

1985 ACTUARIAL REPORT AND  
EXPERIENCE STUDY

for

Buhl Policemen's  
Relief Association



**Hewitt Associates**

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SECTION 1. A BRIEF SUMMARY OF THE CENSUS DATA



SECTION 1. A BRIEF SUMMARY OF THE CENSUS DATA

The data on which this actuarial valuation is based is summarized below.

Members Not Yet Receiving Benefits

|                            | <u>Number</u> | <u>Prospective<br/>Retirement<br/>Annuities</u> |
|----------------------------|---------------|---|
| Active Members             | 2             | \$41,848  |
| Deferred Annuitant Members | 0             | --  |

Members Currently Receiving Benefits

|                              | <u>Number</u> | <u>Annual Annuity<br/>Payments</u> |
|------------------------------|---------------|------------------------------------|
| Retired Members              | 0             | --                                 |
| Disabled Members             | 0             | --                                 |
| Widows of Deceased Members   | 1             | \$7,005                            |
| Children of Deceased Members | 0             | --                                 |

SECTION 2. THE ACTUARIAL VALUATION



SECTION 2. THE ACTUARIAL VALUATION

The results of the valuation on December 31, 1984, are shown below. These results reflect an old plan rate of 65% of total pay and a new plan rate of 85% of total pay.

|  | <u>Old Plan</u> | <u>New Plan</u> |
|--|-----------------|-----------------|
| 1. Accrued Liability   | \$491,312       | \$676,796       |
| 2. Special Fund Assets   | <u>409,528</u>  | <u>409,528</u>  |
| 3. Unfunded Accrued Liability<br>(Prior Service Deficit)   | \$ 81,784       | \$267,268       |
| 4. Normal Cost for Current Year  | \$ 17,751       | \$ 21,670       |
| 5. Normal Cost as a Level Percentage of<br>Current and Projected Future<br>Participating Payroll | 37.12%          | 45.31%          |
| 6. Current Participating Payroll<br>Used for Valuation   | \$ 47,821       | \$ 47,821       |

The actuarial assumptions used in determining these results will be found in Appendix A.

Explanation of Actuarial Terminology

- **Accrued Liability:** The present value of benefits earned for service prior to the valuation date under the actuarial method used. The actuarial method used spreads the cost of total expected benefits equally over each member's anticipated period of active membership. The dollar amount shown as the Accrued Liability represents the number of dollars that should be in the Special Fund to provide for benefits already earned.
- **Unfunded Accrued Liability (Prior Service Deficit):** This amount is the difference between the Accrued Liability (the amount that should be in the Special Fund to fully provide for benefits already earned) and the actual amount of Special Fund assets.

- Normal Cost: The amount necessary, according to the actuarial method used, to pay for benefits earned in 1985 by active employees (and each future year until another actuarial valuation is completed).

SECTION 3. CONTRIBUTIONS

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SECTION 3. CONTRIBUTIONS

The Police and Firefighters' Relief Association Guidelines Act of 1969, as amended by Chapter 564 of Minnesota Statutes 1984, specifies minimum support rates required on an annual basis. The minimum support rates from the municipality and state aid are determined as the amounts required to meet the normal cost plus amortize the unfunded actuarial liability by December 31, 2010. This total contribution is shown below.

The contribution required by the municipality for any year is determined by taking Item 3 below, and subtracting one year's estimated state aid expected from the state pursuant to Minnesota Statutes, Chapter 69.

Contribution to Amortize Unfunded Accrued Liability (Prior Service Deficit) by December 31, 2010

|  |               |
|--|---------------|
| 1. Normal Cost   | \$21,670      |
| 2. Amortization Payment on Unfunded<br>Accrued Liability (Prior Service Deficit) | <u>20,620</u> |
| 3. Total Contribution Required<br>(Including State Aid)                          | \$42,290      |



SECTION 4. INCOME OF FUND DURING 1984



SECTION 4. INCOME OF FUND DURING 1984

|                               |             |
|-------------------------------|-------------|
| Members' Contributions        | \$ 3,825.55 |
| Contributions by Municipality | 13,287.23   |
| State Aid                     | 7,982.72    |
| Other                         | <u>0.00</u> |
| Total Contributions           | \$25,095.50 |
| Investment Income             | \$38,956.57 |



SECTION 5. EXPERIENCE OF THE PLAN



## SECTION 5. EXPERIENCE OF THE PLAN

Since the previous valuation of the Plan, the Unfunded Accrued Liability has changed as follows:

|  |                 |
|--|-----------------|
| Unfunded Accrued Liability, 1/1/84                           | \$ 38,120       |
| Normal Cost  | 11,758          |
| Interest at 5% on the above                                  | 2,494           |
| Contributions plus Interest                                  | <u>(25,192)</u> |
| Expected Unfunded Accrued Liability<br>before Plan Change    | \$ 27,180       |
| Increase in Unfunded Accrued Liability<br>due to Plan Change | <u>185,484</u>  |
| Expected Unfunded Accrued Liability<br>after Plan Change     | \$212,664       |
| Actual Unfunded Accrued Liability<br>after Plan Change       | <u>267,268</u>  |
| Actuarial Loss since the<br>Previous Valuation               | \$ 54,604       |

The major factors for the actuarial loss were a loss of about \$55,000 due to actual pay increases being higher than assumed and a turnover loss of about \$20,000 resulting from no terminations nor deaths during the last year. These losses were partially offset by an asset gain of about \$21,000.

The normal cost as a percent of pay increased from 28.67% on January 1, 1984, to 45.31% on January 1, 1985. The major components of the increase are shown as follows:

|                                |               |
|--------------------------------|---------------|
| Normal Cost Percent, 1/1/84    | 28.67%        |
| Increase due to turnover loss  | + 5.05        |
| Increase due to pay loss       | + 3.40        |
| Increase due to benefit change | + 8.19        |
| Normal Cost Percent, 1/1/85    | <u>45.31%</u> |

The contribution for 1984 is \$42,290.

The average entry age of all active members is 27.



SECTION 6. THE PREPARATION OF THE REPORT



SECTION 6. THE PREPARATION OF THE REPORT

This report has been prepared in accordance with generally accepted actuarial principles and practices. This actuarial survey was made in accordance with our understanding of the requirements of the Police and Firefighters' Relief Association Guidelines Act of 1969, as amended by Chapter 564, Laws of Minnesota 1984. The usual care has been exercised in making the calculations and presenting the results. The contents of this report are, therefore, believed to be a correct appraisal of the state of affairs of the Plan.

Respectfully submitted,

HEWITT ASSOCIATES



Michael M. C. Sze  
Fellow, Society of Actuaries



APPENDIX A. ACTUARIAL ASSUMPTIONS

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APPENDIX A. ACTUARIAL ASSUMPTIONS

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|                  |   |
|------------------|---|
| Mortality Rates  | The mortality rates used are based on the United States Life Table, 1959-61, White Males and White Females. These tables were used for active members, retired members and for survivors.   |
| Withdrawal Rates | The rate of withdrawal is .060 at age 20 decreasing uniformly to zero at age 45 with no withdrawal after that age.  |
| Disability Rates | The expected Normal Cost of any disability benefit has been determined using claim statistics based on rates developed by the New York State Employees' Retirement System, and the resulting cost has been included in the Normal Cost shown on page 2. |
| Retirement Age   | Members are assumed to retire after attaining age 53 and 20 years of service.   |
| Salary Scale     | A 3-1/2% annual increase in the salary on which retirement benefits are based has been assumed.   |
| Interest Rate    | Five percent compounded annually.   |
| Actuarial Method | The Entry Age Normal Cost Method has been used to determine the Unfunded Actuarial Liability. The Normal Cost has been determined as a level percentage of current and future participating payroll on which the retirement benefits are based.         |

APPENDIX B. SUMMARY OF PLAN PROVISIONS



APPENDIX B. SUMMARY OF PLAN PROVISIONS

Requirements for Benefits

|            |  |
|------------|--|
| Retirement | Twenty years service and age 50.                                       |
| Disability | <u>In Line of Duty:</u> None.<br><br><u>Not in Line of Duty:</u> None. |
| Vesting    | Twenty years service. Benefit is deferred to the attainment of age 50. |

Amount of Benefit

|            |   |
|------------|---|
| Retirement | <u>Benefit When Minimum Requirements are Met:</u><br>Old Plan - 65% of final pay.<br>New Plan - 85% of final pay.<br><br><u>Additional Benefits for Service Beyond Minimum Requirements:</u> \$10.00 per month for each additional year of service in excess of 20 years but not to exceed \$50.00. |
|------------|---|

Disability

|            |  |
|------------|--|
| Short Term | \$8.00 per day to a maximum of 26 weeks. |
|------------|--|

|                     |   |
|---------------------|---|
| Total and Permanent | <u>In Line of Duty:</u><br>Old Plan - 65% of final pay.<br>New Plan - 85% of final pay. |
|---------------------|---|

|  |   |
|--|---|
|  | <u>Not in Line of Duty:</u><br>Old Plan - 65% of final pay.<br>New Plan - 85% of final pay. |
|--|---|

Amount of Benefit (Continued)

|                              |  |
|------------------------------|--|
| Vesting                      | Same as Retirement benefit.  |
| Widow's Benefit              | Old Plan: 65% of member's pension benefit based on 65% of final pay.<br><br>New Plan: 85% of member's pension benefit based on 85% of final pay.   |
| Children of Deceased Members | Old Plan: If both parents are deceased, 65% of member's pension. If member dies before retirement, \$125.00 per month per child to age 18 or 22 if in school.<br><br>New Plan: If both parents are deceased, 85% of member's pension. If member dies before retirement, \$125.00 per month per child to age 18 or 22 if in school. |
| Other Death Benefits         | None.  |
| Salary Basis for Benefits    | Current compensation.  |
| Unit Value                   | Not applicable.  |
| Member Contribution          | 8% of compensation.  |
| Escalator Clause             | Former member's pension benefits are increased by 3-1/2% with each salary raise of active members.   |

APPENDIX C. CENSUS DATA

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## APPENDIX C. CENSUS DATA

Active Members

| <u>Number</u> | <u>Age<br/>Nearest<br/>Birthday</u> | <u>Completed<br/>Years of<br/>Service</u> | <u>Current<br/>Salary</u> | <u>Old<br/>Projected<br/>Annual<br/>Annuity</u> | <u>New<br/>Projected<br/>Annual<br/>Annuity</u> |
|---------------|-------------------------------------|---|---------------------------|---|---|
| 1             | 55                                  | 28  | \$25,221                  | \$16,994  | \$22,038  |
| 2             | 47                                  | 19  | \$22,600                  | \$15,290  | \$19,810  |

Widows of Deceased Members

| <u>Number</u> | <u>Age<br/>Nearest<br/>Birthday</u> | <u>Annual<br/>Benefit</u> |
|---------------|-------------------------------------|---------------------------|
| 1             | 60                                  | \$7,005                   |





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