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# FAIRMONT POLICEMEN'S RELIEF ASSOCIATION

December 31, 2008 Actuarial Valuation

June, 2009

December 31, 2008 Actuarial Valuation

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December 31, 2008 Actuarial Valuation

#### Introduction

#### **Purpose**

This report presents the results of the December 31, 2008 valuation for the Fairmont Policemen's Relief Association. Its primary purposes are:

- to determine the funded status as of December 31, 2008,
- to determine the amortization payment for 2008, and
- to present information required to be disclosed under General Accounting Standards Board Statement No. 25 (GASB 25) as of December 31, 2008.

#### Sources of Data

The Relief Association supplied December 31, 2008 census data for all members. Roessler, Nuss & Co., P.A. provided audited asset data for the Special Fund. We have relied on this data in preparing this report.

#### Changes from the Previous Valuation

The prior actuarial valuation of the plan was prepared as of December 31, 2007. The actuarial assumptions and methods used to prepare this report are the same as those used in the 2007 report. The annual benefit value per unit increased from \$823.47 on December 31, 2007 to \$850.38 on December 31, 2008, a 3.27% increase, 0.23% less than the assumed increase of 3.5%.

#### Summary of Valuation Results

The market value of assets decreased from \$7,451,758 to \$6,179,967. The actuarial value of assets, which is based on book value, decreased from \$7,048,107 to \$6,706,750 as of December 31, 2008.

The funded status of the plan decreased from 88.9% on December 31, 2007 to 84.9% on December 31, 2008. The decrease was generated principally by the decrease in assets. The amortization payment has decreased from \$322,710 last year, to \$111,366 this year, based on H.F. 1383 which extends the amortization date to December 31, 2020.

December 31, 2008 Actuarial Valuation

## **Introduction (continued)**

#### Actuarial Certification

We certify that the actuarial valuation has been prepared in accordance with Minnesota Statutes §356.20-.23 and §69.77 as they relate to local police department relief associations in general and the Fairmont Policemen's Relief Association in particular. This valuation has determined the amortization amount based on the December 31, 2020 amortization date required under Minnesota Statutes §69.77, subd 4 and extended by H.F. 1383.

Respectfully submitted,

Sandra L Bruns, FSA.

Sandra L. Bruns

Consulting Actuary

Mark D. Meyer, JD, FSA Consulting Actuary

# **Summary of Results**

A. Membership data*	December 31, 2007	December 31, 2008
1. Liability Duration		
a. Average annuity factor	13.1	12.6
b. Average life expectancy	12.4	11.8
c. Benefit life expectancy		21.7
2. Number of members		
a. Retirees	10	10
b. Surviving spouses	<u>4</u>	<u>4</u>
c. Total	14	14
B. Amortization payments		•
1. Unfunded actuarial accrued liability	884,281	1,188,349
2. Amortization payment	322,710	111,366
C. Value of plan assets	<u>December 31, 2007</u>	December 31, 2008
1. Market value	7,451,758	6,179,967
2. Actuarial value (for calculating contributions)	7,048,107	6,706,750
3. Investment return on actuarial value of assets	7.04%	-13.82%
D. Benefit liabilities		
1. Present value of future benefits	7,932,388	7,895,099
2. Actuarial accrued liability	7,932,388	7,895,099
E. Funded status		
1. Actuarial value of assets as a % of liabilities	88.9%	84.9%
2. Market value of assets as a % of liabilities	93.9%	78.3%

<sup>\*</sup>This is a closed group, all members have retired, so there are only retirees and beneficiaries.

## Funding Basis

## **Actuarial Value of Assets**

## A. Unrealized gain

Year Ending December 31:	Market <u>Value</u>	Book <u>Value</u>	Unrealized Gain (Market - Book)
2005	6,732,970	6,353,680	379,290
2006	7,192,518	6,468,184	724,334
2007	7,451,758	6,846,282	605,476
2008	6,179,967	6,970,142	(790,175)

December 31, 2007 December 31, 2008

#### B. Actuarial value of assets

1. DOOK value
2. One-third of unrealized gain
3. Actuarial value (1. + 2.)

6,846,282 6,970,142 201,825 (263,392) \$7,048,107 \$6,706,750

## **Summary of Member Data**

	December 31, 2007	December 31, 2008
A. Retirees		
1. Age & service	10	10
2. Total annual benefits	\$464,437	\$479,614
3. Average annual benefit	\$46,444	\$47,961
4. Average age	68.4	69.2
5. Average annuity factor	14.5	14.0
*		•
B. Beneficiaries		
1. Surviving spouses	4	4
2. Total annual benefits	\$115,286	\$119,053
3. Average annual benefit	\$28,822	\$29,763
4. Average age	76.0	77.2
5. Average annuity factor	9.6	9.2
		•
C. Total number of members (A.1. + B.1.)	14	14

This is a closed group, all membesr have retired, so there are only retirees and beneficiaries.

# **Summary of Changes in Membership**

	Retirees	<b>Beneficiaries</b>	<u>Total</u>
A. Number of members on December 31, 2007	10	4	14
B. Changes in membership	-		
1. Deaths		•	0
2. Corrections			0
3. Total changes	0	0	. 0
C. Number of members on December 31, 2008	10	4	14

December 31, 2008 Actuarial Valuation

#### Funding Basis

## Actuarial Values Used to Determine Contribution

<u>December 31, 2007</u> <u>December 31, 2008</u>

A. Actuarial present value of projected benefits (the value of all future benefits to be paid to the current group of members)	<u>'</u>	
1. Active members	\$0	\$0
2. Vested terminated members	0	0
3. Retired members	6,827,840	6,805,251
4. Spouses and children receiving benefits	1,104,548	1,089,848
5. Disabled members receiving benefits	0	0
6. Total present value of projected benefits	7,932,388	7,895,099
B. Actuarial accrued liability (the cost allocated to all prior years)		
1. Active members	\$0	\$0
2. Vested terminated members	0	0
3. Retired members	6,827,840	6,805,251
4. Spouses and children receiving benefits	1,104,548	1,089,848
5. Disabled members receiving benefits	<u>0</u>	<u>0</u>
6. Total actuarial accrued liability	7,932,388	7,895,099
C. Unfunded actuarial accrued liability		
1. Total actuarial accrued liability (A.7.)	\$7,932,388	\$7,895,099
2. Actuarial value of assets	7,048,107	6,706,750
3. Unfunded actuarial accrued liability (1 2.)	884,281	1,188,349
4. Funded status (2. / 3.)	88.9%	. 84.9%
D. Development of municipal contribution payable:	2009	<u>2010</u>
1. Unfunded actuarial accrued liability (UAL) (C.3.)	884,281	1,188,349
2. Amortization payment to fund plan by 12/31/2010 (see page 8)	322,710	111,366
3. Expected administrative expense	23,683	23,361
4. Municipal contribution (3. + 4.)	346,393	134,727
E. Key economic assumptions		
1. Funding interest rate	5.00%	5.00%
2. Annual benefit increase rate	3.50%	3.50%

This is a closed group, all members have retired, so there is no normal cost.

December 31, 2008 Actuarial Valuation

# **Present Value of Amortization Payments**

H.F.1383 - Ex	tension to 2020		Amortization
			Based on
Payment	Amortization	Present Value	Valuation
<u>Date</u>	<u>Payment</u>	12/31/2008	Dec 31:
12/31/2009	\$322,710	\$307,343	2007
12/31/2010	111,366	101,013	2008
12/31/2011	111,366	96,203	2008
12/31/2012	111,366	91,621	2008
12/31/2013	111,366	87,259	2008
12/31/2014	111,366	83,103	2008
12/31/2015	111,366	79,146	2008
12/31/2016	111,366	75,377	2008
12/31/2017	111,366	71,788	2008
12/31/2018	111,366	68,369	2008
12/31/2019	111,366	65,114	2008
12/31/2020	111,366	62,013	2008
		ľ	
	. Total	\$1,188,349	

5.0%

Interest for present value:

# Changes in the Unfunded Actuarial Accrued Liability

A. Liability gain or loss for the year ending on December 31, 2008	
Expected actuarial accrued liability (AAL)	:
a. AAL as of December 31, 2007	\$7,932,388
b. Normal cost as of December 31, 2007	0
c. Interest to December 31, 2008 on the AAL and normal cost	396,619
d. Expected benefit payments for the year (excluding post-retirement benefits)	(579,723)
e. Interest on benefit payments (1/2 year)	(14,493)
f. Expected AAL on December 31, 2008 (sum of a. through e.)	7,734,791
2. Actual AAL on December 31, 2008	
a. Before any assumption or plan changes	7,912,831
b. After assumption changes, but before any unit value changes	7,912,831
c. After assumption and unit value changes	7,895,099
3. Liability (gain) or loss	
a. Due to plan experience different from that expected (2a: - 1f.)	178,040
b. Due to changes in actuarial assumptions (2b 2a.)	0
c. Due to changes in unit value (2c 2b.)	(17,732)
d. Total (a. + b. + c.)	160,308
B. Asset gain or loss for the year ending on December 31, 2008	·
1. Expected actuarial value of assets	
a. Actuarial value of assets on December 31, 2007	7,048,107
b. Actual benefit payments and expenses for the year	(602,291)
c. Contributions for the year	351,633
d. Expected return on assets	. 346,139
e. Expected actuarial value of assets on December 31, 2008 (sum of a. through d.)	7,143,588
2. Actual actuarial value of assets on December 31, 2008	6,706,750
3. Asset (gain) or loss (1e 2.)	436,838
	•
C. Changes in the unfunded AAL	·
1. Expected unfunded AAL on December 31, 2008	591,203
2. Changes	•
a. Actuarial (gain) or loss other than change in unit value	614,878
b. Change in unit value different from expected	(17,732)
c. Changes in actuarial methods and assumptions	0
d. Total change	
3. Unfunded AAL on December 31, 2008	1,188,349

## Accounting Basis

## Statement of Plan Net Assets - Market Value

			December 31, 2007	December 31, 2008
A. Assets				
1. Cash			\$0	\$0
2. Short-term investments			<u>0</u>	$\underline{0}$
3. Total	•		0	0
B. Receivables	•			
1. Accrued interest			5,408	9,165
2. Distributions			. 0	0
3. Accrued contributions			<u>0</u>	<u>0</u>
4. Total			5,408	9,165
C. Accounts payable	•	. : T	0	0 :
D. Investments, at fair value	•			
1. Money market			66,875	110,998
2. Mutual funds		·	4,090,007	2,842,380
3. Asset and mortgage backed securities			893,328	1,122,746
4. Municipal Bonds			21,982	20,828
5. Unit trusts			1,098,018	550,125
6. Corporate bonds	•		80,691	85,647
7. Government securities			1,186,996	1,079,906
8. GNMA mortgage certificate			6,410	5,252
9. Limited partnerships			2,043	1,210
10. Investments through City of Fairmont	Trust Fund		<u>0</u>	351,710
11. Total			7,446,350	6,170,802
E. Net assets held in trust for pension ben	<u>ıefits</u>		7,451,758	6,179,967

## Accounting Basis

## **Statement of Changes in Plan Net Assets**

·	December 31, 2007	December 31, 2008
A. Additions		
1. Contributions		
a. Employer	\$365,853	\$351,633
b. Plan members	<u>0</u>	· <u>0</u>
c. Total	365,853	351,633
2. Investment income		•
a. Interest and dividends	519,789	311,238
b. Partnership income	117	109
c. Realized gain (loss)	19,754	63,169
d. Change in unrealized appreciation (depreciation)	(72,097)	(1,395,649)
e. Total	467,563	(1,021,133)
3. Total additions	833,416	(669,500)
	,	
B. Deductions		•
1. Service pensions	430,567	453,340
2. Survivors pensions	108,809	114,462
3. Distributions to members	11,918	11,918
4. Professional services	9,908	9,025
5. Salaries	11,746	12,352
6. Other expenses	<u>1,228</u>	. <u>1,194</u>
7. Total deductions	574,176	602,291
C. Net increase	259,240	(1,271,791)
<u>D. Adjustments</u>	0	. 0
E. Net assets held in special fund		
1. Beginning of year	\$7,192,518	\$7,451,758
2. End of year	\$7,451,758	\$6,179,967
F. Investment return		
1. Market value of assets	6.60%	-13.94%
2. Actuarial value of assets	7.04%	-13.82%

## Accounting Basis

# **Schedule of Funding Progress**

(Dollar amounts in thousands)

As of December 31:	Actuarial Value of <u>Assets</u>	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
1993	\$4,570	\$5,781	\$1,211	79.1%	\$218	555.5%
1994	4,828	5,987	1,159	80.6%	223	519.7%
1995	5,274	6,066	792	86.9%	243	325.9%
1996	5,808	6,179	371	94.0%	200	185.5%
1997	6,516	6,164	(352)	105.7%	210	-167.6%
1998	6,355	6,835	480	93.0%	163	294.7%
1999	7,113	7,174	. 61	99.1%	118	407.0%
2000	7,170	7,245	75	99.0%	-	· ••
2001	6,960	7,573	613	/ 91.9%		-
2002	6,431	7,831	1,400	82.1%	-	<del>-</del>
2003	6,431	7,831	1,400	82.1%	_	_
2004	6,438	7,910	1,472	81.4%	-	- <u>-</u>
2005	6,480	7,734	1,254	83.8%	-	-
2006	6,710	7,882	1,173	85.1%	_	_
2007	7,048	7,932	884	88.9%	-	••
2008	6,707	7,895	1,188	84.9%	-	· 

## Accounting Basis

# **Schedule of Employer Contributions**

Year Ended	Annual Employer
December 31:	<b>Contributions</b>
	•
1993	\$243,556
1994	243,726
1995	208,626
1996	163,177
1997	257,828
1998	5,829
1999	. 0
2000	7,529
2001	10,095
2002	90,321
2003	230,291
2004	218,835
2005	323,808
2006	336,725
2007	365,853
2008	351,633

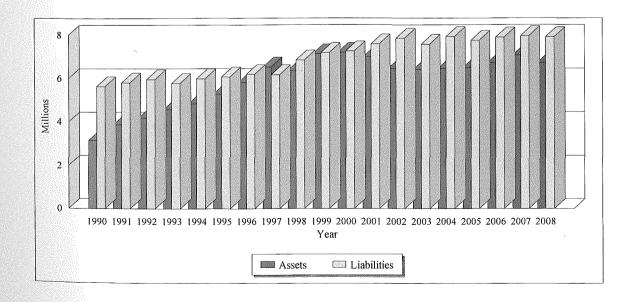
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#### Historical Tables

#### **Historical Funding Ratio Schedule**

(Dollar amounts in thousands)

As of December 31:	Actuarial Accrued <u>Liability</u>	Actuarial Value of <u>Assets</u>	Percent Funded
1990	\$5,627	\$3,137	55.7%
1991	5,803	3,874	66.8%
1992	5,952	4,179	70.2%
1993	5,781	4,570	79.1%
1994	5,987	4,828	80.6%
1995	6,066	5,274	86.9%
1996	6,179	5,808	94.0%
1997	6,164	6,516	105.7%
1998	6,835	6,355	93.0%
1999	7,174	7,113	99.1%
2000	7,245	7,170	99.0%
2001	7,573	6,960	91.9%
2002	7,831	6,431	82.1%
2003	7,560	6,394	84.6%
2004	7,910	6,438	81.4%
2005	7,734	6,480	83.8%
2006	7,882	6,710	85.1%
2007	7,932	7,048	88.9%
2008	7,895	6,707	84.9%



# Historical Tables

# **History of Employer Contributions**

		Amortization
	Normal Cost	of Unfunded
Valuation	as a Percent	Actuarial
December 31:	<u>of Payroll</u>	<u>Liability</u>
1000	26.4007	0001.055
1990	36.40%	\$201,066
1991	36.26%	161,011
1992	35.13%	153,456
1993	35.13%	109,085
1994	35.24%	108,913
1995	35.51%	78,140
1996	35.54%	38,541
1997	36.49%	0
1998	37.21%	56,447
1999		7,529
2000	<b>-</b>	10,095
2001		90,321
2002	-	230,291
2003	-	218,835
2004		323,808
2005	-	336,725
2006		328,444
2007	-	322,710
2008	-	111,366

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## Historical Tables

# **Comparative Schedule of Active Members**

	Number of					
Valuation	Active	Valuation		Averages		
December 31:	<u>Members</u>	Payroll	Age	Service	Pay	% Increase
1990	6	\$246,839	45.5	19.8	\$41,140	3.5%
1991	6	254,243	46.5	20.8	42,374	3.0%
1992	5	217,830	46.8	21.9	43,566	2.8%
1993	5	223,316	47.8	22.9	44,663	2.5%
1994	5	243,049	48.8	23.9	48,610	8.8%
1995	4	199,651	49.5	24.5	49,913	2.7%
1996	4	209,607	50.5	25.5	52,402	5.0%
1997	3	163,423	51.0	25.5	54,474	4.0%
1998	2	117,841	52.5	27.4	58,921	8.2%
1999	0	<u>.</u> .	-	. 2	<u>.</u> .	· -
2000	0	**	-	1	-	-
2001	0		-	-		-
2002	0	<u>.</u>	-	<u>.</u> -	-	-
2003	0	÷	-	· -	-	-
2004	0	-	-	- ,	-	, <u>-</u>
2005	0	-			-	-
2006	0		-	<u></u>	-	<u>.</u> -
2007	0		-	· +	-	· -
2008	0	-	-	• -	-	-

## Historical Tables

## **Comparative Schedule of Inactive Members**

	Number o	of Retirees and B	eneficiaries		
As of	Added	Removed	On Valuation	Annual	Present Value
December 31:	to Rolls	from Rolls	Date	<b>Benefits</b>	of Benefits
1990				\$252,417	\$3,526,812
1991	0	0	14	261,491	3,521,472
1992	0	0	14	287,546	3,944,772
1993	1	0	15	250,879	3,611,904
1994	0 .	2	13	242,682	3,504,876
1995	0	1	12	264,009	3,954,504
1996	2	1	13	262,615	3,848,304
1997	0	1 .	12	286,633	4,302,888
1998	2	1	13	342,613	5,418,324
1999	1	0	14	444,729	7,174,075
2000	2	0	16	452,326	7,245,193
2001	0	1	15	463,261	7,573,377
2002	0	1	14	494,356	7,830,552
2003	0	0	14	494,954	7,560,132
2004	0	0	14	535,864	7,909,793
2005	0	0	14	542,622	7,733,819
2006	0	0	14	555,661	7,882,160
2007	0	0	14	579,723	7,932,388
2008	0	0	14	598.667	7.895.099

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## **Summary of Plan Provisions**

1. Normal Retirement Benefit

50% of "base pay" with 20 years of service, increased
2% per year up to a maximum of 60%. "Base pay" is
the prevailing pay of a first class patrolman for the City
of Fairmont. All members are now retired. Their
benefit is the benefit they are currently receiving,
adjusted by increases in base pay.

2. Deferred Vested Benefit None. All members are retired.

3. Surviving Spouse's Benefit Annual benefit equal to 35% of base pay. If surviving spouse married member after retirement, marriage must have occurred at least five years before member's death.

4. Surviving Children's Benefit

Annual benefit equal to 6.25% of base pay per child, up to a maximum benefit of 25% of base pay if spouse is receiving benefits, or 50% if no spouse. Children are eligible until attainment of age 18.

5. Member Contributions None. There are no active members.

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#### **Actuarial Methods and Assumptions**

1. Mortality

The UP-1984 Mortality Table set forward 2 years for

males and set back 3 years for females.

2. Withdrawal, disability, retirement age

As of December 31, 1999, there are no active members, and the plan is closed to new members.

3. Interest rate

5% compounded annually.

4. Cost-of-living adjustment

3.5% annually. Benefits for members retiring as lieutenants remain level until they equal the benefits of a first class patrolman.

5. Actuarial cost method

The Entry Age Normal Cost Method. Under this method, the normal cost for an individual member is the level annual dollar amount required, beginning on the date of joining the association, to accumulate the funds needed to pay the member's accrued benefits by their assumed retirement age. There is no normal cost for a member or beneficiary in pay status. The actuarial accrued liability is the accumulated value of these annual normal costs on a given date. For members or beneficiaries receiving monthly benefits, the accrued liability is the present value of future benefit payments. The normal cost and accrued liability for the plan is the total of these values for all members.

6. Amortization period

Fixed date amortization of December 31, 2020.