

1987 ACTUARIAL REPORT AND  
EXPERIENCE STUDY

for

BUHL POLICE RELIEF ASSOCIATION



**Hewitt Associates**

CONTENTS

---

<u>Section</u>		<u>Page</u>
1	A BRIEF SUMMARY OF THE CENSUS DATA	1
2	THE ACTUARIAL VALUATION	2
3	CONTRIBUTIONS	4
4	INCOME OF FUND DURING 1986	5
5	EXPERIENCE OF THE PLAN	6
6	THE PREPARATION OF THE REPORT	7

APPENDIX

A	ACTUARIAL ASSUMPTIONS	8
B	SUMMARY OF PLAN PROVISIONS	9
C	CENSUS DATA	10

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 Retirement Annuities</u>
Active Members	2	\$50,318.00
Deferred Annuitant Members	-	-

Members Currently Receiving Benefits

	<u>Number</u>	<u>Annual Annuity Payments</u>
Retired Members	-	-
Disabled Members	-	-
Widows of Deceased Members	1	\$ 9,160.80
Children of Deceased Members	-	-



SECTION 2. THE ACTUARIAL VALUATION

---

SECTION 2. THE ACTUARIAL VALUATION

---

The results of the valuation on December 31, 1986, are shown below. These results reflect a benefit rate of 85% of total pay.

1. Accrued Liability	\$764,800
2. Special Fund Assets	<u>491,961</u>
3. Unfunded Accrued Liability (Prior Service Deficit)	\$272,839
4. Normal Cost for Current Year	\$ 20,976
5. Normal Cost as a Level Percentage of Current and Projected Future Participating Payroll	43.40%
6. Current Participating Payroll Used for Valuation	\$ 48,336

Determination of Assets

1. Cost Value	\$456,971
2. Market Value	\$561,942
3. Valuation Value	\$491,961

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 1987 by active employees (and each future year until another actuarial valuation is completed).

SECTION 3. CONTRIBUTIONS

---

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)

1. Normal Cost	\$20,976
2. Amortization Payment on Unfunded Accrued Liability (Prior Service Deficit)	<u>21,671</u>
3. Total Contribution Required (Including State Aid)	\$42,647

SECTION 4. INCOME OF FUND DURING 1986

---

SECTION 4. INCOME OF FUND DURING 1986

---

Members' Contributions	\$ 3,866.94
Contributions by Municipality	43,426.57
State Aid	10,853.08
Other	<u>0.00</u>
Total Contributions	\$58,146.59
Investment Income	\$37,578.44

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	\$245,490
Normal Cost	19,859
Interest at 5% on the above	13,267
Contributions plus Interest	<u>(58,244)</u>
Expected Unfunded Accrued Liability before Benefit Rate Increase	\$220,372
Increase in Unfunded Accrued Liability due to Benefit Rate Increase	<u>24,431</u>
Expected Unfunded Accrued Liability after Benefit Rate Increase	\$244,803
Actual Unfunded Accrued Liability after Benefit Rate Increase	<u>272,839</u>
Actuarial (Gain)/Loss since the Previous Valuation	\$ 28,036

The major factor for the actuarial loss was a loss of about \$18,000 due to actual pay increases being larger than assumed. There was also an asset loss of approximately \$7,000, a turnover loss of about \$2,000 resulting from no terminations or deaths during the last year, and a retiree loss of about \$1,000. The benefit rate change for the inactives increased the actuarial liability by \$24,431.

The normal cost as a percentage of pay remained relatively stable from 43.77% on January 1, 1986 to 43.40 on January 1, 1987.

The contribution for 1987 is \$42,647. The average entry age for all active members is 27.5.

SECTION 6. THE PREPARATION OF THE REPORT

---

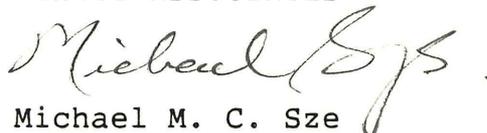
SECTION 6. THE PREPARATION OF THE REPORT

---

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

---

APPENDIX A - ACTUARIAL ASSUMPTIONS

---

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 58 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 In Line of Duty: None.

Not In Line of Duty: None.

Vesting Twenty years service. Benefit is deferred to the attainment of age 50.

Amount of Benefit

Retirement Benefit When Minimum Requirements are Met: 85% of total pay.

Additional Benefits for Services Beyond Minimum Requirements: \$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 In Line of Duty: 85% of total pay.

Not in Line of Duty: 85% of total pay.

Amount of Benefits (Continued)

Vesting	Same as Retirement benefit.
Widow's Benefit	85% of member's pension benefit based on 85% of total pay.
Children of Deceased Members	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

---

APPENDIX C. CENSUS DATA

---

Active Members

<u>Number</u>	<u>Age Nearest Birthday</u>	<u>Completed Years of Service</u>	<u>Current Salary</u>	<u>Projected Annual Benefit</u>
1	57	30	\$24,676	\$22,309
2	49	21	<u>23,660</u>	<u>28,009</u>
Total Active Members			\$48,336	\$50,318

The projected annual benefit is based on salary and years of service projected to assumed retirement age of 58.

Widows of Deceased Members

<u>Number</u>	<u>Age Nearest Birthday</u>	<u>Annual Benefit</u>
1	62	\$9,160.80



## Hewitt Associates

An international firm of consultants  
and actuaries specializing in  
the design, financing, communication,  
and administration of employee  
benefit and compensation programs

---

### United States Professional Centers

2100 RiverEdge Parkway  
Atlanta, Georgia 30328  
(404) 956-7777

100 Half Day Road  
Lincolnshire, Illinois 60015  
(312) 295-5000

40 Highland Avenue  
Rowayton, Connecticut 06853  
(203) 852-1100

3 Hutton Centre Drive  
Santa Ana, California 92707  
(714) 751-1400

25231 Grogan's Mill Road  
The Woodlands, Texas 77380  
(713) 363-0456

---

### United States Regional Consulting Offices

Atlanta	Dayton	Milwaukee	St. Louis
Boston	Denver	Minneapolis	San Francisco
Chicago	Detroit	New York	Seattle
Cleveland	Houston	Philadelphia	Tampa
Dallas	Los Angeles	Phoenix	

---

### International Centers and Offices

Amsterdam	Mexico City	Rotterdam	Wiesbaden
Brussels	Neuchatel	Toronto	Zurich
London	Paris		

---

### Management Compensation Services

8687 East Via de Ventura  
Scottsdale, Arizona 85258  
(602) 994-1373

(A wholly-owned, independently  
operated division of Hewitt Associates)