       | 7,946 |
| 85+   |                   |       |       |       | 8,038 |       | 8,074 | 8,056 |
| ALL   | 0                 | 8,321 | 7,900 | 8,038 | 8,038 | 8,038 | 8,074 | 8,162 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4    | 5-9    | 10-14  | 15-19 | 20-24 | 25+   | TOTAL   |
|----|--------|--------|--------|-------|-------|-------|---------|
| 0  | 58,248 | 15,800 | 16,076 | 8,038 | 8,038 | 8,074 | 114,274 |

TABLE 7H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 62             | 2                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 61             |                                |                             |
|                                | 1              |                                |                             |
| E. Total on June 30, 1990      | 62             | 2                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 45                               | 4               | 16               |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | (2)              |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 45                               | 4               | 14               |

TABLE 8H

## ROCHESTER POLICE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                              |
|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| A. CURRENT ASSETS (19.12% OF TABLE 1, F6)                                                                         | \$16,577,481                 |
| B. EXPECTED FUTURE ASSETS                                                                                         |                              |
| 1. Present Value of Employee Contributions                                                                        | 2,083,070                    |
| 2. Present Value of Regular Municipal Contributions                                                               | 3,124,607                    |
| 3. Present Value of Additional Municipal Contributions                                                            | 5,548,099                    |
| 4. Total Expected Future Assets                                                                                   | <u>\$10,755,776</u>          |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$27,333,257</u><br>===== |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                              |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$13,627,946                 |
| 2. Current Employees                                                                                              |                              |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 2,640,539                    |
| b. Employer-financed vested                                                                                       | 5,454,100                    |
| c. Employer-financed nonvested                                                                                    | 277,637                      |
| d. Total                                                                                                          | 8,372,276                    |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$22,000,222</u>          |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$5,333,035</u>           |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$27,333,257                 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$5,422,741                  |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                          |

\* Estimated

**ROCHESTER POLICE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9H

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 33                           | \$6,602,966                                            | \$4,180,089                       |
| b. No Election (Greater Value)                                         | 29                           | 7,102,345                                              | 5,216,184                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 62                           | \$13,705,311                                           | \$9,396,273                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 2                            | 284,338                                                | 284,338                           |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 2                            | \$284,338                                              | \$284,338                         |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 31                           | \$5,691,328 *                                          | \$5,691,328 *                     |
| b. Elected Relief Association                                          | 32                           | 7,652,280                                              | 7,652,280                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 63                           | \$13,343,608                                           | \$13,343,608                      |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 64                           | \$12,294,294                                           | \$9,871,417                       |
| b. Elected Relief Association                                          | 32                           | 7,652,280                                              | 7,652,280                         |
| c. No Election (Greater Value)                                         | 31                           | 7,386,683                                              | 5,500,522                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 127                          | \$27,333,257                                           | \$23,024,219                      |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$23,024,219                      |
| 2. Current Assets (19.12% of Table 1,F6)                               |                              |                                                        | 16,577,481                        |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$6,446,738                       |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$371,005                         |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$5,202,573.

TABLE 10H

**ROCHESTER POLICE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9H)</b>                                          |               |
| 1. Elected PERA Police and Fire                                                                             | \$12,294,294  |
| 2. Elected Relief Association                                                                               | 7,652,280     |
| 3. No Election (Greater Value)                                                                              | 7,386,683     |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | \$27,333,257  |
|                                                                                                             | -----         |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |               |
| 1. Elected PERA Police and Fire                                                                             | \$1,223,452   |
| 2. No Election (Greater Value)                                                                              | 859,618       |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$2,083,070   |
|                                                                                                             | -----         |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$1,835,179   |
| 2. No Election (Greater Value)                                                                              | 1,289,428     |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$3,124,607   |
|                                                                                                             | -----         |
| <b>D. CURRENT VALUE OF ASSETS (19.12% OF TABLE 1, F6)</b>                                                   | \$16,577,481  |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |               |
| 1. Initial Contribution - Annual Payment of \$885,157<br>through the Amortization Date of December 31, 2010 | \$8,891,512   |
|                                                                                                             | -----         |
| 2. Total                                                                                                    | \$8,891,512   |
|                                                                                                             | -----         |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | (\$3,343,413) |
|                                                                                                             | =====         |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |               |
| 1. MPRIF Mortality                                                                                          | \$25,401      |
| 2. Election of PERA Police and Fire Fund                                                                    | (\$1,771,212) |
| 3. Other                                                                                                    | (1,597,602)   |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | (\$3,343,413) |
|                                                                                                             | =====         |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | (\$386,523)   |

**ROCHESTER POLICE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                                               | <u>AMOUNT</u><br><u>%</u>                   | <u>AMOUNT</u><br><u>\$</u>    |
|--------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                                               | 8.00%                                       |                               |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                                               |                                             |                               |
| 1. Regular Municipal Contribution                                        |                                               | 12.00%                                      |                               |
| 2. Additional Municipal Contribution                                     |                                               |                                             |                               |
| a. <u>Established</u><br>Initial                                         | <u>Current</u><br><u>Balance</u><br>8,891,512 | <u>Last</u><br><u>Payment</u><br>12/31/2010 | 885,157                       |
| b.     7/1/90                                                            | (3,343,413)                                   | 12/31/2004                                  | (386,523)                     |
| c.     Total                                                             | -----<br>\$5,548,099<br>=====                 |                                             | -----<br>\$498,634 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$498,634 |                                               |                                             |                               |

\* Contribution is assumed to be paid on December 31, 1990.



TABLE 31

## ST. CLOUD FIRE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     |       |       |       |       |     | 0     |
| 35-39 |                  |     |     |       |       |       |       |     | 0     |
| 40-44 |                  |     |     |       | 4     | 2     |       |     | 6     |
| 45-49 |                  |     |     |       | 4     | 4     |       |     | 8     |
| 50-54 |                  |     |     |       |       | 2     | 2     | 2   | 6     |
| 55-59 |                  |     |     |       |       |       | 2     |     | 2     |
| 60-64 |                  |     |     |       |       |       |       | 1   | 1     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 0     | 8     | 8     | 4     | 3   | 23    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |       |        |        |        |        | ALL    |
|-------|------------------|-----|-----|-------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |     |       |        |        |        |        | 0      |
| 25-29 |                  |     |     |       |        |        |        |        | 0      |
| 30-34 |                  |     |     |       |        |        |        |        | 0      |
| 35-39 |                  |     |     |       |        |        |        |        | 0      |
| 40-44 |                  |     |     |       | 30,618 | 30,895 |        |        | 30,710 |
| 45-49 |                  |     |     |       | 30,196 | 30,677 |        |        | 30,436 |
| 50-54 |                  |     |     |       |        | 30,867 | 34,837 | 35,810 | 33,838 |
| 55-59 |                  |     |     |       |        |        | 34,794 |        | 34,794 |
| 60-64 |                  |     |     |       |        |        |        | 33,620 | 33,620 |
| 65+   |                  |     |     |       |        |        |        |        | 0      |
| ALL   | 0                | 0   | 0   | 0     | 30,407 | 30,779 | 34,815 | 35,080 | 31,912 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14 | 15-19   | 20-24   | 25-29   | 30+     | TOTAL   |
|----|-----|-----|-------|---------|---------|---------|---------|---------|
| 0  | 0   | 0   | 0     | 243,257 | 246,228 | 139,261 | 105,239 | 733,985 |

TABLE 41

## ST. CLOUD FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 | 1             |     |     |       |       |       |     | 1     |
| 55-59 |               | 2   | 2   |       |       |       |     | 4     |
| 60-64 |               | 1   | 2   | 1     | 1     |       |     | 5     |
| 65-69 | 1             | 1   | 2   | 1     | 3     | 1     |     | 9     |
| 70-74 |               |     |     |       | 1     | 1     |     | 2     |
| 75-79 |               |     |     |       |       |       |     | 0     |
| 80-84 |               |     |     |       |       |       |     | 0     |
| 85+   |               |     |     |       |       |       | 1   | 1     |
| TOTAL | 2             | 4   | 6   | 2     | 5     | 2     | 1   | 22    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |        |        |        |        |        | ALL    |
|-------|---------------|--------|--------|--------|--------|--------|--------|--------|
|       | <1            | 1-4    | 5-9    | 10-14  | 15-19  | 20-24  | 25+    |        |
| <50   |               |        |        |        |        |        |        | 0      |
| 50-54 | 17,740        |        |        |        |        |        |        | 17,740 |
| 55-59 |               | 17,090 | 16,636 |        |        |        |        | 16,863 |
| 60-64 |               | 18,148 | 18,148 | 15,988 | 16,852 |        |        | 17,457 |
| 65-69 | 30,971        | 18,148 | 18,148 | 16,852 | 16,852 | 15,556 |        | 18,709 |
| 70-74 |               |        |        |        | 18,148 | 16,852 |        | 17,500 |
| 75-79 |               |        |        |        |        |        |        | 0      |
| 80-84 |               |        |        |        |        |        |        | 0      |
| 85+   |               |        |        |        |        |        | 13,827 | 13,827 |
| ALL   | 24,356        | 17,619 | 17,644 | 16,420 | 17,111 | 16,204 | 13,827 | 17,713 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

|  | <1     | 1-4    | 5-9     | 10-14  | 15-19  | 20-24  | 25+    | TOTAL   |
|--|--------|--------|---------|--------|--------|--------|--------|---------|
|  | 48,711 | 70,475 | 105,864 | 32,840 | 85,556 | 32,408 | 13,827 | 389,681 |

TABLE 61

## ST. CLOUD FIRE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   | 1   |     |       |       |       |     | 1     |
| 50-54 |                   |     |     |       |       |       |     | 0     |
| 55-59 |                   |     |     | 1     |       |       |     | 1     |
| 60-64 |                   | 3   |     |       |       | 1     |     | 4     |
| 65-69 |                   |     |     |       |       |       |     | 0     |
| 70-74 |                   |     |     |       |       |       |     | 0     |
| 75-79 |                   |     |     |       |       | 1     |     | 1     |
| 80-84 |                   |     |     |       |       |       | 1   | 1     |
| 85+   |                   | 1   |     |       |       | 1     | 1   | 3     |
| TOTAL | 0                 | 5   | 0   | 1     | 0     | 3     | 2   | 11    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |     |        |       |        |        | ALL    |
|-------|-------------------|--------|-----|--------|-------|--------|--------|--------|
|       | <1                | 1-4    | 5-9 | 10-14  | 15-19 | 20-24  | 25+    |        |
| <50   |                   | 10,370 |     |        |       |        |        | 10,370 |
| 50-54 |                   |        |     |        |       |        |        | 0      |
| 55-59 |                   |        |     | 10,370 |       |        |        | 10,370 |
| 60-64 |                   | 10,370 |     |        |       | 10,370 |        | 10,370 |
| 65-69 |                   |        |     |        |       |        |        | 0      |
| 70-74 |                   |        |     |        |       |        |        | 0      |
| 75-79 |                   |        |     |        |       | 10,370 |        | 10,370 |
| 80-84 |                   |        |     |        |       |        | 10,370 | 10,370 |
| 85+   |                   | 9,968  |     |        |       | 10,370 | 10,370 | 10,236 |
| ALL   | 0                 | 10,290 | 0   | 10,370 | 0     | 10,370 | 10,370 | 10,334 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4    | 5-9 | 10-14  | 15-19 | 20-24  | 25+    | TOTAL   |
|----|--------|-----|--------|-------|--------|--------|---------|
| 0  | 51,449 | 0   | 10,370 | 0     | 31,110 | 20,740 | 113,669 |

TABLE 71

**ST. CLOUD FIRE CONSOLIDATION ACCOUNT**  
**RECONCILIATION OF MEMBERS**

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 23             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 18                             |                             |
|                                | Non-Vested     | 5                              |                             |
| E. Total on June 30, 1990      | 23             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 22                               | 0               | 11               |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 22                               | 0               | 11               |

TABLE 81

## ST. CLOUD FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                              |
|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| A. CURRENT ASSETS (7.39% OF TABLE 1, F6)                                                                          | \$6,407,300                  |
| B. EXPECTED FUTURE ASSETS                                                                                         |                              |
| 1. Present Value of Employee Contributions                                                                        | 550,667                      |
| 2. Present Value of Regular Municipal Contributions                                                               | 826,000                      |
| 3. Present Value of Additional Municipal Contributions                                                            | 4,339,280                    |
| 4. Total Expected Future Assets                                                                                   | <u>\$5,715,947</u>           |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$12,123,247</u><br>===== |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                              |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$6,221,289                  |
| 2. Current Employees                                                                                              |                              |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 1,195,916                    |
| b. Employer-financed vested                                                                                       | 2,288,955                    |
| c. Employer-financed nonvested                                                                                    | 750,955                      |
| d. Total                                                                                                          | 4,235,826                    |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$10,457,115</u>          |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$1,666,132</u>           |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$12,123,247                 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$4,049,815                  |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                          |

\* Estimated

**ST. CLOUD FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 91

JULY 1, 1990

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 10                                    | \$2,515,103                                                      | \$2,103,437                                |
| b. No Election (Greater Value)                                         | 13                                    | 3,386,855                                                        | 2,490,592                                  |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 23                                    | \$5,901,958                                                      | \$4,594,029                                |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 0                                     | \$0                                                              | \$0                                        |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 30                                    | \$5,427,590 *                                                    | \$5,427,590 *                              |
| b. Elected Relief Association                                          | 3                                     | 793,699                                                          | 793,699                                    |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| c. Total                                                               | 33                                    | \$6,221,289                                                      | \$6,221,289                                |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 40                                    | \$7,942,693                                                      | \$7,531,027                                |
| b. Elected Relief Association                                          | 3                                     | 793,699                                                          | 793,699                                    |
| c. No Election (Greater Value)                                         | 13                                    | 3,386,855                                                        | 2,490,592                                  |
|                                                                        | ---                                   | -----                                                            | -----                                      |
| d. Total                                                               | 56                                    | \$12,123,247                                                     | \$10,815,318                               |
|                                                                        | ===                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$10,815,318                               |
| 2. Current Assets (7.39% of Table 1,F6)                                |                                       |                                                                  | 6,407,300                                  |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$4,408,018                                |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  | \$147,090                                  |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$4,871,200.

TABLE 101

**ST. CLOUD FIRE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9I)</b>                                          |               |
| 1. Elected PERA Police and Fire                                                                             | \$7,942,693   |
| 2. Elected Relief Association                                                                               | 793,699       |
| 3. No Election (Greater Value)                                                                              | 3,386,855     |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | \$12,123,247  |
|                                                                                                             | -----         |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |               |
| 1. Elected PERA Police and Fire                                                                             | \$207,089     |
| 2. No Election (Greater Value)                                                                              | 343,578       |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$550,667     |
|                                                                                                             | -----         |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$310,633     |
| 2. No Election (Greater Value)                                                                              | 515,367       |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$826,000     |
|                                                                                                             | -----         |
| <b>D. CURRENT VALUE OF ASSETS (7.39% OF TABLE 1, F6)</b>                                                    | \$6,407,300   |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |               |
| 1. Initial Contribution - Annual Payment of \$635,640<br>through the Amortization Date of December 31, 2010 | \$6,385,083   |
|                                                                                                             | -----         |
| 2. Total                                                                                                    | \$6,385,083   |
|                                                                                                             | -----         |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | (\$2,045,803) |
|                                                                                                             | =====         |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |               |
| 1. MPRIF Mortality                                                                                          | \$173,413     |
| 2. Election of PERA Police and Fire Fund                                                                    | (2,358,732)   |
| 3. Other                                                                                                    | 139,516       |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | (\$2,045,803) |
|                                                                                                             | =====         |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | (\$236,510)   |

TABLE 111

ST. CLOUD FIRE CONSOLIDATION ACCOUNT  
DETERMINATION OF STATUTORY CONTRIBUTIONS  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                          |                               | <u>AMOUNT</u><br><u>%</u>                     | <u>AMOUNT</u><br><u>\$</u>                  |
|--------------------------------------------------------------------------|-------------------------------|-----------------------------------------------|---------------------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                               | 8.00%                                         |                                             |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                               |                                               |                                             |
| 1. Regular Municipal Contribution                                        |                               | 12.00%                                        |                                             |
| 2. Additional Municipal Contribution                                     |                               |                                               |                                             |
| a.                                                                       | <u>Established</u><br>Initial | <u>Current</u><br><u>Balance</u><br>6,385,083 | <u>Last</u><br><u>Payment</u><br>12/31/2010 |
|                                                                          |                               |                                               | 635,640                                     |
| b.                                                                       | 7/1/90                        | (2,045,803)                                   | (236,510)                                   |
|                                                                          |                               | -----                                         | -----                                       |
| c.                                                                       | Total                         | \$4,339,280<br>=====                          | \$399,130 *<br>=====                        |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$399,130 |                               |                                               |                                             |

\* Contribution is assumed to be paid on December 31, 1990.



TABLE 3J

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS OF SERVICE</u> |            |            |              |              |              |              | <u>TOTAL</u> |
|------------|-------------------------|------------|------------|--------------|--------------|--------------|--------------|--------------|
|            | <u>&lt;1</u>            | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> |              |
| <25        |                         |            |            |              |              |              |              | 0            |
| 25-29      |                         |            |            |              |              |              |              | 0            |
| 30-34      |                         |            |            | 1            |              |              |              | 1            |
| 35-39      |                         |            |            | 3            |              |              |              | 3            |
| 40-44      |                         |            |            | 4            | 3            |              |              | 7            |
| 45-49      |                         |            | 1          |              |              | 1            |              | 2            |
| 50-54      |                         |            |            |              | 1            | 2            |              | 3            |
| 55-59      |                         |            |            |              |              | 2            |              | 2            |
| 60-64      |                         |            |            |              |              |              |              | 0            |
| 65+        |                         |            |            |              |              |              |              | 0            |
| TOTAL      | 0                       | 0          | 1          | 8            | 4            | 5            | 0            | 18           |

## AVERAGE ANNUAL EARNINGS

| <u>AGE</u> | <u>YEARS OF SERVICE</u> |            |            |              |              |              |              | <u>ALL</u> |
|------------|-------------------------|------------|------------|--------------|--------------|--------------|--------------|------------|
|            | <u>&lt;1</u>            | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> |            |
| <25        |                         |            |            |              |              |              |              | 0          |
| 25-29      |                         |            |            |              |              |              |              | 0          |
| 30-34      |                         |            |            | 35,929       |              |              |              | 35,929     |
| 35-39      |                         |            |            | 36,757       |              |              |              | 36,757     |
| 40-44      |                         |            |            | 37,259       | 37,865       |              |              | 37,518     |
| 45-49      |                         |            | 38,534     |              |              | 35,789       |              | 37,162     |
| 50-54      |                         |            |            |              | 37,844       | 38,910       |              | 38,554     |
| 55-59      |                         |            |            |              |              | 38,529       |              | 38,529     |
| 60-64      |                         |            |            |              |              |              |              | 0          |
| 65+        |                         |            |            |              |              |              |              | 0          |
| ALL        | 0                       | 0          | 38,534     | 36,904       | 37,860       | 38,133       | 0            | 37,549     |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25-29</u> | <u>30+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|--------------|------------|--------------|
| 0            | 0          | 38,534     | 295,235      | 151,439      | 190,665      | 0            | 0          | 675,873      |

TABLE 4J

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |     |     |       |       |       |     | TOTAL |
|-------|---------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1            | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |               |     |     |       |       |       |     | 0     |
| 50-54 |               |     |     |       |       |       |     | 0     |
| 55-59 |               |     |     |       | 1     |       |     | 1     |
| 60-64 |               | 2   |     | 2     |       |       |     | 4     |
| 65-69 |               | 1   |     | 1     | 1     |       |     | 3     |
| 70-74 |               |     |     |       | 1     |       |     | 1     |
| 75-79 |               |     |     | 1     |       |       |     | 1     |
| 80-84 |               |     |     |       |       | 1     |     | 1     |
| 85+   |               |     |     |       |       |       |     | 0     |
| TOTAL | 0             | 3   | 0   | 4     | 3     | 1     | 0   | 11    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |        |     |        |        |        |     | ALL    |
|-------|---------------|--------|-----|--------|--------|--------|-----|--------|
|       | <1            | 1-4    | 5-9 | 10-14  | 15-19  | 20-24  | 25+ |        |
| <50   |               |        |     |        |        |        |     | 0      |
| 50-54 |               |        |     |        |        |        |     | 0      |
| 55-59 |               |        |     |        | 17,420 |        |     | 17,420 |
| 60-64 |               | 20,935 |     | 20,653 |        |        |     | 20,794 |
| 65-69 |               | 22,592 |     | 24,527 | 22,793 |        |     | 23,304 |
| 70-74 |               |        |     |        | 18,841 |        |     | 18,841 |
| 75-79 |               |        |     | 20,904 |        |        |     | 20,904 |
| 80-84 |               |        |     |        |        | 21,740 |     | 21,740 |
| 85+   |               |        |     |        |        |        |     | 0      |
| ALL   | 0             | 21,487 | 0   | 21,684 | 19,685 | 21,740 | 0   | 21,090 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <1 | 1-4    | 5-9 | 10-14  | 15-19  | 20-24  | 25+ | TOTAL   |
|----|--------|-----|--------|--------|--------|-----|---------|
| 0  | 64,462 | 0   | 86,737 | 59,054 | 21,740 | 0   | 231,993 |

TABLE 5J

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| <u>AGE</u> | <u>YEARS DISABLED</u> |            |            |              |              |              |            | <u>TOTAL</u> |
|------------|-----------------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|            | <u>&lt;1</u>          | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |              |
| <50        |                       | 1          |            |              | 1            |              |            | 2            |
| 50-54      |                       |            |            |              |              |              |            | 0            |
| 55-59      |                       |            |            |              |              |              |            | 0            |
| 60-64      |                       |            |            |              |              |              |            | 0            |
| 65-69      |                       |            |            |              |              |              |            | 0            |
| 70-74      |                       |            |            |              |              |              |            | 0            |
| 75-79      |                       |            |            |              |              |              |            | 0            |
| 80-84      |                       |            |            |              |              |              |            | 0            |
| 85+        |                       |            |            |              |              |              |            | 0            |
| TOTAL      | 0                     | 1          | 0          | 0            | 1            | 0            | 0          | 2            |

## AVERAGE ANNUAL BENEFIT

| <u>AGE</u> | <u>YEARS DISABLED</u> |            |            |              |              |              |            | <u>ALL</u> |
|------------|-----------------------|------------|------------|--------------|--------------|--------------|------------|------------|
|            | <u>&lt;1</u>          | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |            |
| <50        |                       | 18,117     |            |              | 18,117       |              |            | 18,117     |
| 50-54      |                       |            |            |              |              |              |            | 0          |
| 55-59      |                       |            |            |              |              |              |            | 0          |
| 60-64      |                       |            |            |              |              |              |            | 0          |
| 65-69      |                       |            |            |              |              |              |            | 0          |
| 70-74      |                       |            |            |              |              |              |            | 0          |
| 75-79      |                       |            |            |              |              |              |            | 0          |
| 80-84      |                       |            |            |              |              |              |            | 0          |
| 85+        |                       |            |            |              |              |              |            | 0          |
| TOTAL      | 0                     | 18,117     | 0          | 0            | 18,117       | 0            | 0          | 18,117     |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 0            | 18,117     | 0          | 0            | 18,117       | 0            | 0          | 36,234       |

TABLE 6J

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

## SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     |     |       |       |       |     | 0     |
| 50-54 |                   | 1   |     |       | 1     |       |     | 2     |
| 55-59 |                   |     |     |       |       |       |     | 0     |
| 60-64 |                   | 2   |     |       |       |       |     | 2     |
| 65-69 |                   | 1   |     | 1     |       |       |     | 2     |
| 70-74 |                   |     |     | 1     |       |       |     | 1     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   |     |     |       |       | 1     |     | 1     |
| 85+   |                   |     |     |       |       |       |     | 0     |
| TOTAL | 0                 | 4   | 0   | 2     | 1     | 1     | 0   | 8     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |        |     |        |        |        |     | ALL    |
|-------|-------------------|--------|-----|--------|--------|--------|-----|--------|
|       | <1                | 1-4    | 5-9 | 10-14  | 15-19  | 20-24  | 25+ |        |
| <50   |                   |        |     |        |        |        |     | 0      |
| 50-54 |                   | 14,493 |     |        | 14,493 |        |     | 14,493 |
| 55-59 |                   |        |     |        |        |        |     | 0      |
| 60-64 |                   | 16,166 |     |        |        |        |     | 16,166 |
| 65-69 |                   | 14,493 |     | 14,493 |        |        |     | 14,493 |
| 70-74 |                   |        |     | 14,499 |        |        |     | 14,499 |
| 75-79 |                   |        |     |        |        |        |     | 0      |
| 80-84 |                   |        |     |        |        | 14,493 |     | 14,493 |
| 85+   |                   |        |     |        |        |        |     | 0      |
| ALL   | 0                 | 15,329 | 0   | 14,496 | 14,493 | 14,493 | 0   | 14,912 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4    | 5-9 | 10-14  | 15-19  | 20-24  | 25+ | TOTAL   |
|----|--------|-----|--------|--------|--------|-----|---------|
| 0  | 61,317 | 0   | 28,992 | 14,493 | 14,493 | 0   | 119,295 |

TABLE 7J

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 18             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         | 18                             |                             |
|                                | Non-Vested     | 0                              |                             |
| E. Total on June 30, 1990      | 18             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 11                               | 2               | 8                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 11                               | 2               | 8                |

## ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                              |
|-------------------------------------------------------------------------------------------------------------------|------------------------------|
| A. CURRENT ASSETS (7.68% OF TABLE 1, F6)                                                                          | \$6,658,737                  |
| B. EXPECTED FUTURE ASSETS                                                                                         |                              |
| 1. Present Value of Employee Contributions                                                                        | 665,874                      |
| 2. Present Value of Regular Municipal Contributions                                                               | 998,811                      |
| 3. Present Value of Additional Municipal Contributions                                                            | 2,834,952                    |
| 4. Total Expected Future Assets                                                                                   | <u>\$4,499,637</u>           |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$11,158,374</u><br>===== |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                              |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$6,221,737                  |
| 2. Current Employees                                                                                              |                              |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 805,534                      |
| b. Employer-financed vested                                                                                       | 1,967,068                    |
| c. Employer-financed nonvested                                                                                    | 0                            |
| d. Total                                                                                                          | 2,772,602                    |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$8,994,339</u>           |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$2,164,035</u>           |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$11,158,374                 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$2,335,602                  |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                          |

\* Estimated

**ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9J

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 2                            | \$504,397                                              | \$411,107                         |
| b. No Election (Greater Value)                                         | 16                           | 4,432,240                                              | 2,738,066                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 18                           | \$4,936,637                                            | \$3,149,173                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 3                            | \$752,218 *                                            | \$752,218 *                       |
| b. Elected Relief Association                                          | 18                           | 5,469,519                                              | 5,469,519                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 21                           | \$6,221,737                                            | \$6,221,737                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 5                            | \$1,256,615                                            | \$1,163,325                       |
| b. Elected Relief Association                                          | 18                           | 5,469,519                                              | 5,469,519                         |
| c. No Election (Greater Value)                                         | 16                           | 4,432,240                                              | 2,738,066                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 39                           | \$11,158,374                                           | \$9,370,910                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$9,370,910                       |
| 2. Current Assets (7.68% of Table 1,F6)                                |                              |                                                        | 6,658,737                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$2,712,173                       |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$149,931                         |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$752,218.

**ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |              |
|-------------------------------------------------------------------------------------------------------------|--------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9J)</b>                                          |              |
| 1. Elected PERA Police and Fire                                                                             | \$1,256,615  |
| 2. Elected Relief Association                                                                               | 5,469,519    |
| 3. No Election (Greater Value)                                                                              | 4,432,240    |
|                                                                                                             | -----        |
| 4. Total                                                                                                    | \$11,158,374 |
|                                                                                                             | -----        |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |              |
| 1. Elected PERA Police and Fire                                                                             | \$41,156     |
| 2. No Election (Greater Value)                                                                              | 624,718      |
|                                                                                                             | -----        |
| 3. Total                                                                                                    | \$665,874    |
|                                                                                                             | -----        |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |              |
| 1. Elected PERA Police and Fire                                                                             | \$61,734     |
| 2. No Election (Greater Value)                                                                              | 937,077      |
|                                                                                                             | -----        |
| 3. Total                                                                                                    | \$998,811    |
|                                                                                                             | -----        |
| <b>D. CURRENT VALUE OF ASSETS (7.68% OF TABLE 1, F6)</b>                                                    | \$6,658,737  |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |              |
| 1. Initial Contribution - Annual Payment of \$325,922<br>through the Amortization Date of December 31, 2010 | \$3,273,927  |
|                                                                                                             | -----        |
| 2. Total                                                                                                    | \$3,273,927  |
|                                                                                                             | -----        |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | (\$438,975)  |
|                                                                                                             | =====        |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |              |
| 1. MPRIF Mortality                                                                                          | \$69,079     |
| 2. Election of PERA Police and Fire Fund                                                                    | (379,848)    |
| 3. Other                                                                                                    | (128,206)    |
|                                                                                                             | -----        |
| 4. Total                                                                                                    | (\$438,975)  |
|                                                                                                             | =====        |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | (\$50,749)   |



ST. LOUIS PARK FIRE CONSOLIDATION ACCOUNT  
 DETERMINATION OF STATUTORY CONTRIBUTIONS  
 (ACTUAL DOLLARS)

JULY 1, 1990

|                                                                          |                                               | <u>AMOUNT</u><br><u>%</u>                   | <u>AMOUNT</u><br><u>\$</u>    |
|--------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                                               | 8.00%                                       |                               |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                                               |                                             |                               |
| 1. Regular Municipal Contribution                                        |                                               | 12.00%                                      |                               |
| 2. Additional Municipal Contribution                                     |                                               |                                             |                               |
| a. <u>Established</u><br>Initial                                         | <u>Current</u><br><u>Balance</u><br>3,273,927 | <u>Last</u><br><u>Payment</u><br>12/31/2010 | 325,922                       |
| b.     7/1/90                                                            | (438,975)                                     | 12/31/2004                                  | (50,749)                      |
| c.     Total                                                             | -----<br>\$2,834,952<br>=====                 |                                             | -----<br>\$275,173 *<br>===== |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$275,173 |                                               |                                             |                               |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     |       |       |       |       |     | 0     |
| 35-39 |                  |     |     | 1     |       |       |       |     | 1     |
| 40-44 |                  |     |     | 1     | 2     |       |       |     | 3     |
| 45-49 |                  |     |     | 1     | 1     | 3     | 1     |     | 6     |
| 50-54 |                  |     |     |       |       | 2     |       |     | 2     |
| 55-59 |                  |     |     |       |       |       |       |     | 0     |
| 60-64 |                  |     |     |       |       |       |       |     | 0     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 3     | 3     | 5     | 1     | 0   | 12    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |        |        |        |        |     | ALL    |
|-------|------------------|-----|-----|--------|--------|--------|--------|-----|--------|
|       | <1               | 1-4 | 5-9 | 10-14  | 15-19  | 20-24  | 25-29  | 30+ |        |
| <25   |                  |     |     |        |        |        |        |     | 0      |
| 25-29 |                  |     |     |        |        |        |        |     | 0      |
| 30-34 |                  |     |     |        |        |        |        |     | 0      |
| 35-39 |                  |     |     | 36,873 |        |        |        |     | 36,873 |
| 40-44 |                  |     |     | 36,390 | 39,539 |        |        |     | 38,489 |
| 45-49 |                  |     |     | 42,269 | 41,269 | 39,299 | 52,865 |     | 42,383 |
| 50-54 |                  |     |     |        |        | 41,270 |        |     | 41,270 |
| 55-59 |                  |     |     |        |        |        |        |     | 0      |
| 60-64 |                  |     |     |        |        |        |        |     | 0      |
| 65+   |                  |     |     |        |        |        |        |     | 0      |
| ALL   | 0                | 0   | 0   | 38,511 | 40,116 | 40,087 | 52,865 | 0   | 40,765 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14   | 15-19   | 20-24   | 25-29  | 30+ | TOTAL   |
|----|-----|-----|---------|---------|---------|--------|-----|---------|
| 0  | 0   | 0   | 115,532 | 120,347 | 200,437 | 52,865 | 0   | 489,181 |

TABLE 4K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |            |            |              |              |              |            | TOTAL |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |               |            |            |              |              |              |            | 0     |
| 50-54 |               |            |            |              |              |              |            | 0     |
| 55-59 | 1             |            |            |              |              |              |            | 1     |
| 60-64 |               |            | 1          |              |              |              |            | 1     |
| 65-69 |               |            | 2          | 1            |              |              |            | 3     |
| 70-74 |               |            |            | 1            |              |              |            | 1     |
| 75-79 |               |            |            |              |              |              |            | 0     |
| 80-84 |               |            |            |              |              |              |            | 0     |
| 85+   |               |            |            |              |              |              |            | 0     |
| TOTAL | 1             | 0          | 3          | 2            | 0            | 0            | 0          | 6     |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |            |            |              |              |              |            | ALL    |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   |               |            |            |              |              |              |            | 0      |
| 50-54 |               |            |            |              |              |              |            | 0      |
| 55-59 | 25,045        |            |            |              |              |              |            | 25,045 |
| 60-64 |               |            | 18,193     |              |              |              |            | 18,193 |
| 65-69 |               |            | 17,284     | 15,282       |              |              |            | 16,616 |
| 70-74 |               |            |            | 15,282       |              |              |            | 15,282 |
| 75-79 |               |            |            |              |              |              |            | 0      |
| 80-84 |               |            |            |              |              |              |            | 0      |
| 85+   |               |            |            |              |              |              |            | 0      |
| ALL   | 25,045        | 0          | 17,587     | 15,282       | 0            | 0            | 0          | 18,062 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

|  | <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
|  | 25,045       | 0          | 52,760     | 30,564       | 0            | 0            | 0          | 108,369      |

TABLE 5K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |     |     |       |       |       |     | TOTAL |
|-------|----------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1             | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                | 1   |     |       |       |       |     | 1     |
| 50-54 |                | 2   |     |       |       |       |     | 2     |
| 55-59 |                |     |     |       |       |       |     | 0     |
| 60-64 |                |     |     |       |       |       |     | 0     |
| 65-69 |                |     |     |       |       |       |     | 0     |
| 70-74 |                |     |     |       |       |       |     | 0     |
| 75-79 |                |     |     |       |       |       |     | 0     |
| 80-84 |                |     |     |       |       |       |     | 0     |
| 85+   |                |     |     |       |       |       |     | 0     |
| TOTAL | 0              | 3   | 0   | 0     | 0     | 0     | 0   | 3     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |        |     |       |       |       |     | ALL    |
|-------|----------------|--------|-----|-------|-------|-------|-----|--------|
|       | <1             | 1-4    | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |        |
| <50   |                | 13,613 |     |       |       |       |     | 13,613 |
| 50-54 |                | 14,084 |     |       |       |       |     | 14,084 |
| 55-59 |                |        |     |       |       |       |     | 0      |
| 60-64 |                |        |     |       |       |       |     | 0      |
| 65-69 |                |        |     |       |       |       |     | 0      |
| 70-74 |                |        |     |       |       |       |     | 0      |
| 75-79 |                |        |     |       |       |       |     | 0      |
| 80-84 |                |        |     |       |       |       |     | 0      |
| 85+   |                |        |     |       |       |       |     | 0      |
| TOTAL | 0              | 13,927 | 0   | 0     | 0     | 0     | 0   | 13,927 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <1 | 1-4    | 5-9 | 10-14 | 15-19 | 20-24 | 25+ | TOTAL  |
|----|--------|-----|-------|-------|-------|-----|--------|
| 0  | 41,781 | 0   | 0     | 0     | 0     | 0   | 41,781 |

TABLE 6K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     |     |       |       |       |     | 0     |
| 50-54 |                   |     |     |       |       |       |     | 0     |
| 55-59 |                   |     |     |       | 1     |       |     | 1     |
| 60-64 |                   |     |     |       |       |       |     | 0     |
| 65-69 |                   |     | 3   |       |       |       |     | 3     |
| 70-74 |                   |     |     |       |       |       |     | 0     |
| 75-79 |                   |     |     |       |       |       |     | 0     |
| 80-84 |                   |     |     |       |       |       |     | 0     |
| 85+   |                   |     |     |       |       |       |     | 0     |
| TOTAL | 0                 | 0   | 3   | 0     | 1     | 0     | 0   | 4     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |     |        |       |        |       |     | ALL    |
|-------|-------------------|-----|--------|-------|--------|-------|-----|--------|
|       | <1                | 1-4 | 5-9    | 10-14 | 15-19  | 20-24 | 25+ |        |
| <50   |                   |     |        |       |        |       |     | 0      |
| 50-54 |                   |     |        |       |        |       |     | 0      |
| 55-59 |                   |     |        |       | 10,210 |       |     | 10,210 |
| 60-64 |                   |     |        |       |        |       |     | 0      |
| 65-69 |                   |     | 10,916 |       |        |       |     | 10,916 |
| 70-74 |                   |     |        |       |        |       |     | 0      |
| 75-79 |                   |     |        |       |        |       |     | 0      |
| 80-84 |                   |     |        |       |        |       |     | 0      |
| 85+   |                   |     |        |       |        |       |     | 0      |
| ALL   | 0                 | 0   | 10,916 | 0     | 10,210 | 0     | 0   | 10,740 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1 | 1-4 | 5-9    | 10-14 | 15-19  | 20-24 | 25+ | TOTAL  |
|----|-----|--------|-------|--------|-------|-----|--------|
| 0  | 0   | 32,748 | 0     | 10,210 | 0     | 0   | 42,958 |

TABLE 7K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 13             | 0                              | 0                           |
| B. Additions                   | 0              | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | (1)            | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 12             |                                |                             |
|                                | 0              |                                |                             |
| E. Total on June 30, 1990      | 12             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 5                                | 3               | 4                |
| B. Additions              | 1                                | 0               | 0                |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | 0                                | 0               | 0                |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 6                                | 3               | 4                |

TABLE 8K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |             |
|-------------------------------------------------------------------------------------------------------------------|-------------|
| A. CURRENT ASSETS (5.23% OF TABLE 1, F6)                                                                          | \$4,534,531 |
| B. EXPECTED FUTURE ASSETS                                                                                         |             |
| 1. Present Value of Employee Contributions                                                                        | 444,726     |
| 2. Present Value of Regular Municipal Contributions                                                               | 667,089     |
| 3. Present Value of Additional Municipal Contributions                                                            | 369,195     |
|                                                                                                                   | -----       |
| 4. Total Expected Future Assets                                                                                   | \$1,481,010 |
|                                                                                                                   | -----       |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | \$6,015,541 |
|                                                                                                                   | =====       |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |             |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$2,886,911 |
| 2. Current Employees                                                                                              |             |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 579,831     |
| b. Employer-financed vested                                                                                       | 1,342,510   |
| c. Employer-financed nonvested                                                                                    | 0           |
| d. Total                                                                                                          | 1,922,341   |
|                                                                                                                   | -----       |
| 3. Total Pension Benefit Obligation                                                                               | \$4,809,252 |
|                                                                                                                   | -----       |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | \$1,206,289 |
|                                                                                                                   | -----       |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$6,015,541 |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$274,721   |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0         |

\* Estimated

**WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

TABLE 9K

JULY 1, 1990

|                                                                        | NUMBER<br>OF<br>PARTICIPANTS | ACTUARIAL<br>PRESENT VALUE<br>OF PROJECTED<br>BENEFITS | ACTUARIAL<br>ACCRUED<br>LIABILITY |
|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|-----------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                              |                                                        |                                   |
| 1. Active Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 10                           | \$2,639,182                                            | \$1,872,106                       |
| b. No Election (Greater Value)                                         | 2                            | 489,448                                                | 281,063                           |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 12                           | \$3,128,630                                            | \$2,153,169                       |
| 2. Former Members                                                      |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 0                            | \$0                                                    | \$0                               |
| b. No Election (Greater Value)                                         | 0                            | 0                                                      | 0                                 |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 0                            | \$0                                                    | \$0                               |
| 3. Benefit Recipients                                                  |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 8                            | \$1,459,040 *                                          | \$1,459,040 *                     |
| b. Elected Relief Association                                          | 5                            | 1,427,871                                              | 1,427,871                         |
|                                                                        | ---                          | -----                                                  | -----                             |
| c. Total                                                               | 13                           | \$2,886,911                                            | \$2,886,911                       |
| 4. Total                                                               |                              |                                                        |                                   |
| a. Elected PERA Police and Fire                                        | 18                           | \$4,098,222                                            | \$3,331,146                       |
| b. Elected Relief Association                                          | 5                            | 1,427,871                                              | 1,427,871                         |
| c. No Election (Greater Value)                                         | 2                            | 489,448                                                | 281,063                           |
|                                                                        | ---                          | -----                                                  | -----                             |
| d. Total                                                               | 25                           | \$6,015,541                                            | \$5,040,080                       |
|                                                                        | ===                          | =====                                                  | =====                             |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                              |                                                        |                                   |
| 1. AAL (A4)                                                            |                              |                                                        | \$5,040,080                       |
| 2. Current Assets (5.23% of Table 1,F6)                                |                              |                                                        | 4,534,531                         |
|                                                                        |                              |                                                        | -----                             |
| 3. UAAL (B1-B2)                                                        |                              |                                                        | \$505,549                         |
|                                                                        |                              |                                                        | =====                             |
| <b>C. NORMAL COST</b>                                                  |                              |                                                        | \$90,952                          |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$1,242,258.



TABLE 10K

## WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT

CALCULATION OF NET ACTUARIAL LOSS (GAIN)  
(ACTUAL DOLLARS)

YEAR ENDING JUNE 30, 1990

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9K)                                                 |               |
| 1. Elected PERA Police and Fire                                                                             | \$4,098,222   |
| 2. Elected Relief Association                                                                               | 1,427,871     |
| 3. No Election (Greater Value)                                                                              | 489,448       |
| 4. Total                                                                                                    | \$6,015,541   |
| B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS                                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$378,908     |
| 2. No Election (Greater Value)                                                                              | 65,818        |
| 3. Total                                                                                                    | \$444,726     |
| C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS                                                  |               |
| 1. Elected PERA Police and Fire                                                                             | \$568,362     |
| 2. No Election (Greater Value)                                                                              | 98,727        |
| 3. Total                                                                                                    | \$667,089     |
| D. CURRENT VALUE OF ASSETS (5.23% OF TABLE 1, F6)                                                           | \$4,534,531   |
| E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS                                               |               |
| 1. Initial Contribution - Annual Payment of \$152,692<br>through the Amortization Date of December 31, 2010 | \$1,533,810   |
| 2. 15 Year Amortization of Prior Years' Loss (Gain)<br>(Table 11B, B.2.b)                                   | (\$1,001,261) |
| 3. Total                                                                                                    | \$532,549     |
| F. LOSS (GAIN) [A-B-C-D-E]                                                                                  | (\$163,354)   |
| G. ANALYSIS OF LOSS (GAIN)                                                                                  |               |
| 1. MPRIF Mortality                                                                                          | (\$28,780)    |
| 2. Election of PERA Police and Fire Fund                                                                    | (284,906)     |
| 3. Other                                                                                                    | 150,332       |
| 4. Total                                                                                                    | (\$163,354)   |
| H. 15 YEAR AMORTIZATION OF LOSS (GAIN)                                                                      | (\$18,885)    |

**WEST ST. PAUL FIRE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                         |                    | <u>AMOUNT</u><br><u>%</u> | <u>AMOUNT</u><br><u>\$</u> |
|-------------------------------------------------------------------------|--------------------|---------------------------|----------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                               |                    | 8.00%                     |                            |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)          |                    |                           |                            |
| 1. Regular Municipal Contribution                                       |                    | 12.00%                    |                            |
| 2. Additional Municipal Contribution                                    |                    |                           |                            |
|                                                                         | <u>Established</u> | <u>Current</u>            | <u>Last</u>                |
|                                                                         | <u>Initial</u>     | <u>Balance</u>            | <u>Payment</u>             |
| a.                                                                      | Initial            | 1,533,810                 | 12/31/2010                 |
| b.                                                                      | 7/1/89             | (1,001,261)               | 12/31/2003                 |
| c.                                                                      | 7/1/90             | (163,354)                 | 12/31/2004                 |
|                                                                         |                    | -----                     | -----                      |
| c.                                                                      | Total              | \$369,195                 | \$13,803 *                 |
|                                                                         |                    | =====                     | =====                      |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$13,803 |                    |                           |                            |

\* Contribution is assumed to be paid on December 31, 1990.

TABLE 3L

## WINONA FIRE CONSOLIDATION ACCOUNT

## ACTIVE MEMBERS AS OF JUNE 30, 1990

| AGE   | YEARS OF SERVICE |     |     |       |       |       |       |     | TOTAL |
|-------|------------------|-----|-----|-------|-------|-------|-------|-----|-------|
|       | <1               | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ |       |
| <25   |                  |     |     |       |       |       |       |     | 0     |
| 25-29 |                  |     |     |       |       |       |       |     | 0     |
| 30-34 |                  |     |     | 2     |       |       |       |     | 2     |
| 35-39 |                  |     |     | 6     |       |       |       |     | 6     |
| 40-44 |                  |     |     |       | 1     | 2     |       |     | 3     |
| 45-49 |                  |     |     |       |       | 1     |       |     | 1     |
| 50-54 |                  |     |     |       |       | 1     | 3     |     | 4     |
| 55-59 |                  |     |     |       |       | 2     | 3     | 2   | 7     |
| 60-64 |                  |     |     |       |       |       |       | 2   | 2     |
| 65+   |                  |     |     |       |       |       |       |     | 0     |
| TOTAL | 0                | 0   | 0   | 8     | 1     | 6     | 6     | 4   | 25    |

## AVERAGE ANNUAL EARNINGS

| AGE   | YEARS OF SERVICE |     |     |        |        |        |        |        | ALL    |
|-------|------------------|-----|-----|--------|--------|--------|--------|--------|--------|
|       | <1               | 1-4 | 5-9 | 10-14  | 15-19  | 20-24  | 25-29  | 30+    |        |
| <25   |                  |     |     |        |        |        |        |        | 0      |
| 25-29 |                  |     |     |        |        |        |        |        | 0      |
| 30-34 |                  |     |     | 29,491 |        |        |        |        | 29,491 |
| 35-39 |                  |     |     | 29,505 |        |        |        |        | 29,505 |
| 40-44 |                  |     |     |        | 32,129 | 29,164 |        |        | 30,152 |
| 45-49 |                  |     |     |        |        | 29,822 |        |        | 29,822 |
| 50-54 |                  |     |     |        |        | 30,605 | 30,219 |        | 30,316 |
| 55-59 |                  |     |     |        |        | 29,955 | 29,689 | 29,915 | 29,830 |
| 60-64 |                  |     |     |        |        |        |        | 31,501 | 31,501 |
| 65+   |                  |     |     |        |        |        |        |        | 0      |
| ALL   | 0                | 0   | 0   | 29,501 | 32,129 | 29,777 | 29,954 | 30,708 | 29,974 |

## PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE

| <1 | 1-4 | 5-9 | 10-14   | 15-19  | 20-24   | 25-29   | 30+     | TOTAL   |
|----|-----|-----|---------|--------|---------|---------|---------|---------|
| 0  | 0   | 0   | 236,011 | 32,129 | 178,663 | 179,726 | 122,832 | 749,361 |

TABLE 4L

## WINONA FIRE CONSOLIDATION ACCOUNT

## SERVICE RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS RETIRED |            |            |              |              |              |            | TOTAL |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|-------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |       |
| <50   |               |            |            |              |              |              |            | 0     |
| 50-54 |               |            |            |              |              |              |            | 0     |
| 55-59 |               | 1          | 1          |              |              |              |            | 2     |
| 60-64 | 2             |            | 2          | 4            |              |              |            | 8     |
| 65-69 |               | 1          | 2          | 1            | 3            |              |            | 7     |
| 70-74 |               |            |            | 1            |              | 1            |            | 2     |
| 75-79 |               |            |            | 2            |              |              |            | 2     |
| 80-84 |               |            |            |              |              | 1            |            | 1     |
| 85+   |               |            |            |              |              |              |            | 0     |
| TOTAL | 2             | 2          | 5          | 8            | 3            | 2            | 0          | 22    |

## AVERAGE ANNUAL ANNUITY

| AGE   | YEARS RETIRED |            |            |              |              |              |            | ALL    |
|-------|---------------|------------|------------|--------------|--------------|--------------|------------|--------|
|       | <u>&lt;1</u>  | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> |        |
| <50   |               |            |            |              |              |              |            | 0      |
| 50-54 |               |            |            |              |              |              |            | 0      |
| 55-59 |               | 13,834     | 14,640     |              |              |              |            | 14,237 |
| 60-64 | 19,193        |            | 16,110     | 15,360       |              |              |            | 16,506 |
| 65-69 |               | 18,268     | 16,838     | 14,241       | 14,376       |              |            | 15,616 |
| 70-74 |               |            |            | 15,868       |              | 15,055       |            | 15,462 |
| 75-79 |               |            |            | 16,857       |              |              |            | 16,857 |
| 80-84 |               |            |            |              |              | 15,055       |            | 15,055 |
| 85+   |               |            |            |              |              |              |            | 0      |
| ALL   | 19,193        | 16,051     | 16,107     | 15,658       | 14,376       | 15,055       | 0          | 15,887 |

## TOTAL ANNUAL ANNUITY (ACTUAL DOLLARS) BY YEARS OF RETIREMENT

| <u>&lt;1</u> | <u>1-4</u> | <u>5-9</u> | <u>10-14</u> | <u>15-19</u> | <u>20-24</u> | <u>25+</u> | <u>TOTAL</u> |
|--------------|------------|------------|--------------|--------------|--------------|------------|--------------|
| 38,386       | 32,102     | 80,535     | 125,262      | 43,129       | 30,110       | 0          | 349,524      |

TABLE 5L

## WINONA FIRE CONSOLIDATION ACCOUNT

## DISABILITY RETIREMENTS AS OF JUNE 30, 1990

| AGE   | YEARS DISABLED |     |     |       |       |       |     | TOTAL |
|-------|----------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1             | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                | 2   |     |       |       |       |     | 2     |
| 50-54 |                |     |     |       |       |       |     | 0     |
| 55-59 |                |     |     |       |       |       |     | 0     |
| 60-64 |                |     |     |       |       |       |     | 0     |
| 65-69 |                |     |     |       |       |       |     | 0     |
| 70-74 |                |     |     |       |       |       |     | 0     |
| 75-79 |                |     |     |       |       |       |     | 0     |
| 80-84 |                |     |     |       |       |       |     | 0     |
| 85+   |                |     |     |       |       |       |     | 0     |
| TOTAL | 0              | 2   | 0   | 0     | 0     | 0     | 0   | 2     |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS DISABLED |        |     |       |       |       |     | ALL    |
|-------|----------------|--------|-----|-------|-------|-------|-----|--------|
|       | <1             | 1-4    | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |        |
| <50   |                | 13,014 |     |       |       |       |     | 13,014 |
| 50-54 |                |        |     |       |       |       |     | 0      |
| 55-59 |                |        |     |       |       |       |     | 0      |
| 60-64 |                |        |     |       |       |       |     | 0      |
| 65-69 |                |        |     |       |       |       |     | 0      |
| 70-74 |                |        |     |       |       |       |     | 0      |
| 75-79 |                |        |     |       |       |       |     | 0      |
| 80-84 |                |        |     |       |       |       |     | 0      |
| 85+   |                |        |     |       |       |       |     | 0      |
| TOTAL | 0              | 13,014 | 0   | 0     | 0     | 0     | 0   | 13,014 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS OF DISABILITY

| <1 | 1-4    | 5-9 | 10-14 | 15-19 | 20-24 | 25+ | TOTAL  |
|----|--------|-----|-------|-------|-------|-----|--------|
| 0  | 26,028 | 0   | 0     | 0     | 0     | 0   | 26,028 |

TABLE 6L

## WINONA FIRE CONSOLIDATION ACCOUNT

## SURVIVORS AS OF JUNE 30, 1990

| AGE   | YEARS SINCE DEATH |     |     |       |       |       |     | TOTAL |
|-------|-------------------|-----|-----|-------|-------|-------|-----|-------|
|       | <1                | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25+ |       |
| <50   |                   |     | 1   | 1     |       |       |     | 2     |
| 50-54 | 1                 |     |     | 1     |       |       |     | 2     |
| 55-59 |                   |     | 1   |       |       |       |     | 1     |
| 60-64 |                   |     | 1   |       |       |       |     | 1     |
| 65-69 |                   |     | 1   |       |       | 1     | 1   | 3     |
| 70-74 |                   |     |     | 1     |       |       |     | 1     |
| 75-79 |                   | 1   |     |       | 1     |       | 1   | 3     |
| 80-84 |                   |     |     | 1     | 1     | 1     |     | 3     |
| 85+   |                   |     |     | 1     |       |       |     | 1     |
| TOTAL | 1                 | 1   | 4   | 5     | 2     | 2     | 2   | 17    |

## AVERAGE ANNUAL BENEFIT

| AGE   | YEARS SINCE DEATH |       |        |       |       |       |       | ALL   |
|-------|-------------------|-------|--------|-------|-------|-------|-------|-------|
|       | <1                | 1-4   | 5-9    | 10-14 | 15-19 | 20-24 | 25+   |       |
| <50   |                   |       | 12,206 | 7,324 |       |       |       | 9,765 |
| 50-54 | 7,039             |       |        | 7,324 |       |       |       | 7,182 |
| 55-59 |                   |       | 7,324  |       |       |       |       | 7,324 |
| 60-64 |                   |       | 7,324  |       |       |       |       | 7,324 |
| 65-69 |                   |       | 7,320  |       |       | 7,324 | 7,324 | 7,323 |
| 70-74 |                   |       |        | 7,324 |       |       |       | 7,324 |
| 75-79 |                   | 7,324 |        |       | 7,324 |       | 7,320 | 7,323 |
| 80-84 |                   |       |        | 7,324 | 7,324 | 7,320 |       | 7,323 |
| 85+   |                   |       |        | 7,320 |       |       |       | 7,320 |
| ALL   | 7,039             | 7,324 | 8,544  | 7,323 | 7,324 | 7,322 | 7,322 | 7,593 |

## TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH

| <1    | 1-4   | 5-9    | 10-14  | 15-19  | 20-24  | 25+    | TOTAL   |
|-------|-------|--------|--------|--------|--------|--------|---------|
| 7,039 | 7,324 | 34,174 | 36,616 | 14,648 | 14,644 | 14,644 | 129,089 |

TABLE 7L

## WINONA FIRE CONSOLIDATION ACCOUNT

## RECONCILIATION OF MEMBERS

|                                | <u>ACTIVES</u> | <u>TERMINATED</u>              |                             |
|--------------------------------|----------------|--------------------------------|-----------------------------|
|                                |                | <u>DEFERRED<br/>RETIREMENT</u> | <u>OTHER<br/>NON-VESTED</u> |
| A. On July 1, 1989             | 0              | 0                              | 0                           |
| B. Additions                   | 25             | 0                              | 0                           |
| C. Deletions:                  |                |                                |                             |
| 1. Service Retirement          | 0              | 0                              | 0                           |
| 2. Disability                  | 0              | 0                              | 0                           |
| 3. Death                       | 0              | 0                              | 0                           |
| 4. Terminated-Deferred         | 0              |                                |                             |
| 5. Terminated-Refund           | 0              | 0                              | 0                           |
| 6. Terminated-Other Non-vested | 0              |                                |                             |
| 7. Returned as Active          |                | 0                              | 0                           |
| D. Data Adjustments            | 0              | 0                              | 0                           |
|                                | Vested         |                                |                             |
|                                | Non-Vested     |                                |                             |
|                                | 25             |                                |                             |
|                                | 0              |                                |                             |
| E. Total on June 30, 1990      | 25             | 0                              | 0                           |

|                           | <u>RECIPIENTS</u>                |                 |                  |
|---------------------------|----------------------------------|-----------------|------------------|
|                           | <u>RETIREMENT<br/>ANNUITANTS</u> | <u>DISABLED</u> | <u>SURVIVORS</u> |
| A. On July 1, 1989        | 0                                | 0               | 0                |
| B. Additions              | 24                               | 2               | 18               |
| C. Deletions:             |                                  |                 |                  |
| 1. Service Retirement     |                                  | 0               |                  |
| 2. Death                  | (2)                              | 0               | (1)              |
| 3. Annuity Expired        | 0                                | 0               | 0                |
| 4. Returned as Active     | 0                                | 0               |                  |
| D. Data Adjustments       | 0                                | 0               | 0                |
| E. Total on June 30, 1990 | 22                               | 2               | 17               |

TABLE 8L

## WINONA FIRE CONSOLIDATION ACCOUNT

ACTUARIAL BALANCE SHEET  
(ACTUAL DOLLARS)

JULY 1, 1990

|                                                                                                                   |                     |
|-------------------------------------------------------------------------------------------------------------------|---------------------|
| A. CURRENT ASSETS (7.81% OF TABLE 1, F6)                                                                          | \$6,771,450         |
| B. EXPECTED FUTURE ASSETS                                                                                         |                     |
| 1. Present Value of Employee Contributions                                                                        | 529,327             |
| 2. Present Value of Regular Municipal Contributions                                                               | 793,990             |
| 3. Present Value of Additional Municipal Contributions                                                            | 3,022,992           |
| 4. Total Expected Future Assets                                                                                   | <u>\$4,346,309</u>  |
| C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS                                                                       | <u>\$11,117,759</u> |
| D. CURRENT PENSION BENEFIT OBLIGATION                                                                             |                     |
| 1. Retirees and Beneficiaries Currently Receiving Benefits<br>and Terminated Employees Not Yet Receiving Benefits | \$5,958,602         |
| 2. Current Employees                                                                                              |                     |
| a. Accumulated employee contributions<br>including allocated investment income*                                   | 110,167             |
| b. Employer-financed vested                                                                                       | 3,664,182           |
| c. Employer-financed nonvested                                                                                    | 0                   |
| d. Total                                                                                                          | 3,774,349           |
| 3. Total Pension Benefit Obligation                                                                               | <u>\$9,732,951</u>  |
| E. EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                                     | <u>\$1,384,808</u>  |
| F. TOTAL CURRENT AND EXPECTED FUTURE PENSION BENEFIT OBLIGATION                                                   | \$11,117,759        |
| G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D3-A)                                                                    | \$2,961,501         |
| H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)                                                          | \$0                 |

\* Estimated



TABLE 9L

**WINONA FIRE CONSOLIDATION ACCOUNT**  
**SUMMARY OF ENTRY AGE NORMAL COST CALCULATIONS**  
**(ACTUAL DOLLARS)**

**JULY 1, 1990**

|                                                                        | <u>NUMBER<br/>OF<br/>PARTICIPANTS</u> | <u>ACTUARIAL<br/>PRESENT VALUE<br/>OF PROJECTED<br/>BENEFITS</u> | <u>ACTUARIAL<br/>ACCRUED<br/>LIABILITY</u> |
|------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------|--------------------------------------------|
| <b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>           |                                       |                                                                  |                                            |
| 1. Active Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 21                                    | \$4,315,972                                                      | \$3,503,229                                |
| b. No Election (Greater Value)                                         | 4                                     | 843,185                                                          | 523,742                                    |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 25                                    | \$5,159,157                                                      | \$4,026,971                                |
| 2. Former Members                                                      |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 0                                     | \$0                                                              | \$0                                        |
| b. No Election (Greater Value)                                         | 0                                     | 0                                                                | 0                                          |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 0                                     | \$0                                                              | \$0                                        |
| 3. Benefit Recipients                                                  |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 36                                    | \$4,936,055 *                                                    | \$4,936,055 *                              |
| b. Elected Relief Association                                          | 5                                     | 1,022,547                                                        | 1,022,547                                  |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| c. Total                                                               | 41                                    | \$5,958,602                                                      | \$5,958,602                                |
| 4. Total                                                               |                                       |                                                                  |                                            |
| a. Elected PERA Police and Fire                                        | 57                                    | \$9,252,027                                                      | \$8,439,284                                |
| b. Elected Relief Association                                          | 5                                     | 1,022,547                                                        | 1,022,547                                  |
| c. No Election (Greater Value)                                         | 4                                     | 843,185                                                          | 523,742                                    |
|                                                                        | ---                                   | ---                                                              | ---                                        |
| d. Total                                                               | 66                                    | \$11,117,759                                                     | \$9,985,573                                |
|                                                                        | ---                                   | =====                                                            | =====                                      |
| <b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b> |                                       |                                                                  |                                            |
| 1. AAL (A4)                                                            |                                       |                                                                  | \$9,985,573                                |
| 2. Current Assets (7.81% of Table 1,F6)                                |                                       |                                                                  | 6,771,450                                  |
|                                                                        |                                       |                                                                  | -----                                      |
| 3. UAAL (B1-B2)                                                        |                                       |                                                                  | \$3,214,123                                |
|                                                                        |                                       |                                                                  | =====                                      |
| <b>C. NORMAL COST</b>                                                  |                                       |                                                                  | \$137,203                                  |

\* Includes Minnesota Post Retirement Investment Fund reserves of \$4,193,303.

**WINONA FIRE CONSOLIDATION ACCOUNT**  
**CALCULATION OF NET ACTUARIAL LOSS (GAIN)**  
**(ACTUAL DOLLARS)**

**TABLE 10L**

**YEAR ENDING JUNE 30, 1990**

|                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------|---------------|
| <b>A. ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (TABLE 9L)</b>                                          |               |
| 1. Elected PERA Police and Fire                                                                             | \$9,252,027   |
| 2. Elected Relief Association                                                                               | 1,022,547     |
| 3. No Election (Greater Value)                                                                              | 843,185       |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | \$11,117,759  |
|                                                                                                             | -----         |
| <b>B. PRESENT VALUE OF FUTURE EMPLOYEE CONTRIBUTIONS</b>                                                    |               |
| 1. Elected PERA Police and Fire                                                                             | \$394,555     |
| 2. No Election (Greater Value)                                                                              | 134,772       |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$529,327     |
|                                                                                                             | -----         |
| <b>C. PRESENT VALUE OF FUTURE REGULAR MUNICIPAL CONTRIBUTIONS</b>                                           |               |
| 1. Elected PERA Police and Fire                                                                             | \$591,832     |
| 2. No Election (Greater Value)                                                                              | 202,158       |
|                                                                                                             | -----         |
| 3. Total                                                                                                    | \$793,990     |
|                                                                                                             | -----         |
| <b>D. CURRENT VALUE OF ASSETS (7.81% OF TABLE 1, F6)</b>                                                    | \$6,771,450   |
|                                                                                                             | -----         |
| <b>E. PRESENT VALUE OF FUTURE ADDITIONAL MUNICIPAL CONTRIBUTIONS</b>                                        |               |
| 1. Initial Contribution - Annual Payment of \$699,895<br>through the Amortization Date of December 31, 2010 | \$7,030,532   |
|                                                                                                             | -----         |
| 2. Total                                                                                                    | \$7,030,532   |
|                                                                                                             | -----         |
| <b>F. LOSS (GAIN) [A-B-C-D-E]</b>                                                                           | (\$4,007,540) |
|                                                                                                             | =====         |
| <b>G. ANALYSIS OF LOSS (GAIN)</b>                                                                           |               |
| 1. MPRIF Mortality                                                                                          | (\$235,810)   |
| 2. Election of PERA Police and Fire Fund                                                                    | (3,385,959)   |
| 3. Other                                                                                                    | (385,771)     |
|                                                                                                             | -----         |
| 4. Total                                                                                                    | (\$4,007,540) |
|                                                                                                             | =====         |
| <b>H. 15 YEAR AMORTIZATION OF LOSS (GAIN)</b>                                                               | (\$463,301)   |

**WINONA FIRE CONSOLIDATION ACCOUNT**  
**DETERMINATION OF STATUTORY CONTRIBUTIONS**  
**(ACTUAL DOLLARS)**

JULY 1, 1990

|                                                                          |                                               | <u>AMOUNT</u><br><u>%</u>                   | <u>AMOUNT</u><br><u>\$</u> |
|--------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------|----------------------------|
| A. EMPLOYEE CONTRIBUTIONS                                                |                                               | 8.00%                                       |                            |
| B. EMPLOYER CONTRIBUTIONS<br>(BEFORE ADJUSTMENT FOR STATE AID)           |                                               |                                             |                            |
| 1. Regular Municipal Contribution                                        |                                               | 12.00%                                      |                            |
| 2. Additional Municipal Contribution                                     |                                               |                                             |                            |
| a. <u>Established</u><br>Initial                                         | <u>Current</u><br><u>Balance</u><br>7,030,532 | <u>Last</u><br><u>Payment</u><br>12/31/2010 | 699,895                    |
| b. 7/1/90                                                                | (4,007,540)                                   | 12/31/2004                                  | (463,301)                  |
| c. Total                                                                 | \$3,022,992<br>=====                          |                                             | \$236,594 *<br>=====       |
| C. TOTAL STATUTORY CONTRIBUTION IS 20.00% OF COMPENSATION PLUS \$236,594 |                                               |                                             |                            |

\* Contribution is assumed to be paid on December 31, 1990.