

**Eveleth Fire and Police
Retirees' Relief Association**



**Annual Actuarial Valuation
December 31, 1997**

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Gabriel, Roeder, Smith & Company



Consultants & Actuaries

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May 19, 1998

Board of Trustees
Eveleth Fire and Police Retirees'
Relief Association
City Hall
Eveleth, Minnesota 55734

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Dear Board Members:

Submitted in this report are the results of the December 31, 1997 actuarial valuation of the assets and liabilities associated with the benefits provided by the Eveleth Fire and Police Retirees' Relief Association.

The valuation was based upon information furnished by the Office of the City Clerk regarding financial data and benefit and census information for each retired member and beneficiary. The data was not audited by us but was sufficient for us to complete the actuarial valuation.

The actuarial valuation was prepared using generally accepted actuarial principles and practices based upon the methods, assumptions, summary of plan provisions and the member and financial data described in this report.

Respectfully submitted,

Norman S. Losk

Brian F. Dunn

Mary Ann Vitale

NSL:ct

Section A



Valuation Results

COMMENTS

Economic Assumptions and Financing Method

The economic assumption of 5% annual investment return is established by state law. State law also specifies that the annual minimum obligation of the municipality shall be determined by adding (i) the employer normal cost percent times covered payroll to (ii) the level dollar amount required to amortize the unfunded actuarial accrued liability by December 31, 2010.

It is worth noting that when the same assumptions and methods are applied to plans which differ in nature, the valuation results may not be comparable. Caution should be exercised when attempting to assess the financial condition of one Association relative to another on the basis of valuation results produced using the assumptions and methods mandated by state law.

Timing of Valuation and Contribution Requirements

In accordance with Minnesota Statutes (1983 Supplement) Section 69.77, Subdivision 2, financial requirements of the Relief Association for the following calendar year are based on the most recent actuarial valuation.

In particular, this valuation as of December 31, 1997 determines the employer's minimum contribution obligation for the year beginning January 1, 1999.

Most Recent Amendment

The most recent amendment to this plan became effective January 1, 1997 and resulted in a \$100 increase in the monthly benefit for each retired member and beneficiary.

CONTRIBUTION RATE TO PROVIDE BENEFITS
Member Portion & Employer Portion
Effective January 1, 1999

<u>Contributions for</u>	<u>If Paid Equally Throughout Year</u>		
	<u>Normal Cost % of Active Payroll for 1999</u>	<u>+</u>	<u>UAAL Dollars</u>
Normal cost of annuities:			
Age & service: to members			
Age & service: to survivors			
Disability			
Death before retirement			
Refunds of member contributions			
Total Normal Cost	N.A.		
Amortization of unfunded actuarial accrued liabilities (UAAL) (12 year level dollar payment)			
Retired lives			\$40,748
Active members			0
Total			\$40,748
Total Cost of Benefits	N.A.	+	\$40,748
Member contributions	N.A.		
COMPUTED EMPLOYER RATE:			
(a) If Paid Equally Throughout Year	N.A.	+	\$40,748
(b) IF PAID AT CALENDAR YEAR END	N.A.	+	\$41,754

PRESENT ACTUARIAL CONDITION

The following schedule shows the relationship between the Association's assets available for benefits as of December 31, 1997, the actuarial accrued liabilities as of that same date, and the number of persons with claims on the Association's assets.

	<u>Actuarial Accrued Assets</u>	<u>Actuarial Accrued Liabilities</u>	<u>Unfunded Actuarial Accrued Liabilities</u>	<u>Percent Funded</u>
Retirants and Beneficiaries				
Retired Members (3)		\$138,935		
Surviving Spouses (8)		444,492		
Surviving Children (0)		<u>0</u>		
Total (11)	\$213,309	\$583,427	\$370,118	36.6%
Members with Deferred Benefits (0)	0	0	0	-
Active Members (0)	<u>0</u>	<u>0</u>	<u>0</u>	-
Total (11)	\$213,309	\$583,427	\$370,118	36.6%

CONTRIBUTION WORKSHEET

The dollar amount of contribution needed to fund retirement benefits depends on the results of the last actuarial valuation, and on the timing of contributions made within the year. The later the contribution date, the greater the dollar amount will be.

As of December 31, 1997:

(1) Normal cost	\$ 0
(2) Actuarial accrued liability	583,427
(3) Actuarial accrued assets	<u>213,309</u>
(4) Unfunded actuarial accrued liability: (2) - (3)	\$370,118
(5) Level dollar amortization of (4) to December 31, 2010:	
(a) If payment is made in equal installments throughout the year	\$ 40,748
(b) If payment is made at year end	\$ 41,754
(6) Employer's minimum contribution obligation:	
(a) If payment is made in equal installments throughout the year: (1) + (5)(a)	\$ 40,748
(b) If payment is made at year end: (1) + (5)(b)	\$ 41,754

Section B



Valuation Data and Summary of Benefit Provisions

MEMBER DATA

Retiree and Beneficiary Data at December 31, 1997

	<u>Number</u>	<u>Monthly Amounts</u>	<u>Computed Actuarial Accrued Liabilities</u>
Retirees	3	\$3,125.00	\$138,935 ⁽¹⁾
Beneficiaries	8	<u>6,597.50</u>	<u>444,492</u>
		\$9,722.50	\$583,427

(1) Includes the value of a \$2,000 death benefit payable on behalf of retired members.

By Attained Ages at December 31, 1997

<u>Attained Ages</u>	<u>Retirees</u>	<u>Beneficiaries</u>	<u>Total</u>
70-74	0	0	0
75-79	0	2	2
80-84	0	3	3
85-89	1	3	4
90-94	<u>2</u>	<u>0</u>	<u>2</u>
	3	8	11
Average Attained Age	89.6	83.3	85.0

Active Member Data at December 31, 1997

As of the end of 1997, the Association had no active members.

**BRIEF SUMMARY OF BENEFIT PROVISIONS
REFLECTED IN ACTUARIAL VALUATION
(AS OF DECEMBER 31, 1997)**

ACCRUED BENEFITS

The Office of the City Clerk of Eveleth supplied a list of the monthly accrued benefits payable to the retired members and beneficiaries. Benefits to beneficiaries and most retirees are paid as life annuities. One retiree has elected a joint and 70% surviving spouse annuity.

DEATH BENEFIT FOR RETIRED MEMBERS

Upon the death of a retired member, a \$2,000 death benefit is paid to a designated eligible beneficiary. This benefit is not payable on behalf of beneficiaries.

COST OF LIVING ADJUSTMENTS

The plan does not provide cost of living adjustments to benefits.

LAST AMENDMENT

The plan was most recently amended effective January 1, 1997, and resulted in a \$100 increase in the monthly benefit for each retired member and beneficiary.

Section C



Valuation Methods and Assumptions

Valuation Methods and Assumptions

The entry age actuarial cost method was used to determine the normal cost of all benefits. The rate of investment return (interest) as required by state law used in making the valuation was 5.0 percent per annum, compounded annually. Mortality was based on the UP-1984 Table set forward 2 years for males and set back 3 years for females. Assets are held in a savings account, the value of which is reported to us at the end of each year. That value is used as the actuarial value of assets.

Mortality Table

Sample Ages	Single Life Values: Present Value of \$1 Monthly Level For Life		Future Life Expectancy (Years)	
	Men	Women	Men	Women
45	\$177.21	\$189.58	29.50	34.00
50	163.12	177.21	25.20	29.50
55	147.50	163.12	21.16	25.20
60	130.52	147.50	17.42	21.16
65	112.87	130.52	14.05	17.42
70	95.20	112.87	11.09	14.05
75	77.77	95.20	8.52	11.09
80	61.71	77.77	6.39	8.52

Section D



Financial Reporting under Governmental Accounting Standards Board (GASB) Statement No. 25

FINANCIAL REPORTING UNDER GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB) REQUIREMENTS

The provisions of GASB Statement No. 25 became effective for periods beginning after June 15, 1996. This Statement established financial reporting standards for defined benefit *plans*.

Defined benefit plan reporting under Statement No. 25 will include two financial statements with notes and two required schedules with notes. In response, the following exhibits appear on the next several pages:

- **Statement of Plan Net Assets Available for Benefits** (page D-2) provides information about the market value of plan assets by investment category.
- **Statement of Changes in Plan Net Assets Available for Benefits** (page D-3) shows a reconciliation of beginning-of-year market value with the end-of-year market value.

The relevant notes to the financial statements are on page D-4.

- **The Schedule of Funding Progress** (page D-5) shows the recent history of the actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded actuarial accrued liabilities to payroll.
- **The Schedule of Employer Contributions** (page D-6) provides a six-year history of the City's contributions to the plan.

A summary of actuarial methods and assumptions completes the Statement No. 25 information on page D-7.

STATEMENT OF PLAN NET ASSETS
MARKET VALUE
AS OF DECEMBER 31, 1996 AND 1997

	<u>1997</u>	<u>1996</u>
Assets:		
Cash and short-term investments	\$213,309	\$169,379
Receivables:		
Accrued interest	-	-
Accounts Payable:	-	-
Investments at fair value:	<u>-</u>	<u>-</u>
Net assets held in trust for pension benefits*	<u>\$213,309</u>	<u>\$169,379</u>

* *A schedule of funding progress for the plan is presented on page D-5.*

STATEMENT OF CHANGES IN PLAN NET ASSETS
FOR THE FISCAL YEARS ENDED DECEMBER 31, 1996
AND DECEMBER 31, 1997

	<u>December 31, 1997</u>	<u>December 31, 1996</u>
Additions:		
Contributions		
Employer	\$156,161	\$156,158
Plan members	<u>-</u>	<u>-</u>
Total	156,161	156,158
Investment Income	<u>9,062</u>	<u>6,411</u>
Total Additions	\$165,223	\$162,569
Deductions:		
Benefits Paid	121,293	117,557
Refund of Contributions	-	-
Expenses	<u>-</u>	<u>1,000</u>
Total Deductions	\$121,293	\$118,557
Net Increase	\$ 43,930	\$ 44,012
Net assets held in Trust Fund:		
Beginning of year	\$169,379	\$125,367
End of year	<u>\$213,309</u>	<u>\$169,379</u>

Plan Description. The Eveleth Fire and Police Retirees' Relief Association is a single-employer defined benefit pension plan that covers the fire and police department retirees of the City of Eveleth.

The plan provides retirement and death benefits to plan members.

The employer's funding policy provides for periodic employer contributions based upon a *fundamental financial objective of having adequate funds available to pay the benefits promised to retirees and beneficiaries of certain deceased retirees*. To determine the employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, the System has actuarial valuations prepared on a regular basis. In preparing those valuations, the entry age actuarial cost method is used to determine normal cost and actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized by level dollar contributions over a period of future years as outlined on page A-2.

On the basis of the December 31, 1997 actuarial valuation, the employer contributions rates were determined to be as follows:

Contributions for	
Normal Cost as a Percent of Active Member Payroll	Unfunded Actuarial Accrued Liabilities
N/A	\$40,748

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS
(DOLLAR AMOUNTS IN THOUSANDS)

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability (AAL)	(b)-(a) Unfunded AAL (UAAL)	(a)/(b) Funded Ratio	(c) Covered Payroll	[(b-a)/c] UAAL as a Percent of Covered Payroll
12/31/95	\$136,524	\$652,073	\$515,549	20.9%	N/A	- %
12/31/97	213,309	583,427	370,118	36.6	N/A	-

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended December 31	Annual Employer Contributions
1992	\$115,085
1993	116,097
1994	114,842
1995	117,397
1996	156,158
1997	156,161

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 1997
Actuarial cost method	Entry age actuarial cost method
Amortization method	Level dollar
Remaining amortization period	12 years
Asset valuation method	Value of total assets held in savings account
Actuarial assumptions:	
Investment rate of return (net)	5.0%
Projected salary increases	N/A
Assumed rate of payroll growth	N/A
Assumed rate of membership growth	0%
Cost-of-living adjustments	0.0%

Appendices



APPENDIX I

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

Promises Made, and Eventually Paid. As each year is completed, the plan in effect hands an “IOU” to each member then acquiring a year of service credit -- the “IOU” says: “The Pension Plan owes you a portion of your retirement benefits, payments to be made in cash, commencing when you qualify for retirement.”

The related key financial questions are: Which generation of taxpayers contributes the money to cover the IOU? The present taxpayers, who receive the benefit of the member’s present year of service? Or the future taxpayers, who happen to be in town paying taxes at the later time when the IOU becomes a cash demand?

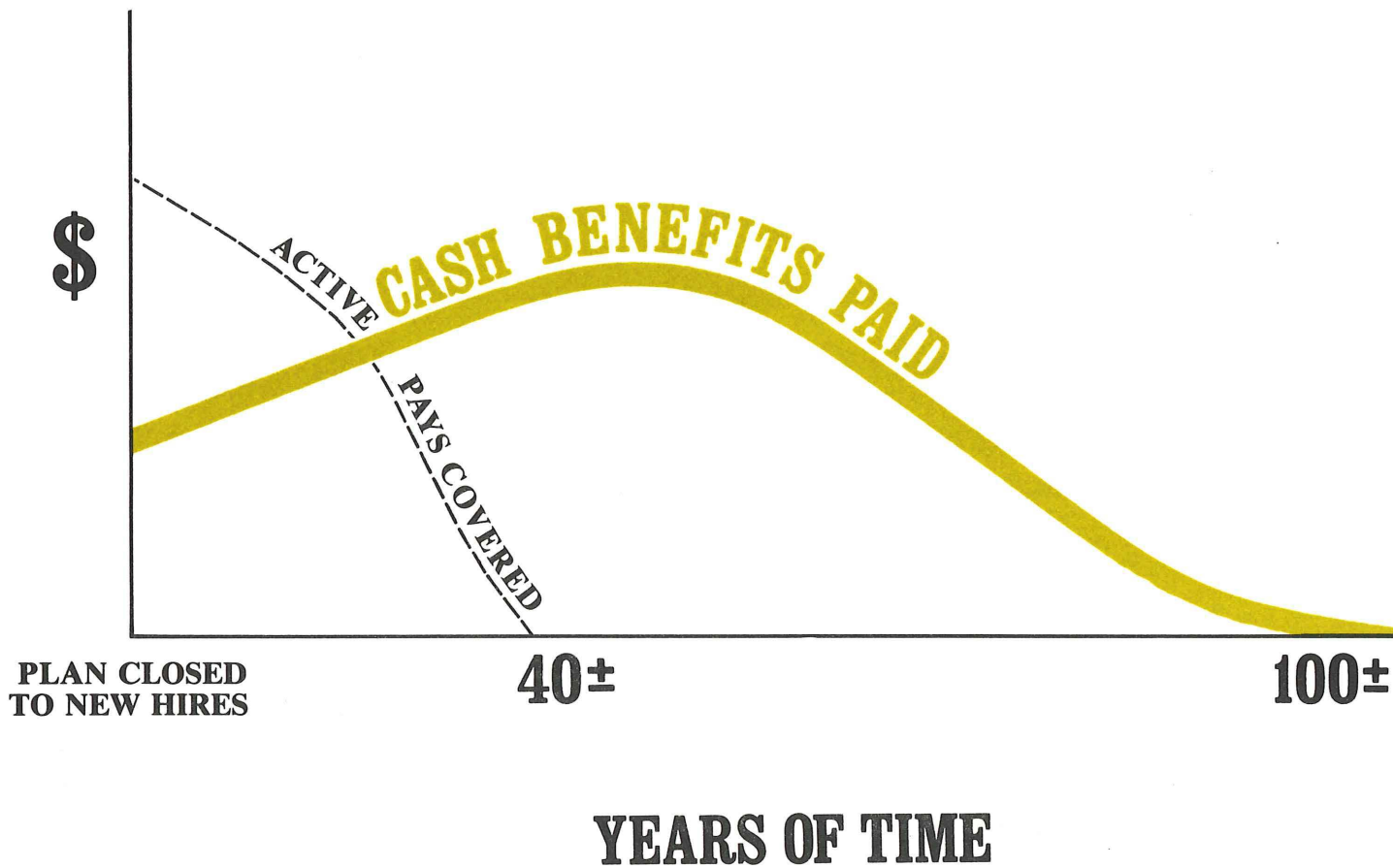
An important principle of sound retirement plan financing is to have this year’s taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, THE CONTRIBUTION RATE WILL REMAIN APPROXIMATELY LEVEL FROM GENERATION TO GENERATION -- our children and grandchildren will contribute the same percents of active payroll we contribute now.

A PENSION PLAN BECOMES CLOSED

The diagram in this appendix shows two important activities which occur after a plan has been closed to employees hired in the future.

Cash benefits paid continue to increase for decades, while active member payroll begins to decrease to zero.

A CLOSED PENSION PLAN



A plan becomes closed when no new hires are admitted to active membership. The persons covered by the plan at the time of closing continue their normal activities and continue to be covered by the plan, until the last survivor dies.

CASH BENEFITS LINE. After a pension plan becomes closed, the usual pattern is for cash benefits to continue to increase for decades of time. Eventually the cash benefits will peak, and then gradually decrease over more decades of time, ultimately to zero. The last cash benefit is likely to occur a century after the time the plan is closed.

The precise amounts of cash benefits cannot be known now, and must be estimated by assumptions of future experiences in a variety of financial risk areas.

Funding Method. A funding method is the long-term, planned pattern for employer contributions.

For an open plan (a plan covering future employees), the level-percent-of-active-member payroll funding method is the basic funding method.

The level-percent funding method can also be applied to a closed plan. However, the resulting contribution percent usually jumps to a high rate, because the number of covered active members is decreasing.

A preferred funding method for a closed plan consists of: level-percent funding for normal cost (the cost of members' service now being rendered); plus a level dollar contribution for unfunded actuarial accrued liabilities over a limited period of years. The period of years must be limited so that plan assets don't become zero while benefits are still payable.

Computing Contributions To Support Plan Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

In making an actuarial valuation, assumptions must be made regarding anticipated financial experiences for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions or the skill of the actuary and the millions of calculations he made. The future can be predicted with considerable but not 100% precision, except for inflation which seems to defy reliable prediction.

A well-managed plan copes with these continually changing differences by having periodic actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continuing adjustment in financial position.

APPENDIX II

MEANING OF UNFUNDED ACCRUED LIABILITIES

Almost every pension plan (public or private) has “unfunded accrued liabilities,” so whatever they are, they are not rare. Since the term is not part of everyday conversation, it needs some definition.

“Accrued liabilities” are the present value dollars of plan promises to pay benefits in the future based upon service already rendered - - - a liability has been established (“accrued”) because the service has been rendered, but the resulting monthly cash benefit may not be payable until years in the future. Accrued liabilities dollars are the result of complex mathematical calculations, which are made by the plan’s actuary (which is the name given to the specialist who makes such calculations).

If “accrued liabilities” at any time exceed the plan’s accrued assets (cash and investments), the difference is “unfunded accrued liabilities.” This is the common condition. If the plan’s assets equalled the plan’s “accrued liabilities,” the plan would be termed “fully funded.” This used to be an uncommon condition, but is becoming more common.

Each time a plan adds a new benefit which applies to service already rendered, an “accrued liability” is created, which is also an “unfunded accrued liability” because the plan can’t print instant cash to cover the accrued liability. Payment for such unfunded accrued liabilities is spread over a period of years, commonly in the 20-40 year range.

Unfunded accrued liabilities can occur in another way: If actual financial experience is less favorable than assumed financial experience, the difference is added to unfunded accrued liabilities. In plans where plan benefits are directly related to an employee’s pay near time of retirement (a common plan provision) rather than his average pay throughout his working career, unfunded accrued liabilities have been increasing in recent years because unexpected rates of pay increase have created additional accrued liabilities which could not be matched by reasonable investment results. Some of these unexpected pay increases are the direct result of inflation, which is a very destructive force on financial stability.

The existence of unfunded accrued liabilities is not bad, then (any more than a mortgage on your house is “bad”), but the changes from year to year in amount of unfunded accrued liabilities are important - - - “bad” or “good” or somewhere in between.

Nor are unfunded accrued liabilities a bill payable immediately (your food costs are payable immediately), but it is important that policy-makers prevent the amount from becoming unreasonably high and it is vital that your plan have a sound method for making payments toward them so that they are controlled.

The existence of large amounts of unfunded accrued liabilities indicates that total contributions in past years were less than level - - - an almost certain history if retired life liabilities are not fully funded now.